



Technology Brief...

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Cisco Gets Un-Maxed and Re-wired

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Cisco recently announced it is leaving the market for supplying WiMax radio equipment to service providers. Instead, it has reaffirmed its commitment to a market it dominates - high speed Internet backhaul. Is this a negative commentary on WiMax, or an admission by Cisco that it should not have been in this business?

Cisco discovered that the market for WiMax equipment hasn't materialized as quickly or in the high volumes it hoped it would, given the strong push from Intel, Sprint, and a number of international players. Indeed, even with its commitment to being a major supplier of radios, it found that other companies (e.g., Motorola, Alvarian) have had more success in supplying radio equipment than Cisco. Of course, Cisco is not alone in backing away from this market because it didn't achieve its goals. Nokia Siemens Networks made a similar move recently as well.

We believe that these defections do not signal the demise of WiMax, which will continue to exist and expand. However, its rollout will be slower than expected in North America where Clearwire continues its expansion. In many parts of the world, WiMax will become a major platform for offering Internet connectivity to end users. And we believe that WiMax will co-exist with the advancing roll-outs of LTE, servicing a different market and end user dynamic.

Cisco understands that its main opportunity is in the backhaul and network infrastructure equipment business. Cisco dominates this market. And the need to increase capacity of the existing broadband infrastructure is a prerequisite to giving users a high quality wireless experience (AT&T learned this lesson the hard way when its 3G network was "trashed" by the overwhelming increase in network traffic from iPhones).

Cisco recently announced its CSR-3 "Router on Steroids" targeted specifically at impacting this area. Although over-hyped leading up to its introduction, this massively expandable 100GB-core router is indeed significant to Cisco's business, and to a strong competitive posture in the marketplace. Massive backhaul upgrades are needed for not only current 3G networks but also for 4G (e.g., LTE, WiMax). And this need is universal and worldwide, representing a massive opportunity that Cisco hopes to take advantage of.

Overall we see both leaving WiMax and the CSR-3 as smart moves by Cisco. The

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high speed router business is a business it can dominate (and compete with rivals Juniper Networks, Huawei, etc.) far better than it can compete in the radio/cell business. It is also a better investment of its resources, complimenting its existing mainstream business rather than diverting from it like WiMax radios did. And the technology will ultimately roll downhill and be used within its corporate infrastructure business as well (something WiMax would not have done), allowing it to better leverage its investment.

This move is positive for users as well, since upgrades of backhaul are the only way to achieve the true promise of 4G wireless connectivity. It is the upgrade of the highway, not the exit and entrance ramps alone, that will determine how much congestion users will experience. And with latency and bandwidth improved, the users will get an overall better experience. Wireless carriers who do not make these improvements will suffer as users flock to those carriers that offer better overall experiences, rather than concentrate on “specsmanship” by stating raw network connection speeds, which are generally meaningless without knowing the overall network/backhaul capability.

Bottom Line: Cisco’s abandonment of the WiMax radio business and its re-focus on its backhaul business is a positive to both Cisco and the market in general. Without the massive Internet infrastructure its new router enables, the wireless experience for many users will simply be frustrating. Further, it will only be 2-3 years before many businesses will need to upgrade their own networks/backhaul to match that available on the increasingly utilized and mission-critical Internet.

Sybase and SAP – Weaving an Unwired Platform

Sybase recently partnered with SAP to enable an increasingly mobile workforce to access business-critical apps built on the SAP platform from a wide array of mobile devices. Indeed, with our research showing that smart phone users are increasing at a rate 4 times greater than notebook users (*J. Gold Associates, November 2008*), it is clear that SAP, whose history of providing compelling mobile apps has been mixed at best, needed to find a partner to help it expand its mobility offerings. This relationship benefits both SAP and Sybase but some organizations may find the current restrictions too limiting.

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Sybase has integrated its Unwired Platform with SAP’s core solutions. However, in its first release the functionality will be limited to custom designed SFA and Mobile Workflow for the SAP business Suite. The functionality is a subset of the entire SAP Business suite, with Sybase designing mobile equivalent functionality based on what made sense to port to a smartphone device. The push architecture allows data to be delivered to the user and not just retrieved. The result is an “always on” app with the user not having to worry about the availability of a connection. The “Thick Client” architecture with local storage allows true transparent synching and off-line use.

But there are a number of limitations. First version will work on iPhone and Windows Mobile only, although we expect Symbian and BlackBerry to be added in the short term. Further, the applications are “pre-packaged” solutions, although end users can build their own should they wish to get into the programming

interface of the Unwired Platform and the SAP system logic. There is no current thin client option, although we expect this capability to be quickly added as it is a key component of the Unwired Platform. Finally, modifications and enablement of customized SAP solutions will require working with NetWeaver as well as the Unwired Platform, since virtually all logic for SAP systems have been built with NetWeaver. The Unwired Platform can then be used to create and integrate the custom user screens with the back-end logic.

Overall, we see the alignment between Sybase and SAP as a strong positive for SAP users. Sybase provides a wide array of mobile enablement tools and technologies, and is a leader in the field. SAP has been weak in the mobility front and needed a credible partner to create a truly functional and compelling mobile application extension, and one that is built on an architecture that can be easily modified and extended to other SAP functions. Finally, with its vast experience, Sybase can advise SAP on what moves it needs to make to maximize its mobile capabilities for its installed base of users. However, this is not an exclusive partnership, as SAP has an existing mobile partnership with Syclo, Antenna and BlackBerry for other components of its complete business solutions (e.g., field force, dispatch).

Bottom Line: We see the paring of Sybase and SAP as a long term relationship that will provide advantage to the SAP installed base and further enhance Sybase as a leading provider of mobile solutions. End users will benefit by having an expanding array of SAP functions that can be extended to mobile devices. While the initial solution offerings are limited, we expect to see a rapid expansion of mobile components created by Sybase and offered to end users on an increasing array of device types.

Google's Nexus One: Qualcomm's Coming Out Party

Google announced its much anticipated Nexus One phone to a market that already knew what to expect. Indeed, the rumor mills had been going for weeks about this and that feature, how Google might sell the phone, what carriers would be involved, what apps it would include, etc. What Google released was an interesting, but not overly compelling device. Rumors of an iPhone killer were greatly exaggerated. What they offered was a competent phone with some very interesting feature like speech to text for texting and email, and Live Wallpapers and 3D photo albums. What seemed to be missing were multi-touch capability and enterprise features like direct Exchange connections via ActiveSync.

Coverage of the product release was overwhelming. But what the media and industry watchers failed to realize is that this was as much about what was powering the device as what the operating system was doing. Indeed, true speech to text has been a dream for years in portable devices, as has 3D graphics. The breakthrough that made this possible was not so much Google, who has had such capability for years on the PC. What made this work was the Qualcomm Snapdragon ARM-based processor with 1GHz processing speed and embedded graphics capability. What Google provided was an instantiation of its Android OS, which will continue to advance and move to other devices beyond

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the smart phone. But it also demonstrated that with the right processing capability inside, nearly miraculous things can happen and in a very small package. Of course, the PC world has done this for years, offering more powerful chip sets on a constant upgrade basis. But within a phone, especially one that is sleek and compelling, the ability to power the device for extended periods of times - sometimes as much as several days without a recharge - has largely limited the ability to put high processing power but low battery power chips inside. With more processing power than iPhones, BlackBerries and nearly every other smart phone currently on the market the Nexus One shows just what can be done with the right combination of processing and graphics power.

Qualcom, even though it remained a silent partner, had a great deal to do with bringing the Nexus One to market, as did HTC which designed the device. Other ARM core chips from TI, Freescale, Marvel, etc. can't come close to what's packed inside the Snapdragon. Of course, this is a temporary victory for Qualcom, as its competitors aren't sitting still and the traditional leapfrogging of chips will continue on an accelerated basis. But Qualcom has established a new benchmark in smart phone processing power, providing more horsepower than most PCs did 3 years ago in a package that fits in your hand and weighs but a few ounces while gently sipping power.

For those that may have been skeptical about why Intel was developing the Atom chip, and why NVIDIA was working on Ion for Atom and Tegra, it is clear that either the traditional PC processor companies have to meet this threat head on or lose overwhelming numbers of processor sales to the ARM licensees like Qualcom. After all, smart phone sales will far outnumber traditional PCs within a few years, not to mention all the other mobile devices coming to market in the near term.

Bottom Line: Qualcomm threw a great coming out party, even while Google did most of the work. And smart phones are only its first beach head. Mobile Internet Devices await. And with Android establishing itself on smart phones, it is inevitable we will see larger, more capable devices emerge from the core which the Nexus One has demonstrated.



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