

## CES 2012 ... in Pajamas

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### About CES

The International Consumer Electronics Show is an industry-only trade show and conference – one of the largest in the world, with 153,000 attendees, including more than 34,000 international attendees from 140 countries. They all came to show or see the latest consumer electronics products and technologies from 3,100 exhibitors.

**Just how big the Consumer Electronics industry?** For perspective, consider that [Samsung is currently selling 2 TVs per second](#).

Nowhere else on earth can you see and experience so much with so many of your industry peers in such a short space of time. That's why I love attending, but I now do it without the expense and hassle of actually traveling there. I call it "CES in PJs," and I hope you enjoy my virtual trip report on the Health & Fitness side of CES.

For background, I've done big shows like COMDEX & CES for some 30 years as an exhibitor, speaker or attendee, and while still at IBM I organized one of the first Hot Spots (now TechZones). It was for Home Networking just after I introduced IBM to the Connected Home concept in 1994 and while I held leadership positions in some of the industry standards groups.

### Getting the Most from this Report

Attending the show in person can be overwhelming and exhausting, but so can reading this report. So here's what I suggest. First browse through the entire report and notice the many links. Then follow the links that interest you. You won't want to follow everything, because there's more than 4.5 hours of video and links to over 100 articles for related details, but you'll likely find so much interesting stuff to come back often to explore more as time permits – where the highlights are compiled in one place.

### General Media Coverage of CES

CNN provided general coverage of the gadgets on display in the 33 football field worth of space at CES ([2:49 video](#)), reported on Ultrabooks & 3DTV ([1:55 video](#), [1:27 video](#) & [1:59 video](#)), and covered the new Health & Fitness gadgets ([4:23 video](#)).

CNN also compiled a list of Hits & Misses from 2011 ([3:32 video](#)). Hits included Angry Birds, Apple's iPhone 4S with Siri speech recognition, Social Networking, and Hackers. Misses include Blackberry, Netflix, and the AT&T/T-Mobile merger.



**Wall Street Journal's Walt Mossberg** ([4:54 video, captioned](#)) walked the CES show floor with Katherine Boehret tour and found little new of interest, and he lamented the fact that Apple avoids CES and that Microsoft is pulling out. But apparently Walt didn't dig deep enough, because I found innovations that he apparently overlooked. They just weren't necessarily in categories that he writes about.

**USA Today** provided this general coverage of CES:

- Day 1 highlights w/ lots of gadgets ([3:20 video](#)),
- Day 2 highlights ([1:30 video](#)),
- Smart devices ([2:27 video](#) and [1:23 video](#)),
- Brain control of your TV ([1:00 video](#)),
- Attendee favorites ([2:42 video](#)), and
- Gadgets for moms ([3:46 video](#)), including the DropCam, which remotely monitors kids but can also be used to monitor your elderly loved ones.

**NPR** described CES as the Tech launching pad and home to 8 million types of iPod cases, [including this one with the cool promotion](#). NPR was also amazed how computer chips and technology are invading all sorts of previously dumb devices and offering up [new interfaces beyond touch](#).

**Forbes** wrote about [5 Trends To Watch](#) (Digital Health is one of them), and **Consumer Reports** identified their own version of Hot Products ([2:24 video](#)), including UltraBooks, OLED, bigger smartphones, smartphone toy interfaces, and more connectivity. But generating buzz at CES is not the same as generating sales, and **C|NET** compiled this list of [failures from past years](#).

**PRODUCT CATEGORIES** – I largely ignored general product categories that other analysts followed and instead focused on health & wellness. For a short summary of what the other analysts followed, see [Engadget's CES 2012 Preview](#) of expected announcements in:

- Smartphones,
- Tablets,
- Desktops,
- Laptops / Netbooks / Ultrabooks,
- E-readers,
- Digital Imaging,
- Gaming,
- Automotive,
- Audio,
- HDTVs and Displays, and
- Smart Households.

## Is CES becoming Irrelevant?

**TechZones** are one way to rise above the CES clutter and get noticed. The TechZones I focused on were Digital Health Summit, Silver Summit, Sports & Fitness, MEMS, Robotics, CEPro, HomePlug and ZigBee. Cool products sprinkled elsewhere in this huge trade show got far less attention.

But CES 2012 seemed like [an in-between year for Digital Health](#), according to C|NET. Many of the products on display in the health and wellness TechZones were announced sometime last year, and others were shown in secret as technology demos for products to be announced later. That's because the pace of innovation is increasing, and products are now developed in Internet time (in months versus years), and it means that fewer product launches coincide with CES.

**Timing product launches** for CES often means your big announcement gets buried in the “clutter” and gets little to no media attention. As a result, more companies today announce when the product’s ready, as opposed to saving the big day for CES. As I noticed over 10 years ago, this trend is causing many companies to re-think the value of exhibiting at CES at all. Farhad Manjoo of *The Slate* also made a strong [case against CES](#), and Phil Simon noted some influential companies that were [Not at CES](#), including Amazon, Apple, Facebook and Google. And this was the last year for Microsoft.

**Apple** wasn’t exhibiting, but 2012 was still another [Year of iStuff](#), showing how platform companies can still have influence without being present at CES. Some of the iStuff on display included the iHealth digital scale, iHealth blood glucose monitor, iShower, iGrill, iBaby monitoring system, iDog (an RFID system), and iLuv alarm clock.

## It’s All about the Platform & Ecosystem

[C|NET explored the Next Big Thing](#) and concluded that it’s NOT the device ([1:11:32 video](#)). This year it’s the Ecosystem, which includes hardware, operating system, user interface, distribution channel, services, developers, and content & apps. The discussion panel featured an interview with Google’s CEO to explain its own ecosystem strategy choices. Molly Wood asked Google’s Eric Schmidt if the Next Big Thing is the ecosystem, [should we fear it?](#) He said, “Devices and computer systems that are NOT on the network are lonely” and gave his vision of the connected home. But I saw holes in his vision and was inclined to post a response online. This is what I said:

**My view:** The Connected Home market has been stuck for over 40 years in a niche of high-end new homes with professional installation. Google wants to change that, but even though Wi-Fi is now finding its way into light switches and thermostats, this does not mean that the free and open-source Android will control your home. Google has the marketing clout and some of the right thinking to make the vision a reality, but several key factors remain unaddressed, and I don’t have the space or financial incentive to describe them here.

Smart TVs abound at CES, but Wired Magazine says [Ecosystems Are Destined for War](#), and according to Forbes, Samsung wants non-Samsung devices in its ['AllShare' ecosystem](#). [C|Net says](#) software is key to addressing the Ecosystem needs, and that ranges apps and cloud computing to artificial intelligence and home integration.

## Smarter, Thinner Televisions

**What's new in TVs?** Large and ultra-thin sets (4mm, or about 1/8 inch) with OLED technology, 4K resolution, 3D (again), smart Internet connections, and new user interfaces, including gestures, speech recognition, and face recognition. ([2:33 video](#))

**OLED technology** has some interesting applications, including transparent displays that can act as windows. Here’s how OLED works ([4:32 video](#)).

**LG and Samsung** took the lead in “thin” and introduced the 'World's Thinnest' TVs ([1:33 video](#)). What allows these TVs to be so thin is a combination of Corning’s Gorilla Glass 2 and OLED Technology.

**Corning Glass** unveiled an even stronger **Gorilla Glass 2** that allows for thinner TVs and touch screens ([4:58 video](#)). In the case of 55" televisions, they're a lot thinner – like just 4mm, or about 1/8 inch.



**Samsung's Smart Window** ([2:45 video](#)) was a technology demo and not a shipping product, but with technology like this, we may soon be living in the world of *The Minority Report* and possibly use a “window” for our Windows.

**Big got Bigger.** LG announced an eye-popping [84-inch, 4K \(3840x2160 pixel\) LCD TV](#) with Blu-ray up-conversion, and **Sharp's 80-inch Aquos TV** can even replace whiteboards in schools and board rooms.

Because forecasters predict declining TV sales in 2012, manufacturers wanted ways to “juice” sales. They're planning even sharper displays for future sets with up to [16 times the resolution](#) of today's HDTV video standard. Japanese broadcaster, NHK plans to test its Ultra HD system during the Summer Olympics in London. UHDTV has 16 times the resolution of current HDTV and 22 surround-sound audio channels. Transmitting video at that quality consumes gigabits of bandwidth, which is only available with fiber optics and short-distance radio today. I know of no U.S. broadband provider that offers that.

**The “Seeing/Hearing” Television** – I'm surprised that it took so long to add a webcam & noise-cancelling microphone to TVs. Microsoft did it last year with the Xbox Kinect, and **TelyHD** this year showed an Android-based Skype video phone for TVs ([2:37 video](#)). But the camera and mic can be used for so much more. **Samsung** demoed hand-motion gestures, voice controls, and face recognition (C|NET: [2:47 video](#), IDG: [2:04 video](#)). Someone else even showed a prototype headset that could use brain waves to control the TV set, but that was weird and years away from mainstream.



## Smarter, Thinner PCs & Tablets

**Ultrabooks** – If one category dominated CES hype, it was the Ultrabook, a term coined by Intel to describe an ultra-thin, ultra-light, ultra-revolutionary laptop PC running [Microsoft Windows 8](#) on low-power Intel chips that could boot up in half the time. The category is designed to challenge Apple's MacBook Air, but many consumers are moving toward tablets instead. So, Intel has a dilemma.

**Whose problem do Ultrabooks solve?** Short of being more powerful and portable laptops, they offer no new “experience” beyond what's available already in smartphones & tablets, and those devices use ARM processors instead of Intel ones. Intel's other competitor is the MacBook Air, a PC that essentially defined the “thin” category that Intel is trying to address with Ultrabooks. Here's an [article about what Amazon and Apple know](#) that all CES PC and tablet peddlers are still missing.

**Microsoft** recapped 15 years of their history in just 2 minutes by setting Bill Gates and Steve Ballmer to music ([2:18 video](#)). Microsoft's [huge CES booth](#) has always been impressive, but they made it clear that this was the company's last year to exhibit at CES.

Early versions of Windows 8 were on display, and when the new operating system eventually ships later this year, it will power computers, tablets and smartphones. But I felt the most important Microsoft announcement was [Kinect for Windows](#). The Microsoft keynote included this stage interview and demo with Steve Balmer & Brian Seagrest ([14:29 video](#)), featuring Xbox, Kinect and the Bing search engine with the new user interfaces of gestures and speech navigation.

Kinect for Xbox already holds the Guinness World Record for the fastest selling consumer electronics device ever, selling 18 million units in its first year and inspiring hackers to adapt the technology for innovative purposes that Microsoft never imagined. Now the company has announced Kinect for Windows 7 and Windows 8 and is giving away the software developer kit and only charging for the hardware.

Kinect for Windows will be available [February 1](#), and developers can download the software from the Kinect for Windows [website](#) and share their application ideas on the Kinect for Windows [blog](#). With Kinect for Windows, Microsoft is ushering the Era of [Motion-Controlled Personal Computing](#) that could bring new gesture and speech interface ideas to all sorts of products and uses, and I look forward to seeing more healthcare uses like here in a [hospital operating room](#).

**Editorial:** [Microsoft faces Huge Challenges in 2012 and beyond](#). [Sluggish computer sales](#) could spell trouble for Microsoft. According to analyst Bianca Bosker, “Microsoft continues to have trouble adapting to world where computing is done on tablets or smartphones, not desktop PCs, and where corporate IT departments increasingly follow employees' leads.” Where it used to be that application software was first written for Windows, now its iOS & Android, and Microsoft is an afterthought. Although Xbox and Kinect are bright spots in Microsoft's consumer repertoire, other consumer products have fallen flat, including Zune, its answer to the iPod. And where Microsoft created the tablet category, it has yet to deliver an answer to Apple's iPad. Even its smartphone software has [only 5.2% U.S. market share](#), while Apple and Google have 28.7% and 46.9%.

[Hewlett Packard made huge missteps](#) in managing its PC business, according to this USA Today article, which caused them to lose 26% market share.

**One Laptop Per Child** – The OLPC non-profit aims to make computing devices affordable enough to be distributed in mass quantities to children who wouldn't otherwise have access to computers, such as in emerging market nations. Here's a first look at their latest XO 3.0 tablet ([4:14 video](#)).



**First-Responder Telepresence** – [Vidyo](#) said it's collaborating with Alcatel-Lucent and other [ng Connect member companies](#) to deliver low-latency videoconferencing in first-responder fleet vehicles such as ambulances, police cars and fire trucks.

**GreatCall's 5Star Responder** was describes as being like OnStar for people. It combines the one-button simplicity of a PERS (personal emergency response system) with the voice capability of a mobile phone. Calls, including 911 calls, are connected through a concierge.

**SilverFox Link** is an elegant, sleek, lightweight watch and home medical alert device. Its two-way voice capability allows the wearer to communicate with a remote Care Center service, and service plans can also include medication reminder calls and daily wellness calls to ensure compliance and prevent isolation issues.

**ZOMM** captured three Innovation Awards for [Lifestyle Connect](#), a next-generation Personal Safety solution that connects you by voice to a personal concierge. ([2:22 video](#))

**GrandCare Systems** was selected as [Sterling Award Winner](#) in the Health & Wellness Category. They offer a HomeBase touch computer system that's senior-friendly and aimed at maintaining independence, controlling chronic conditions, increasing compliance, strengthening family connections and reducing hospital readmissions. GrandCare combines smart home technologies with activity monitoring, wellness monitoring, and social connectivity.

**The AMP™ hearing aid** earned [Starkey Laboratories](#) a CES Innovations award. AMP is a hearing aid for people who aren't ready to wear a hearing aid and are reluctant to consider them because they don't want to be seen wearing a hearing aid. They may also have outdated perceptions of how they sound, but Starkey's AMP addresses these concerns. AMP is invisible in most ears, more affordable and is designed to sound great. Additionally, AMP's programming makes fitting so efficient that patients can walk out the door wearing an AMP in a single visit.

**ClearSounds** showcased new speech-enhancing listening devices that they refer to as 'listening' aids instead of 'hearing' aids. That's because it's not about making things louder; it's about refining the sound quality of speech to ultimately make it more understandable.

**Valencell** showed [Demo V-LINC® Health and Fitness Earbud Sensor](#) technology that turns audio headsets and ear buds into health and fitness devices. The ears happen to be a great place to accurately measure vital statistics that can be the backbone of solutions for those managing hypertension, diabetes, and other medical conditions. ([0:42 video](#))

**iHealth Smart Glucometer** works by taking a blood sample on a test strip, popping it into the dongle that attaches to your iOS device, and using the Glucometer app to see and track your blood sugar levels ([1:07 video](#)).

**Wahoo Fitness Blue HR heart rate strap** was touted as the world's first *Bluetooth Smart* heart rate strap made for the iPhone 4S.

**Zensorium Tinke** sets itself apart from other devices for measuring blood pressure on your iPhone by saying it's the smartest so far. It is a two unit system with dongle that fits on to your iPhone that then connects to a wearable heart monitor. It measures heart stats like blood pressure, respiratory rate and oxygen levels by shining red & infrared light beams onto tiny blood vessels in your fingertip. ([1:01 video](#) and [2:55 video](#))

**BodyMedia** and **Avery Dennison Medical Solutions** introduced a \$149 arm band and an adhesive [7-Day Body Monitor Patch](#) that capture more than 5,000 data points per minute and track things like Galvanic

Skin Response (an indication of your stress level), calorie burned, steps taken, activity levels, and sleep patterns.

**Basis Band** is similar, but in addition to monitoring galvanic skin response, caloric burn and sleep, it also throws temperature and heart rate into the mix. Some fitness enthusiasts will appreciate that. And unlike many arm bands and chest or head straps on the market today, you can wear it 24/7 on your wrist, and it looks stylish. ([1:28 video](#))

**Jawbone UP** didn't miss the CES party after all but showed up to say it's [fixing early problems](#) with its innovative activity and sleep monitor. ([2:28 video](#))

**Oregon Scientific** showed off their stylish Gaiam Touch heart rate monitor, which one of several similar devices at CES ([0:33 video](#)).

**Fitbit** revealed its \$130 [Aria Wi-Fi Smart Scale](#) that tracks weight, % body fat, and BMI and integrates with their online social and motivational tools ([2:06 video](#) and [1:10 video](#)).

The [Telecare BGM](#) measures your blood sugar, wirelessly.

[Sonamba](#) is a Wellbeing Monitor/Medical Alert System with cellular connectivity for seniors living independently. Sonamba sends senior's wellbeing status alerts to caregivers and includes senior-oriented Personal Emergency Response, Medication/Calendar Reminders and Social Communications functions.

**Withings** rolled out a [Web-connected baby scale](#) ([2:47 video](#)) that uses Bluetooth or Wi-Fi to update your child's weight on PCs, phones or tablets, update Facebook or Twitter, or send private emails.

**Belkin** and **Evoz** joined forces to create [Wi-Fi® Enabled Baby Monitoring](#) solutions that can also work for monitoring your elderly loved ones, allowing you to access listen in from anywhere using a smartphone.

**The Zeo Bedside** tracks the quality of sleep by measuring brain waves through a soft headband that you wear while snoozing and then shows light, deep and REM sleep. ([2:08 video](#))

The [Somnologic Sleep Infuser](#), with its unique combination of sound therapies, provides an effective yet gentle means of achieving deep and restful sleep.

[Rehabtek, LLC](#) showed its Off-Axis training system designed for rehabilitating knee injuries ([1:28 video](#)).

**Powerball Gyroscope Exerciser** is both a way to exercise and compete with your friends ([3:22 video](#)).

**Senseg** introduced touch screens that touch you back, targeting the visually impaired and games ([1:42 video](#)).

[GeoPalz Technology](#), an innovator of family pedometers and online activity-tracking games, introduced an "Activity to Currency" platform that empowers parents to give electronics "credits" through physical activity of their kids.

**Germ-free Keyboards** – Seal Shield makes waterproof keyboards and mice that can be washed in the dishwasher and have built-in antimicrobial properties to avoid germs from spreading as doctors, nurses and administrators use them. ([1:02 video](#))

[STMicroelectronics smart-suit prototype](#) was equipped with numerous sensors and designed to help people recover from injuries, improve their co-ordination if they are suffering from conditions like Parkinson's Disease, or push the athletic performance of athletes. Each sensor node combines a microcontroller, nine sensors, accelerometer & a gyroscope, and software. The sensor data is delivered wirelessly over Bluetooth to computers, tablets or mobile phones for analysis.



[PalmSecure](#) has a new way to control security on your laptop. It turns your palm vein pattern and active blood flow into a biometric security key.

[MyMedicalRecords.com](#) introduced a prepaid Personal Health Record card, suggesting a new alternative for paying for healthcare.

[InsureMonkey](#) is a new website for finding health insurance and getting free health insurance quotes so you can compare plans and apply online.

LG tapped **Independa** to [bring health app to TVs](#). Angela is a health and social engagement app that currently runs on iPhones and iPads for the independent elderly. The software sports large fonts and higher contrast and offers video chat, email, Facebook, puzzles, appointment reminders, and more. The companies will work together to conduct customer trials of Angela running on LG TVs.

**Microsoft** and **Healthrageous** join **Ford** to research [in-car health monitoring](#).

**Bluetooth v4.0 is creating huge opportunities in health and wellness.** The Bluetooth SIG announced [a wave of new products](#) that include Bluetooth Smart phones, health & wellness devices, consumer electronics devices, and PC peripherals. From their [7th Annual Best of CES Award Winners & Nominees](#), here are the health & fitness products:

- Navoir nLocator Tracker for iPhone 4s,
- [iHealth Digital Scale \(0.25 video\)](#),
- [iHealth Wireless Blood Pressure Monitor \(2:00 video\)](#),
- [BodyMedia Link armband and smartphone app \(2:43 video\)](#) and [1:19 video](#) of disposable patch,
- [Alive Core ECG Sends Results to Your iPhone](#)
- [Motorola MOTOACTV fitness tracker \(1:44 VIDEO\)](#),
- [Siemens MiniTek automatic streamer for hearing instruments](#),
- [Zeo Sleep Manager Mobile](#),
- [Polar H7 heart rate sensor](#), and
- [Pancreum Genesis Wearable Artificial Pancreas System + CoreMD smartphone app \(2:58 VIDEO\)](#)

## Healthy Games

**Striiv Personal Fitness Trainer** is a workout in your pocket that includes some interesting personal and social incentives. Every step you take contributes to game play and counts toward donations the company makes for social issues ([3:21 video](#)).

**Careverge** is combining social networking, online gaming and healthcare to give consumers more control of their health and reduce healthcare costs. I also read an article, [How Gaming is changing the Landscape in Health Care](#), that caused me to look for examples of healthy games. Here are the favorites videos I found, organized by Senior & Rehab games and Dance & Fitness games:

### SENIOR & REHAB GAMES:

- New virtual gaming system for seniors ([5:07 video](#))
- Wii bowling league at retirement community in Silver Spring, Md ([3:33 video](#))
- Benefits of Wii for seniors ([1:40 video](#))
- Australian seniors use video games for rehab ([1:47 video](#))
- Senior Citizens Play Wii ([2:31 video](#))
- **Wii-hab** – researchers from School of Nursing at UC San Francisco ([2:44 video](#))

## DANCE & FITNESS GAMES:

- Just Dance 3 ([1:28 video](#))
- Zumba Fitness for Kinect, Wii, PS Move & PS3 ([1:50 video](#))
- Kinect: Your Shape: Fitness Evolved ([2:22 video](#))
- Move Fitness - Gamescom 2011 ([2:00 video](#))
- Your Shape Fitness Evolved 2012 ([1:34 video](#))

Have you seen other good examples?

## Home Networks & Energy Management

**Power-line networking** is a way to connect devices without running new wires, and it often reaches parts of the house that are out of range of wireless connections using Wi-Fi. Now [HomePlug says](#) that power-line data rates are set to double, with twice the 500 Mbps throughput rate of current products. That's because the HomePlug® Powerline Alliance announced its [AV2 Specification](#) for next-generation broadband speeds over powerline wires.

**Wireless networking** connects devices without any wires at all, offering complete mobility. High-speed wireless used for PCs, surveillance cameras and televisions is usually done with Wi-Fi, but fast performance and extended range shortens battery life. So many appliances, lights and control applications use low-power wireless technologies like ZigBee and Z-Wave.

**Gigabit Wi-Fi** – The speed of Wi-Fi is about to go up to 1.3Gbps at 5GHz (802.11ac) and 7Gbps at 60GHz (802.11/ad). This compares to the typical 150Mbps data rate for today's 802.11n.

**Z-Wave** also had a big presence. Members of the [Z-Wave Alliance](#) ([backgrounder](#)) showed several new cutting-edge [Home Automation products](#).

- **Somfy** announced many new features for CES. It highlighted the company's [commitment to Z-Wave](#) technology, presented its [Glydea™](#) Z-Wave® plug-In module and a [WireFree™ Solar Pack](#) that increases energy efficiency with TaHoma® (Somfy's total home automation solution), announced [new features](#) and new [mobile apps](#) for [TaHoma](#), and launched an [online database](#) for Somfy installation professionals.
- **2GIG Technologies®** announced the delivery of [500,000+ GO! Control Panels](#) and a new [LCD color touch-screen Wireless Remote](#) keypad
- **Frostdale** showcased its [nanogrid™ lighting controls](#) at the Z-Wave Alliance booth.
- **Fujikom's Z-Wave LED Light Bulbs with 20k Colors**
- **GreenWave Reality** cooperated with Danfoss to deliver innovative, [Connected Thermostat](#) solutions and won a [CES Innovations award](#) for home energy management.
- **Home Connect™ Technology** expanded availability of its products through a partnership with Savant®.
- **Mi Casa Verde** is now shipping a new Vera line up for 2012.
- **MiOS** Integrated an [Electricity Meter](#) with home area networks and a partnership with [Nonnatech](#)
- **Poly-Control** launched [Poly-Lock](#), the first multi-regional wireless door lock.
- **TrickTV** was launched on the Samsung Smart TV platform.
- **Yale** demonstrated the [first residential door locks with Near Field Communication](#) and said they are [available to integrate seamlessly into digital homes](#) now.

[Belkin's WeMo](#) offers wireless home automation that's easy & affordable ([1:17 video](#)). It approaches the cost and simplicity that is needed for solutions for seniors, and I look forward to reporting on this in greater detail soon.

WeMo works with a home's existing electrical system and requires only a Wi-Fi® network and free smartphone app to set up and control. Just plug the WeMo Home Control Switch (\$50) into any electrical outlet and then plug in any device, such as a lamp, into the Switch. Through the free smartphone app, the item then can be turned on or off remotely or scheduled to turn on and off at set times. The second product in the line is a WeMo Motion Sensor (\$100) that works with the Switch to make your device react to motion. Used together, WeMo can create a home environment that can turn a light on when someone walks in a room, or off when no one is present.

WeMo was also shown integrating with **JenNet-IP** lighting controls that are built into individual light bulbs ([1:33 video](#) and [1:22 video](#)).

[Motorola's Connected Home Gateway](#) puts your entire home in the cloud, almost ([photos, 2:52 video](#)). It's much more expensive and complex than WeMo, but it's a relatively easy way to add connected home services such as home control, home security and energy management, especially compared to wired home control systems. The Motorola Connected Home Gateway addresses much of the complexity of a home network and the traditional obstacles of service installation and maintenance. Unfortunately, it's still typical of home automation solutions – too expensive and complicated for most seniors, or most consumers for that matter. (Wayne's opinion)

[Savant Systems](#) demonstrated a complete suite of integrated solutions for Apple-based home control, automation and media systems using iPad, iPhone and iPod Touch.

**GreenWave Reality** demonstrated user installable smart home services for energy management, surveillance and connected lighting ([1:47 video](#)).

**Zienon** presented AirMove touch-free gesture control technology for smart homes ([0:31 video](#)).

**Samsung** is targeting technophobes and elders with its simplified [Wi-Fi surveillance camera and baby monitor](#)

**Dropcam**, which made a name for itself with an easy-to-setup video-monitoring camera and service, took the wraps off a new high-definition video-monitoring camera, the [Dropcam HD](#). It takes home video surveillance into the cloud and could be ideal for remote monitoring of loved ones needing care. ([1:28 video](#)).

**HAI (Home Automation Inc.)** now integrates wireless door locks into their home control systems. With [new firmware](#), HAI supports both the Zi-Wave and ZigBee wireless standards, which are used by companies like Kwikset, Schlage and Yale.

[LED lighting](#) got its own spotlight at CES and was used in products from Panasonic, RCA, Samsung, Toshiba and Vizio. As energy-efficient lighting standards take hold in the U.S. and around the world, more electronics companies will adopt LED lighting, and many CE companies will introduce LED light bulbs.

[SWITCH Lighting™](#) was named as CES Innovations honoree. SWITCH LED bulbs last 20 times longer than incandescent bulbs, turn on instantly, and like incandescent bulbs can be used in any orientation.

[LG's smartThinQ](#) appliance line included a washer & dryer, smart oven, refrigerator with the mind of a dietician, iPhone controlled Hom-Bot vacuum, and HeMS home energy management system. The [LG Smart Refrigerator](#) now has a brain and doubles as a dietician ([1:50 video](#)). The video also briefly mentions an LG smart sink and vacuum.

**Samsung's smart Washer & Dryer** was controlled by smartphone ([1:01 video](#))

**Thermador's Freedom Induction Cooktop** uses magnets to heat and automatically senses the location and the size of pots. It's a safer solution for homes with young children and elders with dementia. Available in July, it will cost about \$5,000. ([1:34 video](#))

**Nest's Learning Thermostat** was recognized for its sleek design and sensors that "learn" its owners' schedule and adjust to regulate temperature based on the user's preferences and patterns. ([2:14 video](#), also in this [2:09 video](#) of CES Unveiled)

**Wireless charging** is going into tablets, cars and the home, but I have safety concerns and posted a comment on this article asking about it.

**Parks Associates** shared market research showing that [Women dominate digital media usage](#) in the connected home. As expected, all sorts of other firms shared market research, but this is one that caught my eye as interesting.

## Robots

I've written extensively about the [Economic Value of Robots, Prosthetics & Assistive Technology](#) and found a few more at CES.

**Pleo, The Robot Dinosaur** just might be a poop-free companion to replace your cat or dog ([0:47 video](#)). He reminded of [Paro, the animatronic 'therapeutic' robot baby seal](#).

**Myomo Inc.** worked with researchers at MIT and the Harvard Medical School to develop the mPower 1000, a robotic arm brace with surface sensors that facilitates muscle rehabilitation. It's aimed at patients who have lost mobility in their arms due to brain injury, stroke, MS or ALS. When combined with innovative software and games, the device can help individuals with partially paralyzed arms regain function at home. ([1:29 video](#))

**Barrett Technology** demonstrated a [haptic robot arm](#) for medical markets that is already approved for some surgeries.

**iRobot** is testing human/robot interactions and showed an early prototype of one of their robots ([3:17 video](#))

**OLogic's AMP** (Automated Music Personality) is a two-wheeled, self balancing "robotic" music player that can be operated using a Smartphone ([1:52 video](#)).

[Oddwerx Animal](#) is a toy that turns your smartphone into a robot. Using an app and Bluetooth connectivity, the docked phone communicates with the robot and recognizes objects or faces. If it spots a toy it wants, it asks for it.