Faultline

Disruptive changes in media due to emerging digital networks

Key Issues

Broadcom pounces on Gigle to break into HomePlug AV and G.hn

- Broadcom grabs Gigle as one of the last "head starts" in powerline left
- Gigle probably only needs cash to deliver a G.hn finished product
- This should lead to a Broadcom hybrid chip between powerline and Wi-Fi

In a deal that we predicted well over a year ago, Broadcom has acquired Gigle networks, a home networking chip designer which is focused on the powerline and G.hn "no new wires" home networking markets. The deal involves an initial $75 million plus the potential for a further $8 million in performance related payments. This jumps Broadcom into the G.hn and Homeplug AV game, directly up against Sigma's Coppergate, which launched a MIMO version of HomePlug and the first G.hn chips last month, and Atheros which acquired Intellon last September, the chip business which drove the first generation of HomePlug devices, as well as DS2, the Spanish chip designer which was snapped up by Marvell a year ago.

Both DS2 and this Gigle deal must be thought of as "distressed" sales, with DS2 sold from bankruptcy and Gigle going for little more than 2.5 times the $31 million of VC funds which were publicly invested in it by VC firms. The chances are that Gigle also had some debt funding that would not have been publicly announced and there was very little profit on the deal for the VCs behind it.

But for Broadcom it brings an unfinished G.hn position which probably needs just a little cash to bring to market, and an established HomePlug and HomePlug AV product line. Gigle also offers a number of home networking switches which work across all forms of physical wire and through powerlines, and its own proprietary Mediaxstream technology which is a wideband superset of them all. Broadcom will almost certainly wish to produce a hybrid chip between WiFi and HomePlug to cover the moves announced by Atheros, but it is known to have had several false starts in home networking and has perhaps lost its way.

Gigle also has its own proprietary 1 Gbps wideband superset technology

We had reports at IBC that a year-long effort to build a MoCA chip had failed and that something similar had been going on for even longer with a set top chip for Microsoft Mediaroom IPTV set tops. Gigle will provide a fresh understanding of these markets for a company known for its massive reach in WiFi and its habit of arriving late into chip markets and commoditizing them.

The home networking business is certainly in need of Broadcom's scale and ambition.

Gigle is culturally very different from Broadcom and it will be a challenge to keep the company's clear start-up spirit. The company has a motto of being "just mad enough" to imagine it can create a brand new technology whereas in fact it was "just sane enough to get acquired."

Gigle had built a set of engineers in Barcelona, Spain and Edinburgh, Scotland, and only had sales people in its Redwood City, California offices.

But Broadcom has been on an acquisition spree of late, spending $316 million to acquire base station chip maker Beceem (mostly for WiMAX base stations) and laid out $86 million to buy Percello, a femtocell SoC builder.

The time is right for Broadcom to acquire, given that it's in its best of financial health and it is on the verge of making headway in the cellular market where it has had its eyes looking jealously for some time at rivals like Qualcomm and ST Ercisson.

WiFi is busting out everywhere in the digital home, thanks in part to DLNA's blessing

And given its leadership role at DLNA and how this is driving WiFi and other home networking technologies apace, it feels it has to own the home networking space which is finally taking off after all these years. There is also the matter that increasingly its heartlands of WiFi, Bluetooth, DSL and set top and video graphics chips, are all moving towards consolidated home gateways and other hybrid combinations of these technologies, and without buying into power line networking, it risks finding it has to license that technology.

Gigle has been around since 2006 when it first took $11 million funding to get off the ground. It took another $20 million in November 2007 and must have been coming to the end of its funded life, and either needed a third round or to get acquired. Investors were initially Accel Partners and then SEP (Scottish Equity Partners) and Pond Venture Partners

All the employees will move across and stock options in the company will be swapped for options in Broadcom

The No New wires market for home networking is expected to grow to 200 million chips a year by 2015 says US researcher IMS and an installed base of over 110 million 'no-new-wire' homes. That still leaves an awful lot of growth going forwards within the 700 million pay TV homes around the world.

Key Issues

The Pearl of the West – MCV has the CV to wake US up to mobile TV

The Pearl initiative, which we said in April would be the first nationwide US mobile TV network using the ATSC M/H broadcast protocol, says that it now has firm plans for its market launch during 2011. It will launch under the three letter acronym of MCV, which stands for Mobile Content Venture, and reach 40% of the US population during 2011.

It says that it will offer at least two ad supported channels in what are some of the biggest markets in the US including New York, LA, Chicago, Philadelphia, San Francisco, Dallas, Washinton DC, Atlanta, Houston, Detroit, Tampa, Phoenix, Minneapolis, Orlando, Portland, Cincinnati, Greenville, West Palm Beach, Birmingham and Knoxville. After that it will grow into more territories and offer more channels, it said.

We don't think there will be only one national mobile TV network in the US, but this is the first one

At Faultline we don't think that it will be the only national network. A comment made back in October by US broadcaster Sinclair Broadcast Group, one of the biggest independent broadcasting groups in the US, and an affiliate of both Fox and ABC, said that by the end of 2011 there will be up to 500 mobile TV stations reaching at least 65% of the US population. That's fighting talk from a company not currently a member of MCV and not aware at that point of MCV's detailed plans. Either Sinclair plans to join this consortium or at least two groupings will jockey for position as the dominant national mobile broadcast network.

In the US there are four broadcast networks which consider themselves national and which attract many affiliates to broadcast the same content outside of the station owned territories and these are NBC, CBS, ABC and Fox.

MCV already embraces two of these in Fox and NBC and the rest of the group is brought up by Belo, Cox Media, Scripps, Gannett Broadcasting, Hearst TV, ION TV, Media General, Meredith, Post-Newsweek Stations and Raycom Media. It's a powerful collective. ABC, which is owned by Disney cannot afford to be left out of a mobile TV war in the US, and CEO Robert Igor has already shown that he is behind being engaged in as many "online" initiatives as possible to ensure Disney does not miss the online boat. On the other hand Apple CEO Steve Jobs is the largest individual shareholder At Disney and obviously considers that the best route to market for portable video is through WiFi and 3G in a paid model.

The result is likely to mean that any online initiative that is not owned by Disney is one that it can afford to join last, when the other national broadcasters have shown the way. It was the case at Hulu that Disney's great weight of content meant it was able to decide late and joint the party as a full member, long after the other founder members had shown the way.

This leaves CBS left in no mans land. It either gets a rival group to coalesce around its own content, offers to partner with ABC and bring it into the game or joins MCV. But like Disney it may decide it has enough to bring to the party to enter late, though we think this is less clear than in Disney's case.

"Our commitment to launch in 20 markets, including 13 of the top 15 DMAs, is a significant and necessary step in building a viable commercial mobile TV business that delivers a comprehensive product to viewers," added Erik Moreno, co-General Manager of MCV. "We welcome the opportunity to work with Fox and NBC affiliates, as well as additional broadcasters, in rolling out many more markets."

The plans for handsets offering an ATSC M/H chip which can tune these services appears to have slid backwards from the first half of 2011, because MCV says it is working with various OEMs and device manufacturers to ensure these devices are available in the second half of 2011.

On our roadmap a second chip and a national network were a pre-requisite, the last step is a cellco's involvement

So far the roadmap which we at Rethink outlined in our Report "The Rise of the ATSC M/H machines," launched back in January has proved fairly accurate, but is perhaps a quarter or two behind where we thought it would be. A second chip supplier in Siano Mobile Silicon has emerged to work alongside the main technology sponsor of the ATSC M/H standard, Zenith, a US subsidiary of LG Electronics. As it becomes clearer to more and more players that this market is really going to happen, more chip vendors will emerge and handsets, PC dongles and in-cars systems will proliferate.

Many US onlookers have talked for some time about mobile TV already being a failure, always implying that consumers have rejected it. Lessons from around the world, in particular in Japan, where it has been very successful with over 70 million devices in play, show that the devices must be subsidized by cellular operators, and services must be cheap or free. The US has never had these conditions in play, having instead tried MediaFLO, a service from Qualcomm which uses its FLO technology, which is now up for sale. This was resold by both Verizon and AT&T, but had made for mobile versions of TV

channels with little or no live sport and no local services. Handsets were subsidized but it was never offered on truly trendy handsets and the service initially cost $15 a month, a price which was falling before the service was canned. MCV says it will offer TV which includes sports and entertainment.

So to say that the US has rejected mobile TV is to miss the point entirely. Cellular networks will not have the capacity to show TV to a large number of people simultaneously using cellular streaming, until second generation LTE, in at least ten years. Sure video can be streamed over cellular, but only to around 8 to 12 users at a time from any given base station radio segment. So mobile TV has a number of years in which to mature and flourish and it needs a linear schedule, which borrows from or entirely copies local TV in order for the public to accept it.

So people think this market will be as small as 30 million devices, but it's still a market

The first devices expected to sell well are handset dongles that will take this kind of TV to tablets and large touch screen smart phones. The likely design approach will be to have a dongle re-broadcast a WiFi signal to handsets like the iPhone and to tablets like the iPad and forthcoming Android Tablets.

In our January report our forecasts were dependent upon key things happening and a similarity emerging in the US to the way in which ISDB-T proliferated in Japan. Given that device availability may be 2 quarters behind our initial expectations, that suggests that as long as MCV sticks to its rollout plan, there could be a rapid ramp up during 2011 to ten million devices or so, and by 2013 ATSC M/H handsets shipped could outstrip iPhones.

Other analysts are more conservative, believing that the existence of WiFi delivered video content to handsets, which is rapidly rising in the US on the back of broadcaster and pay TV iPhone and Android Apps, will slow that whole process down and cite numbers more like 30 million by 2014. Our view is that this under-estimates the market potential and that WiFi or 3G delivered VoD is not an alternative to linear TV, but leads to different content which will develop in parallel. Just because you have an iPhone and Apple is telling you to buy TV series for $1 a time, doesn't mean that you can't go out, buy an ATSC M/H dongle and stream content to your Apple device over WiFi for free.

What needs to happen next is for a major device, probably a top of the line LG Android smart phone, to be offered with ATSC from a major operator like AT&T. Now that the AT&T and Verizon Me-

diaFLO TV efforts are moribund, there is less reason than even for the major cellcos to hold back, especially if the phones come out at the same price with ATSC M/H as without. This is at least likely in the case of LG devices, at least for a while. The bill of materials to add the mobile variant of ATSC to a phone, is around $10 in high volumes, which potentially LG might choose to swallow because of the prospect of long term technology royalties from this market.

In fact there must be some temptation for AT&T, once it loses its exclusive on the iPhone, to embrace Mobile DTV ahead of the pack of other operators in order to replace its iPhone exclusive appeal. The iPhone has been responsible for almost all AT&T Mobility customer growth during the past two years and it will need multiple initiatives to replace it, once gone.

There remains a lot of work to be done to successfully bring mobile TV to the US, but now it could finally happen

There remains a lot of work to be done in bringing a successful mobile TV strategy to the US. The system needs to become interactive, and the natural return path for advertising enquiry is the cellular network, and for that this group needs a sign up from at least one major cellular network. One business model that has been suggested to tie in the cellular operators is to offer the same content in parallel in VoD, as a paid catch up service to TV, and that this would drive data revenues too, but has not been pursued so far.

The interim Co-General Managers for MCV will be Erik Moreno from Fox and Salil Dalvi from NBC, with Moreno coming from SVP of Corporate Development for Fox and Dalvi from SVP of Mobile Platform Development at NBC.

Key Issue

TiVo shows it is still cutting OTT deals in Europe, as US revenues fall

TiVo announced its results and once again the pessimists among us could point to an ailing failing business, destined to fall apart if it does not win its legal action against Dish and EchoStar, while the optimists (which includes us) can see only upside.

The raw numbers are not so encouraging with quarterly revenue down to $50.8 million compared to $57 million a year ago and a net loss of $20.6 million compared to a loss last time of $6.4 million. But the company still has $227 million in cash and in short term investments, and although year to date over nine months it burned through $38 million in running its business, it cut that substantially by making $16 million on its investments. It could continue in that vein for nine years before running out of money.

Going forward TiVo expects to lose $32 million on revenues of $40 million to $42 million in the final fourth quarter.

TiVo also added yet another European operator deal last week, with Canal Digital, to go with its Virgin Media and Ono deals in the UK and Spain. These are hybrid pay TV/OTT services which rely on the key skills where TiVo has a lead, not just DVR (where it does lead) but also cloud based search and the creation of EPGs on the fly, which are combined into multiple services in the cloud.

CEO Tom Rogers talked through his strategy which is basically to offer TiVo in the US for less up front and more per month, taking fees from $13 to close to $20 and virtually giving the hardware away. This creates bigger up front losses, but it is a formula that leads to more subscribers long term he says. This plan will take $10 million off his cash in the fourth quarter, and has only just been fully market tested.

TiVo will follow a strategy of charging more each month and less up front, and pursuing more European license deals

Rogers said, "Additionally, last week we announced yet another distribution deal to deploy the TiVo solution in Europe with Canal Digital, the largest satellite operator in Scandinavia. This is a very important deal, not only because it brings TiVo into a sizeable and attractive international market, but because it gives us a foundational international satellite platform which can be a basis for extending TiVo to other satellite operators -- a significant asset given that direct broadcast satellite remains the dominant medium for provision of pay television service outside the US. This deal will take advantage of some valuable development work we have been doing with Conax under the deal we announced with them last year and is a perfect example of how we can leverage relationships with conditional access and third party hardware vendors, to secure additional distribution deals." He's not strictly correct in that Viasat is the slightly larger of the two major Scandinavian pay TV operators, although they are neck and neck.

At Faultline we don't expect TiVo to be profitable for some time, but win or lose in the long standing patent battle with Dish, the company has been enervated with a new way forward, acquiring new European license and service revenues. So far it is by far the most prominent single technology provider on the European Pay TV Over the Top business. And of course if it wins its patent battle with EchoStar (it is undergoing an En Banc review of the case where it won contempt of court penalties and its patents are still being challenged by Dish), then it can immediately license a dozen new pay TV providers for basic DVR technology.

Key Issues

Dynamically controlling DSL lines could double throughput for IPTV

While we have been talking about Phantom DSL for the past few weeks, wading through our archives and listening to some DSL aficionados at Airties, where we visited this week, we were reminded of Dynamic Spectrum Management (DSM), which back in 2006 was the great white hope for DSL.

The principle behind DSM is the avoidance of crosstalk. In most wired communications this is not a problem, but when a telco takes lines out of an exchange, it automatically bundles them up for easy maintenance and with no shielding on the wires this leads to crosstalk – sideways interference from line to line.

Israeli telecommunications equipment vendor ECI Telecom has had a program in place since 2006 and even got government money to research the subject and quoted us chapter and verse from John Cioffi, at the time Professor of Engineering at Stanford University, and known as the Father (virtually the inventor) of ADSL and also acknowledged as one of the inventors of OFDM.

Now Cioffi working at Assia has just landed a $20.8 million funding round to pursue DSM

DSM uses four key concepts which are channel identification, spectrum balancing, vectored transmission and multi-user detection. The idea is to decide which spectrum to use on adjacent lines to limit interference within each twisted pair binder and this requires individual line management. Back in 2006 they were talking about rates of 45 Mbps at distances of over 1,500 feet from an exchange, and a doubling of the speed of any DSL over long-distances, making services possible on 12,000 foot loops.

Now Cioffi is working at US firm Assia just a few weeks ago landed a $20.8 million investment round with cash from Telefonica, AT&T, and Sandalwood Partners to go with previous investors Mingly China Growth Fund, SFR Development, Sofinnova Partners, Stanford University, Swisscom Ventures, and T-Ventures.

What Assia promises is that (eventually) it can get DSL to 100 Mbps over existing phone lines. It does this by interposing servers called element management systems which collect operations and maintenance data on DSL lines on demand. Using this data it can automate DSL service optimization on a per-line basis. Its handful of customers claim dramatic speed and reach improvements, without ever changing a DSL line card. Assia is already working with AT&T in the US to ensure its DSL line speeds.

So all is not doom and gloom for DSL, and it doesn't need to wait about 3 years for phantom DSL and other technologies to become standards and find their way into chips. This approach can work, and is working, now.

It can bring these benefits to 20 million DSL lines from just 4 servers, hardly any cost at all

In October Assia launched Expresse 2.1, an update on earlier versions of its DSM management system which claims it can cut problems in a DSL network by 30% to 60% and offer a 40% increase in speed and service reach. It reckons that this system can serve 20 million DSL lines from as few as 4 servers, and brings with it automatic line repair, plus the optimization of all network lines. When it is working with VDSL2, the company says that it can already support downstream data speeds up to 200 Mbps and can even manage bonded lines. Of course that's presuming that you were close enough for VDSL2 to work in the first place, at its stated rate of around 100 mbps, which would be some 1,200 feet from a DSLAM.

The company also offers a Power Management module which it says can save up to $500,000 a year in energy costs over a 1 million line network, with no performance penalties.

Of course the upshot of all this is that for the cost of a few servers and some software and a bit of handholding, plus some procedural changes, a telco can prolong its investment in current technology as the same time as including far more "reach" customers, who were previously below the distance threshold for broadband, but also do the same for IPTV customers. Often telcos will only provide IPTV to customers which can get a 10 Mbps throughput on their broadband line, or higher. If such techniques double the speed of the DSL lines, then very likely twice as many are within reach of IPTV, with all the ARPU implications that brings. No wonder these operators were keen to put over $20 million into the pot.

Opinion

Airties merges WiFi and IPTV, accelerates rush to home gateways

There is always more than one way to solve a problem. This can be demonstrated in no better way than the logic that the Airties Wireless Networks management went through when they decided to boot strap a technology business in Turkey.

They could have raised money in the US, but they would need a lot of it, and then they would need to fight it out in a tough market against established names where all telcos had already made their vendor choices. Or they might go to Turkey, where each of them had been

born, and start up in a market where technology businesses were alien, and no investment money was available. Both places, Istanbul and California, offered them a good labor market, sea and sunshine.

Naturally they chose the latter and now five years later have emerged as a front runner not only in advanced WiFi systems, but have now entered the IPTV set top market on the back of a deal with Turk Telecom ISP subsidiary TTNet announced this week.

The problem of how to raise the money was solved by bootstrapping the business themselves with cash earned from their silicon valley days, plus a little help from a few local angel investors.

With stints designing chips at National Semiconductor, Analog Devices and writing software at Cisco, the founders were both equipped with some cash, but also with some considerable technical expertise. This all happened back in in 2004, and at Faultline we came across the company a year later in 2005, and have always known that the company knew a thing or two about the WiFi business.

Where else would you find a big telco that hasn't launched IPTV yet?

But one of the benefits for Bülent Çelebi and co-founders , is that he has managed to turn back time in his now native Turkey and build a solid relationship with the local tier 1 incumbent which has 6 million DSL lines and which is talking aggressively about upgrading its IPTV capability, by installing ADSL2+ lines and putting DSLAMS at the curb. Already TTNet reckons it can take on DigitTurk and D-Smart, the two dominant DTH vendors, at the 3 million homes which can already get 10 Mbps or better DSL at 81 cities in Turkey.

For those who have never been to Istanbul, the largest City in Turkey, it sits astride the Bosphorus, a sea strait which links the Black Sea with the Sea of Marmara, connected in turn by the Dardanelles to the Aegean Sea, part of the Mediterranean. It is one of the busiest waterways you could wish to see, reminiscent of Hong Kong in terms of sea traffic, over which 2 million inhabitants a day cross to what is the "other side of town" from the living side of the City to the working side. Interestingly this means a step from Asia to Europe, and there are even a couple of immensely impressive bridges that will let you drive the same journey.

Perhaps it is this East meets west mentality which helps Airties stay at the leading edge of technology, or perhaps it's the seething 12.5 million city inhabitants (17 million in the wider metropolitan area), each with their business and personal broadband needs, which made Istanbul the right place to start the business. To visit it feels like a

1970s version of Paris, but moved to a hotter climate and with more people and more traffic.

But it has a classical Eastern European business shape. The government owned incumbents like TTNet still have 90% market shares, not because the markets remain distorted, but because fair competition is a new concept and it's taking a while to fund and believe in rivals.

There are few places like this remaining in Europe, where a system can be designed for IPTV, for an incumbent both large enough and sophisticated enough, and yet who has not yet taken the plunge into IPTV.

Most European capitals have not one, but often two or three IPTV incumbents, which is why there is little opportunity to do what Airties has done, test new ideas and shift business models from WiFi home gateways to IPTV set tops and on to full a DLNA Media Gateway product, which it also launched this week, which is one of the most advanced such devices anywhere.

"So far IPTV is only 20% of our business, next year it will be 50%"

And yet the culture here, 97% Muslim (Islam), with a conservative Government, which has only just banned public smoking and only just allowed foreigners to have ownership of property, is perhaps off-putting enough to have stopped just any old European set top specialist waltzing in and stealing the incumbent business. At the rate at which Turkey is westernizing, this will not be long for too long, and Airties is probably just in time with its bid for the IPTV market.

"So far IPTV is just 20% of our total revenue, but by this time next year it will be over 50%," says Bülent Çelebi, CEO of Airties.

Now we can hear the collective intake of breath and shaking of heads, from all over Europe, especially from set top makers everywhere, but these guys are clever and they genuinely do have a shot. And while they are not geniuses or head and shoulders above say the technical guys at Celeno or Pace or Motorola or Amino, and they are Johnny come Lately's to the IPTV business, they are at the leading edge of what will be a big shake out. The home gateway and the set top markets are merging, and may also absorbing home media storage devices too, to become either one device network or certainly a single homogenous network, and Airties is out of the starting block as one of the first runners.

Can we imagine anyone from the set top business incorporating advanced video wireless capabilities? Well yes, but not easily, because

video over WiFi is not easy. Ruckus was the first business to ship devices in Europe which would reliably carry an SD video signal around a home. To do this it needed to offer multiple MIMO antennas and use beamforming, but also it used packet resends, all done outside of the main WiFi chip and the result costing quite a lot of money. Later Ruckus introduced a HD version of this and took it back to the US, where HD was mandated on all pay TV operator RFPs.

But none of the main set top makers included anything similar in their device back then, and Pace is perhaps the only set top vendor far sighted enough and with enough sway at operators, to begin to push that idea. But then again Pace is the biggest set top vendor in the world, so you'd expect that. And we're sure there will be an unholy alliance between all these elements – set top and home gateway, at the other major set top firms – Technicolor, Motorola and of course Cisco.

This is why Celeno has kicked up so much fuss, it promises to let other set top makers enter the media gateway business

This is perhaps why so many major operators have been so keen on Celeno, the Israeli start-up, which says that it can do all of what Airties is doing, but all on software which runs on its own chip. That type of capability means that set top makers could choose to leave all of the hard design thinking to Celeno and plug in a reliable tested device which takes care of the networking side of things. But so far Celeno is in early days and while it has signed China Telecom and Liberty Global, it has yet to deliver anything through them.

What both Celeno and Airties are doing is sending HD video over WiFi without packet loss – comfortably. For years we have been saying that this is tough to do, and it is, but while we have all been looking at WirelessHD, 60 GHz WiGig, and Amimon's WHDI, common or garden variety WiFi has been getting better and better.

The tricks Airties uses are similar to Celeno's. You take a 2 x 2 or higher MIMO version of a WiFi 802.11N chip off the shelf (from Broadcom) and you write firmware which allows it to dynamically sniff each of the radio channels in 5GHz and decide which of the 22 available will best allow the next set of packets you are planning to send to reach their destination unhampered by interference. And you repeat this logic several times each second and achieve a throughput of some 300Mbps. You can also carry out predictive calculations to check that the channel is clear enough to ensure the send, and identify video packets and put them in a Quality of Service stream.

The router starts by using the clearest available channel when it first comes up. From that point on, all other channels are periodically sam-

pled for quality. The information gathered on the other channels helps decide which channel to switch to when the channel currently being used can no longer support real-time video transmission. Airties also has its own mesh design which helps it route traffic around concrete walls rather than trying to go through them.

Whereas the Celeno system makes it clear that it doesn't care what kind of client it is speaking to, which means that it can slot into existing set ups, Airties makes a feature out of supplying the entire network, so that each node comes from Airties and this makes it easier to organize packet resends and calculate if they are worthwhile sending. The technology was shown this week supporting 12 TV screens with separate streams, all of them perfect in a combination of fixed bit IPTV delivery and adaptive streaming from the internet.

"You will still need WiFi in the home even if WirelessHD takes off, and it will need to be able to carry video"

Certainly hard wired systems like MoCA and other "no new wires" technologies such as G.hn will have their place. There will certainly be a marriage between HomePlug AV and WiFi which will potentially use the power system in a home as a backbone and WiFi to handle the final step. There will be 60 GHz single room technologies too, both WirelessHD and WiGig. But we can't have all of that tomorrow, and anyway, any such system will be tightly integrated between set tops or Blu-ray players and screens. You will still need WiFi in the home to send video files in order to incorporate portable devices.

And as Airties points out, it's software layers are independent of the PHY you use to send traffic, so it can adapt to each of these technologies using the same networking firmware.

The three main news points that Airties made this week was a set top and home gateway deal with TTNet, the arrival of a new wireless media gateway product based on the Intel CE 4200 chip, which it says will massively reduce the cost of multi room DVRs and the fact that it is setting up shop in the UK next.

AirTies says that it can offer any kind of hybrid set top and home gateway, whether that is pure IPTV with over the internet adaptive streaming delivery, which it has made for TTNet, or for cable and satellite operators, and it demonstrated the DLNA nature of the home network by moving content between a PS3, a hard disk drive, a Blu-ray player and both Sony and Samsung internet connected TVs. It also showed off its Air 4420 video bridge.

This simple little device just uses all that firmware to replace wires and will come to market in the UK at the £80 plus mark for a pair,

rivaling HomePlug pricing. It allows high-definition video to be distributed across the home wirelessly and it will form one of the main UK product launches, as well as being part of the TTNet deal and is also brand new.

A disproportionate amount of time talk to Airties is spent discussing the fact that consumers need to be able to install this kind of equipment themselves and that it needs to be exceptionally simple. One idea that Airties has pinched from the original HomePlug designs, is to simply push a big red button on a wireless device, and then go to the other device and push the same red button and the two would then begin talking to one another and that's just how this video bridge works. They take 90 seconds to swap encryption keys, check what devices they are attached to, and load up on any other software they will need for the two to converse. And then they can send video to one another. Could my granny set this up without help? No, because Granny won't even open the box without help, in case she loses half the bits and pieces, but her helpful 10 year old Grandson will have no problems with it.

Airties has a new Intel CE 4200 based Home Media Gateway due out in Q1 2011

The new home media gateway will not come out until next quarter at best and even then the first version will only be for IPTV but it might just as easily be built in DVB-T, DVB-C or DVB-S versions and there are plans to offer a DVB-T hybrid in the UK as that opens for business.

It's capable of working with up to 8 tuners and works by reducing all tuned programming into MPEG transport streams and encapsulating them as IP traffic. It can then send them to as many as three further thin client IP-only set-top-boxes for viewing.

The big cost reduction for pay TV operators is that this does away with the MoCA or Ethernet wiring, which can cost a lot to deploy. MoCA talks about being no new wires, but all multi-room DVR installations imply wires where none have been before.

The very first DTCP-IP multiroom DVR came out of DirecTV in the US and it has been a smash hit and this uses the same technology – the conditional access in the gateway decrypts commercial content, and then re-encrypts it using something called an elliptic curve digital signature. DTCP-IP is a technique for allowing the thin client set top and the media gateway to openly swap keys in a WiFi environment without worrying about having these keys intercepted and deciphered. But it is seen very much as the right way to go by the 24 or so major CE companies and partner which make up the DNLA leader-

ship, and creates a protected home domain of devices. There are many of these planned and DLNA says that it has certified over 5,000 home based device models for DLNA interworking, but none of these have this DTCP-IP already built in says Airties.

Another key function for the wireless gateway is that it brings the internet to connected TVs or other devices. One of the reasons that Airties wants to launch next in the UK is because of the arrival of YouView, once known as Canvas. The first generation of devices for this are already designed and not one of them has WiFi in it, we are reliably told. This is because common or garden WiFi loses lots of packets and video can break up when it is sent this way, so YouView set tops and DVRs will all need new wiring installed. But using the Airties 4420 Air Bridge this can be avoided and so Airties will sell it via UK retailers and hopes to position it side by side with YouView.

Another key function of the wireless gateway is that it brings the internet to those TVs designed to be connected TVs

One of the reasons that Airties chose to use the Intel CE 4200, was because of the tremendous amount of processing that is going on, not just in DLNA format conversions, but also in its own algorithms for selecting safe WiFi channels and encapsulating DVB protocols. There's a lot going on in this set up and the idea is that the consumer never really has to understand or wait for any of it. The Media Gateway can manages 8 streams as we said, because more and more home streams will be needed – one child using an iPad, another watching TV on their laptop, plus two adults watching two TVs, both of which are also recording a program.

While the rival Celeno chipset is supposed to use a complex ARM 9 core to manage all its complex WiFi channel management, it would take one of the new dual-core 1.5 GHz chips, delivering 3 GHz of processing cycles, to manage everything that the Atom CE 4200 delivers on. So how will companies like Broadcom, which have long been the favorite in many of these devices – DVD players, set tops, home gateways, WiFi routers – cope with this increased processing requirement. It uses the old MIPs cores in its product and is more familiar with 400 MHz than multi GHz, so it has some way to go, to line itself up against Intel in this space. We're sure it will manage this, but it hasn't addressed it as yet. Another thing that using the DTCP-IP protocol gives you is the ability to use any old disk drives with commercial programming, and the system was demonstrated with a simple, cheap USB plug in hard drive.

The Airties journey may owe it's antecedents to Silicon Valley and California, but right now its impact will next be felt in Europe, coming from the unfamiliar direction of the East.

Tablets, Slates and Pads

Palm to copy Streak, Apple planning 'worldpad'?

So far, there is far more excitement in the tablet segment than choice of devices, but rumors about new products for early 2011 mount up. Palm is expected to follow Dell into the five-inch tablet/phone hybrid space, and even Apple, while refusing to consider a smaller screen format than its current iPad, may still update the product with a slimmer case and dual-mode GSM/CDMA support.

According to the GoRumors blog, HP/Palm is working on a five-inch device – like the Dell Streak, somewhere between an outsized handset and a mobile tablet. This could be shown off at the Consumer Electronics Show in January and launched officially in February, trying to create a differentiated design to showcase Palm's cloud-oriented software platform, webOS 2.0.

The device is codenamed Mansion (following Palm Pre's codename of Castle), and will be touchscreen-only, with an 800 x 480 display but no physical keyboard – unusual for a product that is likely to tap into the enterprise heritage of its parents. And there are serious doubts over the five-inch size – the Dell Streak has not seen strong sales and the firm's mobile chief, Ron Garriques, resigned last week.

Five inch tablet products really have not yet gone down well with consumers

Over at Apple, which has been scathing about smaller tablets, notably the popular seven-inch form factor, the Taiwanese manufacturing ecosystem whispers that the iPad 2 is already on the horizon. Local newspaper DigiTimes says Apple has chosen its suppliers, including circuit board makers Ibiden, Tripod Technology and TTM Technologies, and is gearing up for an April release.

This is not expected to mark a major iPad departure, but a tweaking of the existing product. It may well include CDMA and GSM support, to create a 'worldpad', which would give Qualcomm a slot in the CDMA modem, or possibly open iPad to the chip designer's Gobi platform, which provides multimode CDMA/GSM support and is used in many notebooks.

Another observer with a crystal ball is Brian Blair of Wedge Partners, who told DigitalDaily Apple was planning to build 48 million iPads in 2011, and might use a slimline casing "essentially made from one piece of metal with no pins needed" which would require a new manufacturing process from current or new suppliers.

One of the constraints on the tablet boom could be shortage of com-

ponents, especially advanced touchscreens – a factor that has hit many smartphones recently. Even Samsung Display, currently dominant in AMOLED screens (and the only manufacturer of Super AMOLED) cannot produce enough displays for the needs of its sister firm Samsung Mobile. The first Galaxy Tab tablet does not sport the super-bright technology, but it will soon, if the display maker's showing at a recent conference is anything to go by.

Samsung Mobile Display (SMD) was showing off a wide variety of AMOLEDs at the FPD International event in Makuhari, Japan this month, as it prepares to go live with its new manufacturing facility for this technology, in mid-2011. Its demonstrations included a high quality seven-inch AMOLED for the next generation Tab, as well as prototypes of future AMOLED options such as transparent, flexible and printed displays.

Tablets, Slates and Pads

Acer unveils five touch devices and a store

Acer announced a series of touch-oriented devices this week, as well as an accompanying cloud media offering, recognizing that much of the hoped-for growth in tablets will be driven by integrated services. The firm is not taking sides in the debates about tablet formats, and is covering all its bases, unveiling Android devices in 7-inch and 10-inch varieties (and a smartphone), a 10-inch Windows slate, plus a dual-screen Windows notebook with touch display.

All the products will ship early next year, with the Windows slate coming first, in February, followed by the other models in April. The most innovative is the Iconia Touchbook, which follows the Toshiba Libretto in offering a two-screen laptop, with a touch display in place of a physical keyboard.

Acer now needs to win a similar market share in tablets, to make up for the netbook sales it will lose

Amid all the discussions of whether netbooks, tablets, cloudbooks or other form factors will win out, CEO Gianfranco Lanci believes more options will emerge, rather than the market converging around just one or two. That is because of the increasing variety of uses for mobile data and the shift from using computers for content creation to content consumption.

However, it seems clear that tablets will eat into the market for netbooks, a sector where Acer has been powerful. Research from IDC forecasts that netbooks sales will fall by 2% this year, and will shrink more quickly from 2011. Acer's challenge now is to compensate by gaining similar share in tablets or other new form factors, but this will

be tough. Although it has released some attractive and well regarded Android smartphones, its brand is associated with PCs rather than mobile products, while most of the tablet headlines are going to the handset makers.

Another design that is proving popular among PC makers – though not making major waves among consumers – is the five-inch mini-tablet, which sits between a handset and tablet. The Dell Streak led the way and Hewlett-Packard is expected to announce a similar device from its Palm stable. Acer said its new product, which actually measures 4.8-inches, will have "the soul of a tablet" combined with the capabilities of a smartphone (such as portability and voice). Features include support for Javascript and Flash, and a fast browser that does not require web pages to be resized or adjusted.

And of course Acer has launched yet another App Store—what else?

And of course, no mobile device launch is complete without an app store and, with the emergence of cloud-focused tablets, a cloud service. Acer opened the Alive store, a single point to buy apps for netbooks, PCs, smartphones and tablets running Android or Windows. It will be available first in the UK and Italy before year end and will then be rolled out widely in the first quarter of next year.

The main difference from most mobile shopfronts is that purchases are stored in the cloud and can be accessed from any browser. This multi-platform activity is also supported by an option called cloud-fi, a cloud-based media sharing service that distributes content among any clear.fi devices. As for the Android tablets, the 10-inch model is powered by Nvidia's Tegra 2 processor and supports full 1080p HD resolution and HDMI output, plus front and rear cameras. The 7-inch version runs on the Qualcomm Snapdragon.

Triple and Quad Play

Cox adds cellular network in 3 territories, offers quad play bundles

In the US, initially just in three of its major territorial heartlands, Cox Communications, one of the larger US cable companies, has launched its own CDMA 2000 3G cellular network. Cox bought spectrum on its own in its cable territories when the UHF 700 MHz spectrum was auctioned off in 2008.

Cable TV operators are coming under increasing pressure to offer quad play bundles, offering TV, Broadband, VoIP fixed voice calls and new cellular services, in order to compete with AT&T and Verizon, the telcos in the US, which have strong cellular operations.

It's tough to imagine a cellular phone service which only operates in Hampton Roads Virginia, Omaha Nebraska and Orange County California, ever getting off the ground, but Cox continues to have an MVNO relationship with Sprint for the rest of the country and can no doubt roam through Sprint outside of those territories.

But this will be an interesting experiment in that Cox is a cableco moving into cellular, not the other way around. Many pricing plans which focus on four services for the price of three, or three for the price of two, have been designed to protect existing cellular revenues.

Homes typically spend more on cellular accounts than they do on TV services because sometimes they support four or more cellular phone users and while an individual ARPU (average revenue per user) for cellular might be $60 a month in the US, and a TV service is more like $130, the latter is for an entire household, and often the cellular end of things costs more overall.

Cablcos don't have to protect existing mobile revenue, but you wouldn't know it from this pricing

A cableco does not have to protect any profits in cellular and could offer very cheap cellular deals, rather than cheap TV deals, and perhaps overall be cheaper. Although as we can see below, this hasn't yet materialized yet at Cox. Most of the other major cable operators in the US have had a partnership deal with Sprint and then added a deal with Clearwire for 4G WiMAX services.

The two new charging ideas which Cox has come out with are what it calls MoneyBack Minutes and Free Usage Alerts and it has added these benefits to bundle benefits, free long distance calling and a choice of a single upgrade to one of the other three services – TV, Broadband or fixed voice.

MoneyBack Minutes is the process of giving you money back for cellular minutes not used at the rate of 5 cents a minute – amounting to up to $20 a month - a significant departure from the industry standard by which consumers lose unused minutes or carry them over from month-to-month.

Cox will also send a free text message to users when they approach their maximum number of monthly voice minutes or text messages, something that Europe has been lobbying to get operators to do for the past two years, to create a "zero bill shock" cellular environment. Cox is also offering a sign up bonus of a $200 prepaid Visa card.

Cox Wireless will also appear at the recently unveiled Cox Solutions Stores so there will be a localized retail presence. Smart phones on

offer with the network include the HTC Desire, Hero and Wildfire, the Motorola Milestone, the LG Axis, Samsung Messenger and Profile and some feature phones.

Cox will also offer a Universal Contact Manager to manage, backup and organize all contacts across multiple services in one place and Voice Mail to Text facilities on all of its phones. Cox is also offering 3 wireless broadband deals for PC dongles, one at 200 MB for $40 a month, one for 5GB at $70 a month and one for 5GB a month for customers who already have Cox broadband at $60 a month. These prices seem to us to be introductory and hardly look competitive, so it seems like it has focused on voice users for now.

Triple and Quad Play

Not enough Copper to wire up China so ZJF acquires Firecomms

Imagine how much copper it would take to wire up every residence in China. More copper than is available, according to China-based ZJF Group. That is why it has acquired Ireland-based Firecomms, which has transceivers for consumer plastic optical fiber (POF). Fiber transceivers are made from silicone, and there is enough of that to wire every residence in China.

ZJF Group guaranteed a €5 million ($6.7 million) investment in R&D and to increase the engineering team from 18 to 30 people over the next 12 months. The deal also gives Firecomms a better path for selling in China, which is already its biggest market, according to Firecomms CEO Declan O'Mahoney.

Connectivity from Silicone rather than Silicon

Xuping Zheng, chairman of the ZJF Group, said the acquisition is driven by the recent decision by various provincial governments to classify plastic optical fiber as a major construction focus in China. He pointed out the "green" benefits by saying, "Delivering this infrastructure with copper cables would result in over one million tons of CO2 emissions for China and would be impossible to implement as the demand for copper would far outweigh the world's supply."

China is already the largest manufacturer of plastic optical fiber and this is supposed to be the first acquisition of an Irish tech company by a Chinese company.

This first ran in the Rider Research publication The Online Reporter.

Triple and Quad Play

Verizon actually offering 150 Mbps throughout FiOS footprint

Verizon went one up on the cablecos this week by announcing download speeds of 150 Mbps and upload speeds of 35 Mbps over its fiber FiOS network. It said the speeds will be available by year-end to small businesses and most of the 12.5 million homes that the FiOS network passes, mostly in the Northeast, Texas and California. Unfortunately that's not to most of the US' 110 million or so homes. Verizon VP of product management Eric Bruno called it the fastest broadband in the US and said it "establishes a new benchmark for high-speed Internet in America, and paves the way for a flurry of emerging bandwidth-intensive applications to reach mainstream status."

All of the mobile device makers are keen to extend their reach into the cloud

The download examples he gave were:
- A two-hour, SD movie, typically 1.5 GB, in less than 80 seconds.
- A two-hour HD movie, typically 5 GB, in four and a half minutes.
- Downloading 20 high-resolution photos, typically 100 MB, in less than five and a half seconds.
- Uploading the same number of photos took less than 23 seconds.

It's a bit pricey at $195 per month for consumers but is certain to come down in price as the rival cablecos ramp up their DOCSIS 3.0 speeds. The $195 a month requires a one-year service contract and a wire line voice service. Verizon's competitor Cablevision offers up to 101 Mbps for $100 per month and Comcast has a 105 Mbps plan.

The speed is faster than most consumers need now but Verizon listed the usual bandwidth-intensive applications that will need higher speeds such as streaming and downloading HD and 3D videos, real-time video conferencing and online data backup. In the future tele-medicine and live video monitoring will become major applications.

This first ran in the Rider Research publication The Online Reporter.

Web TV

UK video search pioneer finds place in future of TV search

There's little doubt that the best video search engine anywhere is blinkx, better even than the algorithms used to power Google Video or those in the specialist AOL company Truveo, but we've always wondered about its business model. Well one is emerging very clearly as Over The Top TV services begin to proliferate over Europe, and it could be a critical one for the development of TV.

UK based blinkx uses a combination of text search on words spoken in a video, along with words in any metadata found for web held video and the text around the video, which describes it. Additionally it can make statistical connections between these words, using technology from a sister company Autonomy, which creates low footprint profiles, which cluster together videos with similar content. That way when you look for soccer videos in the UK on a football web site, the search engine never thinks you are looking for American Football or Rugby Football, and it doesn't give you pictures of the ball itself, it just knows what you are after.

But smart as this is, all the blinkx site has tended to do is index online video, and it started with building traffic and then sold web traffic and finally sold its indexing services to video sites. But managing the key search role for either free to air or Pay TV services, which are delivered over the internet, will mean that blinkx can bring its 35 million hours of video indexing to any TV near you.

Blinkx has landed its first pay TV deal with Belgacom in Belgium

It has made a habit of only indexing professional online video and can sell any subset of that which a pay TV provider might wish to offer. It can also offer the technology purely for searching an operator's own content.

Last week blinkx put this new idea into practice with a deal with Amino, the UK based IPTV set top maker, when it said it would develop an integrated search, recommendation and personalization system for Amino's hybrid/OTT set-top boxes. Now it has done its first deal with a pay TV operator, Belgacom, on its IPTV service in Belgium. Blinkx will provide the power to search across Belgacom's entire entertainment platform and the deal is an exclusive one in Belgium and neighboring Luxembourg.

There is not much difference in the search capability offered by blinkx and that offered by US DVR specialist TiVo, which will power the new Virgin OTT service, expected any day now in the UK, on the TiVo Premiere set top. Searches can be sent from a set top to the cloud, and run on servers there, without the TV owner knowing or caring, and the results and streamed video sent directly from the content owner's site to a TV set.

Originally the Belgacom set tops were all provided by Nokia Siemens, but we imagine that it is perhaps those previously announced Amino set tops which will power this service going forwards, hence last week's announcement, but no-one has actually said that yet. The service can be viewed over broadband on handsets, tablets and PCs.

"We're thrilled to be working with Belgacom on this initiative," said Suranga Chandratillake, founder and CEO, blinkx. "We believe their plans for this entertainment platform are truly visionary and represent the future of the three-screen experience. Belgacom understands how audiences want to consume content and blinkx's unparalleled search and discovery functionality can help them deliver the best, most personalized user experience."

Belgacom has already built a number of new partnerships around its IPTV services, adding a deal with US online gaming company OnLive and one with Jinni, another a search and recommendation system and with in3Depth systems, a local specialist in 3D-gesture recognition.

Sounds like Belgium is going to be the place to watch TV, with gesture controlled TV sets which automatically find stuff you will like on the web and bring it to your TV, with what will feel like an in-built gaming console.

Web Video

Sony finally delivers on the old Qriocity shop in Europe

Don't know about you but I can hardly believe in a Sony online video service any more. It says this week that it has launched Qriocity in the UK, France, Germany, Italy and Spain, but we're not so sure this is going to make any difference to Sony.

We can remember when it launched against iTunes, with proprietary formats, identical software and called it Sony Connect. Then there's the PlayStation Network – is this the same thing as Qriocity? Does membership of one allow you into the other? If so is it with the same password? Can you watch Qriocity movies on PS3s (yes you can)? And in the past for Sony there were multiple attempts at creating such a paid network, initially in Japan, and the results just faded away. Let's hope it has the political will to keep this one afloat, because in the past Sony has just not understood that it is services which sell devices.

Back in 2005 was the first time we saw Sony saying it was going this route, but only in Japan, constantly talking about competing with iTunes. It has been uniquely placed to offer a film service and it has many of the perfect video devices in the Bravia TV range, its connected Blu-ray set tops, the PS3 and the PSP, not to mention PCs and Sony Ericsson phones. And of course it happens to have control of around 8000 major motion pictures. It's been execution however that has slowed Sony down, a combination of the right hand specifically not being allowed to know what the left is doing and 5 or 6 technology segments working to the detriment of one another rather than together. Do

you remember the Sony One campaign? It was designed to convince the company it was one, not 6 companies. It never convinced itself, never mind us.

The first service came out of its own Japanese ISP So-net, under the brand of Portable TV. It used the H.264 codec for the first time on the PSP and issued a firmware upgrade back then and it also used its own Atrac3 for the audio codec just to make sure no other devices could muscle in. The Atrac3 part of it has long gone, but if it takes Sony 5 years to get anything half right, it will never catch up with Apple (or Netflix), which has entered a market and achieved 70% dominance before 5 years are up. Also back then it was video downloading, not streaming and at least it hasn't made that mistake, or has it? We have no problems with the actual service, and now that Sony has managed to promulgate it across multiple device types (finally, except what about phones? Not yet) – which makes us only doubt Sony's ability to market it.

Watching Qriocity come to life has been like watching an ocean going tanker try a three point turn in the high street, but Sony may finally be in a place where it needs to be. It has films from Twentieth Century Fox, Lionsgate, MGM, Paramount, Sony Pictures, Starz Digital Media, Disney, NBC Universal and Warner Brothers, as well as from local studios. But you can't help thinking that the tanker still hasn't completely turned and the name Qriocity is not yet a brand in its own right and appears to be a weak word to try to build one around.

Watching Qriocity come to life has been like watching an ocean going tanker three point turn in the high street

Our biggest concern is that the business model is an old one, after renting a film, consumers have 14 days to start watching their movie, and once playback is started, they have 48 hours to watch the film as many times as they like. Rental prices for SD content start from £2.49 (€2.99) for library content and £3.49 (€3.99) for new releases, while HD content start respectively from £3.49 (€3.99) and £4.49 (€4.99).

We're not even sure that rental has a place in this market any more. Rental applied to downloads because you had a copy of the film on your device which had to be subsequently deleted. Netflix in the US has just launched a $7.99 a month subscription service, and it has already proven to the market that this is the right way to go.

Qriocity is more expensive than going to the video store or joining LoveFilm (in Europe) or in the US, Netflix. But it is a streaming service who's charging mechanism is based on old, failed download pricing. This the same business model that failed at Movielink for the past ten years, why would it work now.

Let's hope Sony consistently puts marketing dollars behind its new baby and that it rapidly brings it into line with the more successful service models out there.

Consumer Electronics

Siano does its second chip for TV, first for HD, in Latin America

While it makes a lot of sense for radio chip designer Siano Mobile Silicon, to step outside of its tight Mobile TV niche in Latin America, and introduce a chip which supports full ISBB-T, it does start to say quite a bit about the company.

Siano initially established early on that it would work with multi-protocol chips, before it was a trend, and created chips which both tuned a signal and demodulated video in DVB-H, T-DMB, China's CMMB and ISDB-T in Japan.

Right now the across the board wins for the ISDB-T protocol throughout Latin America, in what is virtually becoming an economic miracle, with the Brazilian, Argentine and Chilean economies growing apace, while much off the world is in recession – makes ISDB-T hot.

Most companies in this business have headed straight for Latin America to get a piece of the economic miracle there

Most companies in and around devices and components for TV, pay TV and mobile TV are heading for Latin America to pick up on the new consumer wealth there. For instance Broadcom in August this year came out of its US centric shell and launched a series of chips to support ISDB-T set tops, HD converters and TV while US analog radio chip specialist Telegent came out with a hybrid TV chip for Latin America, offering both analog TV and ISDB-Tb 1Seg. UK supplier Mirics also launched an ISDB-Tb software module for tuner signals on a PC just a few weeks back.

Siano itself first launched an ISDB-T one-seg in April when it announced deals with Vivo, Claro and TIM Brazil, some of the top Brazilian cellcos, mostly in ZTE phones, which were pushed hard for viewing World Cup soccer this Summer.

One seg is one of 13 segments built into the ISDB-T signal, the others are used for an SD and a HD version of often the same channel and so Siano is now venturing into the HD video world. That's a first.

The architecture is likely to be somewhat different from a mobile TV chip. It has to watch and tune a far wider area of spectrum, a full 6 MHz, instead of just the 428 kHz of bandwidth which a single segment is in. The data throughput is far higher, implying a faster processing speed on the chip for the demodulation, which in turn implies more

electric power needed, but then again HDTVs don't run off batteries. Siano has already made chips which offer DVB-T, which is probably a similar workload, though the protocol is very different.

The new Siano chip is the SMS2270 aimed at TV sets, set tops PCs, and in-Car TVs and Siano claims that the signal is crystal clear even when a long way from the transmitter and using a poor quality antenna. ISDB-T DTV services already cover most of the populations in Brazil, Argentina, Chile, and will soon be embraced by other countries.

In keeping with its usual designs, this Siano chip is a multi-protocol chip also supporting the DVB-T format, which is deployed in Europe, Australia, and some places in the Middle East and Southeast Asia. This means that TV makers can use the same chip in designs for multiple continents.

ISDB-T already reaches most of the people in Brazil, Argentina and Chile

Even if this doesn't constitute a change in direction for Siano, in demonstrates perhaps a change of pace. Siano is getting increasingly confident of entering new markets, and the process of cutting yet another chip, with slightly differing protocols. The company first came on the scene in 2005 and venture capitalists who supported it will be preparing to get back some of the investment they have put in. While it was a pure play Mobile TV company the exit strategy may have been best supported by a sale of the company, but increasingly as its portfolio becomes broader this looks like an IPO as an exit, although we know the company is close to profitability, so there is unlikely to be a rush.

However something we are sure the senior management has considered, is the fact that technology companies achieve better values in US stock markets and now it has an ATSC M/H chip, the company will become pretty well known to US analysts throughout 2011, which would make a US IPO in early 2012 look relatively appealing.

Legalities

Innofidei fails to upset CMMB status quo with dubious legal claims

A legal battle over mobile TV technologies spilled out of China and into the US courts in October when Siano Mobile Silicon of Israel filed an action in the US District Court for Northern California, against the Innofidei CEO Tom Zhang and CTO Stanley Wang.

The dispute began in China when Innofidei began a smear campaign against Siano, frustrated that it has managed to snatch the majority market share in the growing CMMB mobile TV chip business there.

Our spies in China tell us that Innofidei was telling major customers, even China Mobile, that it was planning an intellectual property legal action against Siano, and that any handset vendor using the chips would be politically "disadvantaged."

Such a case raises many questions. How can a non-Chinese company defend itself against claims made in China and whether or not such campaigns would have any effect in the market place. In China every company has to have a card carrying government member on its board, keeping an eye on the political correctness of the company under Chinese law. Get the wrong side of such a character and you can lose your license to carry out business.

Well the action in the US brought by Siano was firing a shot across the bows of its investors more than the company itself. Innofidei took $10 million from BlueRun Ventures in California in 2007 to fund R&D.

Although Innofidei is based in China it has investment from the US and some people there

Although Innofidei is headquartered in Beijing it has offices in Silicon Valley and although it claims to be the first company with a CMMB chip, the truth is that Sinao has trials working in 2006, and that Innofidei initially came to market with a two chip system, one tuner and a separate demodulator and only later in 2008 introduced a single chip version, reported at first as large and running too hot for phones. We're sure it has moved on since then but it's not ahead of the pack.

By contrast Siano dropped CMMB onto its existing 7mm x 7mm chip format that already supported lots of non-Chinese mobile TV systems – DVB-H, DVB-T, T-DMB, and ISDB-T. It has since moved into the ATSC M/H market in the US.

It's hard to know for sure, because neither company wants to talk to us about this right now, but it looks unlikely to us that this was anything other than a smear campaign and neither company is old enough to have many established defendable patents of their own, though they will have some applied for. But 5 years ago in China such campaigns, even when not based on fact often worked, but this is a tactic which has become overused and now local Chinese firms are wary of it.

This has been borne out with this month's new handset design wins at China Mobile, which specified CMMB for 12 new models.

Here the market was effectively carved up by the single buyer across a handful of handset manufacturers using CMMB chips from Siano, Innofidei and Shanghai firm Spreadtrum, which came into the market with a chip in May 2008.

It was this round of contract awards which Innofidei was targeting and which Siano was trying to defend. The results leave the market virtually unchanged. Innofidei has four design wins which found favor in this round at Lenovo and Yulong, while Spreadtrum, which also makes baseband TD-SCMDA chips, had wins at Hisense, New Telecom and T-Smart. The big names of ZTE and Huawei have both remained loyal to Siano and these have won placements for 5 separate devices at China Mobile.

The legal action, as we understand it, never actually emerged in China from Innofidei, and we suspect that the Siano filing in the US may well wither on the vine now that this award has been made, though it may stay on the books for a while to defend against subsequent China Mobile awards.

Right now shipments of devices with CMMB mobile TV chips in them are running at about 1 million a month, and Siano claims a majority market share. China Mobile in March carried out a major adjustment to how it went about pushing CMMB, and began including it in cheaper phones and reduced monthly services costs to around $1.50 a month for the paid portion of TV channels, a move which held up the market for 6 months.

Worth Noting

Deals, launches and products

It looks like **Vodafone** and **Telecom Italia Mobile** (TIM) have given up the ghost, and it was a really thin ghost at that, on mobile TV. The upstart **3 Italia** has gathered about 1 million paying customers and has begun creating much of its own content, but its two leading cellco rivals who each had partnership deals with **MediaSet**'s DVB-H network, are throwing in the towel, with Telecom Italia closing its service at the end of the year and Vodafone contractually due to continue into 2011, but unlikely to stay the course long term. 3 Italia has cornered the market and is the only European success story for DVB-H. Vodafone and TIM were reported as paying €14 million a year for infrastructure, but clearly are not losing enough subscribers to 3 Italia to warrant the continued investment. Neither of them subsidized handsets for DVB-H and even 3 Italia is said to be losing money on its investment, though initially it probably brought 3 about 500,000 new subs from the two leading operators.

Time Warner Cable has broken ranks with US cablecos and begun offering a cable package at the low end, which is called TV Essentials. It says that it's for video customers facing difficult choices during tough economic times. It will go into commercial trials in the next few weeks in the company's New York and Northeast Ohio divisions and more launches are planned for 2011. It will offer local channels from **ABC**, **CBS**, **Fox**, **NBC** and **PBS** plus 12 of the top 20 Nielsen-rated cable channels, plus a few other channels covering the major genres. It comes with two SD set-top choices one with music options and features like StartOver and LookBack . The new bottom rate is $50 a month, discounted to $40 in New York and $30 a month in Ohio.

LG subsidiary **Innotek** has taken Chinese DTMB terrestrial TV demodulators from AltoBeam, using the ATBM884x family, which it says has demonstrated exceptional receiving qualities under multi-path conditions.

UK radio chip specialist **Mirics** has partnered with Brazilian company **ArcSoft** with its FlexiTV software-based global TV receiver. ArcSoft will offer a receiver to view HD TV on PCs which have the Mirics FlexiTV combined with the ArcSoft TotalMedia 3.5 software and it will ship the combination to ODMs in the region.

TeleGeography says that IPTV reached 40.5 million homes by end of September, up 8% from the previous quarter and 37% from a year ago. The company counts 160 service providers in 74 countries. France remains in the lead with 24% of the total followed by the US (16%), China (16%), South Korea (8%), Japan (4%), Germany (3%) and Hong Kong (3%). Completing the top ten are Belgium, Spain and Taiwan, with each accounting for 2% of global subscribers.

US **Orb Networks** has just launched an internet TV set top shaped rather like a hockey puck which allows viewing of TV shows from **Hulu**, **Netflix** and others. For $99, the same price as **Apple** TV, which requires that you pay for the content. It needs special software called Orb Caster which runs on your PC and streams to your TV through the set top. It does however trump Google TV in that Hulu is available, as are the web site held videos of the major TV networks, and uses an iPhone or Android phone as a remote and has its own internet video search tool.

Jim Balsillie, one of the two CEOs at **Research In Motion** said this week that its PlayBook tablet will be three or four times faster than **Apple**'s iPad. That's an interesting criticism given that no-one has actually said that the iPad is slow. He also said that tablets weren't about Apps, but about web connectivity and laughed at the idea that a web site owner has to go away and write an App so that a phone can view a site. The Playbook is imminently available and will connect to broadband wireless through a paired BlackBerry device or Wi-Fi and shortly into its life will come with NFC touch and pay technology, but not from day one.

The **GSMA** says that a group of operators have been chosen to experiment with the development of an embedded SIM which can be remotely activated which will be used in new machine to machine (M2M) services in the future. The task force includes **AT&T**, **China Mobile**, **Deutsche Telekom**, **Orange**, **KT**, **NTT DoCoMo**, **SK Telecom**, **Telecom Italia**, **Telefónica**, **Verizon Wireless** and **Vodafone** – so all the great and the good. The group will work in cooperation with major SIM producers. The idea is to examine market requirements and offer up a technical solution including programmable SIM cards which allow remote activation. They will report by January 2011.

Netflix went ahead this week and did what its CEO Reed Hastings has been heavily hinting at, which is to launch in the US an online only video service, without any DVD rental element, for $7.99 a month. The company had said that if things went well in its Canadian launch it would bring the deal to the US and while some are suggesting that its pricing is a copy of the new Hulu Plus pricing, the truth is the other way around. Netflix had floated this price several months ago as a likely price which is why **Hulu** Plus finally settled on it. Netflix has also raised the price of its $9 a month deal to take a single DVD plus streaming, to $10 a month. In fact all of its price plans have increased if you sign up after January, probably a reflection of the Chapter XI bankruptcy which rival **Blockbuster** is going through.

Initially **Viacom** appeared to be letting Google TV owners see some of its shows, but the company has now moved to join the new trend in blocking Google TV's access to its web video. It joins many of the top US broadcasters in keeping its content off the new set top. Not sure anyone realizes this is a breach of Net Neutrality and Google can quickly imitate a different device if it chooses to. If you try to go to the Viacom site using Google TV, it just says that the web sites does not support this device, which is quite simply a fabrication.

US researcher **In-Stat** says that China's web TV market began in 2009 when it reached 2 million web enabled TV sets, but says it will exceed 15 million units by 2014.

NPD's **DisplaySearch** team says that LED-backlit LCD TV prices have fallen 44% over the past year to an average price of $1,106. Meanwhile traditional LCD TVs have also fallen 24% to $435. While prices for LED chips are falling steadily, the pricing dynamic for the LCD panels themselves is somewhat more complex. After the economic downturn, demand returned quicker than expected in 2009, and the supply chain was faced with product shortages during the second half of the year that fed rising prices for LCD TV panels into the first half of 2010. Since it takes about three months to move through the LCD TV supply chain, the rising panel prices led to slower average selling price declines at retail during the first half of 2010.

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