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Phones and Tablets: What a difference 13 months makes

Electronics are exploding into the marketplace. From phones with front-facing cameras to tablets with 3D, here is what to expect in 2011



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By Michael Mortimer

When it comes to cell phones, I have to say what a difference a year makes.

And in regards to tablets, what a difference 60 days makes (see Plaintiff Magazine, December 2010 issue: *iPad or E-reader, Which Should You Buy This Holiday Season*).

Recent events were so compelling I opted to provide you this update on cell phones and tablets.

CES

In January 2011 the *Consumer Electronics Show* ("CES") took place in Las Vegas. At that show a number of computer manufacturers and tablet retailers displayed their upcoming wares.

MWC

In mid-February the *must attend* function for the wireless industry occurred, the *Mobile World Congress* ("MWC") in Barcelona, Spain. (See mobileworldcongress.com)

As usual, MWC did not disappoint. There were significant revelations, product announcements and keynotes by wireless industry titans. MWC was so important that I had to pull an all-nighter to "electronically attend" the last day of the Congress.

Note: This year's CES and MWC established that for 2011 there are some big changes coming about on cell phones and tablets. There was a lot of information to digest from the two "conventions." Due to space constraints I will endeavor to summarize for you the bits and pieces relevant for lawyers and an electronic law office.

Cell phones – 2011

Here are the most significant technology advancements and "upgrades" you will see on 2011 cell phones (again, what the industry calls "smartphones" or "superphones").

- **Appearance, form factor, design**: All phones are continuing with the iPhone look, the front of the phone dominated by the display, with a few hardware function keys at the bottom.
- **Interface**: Although there are some high-end phones debuting that are business oriented and have a physical keyboard (e.g., the

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Sony Xperia Pro), the touchscreen-only phone will continue to move toward becoming the dominant phone interface.

• **CPU (Dual and Quad-Core)**: The CPU ("central processing unit") is an electronic device's "brain." Just about anything electronic has a CPU, even some modern day over-priced electronic toasters have a CPU to regulate how burnt you want your bread.

The general rule with computers is, if you can separate computer functions into separate "little brains," the computer will function faster. For example, when playing a game, if one chip (or chip within a chip) handles computing functions, another handles graphics, and yet another handles audio, the computer will function faster and more efficiently.

The BIG deal at MWC 2011 was the debut of phones with *dual-core* mobile chipsets. In line with the above, a "dual-core chipset" is like your phone having two separate "brains" with which to perform functions. Remember, separate and independent is a good thing when talking about cell-phone brains.

With the debut of dual-core phones the feeling on the Net is that anything less than dual-core is considered outdated, at least by the geeks, pretend geeks, and those who listen to them.

• **Update**: The big news on day three of MWC is that a chip manufacturer announced its **quad-core** chipsets (yes, that's like having four little brains). Quad-core devices (cell phones and tablets) are projected to show up on store shelves in August-September 2011. And Qualcomm, the maker of all those dual-core chips, said that it won't have quad-core chips available until 2012-2013.

• **Display size:** In 2011 high-end phones will have at least a 4-inch display; the 4.3-inch display is also becoming popular with users.

• **Display quality**: Every manufacturer is attempting to compete or catch up with Samsung and Apple. This is because Samsung's high-end SAMOLED display and Apple's Retina Display are stunning when compared side by side against competitor "plain displays."

• **Front facing camera**: This is a camera on the front of the phone. It is used primarily for video phone calls. In 2010 few phones had a front facing camera, mainly because carriers did not want people sucking up limited bandwidth by everyone making video phone calls.

Now that Apple made video phone calls popular, look for an FFC on pretty much every high-end phone debuting in 2011.

• **Video phone calling**: Because of Apple, in 2011 everyone wants his or her phone to have video calling capability. The feature is not something Apple came up with (video calling has been on European cell phones since 2008). Apple simply took an unremarkable feature, gave it a catchy name ("FaceTime"), and marketed it as a major, essential feature on the iPhone 4. End result, on 2011 high-end phones expect to see video calling capability.

Note: As you may be aware, video calls on an iPhone 4 can only be made using WiFi (either your home's signal via a wireless router or a public WiFi signal, such as at Starbucks). Apple's competitors, such as T-Mobile, allow video calls using one's 3G or 4G data connection. In other words, you can make video calls anywhere, not simply through a WiFi connection. (You may have seen T-Mobile's television commercials poking fun at Apple's WiFi-only video calling.)

• **4G Data – Hardware**: 4G is how fast a data connection you can get with your phone's hardware. In 2010 there were few 4G handsets. Look for all U. S. carriers to include phones in their lineup that are "4G *capable*." (For example, T-Mobile has the *HTC G2*, *MyTouch 4G*, and the currently-debuting *Samsung Galaxy S 4G*.) Even Metro PCS, a prepaid carrier, now has a 4G phone.

Note: In 2010 there was a controversy in the U. S. between carriers, each pointing a finger at the other saying it does not have true 4G service (as defined by an international standards organization). Turns out no U.S. carrier technically has 4G service, so each carrier's marketing department (no doubt with a green light from legal) is using "4G" generically, to define connection speeds faster than 3G.

• **4G Data – Coverage**: The reason carriers describe phones as "4G capable" is because the majority of U.S. regions do NOT have 4G coverage. All carriers are racing to roll out 4G coverage, but it takes time and is very expensive. If getting a 4G connection is important to you, before doing anything, check with your carrier to find out if 4G service is available where you will be using the phone.

• **Camera**: 8 Megapixel is the new standard. Every year the average megapixel count on cell phones increases. In 2007, the high-end phones had 2 MP cameras, 2009 it was 3.2 MP, followed by 5 megapixel digital cameras in 2010.

The specifications of phones announced at MWC 2011 indicate 8 megapixel cameras will become standard on all high-end phones.

• **Camera software**: Every year "cell-phone camera" software is becoming more sophisticated, so much so that you may opt to leave your dedicated digital camera at home and instead use your cell phone camera to photograph events. How complex are cell-phone cameras becoming?

In 2009 cell-phone camera software might have one page of settings. In 2010, the $500 Samsung Galaxy S superphone has five pages of settings. And the camera comes with face and smile detection features: Samsung Galaxy S camera can auto-focus where it detects faces in the shot. And it can also be set to not take a picture until people smile. These are typically features you see on standalone cameras, not on cell phones.

• **HD video recording**: All 2011 high-end phones will have camcorder capability to record at least 720p HD video. In 2011 expect to see many phones with

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1080p recording capability. (1080p is DVD quality).

In 2010 HD 720p was the standard on superphones, so 1080p is a significant increase in quality. Where this really makes a difference is on playback. 1080p HD video can be played full-screen on HD TVs or computer monitors. In contrast, VGA and 720p recordings don't look very good when playing full screen on a large HDTV.

• **HDMI port**: Most 2011 superphones will have a mini HDMI port enabling connection of your phone to an external video device that has an HDMI input.

An HDMI port is an important feature and (IMHO) you should restrict your buying decision only to a phone that has one. This is because an HDMI-connected phone can come in handy when you need to make a client presentation or perhaps need to use your phone as an "emergency exhibit projector" at trial (it's a good thing to have a backup of your trial presentation system, to show jpeg or PDF scans should your main system crash. Redundancy is a good thing at trial).

• **Mobile money:** This is what you have seen on TV commercials or featured on the news. It's where someone is buying groceries or a cup of coffee and to pay the customer simply waves her phone in front of a reader. This method of paying is what the industry calls "mobile money."

Mobile money is a function of hardware. Phones with mobile money or payment capability are starting to roll out in 2011. While I doubt you will see a phone with the feature, it's something to simply note as "coming eventually to a phone near you."

• **Operating systems**: The cell phone OS war has pretty much been reduced by the media to a battle for the number one spot as Android vs. the iPhone. All other phone operating systems have been relegated to sideshow status, no one paying much attention to what they are doing. Those "other operating systems" include RIM's, Nokia's Symbian, and Microsoft's Windows Phone 7. (MWC Nokia announced it was ditching Symbian and would be putting Windows Phone 7 on most of its phones.)

Phone pricing

The economy remains tough in general and especially for plaintiff lawyers. If there is any silver lining to a tanked economy, it is that what I call the "default price" for a discounted phone has stabilized at about $200. That's not a lot of money for the latest and greatest cell phone. **Note:** buying an unsubsidized phone has stabilized at about $500 (where such phones without a contract used to cost about $650 to $750).

• **Data plan pricing**: Dramatic pricing changes and plan types have changed and will continue in 2011 to favor the carrier.

The way it used to be: All carriers used to provide unlimited data plans, meaning you could connect to the Net and download all the music you wanted, view streamed movies all day long, and upload home movies to YouTube, ten times a day if you desired.

How it is now: AT&T has done away with unlimited data plans. It has gone to offering tiered pricing, meaning that you now pay a set price for so many megabytes or gigabytes of data usage.

Only Sprint and T-Mobile continue to offer unlimited data plans.

Some prepaid carriers (Boost Mobile, Metro PCS) also offer unlimited data plans.

I have gone on record that by 2012 all carriers will have completely eliminated unlimited data plans.

• **Tethering**: This is where you connect your phone to a notebook computer, for example, and use the phone's data connection on the notebook to connect to the Internet, check e-mails, etc.

Tethering used to be free. All you needed was a typically free application to make the connection for you. In 2011 *free* tethering is no more.

All carriers now charge you a monthly fee to tether your phone to a computer. For example, to certain customers AT&T offers a $20-per-month tethering service (users on AT&T's Data Pro plan). T-Mobile charges $10 monthly.

• **Prepaid services**: The only thing to note about prepaid is that most prepaid companies have plans available that are less money than post-paid carriers. Boost Mobile and Metro PCS, for example, both provide unlimited talk and data plans, for about $60 monthly. That's far less than say T-Mobile who charges about $80 to $90 monthly for unlimited talk and data.

Moreover, in 2010 prepaid carriers had lousy phones. The phones were what's called "feature phones," a fancy way of saying the phone has limited features and only cost $50, full retail.

Now these carriers have a BlackBerry Curve for the BlackBerry unlimited plan, and there's even Samsung smartphones that run Android 2.2. (That's significant: that there are prepaid phones with an Android operating system.)

In 2011 prepaid is now a respectable option to consider instead of chaining yourself to post-paid carrier for two years.

Tablets – 2011

This is a short, but significant update to my Plaintiff Magazine December 2010 article on tablets and e-readers.

Here are the most interesting things to come out of CES and MWC:

• **Calling All manufacturers**: My article on tablets said that while missing the 2010 holiday season, manufacturers in 2011 would each debut tablets, either "standalone" or through wireless carriers. In fact, many manufacturers debuted their tablet offerings at Mobile World Congress in February 2011.

Since tablets are just now coming en masse to market they all pretty much have what I would call "generic specs." In other words, the tablets coming out in 2011 all pretty much have the same features and specifications. There are a few things that can set them apart; I will discuss that below. For now, see the

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December issue for a detailed discussion of the tablets and the "generic" features I am referring to.

• **Google, Android & desserts:**

Perhaps the most significant development to come to light is Google's January announcement of "Honeycomb" (Android 3.0). While yet another dessert-named Android operating system seems unremarkable, what's noteworthy about Honeycomb is that Google says 3.0 is optimized to run tablets and… ***Google admitted that earlier versions of Android are not suitable to run tablets!***

This is a huge admission on Google's part because that means 2010 tablets (such as the Samsung Tab) are deficient and that in 2011 any tablet debuting with an earlier version of Android is probably DOA (dead on arrival).

• **The 7-inch tablet is also DOA**: In the December tablet article I said that a 7-inch tablet was too small for reading text and small print. I agreed with Steve Jobs, who said that any tablet with a display under 9 inches is DOA.

It's noteworthy that the majority of the tablets that debuted at MWC had 10-inch displays. Only two tablets were announced that had 7-inch displays.

Most remarkable is that at MWC Samsung executive Dr. WP Hong said: A) Samsung no longer considers a 7-inch device a tablet, it's simply too small a screen for that purpose; and 2) That Samsung would no longer make 7-inch tablets and instead put its energies into 10.1-inch tablets! Remember the Samsung Tab? That was one of the few tablets on the market in 2010. It was Android 2.2 powered and cost a fortune, even under a two-year contract. It's somewhat disconcerting that only a few months after the Tab's debut that Samsung has basically admitted the Tab was a flawed product.

For those interested in seeing what all is available or coming up in 2011, here are some tablets that debuted at CES and MWC:

• LG Optimus Pad;
• LG G-Slate 3D (That's right, it's a tablet that plays 3D video);
• Augen - Doppio Hybrid (What I call a tablet with a "netbook style dock");
• BlackBerry 4G PlayBook (us.blackberry.com/playbook-tablet/);
• Viewsonic ViewPad 10Pro;
• HP TouchPad;
• Motorola Xoom – Motorola's CEO announced at MWC that the Xoom tablet (Best in Show at CES 2011) will cost a whopping $800 and a WiFi version for $600. Look for a lower subsidized price from Verizon, the carrier who will be getting it;
• Samsung Galaxy Tab 10.1 – A 10-inch display this time around. Pity the people who bought the first Tab three months ago. It had/has a 7-inch display. T-Mobile is trying to unload them at deep discounts;
• Dell Streak – A 7-inch tablet (But Dell does not call it tablet);
• HTC Flyer (A 7-inch tablet);
• Apple iPad 3 (A rumored fall 2011 release).

Conclusion

The products and technology I mention in here may be currently available; showing up on retail shelves from now until June-August; or not available until the 2011 holiday buying season.

If you are inclined to buy from only your wireless carrier (AT&T, Verizon, T-Mobile) keep in mind that no carrier's product inventory will have every hot product on the market. Typically, your carrier may get one or two of the latest, greatest or cool electronics, the other high-end devices spread around to your carrier's competitors.

Not all this tech is currently available in stores nor will such necessarily show up on the U.S. market until later in the year, if at all. The best way to find out if something is available for purchase is to enter the product name into Google Search, sort the hits by "most recent" and see what turns up.

Many sites follow product development, manufacturer announcements and will tell you when and who will be selling your favorite device (aka the cell phone or tablet you are lusting over).

Here are two Web sites that are excellent in providing information if you want to stay up-to-date on cell phones and tablets:

• *PhoneArena.com* – This is a great site that not only has news about upcoming cell phones, but it also is an archive for phones going way back. It's a great reference. Note: the site covers handsets throughout the world; if you see a phone that you like, you should first check to determine if it is a U.S. device or will debut here.

• *MyTabletLife.com* – For the latest on tablets, including what's inside, pricing, and debut dates. I like the site's thoroughness and author's competency. I believe that it's one of the better Web sites for information specific to tablets.

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