

Changing the Game: Monthly Technology Briefs

May 2011

**New Wireless Standards to Support
Tablets and Smartphones**

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Wireless Connectivity to Support Tablets and Smartphones

With an increasing number of Smartphones and Tablets shifting to 'services' from clouds via the new generation of fast browsers, the requirement for broadband wireless services increases. There are two major standards beginning service and there is bound to be competition to capture marketshare. Often referred to as 4G, one originates from the telecommunication industry, while the other is an upgraded version of WiFi and comes from the IT industry. The challenge is that Smartphones and Tablets do not respect the traditional demarcation between cell phones and notebook PCs. Hence, users expect a single ubiquitous service as and when they want to use their devices.

The IT industry finds the thought of upgrading the existing WiFi standard to WiMax an easier proposition to understand, also an erroneous one as the two are very different. With Intel backing both, the chips with the inbuilt capability to power new devices will be introduced in a manner similar to WiFi. WiMax, on the other hand, requires utilities to invest in public base stations to make use of its longer range capabilities, though in-premise simpler base stations are also available for the home or business premises. There is a direct trade off between range of up to 50 kilometers, and speed up to 70 Mbits, which sees a more typical performance of 4-8Mbits in an urban area with reasonable coverage.

In the same way as the WiFi Alliance and IEEE 802.11 standard define WiFi, WiMax is the marketing name provided by the WiMax Forum that supports the IEEE 802.16 Wireless Network standard, with associated variants such as IEEE 802.16d for Fixed WiMax and IEEE 802.16e for Mobile WiMax. Though often called WiFi on steroids, WiMax differs substantially in its operating principles to give more reliable Quality of Service (QoS) for media and other more demanding services. WiMax uses connectionless, contention-based access control whereas WiFi is based on connection oriented access. WiMax uses a scheduling algorithm via a base station to guarantee service while WiFi allows end-to-end user communication, with little control over service levels delivered.

The Telecommunications industry continues to develop its 3G approach and, though it does not strictly conform to the original specification for 4G, its Long Term Evolution or LTE approach is usually referred to as 4G for marketing purposes. One of the key attractions is that LTE introduces to the telecom sector a flat, IP based network architecture. Hence, it meets up with several other key next generation technologies including the Next Generation Data Centre Alliance and the Next Generation Mobile Networks Alliance, which focus on delivering browser cloud services to a wide range of devices through Internet Protocol-based architectures.

LTE architecture can be delivered in a wide range of ways including different frequencies, and antenna types with up to 326.4 Mbits from the high end 4x4 antenna and 172.8 Mbits from the lower cost 2x2 antennas. Distances up to 100 kilometers are possible with little speed degradation, and most usefully leaving an LTE cell the transmission will gracefully hand over to an existing 3G cell. The Telecom industry believes it has a winning technology and a larger market place commitment. So WiMax will end up making LTE the winning format by 2013 when rollouts will have reached most countries.

However analysts wonder if it really is about technologies, and if WiFi will be easy enough to dislodge from its current dominant and growing position. So, the important questions to ask are what sort of market is emerging, how will it access services, who and how will connections be bought. Most of this boils down to the convergence of Smartphones, in terms of display size and features, with Tablets in terms of the choice of device, and going forward whether the principal buyer will also be the end-user. If so, then the format of selling/subsidizing the device with the connection subscription will favor the Telecom Industry and LTE.

A further point in favor of telecoms service providers and LTE winning concerns the extent to which many telecoms will succeed with their investment and entry into the cloud data center market. Apple has already provided that content is at least as important, if not more important, than the device. Against this is the installed base of mostly free WiFi hot points and the familiarity of their use at points in the day around social establishments. Either way, the high growth mobility will be supported in its growth with more choices, faster services, and competition.

The impact of this and other technologies is discussed in the [Capgemini CTO Blog](#).

Leading Company Results (Revenues)

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Q2	Apple ↑ 83% @ \$24.6bn		
Q1	Google ↑ 27% @ \$8.58bn	Yahoo ↓ 6% @ \$1.06bn	IBM ↑ 5% @ \$24.6bn
	Intel ↑ 25% @ \$12.9bn		

Movements by Industry Leaders

Cisco is acquiring newScale, a provider of tools for automating enterprise IT, to add its capabilities to the Cisco moves on clouds. **Cisco CEO John Chambers** launched a companywide mail to state that they needed to **deliver their 'ideas and capabilities' better** with an increased focus on video and four other areas at the core of their business; network routers and switches, business collaboration tools, cloud computing, and computer system architecture. One result is Cisco is to close their **Flip instant video** division and migrate support for existing customers. A new solution approach bundles Cisco products into **Cisco Safety and Security Solution for Intelligent Risk Management**. **Cisco TrustSec** update includes a new Identity Services Engine (ISE) to make real time monitoring of users and user devices part of active security policy management. www.cisco.com

Oracle will no longer develop any software to run on the **Intel Itanium chip**. **Oracle Linux Validated Configurations** for Oracle Database 11g, Oracle Real Application Clusters and Oracle Sun ZFS 7420 appliance are now available. **Oracle Enterprise Gateway 11g** provides access management and security controls for Fusion Middleware. Oracle Sun ZFS Storage Appliance is now integrated to Exadata Database Machine, Oracle Virtual Desktop Infrastructure and Oracle Scalable StorageTek tape libraries. **Oracle and Fujitsu SPARC Enterprise M3000 Server** is a joint development using the SPARC64 VII+ processor as an initial low entry model for a new series. www.oracle.com

HP has agreed upon a set of printing standards with Google that allow Google and HP Cloud Print services to interact and support each other. **HP Officejet 100 Mobile Printer** is an ultra-compact and lightweight unit in a case with a battery and the ability to be able to do 500 page prints before recharging. HP Information Management Suite has several upgrades; **Integrated Archive Platform (IAP)** is scaled up and supports VMware vSphere, **TRIM Enterprise Records Management** now integrates to IAP, and **Data Protection Platform** is now cheaper and integrated with HP StorageWorks P4000 system for snapshot recovery. **HP Application Transformation** is a new range of products and services that aim to simplify the task of examining the portfolio for rationalization and then updating. **HP EliteBooks 8560w and 8760w** add new mobile workstations complemented by the **HP Z210 range of new Xeon E3** quad-core processor conventional workstations. www.hp.com

Intel Solid State Drives (SSD) 320 range bring the old X25 range up to the technology and performance in the newer 510 range. **Intel Xeon processor** supports the new E7 high-end mission critical range aimed to compete with specialist RISC and UNIX based chips, and an low-end E3 range for entry-level servers. **Intel Atom Z670** provides a specialist chip for Tablets from the Oak Trail platform which is a new variant of the Atom chipset. Intel has reduced the size of **Flash Memory chips** to provide 8GB chips by their 20mm wafer process. www.intel.com

IBM Coremetrics Social provides large scale analysis of social media marketing programs and **IBM Unica Pivotal Veracity Email Optimization Suite** allows email links to be found between members of social platforms both are part of the new IBM Smarter Commerce Platform. IBM Smart Cloud Platform has been extended to include **Enterprise and Enterprise+ cloud hosting services** similar to Amazon Web Services capabilities. **IBM Cloud Standards Customer Council (CSCC)** has been established with 45 of its large customers to develop thoughts on what and how clouds such interoperate. **IBM Webphere Application Server 8 (WAS 8)** bundles together middleware capabilities for cloud and mobility with the traditional EAI and associated functions, and IBM claim that they will be adding more than 50 new products to run on WAS 8. www.ibm.com

Microsoft Bing has gained new social networking integrations and feeds. A new Yen1 billion joint investment **partnership with Toyota** will develop next generation Telematics. Microsoft has pre-announced that its **Dynamics ERP Suite** will be available as a cloud based service running on Microsoft Azure. **Windows Phone 7 Developers Tools Package** is announced and will include direct access to core system components to support imaginative new capabilities by developers. Microsoft have announced a **Partnership Ecosystem for the Media and Entertainment Industry** to develop shared services based on the Azure Cloud Platform. **Microsoft Office 365** is now available as a public beta download as a subscription service running on Microsoft Azure. www.microsoft.com

SAP and ePages are partnering to add the ePages online eCommerce package to the SAP Business-All-in-One cloud based services for Small and Medium Businesses (SMB). **SAP Transportation Manager has been upgraded** to comply with new rules and regulations and provide better integration with other logistic elements. www.sap.com

Google Commerce Search for online Retailers has been further extended in functionality and in speed. **Chrome Browser** now has the capability to check downloads for malicious code during the download and before completion. **Google Android has new features** including the ability to use the Google Apps Device Policy manager to locate or remotely change passwords, and Encrypt the data on Device option, and Google Apps Lookup access to find colleagues. **Google First quarter** results saw a massive 55% increase in operating costs against a 27% revenue rise to lead to missing quarterly targets. **Gmail 'wrong person' feature** and 'suggest more people' features aim to try to ensure the right people get the right mails by associating addresses and content. **Google YouTube** is to stop providing video hosting, a little known service that dates back from its beginnings. **Google Earth Builder** allows geo-spatial data from Google Earth and Maps to be created and stored as a cloud service. www.google.com

Apple MacBookOS 4.3.1 update covers issues found in iPad 2 as well as outstanding bugs on iPhones and iPad 1. www.apple.com

Amazon suffered severe service outages dropping its Elastic Compute Cloud (EC2) service in the US Eastern areas. www.amazon.com

Open Source Update

Mozilla Firefox 4 for Android and Nokia Maemo is now released together with FireFox Sync to provide synchronization of desktop and mobile browsing experiences. **Firefox 5** is now scheduled for release on June 21 as Mozilla continue to drive faster and more frequent upgrades. www.firefox.com

RedHat Project Ceylon claims to address 'issues with Java' and has been running in secret for the last two years at RedHat to provide 'augmentation' of Java and is stressed not to be a 'java killer'. www.redhat.com

SugarCRM is acquiring iExtensions, the provider of parts of the IBM Lotus Notes capabilities, and is now offering Sugar6 users native integration with Lotus Notes. www.sugarcrm.com

Asus has released the Android Honeycomb 3.0 source code stating that this is within Google's guidelines for the Android Open Source on a general public license. www.asus.com

MySQL 5.6 upgrade adds a wide range of new features in a new faster and more scalable version available for download from the master site at Oracle. www.oracle.com

Novell SUSE Linux Enterprise is now to be provided with support for a full 10 years instead of the current seven years. www.novell.com

Google have been fined for Linux Kernel Patent violation in a case which could have a big impact in terms of its inclusion of the code in most of its platforms including Android. www.google.com

Canonical Ubuntu 11.04 has new features aimed at the private cloud enterprise market and as a particular feature offers compatibility with Amazon EC2. www.ubuntu.com

VMware Cloud Foundry is a new open source Platform as a Service (PaaS) to support developers building new generation shared public apps and then allow the services to be maintained and run from the new platform. www.vmware.com

Standards Watch

Java Community Process (JCP) has approved the Java Specification Request (JSR) for the next release of Java Platform Enterprise Edition 7, JSR 342 together with associated JSR 340, 341, 343 and 344. <http://jcp.org>

IEEE 802.16m known as WiMax 2 update for faster speeds up to 1 Gbit for fixed services and 100Mbps for mobile has now been ratified. **IEEE P2302 Guide for Cloud Portability and Interoperability Profiles**, and **IEEE P2302 Standard for Cloud Interoperability and Federation** introduce two important new moves by a key body to help drive the adoption of clouds for new business models. www.ieee.org

European Union RFID tags guidelines offer new voluntary rules for the use of RFID tags to increase privacy after the customer has left the store. http://ec.europa.eu/information_society/policy/rfid/stakes/privacy/index_en.htm

USB 3.0 support is increasing with AMD confirming their support and implication on the new AMD A75 and A70M FCH chips. www.usb.org

Internet Advertising Bureau Behavioral Advertising Code has been the organizer of an agreement of a code of practice supported by 39 companies including Microsoft and Google that allows users to decide on the level that they accept of tracking and use of cookies. www.iab.net

More Noteworthy News

Gartner says IT spending will rise 5.6% in 2011 having increased its previous estimate based on the impact Tablets are having on the overall market. www.gartner.com

Juniper Research says Near Field Communications (NFC) will be a feature of 20% of Smartphones and Tablets by 2015. www.juniperresearch.com

IDC report Q1 PC sales worldwide fell by 3.2% against an expected increase of 1.5% stating weak consumer demand and rise in Tablets as reasons. www.idc.com

Capgemini is acquiring Artesys, a leading provider of Infrastructure solutions in the French market, and **Avantias**, a specialist in Enterprise Content Management, again focused on the French market in moves to extend its core business. www.capgemini.com

Salesforce.com is acquiring Radian6, a leading social media monitoring company, to consolidate its abilities to take CRM in all its forms into a totally cohesive set of capabilities. **Radian6 platform update** links the social platform with analytics companies including Reuters, Open Amplify and others, simplifies users abilities to do complex searches, etc. www.salesforce.com

Teradata Active Enterprise Data Warehouse (EDW) features new packaging for the units, Solid State or Hard Disk Drive storage and boosts speed of access whilst reducing energy consumption. www.teradata.com

Symantec Verisign Identity Protection (VIP) capability is now available for the Apple iPad to simplify a secure log on to sites that support the VIP platform. www.symantec.com

Lenovo launch LePad in China running Android 2.2 and promise a worldwide role out to follow. **Lenovo ThinkStation E30** adds a new top-end powerful workstation and the new **ThinkCentre M81** brings in a low-cost mass employee desk top unit. **Lenovo Cloud Ready Clients (CRC)** are offered on ThinkPads and ThinkCenter PCs based on Stoneware Secure Cloud Access code together with a bundle of other services such as LDAP, SSL, etc to create a secure user environment. www.lenovo.com

Adobe Flash Builder 4.5 and Flex 4.5 for mobiles have been added to Creative Suite 5.5 and allow developers to build applications using AIR 2.6 on most common mobility platforms. www.adobe.com

Verisign Uptime Platform bundles all of its web security protection capabilities onto a single platform supported by services. **DNSSec security now covers the popular.com domain** providing digital signature and authentication for those sites that choose to implement. www.verisign.com

McAfee accepts report of its website having security risks following a report by an ethical hacker group but states none of these will endanger its users. www.mcafee.com

SAS used their Global Forum event to introduce **Conversation Center** links to the existing Social Network Analysis product and allows Twitter streams to be analyzed for keywords. **High Performance Analytics** runs on Terradata or Greenplum databases and allows huge amounts of data to be queried and analyzed in operational timeframes. **Governance Risk and Compliance 4.3** for the financial sector and **Health and Condition Management** for the health sector. www.sas.com

Origin Storage 1TB DataLocker Enterprise v2.0 has been awarded full USA government level FIPS 140-2 validation certificate for its secure encryption thus providing a fully certified portable hard drive for field use. www.originstorage.com

Citrix DataStream Platform adds data management and delivery capabilities to match and align with the NetScaler Platform. www.citrix.com

EMC Mozy Online Back Up set of services now includes Android 2.0, iPad and iPhone iOS 4 devices as a free extension of the MozyHome subscription. **EMC Isilon S200** has been massively upscaled to handle more than 1.4 million Network File System (NFS) per second. **EMC Avamar 6** upgrades the de-duplication package with a new feature called Data Domain Boost that improves management of where and how data is stored and backed up. www.emc.com

Toshiba Satellite Laptops L and P series have been upgraded with processor upgrades, and improved capabilities for media and battery management. **Toshiba MK series self-encrypting hard drives** feature AES 256 standard encryption. www.toshiba.com

Texas Instruments is to acquire National Semiconductor in a move that takes Texas Instruments to third position in the semiconductor market. www.texasinstruments.com

HTC Sensation is a dual core Android smartphone with a large 4.3inch high resolution LCD screen to provide a new top of range unit for those looking for ultimate capabilities. www.htc.com

Lawson Software has a major update adding ViewPoint, a new tool for business analytics, MashUp Designer to allow the quick build of apps, plus Lawson Marketplace for the buying and selling of services. www.lawsonsoftware.com

AMD Llano processor has been launched as a competitive offering to the Intel Sandy Bridge chip set and extends the AMD Fusion Platform features including the Accelerated Processing Unit (APU). www.amd.com

Hitachi Data Systems (HDS) Operations Director Platform is designed to provide a single cohesive approach to managing both hardware and software and its integrated operations with HDS systems. www.hitachidatasystems.com

Dell investing \$1 billion in cloud data centers in 10 locations to be able to sell and support what it terms 'virtual PCs' running from the Dell centers. A comprehensive update of **all the elements for a SMB business** covering servers, storage and switches with a focus on handling large amounts of data has been introduced. **Dell Streak 7 Tablet on Android** is rolled out to more countries. **Dell Kace K1000 v3** adds integration with Dell warranty support and management with other asset and inventory management. www.dell.com

Nokia Qt cross development platform aims at a write once, run on any mobile platform capability and the version 1.1 Software Developers Kit is now available. Nokia has updated its **Symbian Operating System code named Anna** to support better user graphics, spilt screens, etc. and this supports two new models the Business E6 and a consumer large screen version called X7. www.nokia.com

Level 3 is to acquire Global Crossing, its main competitor in the Fiber-based long haul market and providing Level 3 with a network spanning 70 countries. www.level3.com

Iron Mountain Virtual File Store Cloud offering is to be shut down from 2013 with no new customers and existing customers transferred to a 'higher value' offering. www.ironmountain.com

Active Endpoints, a Software as a Service provider Cloud Extend Platform, claims to deliver Salesforce.com CRM by using a direct user interface for business managers to drag and drop their requirement. www.activeendpoints.com

BlackBerry Playbook launch gained mixed reviews with increased user friendliness but less IT depth controls in a package that can't yet match the Apple iPad for features. www.blackberry.com

AEP Networks Secure Application Access Mobile Software aims to secure Android or Apple Tablets for Enterprise Applications by managing the Tablet as an access device to met enterprise policies. www.aepnetworks.com

Seagate is acquiring Samsung Hard Drive business with a counter deal under which Seagate will have a specialized relationship over the use of Samsung Memory Chips for use in their business. www.seagate.com



About Capgemini and the Collaborative Business Experience™

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called Rightshore®, which aims to get the right balance of the best talent from multiple locations, working as one team to create and deliver the optimum solution for clients. Present in 40 countries, Capgemini reported 2010 global revenues of EUR 8.7 billion and employs around 110,000 people worldwide.

More information is available at www.capgemini.com

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