

Biggest Technology Stories of 2012 - Part 1

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<High: A look at the biggest technology stories of 2012. First, Apple and Samsung's patent wars. Then, Nintendo decides to put a touch screen in the controller of their new game console. Finally, interview with the creator of the World Wide Web.>

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KRISTIE LU STOUT, CNN INTERNATIONAL ANCHOR: I'm Kristie Lu Stout in Hong Kong, and welcome to a special edition of NEWS STREAM, when we look back at the biggest stories in technology this year. A look at why the world's biggest tech companies switched much of their attention from consumers to lawyers.

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Nintendo tells us why they decided to put a touch screen in the controller of their new game console. And the man who created the World Wide Web tells us what's next for his invention.

2012 was a year filled with new gadgets and hardware, but the big story wasn't the new iPhone, and it wasn't Samsung's new Android tablet. This was the year the biggest battles between Apple and Google's Android were fought in courtrooms, as the tech companies involved turned their focus to lawyers instead of consumers. Essentially, it's a conflict about patents. Tech companies are accusing one another of patent infringement, hoping to restrict sales of their rival's products, or win royalties and other rewards. The main fight is between two of the biggest companies, Samsung and Apple. They've been locked in battles in ten countries, and some decisions have gone Apple's way, and others Samsung's, but the biggest case was in the U.S., where Apple was awarded more than \$1 billion in August. Samsung is appealing that ruling.

While all this happens, it's worth remembering that Samsung and Apple are actually business partners. Samsung makes money off the chips found at the iPhone and iPad. So, why tech companies turn to the courtroom? I spoke to a tech pundit who used to be a copyright lawyer. Nilay Patel is now the managing editor at "The Verge". He joins me now live from Washington, D.C. And Nilay, why did this rivalry have to end up in court?

NILAY PATEL, MANAGING EDITOR, THE VERGE: You know, the market is completely changing for consumer electronics devices. So, you know, it used to be laptops, and Apple and Microsoft used to sue each other, and they eventually settled and the market itself settled down. That market has completely changed to mobile devices. I think the age of the laptop and a traditional desktop P.C. is ending, the age of the Smartphone and certainly a tablet is rising, and as that market begins to explode, there's going to be a lot of sorting out of who owns what technology, who invented what, and who has to pay for using those technologies in these explosively popular devices, and, you know, Apple and Samsung are the leaders on that market, they are the ones making the most profits. And I think you'll see the two of them continue to battle it out on every front for the next few years to come.

STOUT: So, the battle will continue, even though they are not just patent enemies, they are partners as well.

PATEL: They are partners as well, but I think you are really seeing Apple move away from that relationship a little bit. You know, the first time iPhone used the Samsung processor, now Apple designs its own processors. You see Apple began to look around for alternative memory suppliers that are not Samsung. They are beginning to move some manufacturing to the United States. Tim Cook, the CEO, just said they are going to start moving Macintosh manufacturing to the United States. It would be great, actually, if they could begin to move some of their device manufacturing here as well.

STOUT: It's time to bring Google into this discussion, because Steve Jobs didn't wage war on Samsung, he declared thermonuclear war on Android. So, what is that

verdict back in August, what does it mean for Google?

PATEL: You know, Google is in an interesting place now, because they acquired Motorola this year. And Motorola and Apple are in a court fight as well. But I think Steve Jobs' comments about thermonuclear war were more of a tactical display of aggression than in all-out, you know, moral stance. Apple sued HTC earlier, a few years ago, and they settled just a few weeks ago. They globally settled. They were also suing each other in a number of countries around the world. And they settled that lawsuit and decided to move on. And they licensed each other's patents.

You know, Samsung makes the most money in the market. So, I think that fight will continue. But I think Apple and Google are beginning to recognize, maybe at the highest levels, that they have more to gain in a market if -- it's a big market, they have more to gain from splitting that market and working, you know, together. They are also partners on search and other things. And working together rather than constantly fighting each other. And, you know, the Motorola suit, we are actually seeing Motorola and Google are about to settle. And limiting what Google and Motorola can do with those patents.

STOUT: So, are you foreseeing the end of the patent war, as it were?

PATEL: I'm foreseeing what you might call the end of the overt hostilities in the patent war.

(LAUGHTER)

PATEL: You know, all of the filing of the lawsuits, all of the dragging documents through court, you know, the Apple and Samsung lawsuit I think taught both companies a very important lesson, that they have to have these fights in public. Apple had to show the public a lot of internal documents about how the iPhone and the iPad were developed. Samsung had to show a lot of its internal process, some of which was, you know, frankly, embarrassing. They were looking directly at the iPhone and producing hundred-page documents demonstrating how they intended to copy it exactly. I don't think either company wants to do that very much more. I think there will be a lot of continued fights about royalty rates, about who invented what and who has to pay what for certain technologies, but I think the overt hostilities are beginning to come to an end.

STOUT: It's the end of the hostility, but still some more fighting and legal battles ahead. Now, let's look at Apple patents in particular. They will expire eventually. So, what does that mean for design? And Apple's desire to protect their intellectual property?

PATEL: You know, the patents will expire eventually, but it's a long time horizon, and, you know, it's decades, so it's important to note, that, you know, you can invent other stuff, and I think Apple -- you know, they say over and over again, we're happy to have you invent other things, but it's also important for Apple to invent new things as their patents begin to expire. They need to develop new technologies and new techniques that they can get more patents on. So it's a race, you know,

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there's been a lot of talk about how the patent lawsuit, how the patent environment chills innovation. I think there's some truth that as this -- this level of litigation, you know, steadily rises. But the flip side of this is it also encourages -- it encourages innovation. The more you invent, the more patents you can get, and the more value you can extract from the R&D work that you are doing. And both Apple and Samsung, Google and Microsoft, they are all spending millions and millions of dollars a year for innovation. So it's important to know, that, you know, there is a downside, but there is also a pretty strong upside here.

STOUT: All right. Nilay Patel of "The Verge" on the intersection where the law and technology meets. Thank you so much for joining us once again right here on NEWS STREAM.

PATEL: Thank you for having me.

STOUT: Now, there are plenty of new handsets and tablets here, but perhaps the most significant product wasn't hardware, but software. Microsoft released the biggest ever overhaul to Windows, making the dominant PC operating system touchable and tablet friendly.

And it's Microsoft's response to the changing computer market. PC sales fell over 8 percent the third quarter of 2012, that's according to IDC, while tablets sales are soaring, though. And recent data shows that Apple was selling more iPads than the world's biggest PC makers selling PCs.

So, does this mean that the traditional PC is dead? Maggie Lake asked Dell CEO Michael Dell and the Microsoft CEO Steve Ballmer that question.

(BEGIN VIDEOTAPE)

MICHAEL DELL, FOUNDER & CEO, DELL: Now, this year there will be about 400 million PC sold. I remember hearing that when there were 100 million PC sold a year, so we've been doing this for a while, so, you know, that's been going -- there's been discussion of that for a long time, but it -- there seemed to be more and more PCs being sold. There are about a billion and a half PCs in the world, and so, you know, if you go out in the real world, and look at how business has done, how people get, you know, productive work done, you see a lot of PCs. It's not to say there's not a role for smartphones and tablets. What's really interesting, of course, about this announcement, is now we have tablets that are also full PCs.

MAGGIE LAKE, CNN CORRESPONDENT: Right. And this clearly is geared -- this overhaul is geared to work across now, right? Steven, what is your response? Is the PC dead?

STEVE BALLMER, MICROSOFT CEO: I'd say the PC's never been dead. It never will die, rebirth, re-imagines, moves on. We started with desktops, for god's sakes.

And then, boom, PC gets reimagined into big loggables (ph), and then laptops, and then light notebooks, and then ultrabooks, and now we have PC's as tablets. And

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the number of (inaudible) just from Dell. Michael and I showed you one of these that is a notebook that flips. But you can take the top off, you can (inaudible), you can carry something that is thin and super light. We have PCs coming with Windows 8 that are -- that are wall-size, or certainly if you look at the new Dell, 27 inch, there are these rich, immersive TV experiences.

Our job, our job is to make sure that not only is the PC not dead, but we are constantly innovating, reimagining it. And the PCs as tablet -- boom, we're the only people who've got that. A machine that you can use for work and play, that can be your PC and be your tablet. We don't make you make some compromise on that through the work we are doing together.

(END VIDEOTAPE)

STOUT: It is significant that Microsoft's CEO spoke to Maggie Lake while standing side by side with the PC maker. Microsoft built its vast fortune by building software that ran on other people's hardware. But this year, Microsoft joined the hardware game with this -- the Microsoft Surface tablet. It is hugely significant, because it means Microsoft is out competing with its own partners, the same people it sells Windows 8 to. So when Michael Dell sits next to Steve Ballmer in that interview, he stood there both as a customer and as a competitor.

Coming up on NEWS STREAM special look at the year in technology. A new era in space as private companies play a bigger role in orbit.

Also, the plight of workers who build our gadgets came into focus in 2012. We'll hear from someone who toured a Foxconn factory in China.

And a look at how one company built this watch with crowd funded cash.

(COMMERCIAL BREAK)

STOUT: We are taking a look back at the year in technology. And 2012 can be considered the start of a new commercial space era. For the first time ever, a private company carried supplies to the International Space Station. That is something only a handful of nations have achieved. Now, the company, SpaceX, sent its Dragon capsule to ISS on two successful missions. Dragon also returned safely to Earth each time, and that is just as important, because SpaceX wants to transport people one day. It hopes to take astronauts into orbit possibly as early as 2015.

Remember, the U.S. space agency ended its shuttle program last year, and now relies on Russia for rides, but it's investing in private partners, like SpaceX, to take over trips to ISS. And that will let NASA focus on deep space missions. But SpaceX founder Elon Musk also has ambitious long distance plans. He spoke to CNN in April.

(BEGIN VIDEOCLIP)

ELON MUSK, SPACEX CEO: The thing I think that's really important about

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commercial space and, you know, why -- how does this -- you know, why should Americans or the world care about this, is I think it heralds the dawn of a new era of space exploration. I think it's -- I think we'll see significant improvements in space technology that ultimately will lead to people being able to go to Mars.

And that's -- that's a really important thing, in my opinion. I think, I think humanity became (inaudible) is one of the most important things we could possibly accomplish, and we should try to do that. Because it's -- it's an incredible adventure and it would ensure the continuous survival of humanity. So, but in order to do that, we have to make huge advancements in space technology, and that's I think only going to come with the advent of the commercial sector, and we are really seeing the dawn of commercial space right here and now. So that's why people should get excited about it.

(END VIDEO CLIP)

STOUT: SpaceX founder Elon Musk there, speaking about one day sending people to Mars.

Right now NASA is scouring the red planet with its most sophisticated rover ever. Curiosity is looking for signs that Mars could ever have supported life. It's equipped with a high tech tool kit, complete with a rock vaporizing laser, and lots of cameras. Curiosity has already sent back more than 23,000 raw images, and 55 of them were used to make this self- portrait. And you can see where it scooped up Martian soil. Now, Curiosity's instruments can test those samples for chemical compounds considered the building blocks life. And over here are some of rover's tracks. It was traveling to Mount Sharp, and you can see the base of it right back there. Mount Sharp is roughly seven kilometers from the landing site. And so far, Curiosity has covered about 600 meters, but the rover is not in a rush. Its mission is scheduled for at least two years, but NASA expects it to keep going for much longer.

Curiosity is the most sophisticated roving laboratory ever sent to another planet. It's much bigger than its predecessors, about the size of a small SUV. It took a supersonic parachute, a retro rocket pack and a long tether to set the rover down gently. And the landing was dubbed "the seven minutes of terror." Here is why.

(BEGIN VIDEOTAPE)

UNIDENTIFIED MALE: So we've got literally seven minutes to get from the top of the atmosphere to the surface of Mars, going from 13,000 miles an hour to zero in perfect sequence, perfect choreography, perfect timing, and the computer has to do it all by itself, with no help from the ground.

If any one thing doesn't work just right, it's game over.

ADAM STELTZNER, NASA ENGINEER: From the top of the atmosphere down to the surface, it takes seven minutes. It takes 14 minutes or so for the signal from the spacecraft to make it to Earth, that's how far Mars is away from us.

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So, when we first get a word that we've cut the top of the atmosphere, the vehicle (inaudible) on the surface for at least seven minutes.

(END VIDEO CLIP)

STOUT: Of course, Curiosity did survive its dramatic landing, and after that success, NASA decided to do it again, and plans to send a new rover in 2020.

Next, our NEWS STREAM look-back at the year in technology: Nintendo's next generation. We'll ask the videogame maker whether it could top the Wii with a new Wii U.

(COMMERCIAL BREAK)

STOUT: You are watching NEWS STREAM, a special look back at the year in technology, and this is the rundown of the stories we are covering. We started with patent wars being fought in the smartphone industry, and later, we'll hear from the inventor of the Web. But now, let's look at Nintendo's newest videogame console. Now, the Wii U is the first of the next generation of game consoles, but it's facing a very different environment to its predecessors. More and more people are playing games on mobile phones and tablets. Nintendo's response to that is quite clear. They put a large touch screen in the controller of the Wii U. So, what are the advantages of playing games on two screens? Well, we put that question to Nintendo America's chief operating officer, Reggie Fils-Aime.

(BEGIN VIDEOTAPE)

REGGIE FILS-AIME, PRESIDENT, NINTENDO OF AMERICA: You know, it changes the gaming experience tremendously. By giving you a second screen, that opens up all types of new experiences for our developers, for fantastic third party developers. It really gives consumers a new way to play games. But in addition, this console has fantastic social features. It also has wide-ranging video on demand features, so it's a whole new entertainment system for that center of the living room.

STOUT: Now, we will get into those multimedia features in a sec, but I just want to talk about the pad itself. We live at a time when everyone seems to already have an iPad, a tablet device, so why buy a Wii U when I already have an Apple tablet?

FILS-AIME: Well, the big difference is this. First, only Nintendo content will be available on this system. You can't get that type of content on an i-device. Additionally, this -- this tablet is seamlessly connected to the system, meaning there is no lag, there is no delay. That allows us to create all types of new features that you really can't do with any competing device. And then thirdly, because it is seamlessly connected, it allows our developers and third-party developers to create future content that you really won't be able to get anywhere else. All of this makes it unique and distinctive.

STOUT: And in terms of specs, the Wii U, it's pretty much on par with the Xbox 360 and the PS 3, but we know Sony and Microsoft are set to release new consoles next

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year, so aren't you worried about the timing and that the Wii U will be a generation behind your rivals?

FILS-AIME: Well, first off, I have to correct you. The specs are quite different than our competitive systems, much more graphically intensive. If you do a side by side comparison, you would actually see that third party games like "Call of Duty" look dramatically better on our system. And then in terms of what competition is going to do in the future, we'll see. We know that based on our own development, these two-screen gaming experience really is the next innovation that consumers are gravitating to. It's selling extremely well here in the Americas. Already stocks are quite low in the marketplace, we are rapidly replenishing. And so for us, certainly the consumers deciding that the innovation is well worth their investment.

STOUT: Let's talk about those multimedia features, the online features. I mean, your company, Nintendo, is famous for your focus on games, but the Wii U, it includes features like Netflix, an online store, an Amazon video. I mean, do you think all video game consoles need multimedia functions?

FILS-AIME: Well, here is a way that we look at it. For us, incorporating an e-shop, incorporating all of these video on demand features, created an opportunity for consumers to pick up that game pad every single day. And also, to have that happen throughout the entire household. We saw with Netflix, for example, on the Wii, that the utilization was quite significant, more significant than what they saw on other devices. And that's because we are linked to that center of the living room, we're there with all types of other great family entertainment. And so for us, it's a great way to extend the use of the system and have it used every day.

STOUT: You are going after the living room again, the same way you did with the Wii. That was a huge success for Nintendo, thanks in part to Wii Sports, and it was this intuitive gaming experience. You hold the controller, and you can hold it and swing it like a tennis racket. Do you think that the Wii U has that same appeal, the ability to appeal to all types of gamers, so anyone could just pick it up and get it and understand it, and game with it right away?

FILS-AIME: You know, absolutely. In the deluxe version that's being sold here in the Americas, we're including a game called Nintendo Land. Nintendo Land utilizes 12 of the most beloved franchises in Nintendo history, and many of these games are very intuitive, utilizing the game pad to navigate cars through an obstacle course, to throw Ninja stars from the game pad to your TV. Very pick-up-and-play types of experiences. So, we'll certainly have that more casual consumer. But for us, the big opportunity is also having content from the makes of Activision, or EA, or Ubisoft, these companies that are making content that is quite different than what Nintendo makes, and that's going to make for a much more well rounded console.

(END VIDEOTAPE)

STOUT: OK, you heard Reggie Fils-Aime, so games like Black Ops 2, look quote, "significantly better on Wii U," and we want to see for ourselves. Digital Foundry at Eurogamer took a close look at Black Ops 2. They compared the Wii U version with

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the Xbox 360 and Playstation 3 versions of the game. And in terms of detail, they found that the Wii U was about on a level with the Xbox 360. But the Wii U version was not as smooth as the others. Now, this doesn't necessarily mean that the Wii U is more or less powerful than its rivals. As for the claim that Black Ops 2 looks significantly better on Wii U, Digital Foundry doesn't think so.

Now, from new computers to modern smartphones. It's pretty safe to say that today's technology is far easier to use than what came before. But one group says it's actually a problem. Because it means we are missing out on some key skills, so they created a \$25 device to get more children interested in programming. Let's hear from the founder of the Raspberry Pi Foundation, Evan Upton.

(BEGIN VIDEOTAPE)

EVAN UPTON, FOUNDER, RASPBERRY PI: The Raspberry Pi Foundation is -- it's an organization founded by several of us from the University here in Cambridge, and a group of local businessmen, to try and put some of the fun back into programming, to try to get children involved in programming, in the same way they were in the 1980s.

OK, so we are going to put it together (inaudible). First of all, the spy connector goes in the back there, then we'll plug the mouse and the keyboard into the USB. Now we need to put in the SB (ph) card. This restores the operating system image on all the programs of the device. It's just a regular SB card. But finally, power. This is just my (inaudible) charger. That just goes into the end there. You are going to see a red light comes on. You can see that the machine is starting to boot. It will appear on the display.

I grew up in the 1980s. Many of my friends, even people who did not go into engineering careers, could at least write that two-line program for "I Am Great," 20 go to 10.

I guess what happened to the tools at the end of the 1980s and in the beginning of the 1990s was that that games market was taken by the game consoles, which obviously by their nature are not programmable. But what that led to was a massive reduction in the number of children who got involved in simple programming.

A lot of computer companies are named after fruits, so there are not that many fruits that are left, and so that's where the Raspberry came from. Pi is from - there is a programming language called Python, and we originally intended to make a machine which could only be used to program in Python.

How many of you know the game snake? You play snake on the old Nokia phone? Right. What we're going to do today, we are going to show you an implementation of Snake written in Python.

The Raspberry Pi is designed to be cheap enough so that a child can buy it themselves. It's designed to plug into a common peripheral, so it will plug into your television.

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Now, the come on prompt is how computers used to be.

Although we are primarily focused on the education market, we expect that a lot of people are going to find interesting industrial and commercial applications for this platform. We expect to see a lot of innovation enabled by the fact that we've reduced the cost of computing.

And what we're going to do is really interesting--

One of the nice realizations for us is when we take it into schools and we put it in front of children, they actually like the fact that it's not a box. They like the fact that they can see what it does. One of the advantages children today have with some of these programming language like (inaudible) is that a lot of that framework is already provided for them, so they can concentrate on the interesting stuff.

I've always felt, there's a five to ten minutes period at the start of any child's engagement with programming where it all seems baffling and complicated. And once they've made their couple of modifications to the program and got it up, that's what gets you hooked, that's what gets a significant number of people hooked.

But yeah, when you see that kind of level of enthusiasm from kids, it really encourages us to believe that we are doing a worthwhile thing.

(END VIDEOTAPE)

STOUT: The Raspberry Pi hasn't been out very long, but there are already plenty of applications. The tiny computer's developers are working on a five megapixel camera add-on. There's also a couple of media server apps in case you want to turn it into the world's smallest home theater PC, and the developers of the popular online game Minecraft have already announced a version for Raspberry Pi. But if you want a more serious way to play games on it, check out this kickstarter project. It turns the Raspberry Pi into a mini arcade machine.

You are watching a special edition of NEWS STREAM.

We heard a lot about Apple supplier Foxconn in 2012. Some of it was critical, but it was not all bad.

(COMMERCIAL BREAK)

STOUT: I'm Kristie Lu Stout in Hong Kong, and you are watching a special edition of NEWS STREAM as we look back at the year's biggest technology stories.

Let's take a look at the tech headlines.

It was a big year for Facebook. 2012 saw the company make its long awaited debut on the stock market, but its IPO didn't go smoothly, with trading glitches on the first day. Facebook also snapped up mobile photo app Instagram for a whopping \$1

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billions. It also reached a very special milestone. In October, Facebook said it had over one billion users.

Former Google executive Marissa Mayer became CEO of rival Yahoo! in July, and immediately started on the task of turning around one of the Web's biggest names. But there was one other thing she had to deal with first. Mayer gave birth to her first child less than three months after starting her new job.

Apple was forced to issue a rare apology after the disastrous launch of its new mapping service. Apple decided to replace Google Maps on the iPhone and iPad with its own maps, but when users discovered a series of embarrassing inaccuracies in Apple's maps, CEO Tim Cook apologized for the mistakes.

Skydiver. Felix Baumgartner made a death-defying jump from 39 kilometers above the Earth. He became the first person to break the sound barrier with his body in a free fall. Baumgartner's supersonic skydive set three new records, one for the highest manned balloon flight, another for the highest skydive. And of course, the fastest skydive.

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