

# Consumer Electronics Show (CES) 2009 Debrief

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## *Main Trends and Observations*

*as Identified by Derek Kerton, Principal Analyst, the Kerton Group*

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## Introduction



On January 13, 2009, The Telecom Council of Silicon Valley held a debrief meeting regarding the recent CES Show in Las Vegas. About 25 telecom executive attendees participated in this debrief session which I moderated for the Council, approximately half which had attended the show.

My observations from the show that are below are not a complete, edited research report, but they are interesting take-aways.

The Council's debrief meetings are *not intended to be one person's presentation*. They believed since their first debrief that these shows are too big for a single person to successfully capture. We knew that the way to get the best of the shows was to bump into people we know on-site and ask them what has impressed them so far – it is social networking 1.0 (flesh version), and associated ranking system. When you think about it, this is something we all do naturally, and it improves our show experience. The Council debrief sessions are built around that natural concept.

Under that belief, each attendee shared their most important take-aways, and the trends they observed with each-other in a moderated discussion. As a result, it is unlikely that some important trend eluded our group.

The Council does not capture and distribute these proceedings (in audio or video), because they want to ensure frank discussion on site. So, the main value is reserved for those who attend – be sure to come next time! I have, however, taken some anonymized notes of the group's contributions, and added them to the end of this document.

Indirectly recognizing the value of the Council's process, FierceTelecom's Dan O'Shea said in January 11's newsletter,

I can't imagine even a couple more days would have allowed me to see everything. If ever there was a show built for social networking dynamics, it is CES. It is certainly massive and tries to be all things to all people, but it was apparent last week that your best bet to navigate the event was to find people with like-minded interests and talk to them about what they had seen and still wanted to see. And it was easier than you would think to identify your own niche community among the throngs. I don't think I have ever been at a trade show before last week where the simple questions "Have you seen anything interesting?" or "What's the big news at the show?" didn't come off as polite but empty-headed conversation. At CES, those questions were asked with genuine interest, and in most cases, they were met with genuinely-interested answers.

Naturally, we disagree with him that this process is exclusively useful at CES, but he seems to be on board with the fact that social ranking is critical to catching the best and brightest.



## Overall Show Traffic Down

I kept hearing this from everyone, especially cabbies. But despite the chatter, I had to shoulder my way into most of the exhibits worth seeing. I noticed that the automotive hall was very quiet, but most other venues seemed packed.

The hard data is that last year's attendance was 141k, this year's 110k. A big delta, but still a lot of people, considering the economy.

## LAPTOP's Best of 2009 CES Award Winners

(Interspersed with my comments)

### **Best Notebook:** HP Pavilion dv2 Entertainment Notebook

Just 3.8 pounds, but still with discrete graphics, .5TB, WWAN, LED display, AMD Athlon Neo processor, webcam, and a full range of connectivity options at \$699.

### **Best Mini-Notebook/Netbook:** Sony VAIO P Series (starting \$800)

Tiny laptop, but priced above all the netbooks. This thing only weighs 1.4 pounds for an 8" screen, integrated EV-DO.

### **Best Notebook Accessory:** D-Link SideStage

A USB plug connects this 7" display which augments your viewing areas. D-Link figures your desktop, widgets, IM chats, etc can be moved to the Sidestage, freeing up your main monitor for productivity.

### **Best Enabling Technology:** Nvidia Ion Platform

Combines an Intel Atom processor with a GeForce 9400 GPU to make small, affordable, power-conscious computers possible. Tiny computers that can pump 3D or HD graphics.

### **Best Cell Phone:** Palm Pre

Palm takes the Best of CES prize, the best cellphone category, and the People's Voice Award. More on the Pre later.

### **Best Cell Phone Accessory:** Powermat

This device uses induction current to charge CE, but claims to do so as fast as standard adapters. But cumbersome adapters are needed, prices are high, and it takes up space.

### **Best Storage Device:** Linksys by Cisco Media Hub

2-drive NAS with backup and media server software, remote access. For me, these products all boil down to how fast they respond (UE) and the UI design.

### **Best Software:** Phoenix Technologies HyperSpace

Alternate boot-up environment for rudimentary functionality. Boot in 10 seconds, or a couple of seconds from sleep mode.

### **Best Portable Audio/Video Player:** Sony Walkman X Series

Media player with 3" OLED touch-screen, Wi-Fi, digital noise cancellation, FM, 16 or 32GB, YouTube

### **Best Digital Camera:** Casio Exilim EX-FC100 (\$400)

A 9.1MP sensor, a 5x optical zoom lens, and the unique ability to shoot up to 30 **pictures** per second at 6-megapixel resolution. Can record HD video at 1280 x 720.

### **Best Digital Camcorder:** Panasonic SDR-S26 (\$329)

Red, 70x optical zoom. Mr. DeMille, I'm ready for my close-up.

### **Best Projector:** Samsung MBP200

Tiny, discussed later.

### **Best GPS Navigator:** TomTom Go 740 Live

Has a GPRS data connection to get updated traffic info. Can do Google searches on the move. Voice control, Bluetooth, and a 4.3" screen round this out.

## Best Wi-Fi/Home Networking: Intel My Wi-Fi

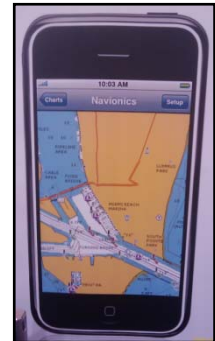
Allows the creation of a Wi-Fi PAN using a single radio that remains connected to a Wi-Fi LAN. Makes Internet sharing easy. I use a Windy31 to do this, but Intel is making it easy.

## Best Wireless Home Entertainment: Slacker for BlackBerry

Internet radio for your phone.

## GPS Everywhere

There were lots, and lots, and lots of aftermarket GPS routing products. Not too much particularly new or interesting. But lots of different devices. I have found that they are all getting better, UIs are improving, real time data is being integrated, but nothing revolutionary.



## Power Solutions for Mobile Devices



I covered this after last year's CES, but there were even more power solutions to support our mobile devices. Bigger screens, faster processors, more duty time, less sleep, more mobile data, more complex digital decoding schemes (ex: HSPA), all contribute to our batteries not making it past afternoon coffee break. Your devices seem to need a double-shot, too.

CES served up all kinds of boosters, solar chargers, car chargers, backpack chargers, induction chargers, charger sharing, travel chargers, multi-device chargers, yikes.

## TVs: Green, Not Gigantic

Last year, it was a "whose is bigger" contest among TV makers. This year, there seems to be more focus on interesting TV functionality, and less on size. What was neat in display?

Touch screens for PCs. Bigger touchscreens.

3D demos were everywhere, and looked pretty good too. This is not 3D rendering, but 3D viewing. Glasses are required, and various different technologies were used (polarization, Red/Blue) but some results were fantastic. This supposedly will have a market in gaming, telepresence, then broadcast sports, then regular entertainment.

Energy-saving features, and generally more efficient displays

Internet connectivity baked into the display. See Yahoo!

1080P, while a feature last year, was basically assumed this year in anything over 32".

I saw a large, flat panel TV with a built-in PC. Not sure how that will work out. The BoM for this unit jacked up the price, but the two functions (PC and TV) have such different shelf-lives that they seem ill-matched. Your TV will be out of date in 5 years. Your PC in just one.



Here's a picture of a Mitsubishi 3D TV: And another picture of Scalable's 3D demo:



## Green



Green was a major trend around the show. Last year, I discussed Green, saying that there was much talk, but few products. This year, is definitely different. Many devices (really do) seem to be designed more intelligently with energy consumption being a factor during design. One of the problems with modern electronics is that they consumer a slow, steady drain of electricity even when we are not using them, and it was this steady drain that the CES vendors seemed to be focused on most.

I saw TVs, chargers, PCs, laptop bricks, Wi-Fi routers, stereos, and more with smart ways to cut power consumption.

## 3D Webcam



Keeping with the above mentioned rise of 3D, there was a consumer-grade 3D webcam on display, which works with common software like Skype.

3D Webcam say: "Johnny Five is Alive"

## Yahoo Connected TV

We mentioned above that Internet content is getting bundled into many TVs. Often this is as simple as YouTube access, but Yahoo takes it one step further. The Yahoo rep told me that they had extensive talks with display makers to see what the marginal BoM would be to web-enable or widget-enable the average TV, and the result was that the existing processing capability of TVs can basically handle the job. So Yahoo partnered with TV vendors to launch Yahoo Connected TV.



## Palm Pre

**Synergy** – uniting different data sources into a single display, such as contacts from multiple sources, or e-mails from different accounts. You could look at these e-mails account by account, or in a single inbox.

**Sprint** – the phone will launch exclusively on Sprint in 1H09, which is an odd choice, since it is a bad brand in the US, and doesn't offer GSM scale economies for international expansion.

**Business or pleasure** – the device is promoted as targeting the sweet spot between a professional device, and a personal device. We think this is a smart goal. People have a single device. Some consumers buy iPhones, but still use it for work, and many professionals use Blackberry, yet still use it for fun. Smartphones should be designed to do both well (I saw a Nokia with 2 UIs – that's not the right way).

**New OS** – Palm has been pushing the same old OS since inception, while promising a Linux-based update for about 4 years. The Nova OS launched in the Pre (clearly they are not focused on the latin market, having learned nothing from the Chevy Nova marketing debacle).

**Multi-threading** – about time Palm's OS allowed apps to continue to function in the background.

**Features** - 3.1-inch multi-touch touchscreen display, slide-out QWERTY keyboard and gesture pad beneath the screen that is integral to the OS. It has 8GB of storage, built-in GPS, Wi-Fi and Bluetooth, as well as a removable battery, ambient light sensor, accelerometer, a 3-megapixel camera with flash and a 3.5mm headphone jack.

Seems like a good product, with nice touches. But you've got to wonder about the management of the firm. The smartphone segment of this market has been exploding over the past 5 years, and it is often said that "a rising tide floats all boats". But Palm's boat must have a leak, since it has managed to sink while the segment they helped define rose.

Does Pre make Palm profitable and viable for the future, or just a better takeover target?



## Sprint's Marketing Angle For Pre

Looks like Sprint will attack the iPhone right where consumers care: in the dollars and cents categories. They already went on the attack, with spokespeople at CES doing the math for anyone that would listen comparing an iPhone with a Pre over the life of the contract.

Subscribers on a basic iPhone data plan, versus a similar Sprint plan, can expect to pay about \$240 in extra telco costs to pocket an iPhone. If the Pre comes in at similar pricing, that's \$240 savings for Pre buyers. Heavier cellular users would save even more.

## Microsoft Wins Verizon Wireless Ad Deal

What does it take to win a mobile ad deal from under Google's nose? About 70% of ad revenues, if rumors can be trusted. Microsoft has won a 5-yr deal to provide the search tools for VZW, including walled garden search, content search, and web search. The WSJ published that MSFT also guaranteed payments to VZW of between \$550M and \$650M over the five years.

"Depending on which device they use, customers will be able to use voice commands and typed queries and opt to use location-aware searches to receive search results, including maps, directions, traffic information, information on local businesses, movie theatres and show times, gas prices and weather." – Wireless Week

I like this deal, as I've been arguing in favor of the telcos getting out of the search space, and partnering with best-of-breed companies. Verizon's previous, terrible search tool would miss any web hits, but would focus on walled garden hits – which is not usually what the subscriber wants. As a telco, if you can't do a good job, partner with someone who can, and get a rev share. Otherwise, subs will eventually just route around you, and you get nil.

MSFT has been on a bender of late buying traffic for their search properties. They have the infamous Live Search Cashback program that pays people to use Live Search for product searches. On the consumer side, there are many negatives to buying traffic, but on the B2B side, it seems to make more sense.

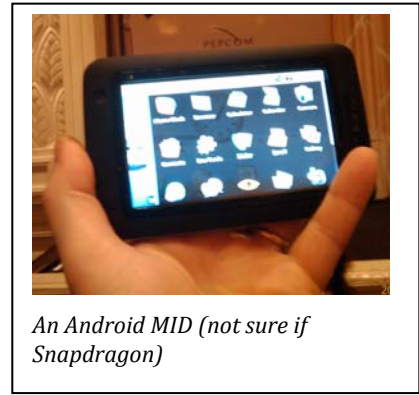
## Android on Snapdragon Processors

Qualcomm has ported the Android OS to its Snapdragon line of fast processors for phones and MIDs. This is a key move in the “Battle for the Middle” with Wintel making smaller devices with Atom processors and Win CE, and phone makers like Nokia and HTC making bigger devices with keyboards and big screens.

My bet on the battle for the middle has always been the mobile companies, because Moore’s law makes it easier to get more and more MIPS out of small processors, making them as powerful as PCs of 2002, this the mobile camp can produce devices that increasingly carve out turf formerly held by Intel. The challenges of the PC guys run deeper: Moore’s law doesn’t apply to power consumption, nor the ability to make very small chipsets, or very cheap chipsets. I think the learning curve is steeper for the PC side than the mobile side. Time will tell.

The Touch Revolution is an Android-based home hub. The device offers a touch screen, and access to all the Android applications.

The prototype here has Bluetooth, Wi-Fi and flash card connectivity, and the vendor presents it as a white label device for Service Providers to sell into a connected home.



## Microsoft MediaRoom Anytime

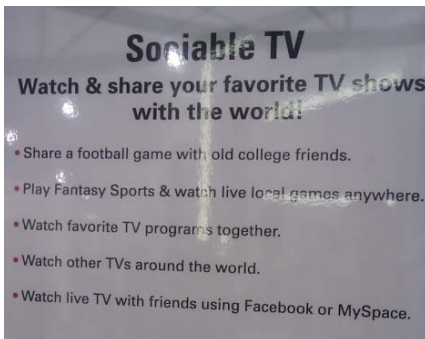
Microsoft showed their enhancements to their IPTV services. MediaRoom Anytime is a feature that allows people to have DVR functionality on shows they forgot to record on their DVR. It is basically a network-DVR add on, serviced by the IPTV service provider.

Microsoft has 2.5M subs using Mediaroom for IPTV.

## Place-Shifting TV, And Social TV

Hava was demonstrating their Hava box, which functions a lot like the Slingbox. Except Sling has always been respectful of the media firms, rights owners, and potential copyright issues, and has such has danced a friendly jig around usability in the hopes of not attracting too many lawsuits.

Sling users can only stream their content to one viewing device at a time. This prevents “rebroadcast” of materials. A sling user must enter a personal string of random digits to find their Slingbox, and the info is designed NOT to be shared.



Hava is playing differently. Users log on with an online ID. They can then invite their friends to log on, whether they have a Hava box or not. The friends can then be invited to tune in to your Hava feed for a given show. You can watch remotely, or you can share your TV with your friends.

Once set up, your friends and you can start to “chat” in a window below the TV content. Furthermore, an entire social network can be built around TV shows, discussions, invitations, etc. It ends up looking a lot more interesting than Sling.

Expect a lawsuit in 5-4-3-2-1...



## Cisco – Push Into Consumer Connected Home

In 2003, Cisco bought Linksys, and later STB maker Scientific Atlanta, so one could say they are already in the connected home. But in his Keynote, John Chambers discussed an overall shift in parent Cisco's efforts towards staking out some key CE turf in the connected home.

"We are really committed to this market and we're putting the whole company behind it", said Chambers.

New efforts include: a Wireless Home Audio system that leverages Wi-Fi-connected speakers throughout the home, a Media Hub that stores up to 500GB worth of media and enables remote Internet access, as well as a hosted platform for companies to create online communities more efficiently.

All in all, the CE products (still to be sold under the Linksys brand) were by no means novel. I swooped through the booth and left it unimpressed. "Wow, NAS." The important thing was Cisco's stated strategy.

The B2B community builder, called EOS, is a service bureau offering media and entertainment companies turn-key creation and management of social networks and online communities. I have no idea on the prospects of EOS, but it does seem a strange fit with Cisco. It sounds more like an Adobe product.

## The Router With The Mostest (End of the first quarter \$300)

Used to be that a residential gateway or Wi-Fi router was something you hid in a closed or under your desk. Not anymore. Clear a spot off your favorite shelf, your glass menagerie, or your desktop for the D-Link DIR-685. This beauty looks more like a digital picture frame, but it's all network device underneath.

The 685 has internal antennas, a 3.2" screen for UI, Internet weather, or slideshows, room for a 2.5" SATA drive, a NAS system, media server, four gig-E ports, two networked USB ports, and energy saving features like Wi-Fi scheduling.

## Netgear for ISPs

Netgear is re-tooling its strategy to work more closely with the service providers. Companies like Netgear must be aware of the success of lesser-known brands like 2Wire, who have made their business selling customized solutions to carriers and ISPs.

The underlying trend here is not news to TCSV members: The telcos historically have seen the outside wall of the home as the demarcation point, but this boundary has shut them out of expanding growth businesses in in-home services (see Cisco story above). As a result, in recent years, carriers have dropped the classic demarcation point, and entered into in-home services. For example, upstart SureWest offers home surveillance packages running off their Wi-Fi routers that come with DSL. The additional service revenues don't hurt the ARPU.

The trend may mean that residential gateways, home Wi-Fi, and such may soon be shifting from a time where it was installed by your nephew Lenny who "is great with computers, you know" and instead is put in and maintained by the telco (or MSO). Netgear is getting ahead of this trend.

In 2008, Netgear shipped 3M white label devices through the ISP channel. Service-provider features include: QoS for VoIP and IPTV, custom firmware loads, remote management, and branding.

An new announcement at the CES show was the ability to bond multiple DSL lines in a shotgun approach. Many homes have two twisted pairs to the CO, but DSL uses only one pair. With MSOs upgrading to the better throughput of DOCSIS 3.0, telcos need to have a credible response ready, and a solution that uses the latent twisted pair makes sense. I'm not clear on whether this would be done in a single CPE, or in multiples.

The bonding ability appears to be powered by UK company, SharedBand, which has worked with BT. Recently, the TCSV Investor Forum met Mushroom, a local firm with similar offerings, and nominated for a SPIFFY Award in February.

Separately, Netgear was showing its Internet TV Player set top box with Internet content like YouTube.

## Home Networking

Still lots of solutions on display at the show for throwing data around the home. The driving force seems to be getting TV signals from one room to another, with Telco TV companies driving the market. There were wireless solutions, but it seems that wired solutions were gaining a lead over previous years.



## YouTube and NetFlix

What do you do if you're an Internet or mail delivered content company that wants to break into the digital living room? You become very promiscuous with your content partnerships.

Not one Set Top Box maker with any kind of Internet content didn't feature YouTube content for the big screen. Netflix was a close second, with distribution deals with a number of box makers. Seems like a natural fit. Box makers bring the hardware, YouTube and Netflix bring a great range of content, and MSOs and IPTV vendors better beware.

It's rapidly becoming the case that if the franchise TV service providers don't provide good choices and prices in regular, on demand, and HD content, the Internet will fill that void. I can see how many households may drop their premium service packages, and use the Internet for movies, and pay per view.

## 4Home Home Automation

I liked the 4Home booth, which showed a lot of cool connected home and home automation demos. They won a Innovation award at CES. Here's what they say:

"4Home, Inc. is fueling the next stage of the broadband services revolution via their innovative "home control services" end-to-end software platform. Beginning with immersive home monitoring and home control, 4Home provides OEM networking hardware partners and broadband service providers a standards-based solution for monthly for-fee services for the digital home. Our partners can now enable their end-users to monitor and control devices and media in their home, using a mobile phone, TV, computer, or a touch-panel-- at home or remotely-- in a unified and captivating user-interface. Home control services are the next set of monthly services to be offered by major broadband service providers-- after voice, video, & data (aka, the "triple-play")-- and consists of home monitoring, media & entertainment management, home health, and energy management."

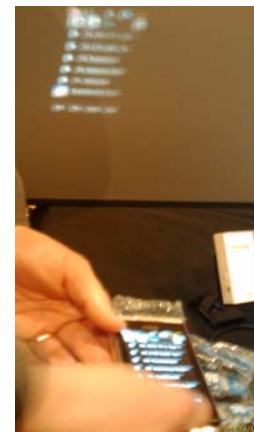
## Micro Projectors



Samsung MBP200 Pico Projector



Toshiba DLP

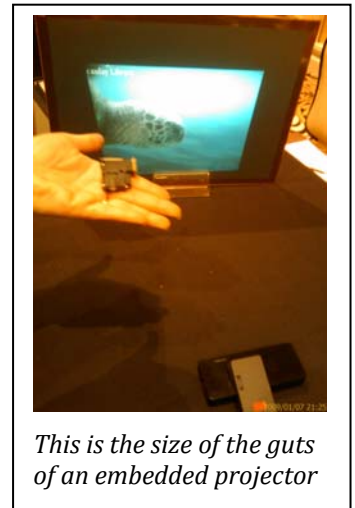


Samsung Phone

Last year, I saw a single micro projector, shown in a darkened booth. This year, I saw dozens of different models, from various vendors and using LCD or DLP technology. The small projectors were impressive, but I particularly liked the models that were integrated into other devices, like Samsung's smartphone.

Using low-power but bright LED bulbs, these micro projectors can pull off a small sales presentation with a laptop, but don't really cut it for bright rooms, or big crowds. Screen sizes over 20" make the image dim. The integrated projectors seem to look OK up to a screen size of about 17" or so.

Size-wise, it looks like adding a projector would only add about 1" to a smartphone. That may be more than I want to sacrifice today, but as devices continue to shrink, it may work!



*This is the size of the guts of an embedded projector*

## Plastic Logic Digital Paper

Similar to the Amazon Kindle, Plastic Logic was showing a cool tablet, about the size of an 8.5" x 11" sheet of paper, and about 8mm thick. The tablet showed black text on a white background, and was an electronic reader, with a focus on the business reader segment.

According to the company, the reader "supports a full range of business document formats, such as Microsoft Word, Excel and Powerpoint, and Adobe PDFs, as well as newspapers, periodicals and books. It has an easy gesture-based user interface and powerful software tools that will help business users to organize and manage their information. Users can connect to their information either wired or wirelessly and store thousands of documents on the device. The reader incorporates E Ink technology for great readability and features low power consumption and long battery life."

Plastic Logic expects to have the devices in the market by end of 2009. The company is also working on flexible plastic displays.

## Skype For MIDs, Smartphones And Javaphones

Skype has adopted the VoIP gateway approach used by EQO and iSkoot for a couple of years to interconnect the cellular voice channel, data channel, Skype VoIP, and POTS. The solution is now available for Android, Mobile Linux, and Java. An iPhone version is due out within months.

Implication: With the popularity of Skype, and the range of targeted devices, we expect this app to have an impact on mobile phone long-distance revenues – long an exploitable profit center for mobile carriers. Customers seldom shop for mobile service on the basis of long-distance rates, and as such, International direct dialing is priced way above market rates for fixed lines. Mobile carriers will be forced to offer lower LD pricing. However, we think they will do so in a price-discriminating manner, which is to offer the same rates, but offer "calling plans" for \$3-5/mo which trigger lower per-minute rates. This allows them to both respond to Skype, but continue to extract revenue from lazy or unsuspecting customers (i.e. many).

## Verizon FiOS Progress

Verizon said that they now had over 100 channels of HD in every FiOS market. They also launched remote scheduling of FiOS DVRs using a web interface or mobile software on a number of phones.

## Verizon To Be All-IP In 7 Years

Verizon told the Los Angeles Times that it plans for all of its voice calling to be VoIP-based in seven years.

CORRECTION: Well, during the debrief I said this sounded a little shocking, and I could not understand how they would manage to do it. Sure enough, it is not true. The story stems from a PR gaffe between a Verizon rep and Bloomberg, and has been retracted: <http://www.von.com/news/verizon-debunks-bloomberg-report.html>

## Sling Loaded DVR

I liked the look of this Dish DuoDVR ViP922, a Slingbox-enabled 1TB HD DVR that streams Dish Network programming to PCs and smartphones.

## HP Touchsmart PCs

HP was very proud of its all in one PCs with 22" touch screens and integrated software. This kind of device looks great for a kitchen or central home location.

## Netbooks

This category was flourishing at the show floor. Every vendor now has an entry in the category. But the Taiwanese have grabbed this bull by the horns early. The mainstream PC vendors, afraid of lower margins and cannibalizing their mainstay laptops, waited too long to get in to this space, which is currently dominated by Acer followed by Asustek.

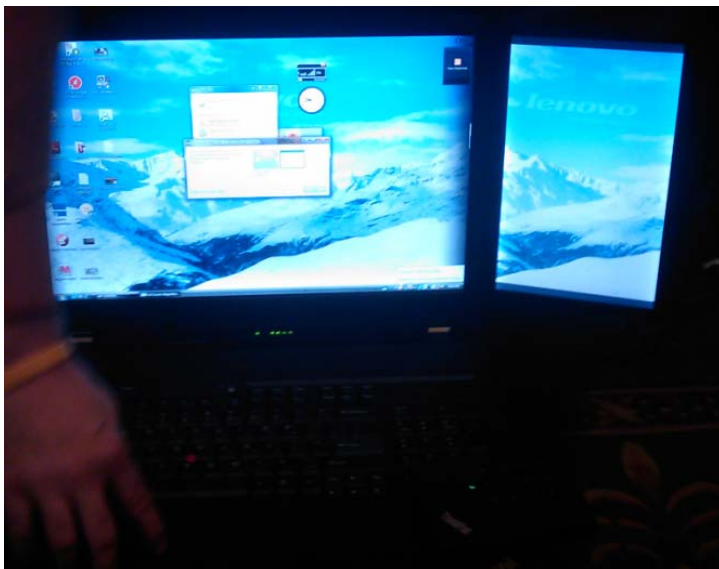
IDC expects netbook unit shipments to surge 85% to 21.5M in 2009.

Atom processors and XP help keep the costs down, but versions were on display with Linux, and Android. Hard drives also were an option, as many netbooks on display used solid state drives to extend battery life, increase speed, and durability. Asus showed a model with a touch-screen.



I like the **hybrid storage** models, which had both solid state flash drives for the OS, and a hard drive for massive storage. The hard drive can be shut down to economize power and extend battery life.

## Laptop With Wings



Well, Wing. This Lenovo Thinkpad W700ds has a right side 10.6" screen extension that can be pulled out of the side of the regular 17" screen to add width. The video driver adapts and adds that screen to the desktop. Weight? 10.1 pounds.

## Boot Environments

I saw at least two companies demonstrating non-Windows boot environments for Windows PCs. The idea being that many tasks don't merit a full boot-up, and could be achieved in a simple runtime environment. Thus, when a PC is powered up from off, or sleep, it presents the option of Windows or simple environment.

The runtime environment offers web browser, media players, and other tools such as calendar viewer. We've seen these from PC makers for a few years, but what made it interesting to me is that these can now be user installed aftermarket.

Ex: Splashtop, Phoenix Technologies HyperSpace

## Wi-Fi Picture Frames

I've always been fascinated by this category, because it seems to hold the "Minority Report" Tom Cruise future in its path. To begin, we had dial-up modem versions and Flash memory. But at this year's show, we see more and more Wi-Fi built-in to the picture frames, and better sizes, too. 7" seems to be the price sweet spot, with more 10" on display at CES.

Naturally, these screens, once connected to Wi-Fi, are expected to not just show your pictures, but also:

Your friends pictures off social networking sites

Weather, news, etc.

Video files

Streaming media, radio

RSS feeds

Recipe finders??

These devices are going to end up getting touch screens, cameras, and rudimentary OSes, and be ubiquitous information panels in every room of the house. For now, though, we can enjoy our photos.



## New Camcorder Category Gets Crowded

The Flip camcorder has redefined the category. For \$140 or so, people can get pretty good digital video that connects to the PC via USB. This device exploded in popularity in 2008, grabbing massive market share from the established camcorder vendors.

Not to be outdone, many new vendors are crashing the gates to be the second best in this new market. The Creative reps I spoke with told me that camcorder companies and retailers were resistant to the devices, because they were cannibalistic and better margins were to be made on \$400 camcorders, but the Flip broke the barrier with online sales, and now the retail channel has opened up.

Creative Labs has the Mino, and Kodak also has a product entering the category.



## Lots of Fancy Chairs For Gamers

I suppose there is money to be made in the gamer seat category, judging by how crowded it is. Seats that move, seats that thump, seats with sound, force feedback, haptics, integrated screens. How big are people's homes?



## Notes From the Attendees At the Debrief

As any of you who attend these debriefs know, much of the value comes from the knowledge shared by the attendees in the room, who each bring their own perspectives and take-aways from the show. Here are some highlights:



- Wireless and Wi-Fi in particular are being integrated into everything. This is especially true throughout the home, in TV, panels, picture frames, Set Top Boxes, media extenders, home control integration, one-piece PCs, and tablets.
- The concept of Laptops and PCs is passé. Now computing devices run a complete spectrum without missing a color. From gaming workhorses, through desktop replacement laptops, down to netbooks, MIDs, smartphones, feature-phones, and many quasi-computing or widget devices in between.
- Netbooks, netbooks, netbooks.
- Cloud computing means much can be achieved with a lightweight computing device (thin client) and a rudimentary browser. A powerful OS isn't needed.
- Broadband to the car is on the cutting edge. Much like it was to the home 8 years ago, the car is starting to be a terminal point for Broadband connections, to be locally distributed in a PAN or WLAN. Next up, we expect to see devices throughout the car that take advantage of this. Autonet had a cool EV-DO <-> Wi-Fi car gateway. What makes this cool is not the fact that it can be done (which is old hat), but the pricing model of \$30 for 1GB/mo or \$50 for 5GB. This is using the Verizon network, but charging significantly different price on different kinds of plans. Will the advances in leveraging this car PAN be provided by the car guys and telematics, or by CE guys? The group supposes the latter.
- As we discussed some CE like the Flip camera, and PND devices, the group observed that there seems to be an accelerating set of races to zero margin. PNDs that sold for \$600 two years ago go for \$150, and there appears to be very little difference between a \$200 PND and a \$700 model. Customers aren't paying for value-added features, and the core price drops faster than ever because of rapid commoditization, partly the result of pressure from cheap Chinese knock-offs.
- Overall, the morning group found that industrial design is better than ever, and UIs and user experiences seem to be better though out than they have been in the past. Of course, this point makes the above bullet all the more frustrating. Better products that work better, and offer better design, and better UIs, but sell for little margin.
- Some noted that onboard storage was growing, and there are substantially large flash memory chips available, and announcements to take the SD standard to 2 TB. Onboard storage is a threat to carriers who want to sell media and

content over the mobile networks. But on the other hand, onboard storage flies in the face of a powerful orthogonal trend: cloud storage. Basically, though, cheap storage will limit the prices that can be charged for access to cloud storage, or people will just carry the data with them.

- Boxee offers an interesting open source set top box software platform. While not offering the hardware. These STBs could come from a number of sources, and would be able to access a growing pool of Internet distribution content, and leave incumbent service providers out of the loop.
- The home is getting crowded with a number of solutions that can move media around, like Linksys, Netgear, Sonos, iRiver, picture frames, TVs, etc. And moreover, these devices seem to be working better this year than ever before.
- Sling seems to have done a good job of solving the challenge of sharing content around the home. The Dish Slingbox partnered with some “SlingCatchers” can use wireless or LAN and does the trick well.
- Now that content is actually being shared throughout the home, for real, we will hopefully see the end of standalone Digital Media Adapters (DMAs). DMA functionality, using UPnP or DLNA, will be integrated into some other piece of CE that we already have, like a STB from our TV provider, or PVR, or the TV itself.
- Set Top Boxes were everywhere, but the second group speculated on whether there is a long-term niche for the STB, or whether it just gets designed into the TV. An IP-capable TV could use open source software like Boxee, a remote, and IP media sources like Netflix. Add in a browser and some widgets, and you see the potential for convergence within that screen. The Yahoo Connected TV is just the start.
- A number of our meeting attendees noticed some interesting gesture-based UIs at the CES. Some that use gestures made with a remote, but some that just require the user to gesture in front of the TV with hands.
- Many of our debrief attendees were impressed with the current range of eyeglass-style LCD screens from MyVu and Sony.
- Touch screens everywhere. If there was a screen, you could touch it.
- During our CES debrief on Tuesday, the Telecom Council members discussed a variety of trends and topics out of the show. One key consensus was that the hurdle of getting media off the PC and the Internet, and into the living rooms and TV rooms has now been passed, if not leapt over.
- There are multiple good solutions for content time and place shifting with increasingly familiar names, Tivo, Sling, AppleTV, iRiver, Sonos, Cisco, Netgear, and many more. The UIs and UEs are good, and ready for prime time. The transport technologies are also matured: Wi-Fi ‘n’, Phonenumber networking, powerline networking, Ethernet over coax, etc. And the content sources are now out there with leaders like Netflix, YouTube, Hulu, and many more.
- Given that the market is ready to go, what survives, and what gets cast aside? We heard it suggested that the Set Top Box’s days are numbered, since that could be built-into the TV itself. The kitchen PC might as well just be a smart picture frame. Cable and IPTV providers may need to step aside for Internet content distributors. What do you see that’s disruptive? Who’s dead, and where should I put my dough?



