Today started off with quite a few interesting, and personally energizing experiences for me. I was walking in the networking/home networking area and was delighted to see so many http://www.arm.com/ based products on view there. Now, you may ask why would that be personally energizing? Well quite frankly, that’s my job, getting ARM products into Networking, storage and printing applications. And today, I got to see our products in action in those segments.

First stop http://www.huawei.com/ booth. Huawei was showing some really exciting products. My personal favorite was the IP phone. This is a case study in convergence. It’s a Network photo frame, no it’s a media player, no it’s a SIP video phone. Wait which is it? It’s all three! Not to sound too much like a late night TV infomercial pitch man but it was kind of cool. I want one for home. They also had their IPTV/digital Video broadcast boxes on display.

I also saw some interesting technology applications for remote monitoring/Telemetrics. Modules that attach to your car, your electrical home meter and security cameras that allow you upload data to a central monitoring point. All these modules are based on http://www.qualcomm.com/ ARM based chips and use the cell network (multiple global standards including CDMA, GSM, UMTS etc) to upload data.

I later on stopped by the http://www.dlink.com/ booth to see the much touted http://www.boxee.tv/box. It is exactly where the future is headed and is another way for users to get a better experience viewing internet content from their home. Based on http://www.nvidia.com/page/handheld.htmlplatform, this box allows users to view internet content whether video online from Youtube or your favorite baseball game from your HD digital TV. Did I mention the aesthetic appeal of the box. I could totally see my kids, who embody the Youtube generation, wanting to watch you tube videos on our home TV. May be for Diwali.
DLINK’s award winning storage technology was also showcased there. Again more products based from ARM silicon partner http://www.marvell.com/. DLINK’s green initiative not only talks about greener materials but lower power consumption. ARM’s certainly all about lower power, our mobile heritage makes us count nW (yes nano not milli watts), I guess I can go back and tell our architects that their efforts are paying off…the architecture is performing, the way that they envisioned it.

Speaking of storage, there has been a lot of buzz in the industry on SSDs and the value that they bring in terms of power savings, reliability and performance. ARM already has been widely adopted in the HDD space as the controller of choice. This show was an opportunity for me to see some proof of how ARM is doing in the emerging SSD category. Last year we saw a lot of entrants into this market place but in conversations with some of these players I learned that there is some consolidation happening with the best solutions starting to emerge. I stopped at http://www.adata-group.com/’s booth and chatted with Gibson Chen, their VP of engineering. He pointed out some of their ARM based SSD solutions that are enjoying quite a bit of market success. The silicon is from some key SSD controller players, Indilinx and JMicron. For SATA based interfaces, performance is everything and yet given the advertising on the green aspects of SSD drives, power is important too. I guess that is why ARM based processors are helping our partners deliver what the market needs for this space.
I'll admit to being a bit of a couch potato for some down time when I am not on the road. Recently I have been paying attention to some commercials that are talking about ubiquitous internet access everywhere courtesy of a [WiMAX](http://en.wikipedia.org/wiki/WiMAX) based service offered by a company called Clear. I was wandering around their booth here at CES looking at their USB interface cards and the modems that you install in your home to continue your internet service there. The modem (picture below) actually has two ARM processors in it. The first was the main processor and then the other processor was in the WiMAX chipset from our partner [Beceem](http://www.beceem.com/). The [Clear](http://www.clear.com/) demo was so cool because they showed someone gaming over the internet at the show with someone who was out in Las Vegas metro area some where.

At this point, I realized that I had basically spent almost one and a half days of the show in just the south hall. So I headed over to the Central Hall and checked out some cool automotive technology. When I was a kid I always loved watching this show called [Knight Rider](http://en.wikipedia.org/wiki/Knight_Rider), which was about this guy with a cool computerized car that could talk, drive itself if needed. Incidentally this show was resurrected recently by NBC. One of the memorable dialogues in the original show was when the hero Michael Knight first gets into the car and says “What is this Darth Vader’s Bathroom?”... or something along those lines. Well I guess life imitates art in this case with the FORD’s [myFORDtouch](http://myfordtouch.com) that was prominently featured in the keynote at CES. The whole driver experience is now updated with the console
and control bringing a sophisticated digital touch screen experience to the car. This experience is of course powered by an [http://www.arm.com/products/CPUs/ARM_Cortex-A8.html](http://www.arm.com/products/CPUs/ARM_Cortex-A8.html) based solution from our partner Freescale. I asked one of the engineers who was on hand what he was most proud of with the development, he said the introduction of WiMAX capability in the car. Any WiMAX USB plug in dongle can now plug into the car and you have instant internet in the car. That means, RSS feeds, weather updates and of course passenger internet video entertainment, because there are extensive safe guards that ensure the driver cannot watch American Idol while driving. 😊

After stopping for a wonderful foot massage for a couple of minutes I then went on learn about one of the fairy tale stories of CES, [http://www.tenrehte.com/](http://www.tenrehte.com/). What is Tenrehte? Tenrehte, besides being Ethernet spelt backwards, is a 5 person company out of Rochester NY that is developing a product called the PicoWatt Smart plug. As the name suggests, this is a WIFI enabled device that you plug your appliances into. These appliances then get connected into your home network. You can then use a browser based interface to connect to your appliances remotely and turn them on or off, monitor electricity usage among other things. The Smart plug now also can tap into the utility company and find out when the lowest electricity rate is to run your appliances. The fairy tale part of the story is that Tenrehte submitted their product to the CEA’s annual i-stage competition and was selected as a finalist allowing them to be at CES i-stage tech zone. Then they got selected as a CES innovation finalist for green products!

Jennifer Indovina, President and CEO of the company told me that they prototyped and developed this innovative product using an easily available Cortex-A8 development board. They chose this solution because they needed a fairly high performance processor to run the entire Linux networking stack, but developing a green product, they needed an extremely power conscious processor that offered them a host of power saving features. They were able to quickly develop this Linux based solution from readily available ARM software packages and middleware... All in all a great way for me to end day 2...With a fairy tale...

**Lakshmi Mandyam, Enterprise Segment Marketing Manager, ARM,** is thrilled to be working on products and technologies that she can excitedly point to when she is out and about with her family. At ARM she is delighted to be able to change people’s perceptions about being able to deliver high performance enterprise solutions in a energy efficient mobile power profile.

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