A Discourse Analysis of Important Apple Keynotes

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ABSTRAKT

Tato bakalářská práce se zabývá pěti významnými prezentacemi společnosti Apple, které se konaly v letech 2007 až 2017 za účelem představení nových produktů, propagace značky Apple a získání nových zákazníků. Cílem této práce je diskurzivní analýza jazykových prostředků prezentérů a komparativní a kontrastivní analýza v rámci sledování diachronních změn ve verbální a neverbální komunikaci.

Klíčová slova: Diskurzivní analýza, diskurz, mluvený projev, jazykové prostředky, Apple, prezentace, Steve Jobs, Tim Cook

ABSTRACT

This bachelor thesis deals with five important Apple Keynotes which were held between years 2007 and 2017 in order to present new products, advertise the brand and acquire new customers. The aim of this thesis is discourse analysis of presenters' language features and comparative and contrastive analysis within observation of diachronic changes in verbal and non-verbal communication.

Keywords: Discourse analysis, discourse, speech, language features, Apple, Keynotes, Steve Jobs, Tim Cook

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I hereby declare that the print version of my Bachelor's/Master's thesis and the electronic version of my thesis deposited in the IS/STAG system are identical.

CONTENTS

INTRODUCTION

The Apple Inc. is one of the biggest companies on the stock market with its market capitalization of $886.13 billion. Their symbolic product presentations called Keynotes are very popular events not only among their biggest fans, but also among general public. There are always several hundred attendees present at the Keynotes and a great amount of people watch either live broadcast or the video recordings of the presentations. Although the company could only upload their new products on their website or create video advertisements, they put a lot of effort into the presentations. These presentations usually take about two hours and the presenters do not only name the characteristics and features, but they also share the performance of the company in past months, describe the new product, share their feelings about the launch and the product itself and moreover they do live demonstrations of various new features. From the very beginning, most of the presentations were done by Steve Jobs, a Chief Executive Officer (CEO) and co-founder of the company, but later more Apple employees did present the products.

One of the reasons to decide to do this kind of demanding presentations may be that language is the most common way of communication between human beings. The fact that the Apple managers have more personal interaction with their audience helps persuade them that the new product is better than the older models or better than the products made by their competition. The speakers describe the products through the language, moreover they reveal their feelings about the products intending for the audience to adopt them.

This discourse analysis is divided into theoretical and practical part. The theoretical part begins with description what discourse, context, cohesion and coherence are. The introduction of pragmatic, syntactic and semantic point of view on the language analysis follows. The theoretical part also contains a description of non-verbal communication. In the practical part of the thesis the discourse analysis of the corpus and video recording is performed. The corpus, which is enclosed in the appendix, consists of transcriptions of five important Apple Keynotes, which took place during the past 11 years.

Since all the presenters are trained professionals, the aim of this analysis is to analyze whether and how they use both verbal expressions and non-verbal signs to express themselves and persuade their fans, customers and potential customers about the quality of their products.

I. THEORY

1 DISCOURSE AND DISCOURSE ANALYSIS

1.1 Discourse

The word discourse can have numerous meanings in various academic areas. In linguistics there are, according to James Paul Gee, two important meanings. He describes a discourse either as a **sequence of sentences** - all of the connections and relationships between sentences in speech or writing - or as a **language-in-use**. While studying language-in-use, the language should not be understood only as a grammar system, but also as a usage of sentences and utterances according to context. (Gee 2014, 17-19) Language is an "element of a social life" (Fairclough 2003, 3) and it varies depending on people's surroundings and intentions. Barbara Johnstone mentioned that when people use a language, they rely on their knowledge – common knowledge, knowledge based on memories, what was said earlier, what happened earlier – which we call context. Moreover, people use language to place orders or requests, express themselves or exchange information. (Johnstone 2008, 3)

1.1.1 Spoken discourse

Speech and its discourse is moderately different than writing. Speech, in most cases, is more interactive than writing, one of the examples is a conversation or a debate, where people react to the other party and take turns to speak and listen. If a listener does not comprehend what was said, he can ask for further explanation, which is not possible while for example reading a book – exception might be a written conversation such as chatting, texting or lettering. On the other hand, a reader can choose his pace of reading and can re-read a text how many times he wants.

Speech is usually less explicit than writing, because people, while speaking, also express themselves with body language, such as gestures, facial expressions or with intonation and tone of voice. For understanding a speech, the physical context is usually important, and will be explained in greater detail in a chapter 1.3.2. (Jones 2012, 15-16) A discourse of presentations differs from the general spoken discourse, and it is usually prepared content being considered for its objective.

1.2 Discourse analysis

The first one who used the term discourse analysis was Zelling Harris in year 1952 when he was analyzing connected speech and writing. According to Brian Paltridge (2012, 2) the discourse analysis examines language patterns and takes into account the relationship

between language and socio-cultural context. Rodney H. Jones points out the fact that discourse analysis should not be considered only as a study of language but also the study of its usage. People use languages to communicate and interact together, for example argue, debate, flirt etc. (Jones 2012, 2)

1.3 Context

In situations when there is a speaker and hearer or writer and reader, context means all the shared background information of the speaker and the hearer, which is needed for full understanding. Context includes place and time of the conversation, history, cultural knowledge, gestures, face expressions, but moreover what those who are involved do at the moment, what they wear or hold, etc. (Jones 2012, 22-23) In real life, people seldom say everything they mean, instead they expect their audience to understand thanks to the context. It is important that people never use the whole context, but only the part that is relevant. (Gee 2014, 119-120) To understand means to connect physical context and language, as without context it is impossible to understand utterances properly as those were meant and as intended. (Widdowson 2007, 19-20)

1.3.1 Co-text

The background information of written text is moderately different, because it does not include body language, place and time and is usually not shared. (Gee 2014, 120) Co-text is a linguistic material that has been mentioned in the particular text. The reader needs the co-text to understand the references – anaphora and cataphora. (Yule 1996, 21)

1.3.2 Context in advertisement

Since this thesis is focused on discourse analysis of product release presentations, parts of context will be evaluated according to their importance. Guy Cook mentioned parts of context in advertisement, and the following ones are most important for this thesis. (Cook 2001, 4) The context of a place is crucial in this case, because the audience should consider the fact that they are in a conference hall intended to host presentations. While listening to a presentation, the audience has to pay attention to the visual aspect as well, because it is meant to help them with imagining the product and understanding the terminology better. To completely comprehend these presentations, general knowledge of history is not required, on the other hand, knowing about the Apple company's history might be handy. In advertising presentation, the roles of individuals are determined, there are usually only few presenters who are speakers, and the audience are addressees and hearers of the text. These

presentations are not built on a conversation, but on a one-way monologue and the audience is only expected to applaud and express themselves by interjections.

The product presentations have a number of functions, the most obvious one is to persuade the audience to like and buy the product. However, the presentation helps to build, and later to strengthen, the company brand. Product presentations usually outline and summarizes company roadmap and explain fulfilled achievement and set new objectives for future. If presentations are of high quality it may intimidate the competition by showing them progress and success at product development. Moreover, members of the audience might get attracted to work for the company and be part of it. (Hughes and Mallett 2012, 52-58) The main goal of presenters is to achieve as many as possible of those functions noted above.

1.4 Cohesion and Coherence

1.4.1 Cohesion

Widdowson says that cohesion of a text can be recognized by connections between pronouns and their antecedents – a phrase mentioned before. There are various cohesive devices which bind parts of a text or a discourse together to make it cohesive. Text producers decide how much cohesive text they can make, depending on their estimate how will the text receivers use a context to understand the meaning of the text properly. (Widdowson 2007, 45-49)

Cohesion can be **grammatical** or **lexical**. According to Halliday and Hasan (1976), there are four grammatical devices used to make a text or a discourse cohesive. The first device is a **conjunction**, which means using connecting words like *and*, *also*, *but*, or conjunctive adverbs like *moreover*, *however*, *although* to connect clauses and sentences into related pairs. Depending on the type of relationship they create we can divide them into groups called: additive, contrastive, causative, sequential.

Reference is another type of cohesive device, which uses pronouns that are referring to antecedents. Anaphoric reference uses a pronoun that refers to an antecedent which was mentioned earlier. On the other hand, while using cataphoric reference, it is being referred to something that will be mentioned later on in the text. If the reference points to something outside the text, it is called exophoric reference. The reference will be explained in more detail in subchapter 2.1.1.

If a different word than a pronoun is used for a reference, it is so-called **substitution** device. Another important cohesion tool is **Ellipsis**, which is “the omission of a noun, verb

or phrase on the assumption that it is understood from the linguistic context." (Jones 2012, 38-41)

Halliday and Hasan provided devices used for lexical cohesion as well, these are **repetition of words** or **repetition of words from the same semantic field.** These sequences of repeated and similar words form lexical chains. (Jones 2012, 41-42) Communication generally works on a **least effort principle**, which means that people use only as much language as is enough to be understood. This principle leads one to use pro-forms and linking devices instead of expressing everything completely. (Widdowson 2007, 47)

1.4.2 Coherence

To produce a coherent text, the pieces of information provided have to be connected logically. Cohesive devices help text receivers to make coherent outcomes of the text. How much is the text coherent depends also on one's ability to use context for better interpretation. (Widdowson 2007, 49-51) Even though it is needed to look outside of the text to find cues, there are cues which are provided by the speaker in the text as well. (Johnstone 2008, 118)

2 LANGUAGE ANALYSIS

Language analysis is traditionally divided into three parts: Pragmatics, Syntax and Semantics. This division has its origin in 1940s, when the Philosopher Charles Morris used these terms as a division of semiotics. (Archer, Aijmer and Wichman 2012, 3) Each of these disciplines analyzes the language from a different point of view, and all will be used in this thesis.

2.1 Pragmatics

Pragmatics studies relationships between linguistic signs and its users. According to Yule "the advantage of studying language via pragmatics is that one can talk about people's intended meanings, their assumptions, their purposes or goals, and the kinds of actions that they are performing when they speak." (Yule 1996, 4) This discipline is crucial for the purpose of this thesis, because unlike the other disciplines of language analysis it takes into account humans. People and their perception of a language is a very important part of product presentations and marketing as such. The audience of these presentations is expected to understand for example jokes or hidden allusions on competition.

2.1.1 Reference and inference

Reference is the relationship between linguistic expression and the entity they stand for in the world. (Archer, Aijmer and Wichmann 2012, 25) George Yule while explaining what reference is, points out that "…words themselves don't refer to anything. People refer." (Yule 1996, 17) People refer to things via linguistic forms called **referring expressions**, and these forms enable readers and listeners to identify what is being referred to. The following tools can be used as a referring expression: a proper noun (for example, *Steve Jobs*, *Czech Republic*), pronoun (for example, *he*, *she*, *them*) or noun phrase, either definite (for example, *the driver*, *the speaker*) or indefinite (for example, *a man*, *a project*). The choice of expression is based on what a text producer expects its receiver to know already and the success of referring depends on receiver's ability to **infer** what is the original subject. For complete understanding cooperation between both sides is necessary, because thinking what the other person has in a mind is needed. (Yule 1996, 17-18)

2.1.2 Deixis

The term deixis has its origin in Greek language where it stands for pointing or indicating. (Archer, Aijmer and Wichmann 2012, 26) Deictic expressions, also called indexicals, are used for pointing at something in the immediate context that is shared between a text

producer and a receiver. That is the reason why are deictic expressions mostly used in face-to-face interactions. (Yule 1996, 9) Deictic expressions are divided according to the type of a target they are pointing at.

- **Person deixis** is used for identification of participants in a speech event, and it's expressed either by personal pronouns or by vocatives. Personal pronouns convey information about person, number and gender. Person in English can be either first person which is grammaticalization of speaker, second person which refers to addressee(s) or third person that refers to neither a speaker nor an addressee. Gender identification in English is possible only in a third person, however only in singular. NPs that refer to the addressees and are included in the body of an utterance, are called vocatives and these are divided into two groups, calls/summons and addresses. (Huang 2014, 136-143) (Archer, Aijmer and Wichmann 2012, 26)
- The **place**; also called space, spatial or local; **deixis** refers to location in relation to that of speaker and addressees. (Huang 2014, 149) There are only two adverbs, *here* and *there*, in contemporary English which are used for basic distance expression. (Yule 1996, 12)
- **Time deictic** expressions are usually considered in relation to speaker's coding time of an utterance. These expressions can point to past, for example *yesterday* or *last year*, or to the present, for example *now* or *today*, or to the future as in *soon, later* or *tomorrow*. On the other hand, there is a possibility to use an absolute time indicator, for example *January 2018*. (Archer, Aijmer and Wichmann 2012, 27)

2.2 Syntax

Noam Chomsky (2002, 11-12) described syntax as a set of processes and principles which are behind the sentence structure, moreover it is name of the linguistic study of these rules. Syntactic structures are also part of the English grammar.

2.2.1 Semantic roles

While analyzing syntax of a speech the subcategorization of verbs, including determination of semantic roles is needed. For the purpose of this thesis Agent, Force, Experiencer, Patient, Theme, Location and Instrument will be essential. Semantic role of agent is assigned to the sentence member which represent the performer of an action. If the Agent is inactive, the semantic role is called Experiencer and if it is an inanimate agent it is called Force. Patient is the element affected by the action performed by the Agent, Theme is in fact an unaffected

Patient. The element used to perform the action is assigned with semantic role of Instrument. (Machová and Charvátová 2017, 6)

2.2.2 Discourse markers

Deborah Schiffrin (2001, 54) claims that discourse markers are linguistic items which operate in textual, cognitive, social and expressive realms. According to Fraser the function of a discourse marker is to connect two segments of the text, the prior discourse with the following segment that the discourse marker introduces. (Fraser 1999, 938) The discourse markers used while presenting, in order to lead the audience through the presentation, to inform them what follows and to sum up what happened, are called signpost language. (BBC n.d.)

2.3 Semantics

Semantics is the discipline that studies linguistic form and their relations to entities in real world. (Yule 1996, 4) Basically it is a study of people's vocabulary – the knowledge of meaning of words and phrases. Linguistic semantics studies organization and expression of meaning in a certain language. (Kreidler 2014, 1-2)

2.3.1 New word formation

As this thesis is going to analyze presentations of tech product, including hardware and software, formation of new words must be taken into account. Technology industry is a somewhat rapidly evolving field, which leads to development of new technologies that have never existed before. These new technologies are usually named by the companies that created them and presumably patented them. Not only technologies are named, but whole brands and products need to be named properly, since the names distinguish the brand or the product among its competition and make it recognizable. (Dyer 1990, 141)

Eponymy is one of the word formation processes, Éva Kovács describe eponym as a word which is a result of a process of generalization of a proper noun. Trademarks and brand names which became eponyms are for example Xerox, aspirin, Walkman etc. (Kovács 2016, 19-20)

2.3.2 Emotive expressions

Words which people use do not only name objects, persons or situations, but they do convey and communicate a feeling and express speakers attitude. These expressed emotions might have an impact on the audience of the text, which is advantageous while presenting a

product. (Dyer 1990, 140-141) In some cases, an exclamation can be characterized as an emotive expression.

2.3.3 Metaphor

The Cambridge Dictionary describes a metaphor as "an expression … that describes a person or object by referring to something that is considered to have similar characteristics to that person or object". (Cambridge Dictionary n.d.) Daniel Chandler (2007, 127) claims that metaphor consist of a "literal" primary object and a "figurative" secondary object.

2.4 Non-verbal communication

Non-verbal communication is used by everyone in everyday lives. In spoken communication, people mutually send, purposely or not, and receive nonverbal messages. The key function of non-verbal signs is to second verbal expressions and help the hearer with understanding. Thanks to the non-verbal signals people can properly understand messages which would be ambiguous under other circumstances. The perception of non-verbal signs is mostly subconscious, unless the hearer is a specialist on that. (Knapp, Hall and Horgan 2014, 3-4) Among these signs belongs audible expressions (sounds like *shh*, *uh-huh*, *brr* etc.; laughing, crying, whispering, pauses), visible expressions (body language such as facial expressions, nodding, gestures and postures) and outfit. (Kreidler 2014, 23-24)

II. ANALYSIS

3 CORPUS AND STRUCTURE OF THE ANALYSIS

This bachelor thesis is going to analyze five important keynotes of the Apple Inc. namely MACWORLD 2007, Apple WWDC 2010, Apple Special Event September 2012, Apple Special Event September 2013 and the very last Apple Special Event September 2017. The Keynotes always take place on occasion of new product launches. The corpus of the analysis are transcribed speeches of various speakers at Apple Keynotes and Special Events, including for example Steve Jobs, Tim Cook, Phil Schiller, Jeff Williams, Craig Federighi and Eddy Cue. The non-verbal signs and visual aspect of the presentations are analyzed from the video recordings which are public in the iTunes application (Apple 2007, 2010, 2012, 2013, 2017). At the Apple Keynotes there are always several hundred attendees and since those who are present are always only Apple employees, press journalists and developers and the presentations are not intended for the general public, and as such, the presenters target this very audience in their speeches. This affects the terminology that the speakers use and also their assumption what is the common knowledge between them and the audience. As for the access of the general public to these presentations, they are allowed to watch the video recordings which are published afterward.

In the first part of this discourse analysis the speech, visual and non-verbal communication at the keynotes will be analyzed diachronically. The part analyzing speech will follow the structure of the theoretical part of this thesis. The second part of the analysis will compare behavior of Steve Jobs and Tim Cook.

4 APPLE KEYNOTES OVER THE YEARS

4.1 Speech

For the purpose of the discourse analysis the speech analysis is essential, since the audience perceive remarkable amount of information by hearing and it can be analysed from the linguistic point of view.

4.1.1 Cohesion

Speakers at the product presentations should make their speeches cohesive in order to follow the least effort principle and to fulfill the purpose of the product launches, to attract audience attention and to make all the information clear for the audience. The two most visible cohesive devices used at presentation are **conjunctions** and **references**. As is evident from the Table 1 the conjunction *and* is the most used one. *And* is an additive type of conjunction, which means it is used to connect two or more pieces of information, sentences or paragraphs. Steve Jobs, Tim Cook and other speakers use this for example when listing features of a device or a software as shown in examples 1-3. The contrastive conjunction *but* is mostly used to join information of rather opposite meaning as is shown in the example 4. It can be seen that the number of occurrences in the year 2013 is slightly smaller, which is due to the fact that the Keynote was about 50 minutes shorter than the others.

The word *even* was used ninety-eight times at all five Keynotes together, however only in 9,2 % it was used as a conjunction. In eighty-nine cases the word *even* was used as a quantifier, to emphasize the fact that same device or software has more features than the audience expected. There can be seen an increasing trend in the amount of use of this quantifier at first three analyzed Keynotes, beginning in year 2007 with 6 uses, through 13 uses in 2010 with the peak of 33 uses in 2013. The decrease to 17 in 2013 is probably caused by the shorter length, and there were 20 uses of this quantifier at the last Keynote in 2017.

1. *We have a power connector, USB 2,* ***and*** *Ethernet.* (Steve Jobs)
2. ***And*** *it's got an Intel processor in it, …* (Steve Jobs)
3. *Movies, TV shows, music* ***and*** *photos all on your widescreen TV.* (Steve Jobs)
4. *I can see the whole page* ***but*** *of course I can't read it.* (Steve Jobs)

Table 1: Occurrences of conjunctions

CONJUNCTION	2007	2010	2012	2013	2017
and	580	545	561	271	549
but	32	42	60	37	46
or	26	28	27	22	33
because	14	24	16	13	15
also	11	15	28	19	29
even	0	3	4	0	2

Another widely used cohesive device is a reference. As can be seen from the Table 2 below, the pronouns *it, this, these, that* and *those* are used much more than *here* and *there*, because the speakers at Apple keynotes in most cases refer to inanimate things – products or people – competitors, employees in contrast with references to place or time. The speakers use both anaphoric and cataphoric references.

Table 2: Occurrences of pronouns

PRONOUN	2007	2010	2012	2013	2017
it	220	169	220	125	221
this, these	212	226	185	133	179
that, those	138	203	171	105	155
here	116	42	33	11	27
there	75	53	20	11	23

The product presentations held by the Apple company routinely follow a certain structure. Each segment of the keynote which is designated to a particular product begins with a reminder of the previous product of the same series and the speaker mentions all the pros of the product and emphasizes the success, mostly by highlighting the number of units sold or by the number of users. The presentation of the new version follows, containing mainly information about the improvements in comparison with previous version, which is supported with visuals. At the end of the presentation the presenter summarizes the characteristics. This certain structure ensures ideal cohesion of the text and makes the presentation understandable and the facts memorable for the audience. The audience is able

to create a coherent outcome of the speech thanks to its cohesion, the context and the co-text.

Individual parts of the presentations are linked together by discourse markers, which make the speech easy-to-follow and help the audience to focus on the course of the presentation. Due to that fact that the presenters at the Apple Keynotes use rather simple language and sentence structure, the two most used discourse markers are *now* and *so*. Steve Jobs used many times quite unusual, colloquial expression *alrighty*, in order to put an end to some part of the presentation, for example description of an iPod as shown in example 5. Another frequent discourse marker is the exclamation *let's* used in combination with various words, for example *let's take a look*, *let's go to*, *let's see* etc. Even though, the signpost language, which is more complex than the discourse markers used by the Apple speakers is common at various presentations it is not much used at the Apple Keynotes. The presenters more likely link the topics only by introducing the topic visually on screen and pronouncing it.

5. *Alrighty. So that, is the iPod.* (Steve Jobs)

In order to make the texts cohesive the speakers use repetition as well. A repetition works similarly to pronouns, however a repetition of a particular word or expression stresses and emphasizes the information and makes it more memorable for the audience. The memorability of a brand, a product or a technology is crucial for the field of product advertisement. The word *revolution* and its variations from different parts of speech are very typical expressions for the Apple company and it is even mentioned in their current mission statement: "Apple designs Macs, the best personal computers in the world, along with OS X, iLife, iWork and professional software. Apple leads the digital music revolution with its iPods and iTunes online store. Apple has reinvented the mobile phone with its revolutionary iPhone and App store and is defining the future of mobile media and computing devices with iPad." (Rowland 2017) The expression was used twenty-one times in the five Keynotes that this thesis analyzes. Above that, each speaker uses and repeats some phrases that are typical for him. For example, Steve Jobs used phrases "isn't this/that incredible/awesome/cool/great" for eighteen times at the MACWORLD 2007. Another example of repetition is from the MACWORLD 2007. When Steve Jobs introduced the first iPhone he uses repetition for building up the momentum. Firstly, he introduces three new products, however by repeating it and with the visual aid on screen the audience soon

understood that the developers combined three products into one. As can be seen from the example 6, the audience is excited about each piece of information he said.

6. *Well, today, we're introducing three revolutionary products of this class.* [applause] *The first one: is a widescreen iPod with touch controls.* [applause] *The second: is a revolutionary mobile phone.* [applause] *And the third is a breakthrough Internet communications device.* [applause] *So, three things: a widescreen iPod with touch controls; a revolutionary mobile phone; and a breakthrough Internet communications device. An iPod, a phone, and an Internet communicator. An iPod,* [laughter] *a phone* [applause*] are you getting it? These are not three separate devices, this is one device* [applause]*, and we are calling it iPhone.* (Steve Jobs)

Thanks to all of these cohesive devices that are used by the speakers, the audience is able to get a logical and meaningful outcome of what they hear. However, in order to completely understand the presentation, the audience need to bear in mind the context of the speech, the visual aspect of the presentation, the history of the brand, the time and location where they are and moreover they need to have a certain knowledge about the terminology.

4.1.2 Syntax

Due to the fact that the presentations of product launches are crucial for the brand, they are probably prepared for a long period of time in advance with the help of professional speakers. Thanks to that, the syntax of the speech is appropriate and professional. The organization of semantic roles usually follow two different syntactic structures. When the speaker does a demo of a product he mostly produces sentences with the structure *Agent*, *Patient* and *Location*/*Instrument*, however when the speaker describes certain product, the sentences mostly follow the structure *Force*, *Patient*/*Theme*.

The figure 1 visualizes the average number of words per sentence in each of the analyzed Keynotes. There can be seen no uniform trend, but rather alternating increase and decrease. The MACWORLD 2007 seems to be the only remarkable exception. There are shorter sentences in written texts, usually easier to understand, however spoken discourse contains longer and more complex sentences, which are more cohesive, links the information together and make the speech more understandable for the audience. Further, the more complex and longer sentences make a professional impression. The diagram is at its peak at year 2013, even though this Keynote was about one hour shorter than the other Keynotes.

The Figure 2 shows the number of words and the number of unique words said at each Keynote. The chart is supplemented with the Table 3, which displays the percentage ratio of unique words out of all words for each of the Keynotes. The progression of proportion is noticeable with the only exception in the year 2013 which is probably caused by the shorter duration. There are two explanations for the rise. Firstly, the development of the technological field in past ten years led to naming of new technologies, features and components. These neologisms gradually appear at the Apple product presentations and probably caused the increase of unique words, which will be analyzed in more detail in subchapter 4.1.3 Semantics. The other reason might be the increase of popularity of the brand in past years which may have caused a need to be more formal and professional while presenting and to use proper vocabulary.

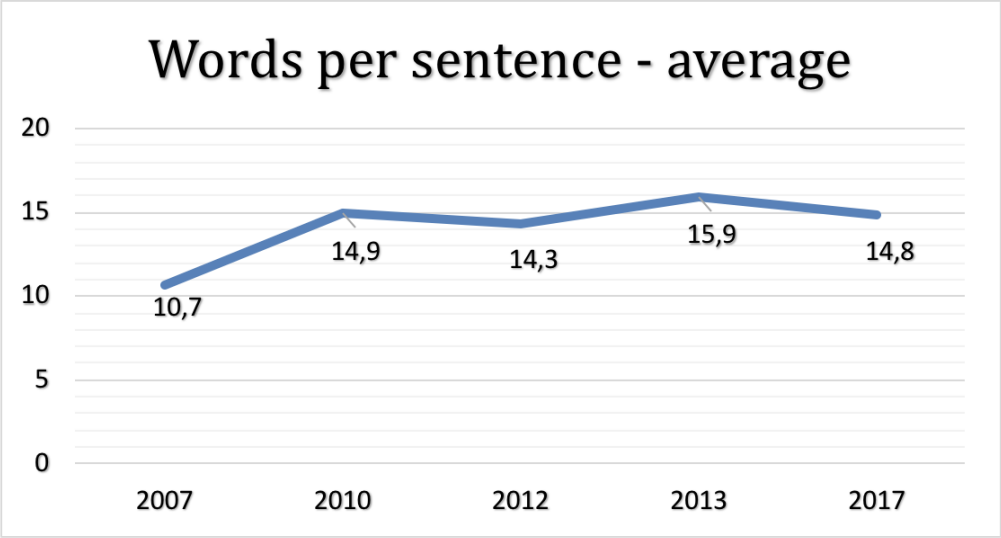


Figure 1: Words per sentence - average

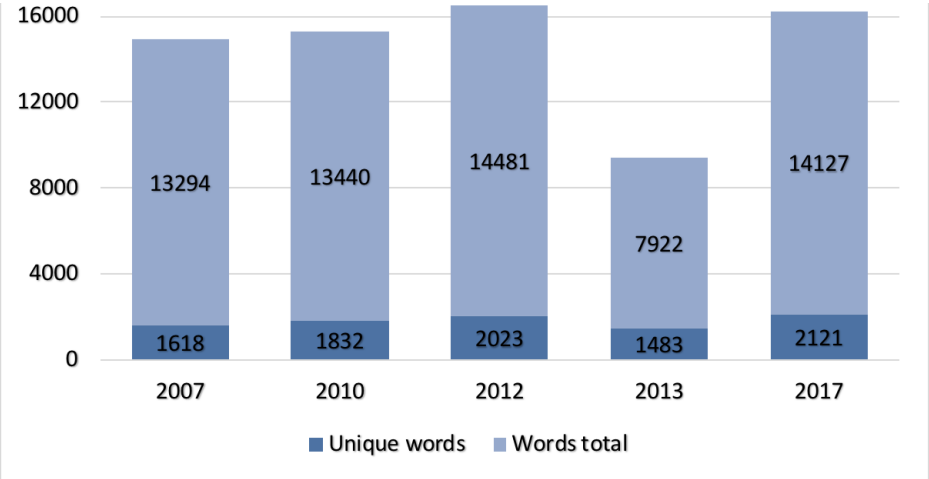


Figure 2: Unique words

Table 3: Percentage of unique words

	2007	**2010**	**2012**	**2013**	**2017**
% of unique words	12,17	13,63	13,97	18,72	15,01

The results of the analysis of **pronouns** shows that the inclusive *we* is used two to five times more than the exclusive *I*. The pronoun *we* is used by the presenters at Apple Keynotes to indicate and emphasize the fact that there is not only the CEO or Heads of the department, but there is a whole team behind the development of each of the products. It also shows that the business environment is friendly and family-like. All this is used to present the brand in the best light and to enhance its reputation. The exclusive *I* is in most cases used to express speaker's feelings and opinions on the product. These expressions are mostly positive, which might be only a marketing move, however in the case of Apple Keynotes, the presenters seem to be really enthusiastic about the announcements. It is possible to see the difference in the use of inclusive *I* between the years 2007, 2010, when the CEO was Steve Jobs, and the years 2012, 2013, 2017, when the CEO have been Tim Cook. This might be caused by the fact that Steve Jobs was co-founder of the Apple company and he was emotionally bound to it so he expressed his enthusiasm and positive opinions on the presented products.

Table 4: Usage of pronouns I and WE

	2007	**2010**	**2012**	**2013**	**2017**
Exclusive I	89	88	35	22	36
Inclusive WE	201	160	192	85	156

The presenters use the pronoun *I* also when they perform demos, however in these cases the antecedent is not only the particular presenter but a user of the device as well. It means that the presenter puts himself in the role of user and describes what and how any user can do with the product. The examples 7 to 9 below are from various Keynotes from 2007, 2012 and 2017.

7. ***I** can go see what's selling on iTunes and stream it down and watch it on iTV. **I** can also look at theatrical trailers.* (Steve Jobs)

8. *Now, when **I** want to add a song to a playlist, **I** just click Add and now unlike previous versions of iTunes, you can actually see your entire music library and the contents of your playlist at the same time.* (Steve Jobs)
9. *So, let's say **I** wake my phone and **I'm** not looking at it, stays locked but once **I** give it my attention, well it unlocks and **I** can get right in; it's really cool.* (Steve Jobs)

4.1.3 Semantics

Since Apple Keynotes' topics are always introductions of new technological devices or software, the words that are used by the speakers include a specific terminology. The terminology is used in order to perfectly describe the products, because then the descriptions are not ambiguous. The audience is expected to know the specific meanings of the terminology to completely understand the presentations. This may cause difficulties to the public audience watching the video recordings, however they have the opportunity to look up the terminology on the internet. The examples of terminology can be *high-speed P2P Wi-Fi*, *dual-band*, *color gamut* or *64-bit design.*

The presenters at the Apple Keynotes commonly use **emotive expressions** for example: *happy*, *awesome*, *incredible*, *amazing*, *pretty cool*, *phenomenal*, etc. The speakers use various exclamation to express their emotions, for example *isn't that amazing/incredible/cool*, which was very typical for Steve Jobs, and he used it not only as a rhetorical question but rather as an exclamation. From example 10 can be seen how Steve Jobs expressed his feelings about a stylus, he used the interjection *yuck* instead of saying that it is uncomfortable etc. There may be two reasons to express emotions. First reason is that they are part of the brand, they have spent a long time developing the product and have put a great amount of effort in the production. This may naturally evoke feelings of happiness and satisfaction which they express and share with the audience. The other reason may be a marketing purpose of the presentation. The fact that the presenters express their, either real or fictional, feelings and thoughts is likely to have an impact on the audience which maybe will influence their opinion on the products and persuade them to like and buy those products.

10. *Who wants a stylus? You have to get em and put em away, and you lose em. Yuck.* (Steve Jobs)

As the technological industry is constantly evolving and new technologies are being developed there is a need to name them. At the MACWORLD 2007 Steve Jobs presented new technology which they have patented and used for the first time in the phone industry and they called it *multi-touch* as is shown in example 10. The word itself has been used before, but with this patent a new meaning was added by Apple regarding a screen feature. Another example of word formation is creating names for new applications. Example 11 is from the Apple WWDC Keynote in 2010 when Steve Jobs introduced the video calling application *Facetime*. Three years later in 2013 at Apple Special Event another new technology has been introduced and named as *Touch ID*. All three quotations numbered 10 to 12 are examples of compound word formation and Apple use them mainly to distinguish themselves and their technology from the competition.

Names of Apple products are examples of new word formation as well. A great amount of Apple devices have the suffix *i-*, for example *iPhone*, *iPod*, *iPad* or *iMac*. The fact that the second letter in the name of a product is capitalized instead of the first letter is atypical and it became part of Apple branding. Interestingly, the word *iPad* is by a portion of Czech people used even for competitor's products instead of correct name *a tablet*, which is an example of an eponymy.

11. *We're gonna touch this with our fingers. And we have invented a new technology called* ***multi-touch****, which is phenomenal.* (Steve Jobs)
12. *So, we call this* ***FaceTime****.* ***FaceTime*** *video calling and it's great.* (Steve Jobs)
13. *And it's called* ***Touch ID. Touch ID*** *uses a key you have with you everywhere you go. Your finger. More specifically your fingerprint which is unique to each of us.* (Phil Schiller)

Professional speakers at product presentations use **pronunciation**, **articulation** and **stress** in order to emphasize certain information, expression or name. As has been the case at Steve Jobs' Keynotes in 2007 and 2010 where he tends to emphasize statistical data about company's performance. Steve Jobs articulates significantly and puts stress on numbers and units, as shown in example 13. Moreover, when describing products or services, as shown in examples 14 and 15 Steve Jobs stresses out adjectives in order to persuade the audience about how perfect the products and services are. Tim Cook and Phil Shiller emphasize the adjectives in the very same way, as can be seen in examples 16 and 17. These language features are used by all speakers at all five analyzed Keynotes. The reason is that in

combination with visual aid on screen it is one of the easiest ways how to highlight and point out important information.

14. …*over 'two 'billion songs.* (Steve Jobs)
15. *The world's most 'popular MP3 player.* (Steve Jobs)
16. *'Gorgeous album art on this display.* (Steve Jobs)
17. *...with a 'radically thin and light design and a 'stunning retina display.* (Tim Cook)
18. *We're so excited because this glass is the most 'durable 'ever in a smartphone.* (Phil Schiller)

Since the Apple Keynotes are official events organized by the company itself the language used, in order to act professionally, is in most cases formal. However sometimes the speakers use for example contractions or informal colloquial expressions. This makes the impression of a friendly and family-like atmosphere and it makes both the speakers and the audience feel more comfortable and relaxed. For example, the colloquial word *gonna* have been used 82 times, and *wanna* 52 times in all five Keynotes together. For the same reason that the presentations should appear formal, professional and should be to the point, the speaker do not use metaphorical expression. The speakers accurately describe the product and explain its features rather than comparing it with anything else, in light of the fact that they need to be sure that all members of the audience, both specialists and general public, will correctly understand the description.

4.1.4 Pragmatics

The speakers at Apple Keynotes rely on their audience while preparing their speeches and the fact that they more or less know what kind of people are in the audience eases the process for them. The presenters expect the audience to know broad context, so they can refer to the past of the brand, to previous products and to the competition as well. This might cause difficulties to the public that watch the Keynotes from the video recordings and do not have that much background knowledge.

The speakers use all three types of deictic expressions. At the beginning of the Keynotes the main speakers, Steve Jobs and Tim Cook, always refer to the past and describe what happened since last the Keynote or since the launch of last model of a certain product. For these references they use time deictic expression, for example: *a year ago*, *the last time*, *over a decade ago*. However, they do not only refer to the past, since the present and future is

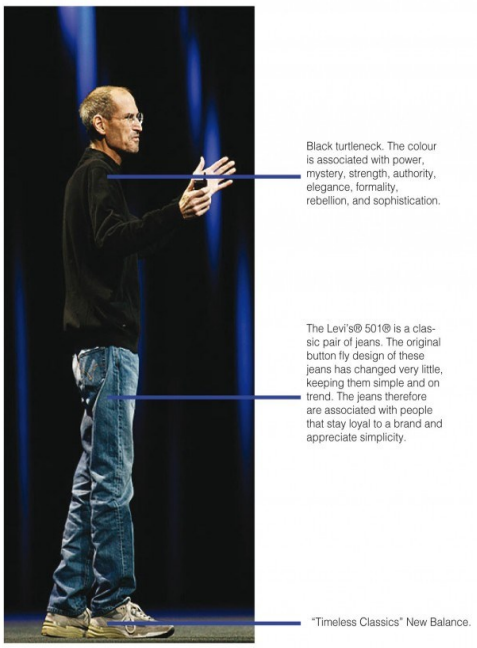
more important for the brand as the Apple they also use deictic expressions such as: *now* (237x), *today* (42x), *next year/month/week* (14x). Space deictic expression are usually used while the speaker does a demo of a certain product, the expression *here* and *there* are used the most to explain where they click etc. By person deixis, the speakers usually refer with *you* to the audience and with *we* to the Apple employees. Moreover, the person deixis is used to refer to other present speakers, managers or teams which are behind the development of presented products.

4.2 Visual

The visual aspect of a presentation should be on the same level of importance as the spoken part. There are more reasons for that, not only that the visual appearance attracts attention of the audience, moreover the presentations actually represent the brand and the product as well. It is obvious that the Apple company cares about the visual aspect of their presentations. The Apple Keynotes are well known for the fact that they more or less follow the same structure throughout the years and they became symbolic.

4.2.1 Steve Jobs' clothes

As part of a presentation, outfit plays an important role, sending a message to the audience before the speaker even begin to talk. Steve Jobs as the co-founder and former CEO is well known for his clothes. He would wear the same outfit at all of the Apple Keynotes he presented at as is shown in the picture 1 below. Jobs' typical outfit consisted of three major components, namely New Balance sneakers, blue jeans and black turtleneck. It is known that a large number of successful business people and politicians wear very similar clothes



Picture 1: Steve Jobs' clothes (Amsterdam University of Applied Sciences 2015)

every day and they do so in order not to waste their brain capacity on unimportant decisions. (Smith 2012)

Picture 2: Jobs' outfit over the years (Amsterdam University of Applied Sciences 2015)

4.2.2 Presentations

The design of presentations which are shown to the audience is unique and it has not changed much over the years. The background of presentations is always very dark with a vertical black-to-grey transition. For its website and presentations Apple used the Myriad font until the year 2017, when they replaced it with the San Francisco font. (Apple Insider 2017) Content of the slide is in most cases minimalistic since it usually contains only a huge number over the whole screen, a single picture of a product, a logo of an app or a list of features.

Very important part of Apple Keynotes are **demos**. The demos are used to demonstrate how a new product, a software or its feature works in reality. The product is connected with projector so the audience can see what is happening on the device and the presenter comments what he is doing and how it works. It is extremely important that the audience can actually see how the product works instead of mere verbal description.

Another essential element of Apple presentations are their **ads**. These video advertisements produced by Apple itself are in most cases played to the audience at the end of the presentation of the product. There are two types of Apple ads, first type is only an animation or a short video with only music but no speech. However, the second type is usually longer video where Apple employees and managers describe the product once again and mention all the pros, benefits and improvements. At the MACWORLD 2007 were shown only three ads in comparison with eight ads and videos at the Apple Special Event in September 2017. This increase is most probably caused by the development of video production technologies and by current trend to produce viral ads which are shared among people.

Very unusual way how to introduce a new product and its telephone function which Apple did is to perform a live phone call during the presentation. Steve Jobs performed live phone call for the first time at MACWORLD 2007 when he introduced the first iPhone and he called Jony Ive. Moreover, he made a conference call together with Jony Ive and Phil Schiller. Even though they had only a friendly conversation as is evident from examples 18 and 19, it was meant to demonstrate the functions of the new iPhone. Three years later, Steve Jobs made a live phone call again, however this time he presented video call via the Facetime application and he called Jony Ive again and as the example 20 shows they have had a friendly conversation. The Apple presentations throughout the years became a symbol, a trend and an inspiration for other presenters. Another unique way how to introduce a device and its features was used by Apple at the MACWORLD 2007. Steve Jobs invited Phil Schiller to the stage and they performed a role-playing of two neighbors who use the AppleTV to watch a movie. This example from a real life helps the audience to imagine and realize how they can use the particular device, even though they thought the device was unnecessary for them.

19. *Hey, Jony, how you doing?* (Steve Jobs)
20. *Hey Steve, I wanted to be the first phone call!* (Phil Schiller)
21. *Yes. Well, listen I — let's have lunch later on.* (Steve Jobs)
    All right. I'll see you soon. (Jony Ive)

Animations are not used much in the Apple presentations in order to keep them minimalistic. However, there are some, which are used to emphasize various information. Very symbolic animation is the fragmentation of a title which is used to highlight that the Apple company have put an end to something, which may be their previous old technology or a product of their competitors that is mocked by this animation. Another important animation is a fall of a word from the top with an effect of a blast. This animation suggests an innovation or revolution and again it emphasizes the fact that they invented something new that will destroy their competition.

4.2.3 Stage

The stages where Apple Keynotes take place are usually large and there are not many things placed on them. The theater stages or conference rooms are always equipped with a giant projection screen and on the side edge of the podium there is only a stand where the presented

product is located for the purpose of mirrored demos. The speakers have remote controls in hand so they do not need to use any computer that would have to be on the stage. The size of the podium makes the audience feel that the whole presentation is very important and it will bring huge changes to the technology industry.

Recently the Steve Jobs Theater has been built and opened for the purpose of holding Apple product launches. The theater is placed in the center of the new Apple headquarters, the Apple Park, and is equipped with 1000 seats for the audience, giant projection screen and high definition projector. The very first presentation which took place in there was the Apple Special Event in September 2017. (Apple 2017)

4.3 Non-verbal communication

Steve Jobs' body language is not very significant, at Keynotes in 2007 and 2010 he was mostly standing in one place or doing only few steps in each direction. He was either holding his hands behind his back or had them pointing forward towards the audience. When Steve Jobs was speaking he often was waving his hands up and down in sync with syllables of his speech. This helped him emphasize certain words not only with verbal stress but also with non-verbal signs. Another important gesture Steve Jobs used was spreading his hands while he was describing that something is *in whole industry/on the whole world* etc., again the gesture emphasized the information. Steve Jobs frequently pointed with his hand towards the screen in order to draw people's attention to it.

Tim Cook was in contrast with Steve Jobs mostly walking from side to side at the podium. He was using two basic gestures, either holding his hands in front of his chest or doing gestures similar to Steve Jobs as spreading hands or waving them to emphasize certain information.

Facial expressions of all the speakers at Apple Keynotes are most of the time serious. The exceptions are for example when they say a joke, mock their competition or if they are extremely excited about some fact, then most of them are smiling. Outfit, as an important element of non-verbal communication, is obviously taken into consideration by the speaker at Apple events. It is noticeable that a majority of them wear clothes in dark and dull colors, in order not to attract audience's attention. Among the most worn clothes by men belongs blue shirt or jumper and dark jeans. And the most worn clothes by women are either dresses or t-shirts with jackets.

The pauses that the presenters do while speaking are very important for the structure of the speech. Because one of the reasons why speakers make pauses is to separate two pieces

of information which are unrelated. By this the audience know that one information was concluded and they need to focus on the next one. Another reason to do pauses is to emphasize certain information and give the viewers time to comprehend what has been said and what they can see on the screen. However, when the audience applaud or laughs, the presenters have to do unintended pauses, which do not have any other meaning than not to be interrupted.

Non-verbal communication at Apple Keynotes has not changed significantly from a diachronic point of view, because of the fact that every presenter has his own style of behavior and habits, the only differences are between various speakers. The non-verbal signs do not significantly differ, because they are meant to fulfill more or less the same purpose.

5 COMPARISON OF JOBS' AND COOK'S KEYNOTES

Even though both Steve Jobs and Tim Cook had been CEOs at the time when they held the Keynotes of the same company, there is a number of differences. It is important to mention that Steve Jobs, unlike Tim Cook, was a co-founder of the Apple company which is significant factor influencing his behavior. One element Steve Jobs and Tim Cook have in common is the beginning and ending of the presentations, they both always waved at the audience and wished good morning and at the end thanked the audience and waved again.

The first noticeable difference is in the structure and organization of the presentation and CEO's role at the presentation. Steve Jobs was filling the role of the main presenter who not only did the introduction and the conclusion but also introduced new products, its features and did the demos. Compared to that, Tim Cook has been more of a moderator of the Keynotes, whose task is to begin and end the whole presentation, moderate it and invite various employees, mostly heads of certain departments, to the podium to introduce the product or the service they and their teams have been working on. Among those Tim Cooked invited belong for example Phil Shiller, Eddy Cue or Craig Federighi. This difference is probably caused by the fact that Jobs was the co-founder and considered the products as his own and wanted to present them by himself. However even Jobs sometimes invited his colleagues or partners, to introduce some features of product, but not whole products.

Whereas Steve Jobs was mocking Apple's competition many times at the Keynotes in 2007 and 2010 his successor rarely did. However, Steve Jobs mostly did it in an unobtrusive way, the example 21 is one of the instances. In this case Jobs made clear that he would use the product made by his company, because it is better than the competitive product. It has to be mentioned that Jobs almost never mocked his competition directly, instead he mostly emphasized the fact that Apple and its products are better than others or the best on the market.

22. *And you can download it to your computer, be it a PC or a Mac. I'm... I'm gonna use a Mac here*. [laughter] (Steve Jobs)

The speaking pace is a significant distinction between the speeches of Jobs and Cook. Steve Jobs speaks more quickly and much more energetically than Tim Cook does. Thanks to that Jobs' presentations look more interesting and exciting in contrast with Cook's more formal and official presentations. Tim Cook's voice sounds very calm and he does much

longer pauses between words and sentences than Jobs which slightly disturbs the unity and cohesion of his speech. If the vocabulary used is considered, Steve Jobs used more technical expressions to describe the features of a certain device, on the other hand Tim Cook led other Apple employees to describe the features and then he personally used more emotive expressions to describe feelings of use of the device. For example, while presenting the iPhone 4 at Apple WWDC 2010 Jobs used expressions *stainless steel*, *scratch resistant*, *pixel density*, *three-axis gyro* etc. however Tim Cook at the Apple Special event in 2013 used for example *experience we want to create*, *feels great in your hand* or *forward-thinking technologies*.

From the comparison of their speeches is evident that they have distinctive access to the audience, which is probably caused by a different personality and different position towards the brand. The fact that Jobs' presentations are more persuasive and act more like advertisements in comparison with Cook's presentations may be the reason why they sound and act different.

CONCLUSION

The aim of this analysis was to analyze whether and how the presenters at Apple Keynotes use both verbal expressions and non-verbal signs to express themselves and persuade their fans, customers and potential customers about the quality of their products.

The bachelor thesis consists of two parts, theoretical and practical. In the theoretical part the terminology was explained, followed by the description of language features and strategies which were divided into three groups: pragmatics, syntax and semantics. The end of the theoretical part was dedicated to explanation of non-verbal communication. In the practical part the corpus consisting of five transcriptions plus video recording were analyzed according to the theoretical part. The discourse analysis was divided into three segments including speech analysis, visual analysis and non-verbal communication analysis. The very last part of the analysis was devoted to the comparison of behavior of two CEO's Steve Jobs and Tim Cook.

Whereas the presenters at Apple Keynotes are trained professionals and they put a lot of effort into the preparation, their speeches are very cohesive. To ensure this attribute of the speech, the presenters use great amount of conjunctions, anaphoric and cataphoric references, pro-forms and repetition. However, the sign-post language is not so common at the Apple presentations even though it is one of the recommendations how to perform a successful presentation. The syntactic structure of the speeches is rather simpler in order to make keep them easy-to-follow. The average amount of words per sentence is 14,12, and there can be seen no uniform trend in the progression. Emotive expressions are often used as a persuasive device, because the speakers share their thoughts and feelings with the audience, which may be affected by that. To emphasize important information the speakers abundantly use exaggerated articulation and word stress which helps the audience to focus on what is important and to remember it easier. The Apple presentation are well known for its visual aspect, which is part of the non-verbal communication. In conjunction with the professional use of non-verbal signs the presentations have the intended persuasive effect on the audience. The differences between individual Keynotes are most likely caused by the fact that they were different speakers at each of the Keynotes.

From the comparison of Steve Jobs' and Tim Cook's behaviors is obvious that they have distinctive personalities and that they both use their language and non-verbal signs in a different way, even though they want to fulfill the same goal. From the quantity of products sold each year is apparent that the presenters are experts in their field.

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CEO Chief Executive Officer

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APPENDIX P I: MACWORLD 2007

Steve Jobs – CEO, Apple Inc.: [Music] Morning (applause) James Brown! So, thank you. Thank you for coming. We're gonna make some history together today. (applause) So, welcome to Macworld. You know, it was. uh it was just a year ago that I was up here and announced that we were gonna switch to Intel processors. A huge, heart transplant to Intel microprocessors. And uh I said that we would do it over the coming 12 months. We did it in seven months, (applause) and it was the [cough] – it's been the smoothest and most successful transition that we've ever seen in the history of our industry. And it was because [cough] we made a beautiful, seamless version of OS X for Intel processors. And our team created Rosetta software which lets you run PowerPC apps on top of OSX on Intel processors. Our hardware team got to cranking out a new Mac with Intel processor every month, and we completed this transition in seven months. But we didn't do this alone. We did this with the help of a lotta folks. Our new colleagues at Intel really helped us. Thank you very much. (applause) [cough] Our thir… Our third-party developers rapidly moving their apps to universal versions to run at native speeds on Intel processors. Thank you very much. (applause) And most of all, our users. The minute you saw these lightning-fast machines, ya bought 'em. And we've had an extremely successful year, and I want to thank our users very much. (applause) Now, as many of you know, our retail stores have for a while been selling over half their Macs to people who have never owned a Mac before: switchers. Well, I'm pleased to report that now, in the U.S., Macs selling through all channels, over half of them are selling to people who've never owned a Mac before. It's not just limited to our retail stores anymore. (applause) Half the Macs we're selling in the U.S. We are picking up lots and lots of new members of the Mac family, and we couldn't be happier. As a matter of fact, here's uh uh uh one that might be coming on soon. Jim Allchin at Microsoft was quoted recently as saying if he didn't work for Microsoft, he would buy a Mac, (laughter) and he's retiring soon, so I've alerted our Seattle stores to keep an eye out for him and give him really good service. [cough] You know, uh Vista's coming out, and uh you know our ads with the Mac guy and the PC guy, uh we made a little ad for Vista, and I'd love to show it to you now, if you'd like to see it? (applause) So, let's go ahead and run it. [Video clip] (applause) (Laughter) So, 2007 is gonna be a great year for the Mac. But this is all we're gonna talk about the Mac today. We're gonna move on to some other things and over the course of the next several months we're gonna roll out some awesome stuff for the Mac. But for today, we're gonna move on. So, the first thing I'd like to do is give you an update about our music business. As you know, we've got the. the iPod, best music player in the world. We've got the iPod nanos, brand new models, colors are back. We've got the amazing new iPod Shuffle. The iPod, in addition to being the world's best MP3 player, has become the world's most popular video player, and by a large margin. The iPod Nano is the world's most popular MP3 player, by a wide margin. And the new shuffle is the world's most wearable MP3 player. (laughter) So, we had an incredible line-up for this holiday season, all refreshed and new products. Now I'd like to tell you a few things about iTunes now that are pretty exciting. Number one, we have crossed a major milestone. We have sold over 2 billion songs on iTunes. (applause) It's amazing. Now, there were some… there was an article recently that said iTunes sales had slowed dramatically. I don't know what data they're looking at, but uh this is our data, (laughter) and what we see is iTunes sales were really up this past year. Uh It took us over three years to get to a billion songs. We got our second billion in 10 months in 2006. And growing off us over 600 million song base, we doubled it in 2006. So, we couldn't be happier with the growth rate of iTunes and selling 2 billion songs. Now, we are selling over 5 million songs a day, now. Isn't that unbelievable? 5 million songs a day. That's 58 songs every second

of every minute of every hour of every day. And the last time we talked to you, we said that we were the 5th largest music reseller in the U.S. Now all these other guys sell music on CDs, and of course we sell it online. But if you add up all the music that's sold, we were the fifth-largest reseller. Because of the growth of iTunes, I am pleased to report that we have now passed Amazon. We sell more music than Amazon, and we are now number four. (applause) And you can guess who our next Target might be. So, so that's an update for music. Now I wanna talk about TV shows. We've got awesome TV shows on iTunes. As a matter of fact, we have over 350 TV shows that you can buy episodes from on iTunes. And I'm very pleased to report that we have sold now 50 million TV shows on iTunes. (applause) Isn't that incredible? Now, now, let me go on to movies. When we started with television shows, the pioneering partner we had was the Walt Disney Company. They decided to throw in with us and sell TV shows, and boy did it work. Well, when we decided to sell movies, they were right there with us again as our pioneering partner to sell movies. And I am really pleased to announce that in the first four months of selling movies, we have sold 1.3 million movies on iTunes, which I think has exceeded all of our expectations. And today, we have a new partner joining the Walt Disney Company to sell movies on iTunes, and that is Paramount. (applause) Paramount is gonna be selling movies on iTunes. And uh we're thrilled because they have some awesome movies. Let me just show you a few of the titles here that are going up as we.as we speak. All. all six Star Trek movies. (laughter) So, we are gonna be moving up from the hundred movies we've offered so far to over 250 movies now offered on iTunes. These are getting up as fast as we can over the next week or so. And we hope to be adding even more movies as other studios throw in with us as 2006 rolls on. So, that's an update on iTunes. Now, as I said, we had a very strong lineup of music players for this holiday season. We always have stiff competition. That's just part of this business. And we had a new competitor this last holiday season, (laughter) which was, of course, Microsoft's Zune. So, how'd they do? Well, we don't have data for December yet, cuz it's not out till next week or the week after, I forget. But we have data for November, which was their launch month, should have been real big. And they garnered two percent market share. Two percent market share. uh iPod had 62 percent market share, and the rest had 36. Now again, we don't have data for December. We know we went up uh uh quite a bit in December in terms of market share. And uh we'll find out how they did. But two percent in their launch month. So, no matter how you try to spin this, UHM what can you say? (laughter) (applause) So, that's an update on how we're doing in the new music business, and we've got a few new ads for iPods. And we work with some of the greatest folks to create advertising. And uh... uh they created this... this wonderful ad that I'd love to show you right now, so let me go ahead and roll it. [Video clip] Whew. (applause) Now, just to let you in on our process a little bit. These guys are incredibly creative, they couldn't stop. And they took the same song, which is a uh you know uh uh uh uh a up-and-coming British pop group, and they uhm... they took the same dancers, and they did some different animation, and they came up with what you're about to see. [Video clip] (applause) Isn't that great? So, those'll be running shortly. And that is an update to our music business. Now, I'd like to talk about a product we introduced in September. uh called, it was called the code name was iTV. We have a new name for it. It's called Apple TV. uh but you should never, you should either go with your code name, like we did with the Mac, or you should pick a code name quite a bit – a real name quite a bit different than your code name, so I'll probably stumble and call this iTV five times today by mistake. I apologize. So, Apple TV. And uh Apple TV is a way to enjoy your media on your big screen TV. So, let's let's uh backtrack and talk about what we did when we uh previewed this in September. You can buy great content on the iTunes music store: Movies,

TV shows and music, of course. And you can download it to your computer, be it a PC or a Mac. I'm… I'm gonna use a Mac here. (laughter) You can put other content on your computer from other places too, of course. [0:12:57] And you can put that content on your iPod, right? Now, you can go out and buy a wide-screen TV, hook up an Apple TV to it, and wirelessly transmit that content from your PC to your Apple TV and watch it on your big screen TV. It's that simple. Right? It's that simple. So, this is it. Let's take a look at around the back at the connectors to refresh ourselves. We have a power connector, USB 2, and Ethernet. We have wi-fi wireless networking built in. And then we have ways to get video out. An HDMI connector, which is digital audio and video. Or component video and analog and digital audio. Right? All out the back. Most people, however, will just use these three. They'll plug it in. There's no power brick necessary. And they'll hook up an HDMI cable to their wide-screen TV, and they'll use wireless networking to get their content. So, it's really, really easy to use. And let me tell you more a little more in-depth about what this box does. First of all, it delivers up to 720p high-definition video. Right? Number one. Number two, it's got a 40 gigabyte hard-drive inside it. So, it will store up to 50 hours of video. Which comes in handy for something I'm about to show you. And it has 802.11 wi-fi wireless networking, and it's got all three of the popular standards. (applause) It's got B, G, and the new Draft N standard, which is really, really fast. And it's got an Intel processor in it, so it's got the processing horsepower to do the kinds of user interfaces we like to do. So, it's a really cool box. It works with video, music and photos. It was designed for wide-screen TVs. It's got wi-fi wireless networking, internal 40 gig hard drive. It, you can auto-sync your content from one computer. And you can stream content from up to five computers. So, let's examine this in a little more detail. Auto-sync from one computer. What does this mean? It means you can take one of the computers in your house, and right from iTunes, just like you would set up an iPod, you could set up your Apple TV. And you can set up your Apple TV to say, oh, take my ten most recently purchased unwatched movies and automatically put them on the hard drive of Apple TV. So, that whenever I walk up to Apple TV, they're there. Right? So, let me show you, I'm gonna to do this with six TV shows. They just automatically, whenever I buy them, they just automatically will stream in the background to Apple TV and be stored on the hard drive. Right? So, whenever I go to watch something, they are there. Now, I can also stream from up to five computers. In this case, I'm gonna take content from five computers, and I can watch it on Apple TV but I will…will not store it on the hard drive. Right, so you can just stream it live and watch it from other computers in the house. Or if your neighbor comes over with a... a notebook and they've got something cool that you wanna watch on your widescreen TV. Again, PCs or Macs, I just choose the computer that I like. (laughter) So, this is Apple TV, and oh why don't we go ahead and show it to you? You can control it with this very simple remote. So, let's go see a demo. This is the screen saver. Takes all your photographs here and just puts them on your TV and they're gorgeous, because as you know, phot…photography these days is high-def, with these amazing digital cameras that we have. So, let's go into the main menu of iTV, and uh here's what it looks like. We've got movies, TV shows, music, podcasts, photos. So, let's go into movies here. And we go into movies and uh, let's see here now, we have uhm all my movies that are stored on iTV, as well as the iTunes top movies. I can go see what's selling on iTunes and stream it down and watch it on iTV. I can also look at theatrical trailers. Again, this is not stored on iTV. This is actually coming over the live Internet. Into my house through my Internet gateway, wirelessly to i – to Apple TV, and I can watch theatrical trailers streaming right from Apple.com. So, let's go in here. And uh what's a cool trailer? Uhmmm gonna watch..yeah this one called the Good Shepherd. where'd it go..oh G.. Good Shepard, there we

go. Boom. So, let's watch this, I just click on it, and this is streaming live from Apple.com. [Movie trailer] So, you get the idea. You can sit on your couch and watch theatrical movie trailers with iTV. Now, let's back up here, and let's go play a movie. uhm We've got Zoolander here. Let's go play a little part of Zoolander. One of our new Paramount movies. [Movie clip] (applause) Isn't this great? So, that's movies, and uh let's go take a look at uh at into TV shows here. It's…. again, incredibly cool. Let's go into uh "Heroes," (applause) a really great new show, and uh let's play an episode called Better Halves. [TV clip] (applause) OK, well, that's TV shows. And uh Now let me show you uh music. You know, iTV, of course is – Apple TV (laughter) is uh primarily for video, but it turns out it's awesome for listening to music on your home theater system, as well. We think a lot of people are going to buy it uh buy it for that. So, we've got music here, we've got the iTunes top music and top music videos. And uh let me go down into a playlist here. And uh, We've got a favorites playlist, I'll go into that. And I'll just shuffle some songs, cause I wanna show you what it's like when you're playing music here. [Music plays] So it does that so it doesn't burn a hole in your uh plasma TV there. And uh we can go ahead and just go to the next track here. next track. So, that's what it's like to play music. Alright. So, now let's go to photos. You know, Again, your photos are high-def. These new digital cameras are awesome. And so, you can just, again, move your photos to iTV or stream them over, over wireless networking. And see your photos right on your TV. So, as an example, here's a photo album I made of uh. [slideshow plays with music] just beautiful. So, you get the idea. It's really cool to watch photos on your widescreen TV. Now, uh what I've been demonstrating so far uh is primarily content that has been synced to Apple TV from my computer and I'd like to show you what it's like uh when you uh wanna connect to someone else's computer. Let's say uh Phil Schiller my neighbor comes over and uh he's got his MacBook and… (applause) Phil, what do you got on your Mac. You got some content we could watch? **Phil Schiller:** Hi neighbor, yea I have some really cool show I was watching, and I wanna to show you on your apple TV. **Steve Jobs:** Great, Well, let me just go down here to sources, and uh here's the uh you know Apple TV that I've been playing off the hard drive of, and I just say I wanna connect to a new iTunes right here, and iTunes is running on Phil's machine. It says type in this PIN, for security reasons, and Phil types in the PIN into his MacBook and uh the minute. They're fully authenticated now, and there's Phil's MacBook right up there and I push it, and now I'm gonna be looking at the content right off of Phil's MacBook and what you wanna watch, Phil? **Phil Schiller:** Let's go into TV shows. **Steve Jobs:** Alright, here we go. Which one? **Phil Schiller:** Yeah, I want to show you something from 30 Rock. **Steve Jobs:** Alright go to 30 Rock here. **Phil Schiller:** There is really funny scene, when Jack meets Dennis. **Steve Jobs:** … Jack meets Dennis, OK, great. Here we go. We're streaming off of Phil's MacBook to this Apple TV live. [Video clip] Alright, so, Thank you Phil. That is Apple TV. (applause) So, we think this is pretty cool. Apple TV. Movies, TV shows, music and photos all on your widescreen TV. I'm really excited about it. So, Apple TV is gonna be priced at $299. Right? (applause) $299 for all this built in. And we're gonna be shipping them next month, in February, and we are taking orders starting today. So, (applause) Apple TV. Enjoy your media on your big-screen TV. We think this is gonna be really something quite special. Apple TV. (Pause) This is a day I've been looking forward to for two-and-a-half years. (applause) Every once in a while, a revolutionary product comes along that changes everything. And Apple has been – well, first of all, one's very fortunate if you get to work on just one of these in your career. Apple's been very fortunate. It's been able to introduce a few of these into the world. In 1984, we introduced the Macintosh. It didn't just change Apple, it changed the whole computer industry. (applause) In 2001, we introduced the first

iPod, and…(applause) it didn't just – it didn't just change the way we all listen to music, it changed the entire music industry. Well, today, we're introducing three revolutionary products of this class. (applause) The first one: is a widescreen iPod with touch controls. (applause) The second: is a revolutionary mobile phone. (huge applause) And the third is a breakthrough Internet communications device. (applause) So, three things: a widescreen iPod with touch controls; a revolutionary mobile phone; and a breakthrough Internet communications device. An iPod, a phone, and an Internet communicator. An iPod, (laughter) a phone (applause)… are you getting it? These are not three separate devices, this is one device(applause), and we are calling it iPhone. (applause) Today, today Apple is going to reinvent the phone, and here it is. (laughter) No, actually here it is, but we're gonna leave it there for now. So, before we get into it, let me uh talk about a category of things. The most advanced phones are called smart phones. So, they say. And uh they typically combine a phone plus some e-mail capability, plus they say it's the Internet. It's sort of the baby Internet, into one device, and they all have these plastic little keyboards on them. uh and the problem is that they're not so smart and they're not so easy to use, so if you kinda make a… Business School 101 graph of the smart axis and the easy-to-use axis, phones, regular cell phones are kinda right there, they're not so smart, and they're – you know – not so easy to use. Uhm but smart phones are definitely a little smarter, but they actually are harder to use. They're really complicated. Just for the basic stuff a hard time figuring out how to use them. Well, we don't wanna do either one of these things. What we wanna do is make a leapfrog product that is way smarter than any mobile device has ever been, and super-easy to use. This is what iPhone is. (applause) OK? So, we're gonna reinvent the phone. Now, we're gonna start… with a revolutionary user interface... is the result of years of research and development, and of course, it's an interplay of hardware and software. Now, why do we need a revolutionary user interface? I mean, Here's four smart phones, right? Motorola Q, the BlackBerry, Palm Treo, Nokia E62 – the usual suspects. And, what's wrong with their user interfaces? Well, the problem with them is really sort of in the bottom 40 there. It's, it's this stuff right here. (laughter) They all have these keyboards that are there whether you need them or not to be there. And they all have these control buttons that are fixed in plastic and are the same for every application. Well, every application wants a slightly different user interface, a slightly optimized set of buttons, just for it. And what happens if you think of a great idea six months from now? You can't run around and add a button to these things. They're already shipped. So, what do you do? It doesn't work because the buttons and the controls can't change. They can't change for each application, and they can't change down the road if you think of another great idea you wanna add to this product. Well, how do you solve this? Hmm. It turns out, we have solved it! We solved it in computers 20 years ago. We solved it with a bit-mapped screen that could display anything we want. Put any user interface up. And a pointing device. We solved it with the mouse. Right? We solved this problem. So, how're we gonna take this to a mobile device? What we gonna do is get rid of all these buttons and just make a giant screen. A giant screen. (applause) Now, how are we gonna communicate this? We don't wanna carry around a mouse, right? So what are we gonna do? Oh, a stylus, right? We're gonna use a stylus.No. (laughter) No. Who wants a stylus? You have to get em and put em away, and you lose em. Yuck. Nobody wants a stylus. So, let's not use a stylus. (laughter) We're gonna use the best pointing device in the world. We're gonna use a pointing device that we're all born with – we're born with ten of them. We're gonna use our fingers. We're gonna touch this with our fingers. And we have invented a new technology called multi-touch, which is phenomenal. It works like magic. (laughter) You don't need a stylus. It's far more accurate than any touch display that's ever

been shipped. It ignores unintended touches, it's super-smart. You can do multi-finger gestures on it. And boy, have we patented it. (applause) So, so we have been very lucky to have brought a few revolutionary user interfaces to the market in our time. First was the mouse. The second was the click wheel. And now, we're gonna bring multi-touch to the market. And each of these revolutionary user interfaces has made possible a revolutionary product – the Mac, the iPod and now the iPhone. So, a revolutionary user interface. We're gonna build on top of that with software. Now, software on mobile phones is like is like baby software. It's not so powerful, and today we gonna show you a software breakthrough. Software that's at least five years ahead of what's on any other phone. Now how do we do this? Well, we start with a strong foundation: iPhone runs OSX. (applause) Now, why, why would we wanna run such a sophisticated operating system on a mobile device? Well, because it's got everything we need. It's got multi-tasking. It's got the best networking. It already knows how to power manage. We've been doing this on mobile computers for years. It's got awesome security. And the right apps. It's got everything from Cocoa and the graphics and it's got core animation built in and it's got the audio and video that OSX is famous for. It's got all the stuff we want. And it's built right into iPhone. And that has let us create desktop class applications and networking, right. Not the crippled stuff that you find on most phones. This is real, desktop-class applications. Now, you know, one of the pioneers of our industry, Alan Kay, has had a lot of great quotes throughout the years. And I ran across one of them recently that explains how we look at this. Explains why we go about doing things the way we do, cause we love software. And here's the quote: "People who are really serious about software should make their own hardware." (applause) You know, Alan said this 30 years ago, and this is how we feel about it. And so we're bringing breakthrough software to a mobile device for the first time. It's five years ahead of anything on any other phone. The second thing we're doing is we're learning from the iPod, syncing with iTunes. You know, we're gonna ship our 100 millionth iPod this year, and that's a lo… 10s of millions of people that know how to sync these devices with their PCs or Mac and sync all of their media right on to their iPod. Right? So you just drop your iPod in, and it automatically syncs. You're gonna do the same thing with iPhone. It automatically syncs to your PC or Mac right through iTunes. And iTunes is gonna sync all of your media onto your iPhone: Your music, your audio books, podcasts, movies, TV shows, music videos. But it also syncs a ton of data: Your contacts, your calendars and your photos, which you can get on your iPod today, your notes, your..your bookmarks from your Web browser, your e-mail accounts, your whole e-mail set-up. All that stuff can be moved over to your iPhone completely automatically. (applause) It's really nice. And we do it, we do it through iTunes. Again, you go to iTunes and you set it up. Just like you'd set up an iPod or an Apple TV. And you set up what you want synced to your iPhone. And it's just like an iPod. Charge and sync. So, sync with iTunes. Third thing I wanna talk about a little is design. We've designed something wonderful for your hand, just wonderful. And this is what it looks like. It's got a three-and-a-half-inch screen on it. It's really big. And, it's the highest-resolution screen we've ever shipped. It's 160 pixels per inch. Highest we've ever shipped. It's gorgeous. And on the front, there's only one button down there. We call it the home button. Takes you home from wherever you are. And that's it. Let's take a look at the side. It's really thin. It's thinner than any smart phone out there, at 11.6 millimeters. Thinner than the Q, thinner than the BlackJack, thinner than all of them. It's really nice. And we've got some controls on the side, we've got a little switch for ring and silent, we've got a volume up and down control. Let's look at the back. On the back, the biggest thing of note is we've got a two-megapixel camera built right in. (applause) The other side, we're back in the front. So, let's take a look at the top now. We've got

a headset jack. 3 and half millimeter all your iPod headphones fit right in. We've got a place, a little tray for your SIM card, and we've got one switch for sleep and wake. Just push it to go to sleep, push it to wake up. Let's take a look at the bottom. We've got a speaker, we've got a microphone, and we've got our 30-pin iPod connector. So, that's the bottom. Now, we've also got some stuff you can't see. We've got three really advanced sensors built into this phone. The first one is a proximity sensor. It senses when physical objects get close, so when you bring iPhone up to your ear, to take a phone call, it turns off the display, and it turns off the touch sensor, instantly. Well, why do you wanna do that? Well, one to save battery, but two, so you don't get spurious inputs from your face into the touch screen. Just automatically turns them off, take it away, boom, it's back on. So, it's got a proximity sensor built in. It's got an ambient light sensor, as well. We sense the ambient lighting conditions and adjust the brightness of the display to match the ambient lighting conditions. Again, better user experience, saves power. And the third thing we've got is an accelerometer, so that we can tell when you switch from portrait to landscape. It's pretty cool. Show it to you in a minute. So, three advanced sensors built in. So, let's go ahead and turn it on. This is the size of it. It fits beautifully in the palm of your hand. So, an iPod, a phone, and an internet communicator. Let's start with the iPod. You can touch your music. (laughter) You can just touch your music, it's so cool. You've got a widescreen video. You can find your music even faster. Gorgeous album art on this display. Built-in speaker, and, why not? Cover flow. First time ever on an iPod. So, rather than talk about this some more, let me show it to you. (applause) Alrighty. Now, I've got some special – some special – iPhones up here, they've got a little special board in them so I can get some digital video out, and I've got a little cord here which goes up to these projectors, and uh so I've got some great images, and you get to see what it really looks like. So, let me, I've got a camera here so you can see what I'm doing with my finger for a few seconds. And uh let me go ahead and get that picture within picture up. I'm gonna go ahead and just push the sleep/wake button and there we go, right there. And to unlock the phone I just take my finger and slide it across. (applause) Want to see that again? Sleep. We wanted something you couldn't do by accident in your pocket. Just slide it across. Boom. And this is the home screen of iPhone right here. And so if I want to get in the iPod, I just go down to that lower right hand corner and push this icon right here, and boom, I'm in the iPod. I wanna get home, I push the home button right here, and I'm home. Back in the iPod. I am back in the iPod. Now, here I am you see five buttons across the bottom. Playlists, artists, songs, videos and more. I'm in artists right now. Well, how do I scroll through my lists of artists? How do I do this? I just take my finger, and I scroll. (applause) That's it. Isn't that cool? A little rubber banding up when I run off the edge. And if I wanna pick somebody, let's say I wanna pick the Beatles, I just tap them, and here's the Beatles songs with their albums right here. If I wanna play Sgt. Pepper's I just hit Sgt. Pepper's right there, and uh "A Little Help From My Friends." Look at this gorgeous album artwork here. Of course, I've got a volume control. Now, I've got a little button up in the corner right here, you can see in the upper right-hand corner, I can hit that and flip the album art around. There's all the other songs back here. And I can play "Lovely Rita" if I want to. Flip it back around. Very simple. Right, I can set some stars back here just by setting the arrows. Right? That's a five-star album. Isn't that cool? (applause) Yeah, it's pretty nice. Now, let me show you something else. I just take my unit here, and I turn it landscape mode, oh, look what happens! I'm in cover flow. (applause) Let's go into Dylan here, let's play "Like a Rolling Stone." I just thumb through, just thumb through my albums. It's really easy. Anytime I find something I like, I can just turn it around, and play something. It's that easy. [playing around with different music] It's that simple. Isn't that great? Yeah. Alright.

I could play with this for a long time. Uh (laughter) Now, Again, I've got playlists here. I can go into my playlists. I've got artists. I've got songs. Uh I've got more over here. I've got you know – albums. I've got a great album view again that shows all my album artwork right here if I want. uh And uh I've also got audio books and compilations and things like that. I've also got videos here. So, I push videos and uh I've got here i've got a podca.. video podcast loaded on, and a music video. And I've got a TV show and a movie, and I'd like you to just show the uh TV show here. This is an episode from The Office. All videos we look at in uh.. in landscape. [Video clip] We have touch controls on here, of course. Isn't that awesome? Isn't that awesome? Let's go uh… Now I wanna show you uh a movie playing. Let's play Pirates of the Caribbean, the second one, here. Great movie, by the way. And uh… [Movie plays] Now this is a widescreen movie so I just double-tap and I can see the whole thing here, or I can fill up the screen, whichever I like. And again, I've got on-screen controls here. Isn't this cool? (applause) So, we can be watching feature-length movies just like this. Alrighty. So, that – is the iPod. Pretty cool, huh? (applause) We've just started. So, again, touch your music. Scroll through your songs, scroll through your playlists. It's incredible. Widescreen video like you've never seen on a portable device, 160 pixels per inch, gorgeous screen quality. Gorgeous album art, and cover flow. It's the best iPod we've ever made. Again, some of the screen shots. It's unbelievable. Here's some album art I just put up, so you can see what it looks like. Just, no matter what you like, it looks pretty doggone gorgeous. (pause) And of course, cover flow and video, with on-screen controls. (applause) You know, I was showing this to somebody – I was giving a demo to somebody a little while ago, who had never seen this before, inside Apple. And I uh finished the demo, I said what do you think. He told me this, he said, you had me at scrolling. So, the iPhone with the most amazing iPod ever. You can now touch your music. So, that's the iPod. Now, let's take a look at a revolutionary phone. We wanna reinvent the phone. Now, what's the killer app? The killer app is making calls! (applause) It's amazing, it's amazing how hard it is to make calls on most phones. Most people actually dial them every time. Most people don't have very many numbers in their address book they use their recents as their address book. Right? How many of you do that? I bet more than a few. (applause) So, we wanna let you use contacts like never before. You can sync your iPhone with your PC or Mac and bring down all your contacts right into your phone. So, you've got everybody's numbers with you at all times. We have something that's going to revolutionize voice mail today. We call it visual voice mail. Wouldn't it be great – if you didn't – if you had six voice mails if you didn't have to listen to five of them first before you wanted to listen to the sixth? (applause) Wouldn't that be great if you had random access voice mail? Well, we've got it. Just like e-mail you can go directly to the voice mails that interest you. Excellent audio audio quality. iPhone is a quad-band, GSM plus Edge phone. We have decided, we decided, to go with the most popular international standard, which is GSM. We're on that bandwagon, headed on that roadmap, and uh plan to make 3G phones and all sorts of other amazing things in the future. So, quad-band GSM plus edge, and of course we have wi-fi and Bluetooth 2.0 EDR built in, as well. (applause) And so this is what it looks like when you get a call. This is what it sounds like. It's one of our ring tones, you can pick of course. So, I wanna show you four things. I wanna show you the phone app, photos, got a calendar, and SMS messaging. The kind of things you would find on a typical phone, but in a very untypical way now. So, let's go ahead and take a look. So, let's go to our phone, first. You see that uh icon in the lower left-hand corner, the phone? I just push it right here, and boom, I'm in the phone. And I've got five buttons across the bottom: favorites, recents, contacts, keypad and voice mail. I'm in contacts, right now, again. How do I move around my contacts? I just scroll

through them. And so, let's say I wanna make a call to Jony Ive. I can just push here, and I see Jony Ive's context, with all his information: his three phone numbers, his e-mail, whatever else, his address, whatever else I've got. It's all in one place. And if I wanna call Jony, all I do is push his phone number. I'll call his mobile number right now. And now, we are calling Jony here. Hey, Jony, how you doing? **Jony Ive**: [on phone] I am good how you doing? **Steve Jobs:** Well, it's been 2 and a half years, and I.. I can't tell you how thrilled I am to make the first public phone call with iPhone. (applause) I… I remember when we first started working on this, and it's.. it's just unbelievable. Wah, whoa, what is this? I've got another call coming in. Jony, can I put you on hold for a minute? Ok. So, I put Jony on hold and … Hi Phil. **Phil Schiller:** [on phone] Hey, Steve, I wanted to be the first call! (laughter) **Steve Jobs:** Sorry Phil! As you can see, it's pu.. put Jony on hold, and Phil, I can just touch Jony and bring Jony back. Hey, Jony are you there? **Jony Ive:** Yea I am here. **Steve Jobs:** Hey listen, uh Phil called. Do you mind if I conference him in? **Jony Ive:** I guess so. **Steve Jobs:** You can see the m.. uh button has changed to merge calls right there in the middle, so I just push that right here, and now, I've created a conference call. (applause) Jony, you there? **Jony Ive:** Oh yeah. **Steve Jobs:** Phil, you there? **Phil Schiller:** I am still hanging on. **Steve Jobs:** So here we are, and uh listen I gotta get back to my keynote, so uh if I wanna do that, what i'm gonna.. I just touch this arrow right here, and uh I'm gonna go ahead and take Jony private here and uh put Phil on hold. Jony, do you have anything to say on the first phone call? **Jony Ive:** It's not too shabby is it? (laughter) **Steve Jobs:** It's not too shabby. You take care, Jony. And I end this call. and it..Phil's on hold. I take him off of hold. Phil, thanks very much, I gotta get back to the keynote now. **Phil Schiller:** All right see you later. Bye-Bye. **Steve Jobs:** Alrighty. (applause) So, now I've also got a way to make a list of favorites here, from my most-often called numbers so I can just touch it once and dial.. dial the number. And I might wanna add somebody to favorites, so let's say I wanna add Phil Schiller, I just push that plus button in the upper right-hand corner right there, and up pop my favorites, and I can just go to uh "S" is here and there's Phil, so uh Phil Schiller is right there. And uh I'll put, let's say I wanna put Phil's work number, and it's added Phil, right there you can see the favorites. I can edit favorites by pushing the edit button in the upper left-hand corner, and I can move Phil up if I want to, you know maybe to the top. And uh let's see, i'm not gonna.. you know type Tony's changed his number I've got to update this anyway, so I'm gonna get rid of that and I can just remove Tony. Boom, there we go. It's that simple to edit these things. Very, very easy. I've got recents right here, which is all my recent phone calls. If I wanna see the ones I've missed, which are in red, I can just go up and touch that button at the top, and boom, those are all the ones I've missed, and those are all the calls that I've placed or have gotten. If I wanna dial the phone, if I'm real last-century, I can push keypad here, and uh I can dial a call just with … oops, called four, sorry. Wrong number. uh 408 uh 996-1010. And it formats the numbers and uh if I want to, I can just keep dialing, let's say it's a European number, and the numbers just keep getting smaller, real simple. Very simple to dial with the keypad. Now let me show you visual voice mail. This is so cool. This is a collaboration that we've done, which I'll talk more about later, and uh it allows us to have random access voice mail. Go directly to the voice mails we want. So, as an example, I come to my voice mail, and I say, oh, there's one by Al Gore. I wanna hear that one. I just push it. [Congratulatory message from Al Gore plays.] Now, if I wanna call Al back right now, I can just push that call back button. But I wanna listen to one from Tim Cook I've got here, so let me listen to Tim. [Message plays with Joke about revenue] Isn't this awesome. (applause) And so I've got voice mail how I wanna listen to it, when I wanna listen to it, in any order I wanna listen to it with visual voice mail. So, that is a quick tour of the

phone app. Now what I wanna do is show you SMS texting. So, I just go to that SMS icon in the upper-left-hand corner and push it. And I not only have SMS texting, but I have multiple sessions. So, I can be carrying on conversations with people, and every time I get a new message from them, I'll be alerted to that, and go check it out. So. As an example here, I've got Eddie and I've been carrying on a conversation with Eddie, and I just tap this, and here's the conversation I've been carrying on right here, right. And if there's a new message it will tell me. And so there's a new message from Phil, and uh let's see the conversation was what: [SMS messages] Hey Steve. Hi. Still on for dinner tonight? Absolutely. Your turn to pick. Hmmm I pick Sushi Ran. How about 7 o clock tonight? And I say, I can can just say, you know. Sounds great. And I've got this little keyboard which is phenomenal. It does error prot-uh prevention and correction. Not that I won't make some, I probably will. But it's actually really fast to type on. It's faster than all these little plastic keyboards on all these smart phones. So, I can just say "sounds great, see you there." And I can send that. And there it is, right. It's that simple. (applause) And when Phil messages me back, I'll be alerted, I'll see the dot, and I can just go pick up that conversation where it left off. If I wanna send a message to Eddie I or Scott, I just push this and send a message and go. It's so simple. So, that's SMS messaging, and uh you know again, you've seen the keyboard, it's pretty awesome. We'll come back to that a little bit later. And the third app I wanna show you as part of the phone package is photos. You know, we have a two-megapixel camera built in, as I said. We also have the coolest photo management app uh ever, certainly on a mobile device, but I think maybe ever. And uh so here's uh here's our photos. I'm going to go into our photo library, and this is our library and again, I can just scroll through photos here with my finger. Pretty cool. Let me go to uh photo album, I'll pick Italy, and I just uh, let's start at the top. And to go through pictures, I just swipe them. I can just swipe through my photo library. Oh There's one that's uh that's landscape. (applause) I can just turn my device and take a look at it. Pretty cool, huh? So.. Alright? So I can even swipe when I'm in landscape here. Yeah? Isn't this awesome? The other thing I can do is uh I can take any of these pictures and uh I can make them bigger. And uh So let me go ahead and get the camera back up yeah there it is right there. I can uh.. I can just take my fingers and I can, we call it the pinch, I can bring them closer together and move them further apart to make it bigger or smaller. And so I can just move them further apart and stretch the image. (applause) Isn't that cool? I can move it around, and … isn't that cool? And now, now what I can do is I can uh pick to uh make this my uh wallpaper. And of course, I could you know.. jigger it around then and just set the wallpaper, and now when I uh if I'm back at home and I go to sleep, when I wake up from here on out, until I reset it, that's my wallpaper. Whenever I'm making a call, that's what I'm gonna see. Boom. There we go. So, photos, SMS and the phone app. That is part of our phone package for iPhone. (applause) Get a call, again, really great call management features, just scroll through contacts with your finger. All the information at your fingertips here. Favorites, last century, visual voice mail. Calendar, SMS texting, incredible photo app, the ability to just take any picture and make it your wallpaper. It's pretty unbelievable, and I think when you have a chance to get your hand on it, you'll agree, we have reinvented the phone. (applause) OK. So, now, let's take a look at an Internet communications device as part of iPhone. So what's this all about? Well, we've got some real breakthroughs here. To start off with, we've got rich, html e-mail on iPhone. The first time really rich e-mail on a mobile device. And it works with any IMAP or POP e-mail service. You got your favorite mail service, it'll likely work with it. And it's rich text e-mail. We wanted the best web browser in the world on our phone, not a baby web browser or a WAP browser, a real Web browser, and we picked the best one in the world, Safari, and we have Safari running on iPhone. It

is the first fully usable html browser on a phone. (applause) Third, we have Google Maps. Maps, satellite images, directions and traffic. (applause) This is unbelievable, wait till you see it. We have widgets, (applause) starting off with weather and stocks. And this communicates with the Internet over EDGE and wi-fi. And iPhone automatically detects wi-fi and switches seamlessly to. You don't have to manage the network. It just does the right thing. (applause) Now, I wanna take a second and talk about email. we hook up to almost any IMAP or POP3 mail service. I just want to give you some examples. IMAP of course is the best because you can keep your folders and all your e-mail on the server and access it from anywhere. uh Yahoo E.. Yahoo Mail is IMAP. Microsoft Exchange has an IMAP option. And obviously .Mac mail is IMAP, as well. POP3, Google Gmail, AOL Mail, and most ISPs are POP3 e-mail. Now, I wanna take a minute and highlight one. Yahoo Mail. Yahoo Mail is the biggest mail service in the world. They have over a quarter billion users. Biggest e-mail service in the world, and today, we are announcing with Yahoo that they are going to provide free push IMAP e-mail to all iPhone customers. (applause) So, this isn't just IMAP e-mail. It is push IMAP e-mail. So, when you get a message, it will push it right out to the phone for you. Same as a BlackBerry. Free IMAP push e-mail from Yahoo. So, we think this is a pretty big deal. So, what I'd like to do now is I'd like to show you: Mail, Safari, Google Maps and widgets running on iPhone. So, let's go see. So, let's go into mail. Second icon from the left on the bottom there. I just touch it with my finger, and boom, I'm there. And so I've got an in-box here, and this is, by the way, running live on Yahoo IMAP e-mail. This stuff is coming off a Yahoo server somewhere up in the cloud. And uh so I can say James Vincent here sent me an e-mail. And he's a proud father. And there we there we go. And I can just scroll here. I've got in-line photos, rich text e-mail. there we go. So, let's look at another one. Phil Schiller. She loved the gift. Again, in-line photos, rich text, pretty nice. Shopping list. Again, rich text right here. Pretty cool. Directions to Sushi Ran for tonight's dinner. Now, iPhone of course parses out phone numbers and as you can see there's a phone number in blue. I can just touch it, and boom, I'm gonna call this place. I don't really wanna call them so I'm going to end the call here. (laughter) But you get the idea. And uh this last one uh, Ken Bereskin is uh one of our marketing folks. He just returned from Antarctica. Ken's a great photographer, and he took all these great photos of uh of penguins in Antarctica. It's really cool. Look at this, it's great. Right in your e-mail, right on your phone. And if I want to – by the way –, I can uh look at my e-mail with a split view just like I do on my computer, and so I can select something here and just look at it down here if I want to peruse my messages real fast and just find that one message I was looking for. But I actually like the full-screen view. And of course, we have a standard in-box and drafts, and sent, and eh and and all sorts of folders you can put things in as well. So, it's real e-mail, just like you're used to uh on your computer, right here on your phone. It's extraordinary. And again, free IMAP e-mail from Yahoo. Now, let me go ahead and just uh create an e-mail message. Show you what that's like. So, again, when I don't need a keyboard it's not there. When I do, it's there. I want to send a message to uh, let's say, Phil. I just type PH, and boom, Phil Schiller, it's address completion and maybe I'll send one to Scott Forrestal, as well, and there's Scott right there, and uh let's say the subject is uh dinner. Dinner and uh.. uh. you know. oops. See you tonight. Boom, and I just hit send. Sends that e-mail, and we're done. So, that is mail. Full desktop class e-mail running on a mobile device. Alright, now I wanna show you something incredible. I wanna show you Safari running on a mobile device. So, let's go to the Web, and here we are. I'm gonna load in, rather than apple.com here, a.. a little uh.. more universal site. I'm gonna load in the New York Times, it's kind of a slow site because it's got a lot of images, but here we are loading and we're loading over wi-fi right now. And rather than just

give you a WAP version of the New York Times, rather than give you this wrapped version all around, we're showing you the whole New York Times Web site, and there it is. And Guess what I can do, I can just put this into landscape mode, and there it is right there. And I can scroll here if I want. Scroll up and down here. Still loading it in. There we go. Or I can just get back like this. Now, this is really great and I can see the whole page but of course I can't read it. It's a little too small. So, I can get in with my fingers and pinch it but we have an optimization here. I can just double-tap on anything and it automatically fills up the screen with it. And I can just scroll around like this and scroll over here and I can even make this text bigger if I want to, and there it is. (applause) Just double-tap again to get back to the full page. Isn't this cool? So I can just. Look at this. There is the New York Times. And again, any article I want, boom, there we go. Boom. Unbelievable. Now, you can look at multiple Web pages as well. You can have multiple Web pages open. So, I just push this button in the lower-right hand corner. Shrinks it down, and I can add a new page if I want. And uh I'll go to uh Amazon here out of my bookmarks. So, let's go to Amazon. And I love to go the DVD section of Amazon and see what DVDs are selling. I like it especially when Disney's are at the top. (laughter) Uh, [cough] And, uh so here's Amazon coming, and even before the whole page is loaded on, I'm just going to double-tap on this, and.. and uh I'm gonna say let's go to the DVD section here, and now it's doing that. And here we are. And there's a section over here on the right hand side, right there, and these are the top sellers, updated hourly. Oh look, Al's Inconvenient Truth is number one. (applause) Alright. And here's all the other movies. Grey's Anatomy, I like that. Pirates of the Caribbean. Fantastic. And so I've got this right here, and I can go back to the New York Times if I want. You know. Zoom up to that picture so we can all see it. And again, here isn't this cool? Just go over there and go back to this one. I can get rid of them just by hitting the X. And there we go. Isn't that incredible? Safari. (applause) You know, if you've ever used what's called a Web browser on a mobile phone, you'll know how incredible this is. I hope you'll never really know, because it's it's bad out there today, and this is a revolution of the first order, to really bring the real Internet to your phone. Let me show you something about widgets here. uh Let's go to stocks right now, i'm gonna load stock information off the Web, and uh just right onto the phone here. Oh, look, Apple's up! (applause) That's great! [1:11:13] Well, I could look at different graphs here if I want to. And uh that's fantastic. Let's look at the percentages here. Oh, good. Good good. (laughter) So, I've got stocks right here, and uh I can go look at the weather. Let's see what uh what it's like outside. 49 degrees, but it's supposed to get to 61 today, so that's good. We'll just stay in here until it warms up. (laughter) Now, I've got uh Paris right here. I can have as many of these as I want, so it's nighttime in Paris. It's actually warmer in Paris at night than it is here today. Wow. Aspen, well, no snow till later in the week. And Hawaii. Oh, it's raining, that's not good. Well, anyway, here's four places. Hawaii, Aspen, Paris and San Francisco, and again, the weather widget. Now, to conclude with the Internet device section here, I wanna show you something truly remarkable, which is, Google Maps on iPhone. I hit our maps application here and it's coming up. And it shows us North America, and I'm gonna go to Moscone West. That's where we are right now. And here we are. Boom. That's where we are. Now, what I'm gonna do, is I'm gonna go uh look for something. I'm I'm gonna certainly want a cup of coffee afterward, so I'm just gonna look for Starbucks, right? Starbucks, so I'm gonna search for Starbucks, and sure enough, there's all the Starbucks. (laughter) (applause) Now, I can get a list of Starbucks here, so I can pick that one if I want, and I can even go look at that Starbucks, and there it is, and let's give em a call. **[on phone]:** Good morning, Starbucks, how can I help you? **Steve Jobs:** Yes, I'd like to order 4,000 lattes to go, please. No, just kidding,

wrong number. (laughter) Thank you. Bye-bye. (applause) OK. Now, I can zoom in by just again pinching if I want to. Or I can just double click to zoom in, and uh I get just uh higher and higher resolution versions of the map. So, let's go somewhere else here that I've got bookmarked. And uh Let's go to the Washington Monument. And so here's Washington, D.C, and I could uh just double-tap and uh I'm going in a little further here. Just double-tapping in. And there's the Washington Monument there, and I'll double-tap in again. And uh but now I wanna show you something else. Satellite images. So, I just hit this button called satellite down at the bottom. and It's gonna replace the map with satellite images, there we go. (applause) And uh I can just double-tap in, and double-tap in again. And uh let's it's catching up to me. There we go. And let's double-tap in again. This is the Washington Monument. (applause) There we go. Look at this. I can see people down there. (applause) Whoops, there we go. Yep. Isn't that incredible. Right on my phone! It's unbelievable. (laughter) So, let's go, uh I've got another one, uh the Eiffel Tower, which is very cool. I set this one uh to be uh, look at this, there's the Eiffel tower. There's people at the Eiffel Tower you can see. Look at that. isn't that incredible. And here, one last one I have to show you, the Colosseum in Rome. So, again, here we are in Rome. That's as far as we can go with the map, but we can go a little further with the satellite. There's the Colosseum. There's the Roman Colosseum. Satellite imagery, right on the phone. Look at that. That's the Colosseum. Unbelievable. Right on the phone. What'd'ya you think? Isn't that incredible? So, So, all these amazing things. This is a breakthrough Internet communicator built right into iPhone. The first rich html e-mail on a phone. The first real Web browser on a phone. Best version of Google Maps on the planet, widgets, and all with Edge and wi-fi networking. We're very, very happy with this. Again, e-mail. Push e-mail IMAP free Yahoo and almost any other IMAP and POP mail service you wanna hook up to. (pause) Incredible new technology for entering text. Far better than we've seen on phones before. A real browser on the phone. We can see real Web pages in portrait or landscape. We can zoom in on what we wanna take a look at more closely. Google Maps and widgets. It's the Internet in your pockets for the first time ever. Now, you can't you can't really think about the Internet, of course, without thinking about Google, right? And for Google, what we have on our phone, working with them is of course Google search, we have that built right into the browser. Just type what you want, hit Google and you're off. And Google Maps. We've been working very closely with them to make this all happen. We're thrilled with the results, and it's my pleasure now to introduce Dr. Eric Schmidt, Google's CEO. (applause)

Eric Schmidt: Congratulations Steve, what an incredible job. So, Steve, you know I've had the privilege of joining the board, and there is a lot of relationships between the boards. And I thought, you know, if we sort of merge the companies we can call them AppleGoo, but I am not a marketing guy. What I like about this new devise and new architecture of the internet is that you can actually merge without merging. Steve says that each company should do the absolutely best thing they can do everytime, and I think he shown it once again today. And internet architectures (applause) right? Intrenet architectures allow you now to take the enormous brain trust that is represented by the apple development team and combine that with the open protocols and data services, that companies like google and others represented coming up in a bit, to actually put them together in a seamless environment for users. what I particularly like is about this is it is a first time it all comes together into one place. Now from a google perspective, what we have done is that we have pushed very very hard to partner with other and particularly partner with Apple, the companies, the culture are similar, innovation, having fun while you are doing it. And also working with many many different data services. So, Steve showed a little bit of some of the components, some of the pieces and so for, that you can do. But, understand that this

is a set of data, maps, and partners and so for, that you can get the full integration. Person does not understand how hard is was to get it all together, it goes together seamlessly. From my perspective, this is a first of whole new generation of data services, where these cloud computers provides HTML and XML and other sophisticated services. Steve, congratulation to you and this product is gonna be hot. (applause) **Steve Jobs:** As a boardmember you'll get one of the first ones. Ok, now, you also can't think about the Internet without thinking about Yahoo. And again on the phone, we've got Yahoo Search built right in, you can select which one you wanna use. Just type in something, hit that Yahoo button and boom, you're off. And of course, we also have Yahoo IMAP e-mail services. And so, it is my great pleasure to introduce Jerry Yang, co-founder and chief Yahoo. Jerry. **Jerry Yang:** Congrats. Thank you Steve. Wow, all this for a phone, pretty incredible. What a great device, we are really proud at Yahoo to be partnering with Apple. One of the things we are gonna be doing with Apple is launching of some of our new service that we announced this week. Yahoo Go, Yahoo OneSearch, And hopefully we can get Yahoo OneSearch on this phone, which is really innovative way of looking at search. Not only getting a traditional websearch. As Steve said, Mail is a pretty killer app on this phone, and yahoo is really trying to redesign and renovate the internet experience on the mobile devices. This is really gonna be a great, not only having a seamless experience from a pc taken on your mobile internet. Lastly we really wanna be able to take what Apple is doing on a phone by reinventing the phone and reinventing the device we wanna be able to do that on the internet. Thanks again, great to be your partner. (applause) **Steve Jobs:** Thanks. You know, it's been great having the two greatest companies on the Web right down the block. Google and Yahoo. And we've been able to work with these guys really closely, and it's been an incredible pleasure to work on this great technology and bring it to everybody in iPhone. So, thank you guys so much. You've really helped us put the Internet in your pocket. (applause) So, Internet communicator, an iPod and a phone. Let's put them all together and see what you can do in a real-life scenario. So, let's take a look. I'm uh I wanna listen to some music, so I'm gonna go into my iPod here and uh let's see uh, in artists, I wanna listen to uh, oh, maybe Red Hot Chili Peppers, I love those guys. And so I'm listening to a song of theirs. [music plays] And let's see what happens when I get a phone call. Music fades out. Screen changes. Got a phone call coming in. So, I can ignore it, but I think I'm gonna answer it. So, I'll answer it. Howdy. Hi Phil. Now it knows who Phil is cause he is in my address book. So, it puts his little picture here and everything up there. Uh Hi Phil Listen I'm kind of busy right now. What can I do for you? [Phil Schiller talking on phone.] **Steve Jobs:** Oh, OK, uh hold on just a sec. So, I push the home button here, down at the bottom on my – go home right here, and I'm still on the call. You can see the uh the phone thing flashing right there on the lower left. And I go into photos and now I'm in photos and again you can see the bar across the top, the green bar, I can just touch that to return to the call. And uh Phil wants a photo that uh he wanted to use it for his screensaver, it was one of the ones that was taken in Hawaii, I think it was this one. Yep, there it is. So, you want me to mail this to you, Phil? Alright, So I again I just go down here and push this button, and rather than use it as wallpaper, I'm going to e-mail it. And uh So watch what happens now. It shrinks it a little bit, and then a compose windows will come up right behind it. There we go. And uh I will uh just tap in the to field and send this to Phil here, Phil Schiller there we go. And uh the e-mail is there, yep, it's there, and I'm just gonna send it. Hey, Phil, that should be on its way right now. Yup, Any else? uhm Let me go check it out. I Got uh.. I think I've got Fandango in my uh bookmarks here. And uh, Yes, I do. Let's go to Fandango, figure out what movies are playing. Yeah, ok. Here is fandango let's just double tap and here is the movies playing. yep. How about we go see uh "night

at the museum"? I haven't seen that yet. Great, alrighty. Hey, take care Phil. Now what I'm gonna do is: To go back to my uh call I just touch the top here, and I'm back at my call, and I'm just gonna go ahead and end the call. And uh What happens now? (applause) Back in my music. So, this is what it's like when you put it all together. iPhone. Today Apple is reinventing the phone. Now how does this stack up. Let's go back to to these guys. Let's take a look. Well, these are their these are their home screens. And again, as you recall, this is iPhone's home screen. uhm this this is what their contacts look like. This is what iPhone's contacts look like, and again, you just pick one and you see everything about that person, all the information you have. This is what mail looks like on these smart phones. Again this what mail looks like on iPhone. You have rich, html, rich text e-mail. This is what calendars look like on these guys. This is what calendars look like on iPhone. This is what the Web looks like, and we tried to make it look as good as we could on these. It usually looks worse and this is what you get, and of course, this is what you get on iPhone, and you can zoom in and see anything you want. (applause) And this is what you get for music players, nobody really uses them much. Uh and this is what you get on iPhone. So, after today, I don't think anyone is gonna look at these phones quite the same way again. Now let me tell you about some accessories we've got for iPhone. Got some great stereo headphones we're gonna be shipping. And uh they've got a little addition to them, which is this little thing right over here. It's a microphone and a switch, so you can talk, uh you have them in there, you can get a call and just talk. they've Beautiful reception on the microphone. And just push it together to answer a call or hang up on a call. And So you can be wearing them and.. It just dangles right there and picks up your voice beautifully. And we also have a Bluetooth accessory headset that we're gonna be shipping and there it is right there. It's incredibly small and uh just to let you see what it looks like, it's got one button on the top for answering and hanging up a phone call. You never have to turn it off or on. It just goes to sleep. It automatically pairs with iPhone so you don't have to worry about pairing. It's really simple. And uh it's very tiny. This is what it looks like in-ear. It's just beautiful. It's the coolest one that we've ever seen. So, Bluetooth headset coming as well. Battery life. There's a lot of stuff. A lot of these phones, a lot of these smart phones have pretty pretty low battery lives. We've managed to get five hours of battery, and that's for talk time, video or browsing. Five hours of battery life, and 16 hours of audio playback. So that's dramatically better than any of these smart phones. (applause) There is a tremendous amount of high technology in iPhone. We've been pushing the state of the art in every facet of this design. So, lemme just talk a little bit about it here. We've got the multi-touch screen. A first. Miniaturization, more than we've done before. A lot of custom silicon. Tremendous power management. OSX inside a mobile device. Featherweight precision enclosures. Three advanced sensors. Desktop class applications, and of course, the widescreen video iPod. We've been innovating like crazy for the last few years on this, and we filed for over 200 patents for all the inventions in iPhone, (applause) and we intend to protect them. So, a lot of high technology. I think we're advancing the state of the art in every aspect of this design. So, iPhone is like having your life in your pocket. It's the ultimate digital device. So, what should we price it at? (laughter) Well, what do these things normally cost? An iPod, the most popular iPod, $199 for 4 gig nano. What's a smart phone cost? Well, they say you get the phone and some of the Internet with it, although that's questionable. But they cost somewhere around $299. You can get them for $199. Palm just introduced one at $399 yesterday, so they generally average about $299 with a two-year contract. Now, these phones sort of do music but nobody uses them for music because they're not very good and so they end up buying an iPod to go with the phone. We know, we sell the iPod. And so people spend $499 on this

combination. What should we charge for iPhone? Cause iPhone has got a lot more than this stuff, right. It's got video. Real video. It's got wha… this beautiful gorgeous wide screen. It's got multi-touch user interface. It's got wi-fi. It's got a real browser. It's got html e-mail. It's got coverflow and on and on and on. And this stuff would normally cost hundreds of dollars. So, how much more than $499 should we price iPhone? Well, we thought long and hard about it, because iPhone just does so much stuff. So, much better experience on call, on managing your contacts, and visual voice mail. Random access voice mail for the first time. Texting and e-mail and real browser and Google Maps. Tremendous iPod and cover flow and video. What should we price this thing at? Well, for a 4 gigabyte model, we're gonna price it at that same $499. No premium whatsoever. $499. (applause) And we're gonna have an 8 gigabyte model for just $599. (applause) So, we're gonna price it starting at $499. Now, when's its gonna be available? We're gonna be shipping these in June. Yeah, June. (laughter) We're announcing it today because with products like this we gotta go and get FCC approval which takes a few months, and we thought it would be better if we introduced this rather than ask the FCC introduce (laughter) … to to introduce it for us. So, here we are, and we're gonna be shipping it in June in the U.S. We're going to Europe hopefully by the fourth calendar quarter of this year. And Asia in 2008. So, June, in just a few months, we'll be shipping in the U.S. And when we do, our partner is gonna be Cingular. (applause) We've chosen Cingular. They are they are the best and most popular network in the country. 58 million subscribers. They are number one. And they're gonna be our exclusive partner in the U.S. Now, it's a unique partnership though. We're not just gonna be selling phones and services together. We're gonna be doing innovation together. We worked with Cingular on visual voice mail. Because it's an innovation that requires both innovation on the phone and in the network. You can't do it in just one place. You have to do it in both places and collaborate. And so visual voice mail is the first fruit of this collaboration, and you will see more. And when we start shipping in June, we will be selling iPhone through our own stores, and through Cingular stores. The telecommunications industry, the computer industry and of course music with the iPod. And, uh and yet we have worked wonderfully together and we love these guys. Ad we think its… we're gonna bring some great stuff to the market over the years together. So, Let's take a look at uh, at this market, and how big it is. My clicker's not working. Oh. There it is. Maybe it is working. So, how big is this market, well let's take a look. No. Alrighty. Clicker is not working [with loud voice]. Alright. They're scrambling backstage right now. (laughter) You know, when I was in high school. (laughter) Steve Wozniak and I, m.. mostly Steve, uh made this little device called the TV jammer. And it, was, it was this little oscillator that put out frequencies that would screw up the TV. And Woz would have it in his pocket, and we'd go into like a dorm at Berkeley where he was going to school and a bunch of folks was watching like Star Trek and he'd screw up the TV, and somebody'd go up to fix it, and and just as they had their foot off the ground, he'd turn it back on. (laughter) And If they put their foot back on the ground he'd screw up the TV again. (laughter) And within five minutes he'd have somebody like this for the rest of the Star Trek episode. Ok. So, maybe it's working now, maybe they're gonna have to click 'em for me. So, game consoles. 26 million game consoles were sold in 2006 worldwide, actually a little smaller than you'd think. It's not such a big market. Digital cameras dwarfed it at 94 million. MP3 players 135 million. And PCs, about 209. Mobile phones, just about a billion last year, worldwide. So, what does this tell you? What this tells you is, that 1 percent market share equals 10 million units. This is a giant market. If you just One percent market share, you're gonna sell 10 million phones. And this is exactly what we're gonna try to do in 2008, our first full year in the market, is grab 1 percent market

share and go from there. So, we're gonna enter a very competitive market, lotta players, we think we're gonna have the best product in the world, and we're gonna go for it and see if we can get 1 percent market share, 10 million units in 2008, and go from there. So, today, we've added to the Mac and the iPod. We've added Apple TV and now iPhone. And you know, the Mac is the only one that you think really of as a computer. Right? And so we've thought about this and we thought, you know, maybe our name should reflect this a little bit more than it does. So, we're announcing today we're dropping the computer from our name, and from this day forward, we're gonna be known as Apple Incorporated, to reflect the product mix that we have today. [1:44:14] (applause) And I didn't sleep a wink last night. And uh I was so excited about today, because we've been so lucky at Apple. We've had some real revolutionary products. The Mac in 1984 is an experience that those of us that were there will never forget. And I don't think the world will forget it either. The iPod in 2001 changed everything about music, and we're gonna do it again with the iPhone in 2007. (applause) We're very excited about this. You know, there's an old Wayne Gretzky quote that I love. "I skate to where the puck is going to be, not where it has been." And we've always tried to do that at Apple. Since the very very beginning. And we always will. So, thank you very very much for being a part of this. (applause) [END]

APPENDIX P II: APPLE WWDC 2010 KEYNOTE ADDRESS

Steve Jobs – CEO, Apple Inc.: (applause) Good morning. Good morning. Thank you. Thank you very much. Thank you. Thank you very much. Thank you. It's great to be here. Thank you very much for the welcome. [Audience: We love you, Steve!] Thanks, I think. (laughter) Well, listen we have got a great conference for you guys this week. It's — we've really worked super hard to put this together. We've got over 5200 attendees, we're packed to the gills. Folks from 57 different countries are here this week and we sold out in eight days. So, it's taken us a little over a month before but this year eight days we were completely sold out, and we apologize to all those folks who wanted to be here, we didn't have room and this is the biggest place we can get. So, anyway. (laughter) Over 120 sessions this week and over 120 hands-on labs. And there are over 1000 Apple engineers that will be here this week. So, we're rolling out everything for you, some great sessions on Mac, iPhone, iPad. And just about everything you'd want to know there's somebody here that can answer your questions and sessions on almost everything. So, we're very excited about this year's conference and we're thrilled to have you here for it. Now, I'd like to give you a few updates to start with, and I'd like to start with the iPad. The iPad, this incredible device. (applause) It is really changing the way we're experiencing the web, things like e-mail, photos, you know, maps, video, you name i t. It is a whole new way to interact with the Internet, with apps, with our content media and it's going on really well and it is magical. I know it, because I got this email. "I was sitting in a cafe with my iPad and it got a girl interested in me." So, there's proof. (laughter) We have sold over 2 million iPads, we sold 2 million in the first 59 days. That's one every three seconds. So, iPad is now in 10 countries. We just started shipping in 9 of those 10 countries in the last two weeks and I put together a little video reel with some of the press coverage we got, So, could we run that now? [Video clip] So, we're in 10 countries today, we're going to be in 19 by the end of July. And we thank everybody for their patience, we're making iPads as fast as we possibly can. So, there are now 8500 native iPad apps in the App Store, which is really great. And of course, the iPad can run over 200,000 of the iPhone apps that are there as well. And these 8500 native apps have been downloaded over 35 million times. And So, if you divide that by those 2 million iPads out there, that's about 17 apps per iPad that have already been

downloaded. That's a great number; that's a great number. So, we're really thrilled with that. And again, let me just show you some of the latest apps that have been out, Pulse which is a wonderful RSS reader if you haven't seen it; Wallah, WebMD for finding out all sorts of things about procedures in your local pharmacy, eBay has got a great application out on the iPad, some wonderful education applications, Anatomy, isn't this cool? There are some wonderful stuff that's coming out, a lot of great games Iron Man, Avatar, Fieldrunners, Golf, a really cool DJ app, Flight Tracker, a lot of newspapers and magazines. This is the Financial Times, we've seen tremendous interest from publishers of all kinds, lot of great stuff that's out. And this is an app that's really cool. It's called The Elements and you can just peruse the periodic table and learn about the things that we're all made of, that's from Wolfram. And a friend of mine named Theo Gray wrote this and he sent me an e-mail and said that I could use it: "I earned more on the sales of The Elements for iPad in the first day than from the past five years of Google ads on periodictable.com." (applause) This is what we'd love to hear from you guys. And So, we're doing our best to get iPads out there like crazy. And I know a lot of you are doing your best to get your apps out on the iPad and I think it's a really fantastic combination. I'd like to tell you about one of our apps that we're updating today, which is iBooks on the iPad. You all know iBooks. Many people think it's the best e-book reader in the world. It's got this great book shelf for keeping your books and of course the iBookstore for buying books online. I've got a few stats today for you. In the first 65 days, users have downloaded over 5 million books, and that is about 2.5 books per iPad, which is terrific. The other interesting thing is the five of the six biggest publishers in the US who have their books on the iBookstore tell us that the share of ebooks now that are going through the iBookstore is about 22%. So, iBooks' market share now of e-books from these five of the six major publishers is up to 22% in just about eight weeks. And as we ship more iPads, that number is just going to keep going up and up and up, and we're really thrilled with it. So, we've got some enhancements to iBooks today. The first is, as you know, you can create highlights and highlight the things you want. You can also now make notes. (applause) So, you can make notes right there and you can post them. You can see them posted right on the — right over there. In addition to that, we've added a control on the upper right-hand corner. You can just tap and bookmark the page and you can see that bookmark whether or not the controls are up there. And when you go to the table of contents and look under bookmarks, you'll see all the pages that are bookmarked and all the notes you created as well as the highlights. So, that's pretty nice, an often-requested feature now in iBooks. We've added another big enhancement, too. One of the biggest requests we've gotten for the iPad is the ability to view and read PDFs. So, we've built that now (applause) right into iBooks. In addition to books, you can now view PDFs. And what we've done is we've put a little selector right up on the top and so, you can select between books and PDFs. When you select PDFs you get a whole new bookshelf just for PDFs and when you select one, they just look gorgeous. And you can navigate through them. You can flick through them and they're just — just gorgeous on the iPad. So, PDF viewing built right into iBooks and that's what we've done to enhance it today, and that enhancement will be out just a little bit later this month. So, that is my update for the iPad. (applause) Next, I'd like to talk about the App Store, something near and dear to all of us. Now, before I get into the App Store, I want to make something really clear. We support two platforms at Apple. Two! The first one is HTML5. HTML5 is a fully open uncontrolled platform that is forged and defined by widely respected standards bodies. Apple is a member of some of these standards bodies along with lots of other companies, and we fully support HTML5. A lot of the technology in it is come from Apple and Apple's browsers are in the lead in terms of supporting the full HTML5

standard. So, we're behind this a 100% and it's fully open. Anyone can write HTML5 apps and have them on the iPad, the iPhone, the iPod Touch, and of course, the Mac. The second platform we support is the App Store. The App Store is a curated platform with over now 225,000 apps and it is the most vibrant app community on the planet. There is nowhere else you can go and find 225,000 apps, and some of them are just terrific apps. So, we have these two platforms that we support and what I'd like to do now is talk about the App Store. Now you've read a lot about our process of approving apps. Let me give you some of the facts behind this, might be interesting to you. We get about 15,000 apps submitted every week. That's new apps, that's updates to apps, everything — about 15,000 a week, and they come in, in up to 30 different languages that we support. 15,000 apps a week, up to 30 languages, guess what? 95% of all the apps we get submitted are approved within 7 days. 95% of them approved within 7 days. Well, what about the 5% that aren't? Why don't we approve these apps? Well, let me give you the three top reasons — there's more — but these are the three top ones. The number one reason: the app doesn't function as advertised. It doesn't do what the developer says it does, So, we reject it. We say, 'You said it did this, it does this. Change your description or change your app but it doesn't do what you told us it did.' Second reason is use of private APIs. We're very clear on this: developers can't use private APIs. Why not? Because when we change the OS, those private APIs are not guaranteed not to change and if they change the app will break. And we'll have a very unhappy customer, right? If they upgrade their OS and half their apps break, they're not going to be happy campers. So, you can't use private APIs. And developers that use private APIs, of course, know exactly what they're doing. So, — (laughter) — and the third reason we reject apps, the third most frequent reason: they crash. So, I think if you were in our shoes you would be rejecting these apps for the same three reasons. Even with all of this, 95% of these apps are approved within 7 days. So, I just wanted to give you those facts. Sometimes when you read some of these articles you think something different was going on. But 95% of these apps get approved within 7 days. Now, I'd like to highlight one of them for a moment: eBay. eBay came out with a great app on the iPhone last year. And eBay CEO John Donahoe made this statement last week at the D conference: "We launched the eBay application on the iPhone last year, 10 million downloads. It did $600 million of volume in its first year, it's going to do $1.5 billion to $2 billion this year." Wow! Would we all be the successful? This is fantastic. Well, it's my pleasure now to show you three new apps that are going to be on the App Store soon. They're all in the entertainment category, and I'm sure they're all aspiring for this kind of success as well. The first one is Netflix. Netflix on the iPhone and it's my pleasure to introduce Netflix CEO, Reed Hastings. There he is. **Reed Hastings:**Thank you, Steve. **Steve Jobs:** Thank you, Reed. **Reed Hastings:** Two months ago, we launched the Netflix application for the iPad and it's been a tremendous success for us. It's now one of our fastest growing platforms. It's just incredible, the customer ratings in the App Store are some of the highest of any application. It's been one of the top 10 most downloaded applications in all of the App Store and in particular in the entertainment category the Netflix app has been the number one most downloaded application. There is, however, one feature requested consistently gotten and I'm happy to announce today Netflix application for the iPhone coming this summer for free. And for an early look at the application, my colleague John Ciancutti. **John Ciancutti:** Thank you, Reed. Starting this summer, you're going to get your full Netflix experience right on your iPhone, the same service you get in your HDTV, your laptop and on your iPad. I'm going to show you how it's going to work. Now you can start a film on your big screen TV and pick up right from where you left off on your iPhone whenever you like. You can resume your current movie from the top of our home screen. Now as you can see,

I also get personalized recommendations front and center. Netflix knows what I like based on my tastes and my viewing history. For example, Reed, you can see that I enjoy gritty crime movies. **Reed Hastings:** John, we were going to try to keep it clean today. **John Ciancutti:** All right. Well, then maybe it would be safer to show off the fact that you can access all of Netflix's movie and television genres, your complete Instant Queue or you can search through Netflix's entire streaming library for movies and television shows you'd like to watch. **Reed Hastings:** John, I was trying to show the search off. There's a great little documentary at Sundance Art & Copy, it's kind of a counterpoint to Mad Men, I want you to look that up. **John Ciancutti:** All righty. Great, well we've got it. **Reed Hastings:** Miracle! **John Ciancutti:** Shocking! I'm going to add it to my Instant Queue and I'm going to check it out tonight. Now just like on the iPad, on the iPhone, Netflix is taking advantage of Apple's HTTP adaptive bit rate streaming technology to optimize our playback over Wi-Fi and over 3G as well. And in fact, Apple's technology allows us to seamlessly switch between networks. So, you're going to get a great playback experience even when you're on the go. **Reed Hastings:** Thank you, John. And thank you to everyone. Netflix iPhone application this summer for free. Thank you. (applause) **Steve Jobs:** That's great. Next up: Zynga. Zynga is a remarkable phenomenon. And well, let me have them explain it to you. It's amazing. Mark Pincus, CEO of Zynga. **Mark Pincus:** Well, thank you, Steve and Apple for having us here today. We're really honored and excited. Today we will be introducing farming for the iPhone. (applause) Farmville is our most popular game and we're excited to be finally bringing it to the most popular mobile gaming platform in the world. Every day 35 million people play Zynga's games. That's more than the combined audiences for the season finales of Lost and 24 and my wife and I were two of those people. And she's here today and I want to embarrass her, any more than I have. In a year since we launched Farmville, it's grown to over 70 million monthly active users and they're very active users. We're proud that they've raised over $2 million to help Haiti. But anyway, I'll turn it over to my colleague Jen Herman who's going to show you farming on the fly. **Jen Herman:** Thanks, Mark. This is the same farm that I've spent many many hours creating and perfecting on Facebook. Except now it's in the palm of my hand. I've got the same decorations, same friends and more. Let's zoom in and have a look. Going to go over and check out my pasture, got my San Francisco style groovy barn and now I'm going to the marketplace. I can use in-app purchases to add cash and points which I can then use to go into the market and buy things like animals. **Mark Pincus:** Is that a snow leopard? (applause) (laughter) **Jen Herman:** It sure is and it's only on the iPhone. Let's jump in and do some farming. I can plow, plant, and harvest, and say goodbye to withering crops. We now have push notification. (laughter) **Mark Pincus:** And I want to mention for those of you who don't regularly farm that you should plow. Millions of our Farmville players set their alarm clocks for 2 AM in the morning, they bring their laptops to bars and other strange places just so, that they won't miss a key harvest. With Farmville on the iPhone, they're going to be able to farm anytime and anywhere. But what I'm most excited about is how much cooler tractoring just got. **Jen Herman:** With a simple tap and hold, I can fire up my harvester, quickly select the multiple plots for fast and efficient farming. And with another tap and hold, it will automatically select my hot rod tractor, here we go. Farmville is all about being social. These are my same friends from Facebook. I can visit their farms, fertilize their crops and send them gifts. **Mark Pincus:** And also, you may not know, or many of you do know that farming — Farmville is all about gifting and our players send each other over 200 million gifts every day. It's a lot more than Hallmark sends out. It looks like Jen has a new gift now. **Jen Herman:** Let's check. I do. I've got a few of my gift box. Looks like one of my iPhone friends just sent me a white apple

tree. Thanks, and that's our game. (applause) **Mark Pincus:** Farmville will be available on iPhone near you by the end of June in time for the one-year anniversary of the original launch of the game. Thanks guys. **Steve Jobs:** Thanks, Mark. All right. Number three: Activision. I am really happy to welcome the senior vice president, Karthik Bala to tell us about Guitar Hero. (applause) **Karthik Bala:** Thank you. With over 40 million units sold worldwide, Guitar Hero is a pop culture phenomenon. So, our team at Vicarious Visions spent significant effort and time to develop a brand-new Guitar Hero experience exclusively for the iPhone and iPod Touch that lives up to its name. Guitar Hero is about being connected — connected to your rock star persona, to your friends and course to the music. Going back stage you can customize the look of your Rockstar anyway you want and you can hop into the photo booth to share that look with your friends. At its core, Guitar Hero is about connecting with your favorite rock music. The game comes with classic rock from Queen and The Rolling Stones as well as new favorites from Vampire Weekend and Rise Against. We've gotten great feedback and support from our music industry partners allowing us to deliver rich downloadable content with new music to discover, like this one from the Band of Skulls, one of Jason's favorite new bands. The gameplay riffs off classic Guitar Hero perfectly tuned for your iPhone. Our team of musicians have handcrafted note tracks to deliver an authentic deeper connection with your music experience. As you can see we have the obvious taping mechanics that get you into the rhythm. But we wanted to deliver a richer guitar experience. With the introduction of a new strumming mechanic and use of the multi-touch display, our team has tweaked and polished Guitar Hero to make the gameplay perfect. We have sustained those that can be whammy to choose up for star power and slight thrums that's where you master these tricky swipes and pull off combos. Of course, if you really want to score big and show up, be sure to activate star power. (music) You rock, Jason. 5 stars! You can brag about your high scores to your friends or post them on leaderboards or to Facebook. And he scored enough skill points the level of his rock friend. This is just the beginning. I'm proud to say you guys can all start rocking out today. Guitar Hero is available in the App Store for $2.99. Go download it! **Steve Jobs:** You know, he was playing that guitar lead real time right there. It's very cool. So, three great entertainment apps and they're going to join the over 225,000 apps on the App Store, and I've got a few great pieces of information to share with you this morning. The first is just last week we crossed 5 billion downloads on the App Store. Isn't that incredible? 5 billion. But this next thing is my favorite stat of the whole show today. So, as you know, when we get revenue from the App Store, 70% of it goes to the developer, right? 70%! So, how much have we paid developers? Our 70% that we paid you; how much have we paid you to date? Just a few days ago, we crossed $1 billion. $1 billion! (applause) And it is one of the greatest things we get to do. So, let's go do it again. All right. And that's what makes the App Store the most vibrant app community on the planet. Over 5 billion downloads and a really healthy ecosystem not only for users but for developers as well. And we're thrilled with it. So that's the App Store. Now, I'd like to talk about the iPhone. (applause) Now there have been a lot of statistics floating around market research, market share studies and some of them are OK and some of them are questionable. And I'd like to just give you two pieces of data that can help you make your own judgments about market share. The first one is a report that just came out by Nielsen, highly respected firm. And this is for Q1 of 2010. This just came out and they said, "What is the smartphone market share in the US?" And here's what they reported: RIM number one with 35%; iPhone, number two with 28%; Windows Mobile number three with 19%; Android number four with 9% and other tied at 9%. And So, what Nielsen said was in Q1 of 2010 the iPhone's market share was over three times that of Android. Let me give you another

study. This is US mobile browser usage NET Applications, comes out with this and this is for May. It's the most recent data that they published. This is — mobile browser usage in the U.S. and you can see iPhone has 58.2% of the entire mobile browser usage in the country. That's over 2.5 times as much as number two which is Android at just 22.7%. So, very recent data, this may help you put things in perspective. So, let's get back to iPhone. In 2007, iPhone reinvented what we think of as a phone. It's hard to remember what it was like before iPhone. Carriers controlled what was on the phone. There were a few apps but nothing like we think about apps today. There was no free market for apps. There was no app store, it was really different before the iPhone. And the iPhone started to change all of that, 2007. It was a revolution. In 2008, we added 3G networking and the App Store. In 2009, the iPhone 3GS was twice as fast and we added some other cool features, like video recording. For 2010, we're going to take the biggest leap since the original iPhone. (applause) And so, today we are introducing iPhone 4, (applause) the fourth generation iPhone. Now, this is really hot! And there are well over 100 new features and we don't have time to cover all of them today. So, I get to cover 8 of them with you. Eight new features of the iPhone 4. The first one: an all new design. (applause) Now, stop me if you've already seen this. Well, believe me, you ain't seen it? You've got to see this thing in person. It is one of the most beautiful designs you've ever seen. This is beyond a doubt the most precise thing, one of those beautiful things we've ever made: Glass on the front and rear, and stainless-steel running around and the precision of which this is made is beyond any consumer product we've ever seen. Its closest kin is like a beautiful old Leica camera. It's unheard of in consumer products today. Just gorgeous! And it's really thin. This is the new iPhone 4. (applause) It is just 9.3 millimeters thick, that is 24% thinner than the iPhone GS. Again a quarter thinner and something you didn't think could get any thinner. As a matter of fact, it is the thinnest smartphone on the planet. So, I want to point out — let me point out a few of the things — a few of the external things on it. Here are the volume controls, volume up, volume down and mute. On the front, we have a front-facing camera. We have the receiver, we have a home button. We have the micro SIM tray. We have camera and an LED flash on the back. If you look at the bottom, we've got the microphone, the 30-pin connector in the speaker. And if we look on the top, we've got the headset jack, we've got a second mic for noise cancellation and the sleep wake button. Now, because there have been a few photos of this around, people have asked: What's this? (laughter) Some have even said this doesn't seem like Apple. (laughter) What are these lines in this beautiful stainless-steel band? Well, it turns out there's not just one of them. There's three of them. And they are part of the entire structure of this phone. That stainless-steel band that runs around is the primary structural elements of the phone and there are these three slits in it. It turns out this is part of some brilliant engineering which actually uses the stainless-steel band as part of the antenna system. (applause) And So, one piece is Bluetooth, Wi-Fi, and GPS, and the other is UMTS and GSM. So, it's got these integrated antennas right in the structure of the phone. It's never been done before, and it's really cool engineering. So, we have an all new design: the thinnest smartphone ever. It uses stainless steel for strength. It uses glass on the front and the back for optical quality and scratch resistance. It's got integrated antennas and extraordinary build quality. Again, I don't think there's another consumer product like this. When you hold this in your hands, it's unbelievable. So, this is our all new design for the iPhone 4. (applause) That's the first thing. Second one. This is a biggie. Something we call the retina display. What's that? Well, in any display there are pixels. Here's four of them. (laughter) We start off with the retina display by dramatically increasing the pixel density. Four times as many pixels in the same amount of space. Now why is that important? Well, let's make more pixels. And

let's say we want to draw the letter A. And this is the outside boundary of one of the strokes of the letter, the letter A. While you can see we turn on pixels inside that stroke, we can get far more precision the more pixels we have. And we play all sorts of tricks by putting different levels of grey pixels on that line as well to try to fuzz it for our eye. But when we zoom out of this, what you can see is that because we have four times as many pixels, we get really really sharp text compared to what we normally get on displays of lesser resolution.Now the retina display has 326 pixels per inch. (applause) There's never been a display like this on a phone. People haven't even dreamed about a display like this on a phone. But it's more than that. It turns out that there's a magic number right around 300 pixels per inch, that when you hold something around 10 or 12 inches away from your eyes, is the limit of the human retina to differentiate the pixels. And so, they're so, close together when you get at this 300 pixels per inch threshold that all of a sudden things start to look like continuous — continuous curves like, text looks like you've seen it in a fine printed book, unlike you've ever seen on an electronic display before. And at 326 pixels per inch we are comfortably over that limit and it's extraordinary. So, let me give you an example of a normal display on the left and the retina display on the right. Look at the difference. Can you see it? Here are some more texts of different sizes and different weights and you can really really see this stuff. Once you use a retina display, you can't go back. When you get the character-based languages, Kanji in this case, it's also striking. And it's not just texts, it's images and video as well. Look at the difference. This is the same image on a normal display and a retina display. Here's another one. Pretty amazing, isn't it? So, what I'd like to do now is show this to you live. I've got an iPhone 3GS which has got a widely praised display on it and I've got a new iPhone 4. So, let me get them both fired up here. There we go. And I can ask them to blow these up, there we go. Look at that difference now. (applause) This is pixel — we had to get special projectors for this because most projectors can't display as many dots as are on a retina display. So, this is pixel for pixel accurate right off these two displays and you can really see it. Look at that folder there and then let me go inside and you can look at the icon of the folder, compare them. Look at the texts, look at the linen, look at the icon of the compass, the icon of the clock, isn't that amazing? (applause) So, now let me go ahead — I am going to go to some websites, I am going to go to the New York Times today. And let's just compare these websites. Our networks in here are always unpredictable. So, we have no idea what we're going to find. They are slow today. You know, you can help me out if you're on Wi-Fi if you could just get off, (laughter) I'd appreciate it. We're having a little problem here. I don't know what's wrong with our networks. I'm afraid I have a problem and I'm not going to be able to show you much here today. I can show you some pictures in the camera roll. And let's just go, take a look at some photos here. Take a look at that, same photos. Pretty different. Again, the same photo, see the difference. You really see it around the eyes, the teeth. (applause) So, it kind of just comes down to what do you want to be looking at all day long? So, the retina display. 3.5 inches, the same size as the iPhone 3GS, yet with 960 by 640 pixels, that's 4 times more pixels than the iPhone 3GS. 326 pixels per inch, an 800 to 1 contrast ratio which is again 4 times better than the 3GS. We're using IPS technology. This is a very advanced LCD technology which is quite a bit — in our opinion quite a bit better than the OLED technology for these types of products and provides much more accurate color and much higher resolution. You can't make an OLED display with this type of resolution right now. And So, we think the IPS technology is really quite superior. And it results in incredibly sharp text images and video. Now, again, the retina display has got 78% of the pixels on an iPad right in the palm of your hand. (pause) iPhone OS 4 makes it show your apps automatically run on the retina display, full size. But they look

even better. Because what we do, is iPhone OS automatically renders your texts in the higher resolution and all your controls in the higher resolution. So, you get that automatically and your apps look even better without you doing any work. But if you do a little bit of work and open up the hood of your app and put in higher resolution artwork, then they will look stunning. So, we'd suggest that you do that. So, that is the retina display: awesome texts, awesome images and awesome video. We think this is going to set the standard for displays for the next several years. We don't think anybody's going to come close. And you know, the display is your window into the Internet, into your apps, into your media, into your software. We think it maybe the most important single component of the hardware. And we've got something here now, that's like the best window on the planet. So, that's the retina display. (applause) Third up, the iPhone 4 is powered by the A4 chip. (applause) Apple's A4 chip. This is a chip designed by our own team, they are really good. And this is wonderful to have in an iPhone. Now let me show it to you. The back of the iPhone, you take the back off, first thing you notice is the iPhone 4 is packed to the guills. There's a tremendous amount of functionality in not such a big space and So, you have to kind of hunt to find the A4 chip but it's right there. And let me just point out some of the other things. There is the micro Sim. We went to the micro SIM, because it's smaller. We need the space, the radios, the connectors. You can see that the biggest single component in the phone is the battery. We've been able to make the battery a little bit bigger. And so that's where everything is inside the phone. Now, because we've been able to make the battery a little bit bigger, and because the A4 is so, good with power management, we've been able to improve the battery life as well. So, we have up to 40% more talk time on 3G from five hours to seven hours now. Six hours of 3G browsing, 10 hours of Wi-Fi browsing, 10 hours of video, 40 hours of music and 300 hours of standby. (applause) Also our environmental report card is strong: arsenic free, BFR free, mercury-free, PVC free and stainless steel and glass are highly recyclable materials. So, we're doing great there. So, the A4 chip —(applause) - A4 chip up to 32 gigabytes of storage, quad band HSDPA and HSUPA for 7.2 megabits per second, down 5.8 megabits per second up. That's theoretical, because the carriers don't support that yet but as they do, we'll welcome it. And dual-mics for noise cancellation, 802.11n Wi-Fi and of course GPS plus accelerometer plus compass. So, we've got some great hardware in the iPhone 4 and the A4 chip. Number four: We've got another really cool piece of hardware. Remember when we added the accelerometer and how that opened up a whole new vista of gaming, well we're taking it even further with the iPhone 4, because we're adding a gyroscope. (applause) So, we're adding a three-axis gyro which is fantastic, pitch, roll and yaw, also rotation around gravity and we've tied the gyro and the accelerometer and even the compass together to provide six-axis motion sensing. And we've got some new core motion APIs that you can call that give you an extremely precise position information. And it's perfect for gaming. And one of the reasons it's perfect is because it's built into every iPhone 4. So, you know it's there. So, what I'd love to do now is give you a demo of this. And since this demo does not require the network, (laughter) I should be OK. So, this is a little app that we wrote. And this is being run with the accelerometer now and as you see with the accelerometer I can tilt it from side to side or backwards and forwards and but I can't — it doesn't move when I rotate around gravity. And the positioning is good but not super precise. So, now by tapping the word 'accelerometer' it's going to change to the gyro and now I get much more precise movement here. And as you see it rotates around gravity. (applause) So, let me go ahead — So, I'm going to play this game here. And I think I'll take this one out. All right. And maybe I'll take this one out. And I'll take that one out. This one out. And this one out. I'll take that one out. (laughter) I practiced this a little bit. Ohhh, (applause) well you get the

idea. So, some of our amazing engineers cobbled that together for me to show you the gyro but I can't wait to see what you guys are gonna do. I think it's going to be pretty amazing. So, the gyro joins our four other sensors in every phone. Now the gyro, the accelerometer, the compass, proximity sensor and the ambient light sensor, these phones are getting more and more intelligent about the world around you. And it's very exciting and I can't wait to see what you guys do with the gyro built into every iPhone 4. So, that's number four. Number five: This is a great one. A whole new camera system built into iPhone 4. Now everybody loves to talk about things that are very tangible when it comes to photography, like megapixels. But we tend to ask the question: how do we make better pictures? And there are different things. Megapixels are nice but what cellphone cameras are really about is capturing photons, because the cameras are so, small, the sensors are so, small, the lenses are so small that it's all about capturing photons and low-light photography. So, what we've done is we've gone from a 3-megapixel to a 5-megapixel sensor. But we're using something that has been shipping for a while in larger cameras but it's fairly new to smartphones and that is what's called a backside illuminated sensor. It's a way of getting a lot more photons to the sensor by getting some of the wiring and stuff out of the way. In addition to that, when most people increase their megapixels they make those pixels smaller. When you make pixels smaller they capture less photons. What we've done is we've gone from 3 megapixels to 5 megapixels we've kept the pixels the same size, 1.75 microns. And So, they don't capture less photons per pixel and we have more pixels. We've got a 5X digital zoom built into the camera app. Of course, what we pioneered tap to focus and we've got an LED flash built in. And the pictures that we're taking off this are pretty remarkable. Of course, you can do portrait and landscape, you can see the digital zoom right there. And these are pictures that are taken right off the iPhone 4, they haven't been touched in any way (applause) and it shows you — it shows you what kind of quality we're able to get. Again, these are completely unretouched. These were all taken by our employees, just called some of the better ones that I saw. So, this gives you — as an example that low-light photograph is hard to take with any camera much less a phone. So, we're really happy with the photos we're taking with the iPhone 4. We think we've got a great camera built in, but that's not all. Because the camera also records HD video. (applause) And that's HD video at full 720p at 30 frames per second. So, it's real HD video. Now we pioneered tap to focus for still photos, we now have tap to focus video and we have built in video editing for trimming your clips right on the phone and one click sharing to share your photos and the LED flash also will stay on to illuminate scenes for video recording. And so, you can actually record HD video right on your phone, edit it right on your phone, and then with a few taps, e-mail it, send it in MMS, send it to Mobile Me, send it to YouTube. It's pretty remarkable. But we're going even further than that, because what we've done is we've written an application ourselves called iMovie for iPhone. (applause) And rather than tell you about this, I want to show it to you and to show it to you, it's my great pleasure to invite Randy Ubillos. He's one of our incredible engineers, he's the chief architect for all our video apps. I'd like Randy to come up and show this to you himself. Randy? **Randy Ubillos:** Thanks, Steve. Thanks very much. I've been working on video editing software for a long time on some pretty groundbreaking products, 15years ago it was Final Cut Pro, three years ago it was the new iMovie. This year I had the opportunity to work on another one: iMovie for iPhone, and it's one of the most exciting things I've ever worked on. You can record HD video, edit with beautiful theme transitions and titles and share your finished movies all on the device that you carry in your pocket every day. It's really amazing. Let me show it to you.

Go ahead, bring this up and you can see the icon there, I'll go ahead and tap on that. So, once we bring up the application you get a list of all the projects that you have. And I'm going to go ahead and just tap on this project and now I get my editing environment. I can see the clips that I have edited in this project down here along the bottom. Let's e go ahead and rotate the phone over. So, we can go to landscape, you see I get the same view here. And let's go ahead and do a little bit of editing on this. I can record directly, enter the timeline if I want, or I can choose from existing clips and photos that are on the device. And I go to my video bin here, and I'll just scroll down. Let's pick this clip and put this in and I can pinch and change the scale of the timeline down here and we'll go ahead and select this clip and now I can just grab the pin and drag this, trim the beginning portion of the clip to set the lengths to be whatever I like. I can zoom that in a little bit if I like. Now let's go ahead now to photo. So, what I'm going to do is go back to my bin, go to my photos, then I'll scroll down here a little bit and we got this weekend in SF event, got a nice picture here. That's got the whole group. So, I'll go ahead and choose that. Now once I've got that in there, I can tap on it and photos automatically get the Ken Burns effect on them. So, I can go ahead and adjust that, I'll go back to the beginning and I can pan around and I can zoom in and you'll see that as we go from the beginning to the end, we get a nice Ken Burns effect on that. I can also use theme transitions, So, I'm going to go ahead to this title and I'm going to switch it from across this all to a theme transition. And when I do that, I get this nice theme transition that will come across on here. We can go ahead and put a title on the first clip, I'll just double tap on it, I'll select title and I'll choose an opening title. I'll just go ahead and tap and I'll give this a nice title here. So, I'll go ahead and just type in our California vacation. And once I put that in there, one of the things you'll notice is that it's put San Francisco on there. The camera records geo location information into the video that's been recorded and we pick that up automatically and it gets put into the theme as you see there on the screen. Now I am going to go ahead and add some music. So, I'll go ahead and I'll bring up the audio bin. I could bring in music from my iTunes library or we also have some theme music that comes with the product. So, I'll go ahead and choose this playful track. Let's go ahead and just play this back. [Music] Now we have five different themes with iMovie. So, I will go ahead and tap the gear here and I can switch to a different theme. So, I will switch to the travel theme and select that I'd like to use a theme music. And what you can see here is that for this theme the geo-location data has actually been put on a pin on a map and that map slides around and the pin moves around based on the location that you have on the map. And if I stroll over here a little bit you'll see the transition has been replaced with this nice theme transition with some stamps and things. So, that happens automatically when you switch from one theme to another. So, I can come back to the project list and I can tap the export button and I have three different sizes that I can choose to export all the way up to HD 720p. And what I'm going to do now is going to show you a version of this project that was exported out at 720p HD and what you're going to see was produced entirely on the phone, recorded, edited, rendered all completely on the phone. I am going to show you that. [Video clip] (applause) That's iMovie for iPhone 4. Thanks very much. **Steve Jobs:** Isn't that awesome? So, iMovie for iPhone. And you'll be able to buy this right on your phone for $4.99 if we approve it. (laughter) And so, this is again part of this amazing new camera system on the iPhone 4. And we're really proud of it and I think you're going to like it a lot. Now before I begin number six, our guys were running around like crazy backstage as you might imagine it. And we figured out why my demo crashed. Because there are 570 Wi-Fi base stations operating in this room, OK. (laughter) We can't deal with that. So, we have two choices: either I've got some more demos that are really great that I'd like to show you. So, we either turn off

all the stuff and see the demos or we give up and I don't show you the demos. Would you like to see the demos or not? ("Yes" applause) OK. So, here is the deal. Let's turn off the lights in the hall, several hundred of these are these MiFi things too by the way. So, all you bloggers need to turn off your base stations, turn off your Wi-Fi, every notebook, I'd like them to put — put them down on the floor and all of you look around, I'd like you to police each other. If you want to see the demos, shut all your laptops, turn off all these MiFi base stations and put them on the floor, please. Come on, look around you! I mean I'm not — I think bloggers have a right to blog but if we want to see the demos, we're not going to be able to do it unless we turn off all these MiFi base stations and laptops, shut them on the floor. (laughter) I've got time. (laughter) You know, this is a testament to how far we've come, isn't it? It's incredible, 570 Wi-Fi base stations in this room. Wow! All right, we done? I really appreciate, I'm starting to inconvenience you but if we want to see the demos, this is what we have to do. All right. So, number six: iPhone OS 4, the most advanced mobile operating system in the world. (applause) Now the first new feature is that we're going to rename it. We're going to take away the phone, because it's on iPads and iPod Touches and iPhones. So, we're going to rename it iOS 4 or iOS and this is the fourth version. And we're going to go even further. We're going to give it some metal. (laughter) So, iOS4. Rolls off the top. Now iOS 4 is our most ambitious release to date. It has over 1500 new developer APIs. I am sure most of you've been playing with this, there are some great stuff in there. And we're aware of a lot of great apps being developed that use a lot of these new APIs, we're thrilled by that. And there's over 100 new user features as well, the biggest being multitasking. Now, you know, some people have said, 'Well, you weren't first with multitasking' and they're right. Just like we weren't first with cut, copy and paste, took us a little while to figure out how to do it just right. And the same is true of multitasking. If you don't do it right, you're going to burn battery life and it's nice to see some people agreeing with us. This is a statement that Larry Page made just a few weeks ago: "Software running in the background, that just sort of exhausts the battery quickly". Yes, it does. (laughter) But unless you do it right. And So, we've taken a little longer but we think we've come up with a good — a good architecture for multitasking along with an awesome user interface, that is just the best in the industry for finding your apps and instantly switching between them. We're also using it to control all the audio that you might be playing as well as the locking the rotation into the portrait position. In addition to that we've added folders, just got a great folder implementation and a whole bunch of other things that I'm not going to have time to demo today but I would like to demo these few things for you if that's OK. All right. So, first thing I'm gonna do. Let's get it big there, there we go on the launch Pandora and play some Jack Johnson and I'm going to go launch Mail here. And again you can see the quality of the texture, it's just extraordinary with this retina display and Summer time in Yosemite. Now I'm going to go to a web page and find out if we really did turn off our Wi-Fi devices. Progress! (applause) Thank you. All right. And So, again look at the quality of this, text and graphics and I'm going to go ahead and just go back to Mail just by double tapping the home button, seeing all the apps that are running here and just scrolling through them all. I am going to go back to Mail here and now I'm back in there. And I can also if I want to again just go back here and I can swipe to the right. And here's the audio controls for whatever audio app I'm using, in this case Pandora. I'm just going to pause it right here and I'm in Mail right now. Let me show you a few things in Mail real quick. I can go to my inbox and as you can see I have the unified inbox which is all inboxes, or any of the other inboxes, I've got — I can switch really fast between all my inboxes if I want to and I've also got threading, So, you can see the number there next to the arrow and I can see all of the email messages from

a single conversation in one place. (applause) So, it makes it really easy to follow a conversation, delete a whole conversation at once etc. Now what I'd like to do is go back to the home screen and I'm going to create a folder and we've got this great new folder system for being able to help you organize and manage your apps. And all I have to do is just to hold my finger on an icon, So, it starts to jiggle and drag it on top of another icon. So, I will drag this sports app on top of another sports app and it automatically makes a folder and it names it based on the category of apps. Now I can rename it at any time if I want to, and I can go back and drag other apps in as well. I can just drag my ESPN app in there and I can drag a sports game in there if I want to — and so, now when I go in there, boom, there are my four apps, I can drag one out if I like. And I can also take a app out of the dock and I can even drag a folder in a dock if I want to. And So, now I've got my folder with me wherever I am in the system and I can just tap and see all my sports apps and it's really really helpful. (applause) So, that gives you — it gives you a grief view of just a few of the new features of iOS 4 but there are just tons of new features everywhere. So, iOS 4: multitasking, folders, retina display integration, again we've enhanced every app we ship on the iPhone to work perfectly with the retina display, super high resolution artwork et cetera, and put in all the work so that your apps automatically work beautifully with it as well even if you don't update your artwork. Mail, lot of new things in mail, the biggest two being the unified inbox and threading, lot of enhancements in the camera and the photo apps to take advantage of our whole new camera system, much deeper enterprise integration and just again tons of new features everywhere. I wanted to hit for just a second on the enterprise integration, we've got a lot of requests and our enterprise customers are thrilled because we've got all of that stuff in to iOS 4, much better data protection, device management, they can wirelessly distribute apps around the enterprise, multiple exchange support, deeper VPN support, our enterprise customers seem really really excited about iOS4. Another thing we're adding on the consumer side — another thing we're adding on the consumer side is today we have Google search and we have Yahoo as an option that you can select, readying a third option which is Bing. And so Google will stay the default but now you'll have one more choice if you like. And So, instead of just having one choice or two choices you have three choices, you can search with Google or Yahoo or Bing. Each one takes a unique approach to how they search and how they format their results. So, again we're going to give you the choice, you decide that, you have one more choice now. And Microsoft has done a really nice job on this, it's the HTML5 presentation, they've done a great job. So, check it out. It's kind of cool. Alrighty. So, iOS 4 and we're going to put a Golden Master Candidate in developer hands today. (applause) For those of you who have been following the releases they've gotten really good lately and we now have our final release candidate, our Golden Master Candidate. It's going to be in your hands today if you're a developer and it will be out soon. Now there's another major milestone we're about to hit with iOS this month. This month we will sell our 100th million iOS device. (applause) 100 million! That's iPhones, iPod Touches and iPads, a 100 million. There is definitely a market for your applications. (applause) 100 million! So, no one even comes close to this. So, that is iOS 4; that's number six. Number seven: iBooks. We talked about iBooks with its enhancements on the iPad. We are bringing it to the iPhone with iPhone 4. So, it's just gorgeous as you know and same controls, the same highlighting, the same bookmarking, the same notes, as you see on the iPad, it's done really really well, same bookshelf to keep your books, the same PDF right on your iPhone. So, you can get a PDF in a mail message, tap on it, it goes right to iBooks to the PDF shelf and you can have it, store it, and flick through it whenever you like. So, we're really excited about this and of course the iBookstore right on your iPhone. Now we've got iBooks now, we'll have it on the iPad, the

iPhone and the iPod Touch. This gets interesting. What can we do with all these products together? Well, I'd like to outline just a few things. And please keep in mind that they work across all three of these products and all wirelessly. The first is of course you can purchase and download a book with the iBookstore, to any one of these products: on your iPhone, on your iPad or on your iPod. And it will wirelessly be downloaded right to the device. You don't have to go through a computer or anything like that. Buy your book right in the device, just download it right in the device. Now you can download the same book to all your devices at no extra charge. (applause) So, buy a book on your iPad, download it to your iPhone; buy a book on your iPhone, download it to your iPod and your iPad. You only have to buy it once. And iBooks will automatically and wirelessly and for no charge sync your current place, all your bookmarks and all your notes across all your devices. (applause) So, you can start reading a book on your iPad, need to run out with your iPhone in your pocket, pick up right where you left off with all your bookmarks, all your notes right on your iPhone, just all works. And So, that is iBooks on the iPhone and I'd like to give you a demo of that. Partly because I just want you to see how beautiful it looks on this amazing retina display. So, I'm going to open one of my favorite books: Winnie-the-Pooh. And look at that gorgeous text. It doesn't get any better than that. And, again you can just flip through the book and you can make a selection here. And you can say I want to highlight that, you could select it again and say I'd like to maybe change the color of that highlight. And I could make a note if I want. And so I could say, 'I love Winnie-the-Pooh'. And I've got myself a note right now and I could bookmark the page if I wanted to, put away the control — I am going to go back, sorry — put away the controls. And now if I go back to the table of contents and there's my bookmarks and my notes and my highlight. So, it all just kind of works. Now let me go back now to the library and I'm going to switch to PDFs and here's my PDF bookshelf with my PDFs on it. So, let me open one of those. And I can use just thumb along the bottom if I want to or I can just flip pages like this by tapping them. Isn't this cool? And again I can just zoom in the texts, pinch and zoom any way I want to. It's just really really nice, look at that. Pretty cool, uh? (applause) Alrighty. So, that is iBooks. Now iBooks as you know has the iBookstore on the iPhone and the iBookstore joins the iTunes store and the App Store, has the store on the iPhone. Now we've gotten over 150 million accounts for these stores with credit cards ready to buy your apps. (applause) Over 150 million! We believe this is the most of any store on the Web. We believe we're now number one and these stores have had over 16 billion downloads, again number one on the web. So, the iBookstore joining the iTunes store and the App Store, now on the iPhone. And that is number seven. (applause) Number eight: iAds. Why are we doing iAds? We're doing it for one simple reason: to help our developers earn money So, they continue to create free and low-cost apps for users. That's why we're doing this. So, this is what iAds look like. Here's an app, Wall Street Journal app and you'll see banners pop into the ad at various places depending on where you the developer say you want them to show up and they'll pop up. And as you know what we're trying to do with iAds is we're trying to combine the emotion of video with the interactivity of the Web. This is what advertisers have been after in the digital advertising medium. They want to get some of the emotion that they use television for today on to these digital platforms and we think we've figured out how to do that. Now iAds keep you in your app, the worst thing you want as a user is to tap on a banner, be hijacked out of your app to a browser, taken to some random website and decide you're not even interested in the product or service they're offering. And you've got to find your app again and hopefully get back to where you left off. People don't click on the ads. If people don't click on the ads, they don't get the benefit of the ads and you don't make any money. So, by making sure that our

users know what an iAd is with a little branding in the corner, they'll know that iAds don't hijack them out of their apps. It's built right into iOS 4. You can add iAds to your app in an afternoon. Simply tell us where you want us to place them, everything else is done automatically because it's built right into the operating system. You don't have to in essence write an app to put an ad like this into your app. It's all done in iOS 4. Apple sells and hosts the ads. So, all you have to do is tell us where to put them and make money. You get 60% of the revenues and you get paid via iTunes connect, the same way you get paid for your apps and as you know we pay very frequently. So, that's what iAds are. Now we've only been selling ads for eight weeks. We started selling ads about eight weeks ago and I'd like to just tell you about some of the brands that are going to be advertising with us during the second half of this year. These folks are the ones that have committed So, far and let me just run through them now for you. Starting off with Nissan, Citi, Unilever, the second largest consumer products company in the world, AT&T, Chanel, very high end brands, GE, Liberty Mutual, State Farm, and Geico, they want you guys to have some insurance, Campbell Soup, Sears, some great retailer, J.C. Penny, Target, Best Buy, DirecTV, The TBS Network, and Disney, and those are some of the brands that have signed up with us for the second half of this year, we couldn't be happier. Really excited about this. Now I pulled — all these folks are working on their iAds, none of them are quite done yet but I pulled one in process which was a Nissan ad. Nissan is going to use iAds to advertise their new fully electric car, The Leaf and so I pulled their ad and I just want to show it to you now, again it's a work in process. And they were a little hesitant to have me show you. But I wanted to show you. So, I convinced them. (laughter) So, this is a newsreader app and as you can see their banner pop in on the bottom and I as a user can just tap on it, it takes over the screen and loads in, and any time I want to go, I didn't want to watch this ad. I just push this button up at the top and I'm back in the app. So, I can get back to the app instantly. Let me go back into the ad in this case. So, they're loading up a little bit of video. And here we go. [Video clip] (applause) So, it's amazing how — 15 seconds of video how compelling it can be. So, now we've got this really cool navigator on the bottom that as I spin it around it, it just spins around the car and So, let me show you a few things here. I can say, oh, a new driver. The only way you're going to be able to register to get one of these initially is with this ad right on the iPhone. So, if you're interested in the Leaf you have to get an iPhone and register in this ad. So, let me show a few things they've done. This is very cool. They want to show how efficient the Leaf is and they came up with this really cool way: the new miles per gallon, and So, you just tap on this and it shows you that a Leaf goes 38 miles on a dollar — for a dollar, right? Dollars' worth of electricity in this case takes you 38 miles, how much will a dollar's worth of fuel take you in some of these other cars? So, you just push on the car and you can see, well Hummer doesn't take you very far. You know, a Corvette takes you a little further, a Ford Taurus little further, a Mini Cooper, it's kind of a cool car that takes you about ten miles, a Civic, they're not so good. Here's the Prius that's probably a little further. So, this is a pretty doggone compelling way to get your point across and it's fun. And So, this is what iAds are all about. So, — and then one other very cool thing they're putting in here is the new prize. They are going to actually give away a car and So, you enter through the ad. So, I can just shake my phone and change the color. And I'll say I want a red one, So, I enter to win a red one and — sorry, I'll go with that one — and it pulls my name up, my contact information and I can just submit it. And now I have entered this contest to win a car. Pretty cool. So, that is an iAd. (applause) And I think a lot of people are going to try to win the car. It's a great idea. So, iAds. iAds start — we're going to turn it on July 1 for all iOS 4 devices. So, July 1, less than a month from now. Now how successful have we been in selling

iAds? Well, we're new I with this, we've never done this before, and we don't know what we're doing. But we've attracted some pretty exciting brands and they have committed over $60 million for the second half of this year in the last eight weeks. (applause) Well, how much is that? Well, JPMorgan just revised their study of US mobile display advertising in the year 2010. They just came out with it a few days ago and they reiterated their number that they think the mobile display advertising market in the US for the whole year is going to $250 million. Well, $60 million of that's about that much. But it's actually a little more because we're only talking about the second half of the year. And So, we're looking at iAds now with just the commitments we've got in the last eight weeks to be 48% of the second half 2010 entire U.S. mobile display advertising market. We've only been at this for eight weeks and we're not stopping selling. So, we think we're off to a pretty great start and we'll report back to you on how we do. But I would encourage you, if you're interested, to sign up for iAds and get the necessary stuff built into your app and let's go put some ads out there and help you make some money because that's our goal in this: to help you earn money So, you can continue to create free and low-cost apps for the users and we think this is going to work, we're really excited about it. (applause) So, those are the eight things I want to share with you on iPhone 4. What do you think So, far? (applause) You like it? I think it's a lot more than people thought it was. I don't know what do you think? Is it more than you thought? (applause) Well, we're really pleased with it. But there is one more thing. (applause) And I think it's best that I just show you. Now I really want your Wi-Fi devices off, are they off? (laughter) Please turn them off if you've turned them back on.So, in 2007 when we launched the iPhone, it was my privilege to make the first public call on stage to one of my best friends in the whole world, Jony Ive, the head of our design team. And I'd like to do the same on this occasion. So, I'm going to go ahead and call Jony now. Hey, Jony! (applause) It's — this never freezes up, So, you guys haven't turned off all your Wi-Fi. Come on, let's get it off, please. Hey Jony, how you doing? **Jony Ive:** I'm good, I'm good; how are you? **Steve Jobs:** I'm doing OK, except that these guys aren't tuning their Wi-Fi off. **Jony Ive:** (inaudible) Isn't it? **Steve Jobs:** Yes. This is amazing. I grew up here in the US with the Jetsons and with Star Trek and communicators and just dreaming about this — you know, dreaming about video calling and it's real now. Did you have this kind of stuff in England? **Jony Ive:** I grew up watching exactly the same TV shows. You know, I used to love that sort of wonderful sort of optimistic view of the future and it's real now, isn't it? **Steve Jobs:** It's real, especially when people turn their Wi-Fi stuff off. (applause) **Jony Ive:** It's sort of odd, isn't it? Because the idea of communicating this way, it's an old idea, it's one that we're with familiar with, we just have to wait — we've had to wait an awfully long time for it to become real. Haven't we? **Steve Jobs:** Yes. Well, listen I — let's have lunch later on. **Jony Ive:** All right. I'll see you soon. **Steve Jobs:** Thanks Jony. **Jony Ive:** Thank you, Steve. (applause) **Steve Jobs:** So, we call this FaceTime. FaceTime video calling and it's great. It's iPhone 4 to iPhone 4, anywhere there is Wi-Fi and there is no set up required. You don't have to find a server, you don't have to type in anything, you don't need a special code, you don't need a buddy list. Nothing. You just make a phone call. You can use the front or the rear camera, you can switch to the rear camera So, the person on the other end can see what you're seeing. You just switch back and forth really easy. Portrait or landscape. You turn your phone, it automatically does the right thing on the other side. So, if you have two people wanting to talk to somebody you can just go into landscape and get a little bit wider aspect ratio. And the video and audio quality is great. Now FaceTime is going to be Wi-Fi only in 2010. We need to work a little bit with the cellular providers, (laughter) get ready for the future. So, we're Wi-Fi only in 2010 and Apple will ship tens of millions

of FaceTime devices this year. Tens of millions of FaceTime devices this calendar year. So, there's going to be a lot of people to talk to. So, FaceTime video calling. We're really happy with this. (applause) Now we made a little video that just shows some of the ways that we hope people will use FaceTime and I'd like to run that for you now. [Video clip] (applause) This is one of those moments that reminds us why we do what we do. So, FaceTime, iPhone 4 to iPhone 4, anywhere there is Wi-Fi, zero set-up, portrait or landscape, front or rear camera and amazing video and audio quality. Now FaceTime is based on a lot of open standards H.264 video, AAC audio and a bunch of Alphabet soup acronyms (laughter) and we're going to take it all the way. We're going to the standards bodies starting tomorrow. And we're going to make FaceTime an open industry standard. (applause) So, FaceTime, that's number nine. So, that is the iPhone 4. And we think it's the biggest leap we've taken since the original iPhone. We're really proud of it and I think you'll agree there's more to it than met the eye. So, price and availability. Well, first of all, the iPhone 4 comes in two colors, (applause) black and white. They're both gorgeous and the price with the normal qualifications and two-year contract $199 in the US for the 16-gigabyte model, same price as the 3GS, and $299 for the 32-gigabyte model. (applause) Now I'm thrilled to also announce that AT&T is going to make an incredibly generous upgrade offer. Their offer is going to be if your contract expires any time during 2010, you are immediately eligible for a new iPhone 4 at the same $199, $299 prices if you top up your contract to two years. So, you can get up to six months early eligibility for an iPhone 4. If your contract expires any time this calendar year, you top up your contract to two years and you can buy an iPhone 4 for the same price $199 or $299. So, we're thrilled about that. Now what's our lineup look like? Well, today or yesterday it was the iPhone 3G at 8 gigabytes for $99, the 3GS 16 for $199. Well we're going to just add iOS 4 to the 3GS and slide it on over, and 8 gigabyte 3GS for $99, 16 gigabyte iPhone 4 for $199 and of course the 32 for $299. This is our new lineup. And these go on sale June 24. (applause) Preorders. Preorders start a week from tomorrow, June 15. Now on June 24, we're going to be shipping in five countries: the U.S., France, Germany, the UK and Japan. But in July we're going to be shipping in 18 more countries: Australia, Austria, Belgium, Canada, Denmark, Finland, Hong Kong, Ireland, Italy, Luxembourg, Netherlands, Norway, New Zealand, Singapore, South Korea, Spain, Sweden and Switzerland. In August, we're going to add 24 more countries and in September we're going to add 40 more So, that by the end of September we are shipping in 88 countries. This will be our fastest rollout ever for iPhone 4. (applause) Now we've got a few accessories that I'd like to tell you about. The first, very simple one, a Dock, real nice Dock for the iPhone 4, $29. The other is just like we did with the iPad, we took a crack at doing a case ourselves, we're pretty happy with the result. We call it a Bumper and it goes around the iPhone four. It's got these really nice metal controls, So, they pass through the plastic, the back is open, So, you have the camera and you can see our logo, and they protect the phone very well and they come in colors. And So, they are real nice and they are $29 as well. And I'd like to talk for a minute about iOs 4 upgrades. We will be offering iOS 4 upgrades for the iPhone 3GS. The iPhone 3G but again not all of the features are supported, the hardware just won't support the kind of experience for multitasking that we would like to see. So, that will not be supported on the 3G. But many things will be. And the iPod Touch, again not all the features will be supported on every model and it excludes the first generation, because again the hardware will just not support it. And the great news here is that upgrades for all these products will be free on June 21. (applause) So, we finally found a way to get these upgrades for free to our iPod Touch customers and we couldn't be happier about that. So, that is iOS 4 and of course the new iPhone 4. Now we've put together a video to kind

of try to summarize all the features of the iPhone 4. And I'd like to run that now. [Video clip] (applause) I put up this slide one little earlier this year and to me it represents what Apple is all about. Apple's not just a technology company, even though we have and invent some of the highest technology in our industry, it's more than that. It's the marriage of that, plus if you will, the humanities or the liberal arts that distinguishes Apple. It's the hardware and the software working together, coming up with A4 chips that work with the software to give us these incredible battery lives. It's not just a great new camera system built into the iPhone 4. But it's the video editing software built in and iMovie for iPhone, that really takes it to distance and gives you a complete solution. It's not just the front facing camera. It's a front facing camera and 18 months worth of work to come up with software that you'll never even notice when you want to place a video call. It's the complete solution. So, that all of us don't have to be system integrators. And I am So, proud of the teams that have made this product. It's really extraordinary. And I urge you to get your hands on one and see for yourself. So, before we end today, I'd like to just say thanks to the teams that have worked their tails off for the last 18 months to create the iPhone 4. Mark Papermaster and his hardware team, can you guys please stand up? (applause) All of the Jony Ive and the design team. (applause) Bob Mansfield and the A4 team. (applause) Scott Forestall and our remarkable iOS software team. (applause) And all of this wouldn't make any difference if we couldn't build a ton of them, Tim and our operations team, Jeff, stand up please. (applause) And all the rest of the Apple family that just supports us in a thousand ways, I'm really proud of all you guys. Awesome job! (applause) So, thank you very much for coming this morning. And this is our new baby. I hope you love it as much as we do. Thank you very much. [jazz music] [END]

APPENDIX P III: APPLE SPECIAL EVENT SEPTEMBER 2012

Tim Cook – CEO, Apple Inc.: Good morning. Good morning. Good morning. Good morning, thank you. Thank you, thank you. Thank you. (applause) Thank you for coming this morning. We've got some really cool stuff to show you. It's an amazing time at Apple, an extraordinary time and I'd like to show you some of the things going on, I'll start with a few updates beginning with Apple Retail.This is a beautiful store in Barcelona. It's on the Passeig de Gracia which is a great location in Barcelona. We spent two and a half years working every detail of the store, getting everything exactly right. We used limestone from a local quarry to restore it and modernize it. No one would have done this but Apple. Here's a picture of the interior. It's absolutely gorgeous. It's now one of our largest stores in the world. It has a signature glass staircase and the opening had a signature crowd. (applause) All right. Thank you. Our customers in Barcelona love this store. It's the perfect place to explore and discover Apple's latest products. Now these photos don't quite capture the energy and the enthusiasm that we saw at the opening, but we prepared a video and I'd like to run it for you this morning. [Video Presentation] (applause) Our stores offer the best buying experience and the best customer service on the planet. We now have 380 stores around the world, we're operating in 12 countries. We'll enter our 13th country on Friday, opening our very first store in Sweden and we're excited about that. We welcomed 83 million visitors to our store last quarter. That's almost 1 million people per day and several days were significantly higher than that. It's absolutely amazing. So, that's a brief update on Apple Retail. Now on to the Macintosh. We've had a very busy summer for the Mac. We launched Mountain Lion in July. Mountain Lion is the 9th major release of the world's best desktop operating system and the very first with iCloud built right in. The reviews had been fantastic. PC Magazine said, "Once again OS X takes the prize as the world's best

consumer operating system." And more importantly, our customers have responded. They've downloaded 7 million copies of Mountain Lion making it the fastest selling OS X of all time. Also earlier this summer, we launched the new MacBook Pro with a radically thin and light design and a stunning retina display. It is the best Mac we've ever made. And our customers have responded to this. Together with MacBook Air, our notebooks now rank number one in the US in market share for the last three months. This is incredible. (applause) With July being 27%. Now this isn't just the momentum of a few months. In fact, over the last year, the Mac has significantly outgrown the PC. And it's not just the last year. In fact for the last 6 years straight, the Mac has grown significantly faster than the PC. So, that's the Mac, we're really happy with how we're doing with the Macintosh. Now the iPad, the iPad is driving the post-PC revolution at a breathtaking pace. Our latest iPad which has a stunning retina display, a super-fast A5 chip and LTE was announced in March and the reviews had been phenomenal. Here's one from Ed Baig of USA Today. "The new iPad snatches the crown from its predecessor as the finest tablet you can buy." And our customers have responded to this. Just last quarter, we sold a whopping 17 million iPads setting an all new record for iPad sales. Now, to put this achievement in some perspective, we sold more iPads than any PC manufacturer sold of their entire PC lineup. Yes, we are in a post-PC world. Now this brings our total to 84 million units which is absolutely shocking when you think that this is a product category that didn't even exist two and a half years ago. Now, our competitors have taken note of this. And over the last year, they've launched hundreds of tablets to compete. And so, how has iPad fared in this period of time? Well, if you look at the last — a year ago, iPad had a 62% market share. So, what happened over the last year with hundreds of new tablets coming to market? Well, the latest data shows iPad with 68% share. It actually went up. And the gap is even more staggering when you look at usage statistics. iPad accounts for 91% of the web traffic of all tablets. Now, I don't know what these other tablets are doing. They must be in warehouses or on store shelves or maybe in somebody's bottom drawer, you know. Now, iPads are being used everywhere by everyone, from consumers to educators, to students and even enterprise. As an example, almost all of the Fortune 500 are testing, are deploying iPad, and they're investing in custom apps. This is something none of them do on the PC. Apps like this one from GE Capital which helps them manage the business on a real time basis, or this one from Mayo Clinic which helps thousands of doctors deliver better patient care, or this one from Ducati which helps dealers custom configure bikes for their very lucky customers. Now of course the App Store is the place for all of us. It's the most vibrant app ecosystem on the planet. And we've recently crossed 700,000 apps in the store with — (applause) – And 250,000 of those have been specifically tailored for iPad to take full advantage of the larger beautiful canvas. Now, there's something in the App Store for everyone. And believe or not, every app seems to have its fan, or fans. In fact, 90% of the apps that I just showed you, the 700,000, are downloaded each in every month. And the average customer now is using over 100 apps. The App Store has been an absolute revolution. It's phenomenal. And together, with the incredible products, these have helped us achieve another huge milestone. Last quarter, we sold our 400 millionth iOS device. This is amazing. (applause) No one could have predicted this. Now, today, we're taking it to the next level making a huge leap. We have some very exciting news to tell you about iPhone. And to do that, I'd like to invite Phil Schiller to take you through it. Phil? (applause) **Phil Schiller:** Good morning. It's really neat to stand here and see all the Apple logos going from all the computer screens facing me. Well, we're here to talk about the iPhone. We launched the first iPhone in 2007. And what an incredible breakthrough it was for the entire industry. I think Time Magazine put it the best, when they put iPhone on the

cover of the magazine. They called it “The innovation of the year” and they wrote that it is “the phone that has changed phones forever.” And boy, were they right. It simply went on to become the number one smartphone in the world. We started with that first iPhone. And each and every year, we introduced new versions with new features, new innovations. Each time, setting a new bar for what is the gold standard in the phone marketplace. And we’re going to do that again today. Today, we’re going to introduce iPhone 5. (applause) And I’d like to show it to you right now. So, let’s take a look at the brand new iPhone 5. (laughter) Is it an absolutely jewel. It is the most beautiful product we have ever made, bar none. We’ll put up video up on screen so you can see it even bigger, since it’s so small. And this is iPhone 5. (applause) I’m going to take you through it. And I hope when we’re done, you’ll love it just as much as we do. Thank you. So, iPhone 5, it is made entirely of glass and aluminum. It’s designed and built to an exacting level of standard unlike anything we or anyone in our industry has made before. And I don’t think it is an exaggeration to say that the hardware and software engineering that has gone into this product is the most challenging our team has even taken on. And what they’ve accomplished is simply amazing. So, let’s walk through it. First, iPhone 5 is the thinnest phone we have ever made. It is the lightest as well. The new iPhone 5 is just 7.6 millimeters thin, that’s 18% thinner than the iPhone 4S. And best of all, it’s the world’s thinnest smartphone. It also weighs just 112 grams, that’s 20% lighter, 1/5th lighter than the iPhone 4S. Volumetrically, it’s smaller as well. So, before we get into it, this is the monumental challenge the team had. Can you make a phone that has everything the iPhone 4S has before we even talk about new features and the design that’s thinner, lighter and smaller than the previous product? It is really easy to make a new product that’s bigger. Everyone does that, that’s not the challenge. The challenge is to make it better and smaller. So, let’s start with the product. It starts of course with the display. iPhone 5 is a retina display, the same 326 pixels per inch and it is a stunning display in every way. Every iPhone to date has had a 3.5- inch screen but the new screen on iPhone 5 is a 4-inch display. In terms of pixels, it’s 1,136x 640, so the same width but taller giving it a natural 16:9 aspect ratio. But why would we design it that way? What is the design center for a phone? It’s this, it’s your hand. A phone should feel great in your hand and more importantly, should be easy to use with this magical device we all carry called a horizontally opposed thumb. It does most of the hard work for us. So, when you carry your phone, it should fit beautifully in your hand. It should be easy to send messages, type e-mails, surf the web and it’s just how we designed iPhone 5. This display is simply amazing. Let’s zoom in a little closer. You see with the vertical pixels now we’re able to add a fifth row of icons to your home screen, so more apps on every screen. And all the software that comes on the iPhone 5 has been updated to take advantage of this display, so you see more of the web when you’re surfing Safari. You see more of your e-mail and mail. Your calendar shows more events. And as you probably know when you turn your calendar sideways in the iPhone, it automatically goes into week view, and now you see a full five-day work week where previously it was just over three days. It’s a really useful view. And all of our software is being updated as well to take advantage of this display, our iWork applications. So, Keynote, Pages, Numbers, all take advantage of this gorgeous display. Our iLight software as well, iPhoto, iMovie, GarageBand, there’s much more room to work and play. And Tim told you the 700,000 applications in the App Store, what happens with all of them? Well, this is part of the brilliance of the design. Here is an application that has not been updated because the developer didn’t know yet about iPhone 5, it’s exactly how it would run when you launch it. It runs at the same size as it does on every previous iPhone. You don’t have to stretch it or scale it. It fits perfectly with the same dimensions. We center it or we just subtly place black borders on either

side of it that you don't even notice. It works exactly as the developer intended it to. The same is true in the vertical position as well. So, all your software works just like before. Now we have given some of the developers an early access to take a peek at the iPhone 5 and this new 4-inch retina display and to see what they'll do with their applications and what we learned is two things. One, they can update their apps very quickly. And number two, when they want to, they don't want to just make it bigger, they want to do more with this display. So, let me just show you two quick examples before and after of two popular applications. First, CNN, this is the application if you use it like many of us do, it's working just like they used to. But now with their update, they take more advantage of that beautiful display, have more areas to present their stories, just a better application. Here's a second example. OpenTable, you've likely used this to make reservations. This is how it is currently, it works just like before and here is their new update, taking advantage of this gorgeous display. They've updated to show restaurants, they've actually applied some of the techniques and user interface of their iPad app into the iPhone now with a larger display area and everything you do looks gorgeous on this display. Photos, TV shows, of course movies take advantage of that beautiful wide screen display. But I say it looks better, they really do look better. This display has 44% more color saturation than the iPhone 4S display. And if you know about this stuff, this takes now — us to full sRGB color specification. So, this is the most accurate display in the industry, and the engineering team went much further than that. They did some breakthrough work and have integrated the touch sensors right into the display itself. Others put a layer part in a layer on top. By doing this, we make it 30% thinner than the previous display and we remove a layer making the image sharper, having less glare in sunlight. This truly is the world's most advanced display, we couldn't be prouder of it. And that's the first feature in the new iPhone 5. (applause) Next, ultrafast wireless technology. Again, you can imagine the challenge engineering team faced, make the iPhone thinner, lighter, smaller, build in all the wireless technology you had with iPhone 4S and take it further. And that's what they have done, we've built in GPRS, EDGE, EVDO, HSPA, making it a great 3G world phone just like the iPhone 4S. But to that, we've added HSPA+, Dual Carrier HSDPA, and yes, LTE. (applause) So, LTE gives you a theoretical maximum downlink of up to 100megabits per second, and it just screams. So, how do they do this? This took a lot of incredibly advanced engineering. There's now a single chip, baseband chip for voice and data, and a single radio chip as well. This saves a great deal of space. And we have a really unique Apple innovation in a dynamic antenna. We started this with the iPhone 4S and taken it much further with iPhone 5 where it can automatically switch antenna connections on the base antenna between different networks creating different virtual length antennas. Now, you probably know LTE is probably the most complicated networking technology ever brought to this earth. And, there are different bands and frequencies around the world. So, an important question is who we're working with to rule out LTE on iPhone 5. Well, in the US, we have great partners who are working with AT&T, Verizon, and Sprint to support LTE on iPhone 5. In Canada: Rogers, TELUS, Bell, Virgin, Fido, Koodo. In Asia: SoftBank, KDDI, SKT, KT, SmarTone, M1, and SingTel. In Australia: Telstra, Optus, Virgin Mobile. In Europe: Deutsche Telekom and the brand new Everything Everywhere that's just launched their EE LTE network in the UK. Now, in Europe there's something else really interesting going on, there's a lot of adoption of this new Dual Carrier HSDPA network. So, here's a list of all the carriers we're working on that with us as well, just great coverage of that dual-carrier network. So, ultrafast wireless doesn't just stop with cellular, we've also built in higher performing Wi-Fi as well. With iPhone 5, we have 802.11a joining b/g/n. 802.11n is now 2.4 and 5 gigahertz and that's dual-channel 5 gigahertz for

much greater performance. So, you can get a theoretical maximum performance of 100 megabits per second of bandwidth on 802.11. So, that's ultrafast wireless. Now, we're going to keep going with this and what you're going to hear as I go through each step, we've updated every aspect of iPhone 5. Everything has been enhanced, reengineered, redesigned over iPhone 4S. So, what's next? System performance, a brand-new chip, the Apple A6 chip. Compared to the A5, it's two times faster at CPU, two times faster at graphics. Our expertise in chip design is really showing itself here because not only is it a huge jump forward in performance, it's also a 22% smaller making more space and energy efficient. Team has done a remarkable job. You're going to see that across many of the things you do. Whether you're launching apps like Pages, saving images from your photo app, loading up the music app with songs to play, viewing attachments and Keynotes, really seeing basically 2x performance across the board. And developers are going to love what they can do with this new A6 chip, the performance they get for their CPU and graphic intense applications. So, we thought, let's get a developer to get their hands on this A6 chip and new iPhone 5 and show you what can be done with state of the art performance and graphics. So, I'm really excited to invite out Rob Murray, executive producer, EA studios, to show you some amazing work they're doing on the new A6 chip on the iPhone 5, Rob. (applause) Welcome. **Rob Murray:** Thanks Phil. Hi everyone. Now we are known for creating the ultimate racing experience on iOS. With the new iPhone, let's just take this to a whole new level. So, today, I'm going to show you Real Racing 3 for the first time. And you're going to see a Porsche GT3 racing on a legendary raceway, Laguna Seca. And we've got Vince up here to help. Hi, Vince. Let's get it started. (applause) Look at the graphics here. Now, these graphics they've been built to full console quality and they're running on the powerful new iPhone. I mean, all this is running in the palm of your hands. It's incredible. Have a look down the side of this Porsche. See the reflections and see the car in the track reflecting dynamically in the body work. Now, this not only looks awesome but it actually shows you a bit of what's going on around you. I mean, it actually makes the game easier to play. As do rear view mirrors, yes for the first time in Real Racing, you could see behind you. It's great. (applause) So, you've seen the graphics, but these are thing — these are more– racing recently. So, we're taking this out on the track today and that's me up ahead, Rob M., the flight control icon there. And you're seeing Vince trying to catch me. Now you might be wondering, now Vince and I are racing, and we are. How is it that he's driving but I'm just standing here? Well, we used Game Center to produce one of the coolest new features in Real Racing 3, time-shifted multiplayer. So, I can challenge Vince one day and he can race me the next. And what you're seeing up ahead, that's actually my race from yesterday. See a lot closer if Vince could catch me. Nice one, Vince. So, this is not just a ghost because you saw Vince bump me. He can fully interact with his vehicle. He can jostle for race position and he could actually affect my final time in the race. Now, this is something we have never seen done before. And this is Real Racing 3 for the powerful new iPhone. Real tracks, real cars, real people you can play against anytime you like. That's coming to the App Store later this year. Thanks everyone. (applause) **Phil Schiller:** If you are a fan of the Real Racing app like I am, you know that. It is truly state of the art in the physics and the realism it brings. And now, to marry that with console-quality graphics is unheard of and unseen before, truly epitomize what can be done in the palm of your hand with that A6 chip. So, we've got an A6 chip, we've got LTE networking. We've got a larger 4-inch retina display. You can imagine the challenge the team face now of trying to even match the battery life the iPhone 4S has in a thinner and lighter design and we're really proud because what they've done has not only matched but exceed the battery life of the iPhone 4S. So, 8 hours of 3G talk time and 3G browsing, 8 hours of LTE

browsing, 10 hours of Wi-Fi browsing, 10 hours of video playback, 40 hours of music playback, 225 hours of standby time. Incredible battery life in the world's thinnest smartphone. Next, the camera. Another area we've spent a tremendous amount of engineering in. Now, if you know anything about camera design, you know the biggest challenge is vertical height. Making something thinner is the worst thing you do to camera team. So, we asked them to go ahead and try to create a camera to fit in a new thinner, lighter iPhone 5 and deliver the kind of performance we had with the iPhone 4S camera that is heralded as perhaps the best camera in the entire market, and they have done that. They have built in an 8-megapixel sensor, 3264×2448, backside illuminated for great low light performance, hybrid IR filter, five-element lens and a fast f2.4 aperture. All the things you loved about the iPhone 4S now on a camera design that's 25 percent smaller. That was a huge undertaking. But they didn't stop there. They've enhanced this camera even further. A few of the examples of what it has now it has a new dynamic low light mode. So, when you're in low light situations, the ISP senses that and is able to combine multiple pixels together to give you up to two f-stops greater performance in those scenarios, and you'll really the see difference in your low light pictures. And this optical system has been amazing with this five element lens, one of the best ways to get a better, sharper image through an optical system is more advanced alignment of those lenses for focusing. And the team now is measuring down to the micron level to create better aligned lenses and you really see a difference in the quality of the image. And for the first time, we cap off this optical system with a sapphire or crystal lens cover. You know, sapphire is renowned for being hard and crystal clear and it helps protect your lens and make your images clearer and sharper. On top of this camera system, we have a new ISP image signal processor from Apple built in to the A6 chip and it does some tremendous things to help improve your photography. The spatial noise reduction, you want to remove the noisy particles especially in low light images, so by looking at surrounding pixels, we can determine where the noise is and help remove that. We also have an Apple technology called a SmartFilter that looks at the image before the ISP does its noise reduction and can figure out where those areas that should be uniform color like the blue sky and other areas where they're textured and you shouldn't be doing noise reduction on that, and it's really powerful to deliver amazing low light performance. We also have faster photo capture and the iPhone 4S was already really fast. This is now 40% faster. But it all adds up to simply using it and seeing what kind of pictures you can get. So, we've taken the iPhone 5, we've taken pictures with it and these are from the camera untouched and see what you think. The ocean just looks bluer on the iPhone 5. Kids look happier, they really do, and the world is just a more beautiful place when you take pictures with the iPhone 5. Now this is incredible, this is a macro photo, beautiful bokeh or blurred background as you would want from a great camera system. I'm just going to zoom in a little bit. Look at that bee, you can see the veins on the wings of the bee. And if you've ever tried to do that in a photo, it's not easy, this camera is tremendous. And with iOS 6 and iCloud, you now have the new feature called shared photo streams where you can take your photos and automatically share them with your friends and family where they can like them and comment on them. But perhaps, the most amazing feature of the new camera in iPhone 5, it's called Panorama, and this is incredible. With typical legendary Apple ease of use, you just tap and say, I want to take a panorama photo. You hold your phone vertical to get the maximum area and then you just sweep your scene and the software tells you what pace to sweep it out to get the perfect image. And what it does is astounding. You get remarkably beautiful photographs, incredible panoramas. This image is 28 megapixels in size taken right on your iPhone 5 camera. And what the software does is unbelievable. Behind the scenes in real time while you're panning is taking

slices of photos, finding edges, stitching them together, creating seamless transitions between those photos for one beautiful panorama. It's even able to determine a nonlinear path through it if you're not perfectly stable and align it and remove some of the echo artifacts you get of people or objects who are moving while you're trying to get that pan. It is truly breakthrough software for panorama photos. Let me zoom in a little more and show you the quality of this image, it's simply stunning the detail. Now we use this one because it's a tough one so you can see the exposure changes from one end to the other as it goes from dark to light. There's even people standing there in the corner, they were tougher to see when we pulled out to such a large photo. And one other example just to show you how much fun you can have with the Panorama feature, this is one panorama photo, this — it looks like there's two people in it, those are not twins, that's the same person. I'll leave it to fans of the iPhone to figure out how to do pictures like this and have a blast taking fun panorama photos. Well, the camera is amazing for taking pictures, it's also a lot better for video as well. They still take 1080p HD video, we've improved the video stabilization with the new ISP and the A6 chip. We have face detection for up to 10 faces while you're shooting the video and of course, you can take photos while you're recording video. And the camera on the front has been updated as well. The FaceTime camera is now a FaceTime HD camera, 720p backside illuminated for great low light performance. It has face detection and you can do FaceTime over cellular networks as well. So, that's the new camera, iSight and FaceTime cameras built in to iPhone 5. (applause) Everything has been updated in iPhone 5 and that goes for the audio system as well. We now have not two but three microphones built in to iPhone 5, one on the bottom, one on the front and another on the back. This helps in many situations, you're doing a FaceTime call, you're creating a video, you can get the perfect placement for your microphones. We can use them for noise cancellation solutions, and we can use them for beamforming which is important on voice recognition and applications like Siri. So, a big advancement in the microphones. We've improved the speaker as well. Now, instead of two magnets in the transducer, there's five magnets that gives a better frequency response for the audio, and best of all, they fit into a space that's 20% smaller, all sounding better. We've even updated the ear piece, so that when you hold it in your head and make a call, not only doing noise cancellation and your voice going out to whoever you're speaking with, we do noise cancellation on what you hear through your own ear piece, removing some of the surrounding noise in your area to make it clearer to listen to your call. And we've got a new technology called wideband audio if you want amazing sound performance. But what's this? On typical cellphone call, this is what it looks like, the frequency of the data in your voice, and you see it's somewhat compressed around the midrange to help make that call more intelligible. But it doesn't sound entirely natural all the time. So, the wideband audio, we can fill out more the frequency spectrum and make your voice sound even more natural. This is a new technology, we're just starting it, and we have carrier partners around the world working with us on it. We'll have 20 at launch supporting this, great partners like Deutsche Telekom and Orange supporting it at launch. So, that's the new audio system in the iPhone 5. (applause) Next, the connector. You know the iPhone from its start has used the iPod 30-pin connector which we launched originally in 2003. And it served as well for almost a decade. But so much has changed since we first created that 30-pin connector. So, many of the things we used to do over the wire, we now do wirelessly. We use Bluetooth now to connect to speakers and headphones and car systems. We use Wi-Fi to for example, use, do airplay to our TV or for our stereo. We can do Wi-Fi syncing to iTunes now. And best of all with iCloud we can download all our content wirelessly and even backup to the cloud. So, a lot has changed and it's time for the connector to evolve, and that's just

what we've done. Our new connector is called Lightning. So, now, we have Thunderbolt and Lightning in our connector strategy. This connector is a modern connector for the next decade. All digital, 8 signal design, it's adaptive to what those signals need to be for the different accessories you might plug into. It's more durable and much easier to use, because now you can plug it in either direction, it doesn't matter. And best of all for the engineering team to make a product like this, it's 80% smaller. It's a huge difference in the world's thinnest smartphone. We're working with accessory makers to have them integrate Lightning connectors into products you may choose to buy. For example this holiday season, we have great partners working with us, partners like Bose, JBL, Bowers and Wilkins, Bang & Olufsen and many more. But what about all the devices and speakers and connectors you have now that you already have that use a 30-pin connector? But we're creating a bunch of accessories to help you with that. This is a 30-pin to Lightning adapter, and it works just like you'd expect. You can plug your 30-pin cable into it and it into your iPhone 5. So, a typical example for this might be in your car, where you have an iPod connection kit. You just plug in as adapter, you can just leave it there. And now whenever you jump in your car, plug in iPhone 5 and you can charge and listen to your music as you go. So, that's the new Lightning connector. (applause) Perhaps one of the most important features of iPhone is the software it runs. And we have iOS 6, the latest version of the world's most advanced operating system. And it's been designed from the very beginning to take full advantage of this beautiful 4-inch retina display, now the performance and features the iPhone 5 has to offer. So, we'd like to do is have you see for the first time iOS 6 running on the new iPhone 5. To do that, I like to invite up Scott Forstall. Scott? (applause) **Scott Forstall:** Thanks, Phil. We are really excited about iOS 6. It has so many new features in it and I like to go ahead and demo just a few of those for you here on the iPhone 5. We'll start off with our brand-new Maps application. We have built Maps from the ground up to use vectors so it's incredibly smooth, zoom in and out, to rotate around. We've also built a search engine in so you can look for local points of interest. We included over a hundred million points of interest including restaurants. Let me go ahead and search for a Luce Restaurant. When it finds it, we have this great info card which includes reviews with the partnership with Yelp and lots of photos. And we've also built in free turn-by-turn directions. And so just by tapping on that car icon, you get a quick route and let's go ahead and start. "Starting route to Howard Street. Turn left on to Mission Street. In 900 feet, turn left on to 4th Street." You can see we have this beautiful 3D turn-by-turn directions. As we take you around turns, we use a cinematic camera angle to fly you around. "Turn left on to 4th Street then turn right on to Howard Street." We all– Have all the footprints of these buildings correct. "In 600 feet, turn right on to Howard Street." At anytime, you can tap to get an overview. "Turn right on to Howard Street then a destination is on your right." I can zoom out and see the whole route. "In 700 feet, the destination is on your right." I can zoom in or just tap to resume. And all of this works in landscape in addition to portrait. "Arrived at Howard Street." And that is turn-by-turn. (applause) We've also got great satellite imagery. So, let me switch to satellite here. When you're looking at this, actually in the bottom left corner, there's a button of a 3D buildings. And when you tap on that, it takes you into Flyover. And Flyover literally allows you to fly around the scene with your fingers. It's just gorgeous. And we've added Flyover for areas around the world, so let me choose one other. Let's go to Big Ben in London. It's amazing. You can take, you just tap on it yourself and zoom right in. Give yourself a virtual tour of the area. If you take two fingers, you can change the camera angle and down, zoom around so you can see the Parliament. Just gorgeous. And that is Maps in iOS 6. (applause) Next step, I'd like to show a nice little enhancement we made to Notification Center. Now you

can get to Notification Center anytime just by flicking your finger down from the top of the screen. And now, right from Notification Center, you can post to Facebook or tap to tweet. I'll go ahead and tweet and I'm going to tweet "Love Flyover." And it's that easy to tweet from anywhere. The next step, let me show you some enhancements we've made to Safari. Now first you'll see Safari just looks great on this big 4-inch display. When you go into landscape, it looks great and you see those arrows in the bottom right. If you tap on them, it now takes you to full screen mode. So, the page takes the entire large display. Now here you can see there's an article about David Hockney. Now, I have another website opened to a David Hockney article back on my Mac and now, in iOS 6, I can get back to any of the articles I have opened on any of my devices on the go. It's something we call iCloud Tabs. So, when I tap on iCloud Tabs, it shows the four windows I have opened back on my Mac. I'll choose that first one, it takes me right to that web page on the go to iCloud Tabs. (applause) Next, I'd like to show you some enhancements to Mail. We've added a feature called VIPs to mail. And VIPs allows you mark people as VIPs and then all of the messages from them in the inbox are collected in one place. So, here's a message from one of my VIPs. It's also a lot easier to now flag something. So, this is about a family camping trip. And to flag that, see on the bottom left corner is the flag icon, if I just tap on that and say flag, it will automatically be added to this dynamic flagged mailbox so it's easy to go and get back to it at any time. And those are some enhancements for Mail. Next, I'd like to show you a brand-new app and that is Passbook. Passbook is the best way to collect all of your passes in one place. Here I have a movie ticket, an airline boarding pass, here is a coupon from Target, here's a store card from Starbucks complete with the balance. Here is a ticket for a concert. Here's a ticket for a baseball game. Now, this is a baseball game I've already gone to so I can flip it over, tap the trash icon, and we'll go ahead and shred that for you. (applause) And one of the really cool things about Passbook is it integrates with the lock screen. So, if I have my phone locked and in my pocket and I get to the airport, my boarding pass automatically appears on the lock screen, I slide across, it brings up my boarding pass, I scan it and get on the plane, it's that simple. (applause) And that is Passbook. Next, I'd love to show you shared photo streams. Shared photo stream is the easiest way to share photos with your friends. I'll go here in photos and here is my camera roll. Let me choose a few of the photos I've taken recently and I'll say share to the photo stream. I'll share this with let's see, Ashley and Wendy. I'll name it "Fun" and that's it. It's that easy to share photos with your friends. It looks like this. They've already received the Push Notification with those photos on their phones. Here is a shared photo stream I have subscribed to. The great thing is you can comment on photos, your friends can comment on photos, and if you just like a photo, just tap that like button up top and your friends will be notified that you like that photo. And that is shared photo stream. (applause) There's one more thing I'd like to demo for you and that's some great enhancements to Siri. Siri now knows all about sports so I can ask questions like, "How did the 49ers do last weekend?" "The 49ers beat the Packers by a score of 30 to 22 last Sunday." So sport scores, you can ask about standings. "What are the current NFL standings?" "Okay, these are the standings for the NFL." Scroll down, you can see there is the Niners 1 and 0. You can also now launch apps just by talking to your phone. So, I could say "launch Yahoo Fantasy Football", and that's it. Immediately it launches the app. Now, Siri has also learned a lot more about movies so I can ask. "Can you recommend a good movie in theaters?" "Checking for movies, that is a very subjective question. Here is what others have found to be the best movies." So, we can find all sorts of information of movies, sort by rating. Siri also knows a lot more about restaurants, so it can help find a restaurant, even help you book a table like this. "Find a sushi restaurant for 4 at 8 o'clock." "Checking for

sushi restaurants. These restaurants have tables for 4 around 8 p.m. Tap the one you'd like to reserve." So I can tap one but if I want to change the time, I can just tap on say 7:45 there, and then tap make reservation which takes me directly to the OpenTable app to finalize my reservation. We've also integrated Facebook right into Siri, so I can now post by talking to my phone. "Post looking forward to sushi tonight to my wall." **SIRI:** Here is your new Facebook status, ready to post it? **Steve Jobs:** I'll go ahead and post that. **SIRI:** Okay, I posted your Facebook status. **Steve Jobs:** Thanks Siri. **SIRI:** No problem. **Steve Jobs:** And those are just a few of the new features in iOS 6, there is so much more. You saw some of the Facebook integration, we've integrated Facebook into many of the apps throughout the OS. There's some great enhancements to the Phone app including the ability to automatically send an SMS or iMessage back when someone is calling you on the phone and you can't answer it right then. We've taken FaceTime beyond Wi-Fi and now, you can make a FaceTime call from wherever you are over the cellular data network. We've got some great enhancements for accessibility including single app mode and these are only 10 of the more than 200 new features in iOS 6. We think you're going to absolutely love it and that is iOS 6, thanks. (applause) **Phil Schiller:** Thank you, Scott. Without doubt, the most advanced operating system on any mobile device and it powers iPhone 5. Now, iPhone 5 comes in this beautiful black design, the glass is all black, the aluminum is a color we call slate and there's another color as well. There's a white iPhone, the glass is all white, it's got a beautiful bright silver aluminum finish. I think customers are going to love it just as much as the black one. They're both stunning and they're the thinnest and lightest phones we have ever made. And even with that, the team has packed in innovation at every level of the design. It's the most innovative display with that 4-inch retina display. It's got ultra-fast wireless with the LTE and faster Wi-Fi. The brand new generation A6 chip would double the performance and it's smaller and more energy efficient. The all-new iSight camera, as well as FaceTime camera and that killer Panorama feature. It's got all new audio systems with new microphones, new earpiece and we've got the Lightning connector and of course iOS 6. iPhone 5 is the best phone we have ever made and what would be the best phone without a killer video? So I like to run our video now. [Video clip] (applause) When you think about your iPhone, it's probably the object that you use most in your life. It's the product that you have with you all the time. With this unique relationship people have with their iPhone, we take changing it really seriously. We don't want to just make a new phone. We want to make a much better phone. iPhone 5 is the result of this approach. It's being completely redesigned and for the first time ever, we've increased the size of the display. By making the screen taller but not wider, you can see more of your content but still comfortably use it in one hand. And yet, even with the larger display, iPhone 5 is the thinnest, 52:17lightest iPhone we've ever built. To achieve a design this thin, we had to look at making many of the components inside the design smaller. It's actually 18% thinner and 20% lighter than the previous iPhone. It took an incredible cross collaborative effort to do this. From the beginning, we knew we wanted to bring LTE to the iPhone. What LTE does is it enables really fast downloads over your cellular network. You'll notice a big difference compared to previous network connectivity. In fact, LTE can actually be faster than the average Wi-Fi connection at home. The conventional approach of designing LTE into a world phone uses two chips. With the new iPhone, both voice and data technology are combined onto a single chip, this is one of the real breakthroughs that enables iPhone 5's thin design. We're also introducing an all new Apple design A6 chip. It delivers performance that's up to twice as fast as the previous generation. You'll experience a big increase in speed in everything you use your iPhone for, especially in the way it delivers more detail and boosts frame rates in graphics-intensive apps. The A6 chip is so power efficient that it increases

performance while also increasing its battery life. Given the dimensions of the new phone and all the capability that we wanted to add, we needed to manage space inside the phone very carefully. We've created the new much smaller Lightning connector. It's all digital, so it's designed for today's uses and we made it reversible so it fits either away. We also moved to a sapphire lens cover which is thinner and more durable than the previous cover glass. This really protects the optics and keeps your photos looking great. I don't think the level of invention has ever been matched by any another product we've done. The seamless integration between hardware and software makes everything you do on iPhone 5 just feel more fluid, responsive, and fast. And with its amazing display, you just feel like you can do more. It's great for watching HD videos in full wide screen. And in portrait mode, iPhone 5 still fits so comfortably in your hand. Our all new Maps application is fantastic. If you look at things like Flyover, it's a completely different experience than you've ever had before in Maps. And using turn-by-turn spoken directions makes it really easy to get where you're going. Turn left on to Lombard Street then turn right on to Van Ness Avenue. The Panorama feature is simply awesome. You can capture a panorama photo just by moving your camera through the scene. Once you're done, the app combines what you captured into one beautiful panoramic shot. And now, Siri can do more for you. You can get sports scores and team schedules. Siri can also find places to eat and even help you make a reservation. Facebook is now integrated right into iOS 6. So, you can post photos or share anything else you want to directly from your apps. And now, you can make a FaceTime call right over the cellular network. So, no matter where you are, you're always able to see the ones you love. Along with the experience of actually using it, what makes iPhone 5 so unique is how it feels in your hand. The materials it's been made with, the remarkable precision with which it's been built, never before have we built a product with this extraordinary level of fit and finish. We've developed manufacturing processes that are most complex and ambitious. Starting with the aluminum, we machine all of the surfaces of the enclosure. We then polish and texture them. We then use crystal and diamonds to cut the chamfers. It's so exact that you're left with a near mirror finish. These techniques created dramatic distinction between the product's lightly textured back and its highly polished chamfered edge. This manufacturing precision extends to have these many pieces seamlessly come together. The inlay of the product is matched to the housing through a highly sophisticated process. With the parts on the conveyer, two high powered cameras take pictures of the housing. An instantaneous analysis is done and then the best match out of a possible 725 cuts is determined. The variances from product to product, we now measure in microns. We believe that going to such extreme lengths is the only way that we can deliver this level of quality. To create the new iPhone, we began with the design that we really loved. But to build it, to implement it, we had to look way beyond what we knew to be possible. It took all of our learning, our best thinking, to realize something so simple, so clear, and yet so truly extraordinary. Well, I don't know about you but for me I think there's just two questions left. How much do I have to spend to get one? I want one. Well, the great news, it's the same price as the iPhone 4S it replaces. $199 for 16 gigabytes, $299 for 32 gigabytes, $399 for 64 gigabytes, and a typical 2-year carrier contract. What's equally impressive is what happens with the entire line. So, now, you'll be able to get iPhone 4, 8 gigabytes on free contracts. That's amazing. iPhone 4S for just $99 with 16 gigabytes and the iPhone 5 starting at $199. Clearly the state of the art best phones at every price points from free on up. And the second question, when can I get my hands on one? You know, a lot of customers are going to be asking that. But you can start to pre-order this Friday, September 14th. And we're going to ship the iPhone 5 just one week later, September 21st in the US, Canada, UK, France, Germany, Australia, Japan, Hong Kong, and

Singapore, an incredibly quick start. And just one week later, over 20 more countries around the world, this is just before the end of this month. By the end of this calendar year, we hope to be in 100 countries, 240 carrier partners around the world. This will be our fastest phone rollout ever. Of course, they all run iOS 6. I think we did the best job in the industry of helping to support our customer base with great upgrades. So, if you have an iPhone 4S, iPhone 4, iPhone 3GS, the new iPad, iPad 2, and the iPod touch 4th generation. We have an upgrade for free to iOS 6 next week on September 19th. So, that is iPhone 5. Thank you very much. (applause) I'm going to turn it back to Jeff Robbin. **Jeff Robbin:** Thank you. iPhone 5 and iOS 6, the biggest things to happen to iPhone since iPhone. And I am so incredibly proud of everyone at Apple that helps makes today occur. These products are simply amazing. Now, in addition to announcing iPhone 5, we have something near and dear to our hearts to talk to you about today and that is music. Apple loves creating music products. Music is deeply imbedded in our DNA. And this is the reason that we created iPod and iTunes. And these products have gone on to just revolutionize the music industry. We get really excited when we can make music products that make enjoying music even better or even simpler. Today, we're announcing exciting changes with both iPod and iTunes. So, let's get right to it. We'd like to start it with iTunes and I'd like to invite Eddy Cue up to take you through it, Eddy? (applause) **Eddy Cue:** Thanks, Jeff. So, thanks. So, let's talk about iTunes. So, the iTunes store is the number one music store in the world. It offers more than 26 million songs and all of you have purchased and downloaded over 20 billion songs since we launched it just nine years ago. Now last year, the iTunes Store was available in 23 countries, but we've been hard at work to make it available to even more people. And today, I'm happy to report that the iTunes Store is available in 63 countries around the world. (applause) And with that, we now have 435 million iTunes accounts all with one click purchasing. And all of these customers can easily shop from anywhere with their iPhone, their iPod touch, their iPad, or on iTunes on their Mac and PC. But over the last couple of years, it's been an amazing trend. More than two-thirds of our downloads now come directly from iOS dev ices. And that's why we spent the last year redesigning all of our stores for iOS, making them more fun and easier to use. Here is the new iTunes Store on the iPad. It's a beautiful new design, everything is faster, large showcases on the top to show you what's hot and new, and we use the same design for movies, for TV shows, it works great for the App Store, the iBookstore, and it transforms beautifully to the iPhone. Here is the iTunes Store on the new iPhone 5. You can just swipe to see more albums, tap on charts to see all of the top songs and they automatically update as you scroll. Here is the App Store. We've integrated Facebook likes into every one of our product pages. So, now you can like an app and see if your friends like it too. So, the new stores on iOS completely redesigned from the ground up, faster, easier to use. Now, if you preview a song today and you leave the album page, it stops playing. Well now, when you preview a song, you can browse the rest of the store and it will keep playing and with 90-second previews, this is great. Much better results from search and you can share directly on Facebook and Twitter. All of these stores will be available with iOS 6 on September 19th. (applause) Now let's talk about iTunes on your Mac and PC. iTunes is the world's most popular media player. Now, iTunes was at the center of your digital hub. It was the place where you kept all your music, movies and TV shows, but iCloud changed all of that. iCloud keeps your purchases and makes them available to all of your devices and it's been a huge, huge hit. We now have over 200 million customers using iTunes in the Cloud. And they've downloaded more than 15 billion songs, movies, TV shows, apps and books right from the Cloud. But we're not standing still. This is the current iTunes and today we're introducing brand new version and it is dramatically simpler and we've built iCloud

right in. And I'd like to show it to you right now. Now, rather than walking through all the features, I'd like to invite Jeff Robbin up to give you a demo. Jeff? (applause) **Jeff Robbin:** Thanks Eddy. Okay, let's take a look at the new iTunes. Here's what it looks like. We've got a beautiful new edge to edge design where you can really focus on your music. When you click on an album, it expands in place. And iTunes automatically analyzes the album cover to provide this beautiful-themed experience. This is what Adele looks like. Here's "Abbey Road," Bruno Mars, and you can just double click to hear a song. And each album also comes with a feature we call In The Store where you can see the top songs and albums from that artist as well as recommendations. Now of course you can also browse your library by artist. You can see here we've got the list of artists down the left as well as all the albums down the right, and I can just click on an artist and just see those albums by that artist on the right. We've even given the artist the ability to share photos with you right in your library. Just click Gallery. And here are some photos that Coldplay is sharing. And of course, we've also got the Familiar Song List View. But what about playlists? If I click playlist, we can see them on the list on the left here. I can just select one and click Play. Now, when I want to add a song to a playlist, I just click Add and now unlike previous versions of iTunes, you can actually see your entire music library and the contents of your playlist at the same time. So, I can just drag in new songs and click Done when I'm finished. Now, what about when I'm browsing my library? Let's go back to Albums and whenever I start to drag an album, iTunes just brings in a list of my playlist from the side and it can drop new songs right there. And that's playlists inside iTunes. (applause) We've also added a really cool new feature we call Up Next. Just click this icon in the LCD and you can quickly see what songs are coming up next. You can rearrange them and when you see a song you want to hear right now, just double click. But we've also made it really easy to add new songs to Up Next. So, I can go to an album and I can go ahead and just choose Play Next. And if you look as Up Next, you're now going to see Up Next is that new song and when iTunes is finished playing with it, it's going to go back to my playlist and pick up right where it left off. We think this is a great way to listen to music in the new iTunes. Now, we've also improved search. I can go ahead and just type "say"– oops, apparently, I can't type say. And so, what you see is iTunes searching across your entire library. Albums, songs, artists, music videos, and I could just double click to play or just click, and iTunes takes you right there. It's a really easy way to search your library. Now we know that people love to listen to their music in the background while they're doing other things. So, we've really improved the new mini-player. So, up here in the upper right corner, you'll see a new icon and if I just click it — it switches to the completely redesigned mini-player. And I can just roll over and get the controls, click Play. Picked up where I left off. I can skip to the next song, and the mini-player shows me the song that's playing. Now if I want to hear a different song, I can search and I'll just type OK. And we've built search right into the mini-player. So, I can either double click and hear that song right now or I can click plus and it adds it to up next which of course is also built into the mini-player. And so, you can see there's that song coming up next and then it'll go back to the playlist and pick up where it left off. So, a brand new mini-player inside the new iTunes. (applause) Now let's go back to the main library. And as Eddy mentioned, we've built iCloud right into iTunes. So, my music purchases, movies, TV shows, all right in my library. So, let's switch to movies. And this is my entire library including movies both on my computer as well as in iCloud. So, here is one, "The Avengers." I was watching this earlier on my iPad but I didn't get to finish it. Well, iTunes can pick up right where I left off right from iCloud. [Video Clip] I love that. (laughter) iCloud built right into iTunes. And now, let me give you a quick tour of the redesigned iTunes Store. I'm just going

to click this button to go to the store and this is what it looks like, very similar to the store on the iPad. And we've got this beautiful showcase up top where you can see what's new and what's hot and I can just click to cycle through as well as the shelves, here's new music. It's really easy to just scroll through as well as New & Noteworthy. And if you see an album you're interested in, just click. Here's album from Bruce Springsteen, been remastered. If I want to preview a song, just click Play. Let's go to his artist page, click here, and you notice that the song kept playing. So, while I'm browsing the store, you can keep those previews going. So, this is Bruce's artist page. You'll notice over on the right, we've added concerts. So, I can actually see his tour information as well as what concerts are near me. And of course, the new store redesign looks great for movies, TV shows, apps, and the bookstore. So, those are just the few of the new features in the new iTunes and looking forward to you enjoying it as well as we do. Thanks. (applause) **Eddy Cue:** Thanks Jeff. That was great. So, the new iTunes dramatically simplified user interface. Play your music, your movies, and TV shows right from iCloud, a completely new mini-player, a great new way to listen to your music with Up Next and of course, the redesigned iTunes store. The new iTunes will be available in late October and that's our update on iTunes. We think you're going to love it and we can't wait for you to get your hands on it. So, thank you. (applause) I'd like to bring up Greg Joswiak to give you an update on iPod. (applause) **Greg Joswiak:** Thanks Eddy. Okay, let's talk about the iPod. iPod has changed the way we all listen to music. And the iPod is the most popular music player of all time. In fact, we've sold over 350 million iPods. And we had millions, and millions to this every quarter. But like Tim said, we don't do this just for the numbers. iPod and music are part of the DNA of the company and we love music and we have the most loved family music players there is. And we're going to make some exciting changes that line up today. So, let's start first with the iPod nano. So, the Nano from the very beginning was about the best ultra-portable music experience and we've had six amazing generations of the iPod nano. When we look and create new iPod nano, we really wanted to take the opportunity to reinvent the Nano. And if we're going to reinvent it and make an even better music player, well, what elements would we want to create and give to the Nano to do just that. Well, for one, we'd want to give it a really large display to make it easy to navigate and experience your music. We'd want to have really easy to use controls. We'd want to make it thin and light and make it out of the highest quality lightest weight materials with precision engineering. And of course, we'd want to give it the latest technologies like the Lightning connector. Well that's just what we did with the all new Nano. The new 7th generation iPod nano which by far the best Nano we've ever created and here it is. It is incredibly ultra-portable and ultra-light. As you see it in your hand there it is really small and has perfect size and shape for your hand. And ultra-portable course means ultra-thin. And it is only 5 millimeters thin. Almost 40% thinner than the iPod nano it replaces and the thinnest iPod nano we've ever created. And despite its small size, we've given it really big easy to use control. So, you can control your volume as well as even play, pause your music or go forward and backward through your list without ever having to look at your display. But when you do look at your display, you're going to love it because it's the biggest display we've ever put in an iPod nano at 2-1/2 inches. And it's a multi-touch display and we've redesigned the Home screen and give it a new Home button, so you can always go back this Home screen from no matter where you're at. It's super easy to use. And of course it's an iPod nano, so it comes in a collection of really fun colors. Seven different colors and if you notice, we've color-matched wallpaper of the iPod nanos to match the beautiful enclosure of the iPod nano. So, you can now experience the color on the front as well as the back. It's really beautiful. And of course that bigger screen is great for experiencing your

music even better, full album art, song information, touch controls, all up in the screen at the same time. And we've integrated an FM tuner that even has live pause so you can pause your FM or go back and listen to something again. And of course the Nano is a fantastic photo viewer. And with multi-touch, you can simple pinch and zoom your photos. And we're bringing video back to the iPod nano. (applause) And it's wide screen video and as you notice we have a wide aspect display. So, it uses every pixel of that display, really beautiful video. And we're building Fitness and Pedometer right into the Nano. So, it means you can track your runs and your walks and integrate with Nike+ right out of the box, nothing extra to have to buy. That's fantastic. And one of the biggest requests we've had was for Bluetooth. So, we're integrating Bluetooth for the first time to the iPod nano so you can stream your music wirelessly to speakers like your Jambox, wireless headphones, and of course even your car, all without ever having to plug it in. But when you do plugged it in, of course, as you would expect, we've given it the all new Lightning connector, super small, super durable, reversible, easy to use. So, the new Nano, more beautiful than any Nano we've done, more portable, more feature rich, but also more battery life. The longest battery life we've ever had in a Nano with up to 30 hours of music playback. So, this is the all new 7th generation iPod nano. (applause) Hope you love it as much as I do, because I love it. Next, let's talk about the iPod touch. The iPod touch is the most popular iPod we make. And it's the world's most popular music player. But what a lot of people don't realize is it's actually the world's most popular game player as well, with access to over 175,000 game and entertainment apps. And with Game Center, you're connected to a network over 150 million game players. But it's not just a great music player and great game player, it's a great iOS device. And we wanted to take everything that costumers love about the iPod touch and make it even better within an all new 5th generation iPod touch. And here it is. The best iPod touch we've ever made. (applause) And when you turn it on your side, on a side, you're going to be amazed, because it's only six millimeters thin. Not just the thinnest iPod touch we've ever done. It's almost as thin as the iPod nano, yet it's a touch. And when you pick it up, you'll hardly believe the weight of it. It is incredibly light. It's the lightest iPod touch we've ever created. So, thin and light, again, perfectly for your pocket, perfect for taking with you wherever you go. And we've made it out of this really high quality anodized aluminum with an amazing finish. And on the bottom, you'll see that we have a head phone jack, speaker and of course the Lighting connector. But I know the thing you probably notice first and foremost was that display. It is the exactly the same 4-inch retina display that we have in the iPhone 5. And, that means we were able to increase the screen size of the iPod touch without sacrificing any portability or any of the one-handed operation. Absolutely fantastic. And of course, the bigger displays, great for experiencing everything better that iPod touch users love, like your music. Again, full album art, song information, touch controls all up in the screen the same time, easier to navigate through your long list of music. Perfectly matched for widescreen video, again, using every pixel that display. And of course, even a better and more immersive game experience. So, that's the new design, a new display of the iPod touch. (applause) And we made it faster. We're bringing the A5 chip to the iPod touch which brings dual core processing to the iPod touch for the first time, which not only doubles the performance from where the A4 was on the 4th generation iPod touch, but even more important with the dual core graphics can increase the graphics performance by up to seven times where we were with the A4. And what that means is that we can do things with the new iPod touch. You just couldn't do with the 4th generation iPod touch. And to give you an example of that, I'd like to invite up a developer Torsten Reil from NaturalMotion Games to give you an example of something he's working on that takes advantage to the new iPod touch. Torsten? (applause)

Torsten Reil: Thanks Josh, thank you. Hi, we have to show you something that we think is unlike anything you've seen before. We're to show Clumsy Ninja, a next generation interactive toy running on the new iPod touch. Now, until now game characters has been based on play back animation. Today, we're showing for the first time a character that is based on the real time simulation of his body, of his muscles and of his central nervous system. This means that Clumsy Ninja is self aware, aware of his environment and fully interactive. So, [Berkley] here is interacting with the ninja now. And you can see that he's lifting his arm and the ninja is noticing that. Now, he can lift his other arm as well and pull him a little bit to the right, (laughter) and you see that he is reacting to that in real time.Now, we can even pick him up a little and flick him up into the air. (laughter) And the ninja is landing on his two feet. And the reason he's able to do that is because the iPod touch is calculating all the required body motions in real time which we think is amazing. Now, Clumsy Ninja probably didn't like that very much but he does like being tickled. And so, Berkley can select the tickle feather and tickle him a little bit. (laughter) So, he likes that to a point and has decided to hide behind the tree. But you can probably tell Clumsy Ninja isn't very good at hiding and that's because he's a Clumsy Ninja. You have to help him become a better Ninja by playing with him and doing different exercises. (laughter) So, let's do the first exercise which is the punch bag. Now, Clumsy Ninja can actually see because we are rate casting out of his eyes in realtime. So, when Berkley picks up the punch bag here, the Ninja will notice it. And he's going to try and play with it as well. Now, this is the first time he actually sees the punch bag, so you can tell he's not very good at it yet. But Clumsy Ninja can learn, the more we play with him the better he becomes at punching the punch bag. Let's try something else out. Something that he's seen before which is the Ninja trampoline. So, the Ninja trampoline, we've already played with the Ninja. And you can tell that he's quite a bit more confident on this already. He's already jumping quite high, and even throwing some special shapes. Actually, he's probably getting a bit ahead of himself. So, let's bring him back to safety. There you go. This completes our first training session with Clumsy Ninja. He's based on many years of research at NaturalMotion and Oxford University. And he's using technology that not long ago would have required a super computer, now running in the palm of your hand on the new iPod touch. We think that it's truly remarkable. Clumsy Ninja is looking forward to playing with you this holiday season, thank you. (laughter) (applause) **Greg Joswiak:** Fantastic game. That's Torstein Reil, again, from NaturalMotion Games. So, with all this performance would we sacrifice battery life? And of course the answer is no. So, we have up to 40 hours of music playback with the new touch. And we've actually increased the video playback. We now have up to eight hours of video playback. So, the Apple A5 chip taking the performance to the next level for iPod touch. So, the camera, iPod touch customers love to shoot video and take pictures with their cameras. But we're going to make it significant upgrade to the camera system of the iPod touch. For the first time, we're building an iSight camera into the touch. It's a 5 megapixel iSight camera. And as you can see from the features that is every bit the latest technology for sensors and lenses. And for the first time building auto focus and flash into the iPod touch. And just like the iPhone 5, we're using a sapphire crystal lens cover to keep your pictures looking clear and sharp. And the pictures we take with this iPod touch are very clear and sharp. I want to give you an example. These are actual shot with an iPod touch. So, see just the level of detail. Amazing skin tones and the colors just pop, look how beautiful the sky looks, and significantly improved, auto exposure for darkness and better outdoor as well as inside in low light. And we've given it the really easy to use Panorama feature, which allows you to take just breathtaking panoramas, really is by just sweeping your iPod touch. And for the first time, you can

download iPhoto from the App Store and do the photo editing right there in the iPod touch. And as Scott showed you, there's never been an easier way to share your pictures than with Shared Photo Streams. So, with all this capability, iSight camera alone rivals point shoot cameras. But the ability to edit on the device, share on the device, Panorama, we think it takes things even further. But there's still more. You may have notice on the back of the iPod touch, the bottom corner there's a little circle. Circle is actually a hidden button, that's part of a feature we call the iPod touch loop. And if you push that little button with your finger, it pops out. It can attach the loop. And just like that, you've added a really handy and convenient wrist strap to your iPod touch. That added security when you're taking pictures or just waking around town. The iPod touch loop, and that's included. (applause) And that's included with the new iPod touch. So, in addition to making the still pictures better, we'd make the HD video recording better as well. It's now 1080p. With video image stabilization and face detection. And just like iPhoto, you can download iMovie from the App Store and do your video editing right there on the device. We've improved the front camera as well, face time HD cameras, so better face timing as well as even recording 720p HD video there. And with the better camera, you take better self-portraits, better profile pictures. So, that's the amazing new camera technology of the new iPod touch. (applause) So, we've improved the wireless capabilities as well. We've upgraded Bluetooth to 4.0 with low energy capabilities. We have support for 802.11, a/b/g, and dualband N, and we have support now for up to 150 megabits per second max bandwidth. And with the with the A5 combined with Wi-Fi means we bring AirPlay Mirroring for the first time to the iPod touch which means you can take your gaming experience from your device to the big screen through Apple TV for the time with iPod touch. So, improvements to the wireless across the board, and as you probably guess, this is all powered by iOS 6, the most advance operating system in the world with over 200 new features of iOS 6. And for the first time, we're supporting Siri on the new iPod touch. (applause) So, the iPod touch is better now in every way. The 4-inch retina display, A5 chip, iSight camera and loop, 1080p video recording, better wireless, Lightning connector, Siri, and iOS 6. But it's still even better than that 'cause for the first time, iPod touch now comes in colors. (applause) With five really beautiful choices and each one of them comes with its own loop, (laughter) color-coordinated. So, that's the new iPod touch, the heart of our music lineup for the holiday along with the 7th generation iPod nano. And we're going to update the colors of the iPod Shuffle to match the seven new colors of the iPod nano. So, this is our iPod lineup for the holiday. (applause) But I want to turn our attention to just something else that's really important to music, and that's speakers. Apple, I don't think a lot of people realize, is one of the biggest providers, if not the biggest providers of speakers in the entire world. Think about it. Sound is so important to our products. We integrate sound and speakers and they're just about everything we sell. We have speakers in our MacBooks, our iMacs, our iPhones, our iPads, our iPod touch, all come with speakers. But we also include speakers in these things, headphones. And to date, we've shipped well over 600 million sets of headphones. So, if you're doing the math, that means over 1.2 billion little speakers. And doing a great headphone is hard because ears are really, really challenging. Everybody's ears are different but you got to make one size fit all. So, that's why we've spent three years in designing an entirely new headphone, and we call them EarPods. And for the moment you see them, you'll see that not only they beautiful, they look unlike any headphone you've ever seen before. And we even made the controls bigger and easier to use. But we made a video even give you better ideas to what it took to create a breakthrough in both comfort and audio quality that the EarPods represent. So, I'd love to run the video. [Video clip] The human ear is so unique. No two are alike. Making one

headphone to fit everybody's ears would be like trying to make one pair of shoes to fit everybody's feet. I mean, it's impossible. But that's exactly what we tried to do with the new EarPods. Everything about their design is focused on delivering incredible sound of comfort. It's part of an exhaustive research and development effort. We three-dimensionally scanned hundreds of ears and look for a commonality. From that, we were able to determine a common volume. This was our starting point to developing a form to fit a broad range of ears. The shape of the EarPod is actually defined by the geometry of your ear. They rest comfortably in your ears, but they don't create a seal the way in-ear headphones do. EarPods are designed to intentionally direct sound right into the ear canal. To optimize the acoustics, we've built in a series of ports, each with its own unique purpose. A port in the back tunes midframe frequencies and provide a consistent listening experience from one person to the next. To provide rich powerful bass, we built ports into the stem that actually work in sympathy with the speaker. By letting air flow in and out of the acoustic chamber, they relieve pressure in and out of the speaker to move more freely producing greater low frequency sound. Sound is so important to the way that you experience an Apple product so we wanted to make a headphone that was absolutely the very best it could be. (applause) So, the new EarPods, I think the music lovers are really going to love this. And of course what we want to do is to make this available as soon as possible. So, we're going to start shipping this as a stand-alone accessory. So, people can start upgrading their music listening experience right away, this would be available starting today. (applause) But you might have guessed that we want to include this with the couple of our products as well. So, we'll be including EarPods with the new 5th generation iPod touch, we'll be including them with the new 7th generation iPod nano, and of course with the new iPhone 5. All include the new EarPods. So, let's review what we did today and go over a line up for the fall for the holidays. So, we have the iPod Shuffle, still 2 gigabytes starting at only $49 but with 7 new colors. The iPod nano we're making available on one high capacity 16 gigabyte model for $149, again, 7 beautiful colors. We're going to keep the 4th generation iPod touch in the line up, but we're going to double its memory, now have 16 gigabytes and iOS 6 over 200 new features at $199. And you can double your memory from there to 32 gigabytes for $50 more to $249. And the new iPod touch with its 6-millimeter design, A5 chip, 4-inch retina display, iSight camera, 5 colors, EarPods and more, for only $50 more than that, so 32 gigabytes for $299. And we're going to make the new Nano and the new touch available next month, in October. And that is our lineup for the fall. We hope you love this as much as we love it because it's the best iPods we've ever done. (applause)

And we do have one more color for each of these as well. There are red ones. These are our product red models that we make available on our Apple retail and our Apple online store and we give a portion of the profits of these products to fight AIDS in Africa. And to date, Apple has contributed over $50 million to this important cause. (applause) So, hopefully you'll buy one of these as well. So, that's our iPod lineup. I'd like to turn the show back over to Tim. (applause) **Tim Cook:** So that's iPod and iTunes. They are a great duo. Now, we do love music and we love this new lineup of iPods. We're so excited about them that we created an ad and I'd like to run it for you this morning. [Video clip] (applause) It's pretty cool. We are very excited about all of the products we've launched today. Let's review. A whole new lineup of the world's most popular music players with an entirely new iPod touch and a reinvented iPod nano; a completely new iTunes with a redesigned music players, seamless integration with iCloud and a stunning new look. And iPhone 5, the thinnest, lightest, and best iPhone we have ever shipped, powered by iOS 6, the world's most advanced mobile operating system now with 200 new features for you to discover and explore. Now, when you look at each of these, they are incredible

industry leading innovations by themselves. But what's that sets them apart and what places Apple way out in front of the competition is how they work so well together. Only Apple could create such amazing software, hardware, and services, and bring them all together in just such a powerful yet integrated solution. Apple has never been stronger. And that's because of the dedication and creativity of our employees throughout the world that they bring to their jobs every single day. They are doing the best work of their lives, work that has real significance because delivering revolutionary products make a real difference in people's lives. Now, whenever we have a music event, we like to remind ourselves and our customers of why we do what we do and there's no better way to do that than to have one of our favorite musical artist performed. We are truly honored today to have an incredible band joined us. They're not only one of the most popular bands in the world. They're one of the most artistically respected. They've won 11 Grammy Awards including 5 in the last year alone. They sell out arenas around the globe. And if you haven't seen them before, you are about to discover why. Please join me in welcoming Foo Fighters. (applause) **Foo Fighters:** Hello! What an amazing day, huh? This is called "Times Like These." [Music] One of the great things about being here is getting to meet all the people, these incredible people. They're shaping our future. And just like when you get to meet someone, like Little Richard or Tom Petty or Jimmy Page, you realize these are just people that took it upon themselves to do something different. They change the world and shape our future but you meet them and they're flesh and bone. They're people and it's totally inspiring. This one is dedicated to all of those people. [Music] We got one more for you. This song is about starting over. It's called "Walk." [Music] Do you remember the days we built these paper mountains then sat and watched them burn? I think I found my place. Can't you feel it growing stronger? Little conquerors. I'm learning to walk again. I believe I've waited long enough. Where to begin? I'm learning to talk again. Can't you see I've waited long enough? Where do I begin? Now. [Music] Thank you very much again. (applause) **Tim Cook:** You guys are absolutely awesome. I hope you're as excited as we are by what you saw today. We've got a hands-on area set up so please get your hands on these amazing products. Thanks very much for coming. You guys are absolutely awesome. [END]

APPENDIX P IV: APPLE SPECIAL EVENT SEPTEMBER 2013

Tim Cook – CEO, Apple: (applause) Good morning. It's great to see everyone. Thank you very much for joining us, and welcome to Cupertino. A special welcome goes out to those joining us in Beijing and Berlin and Tokyo this morning. We are really excited to show you a few things this morning that we're really proud of. But before we dive into that, I've got some updates on some exciting things happening around the company this month in September. The iTunes Festival began earlier this month. The iTunes Festival is the perfect way for us to celebrate our passion for music with some of our favorite artists. This is the seventh year in a row we've been running the festival. And this year is the best one yet. It's 30 unforgettable nights of live performances in London. We had the most incredible line-up with global superstars and stellar emerging artists. It's really some incredible headliners. Lady Gaga opened the festival and she performed her new full-length album before it was released. And we can't wait to see Justin Timberlake and Katy Perry and so many of the others. All the concerts are held here in the historic Roundhouse in London. It's a beautiful incredible intimate place to see a concert. And despite it being the hottest ticket in London, we don't charge anything to get in. Now, as you might guess, demand for these concerts have been off the charts — 20 million people applied for tickets. (laughter) It's like an opening weekend for product. Now we wanted everyone to enjoy this experience.

And so we're live streaming the concerts over a 100 countries and many of these (applause) — many of the concerts are also available on demand. Andy's team prepared a simple and elegant app, and so fans can enjoy the concerts on their iPad, or iPhone or they can join on their Mac or PC and iTunes or you can enjoy it on Apple TV in beautiful HD quality. The enthusiasm and excitement around the festival is just incredible. And we prepared a video and I would love to show it for this morning. [Video Presentation] (applause) It's a month of incredible music. I'd really encourage you to catch a couple of concerts; they're unbelievable. Also this month, we have a lot of excitement in retail. As many of you know, we've been expanding our footprint outside the United States, but this month, our attention turns home. A few miles from here, in Stanford Shopping Center, we've had this small 1,100 square foot store and despite the size of it, our teams have served 5 million customers there, in just nine years. And they've recently been serving 2000 per day in the space. Now this store has long been overdue for an expansion, and this weekend, we replaced it with this store. (applause) This store is a gorgeous pavilion design with glass on three sides and a cantilever groove supported by the three sides of glass. It's an architectural marvel. It's absolutely stunning. It's also over 8 times the size of the other store that you just saw. Now the store consists of two rooms. In the front room, you can get your hands-on on all of our products. You can have a really hands-on experience. And in the other room, you have access to all of our services from the Genius Bar to personal setup to one-to-one training. This was the opening. It was really great, lot of excitement. That's our new Stanford store. I would encourage you to drop by after today's event. It's really great to see. Our retail teams do an incredible job. They do retail like no one else. Now, also this month, we've been hard at work on completing iOS 7. Of course, iOS 7 is the latest version of the world's most advanced mobile operating system. And next month, we will ship the 700 millionth iOS device. (applause) And since we make updates easy and make them available to as many customers as possible, iOS 7 will quickly become the world's most popular mobile operating system. It's packed with amazing new features and a stunning new user interface, and to tell you all about it, I'd like to add invite Craig up. Craig? (applause) **Craig Federighi:** Good morning. These are exciting times. It was just three months ago at a WWDC [Apple Worldwide Developers Conference], we first unveiled iOS 7, and we couldn't be more thrilled with the response. And now soon we're going to witness an event, really almost unprecedented in our industry, when virtually overnight hundreds of millions of people download iOS 7 and begin a fantastic new experience with their devices. Let's take a look at what they have in store. It starts with the lock screen. It's so gorgeous with its edge-to-edge design, precise typography. When you swipe into the home screen, get these gorgeous animations as these icons come in with their harmonious layout, their precisely chosen color palette. But iOS 7 is so alive with depth and not through artificial shadows or borders but the way the device responds to the motion of your hand with a parallax effect. And this deep layering is conveyed across every experience of the device. So, as you swipe up from the bottom of the display, you bring up controls and you see that layer — semi-transparent layer with these handy controls. You can turn on airplane mode, access your music, even turn on a flashlight. This extends as well to experiences like notification center. You can pull down from the top and now from anywhere, including the lock screen, it's incredibly handy. You can find it where you next need to go. And because an iOS 7, your device actually learns when and where you commute, it can recommend where you need to go and how long it will take you to get there with current traffic conditions – it's totally handy. Now we've also made search more convenient than ever before in iOS 7. From any screen on your home screen, you can pull down and search for whatever it is you're looking for and find it — just like that.

(laughter) Now the experience in iOS extends throughout all the applications. A great example is the weather app. You see the edge-to-edge design, the precise typography, the subtle animations. And if you double-click on the home button, you're taken into multi-tasking, or all your apps are kept up-to-date. And just tab like for instance on Safari and bring an app forward. And Safari in iOS 7 is fantastic. We have a new tab — you just tab on the lower right of the screen, can overview all of your tabs. Pick a tab, it slides forward. Start browsing and the controls just elegantly fade away, letting you focus on your content. Now Siri is massively improved in iOS 7. Just hold down on your home button, go into Siri, you can say things like what's Lady Gaga saying. "Searching on Twitter. Okay, here are the tweets." You see that Siri can now draw on the latest tweets but you also notice that great new high quality female voice. You can also select between a new high quality male voice as well. "Okay, here are some sweets." And in addition to Twitter, Siri can now draw on information from Wikipedia, inline websearch and great photo search as well. Now the voices aren't the only place for the sound in iOS 7 is improved. When you receive a call, you may hear something like this…. Now you may miss a call due to your dancing, but it's okay. (laughter) We still have voicemail. So, it's so good. We've improved the system alert sounds as well. You have lots of options like this….it's kind of cool. In addition to these and many others, we have all the old classics as well but remastered the sound better than ever before. Now of course, one of the most important things we do with our phones is capture memories. We do that with the camera app. In iOS 7, the camera is better than ever. You can easily swipe between your different cameras like your video camera, a new square aspect ratio camera. You can tab in the lower right and get access to live photo effects. You can apply them right while shooting, or after the effect when you add it. But what I really love with photos in iOS 7 is the way, instead of a flat camera roll, I can actually get my photos automatically grouped by moments, based on the location in time when they were taken. And if I want to zoom back those moments are collected into related collections, for instance, an entire vacation, automatically pulled together into a single collection. And I can pull even further back into the year view. It's just stunning. I get to see my entire years' wall of colors. (applause) What's really awesome is that on a retina display you can actually make out different parts of your photo collection and you can just hold down your finger and scrub and find a particular photo and bring it forward. And of course, when you find a great photo, you're going to want to share it. Sharing in iOS 7 is easier than ever. Tab in the lower left, bring up the share sheet, cross the top, you can select additional photos to share. You, of course, can share cross messages, iMail, iCloud photo sharing. But if you want to share with people right around you, there's nothing better than AirDrop for anyone who has their phone on nearby, they'll appear in AirDrop. You can just tab, tab on each person you want to share with and via high-speed P2P WiFi you're securely sharing. It's absolutely phenomenal. Now of course, at Apple, we really love music. In iOS 7, the music app is absolutely the best way to enjoy your own personal music collection. But now on iOS 7, you also have iTunes radio. It's the best way to experience new music. Now this is as easy as tapping across the top on one of the featured stations. You can also, of course, create your own stations. Just tab on the new station button and you're prompted with a set of genres to browse. But what's really great is you can really create a station that expresses your own taste. So, if you're like me, you're going to tap on the search field and type RUSH for the awesome Canadian rock trio RUSH and get a thorough dose of awesome right on your featured station's list. Absolutely. (applause) So, that's music. Now iOS 7, of course, is more than I can show you right here. There are over 200 features and it doesn't stop there, because our developer community has been hugely inspired by iOS 7, we're seeing great new designs coming in. Perhaps like

OpenTable, Evernote, Zillow, NBC and so many more. You'll see many more coming in the App Store and in the time to come. So, downloading iOS 7 is like getting an all new device, one that's so much more useful and elegant than you ever before but when you already know how to use, it's great not just on the iPhone but on the iPad as well, where iOS 7 takes great advantage of the expanded iPad canvas. As always, iOS 7 will be available unbelievably for free, starting on September 18. It's available for iPhone 4 and later, the iPad 2 and later, the iPad Mini and the fifth generation iPod Touch. That's iOS 7. Thank you very much. (applause)

Tim Cook

This has been an incredible effort. I can't stress that enough and it is only possible because of the incredible collaboration between Jony and his amazing design team, and Craig and his incredible engineering team. We think our customers are absolutely going to love it. Now I'd like to switch gears and talk about some other software that we create. As you know, iWork was designed to take advantage of the power of the iPhone and the iPad and to bring that power right to your fingertips. And what you may not know is that iWork now consists of the best-selling mobile productivity app on any platform. Now iWork has three amazing apps. The first is Keynote. Keynote is the most powerful presentation app ever designed for mobile device and allows you to create and deliver world-class presentations on your iPad or iPhone and pages the most beautiful spreadsheet ever written for mobile device allows you to create, edit and view documents from anywhere. And numbers — Numbers is the best spreadsheet ever designed for a mobile device and allows you to make compelling spreadsheets in just minutes. Now iWork highlights the fact that iOS devices aren't just great for consuming content, they're incredible for creating content. We also make some incredible creativity apps. Apps like iPhoto. iPhoto brings powerful photographic tools right to your fingertips, so you can take your photo editing to the next level. And apps like iMovie, so you can make beautiful full HD movies from Hollywood trailers to more sophisticated projects right on your iPhone or iPad. Now we think that iWork is a really key advantage for customers' productivity and that iPhoto and iMovie are great for our customers' creativity. No other platform has any apps like these. We think that all iOS devices are made even better if they have these apps. And almost all of our customers want these apps. So, today we're announcing that we're making all five of these industry leading apps free. (applause) They are free with any new iOS device. We think our customers are going to believe this is incredible, it'll be great for their productivity and creativity. So, when you're setting up your new iOS device, iOS 7 will present you with this screen and with one-touch, boom! all five of these apps are downloaded for you and some additional ones. We think our customers are going to love this. This is for any new iPad or for any new iPhone or fifth generation iPod Touch. We think this will be great for our customers. (applause) Now I'd like to talk about iPhone. A couple of you may have been expecting this. About a year ago, we announced iPhone 5. iPhone 5 was instantly the most loved iPhone ever and it had the most successful first-year of any iPhone we've ever done. Customers loved the retina display. They loved the thin and beautiful design, the superfast processing and graphics, the incredible camera. And iPhone 5 helped take our iPhone business to an entirely different level, becoming very huge. Now in the past when we've announced a new iPhone, we've lowered the price of the current iPhone, making it even more accessible to more people. But this year, we're not going to do that. The business has become so large that this year we're going to replace the iPhone 5. And we're going to replace it with not one but two new designs. This allows us to serve even more customers. And to tell you all about these two new incredible designs, I'd like to invite Phil Schiller up. Phil? (applause) **Phil Schiller:** Well, good morning everyone. Really happy to be here, because I have the great

honor and privilege to introduce these two new iPhone products to you. And the first one is called iPhone 5c. The iPhone 5c is made with all the incredible technology the customers have loved with the iPhone 5, and there's more too. It has an incredible all new design — one that's more fun, more colorful than any iPhone we've made yet. A few of you might have seen some shots in the web, you have seen them (laughter), and that's cool, because everyone's really excited about this and so are we. But you haven't really seen it before not like this. [Video clip] (applause) This is iPhone 5c and it's really stunning. Incredible new color design. It delivers on color throughout the product every detail — volume buttons, the switches, the entire back insides are made from a single part. In the front is one glass multi-touch surface. As close as you look, you won't see seams, or part lines or joints. It's absolutely gorgeous. And when you turn it on for the very first time an iOS 7 runs on the new iPhone 5c, you will see how incredible they look together. The vibrant icons, the color matched wallpaper, the way the translucency brings color to the surface and it creates an entire experience of color and experience just doesn't stop with the phone design and the software. The team has created a really cool line of custom cases specifically for the iPhone 5c made of a soft feel silicon rubber, they're micro fiber line and they've designed areas like around the camera and flash with the color the iPhone shines through. In fact, as we look down you're going to see this cool circular cutout patterns. So, you get this amazing combination of color between the iPhone 5c and its case. You can combine them in really amazing combinations to create the exact look that you love. It's absolutely beautiful. And when you pick up and hold the iPhone 5c for the first time, you're going to be blown away about the quality of it and how rigid and great it feels in your hand. It's made of a hard-coated polycarbonate material that's ideal with its incredible color but it's more inside. It's built with the new construction method that uses a steel reinforced structure. It provides incredible rigidity. It also serves a dual purpose as part of the antenna system, so it's really smart. It surrounds a beautiful four-inch retina display with integrated touch layers so the colors feel like they're right sitting there on top of the glass, has gorgeous range of colors that's awesome for your photos and your videos. Inside it's powered by an Apple designed A6 chip that gives great performance and great battery life. In fact, the battery inside the iPhone 5c is slightly larger than the battery that was in the iPhone 5 before it. It has the world's most popular camera, the 8 megapixel iSight camera with its backside illuminated sensor, five-element lens, hybrid IR filter; it takes great photos. And it uses that new camera app that Craig told you about, that has all these great features, as well as these live in-line photo filters while you are taking your photos and zoom while you're shooting your video. On the front side, it's got a brand new FaceTime HD camera that's even better in low light scenarios. It's bigger pixels, better backside illumination and it works with this new FaceTime audio feature. In iOS 7 you can make calls that are crystal clear using FaceTime. The iPhone 5c supports more network bands than any phone we've made yet. In fact, it supports more LTE bands than any other smartphone in the world. It has download speeds up to 100 megabit per second down, has dual band WiFi and Bluetooth 4.0. It runs iOS 7 and running the apps on iOS 7 on this beautiful color design is just an amazingly great experience. So, this is iPhone 5c. It comes in five colors: blue, white, pink, yellow and green. It starts with a large 16-gigabyte configuration at a price of just $99. (applause) As you can see, 32 gigabytes for $199 is on a typical U.S. carrier two-year contract. These gorgeous cases, there are six colors to choose from at just $29 dollars each. We think customers will get more than one SIMs to look at their iPhone whenever they feel like it. We worked really hard to make sure these products are designed the most environmentally friendly manner. They're arsenic free display glass, mercury-free displays, BFR free, PVC-free, yes, an Android-free. This is

the iPhone 5c. We have a video to tell our customers a lot more about it. [Video clip] (applause) So that is iPhone 5c – the first of our two new phone lines today. The second – the second is called iPhone 5s. The 5s is the most forward-thinking phone we've ever created. In fact, perhaps the most forward-thinking phone anyone has ever made. It's packed with incredible technologies — technologies that are in service of helping people use these devices more in the ways that we all want to. And it's built in a design that is absolutely the most beautiful stunning phone design in the industry and this is what it looks like. [Video clip] (applause) This is iPhone 5s. It's made of a high-grade aluminum with diamond-cut chamfered edges, perfectly matched glass inlays. The team has carefully considered every detail to make this the most beautiful phone ever made and it is the gold standard in smartphones. It comes in three metal finishes: silver, gold and a new space gray. And there are so many innovations inside it. I'm going to tell you about three major ones today. The first is performance. We all want great performance in our devices. And it's even hard to remember the old days where performance meant big processing cards and graphic cards and power supplies and fans, that defined computing performance. But thank goodness we've moved beyond that. Now customers want great performance that fits in the palm of your hands and you can take with you everywhere. And the iPhone 5s is a huge leap forward in mobile computing performance. It starts with a brand-new system-on-a-chip from Apple called A7. A7 is 64 bit. This is the first ever in a phone of any kind. Now the PC world went through a transition from 32 bit to 64 bit and it took years. Today you're going to see that Apple is going to move the system forward, the mobile computing system from 32 to 64 bit in one day. Going to do it by great new hardware, amazing operating system advancements and all new applications. So, let's talk about the hardware – the A7 chip. This is remarkable. This is a 64-bit desktop class architecture. That means we can use a new modern instruction set, an ARM instruction set that's more efficient than the others use. It is a lot of great technology in it. The number that just stands out above all else, has over a billion transistors in it. And this fits in a dye that's about the same size as the previous generation A6. It's about twice as many transistors. It's remarkable. And you've heard a lot about iOS 7. But what we haven't told you yet is it's also been completely reengineered for 64-bit at the same time. There are 64-bit kernel libraries and drivers and all the apps that come with your iPhone 5s, they've been reengineered to 64 bit as well. This will be an easy transition for developers as we've updated our tools with Xcode to support 64-bit, so they can make 32 and 64-bit apps easily. And this is seamless for customers because it's completely backwards compatible with all your existing 32-bit applications, that runs the 32 and 64-bit applications side by side transparently. You don't have to worry a thing about it. Why go through all this because the benefits are huge. The A7 is up to twice as fast as the previous generation system at CPU tasks and it's up to twice as fast at graphics tests as well. And it jumped forth and performance by our team here is incredible. CPU performance from the first iPhone to now the new iPhone 5s has increased 40 tasks. What's striking looking at this chart is half of that performance comes today with the iPhone 5s and it's even more with graphics. It's increased 56 times since the original iPhone, again half of that coming today with the new iPhone 5s. It runs Open GL ES version 3.0, the latest graphic standard. This means the graphic intensive applications can bring their console and their desktop levels 64 bit graphics easily to the iPhone platform, and this when enabled breakthroughs in performance for graphic intense games and things that we love to play and use all day long in our iPhones. Now that sounds great but what's really amazing is when you see it for the first time. And so we're super excited for invite-up from Epic Games, Donald Mustard, co-founder, Chair Entertainment. Donald? (applause) **Donald Mustard**: Good morning. I can hardly believe that it's been three

years since we first introduced the world to Infinity Blade. With touch gameplay designed from the ground up for these amazing Apple devices, Infinity Blade I and II have delighted tens of millions of players and won countless awards. Today, my brother Jeremy and I are thrilled to unveil the epic conclusion to the Infinity Blade trilogy and we're going to show you something that's never been seen before on a mobile device until now. We begin our journey in the hideout, which serves as a hub for players to access any of the eight new worlds in Infinity Blade III. Let's take a look at a few those worlds now. Now in Infinity Blade III, you play as two characters. This is Isha, a stealthy warrior thief. Each of these environments is huge, extremely detailed and filled with rich and rewarding gameplay, and each of these areas is as big or bigger than the entirety of the first Infinitely Blade. Now this is all running real time with each of these complex environments being loaded almost instantly. That's over five times faster than on an iPhone 5. The 64-bit architecture of the A7 chip is so efficient. I literally did a double take the first time I saw how fast it loaded. Now typically converting software to 64-bit is a lengthy painstaking process, but with Apple's excellent tools, it took you how long, Jeremy? Two hours by himself. (applause) Now the Sirius and Isha have joined forces to take down the deathless and the worker of secrets. With OpenGL ES 3.0 we can now combine advanced rendering effects that you've only before seen in film, things like depth of field and blur and fullscreen vignettes. We can even now add lens flares that would make JJ Abrams proud. So, Infinity Blade is known for its big epic boss battles. But we want to do something bigger, something that would even make this troll afraid for its life. Now this new boss eats the old boss for lunch. Now remember this is running real time. This is absolutely not a movie. Jeremy is fighting this dragon right now on the iPhone 5s. Okay. So, when we first got our hands on the new iPhone, I was blown away by how much we could throw at it. We literally just kept turning on feature after feature and still there was power to spare. For example, we were able to add four times the detail to this dragon. Now once you notice the rose of razor-sharp teeth and the ridges of bony spine of its back, I really think that this represents a sea change for our industry. (applause) Infinity Blade III will yet again completely redefine the boundaries of mobile gaming and it's only possible because of the power of the new iPhone. And best of all we've just finished putting the final touches on Infinity Blade III. And it will be available in the App Store alongside the new iPhone 5s. Thank you. (applause) **Phil Schiller:** I hope you are blown away, I am. That is a level of graphics performance you've never before seen on a mobile device. Thanks to this incredible new software running on this amazing A7 chip. But that's not the end of the story in the architecture, there's more to it. We have a completely new part in the iPhone, we call it M7. It works alongside A7. It is a motion co-processor. What does that do? Well, it takes advantage of all these great sensors and it continually measures the data coming from them without even having to wake up A7 chip. It measures from the accelerometer, the gyroscope, and the compass. And with new software and applications you're going to get a whole new level of health and fitness solutions never before possible on a mobile phone. We're updating our core motion API inside iOS 7 to read this data and provide it to applications and it can characterize and analyze the data to tell applications whether you're stationary, walking, running, driving and provide that to enable you to take applications to help you make life more fit and healthy. And we've been working with developers to do this. They're doing some amazing work. Like to tell you about one of them. Nike. The great team at Nike is creating a new application called Nike+ Move. It's all about helping athletes stay motivated, to be fit and active throughout their day. It uses the new M7 chip and core motion API as well as GPS, help keep track over the kind of activities you are taking part in throughout the day and where you're doing it. It gives you Nike Fuel points, lets you compete

with friends over Game Center, all in service of having you have a more healthy and active lifestyle throughout your day. It's really cool. So, A7, M7, a lot more performance, a lot more graphics, motion data. What about battery life? We're really happy to tell you the team has done a phenomenal job. They built a battery life that's equal or greater the iPhone 5 had. 10 hours 3G talk time, 8 hours 3G browsing, 10 hours LTE browsing, Wi-Fi browsing, video playback, 40 hours of music listening, up to 250 hours of standby. So, that's the first of our breakthrough new technologies in the iPhone 5s. 64-bit class architecture, an incredible performance of A7 and M7. Second, the camera system. People love taking photos with their iPhones and its iSight camera and it does a phenomenal job. We want it to get smarter and better at helping us take phenomenal pictures. It used to be the way you take better pictures is you learn to be a better photographer. You get bigger cameras, bigger lenses. You learn about all the techniques of light meters and gels and filters and you can spend your lifetime studying how to take advantage of this and make it work for you. And for the people who want to do that, that's great but for most of us, we just want to take a picture, have the iPhone take a better picture for us. And we have some huge advancements in technology with iPhone 5s to do just that. First, starts with the hardware. A new camera system. You have a new five-element Apple designed lens that has a larger F2.2 aperture, lets more light onto the sensor. We have new sensor as well that has a 15% larger active area. Now our competitors would just pack more pixels on that, make them ever smaller to get some stout on the spec sheet. That's not what we do. We know a secret. We know it's actually bigger pixels that make a better picture. And the pixels on this sensor are 1.5 microns in size, larger than the iPhone 5 and much larger than most competitive phones. They often have 1.0 or 1.1-micron size pixels. With a bigger pixel, they let in more light, get a better dynamic range of color and less noise in the image, all to make a better photograph. The new software in iOS 7 has been designed to take advantage of this new sensor as well as the image — the image capabilities of the A7 chip which are remarkable. Let me give you examples of some of the things this new camera app is doing automatically for you. When you launch the camera app, before you even take a picture, it's automatically setting a light balance, getting the right colors for you. It's automatically setting the exposure level to get the right brightness level. For the first time it's creating a dynamic local tone map around the image, so you can get better highlights and shadows in the image. For the first time, it's doing autofocus, matrix metering with 15 focus zones. This is DSLR level stuff to get a sharper image. And then when you do take a picture unbeknownst to you, it actually takes multiple photos. It instantly analyzes them in real time for which is the sharpest, and that's what you see on your screen. It is completely automatic and much smarter and more capable than ever before. And it doesn't stop with that. It has a new flash as well. We call it True Tone flash. When you take a flash picture, I am sure many of you know that the ambient light whether you are outside, in a room varies in its color temperature. For example, a florescent light is cooler or bluer; incandescent light is warmer or more amber. Whatever color your flash is it's going to clash with the color of the lighting in the room and give you a photo that doesn't look quite right, especially skin tones because skin is so reflective. For flash in the iPhone 5s solves for this. It actually has two LEDs, one, a cooler white one and another a warmer amber one and in real time it analyzes the scene, can present the color flash of over 1000 color variations to give exactly the right color flash for the room or situation you're in. This is the first time it has ever been done, not just on a phone but a camera of any kind. It's truly a breakthrough. So, before using a phone that has a camera with a single LED, you might get a photo like this. You see it has a warm incandescent light. The skin tones don't look right at all. The wood table looks too orange, the jeans are too blue and not right. That's really hard

to fix later with editing. This is un-retouch photos right off the iPhone 5s in the same scene. (applause) You see much more natural skin tones; the wood table looks great. That's one of the great new features in the camera system. Here's another one. For the first time the iPhone Auto Image Stabilization. We've all run into situations like this: in a room maybe a little bit less ambient light, the subject is moving, it needs a long exposure to get a picture but that means you're going to blur on your photo. So, this isn't a keeper, you got to get rid of this photo. But in the iPhone 5s, to get a much sharper image in the same situation, what is it doing? It actually with a single press of the shutter takes multiple photos that's able to combine them for the right exposure level but select the part to the image that could be sharpest on that short exposure time, all done instantly in real time. Here is another great feature of this camera system. A fun new burst mode. When you go to take your picture, if you hold down on the shutter button, it'll burst a bunch of photos. It can actually take 10 frames a second for as long as you hold your finger on the shutter. So, it can work like this. So, in two seconds we just took 20 photos with that scene. This is great for action shots or maybe you're just taking a still of have some kids that are fidgeting and moving around. Now if every time you did this you have to go into your camera roll and sort through all those photos, well the fun would be lost. But the team has done a brilliant job. Using the A7 chip in real time as you took those photos, it analyzed them for a number of variables that checks on exposure, sharpness whether our face is in the scene, whether they're smiling, whether they are blinking and when you go to the camera roll it presents where things might be your favorite shot out of all the shots. You don't have to select them, you can go inside and select any of the other ones you want, they're all there but it picks the best one. If it notices a shot like this one that wasn't an action sequence it will pick a couple shots to represent the major motions in the action, so you have a few photos from the whole series, all done in real time automatically. (applause) One more great camera feature I want to tell you about – slowmo. So, we have a video camera you can select in the camera app. You have a second one called a slow-motion camera. You select that one and then you can create scenes with slow motion like this. (applause) With the iPhone 5s does in that situation it's capturing HD video at 720p at 120 frames a second. Now normal video is 30 frames a second and you can go in and select right on the screen what part you want to be normal speed, what you want to be slow-motion, and instantly create it, yet it looks completely natural and there is no loss of quality as you move in and out of normal and slow speed, and then you just share with your family and friends. Now all of these great features and technologies are simply in service of taking a beautiful picture. So, we have a few photos I like to walk through here and show you that are all taken right off an iPhone 5s, not edited retouched in anyway. So, here are some examples: just a beautiful macro shot, you see a great dynamic range of color in this image. A still shot, we can see a great sharpness. The camera takes such sharp images now. But it's better low light capability when we get photos in all different situations that come out even more beautiful like this jelly fish take in an aquarium. Now on the previous product we showed some photos and everybody had they favorite which was of a creature, so [inaudible] for us. (laughter) The sharpness and detail is amazing. This is right of the iPhone 5S camera, beautiful skin tones rich deep browns. Just gorgeous photo. This one is gorgeous too, sunset shoot, incredible white balance, just beautiful glowing tones. And even the great panorama shots we can take, are even better with the iPhone 5s. This 28 megapixel panorama, taken with the 5S. And what makes it even better now, is we can adjust the exposure level automatically as you are panning the scene. So, for example this scene has more sun on the right hand side, than left side on the sky.

So that is the new iSight camera and the iPhone 5s. (applause) The third feature is all about security. Now we have so much personal information on our devices that we want to protect. I miss the old days when documents were actually paper and you can lock them up in places and protect them. But we know that's not the world we live in anymore. We have so much of our personal life on these devices, our contacts, our emails, access to our accounts, our photos and they are with us everywhere we go. So, we have to protect them. The most common way, of course, is to set up a passcode. Simple four-digit passcode or more complex one if you want. This is something you do dozens of times a day to unlock and get access to your phone. Unfortunately some people find that's too cumbersome and they don't set it up. In fact, in our research, about half of smartphone customers do not set up a passcode on the device and they really, really should. That's why the team's worked so hard in a brand-new technology to make this easy and fun to do. And it's called Touch ID. Touch ID uses a key you have with you everywhere you go. Your finger. More specifically your fingerprint which is unique to each of us. It reads your fingerprint at an incredibly detailed level, and that's because of a brand new sensor called the Touch ID sensor. It's a touch capacitive sensor, it's super thin, 107 microns thin. It's just thicker than a human air. Yet it's very high resolution, 500 pixels per inch, it scans through the outer layers of your epidermis right to the inner live layers to get a better image of your actual fingerprint. You can teach it about more than one finger if you want, maybe use it right-handed or left-handed. And no matter what orientation you use to train it, you can turn your finger and don't have to worry about it because it can read any orientation. But probably the most brilliant things the team did was where they put this new sensor. Right into the home button that we use all day long. This is really smart. The home button still has a tactile switch just like before, so it works the way you use to but it also now includes the Touch ID sensor. Around it is the stainless steel detection ring. So, the sensor knows when to read your fingerprint just by the fact that your finger is on the button. You don't even have to click it. On top of it's protected the sapphire lens, it's hard and also provides a better image down on the Touch ID sensor. Now Touch ID has been built deeply into iOS 7. And the team has made it really fun and easy for you to teach your iPhone 5s about your fingerprint and once you do, you can simply touch the home button to unlock your phone. And it's something that's a joy to do all day every day and leave on always. And since it's built-in, it seems also figure out how to use it to make iTunes purchases, which of course is a different passcode but you can just use the same finger to authenticate music, applications, books, TV shows and movies, all with just a touch of your finger. (applause) [Video clip] (applause) So that is Touch ID, the third of our forward-thinking technologies in the iPhone 5s, has the new A7 chip with its 64-bit desktop class architecture, the all-new iSight camera system with its true Tone Flash and dozens of new features that make picture-taking better and easier than ever and Touch ID deep integration, security features based on your fingerprint. Throughout this you've heard about iOS 7 in ways you haven't heard before, in addition to all the great user experience and great features, now you know that iOS 7 has also been created to fully support iPhone 5s with a 64-bit architecture and integration of Touch ID at deep level of the system and all that camera capability with the image processing and the A7 chip. This is our most forward-thinking phone yet, as the iPhone 5s again in silver, gold and space gray. It starts with a 16-gigabyte configuration at just $199, 32 gigabytes at $299, the massive 64 gigabytes at $399, again on a standard two-year contract. In addition to that, the team has made sort of cases that fit the character of this phone so well. They are leather cases, dyed in these five gorgeous colors. Just $39 each and is also a beautiful product red one as well. It's really great. Like all of our products, it's really important that we designed iPhone 5s to be environmentally friendly. Others don't talk

about this but we're going to continue to because it matters so much. Arsenic free display glass, mercury-free display, BFR free, PVC-free and highly recyclable with its high-grade aluminum glass. So now you've seen our two new phone lines. iPhone 5c and iPhone 5s. The 5c in these gorgeous new colors, 5s is beautiful metal finishes and packed with these forward-thinking technologies. The 5c starts at just $99, the 5s at $199. We're also going to keep a model of the iPhone 4s and 8 gigabyte configuration in the line. Many carriers will be offering that for free, their two-year contracts. So, this is the first time we are launching and rolling out two new lines of iPhone. So, how are we going to do that? Starting on Friday September 13, that's this Friday you will be able to order the iPhone 5c, pre-order it online. Then a week later, September 20th you will start to be able to purchase both the iPhone 5c and the iPhone 5s in channels in the United States, Australia, Canada, China, France, Germany, Japan, Singapore and the United Kingdom. This is the first time we've been able to launch an iPhone at the start with the other countries in China and we are so proud of the work that the team has done here in the US and in China to make that possible. It's really great. (applause) And in Japan, we are going to launch with our great friends at SoftBank and KDDI and also for the first time with NTT DoCoMo. (applause) By the end of the year, we're going to work hard to bring it out into a 100 countries and over 270 carrier partners around the world. So, that's iPhone, and let me turn it back to Tim. (applause) **Tim Cook:** Thanks, Phil. These iPhones are packed with remarkable technologies but we've done that in a way that really matters to people, making things easier and better for our users. We don't just pack in feature after feature. Instead we think deeply about what kind of experience we want to create and then create technologies that enable that experience. It's really an amazing start of prowess – iOS 7, the biggest change to iOS since the original iPhone. iPhone 5c, an advancement of iPhone 5 with an entirely new design that feels great in your hand and color done in a way that only Apple could do. iPhone 5s, the most advanced iPhone ever with our most forward-thinking technologies. Now we prepared a few adds, because we are so excited about the new iPhones and iOS. And I selected one this morning and I would like to play it for you. [Video Clip] (applause) Isn't that cool? We hope that you love these new products as much as we've loved creating them. I would like to thank all the teams at Apple that worked hard on creating these products. I am so incredibly proud over their work. We have got the iPhone 5C and 5S a crossed the hall so you can get your hands on. I would like to thank everybody for coming. See ya. (applause) [END]

APPENDIX P V: APPLE SPECIAL EVENT SEPTEMBER 2017

[Video clip, Steve Jobs' voice] There's lots of ways to be as a person. And some people express their deep appreciation in different ways. But one of the ways that I believe people express their appreciation to the rest of humanity is to make something wonderful and put it out. And you never — you never meet the people, you never shake their hands. You never hear their story or tell yours but somehow in the act of making something with a great deal of care and love, something is transmitted there. And it's a way of expressing to the rest of our species our deep appreciation. So, we need to be true to who we are and remember what's really important to us. That's what's going to keep Apple, Apple, as if we keep us, us. (Applause) **Tim Cook – CEO, Apple Inc.:** Thank you. I love hearing his voice and his inspiring message. And it was only fitting that Steve should open his theater. (Applause) Thank you. It is the honor of a lifetime to be the first to welcome you to the Steve Jobs Theater. Pause Steve meant so much to me and so much to all of us. There is not a day that goes by that we don't think about him. Memories have especially come rushing back as we prepared for today and this

event. It's taken some time but we can now reflect on him with joy, instead of sadness. Steve's spirit and timeless philosophy on life will always be the DNA of Apple. His greatest gift, his greatest expression of his appreciation for humanity, would not be a singular product. But rather it would be Apple itself. We dedicate this theater to Steve because we loved him, (chuckles) and because he loved days like this where he could share our latest new products and new ideas with the world. And we do so not only to pay tribute to Steve but to inspire the next generation of creators and innovators. Steve was a genius and one of the many ways that he showed that was in his uncanny ability to unlock the talent of everybody that he worked with. He thought deeply about our workplace and its surroundings. And he believed that they should inspire talented people to do their best work. So, over a decade ago, he began to work on a new campus for Apple. His vision for Apple Park was to create an incredible workplace of the future where engineers and designers could all be together, collaborating on the next generations of Apple product to change the world. Steve's vision and passion live on here at Apple Park and everywhere in Apple. Today and always, we honor him. (applause) Thank you. (applause) We're here today to talk about some incredible products. But before we get to that, I'd like to take a moment to talk about what's happening in Florida and Texas, Southeastern United States and across the Caribbean. Our hearts go out to all of the people whose lives have been disrupted by hurricanes Irma and hurricane Hardy. You're in our thoughts. We send you our strength. You are in our prayers. sApple is working closely with relief and recovery efforts through Hand in Hand and the American Red Cross and in addition to Apple's direct contributions, we're making it really simple for the entire Apple community to donate via iTunes and the App Store. The Hand-in-Hand benefit for hurricane relief airs tonight on all of the major broadcast networks and I encourage you to watch it. And however, you choose to give, I hope that you open your heart to this important effort. Thank you. (applause) Now let me tell you a little bit about our new home. We'll start moving in Apple Park later this year but of course such a large move is really more of a process. And the first big step is the opening today of the Steve Jobs Theater. It's the most state-of-the-art, purpose-built theater ever built for events just like this one. Apple Park has been built to reflect Apple's values for both technology and the environment. It connects — connects extraordinarily advanced buildings with the rolling parkland to form an open and inspiring environment for our teams to create and collaborate. The park itself was converted from a sea of asphalt into a 175-acre green space with over 9000 trees. Apple Park is designed to be seamless with nature. It's open, transparent. It brings the outside in and connects everyone to the beautiful California landscape. It's powered by a 100% renewable energy. (applause) And in fact, we have one of the world's largest on-site solar installations right here. And just like everything we make, Apple Park has been designed with extraordinary attention to detail, incredible precision, and really beautiful materials. We've got a great Visitor Center which will be opened later this year where we will welcome everyone. And inside the Visitor Center, you'll find an incredible augmented reality experience where you can learn more about Apple Park, its design and its innovations. You'll also find a fantastic new Apple retail store. As you know, Apple Retail has always been about more than selling. It's about learning, inspiring and connecting with people. Now our stores are also the best place to go discover, explore and experience our new products. So, before we get to some incredible products, we'd like to give you an update on retail. And to do that, I'd like to invite Angela up. (applause) Angela? (applause) **Angela Ahrendts:** Good morning. Thank you. It's great to be here. And I love the fact that the same team that designs Apple Park also designs our largest retail stores around the world. But it's funny, because we actually don't call them stores anymore; we call them Town Squares, because they're

gathering places for 500 million people who visit us every year, places where everyone is welcomed and we're all of Apple comes together. But what really brings it all to life, as Tim said, are our incredible teams. We've always said that our people are our soul and they're Apple's greatest differentiator because they bring personal connection to communities all over the world. They humanize technology. But along with our amazing teams, our commitment to design also sets us apart, to make things simple, beautiful. And that's why we think of Apple Retail as Apple's largest products and like all of our products we've designed new features to take the customer experience even further. In our largest cities where we can, we create a plaza, a space open to everyone, come in and relax, meet up with friends or just listen to a local artist on the weekends. Inside we've designed a forum, a place for customers to come and create, collaborate or just connect again with one another. For local entrepreneurs and app developers, we have a quieter space in the larger stores called a boardroom where they can learn more from our teams or again share with each other. And the Genius Grove, a redesigned, more relaxed cervix experience now in the heart of our larger stores. And lastly the Avenues – kind of like shop windows around the Town Square. They're carefully curated and they change seasonally to always feature our newest products and services. And this summer, to turn on these new features, we've launched Today at Apple, our in-store experience designed to inspire customers to go even further with their passions. We started with things that are core to Apple's DNA — things people most use their devices for and they trust us to teach them, like photography, music, gaming and app development. We've created new programs like Photo Walks where customers can perfect their photography skills with features like portrait mode and memories and we do all of this in a really fun social way by taking them out to the neighborhood to explore with each other. Or Swift Playgrounds where the next generation app developers can begin to learn the basics of coding. And one of my personal favorites: Teachers Tuesdays where our teams help local educators stay updated on the newest technologies and apps. In some of our larger stores, sessions are led by local artists like this Music Lab called The Art of Beat Making with the RZA and the ROLI team in Brooklyn. These sessions in all stores are led by our creative team and a new position we call a Creative Pro. So, the Creative Pro is now the liberal arts as the genius has always been to technology and I would love to show a quick video to show you how Today at Apple is coming to life. [Video clip] (applause) We've just started. We've just started but the feedback has been fantastic. Customers are telling us they love the role that Apple Retail is playing in their community. So, what's next? Well, we're going to continue to open Apple Town Squares in the top cities around the world. We're going to invest in online and we're also going to continue to reinvest in our 400 classic locations, including Apple Fifth Avenue in New York City where we're opening up the Plaza to allow natural sunlight to come in, into a greatly expanded space below. And you can see the glass cube will return when reopened late next year. (applause) And in Paris, we're restoring an entire historic building on the iconic Champs Elysées. We're turning a five-story atrium into our largest forum. Early next year we're transforming a theater beneath Piazza Liberty into a modern-day Town Square for Milan. Just imagine movie night there next summer. "wow" (applause) And we've recently announced an ambitious project to restore Carnegie Library in the heart of our nation's capital. We can't think of a better place for Today at Apple programs than a building originally created for the city to access knowledge and unlock their potential. (applause) And I'm thrilled to personally announce the opening of our newest flagship store in the heart of the Midwest, Apple Michigan Avenue in Chicago on October 20. (applause) Our team has designed a spectacular pavilion that seamlessly connects the Plaza to the Promenade as a part of the city's plan to transform the Chicago river front. So, that's a brief highlight, just a

couple of things we've been working on, and as Tim said, Apple's Retail purpose has always been to enrich lives. So, a huge thank you to the 65,000 Apple Retail employees around the world whose passion, energy and commitment in serving all of us every day and ensuring all of Apple comes together, it's brilliant. Thank you. (applause) **Tim Cook:** Thank you. Thanks Angela. I am really excited — I'm really excited about all the incredible things going on in Retail, that I am especially proud of our unbelievable retail team. It's the best place to go experience our new products. And so, let's get going on telling you about what we're going to launch today beginning with Apple Watch. (applause) Apple Watch was designed to help people stay active, motivated, and connected so that they could live a better day. And I'm happy to tell you that more people are doing that than ever before. Since the launch of the Series 2, the Apple Watch has experienced phenomenal growth. In fact, last quarter Apple Watch grew over 50% compared to the previous year. (applause) This is incredible! Now, last year we told you that the Apple Watch had already become the number two watch in the world. Today I'm thrilled to tell you the Apple Watch is now the number one watch in the world. "Wooooooow" (applause) But what's most rewarding to us is how much our users love it. We have an industry-leading customer satisfaction rate of 97%. This is blow-away. (applause) People write to us all the time and tell us how the Apple Watch is helping them lead a healthier life. These stories are unbelievable and we prepared a video so that you could hear directly from them what they're telling us. I'd love to play it for you. [Video clip] (applause) Those stories are so moving, and there is really no words to describe what it feels like to receive this. I'd like to thank everybody in the video for sharing their personal experience with all of us. We have some great news about the future of Apple Watch, and to share it with you, I'd like to invite Jeff up. Jeff? (applause) **Jeff Williams** Thanks, Tim. Those stories are really great and it's really inspiring to us that so many people are getting healthier without Apple Watch. And with watchOS 4, they're going to be able to do even more. We're adding smart activity coaching which is going to help more people close more rings more often, a completely redesigned workout app with high intensity interval training, new features for swimmers like auto-sets and GymKit, an industry first. It's really simple; you just tap your watch on machine, get going and all your metrics are in sync. One of the things that enables these fitness features is the Apple Heart Rate Sensor and it's been at the core of Apple Watch since the very beginning. And today it's the most used heart rate monitor in the world, and we want to use it to help even more people. So, we're doing three things. First, we're making enhancements to the Heart Rate app to give you more information. Now you'll see your heart rate right on the watch face, so you can keep an eye on it with just the raise of the wrist. And when you launch the Heart Rate app, you'll see new measurements, like resting heart rate. Apple Watch calculates this daily by correlating background heart rate readings with accelerometer data. And recovery heart rate which tells you how quickly your heart rate drops after a workout. A lower resting heart rate and a quicker recovery rate can be signs of improved fitness. And now you can keep a better picture of your heart rate, you have a better picture throughout the day. The second thing we're doing is inspired by many of the letters we received from customers who noticed an unusually high heart rate when they wouldn't expect one. So, Apple Watch has been helpful for them but we realize most people won't notice. So, we're adding a feature. And now Apple Watch will notify you when it detects an elevated heart rate and you don't appear to be active. (applause) And the third thing we're doing is focused on heart rhythm. A regular heart rhythm has a familiar pattern, but when your heart beats irregularly, it's called an arrhythmia. It doesn't mean it's beating too fast or too slow; it just means it's beating out of its normal rhythm. And that can cause problems. The most common form of serious arrhythmia

is called atrial fibrillation or A-fib, and it affects tens of millions of people and is a leading cause of stroke. But the challenge is many people with A-fib don't feel symptoms, so it often goes undiagnosed. We've been looking at this for a couple of years and we think Apple Watch can help. In our initial studies, Apple Watch has been effective at surfacing irregular rhythms. So, we're expanding that work and today we're announcing the Apple Heart Study. (applause) It will use data from Apple Watch and it will analyze arrhythmias, including A-fib and notify users. This study is being conducted in partnership with Stanford Medicine and we're working closely with the FDA and they've been great to work with. So, later this year, the first phase of the Apple Heart Study will be available in the U.S. on the App Store. Those are the updates focused on fitness and health and they join the other great features of watchOS 4, we have a completely redesigned music experience, an intelligent Siri face, fun new characters from Toy Story and more. So that's watchOS 4. It will be available to all Apple Watch customers on September 19. (applause) And now I'd like to introduce the next generation of Apple Watch. [Video clip] (applause) Introducing Apple Watch Series 3 and it has cellular built in. (applause) Now you have the freedom to go anywhere with just your Apple Watch. This has been our vision from the very beginning and we believe built-in cellular make Series 3 the ultimate expression of Apple Watch. Now you can go for a run with just your watch and still be connected. You can leave your phone when you go to the beach or just run a quick errand. And it's really nice to know you can be reached if needed while staying in the moment. You can receive an important call with just your watch and the number is the same number as your iPhone. You don't have to manage a separate number. The apps you rely on, like Messages, just work and Siri is at your back, and can call anytime anywhere. You can use Maps and get directions and the location for Find My Friend automatically switches to your watch when you're away from your phone. And third-party apps like WeChat work over cellular as well. And coming next month, cellular is going to change the way we listen to music, because with Apple Watch Series 3 and Apple Music, you can stream 40 million songs on your wrist. (applause) You'll have access to all your favorite music. You can listen to Beats 1 live or any Apple radio music station. You can even ask Siri to find you the perfect track. Now the best advice for staying active has all the music you need to stay motivated. To enable these features on Apple Watch, we have packed Series 3 with the most advanced technologies ever in a watch. Inside is a new dual-core processor delivering up to 70% more performance. It's really, really fast. Siri is quicker than ever, and thanks to the new processor, for the first time on Apple Watch Siri can talk. **SIRI:** It's 64 degrees right now in South Lake Tahoe **Jeff Williams:** It's really convenient to not have to look at the screen when you ask it a question. For Bluetooth and Wi-Fi connectivity, we developed a custom wireless chip, we call W2. There's nothing else like it. It delivers up to 85% faster Wi-Fi while being 50% more power — power efficient for both Bluetooth and Wi-Fi. And we've added a barometric altimeter. So, now you get flights of stairs climbed and elevation gains after a workout. We're also releasing an app for developers. This can be great for skiing and snowboarding acts. Of course, (applause) got a snowboarder out there. Of course, the biggest challenge of all was adding cellular. You see, our little watch is already packed, and you have to add antennas, radios, power amplifiers, a SIM card. And if you don't do it right, it gets so big it looks like a house arrest bracelet (laughter) and you're not going to want to wear it. So, our engineers have been hard at work. And they've come up with some really creative solutions. For example, rather than add an antenna, the display itself is the multi-frequency antenna for both LTE and UMTS. And of course, you have to have a SIM card but even a nano SIM would be way too big. So, instead we integrated an electronic SIM and it's a fraction of the size. So, here's where we ended up. Even with all

these new features: faster dual core processor, W2, altimeter, all the stuff you've got to put in for cellular, the case for Series 3 is the same size as Series 2. (applause) The only difference is we extended the back crystal a mere 0.25 millimeters, that's as thin as two sheets of paper. It's really magical to make a standalone call on a device this small. And I'd like to do that for you right now. I'm going to switch watches so you guys can see what's going on. This watch is connected over the AT&T cellular network. This is our new Explorer face and I'm going to tap on the phone app. And I'm going to call Deirdre who is a colleague on the watch team. **Deirdre:** [on phone] Hi Jeff. **Jeff Williams:** Hi, Deirdre. Hey, I'm calling you from the new Steve Jobs Theater. How are you doing? **Deirdre:** I'm a little sad to be missing the keynote but I'm working very hard up here. **Jeff Williams:** Yes, sure you are. Why don't we pull in some video and show everybody where you are? (applause) **Deirdre:** This has been a very testifying. But you know me I am a team player. (laughter) **Jeff Williams:** Yes, that's you, Deirdre. Give give give. Well it looks beautiful out there. **Deirdre:** It is amazing. But I am just trying to not to fall off in front of a million people. (jeff laughs) (laughter) **Jeff Williams:** Well, so far so good, Deirdre. Hey, I should probably cut it off or something goes awry but be safe out there and thanks for doing this. **Deirdre:** My pleasure! I may stay in here few more days. **Jeff Williams:** Yeah, OK, OK, that sounds great, Deirdre. (applause) I'm going to go rogue for a minute. (laughter) You guys get it but sometimes people take technology for granted. And just for perspective, I am mic-ed – and in fact I'm actually double mic-ed in just the right location so you can hear me. Deirdre is out in the middle of a windy lake and the only microphone Deirdre is the little tiny one on the Apple Watch is a foot or two away from her mouth, she's paddling and the signals being sent over cellular coming in and that's just darn close to magic. (applause) Who would have thought? Series 3 comes in a wide variety of cases and bands. We have a beautiful new gold aluminum finish along with silver and space gray. We're excited to introduce a new band we call the Sport Loop that's designed for an active lifestyle and it's light, stretchy and breathable. For Apple Watch Nike+, we have exclusive new colors and they're releasing a new version of their Nike+ Run Club app with great new features like in-run audio coaching. And we have some wonderful colors across all of our bands that you just have to see in person. We have a great partnership with Hermès and the tradition continues this year with some new watch face styles, some beautiful new bands like the one on the left that's inspired by the classic Hermès driving glove. And last year we introduced a white ceramic watch. This year we're adding a ceramic watch in a gorgeous grey finish. (applause) All of these watches were built with a great deal of care as well as a concern for the environment and they're free of these harmful materials. So, that's Apple Watch Series 3, cellular, GPS, swim-proof, 70% faster dual-core processor, barometric altimeter, all the features of watchOS 4 and it still has all-day battery life up to 18 hours across a mix of LTE, Bluetooth and Wi-Fi. We have two versions of Series 3. There's one with cellular at $399 and a version without cellular that has all the other great features at just $329. And we're going to keep Series 1 in the line at a new starting price of $249. (applause) Series 3 cellular will be available in these nine countries with these 14 carriers at launch and six more coming later in the year. And we've worked with each of these carriers and they each have a special introductory offer for Series 3. So, it's going to be great. And we are offering the Series 3 without cellular in these 26 countries at launch. Orders will begin September 15 and availability will be September 22. That's the update on Apple Watch. And now back to Tim. (applause) **Tim Cook:** Apple Watch is the ultimate device for a healthy life and the Series 3 takes that to a whole new level. Now, Jeff showed you some very cool things you can do with the cellular function in Series 3. And one of those is to stream 40 million songs right on your wrist. We've made a great ad showing

just that. I'd love to play it for you. [Video clip] (applause) This is a big moment for Apple Watch, and we think you are going to love it. Next up, I'd like to turn your attention to Apple TV. Apple TV has changed the way we experience television, simplifying the way that we discover and enjoy movies, TV shows, sports, news, games, apps and so much more. In fact, we've just been awarded our second Emmy for Apple TV. (applause) Thank you. This Emmy was in recognition for how Siri makes it so easy to search, discover and interact with your TV content. We're really – we're really proud of the efforts we've made to improve the TV experience. Now throughout the history of TV, there's been a few key inflection points that have changed the way we experience television. It, of course, all began with black and white, and it was first transformed with the introduction of color. It took a huge step forward with the advent of HD. Each stage brought with it a more true to life experience, a more immersive experience. Now we're at the next major inflection point. One that has the most stunning visuals ever that are ideal for the large TV screens that are coming into our living rooms. This will bring cinematic quality to virtually everything that you watch. That's why I am so excited to introduce Apple TV 4K. (applause) At the heart of Apple TV 4K are two key technologies that are driving this next evolution of the TV experience. And to tell you all about them, I'd like to invite Eddy to the stage. Eddy? (applause) **Eddy Cue:** Thank you, Tim. It is really great to be here tonight. Apple TV 4K is incredible and it starts with two big advancements in picture quality. First, it's 4K. Let me show you. This is an image in 4K. It's got incredible detail. That's possible because 4K has four times the number of pixels as HD. But resolution isn't everything. There's an even bigger advancement that's more important, and it's called High Dynamic Range or HDR. While 4K is about the number of pixels, HDR is about better pixels. Let me show you. Here is that same 4K image, and here it is an HDR. (applause) at the color, the details. Apple TV can do this, because it supports the industry standard HDR10 as well as Dolby Vision, the best HDR experience. Now Apple TV 4K with HDR delivers the highest picture quality ever, and to show you we've installed a state-of-the-art Dolby 4K HDR cinema projector in the theater. So, let's dim the lights and let me show you the new Apple TV. Now we remastered our screen savers, our customers love this to take full advantage of 4K HDR. (applause) Here we are in Dubai and even at night, you can see incredible details in the buildings and the cars on the road. And here's a city shot that really shows off the crispness and sharpness that's possible in the new Apple TV. Now we've redone the whole Apple TV UI in 4K. The texts are sharper, the images are brighter and more vibrant. But let's take a look at a 4K HDR clip. This is from the new Spider-Man movie coming to iTunes later this month. [Video clip] (applause) That was great, and that was all playing on the new apple TV 4K, no at the heart of Apple Tv, we've got the powerful A10X Fusion Chip. This is the same chip that's in our iPad Pro. And the new Apple TV isn't just slightly faster; it's remarkably faster. CPU performance is more than twice as fast as the current Apple TV, and graphics are more than four times faster. And of course, it runs the latest version of tvOS, the best operating system for the living room. Now to experience 4K with HDR, you also need great content. And we've been working with the large Hollywood studios to bring all of their 4K and HDR movie titles to iTunes. So, now you'll have the biggest releases in the best picture quality, all on iTunes, all available for the same price as HD. (applause) And if you bought one of those movies in HD from iTunes, we're going to automatically upgrade them to 4K HDR at no additional charge. (applause) Now in addition to iTunes, we've been working with leading streaming providers like Netflix to bring their 4K HDR titles to Apple TV and later this year Amazon Prime video with all of their 4K HDR titles and originals as well. Now last year we introduced the Apple TV app, an easy way to watch your favorite movies and TV shows in a single

place. It's been available in the U.S. and today I'm happy to announce that we're bringing it to 7 additional countries: Canada and Australia later this month and the rest by the end of the year. (applause) Now for each country, it's really important that we have the content that those customers know and love. And that's why we're adding all of these local services to Apple TV. And later this year, Apple TV will do even more, because we're bringing live sports, so you'll never miss a game. If you're a huge sports fan, like I am, you're really going to love this feature. If your favorite team is playing on ESPN, it will automatically appear right first in the Up Next List. You'll even get notifications when a game's about to start, or if there's a close game so you can start watching instantly. And if you scroll up you'll see even more games and in addition we're bringing live news to the TV app. Now let's take a look at those games. As you can see, we show you the score and the time remaining to help you decide which game to watch. (applause) And if you're one of these people who doesn't like to know the score you can turn the feature off. Now we also have a dedicated sports tab where you can see every live and upcoming game, and as the seasons change so will the sports tab always showing you what's best for you. As sports in the TV app is a real game changer for sports fans and of course, the new TV app is available on your iPhone and iPad as well. Now if you own an iPad or iPhone, there is no better choice than Apple TV. You can now share your photos on the big screen, including Live Photo effects, 4K video memories. You can play from the over 40 million songs in Apple Music, including the music that your friends are listening to. And because Apple TV is always home, you get anywhere anytime access to all of your HomeKit accessories. And of course, you've got access to choose from the thousands of games and apps on the App Store and with the A10X Fusion ship there is so much more that Apple TV can do. And to see what's possible, we'd love to show you a new game from Thatgamecompany. They're known for making artistic and critically acclaimed games. As a matter of fact, their first game called Flower was chosen as the first video game ever to be in the permanent collection in the Smithsonian, which is very very cool. So, with that, I would love to welcome their CEO Jenova Chen. (applause) **Jenova Chen:** Hey Eddy. At thatgamecompany, we treat games as an art form. Today many of us play games alone. We believe games is a medium that can bring people together. And that's exactly what we are going to do with our new game Sky. Together with me is my colleague Mike, and Mike, why don't we take off? Sky is a romantic social adventure game while you fly above the clouds to explore the wonders of a mysterious world. The game is designed to be adaptable to the most casual players. The control is simple and intuitive. Everything can be done with one finger on the Siri Remote. Oh, hey that's Mike's friend Jeff and he's asking us to follow him. Let's see what he has discovered. Compassion and generosity are key to unveil hidden areas of the world as well as growing your character. So, by lighting all the candles, Jeff and Mike was able to summon the spirit. And he's about to teach Mike the knowledge of how to summon a magical creature. In Sky, we really take advantage of the powerful and new hardware. With Metal 2 and Apple TV's A10X Fusion chip, we're able to run the game smoothly even with these detailed clouds, intelligent creatures, and up to eight players from anywhere around the world. And let's see if we can draft off these creatures. We don't have time to show you everything, so we're going to skip forward to the Dark Temple ahead. Light and dark are important themes of the game. In Sky, you play as the children of light and your goal is to bring that light to where it is needed the most. With the light, Mike was able to free all the butterflies and together they can move on to the next part of the adventure. With a live XXX? soundtrack and cinematic experiences, you can expect to be immersed in an ever-expanding world. So, join hands with your loved ones and play Sky exclusively on Apple TV, iPad and iPhone this winter. Thank you. (applause) **Eddy**

Cue: Thanks, Jenova. We can't wait for you to get your hands-on Sky. We're so excited about the new Apple TV 4K. It's got powerful hardware that delivers stunning 4K HDR video, live sports along with live news, TV shows and movies all in the TV app, and the perfect big screen companion for your iPhone or iPad. New Apple TV 4K starts at $179, it joins the existing one. You can order it starting on September 15 and it ships just a week later. That is the new Apple TV 4K. Thank you and I'd like to turn it back to Tim. (applause) **Tim Cook:** Thanks Eddy. I can't wait for you to experience the beauty and the magic of the cinema right in your living room with the Apple TV 4K. Next stop, iPhone. (applause) Apple has always believed that technology infused with humanity can improve people's lives and change the world. No other device in our lifetimes have had the impact on the world that the iPhone has. Nothing else has become so essential or put so much power into so many people's hands than iPhone. It's truly amazing how much iPhone impacts the world each and every day. Our intention with the iPhone has always been to create something so powerful, so immersive, and so magical that the hardware virtually disappears. Over the last 10 years, we've reimagined or invented numerous technologies to create just that experience. The first iPhone forever changed how we interact with technology by introducing Multi-Touch. For the first time, you are actually touching the software instead of buttons; it's magical. The App Store changed the way we work, play, learn, communicate, spawning new companies and new industries along the way. We took the viewing experience to places literally never seen before with technologies like the Retina Display. We changed the way people communicate with features like iMessage and FaceTime that allowed us all to connect in more meaningful ways. And with Siri, we used artificial intelligence to make our voices more powerful. iPhone even revolutionized security and privacy with Touch ID and our wallets with Apple Pay. And of course, iPhone put amazing easy-to-use cameras into our hands becoming the most popular way to capture the images of our lives. Over the past decade, we pushed forward with innovation after innovation after innovation bringing us to this moment, when now we can create devices that are far more intelligent, far more capable, far more personal than ever before. We have huge iPhone news for you today and it gets started right now. (applause) [Video clip] (applause) iPhone 8 — this is a huge step forward for iPhone. And to tell you all about it, I'd like to invite Phil to the stage. Phil? (applause) **Phil Schiller:** Thank you, Tim. Well, good morning everyone. I am so excited to tell you all about the new iPhone 8 and the new iPhone 8 Plus. These are a new generation of iPhone improved on everything we love about iPhone. The design is all new. It has glass in both the front and the back. The aluminum band beautifully matches the finish of each iPhone 8. It comes in silver, space gray, and a beautiful new gold finish. (applause) It's made from an aerospace grade 7000 series custom aluminum alloy. The glass has a seven-layer color process making sure it is a beautiful precise hue. And the glass is further reinforced by an internal laser welded steel and copper structure. We're so excited because this glass is the most durable ever in a smartphone. (applause) iPhone 8 and 8 Plus is also microscopically sealed for water and dust resistance. And they have a new Retina HD Display in each model. It's a 4.7-inch Retina Display in iPhone 8 and a 5.5 inch in iPhone 8 Plus. Now, Apple Retina Displays are renowned for their incredible color accuracy and they have great wide cinema quality color gamut. We've built in our 3D Touch technology into the display and for the first time in iPhone display, it has our True Tone technology. Now with True Tone, it adapts the color, temperature and intensity to the ambient light around us. Along with the displays, iPhone 8 and 8 Plus have new stereo speakers as well. The 25% louder than the speakers in iPhone 7 and have a deeper bass too. And this is pretty incredible. Inside iPhone 8 and 8 Plus is a brand new chip, and this is a breakthrough performance in a mobile device. We call it A11 Bionic.

(applause) This is the most powerful and smartest chip ever in a smartphone. The 64-bit design, 4.3 billion transistors, six core — it is so awesome, it has two high performance cores. They are 25% faster than the high performance cores and the previous industry leading A10 chip. It has four high efficiency cores — they're up to 70% faster than the ones in the A10 chip. They're managed by our second-generation performance controller that now can use all six cores at once, can deliver up to 70% improvement in multi-threaded workloads. And they have our first ever Apple designed graphics processing unit or GPU. This is a three-core design; it's 30% faster than the graphics in the previous A10. And the GPU is designed to accelerate 3D apps and games, especially those that use our new Metal 2 framework. And the GPU also is incredible for machine learning apps and those kind of tasks get a big speed up if they use our core machine learning framework too. There's more to it. A11 Bionic includes our new generation image signal processor or ISP. So, you know this is used in photography. It delivers faster autofocus in low light. It has new pixel processing for sharpness and texture. And for the first time to help reduce noise, it has hardware-enabled multiband noise reduction. All of this helps to improve performance and helps us take better pictures. Perhaps the most beloved feature of every new generation of iPhone is the cameras, and people love taking photos. And customers send us their photos for our Shot on iPhone campaign. Like this one, this was sent from Jeremy Perez-cruz; he shot it with an iPhone 7 plus. People are going to love taking pictures with the iPhone 8 camera. It has an all new 12-megapixel sensor; it's larger and faster. It provides 83% more light and it provides more — it's more power efficient at the same time. It has deeper pixels and a new color filter. So, this adds up to having better color saturation, a wider dynamic range of color, and lower noise in your photos and videos. iPhone 8 Plus has two new sensors in its dual camera. The wide-angle camera has an f1.8 aperture and optical image stabilization. The telephoto camera has f2.8 aperture. So, as always, we want to show you the kind of photos you can take off of our new cameras and these are photos we're going to show that have not been retouched in any way. They are straight off the iPhone 8 and 8 Plus. So, here's the first one. This is absolutely beautiful. Now that's not the Golden Gate Bridge, this is taken in Portugal. It shows the beauty of wide color gamut. It has great dynamic range, sharpness and incredibly low noise; just look at that blue sky. Here is another example. It shows incredible wide quality color again. Just look at the skin tones and the detail in the hair and the eyes. If you look closely in her eyes, you can actually see the photographer reflected there holding an iPhone to take the picture. Here is a great example of amazing textures and depth in photography, can really feel the fabric and you can see details in their face behind the fabric. Here is a great example of low-light photography — texture detail and very subtle colors in this darker environment. Last year we introduced Portrait mode. iPhone 8 takes fantastic Portrait modes and people flip over taking these photos and now with the iPhone 8 Plus, you're going to get sharper details, more uses in low light and even a more natural bokeh in the background of the photos. So, this is a big hit. We had a surprise new feature last year of Portrait mode. We brought it out in beta and it just got better and better over time and customers sent us photos, they love this. So, we challenged the engineering team to do that again, to make it easy for all of us to take advantage of an advanced photographic technique and they're doing it. And it has to do with lighting. And if you've ever had a professional portrait taken, you know the pro photographers use advanced equipment and have a great understanding of advanced techniques to literally sculpt the light on your face to create the perfect mood for a portrait photograph. Our team is making this possible for all of us. Using the new dual cameras and the A11 Bionic chip in the iPhone 8 plus, the team has come up with a new feature called Portrait Lighting. And this is beta but it will ship with the iPhone 8 Plus.

And here's how it works. You compose a photo in the camera app, using the Portrait mode. The dual cameras in the ISP sends the scene. They create a depth map, they separate the subject from the background. And then using machine learning it creates facial landmarks and actually changes the lighting of the contours over your face. That happens while you're composing the shot. (applause) It's super easy to use. Right when you're in the camera app, you use Portrait mode and there is a new menu to select the lighting effect you want to use. You just swipe to pick a different effect or whatever you want to shoot. And these aren't filters, this is real-time analysis of the light on your subject's face. In fact, you can go in later after you shot a portrait mode photo into the Photos app and change the lighting effect to select which one you want to use in your photograph. (applause) The team has done an unbelievable job on this. And so here's an example of a photo that's taken, not touched in any way. This is Portrait mode using Portrait Lighting, it's actually using the setting in Portrait Lighting for stage light, so it drops away the background to make the stunning dramatic photograph. It's absolutely beautiful. So, iPhone 8 and 8 Plus are incredible for taking pictures. They are also amazing for video as well. In fact, iPhone 8 has the highest quality video capture ever in a smartphone. (applause) Along with the ISP, we have an Apple designed video encoder. This enables faster frame rates and higher quality video. It does real-time image and motion analysis to predict changes in the content and optimize the video encoding algorithms. So, while you're shooting video, let's say, 4K sixty frames a second, the iPhone 8 divides each frame into individual tiles, 2 million of them and we analyze the 2 million tiles every second but for details like texture and edges to predict whether that tile has grass, sky, water, or movement in it. So let's say you're shooting 4K 60 frame of video and look like this, it's beautifully optimized, for quality and for compression level. And this video was shot on an iPhone in 4K. It's amazing. And if you are one of the many people who love shooting slowmo videos, that's gotten a lot better too. Now you can shoot 1080p HD 240 frames a second, that's double the frame rate of previous. Absolutely beautiful. So, now iPhone 8 is incredible for shooting photos; it's incredible for video. There's a third category of use of the camera that's going to become increasingly important in our mobile devices. And that's augmented reality. This is an incredible area for us to advance in. And our teams have worked together — hardware and software — to make iPhone — the first iPhone really created for augmented reality and the first smartphone designed for it as well. We custom tuned each iPhone for augmented reality. The cameras are actually individually calibrated in the factory and that makes a huge difference in the performance for AR, through new gyroscopes, new accelerometers, and ARKit software is tightly tuned to all this hardware to deliver the best experience for motion tracking. And AR greatly benefits in the new A11 Bionic chip. The CPU handles world tracking. The new Apple GPU renders immersive graphics at up to sixty frames a second. The ISP – there is real-time lighting estimation. This stuff is amazing that it happens on a device in the palm of our hands. So, I want to show you some of the work that developers have started to do with AR apps on iPhone 8. So, here's one example. It's a game Warhammer 40K: Freeblade from Pixel Toys. You can now use their Photo mode to bring the freeblade knight into the real world and play it right where your friends are standing around you. Here's another, from Major League Baseball's Advanced Media Team. They're enhancing the At Bat app with ARKit so that when you're at the game you can hold up your iPhone and see real-time player information and stats on top of the game you're watching. Here is Sky Guide from Fifth Star Labs. You can use ARKit with this app to actually superimpose the map on top of the sky as you're looking at it around you. This isn't some generic sky, this is the sky around you. (applause) So, now we want to show exciting AR app right here live on stage playing on an iPhone 8. It's from Directive

Games. This is a new startup based in Shanghai. It's founded by developers who have worked in some of the biggest franchises in gaming. So, please welcome Atli Mar, CEO and Co-founder of Directive Games. Atli? (applause) **Atli Mar**: Thanks Phil. Earlier this summer, with the introduction of ARKit, Apple changed gaming forever. What we're about to show you is one of the world's first competitive multiplayer games designed to be played entirely in augmented reality. This is The Machines. In the game, players battle their friends in real time, either online or around the table in the same room. My friend and co-founder Andrea is preparing a match for us where we play the rebels, against the Dominators. What's really cool is with ARKit, the Metal 2 on the new iPhone, we are able to experience games in an entirely new way. Since players are able to view the game from any angle, our content has to be incredibly detailed. With the power of the new iPhone and Unreal support for Metal 2, we are able to render the entire level on screen, an amazing 1.2 million polygons, while also allowing you to move in close to really appreciate the high visual fidelity. And just look at those 4K textures; it's gorgeous. Now shall we go into the game. AR allows us to use our position in the real world to gain a tactical advantage. Just look how Andrea is moving towards this cave, lining up his targets. This is something that would've been hard to do with Pencil too. It's like you're not just controlling the game, you're in the game. Another awesome addition to the experience is spatial audio. If you go close to the action the sound increases. And if a solid object gets between you and the action, the sound is occluded perfectly, and with the stereo speakers on the new iPhone, this is truly amazing. It looks like we're getting hit pretty hard. Yes, we'll protect our hero and let's rain fire on our enemies, move closer to their base and get ready for the fatal blow with our sobua. All the trucks, it is there, can you take it out at the same time? What you just saw is an amazing evolution in how games are played and experienced, thanks to the combination of ARKit and Metal 2 on the brand-new iPhone. We can't wait for you to play it. Look for The Machines on the App Store this month, exclusively on iOS. Thank you. (applause) **Phil Schiller**: Thank you, Atli. Now let's talk about Wireless. We once said that the future is wireless. Boy, were we right? Now it's becoming more true than ever before with iPhone 8. It supports LTE Advanced for fast networking connections, Bluetooth 5.0 for the latest accessories. Of course, it supports our great beloved AirPods and the Beats X headphones that use our W1 chip and the new Beats Studio 3s as well. And now with iPhone 8 with its glass back, we're enabling the freedom of wireless charging. (applause) I mean, this is a simple thing; we do this every day. We use our phones in the day and we charge them at night, often on a charger by our bed stand in our homes or in our hotels. And words can't describe just how much nicer it is to just put it down and pick it up whenever you want to charge without ever having to plug in a cable again and want to do this by your bedside and want to do this in a cafe or restaurant as they start to support wireless charging. And want to do it in an airport so you can top up your charge before you get on the next flight. And perhaps the best use case of all, in your car. You can get into your car, wirelessly connect and start using CarPlay, put your iPhone in the center console and it's charging all without ever having to plug in a cable again. What makes this possible is we're building into iPhone 8 and 8 Plus wireless charging with Qi, that Qi is the leading openness wireless charging standard. And we hope to help Qi by increasing adoption of it and creating new use cases for it. Many restaurants, shops, airports, cars have started to build in support for Qi wireless charging and they work with iPhone 8. Many companies are offering Qi chargers and those that are Qi certified should all work with iPhone 8. And we've worked with some developers who are creating Qi chargers and we're going to offer them in our stores and online for our iPhone 8 customers, like this one, from Mophie, and this one from Belkin. So that's iPhone 8. It's a new generation of iPhone. It improves on

everything we love about iPhone. It is packed with innovative technologies from the glass and aluminum design to the Retina HD displays, the new A11 Bionic chip. They're designed for AR apps like no phone has been before, a new single and dual cameras that support for the brand new photo lighting effects in Portrait mode and wireless charging. Now, iPhone 7 came in these three configurations starting at 32 gigabytes. iPhone 8 is going to start with twice the capacity at 64 gigabytes and the second one at 256 gigabytes. And the price will be $699. iPhone 8 Plus will have the same two configurations: 64 gigabytes and 256 gigabytes. And it will be priced starting at $799. You will be able to preorder them starting this Friday on September 15 and will be available a week later on September 22. And we can all upgrade to iOS 11 starting on September 19. So, that is iPhone 8. I'd like to turn it back to Tim. (applause) **Tim Cook:** Thanks, Phil. iPhone, a new generation of iPhone and a huge step forward. But we're not stopping there. We do have one more thing. (applause) Now, we have great respect for these words and we don't use them lightly. Our teams have been hard at work for years on something that is important to all of us: the future of the smartphone. The first iPhone revolutionized the decade of technology and changed the world in the process. Now 10 years later, it is only fitting that we are here in this place, on this day, to reveal a product that will set the path for technology for the next decade. [Video clip] (applause) Thank you. This is iPhone 10. It is the biggest leap forward since the original iPhone. And to tell you all about it, I'd like to invite Phil back up. Phil? (applause) **Phil Schiller**: Thank you, Tim. I think you can imagine there are a lot of people at Apple that didn't get much sleep last night preparing for this this. This is so exciting. And it is all-screen. It is beautiful to look at. It is incredible to hold. The display fits edge to edge, top to bottom. It goes into each corner where it follows the tight curve of the design. And it has glass on both the front and the back using the same super-strong formula as iPhone 8. The band is made from a surgical grade stainless steel, that's both durable and polished with beautiful finish. And look how the glass and the stainless-steel fit, form a continuous surface from front to back. There has never been anything like it. It's engineered to be water and dust resistant at a microscopic level, comes in two beautiful finishes: space gray and silver. Each has an incredible depth in a pearl essence to the color in the glass. iPhone 10 has an all new display. It's called the Super Retina Display. (applause) The level of quality and responsiveness and efficiency is really quite a breakthrough in mobile displays. Start with the Super Retina Display. It's 5.8 inches on the diagonal. It's got 2436 by 1125 resolution; that's over 2.7 million pixels. It has 458 pixels per inch. Now this is the highest resolution in pixel density ever in an iPhone. And it's remarkable how this larger display can be packed into a phone that fits so comfortably in our hands. The Super Retina Display uses OLED technology. This is the first OLED display great enough to be in an iPhone. Traditional OLED displays have had great benefits, like high contrast and resolution and no backlight means you can make them thinner. But they came with trade-offs in brightness and rich colors and color accuracy at least compared to our retina displays. But the Super Retina Display overcomes all of these deficiencies and lives up to all that we expect from an iPhone display. In addition, the new Super Retina Display supports HDR in both the Dolby Vision and HDR10 formats. It has an incredible a million to one contrast ratio, it has the best color accuracy. It integrates our unique 3D Touch technology right into the display and like iPhone 8, it includes True Tone. Now all this innovative Super Retina Display technology is great. But it's the point of it that matters. And the point of it is to enable an entirely new experience that's more fluid, more intuitive. So, let's start with the simplest thing: How do you wake up your iPhone 10? Well, certainly you can raise to wake just like before, but now you can also just tap on the screen and it wakes up. And with the display going edge to edge and top to bottom, there's no more

Home button. And this is an important part and a big step forward in the iPhone user experience. Something we use hundreds of times a day for so many tasks is an opportunity to rethink how iPhone should work and how we can make it better. So, now when you want to go to the Home screen, you simply swipe up from the bottom and you go Home; it's that simple. It's that easy. It's incredibly smooth and once you do it for the first time, you know there's never been a better way. And it works the same way across the system. You're running an app like Mail, when you want to go Home, what do you do? You simply swipe up from the bottom and you go Home; it's that easy and that intuitive, so much nicer. But the same fluid gesture also works for multitasking. So, if you're in an app and you want to multitask, you just swipe up from the bottom, you pause for a split second and you're in multitasking, and then you can tap on any app and jump right to it. We also use the Home button for Siri. So, how are we going to do that now? Well, of course, you can just speak to your phone as before and say, "Hey Siri," No, I didn't, shutting one's phones off, or you can now press the side button in which has been made larger, once you press it in, you can just talk to Siri. I know what you're thinking about. What about unlocking? How do you unlock your phone with iPhone 10? And this has been very important part of the iPhone user experience from the very beginning. The first iPhone we led the way with Multi-Touch. We created slide to unlock. This protected the iPhone from turning on when you didn't want to like in your pocket. Starting with iPhone 5S, we invented Touch ID, made it fast and easy to protect all your data and unlock your phone with just your fingerprint. And Touch ID became the gold standard in consumer device biometric protection. But we know we can do something that's better. The iPhone 10, your iPhone is locked until you look at it and it recognizes you. Nothing else has ever been simpler, more natural, and effortless. We call this Face ID. (applause) So, Face ID is the future of how we unlock our smartphones and protect our sensitive information. To make Face ID possible took some of the most advanced technology we have ever created and much of it is packed right up here into this tiny little area at the top of the display; we call this the TrueDepth Camera System. And it is made up of incredible state-of-the-art technology. There's an infrared camera, a flood illuminator, a front-sight camera and a dot projector, and that's not all. There's also the proximity sensor, the ambient light sensor, the speaker and microphone, all packed into this TrueDepth Camera System area. It is amazing. And here's how it works. Every time you glance at your iPhone 10, it detects your face with the flood illuminator even in the dark. The IR camera takes an IR image. The DOT projector projects out over 30,000 invisible IR dots. (pause) We use the IR image in the dot pattern and we push them through neural networks to create a mathematical model of your face. And then we check that mathematical model against the one that we've stored that you set up earlier to see if it's a match and unlock your phone. And this all happens in real time; it all happens invisibly. You don't see these things going off. It's incredible, it just all works, it all happens. To create Face ID, we worked with thousands of people around the world and the team took over a billion images. And with that they developed multiple neural networks to create Face ID. And to process the machine learning in Face ID's neural networks, we built Apple's first ever neural engine. Yeah, this is a big deal. In our pockets, in our phones, is the A11 Bionic chip with a built-in neural engine to process face recognition. (applause) Now the neural engine is a specialized hardware built for a specific set of machine learning algorithms. This is another example of the incredible collaboration between the hardware and software teams that's only possible at Apple. The neural engine is a state-of-the-art ultrafast processing system that uses the highest density computing ever. It's a dual core design; it can perform over 600 billion operations per second, and it's used to the real-time processing of Face ID recognition. But for all of us it's just super easy

and fun to use. When you set up Face ID, you just follow the on-screen instructions. It tells you how to move your head around in the camera so Face ID can recognize your face. And that's it. You do that once when you set it up, and Face ID learns your face. Even if you change your hairstyle. You decide to put on glasses. You're wearing a hat, so you do it up, anyway you do it Face ID learns your face. It learns who you are and it adapts to you as your face changes over time, let's say you start to grow a beard. It works in day, it works at night. And the team has worked hard to make sure the Face ID can easily be spoofed by things like photographs. They've even gone and worked with professional mask makers and makeup artists in Hollywood to protect against these attempts to beat Face ID. These are actual masks used by the engineering team to train the neural networks to protect against them with Face ID. It's incredible. The team has worked hard to protect your face data. Yes! (applause) Your face data is protected with the Secure Enclave and A11 Bionic chip. All the processing is done on iPhone 10 and not sent to a server. We require user attention to unlock. That means if your eyes are closed, you're looking away, it's not going to unlock. Now how do we compare that to Touch ID? How secure is it? Well, there's no perfect system, not even biometric ones but as we said earlier, Touch ID is the gold standard for consumer device biometric protection. And the data for Touch ID has been one in 50,000. Meaning that the chance that a random person could use their fingerprint to unlock your iPhone has been about one in 50,000 and it's been great. So, what are the similar statistics for Face ID? One in a million. (applause) The chance that a random person in the population could look at your iPhone 10 and unlock it with their face is about one in a million. And of course, the statistics are lower if that person shares a close genetic relationship with you. So, for example, if you happen to have an evil twin, you really need to protect your pass code or your sensitive data with a pass code. Hopefully you don't. Face ID also works with Apple Pay. So, to pay for things you just double tap the button on the side. You look at iPhone 10 to authenticate and hold it near the payment terminal to pay. It's that easy, fast, intuitive, simple. Face ID also works with third-party apps. Third-party apps already support Touch ID and they work with Face ID. So, apps like Mint, 1Password, E-Trade all work with Face ID. So, Face ID — it's face authentication for unlocking your iPhone and protecting your sensitive data. It uses the innovative TrueDepth camera system. It's trained with neural networks, it's easy to set up. It learns your face and it adapts to your face over time. It's aware of your attention. It works with Apple Pay and it works with third-party apps. This True-Depth Camera System is incredible technology and it's going to enable so many great new user experiences. The first one, of course, is Face ID. But the team decided to create another great experience with it as well. This is a fun one. It has to do with emojis. We use emojis to communicate with others and to express emotion but of course you can't customize emojis; they only have a limited amount of expressiveness to them. So, our team created something called Animoji. (applause) These are animated emojis. These are emojis that you control with your face. Animojis track more than 50 facial muscle movements. They've been meticulously animated to create amazing expressiveness. And just watch this, can you? The way you create and share Animoji are write from within Apple messages. You can pick from a dozen different animated emojis to share and express whatever you want to express your family and friends. (applause) So, iPhone 10 is packed with innovative technologies that enable new user experiences. I'm really excited to invite out Craig Federighi to show you iPhone 10 and what it's like to use it for the very first time. Craig? (applause) **Craig Federighi:** Hey everybody. Wow! Well, I'm absolutely thrilled to be able to give all of you your first live look at iPhone 10. This is a phone we've been dreaming about for a long time but the reality of it in your hand, it's really something epic. So, let's take a look. Here is iPhone 10. Now

unlocking it is as easy as looking at it and swiping up and, you know, let's try that again. Whoa whoa, let's go to back up here and get right in. So, here we are and you see this expansive display. It's just a beautiful canvas for all of your content and your gestures. Now I am just going to go into the Weather app here and you can just see how apps look when they take advantage of the edge to edge display. Now exiting an app couldn't be easier. You just swipe from the bottom, just like this and throw the app right back on the Home screen. Let me do that again. Just swipe right up. Let's take a look at the Web. It just looks unbelievable, edge to edge on this display. And your photos, of course, are just gorgeous as well. Let's jump into this one, just amazing. (applause) Now video, of course, is unbelievable on the Super Retina Display. It looks great in Portrait and in Landscape and, of course, this is HDR video, just incredible of you. And Phil told you a little bit about multitasking on the device. Let me show you. I'm just going to jump into Maps. If I want to move between my applications, I can just swipe up and stop, my other apps all come in. I can get at them with a tap. Just lift, it's just that easy and we have a great shortcut as well. You can actually move back between apps just by swiping along the bottom, like this. It's really easy. Now you may be wondering about Control Center. And worry not! Right where your status indicators are in the upper right hand corner, you can just swipe down and get a control center from anywhere. It's that easy. Now let's take a look again at Face ID, because unlocking your phone is just amazingly intuitive. You just raise it, look at it, and swipe right up to get started. (applause) But now it's also incredibly fast. So, I'm just going to do that again. Just raise it, look at it, swipe. I don't have to wait and it's also really really smart. So, let's say I wake my phone and I'm not looking at it, stays locked but once I give it my attention, well it unlocks and I can get right in; it's really cool. Now Face ID is also great for Apple Pay. So, if I'm at the register, I can just double click on the side button, I'm authenticated. And I can get in, just like that. Now the TrueDepth camera behind Face ID isn't just about authentication. In fact, we've extended ARKit with some incredible new face tracking capabilities that provide a whole new class of augmented reality experiences. Now we've been working on with SnapChat and I'd like to show it to you now. I am going to launch in. You see, it's built to measure my face and now I can just select the mask. (applause) The tracking is just unreal. Check out this one. (laughter) Now look at the detail over the eyes, the incredible metallic reflections, the quality of the tracking is just stunning. (applause) Now, of course, many of us like to communicate with emoji. And with Animoji, we can now breathe our own personality into our favorites. It's available as an app right inside of Messages, so I can just go right in here and it immediately starts tracking me. So, I can make whatever expression I want, like just pick that up and use it as a sticker or drop it on my message like that. We also let you manipulate these in full screen. You can audition your favorites with some really great ones, like the kitty cat, so expressive and ferocious. (laughter) So, happy puppy, check out the physics in the ears. That pig. We've got a chicken, bah-hawk-hawk-hawk. (laughter) And the unicorn, mythical creature, favorite of the start-up, pfrrrr pfrrr (laughter) (applause) And if you were by chance wondering what humanity would do when given access to the most advanced facial tracking technology available, (laughter) you now have your answer. Now these can be so much fun you're going to share them. Unfortunately, we let you record messages. I am going to record a message here for Tim. "Hey Tim, I'm not sure what the protocol is here but I'd like to call GIFs on the box for my favorite emoji. Which one do you like?" (recorded version) Now you can send it with just a tap and it appears as a looping video right inside the transcript, or really lucky for our grand finale we might just get a response back from Tim. Oh here it is, let's take a look. **Tim Cook:** [from phone] Take me to your leader. Wait a minute Craig! I am your leader. Let's wrap this thing up (applause)

Craig Federighi: So that is your first look at the new iPhone 10 and the amazing experience with the TrueDepth camera and Animoji. I think you're going to love it. Thank you very much. (applause) **Phil Schiller:** Thank you, Craig. Now let's talk about the amazing cameras in iPhone 10. iPhone 10 has dual — 12 megapixel sensors, dual cameras, both faster sensors, wider sensors just like in iPhone 8. There is new color filters, deeper pixels. There's an f1.8 aperture on the white angle camera and a faster f2.4 aperture on a telephoto that lets in 36% more light to the telephoto camera. But the big news on the camera in iPhone 10 is that it has dual optical image stabilization. That means it's OIS in both the wide angle and the telephoto lens, that's a lot of magnets moving around in a very small space but it helps with compensating for handshake and to take better photos and videos in low light. It has also a better quad LED True Tone Flash that is twice the uniformity of light on our subjects. So, let's look at some photos taken from the back side camera on iPhone 10. This is absolutely beautiful: great dynamic range, detailed, low noise. This is a beautiful photo. The textures are simply stunning. Now there is zero shutter lag that helps to freeze motions, so we can get a photo like this. Look at that: blue sky with low noise; it's absolutely to die for. OIS delivers low light performance, so now you can get incredible low light images like this with a telephoto camera as well as the wide angle. And iPhone 10 is fantastic for the Portrait mode feature that we all love. iPhone 10, you get great portrait mode especially in lower light. And iPhone 10 supports the brand-new Portrait Lighting feature as well. That's again a photo taken right off of iPhone 10, not retouched in anyway with the stage lighting effect dropping out the background. (applause) iPhone 10 is great for photos. It's amazing for 4K video, and like iPhone 8, it's tuned for AR applications. It has factory calibrated cameras, the new gyroscope, accelerometer, the performance advantage of A11 Bionic chip, CPU, GPU, and ISP and ARKit is tuned for iPhone 10. And the back-side camera that we use so much is not the only camera, of course, on the iPhone. We have our front-side camera as well and people love to use those for taking selfie photographs. And now with iPhone 10 and its TrueDepth camera, it really delivers a breakthrough in the photos you can take for selfies, because now with selfies you can take Portrait mode photos as well. And it also supports Portrait Lighting all through the front side TrueDepth camera. (applause) And people are going to be blown away with the selfies you can take with the iPhone 10. This is absolutely beautiful. Of course, everything we've seen is powered in iPhone 10 by the amazing new A11 Bionic chip. We talked all about in iPhone 8 but it's worth hitting on the highlights again, because there has never been anything like it: 64 bit, six core design, 4.3 billion transistors, 2 high performance cores, four high efficiency cores, our new second generation performance controller that uses all six cores at once, our first Apple designed graphics processing unit, the brand new ISP that improves auto focus, the video encoder that has real time motion analysis while you're shooting video, the neural engine and of course the Secure Enclave to protect our Face ID data. All this performance, I am sure as you expect, does come with a hit to battery life. So, I think it's important tell you that we've increased it. (applause) Yes. It lasts. Again, hardware and software teams worked really hard to deliver two more hours of all day battery life to us. So, wireless — just like iPhone 8, iPhone 10 is also built for a wireless world. It has Qi charging through the glass back and they work with the Qi charging devices like the ones we mentioned earlier from Mophie and Belkin. They also work with third-party Qi devices that are Qi certified. And there are a lot of great devices, they're going to start to come to market particularly because of iPhone 8 and iPhone 10. But we also think we can make the wireless charging experience even better. So, our team wants to create something — I think all of us are going to want to use and it might actually help move the entire industry forward. So, we're going to give you a sneak peek of this idea right now. I'm

sure many of you do this. I do this, have a lot of Apple products. I love them and use them all day long. I charge them at night. You plug in your cables, you plug in your chargers. You take those cables and chargers with you on the road when you travel. We think we have an idea of how to make this a better experience. And here it is. It's a mat that you place your iPhone 8 or iPhone 10 down and it just starts to charge. And it has a beautiful new interface. It doesn't stop there. You can place your Series 3 Apple Watch down on it and it starts to charge as well. And you can place your AirPods with the optional new wireless charging case on it and it starts to charge as well. They all charge. (applause) The system has a great interface. They intelligently work together and communicate with each other to manage the charging through one more efficient charging system. This is not possible with current standards but our team knows how to do this. We call it AirPower. (applause) We hope people love it, that it encourages others to create more advanced solutions based on technology like this. We're going to be working with the Qi standards team to incorporate these benefits into the future of the standards to make wireless charging better for everyone. So, look for the AirPower charger next year. So that is iPhone 10. It is the future of the smartphone. And it's packed with many innovative features — huge list, won't go through them all — they add up to a new better experience. We're so excited about iPhone 10. We created a beautiful video to tell you all about it. [Video clip] (applause) The team works hard to make iPhone 8 and iPhone 10 in the most environmentally friendly manner possible. We have arsenic free display glass, mercury free displays. They are BFR free, PVC free, beryllium free and now made with a low carbon process for the aluminum design and they are highly recyclable with the materials. Really proud of that list, so I like to say it at a free time. iPhone 10 also comes in two configurations: 64 gigs and 256 gigabytes. They will be priced $999. You can order it starting on October 27 and begin to ship on November 3rd. So, this is the future of the smartphone shipping this year. So, this is our lineup for the holidays. And every year we say it's a great line-up for the holidays and it is. But this year is really special. It starts with iPhone SE, iPhone 6S, iPhone 7, the new generation iPhone 8 and the futuristic iPhone 10. (applause) Ten years ago, when Steve introduced the world to iPhone, he closed with a quote from Wayne Gretzky. It said, "I skate to where the puck is going to be, not where it has been." Steve said that's what Apple does: we skate to where the puck is going to be. And that is what iPhone 10 is all about. Thank you. (applause) Back to you, Tim. **Tim Cook**: iPhone 10: This really is the future. We've made a great fun new ad that I would love to show it to you. [Video clip] (applause) That is iPhone 10. Thank you. Thank you… So what a morning we've had! Apple Watch Series 3 with cellular which gives you the freedom to go anywhere you want with or without your iPhone. Apple TV 4K brings the magic of the cinemas straight to your living room with incredible 4K and HDR content. iPhone 8, a beautiful glass design, incredible cameras, wireless charging, A11 Bionic chip and of course powerful AR capabilities. We think you're going to love it. And iPhone 10, the most advanced iPhone we've ever made — the incredible new design, Face ID, TrueDepth Camera System and more powerful technologies than we've ever put in an iPhone before. It really is the future of the smartphone. (pause) And we began this morning with some inspiring words from Steve. One of the ways that I believe people express their appreciation to the rest of humanity is to make something wonderful and put it out there. We work really hard at Apple to create wonderful things. And we hope you love what we've introduced today. I think Steve would be really proud of them. (applause) I'd like to thank everyone at Apple who made today possible. I'd like everybody in Apple to stand up that are here representing their teams from hardware and software and services. Please stand up – and operations, our amazing retail employees — everyone that worked so hard on this theater and on Apple Park. (huge applause)

One of the great things about this theater is an unbelievable hands-on area. It is the most beautiful hands-on area we've ever had by far. And I would encourage all of you to join us there and get your hands on these wonderful products. Thank you so much for spending the morning with us. Thank you (applause) [END]