Changing The Game: Monthly Technology Briefs

January 2009

Google Health: A Business Technology & Web 2.0 Use Case

Read the Capgemini Chief Technology Officers' Blog at
www.capgemini.com/ctoblog

Google Health: A Business Technology & Web 2.0 Use Case

The UK government got the wrong type of headlines for its attempt to provide shared access to health records across hospitals, doctors, and other health professionals when its NHS Connecting for Health program ran into difficulties. At the same time, Google was successfully delivering an almost identical program called Google Health in North America. The difference was that the techniques used by the UK NHS (National Health Service) program were based on conventional database driven management. It attempted to build a huge master database that would combine all the necessary data and was then surrounded by various user applications. The questions of scale and governance were only outweighed by those of security and authorization.

Google Health takes an entirely different approach and is a good example of a Business Technology (BT) solution that is built using Web based technology. The solution is also powered by the Cloud as an 'Invisible infostructure'. Web Services are deployed to provide 'Interactions rather than Transactions'. Users have a high degree of freedom in how they choose to personalize their use of the health records: the 'You Experience'. This combination, with many other sources of information, is a prime example of how to 'thrive on data'. The whole system is built upon a 'Standards based' approach and allows the invocation of flexible 'Process on the Fly' between participants that can connect to existing IT applications when necessary.

However, sharing Health Service records is not just a technology issue; it is a different type of requirement--one that is based on BT as opposed to Information Technology (IT). It is important to recognize this difference. IT is fundamentally an internal activity designed to record commercial transactions onto databases using strongly managed procedures delivered by using large monolithic applications to ensure the integrity of the data. BT on the other hand is a mixture of external and internal activities based around people viewing and combining information in a personalized manner, as well as making contact with other people with whom they share interests and expertise.

Google defined the problem, and their approach to it in the health sector, back in December 2006 in an informative paper, **"Connecting Americans to Their Health Care"**. When rolled out in early 2008, the Google Health solution claimed to have embraced everything from existing websites, such as WebMD, through to Pharmacy groups, as well as healthcare professionals to create a single comprehensive and cohesive requirement. Details from the rollout of the service in the Boston area in May 2008 can be found on **Boston.com**.

BT is not based on applications, data, nor databases but it does require the creation and access to a common master database. Instead, 'services' manage the various tasks, and representations of records are provided to users thus avoiding all of the inherent security issues in transferring files. As an example, think of using Google maps; there is no file transferred, instead a representation of the map is provided to be viewed. In addition, there are the benefits of not producing multiple copies of data or having to manage the state of a record.

In the case of health professionals, they are a community made up of a series of smaller communities around specialized topics, and they wish to view and discuss health records. These activities are not contained within a single hospital or region, as defined by enterprise IT, so conventional IT methods to manage sign-ons and authentication users cannot be applied. A BT based solution uses Social Networking to create and manage the various communities. This requires the ability to link and transfer members' details as well as deciding which members are entitled to which services. In addition, there is the ability to create services, widgets, and MashUps (now increasingly known as 'social software') that can be used in and by any of the social networking communities via common standardized Application Programming Interfaces (APIs).

There are some key standards that support this and similar BT based approaches. More of them are on the way to make this approach to building a new generation of BT solutions both possible and secure. Two good examples are OpenSocial--a set of common APIs for web-based social network applications. It was developed by Google along with MySpace and a number of other social networks, thus ensuring that any App would work in any social community. It has been criticized for its relative lack of security. Open Social Apps can easily be accessed by hackers. This gave rise to the development of OAuth, an open protocol that provides secure API authorization in a standard method for desktop, mobile, and Web applications and supports the need of both users and services providers to secure their services and records. OAuth allows a user to grant access to their information on one site (the Service Provider), to another site (called Consumer) without sharing all of his or her identity.

As the understanding of the standards, the architecture, and the use of BT grows, it can be expected that a new generation of business requirements will be identified and delivered, in much the same way as PC and Network based IT brought new business solutions that extended 'computing' technology.

The impact of this and other technologies are discussed in the **Capgemini CTO blog**

Leading Company Results (Revenues)

Leading Company Results (Revenues)	
Q4:	**Novell** ↑0% @ $245mn
Q3:	**Oracle** ↑6% @ $5.6bn
Q2:	**Palm** ↓5% @ $190mn

Movements by Industry Leaders

Cisco announced a four day North American operations shutdown as part of a cost cutting exercise; support teams will remain active throughout the period. The new Cisco Media Experience Engine, MXE 3000 Video sharing platform, has been launched to handle the processing of video streams into a wide variety of Video presentations with a range of editing options in a manner fully integrated with other IP based network services. **www.cisco.com**

Oracle Configuration Management Pack has gained real-time configuration change detection capabilities to ensure that the growing numbers of changes that are being made across the enterprise are all tracked as they happen. **www.oracle.com**

Sun JavaFX 1.0 Rich Internet Application (RIA) is to compete against Adobe Flash and Microsoft Silverlight in the growing market for developing a new generation of interactive apps around video and other rich media, and includes a wide range of plug-ins for NetBeans and Eclipse plus a mobile emulator. Three new rack mounted versions of the x64 Server range will be offered based on the latest AMD Shanghai quad core processor. **www.sun.com**

HP has new AMD Quad Core Opteron Workstations in the HP xw9400 range which are claimed to be the first to use the new high performance chip. **www.hp.com**

Intel and Hitachi are partnering on Solid State Drives (SSDs) with the aim of producing a range that will cover all types and sizes of requirements from workstations to storage devices. They believe that the resulting lower cost point will change performance and energy usage for enterprise computing. **www.intel.com**

IBM Cloud Computing Evaluation services will help clients assess the cost savings and business value to be found through adoption of Cloud Computing. IBM's new Virtual Enterprise Remote Desktop Environment (VERDE) produced in combination with Canonical based on Ubuntu Linux and using the IBM Lotus office suite plus a wide range of IBM enterprise management tools that will provide a challenge to Microsoft based desktops. IBM is adding a hosted conferencing service based on a new version of the Lotus Sametime Unyte service. **www.ibm.com**

Microsoft has said that its Connected Services Framework (CSF) is now at 'the end of its life' and due to changes in the market Microsoft will not be replacing the CSF in the 30 or so carriers that implemented the Framework. EMC will be providing their RSA Data Loss Prevention product for inclusion in the bundled Microsoft security products suite. Document Interoperability has been improved with new OpenXML and ODF translator and an OpenXML to HTML translator plug-ins. The beta of Windows Vista Service Pack Two SP2 is being offered for download on the Microsoft Customer Preview Program web site. **www.microsoft.com**

SAP is to redouble its SME program in 2009 with its online customer configurator as its key tactic to reduce sales costs by allowing prospective customers to test the costs

and value of the service options. BI OnDemand has been released to provide a complete suite of BI capabilities including a data warehouse that are accessed 'on demand' and paid for as a utility. **www.sap.com**

Google is offering developers a SIM free Android phone called Android Dev Phone 1, but it stresses that these are not for sale to consumers and can be obtained by developers that are registered on the Android Market. Google Books is to be extended to cover 'thousands of magazines' with full indexing so that book searches will also produce magazines in the results. The Chrome Browser has been moved to non beta status after 14 updates and more than 10 million downloads in the 100 days since it was launched in traditional Google style as a beta. **www.google.com**

What's Happening with Standards

The Institute of Electrical and Electronics Engineers (IEEE) is setting up 'Patent Pools' around IEEE standards to allow companies to cross license the necessary patents easily and in a controlled manner reviving an old method and updating it to electronic online formats. **http://standards.ieee.org**

The European Union Waste Electrical and Electronic Equipment, the WEEE directive, is to have the targets increased in 2009 as a part of overall increases in the recycling targets for waste within the EU.
http://ec.europa.eu/environment/waste/weee/index_en.htm

World Wide Web Consortium (W3C) has updated the Web Content Accessibility Guidelines, WCAG, from v1.0 to v2.0 to broaden the technologies covered and to make it more acceptable as a true global standard for all web sites. **www.w3c.org**

The Wireless Power Consortium wants to standardize power chargers for mobile devices so that one power supply will be all that is required to recharge all the devices that people carry today. **www.wirelesspowerconsortium.com**

Open Source Update

Ruby on Rails 2.2 is now out with a large collection of improvements and additional features but the most significant is said to be a full internalization framework and a broad set of templates. **www.rubyonrails.org**

iPhonelinux - a developer's group - claims to have developed a working version of the Linux Kernel that can be installed on the Apple iPhone and the iPod Touch as a proof of concept though further work is required to make it functional in a true sense. **www.iphonelinux.org**

RedHat supported Fedora 10 - a downloadable Linux Operating System - is now available with the usual enhancements around virtualization as well as other enhanced features. **www.redhat.com**

Canonical Ubunto has been chosen by IBM to provide the foundation for their new 'Microsoft free' enterprise desktop. See the IBM entry for more details. **www.canonical.com**

Mozilla FireFox 3.1 Beta 2 is now available offering support for 54 languages as well as support for a series of new capabilities and standards including W3C Geolocation API, JavaScript Query selectors, and improved privacy management. **www.mozilla.org**

Cisco is being sued by the Free Software Foundation for violation of the GNU GPL, (General Public License) in the Linksys product line with the claim that its standard terms state customers cannot modify or share information about the software and violation of patents. **www.cisco.com**

Sun OpenSolaris gains new features including TimeSlider using ZFS file systems for instant 'snapshot' backups, together with a new automated installation facility. **www.sun.com**

Oracle has contributed its enterprise class data integrity code to be included in the Linux 2.6.27 kernel offering support for generic block and file systems and the Emulex extensions to the T10 Protection Information Model, previously called the Data Integrity Extensions. **www.oracle.com**

Adobe AIR 1.5 for Linux supports Linux distributions including Fedora Core 8, Ubuntu 7.10 and OpenSuSe 10.3 offering developers the ability to deploy Web Apps over a multiple operating systems and extending the original capabilities from Windows and Mac OS X. **www.adobe.com**

More Noteworthy News

"Realizing Value from a CIO, Navigating the Silicon Ceiling" is a new report from Deloitte and the UK's Cranfield School of Management which states that CIOs currently feel 'left out' from senior management as their role and scope is far from being clear and seems to be dominated by success or failure of the occasional major project as opposed to a systematic role in developing the business. **http://www.deloitte.com/dtt/cda/doc/content/UK_C_RealisingValueFromACIO.pdf**

Apple Mac OS X has been updated to version 10.5.6 which includes features that address a number of serious security flaws. Apple is advising users to download this version immediately. **www.apple.com**

LinkedIn has a new search capability aimed at supporting companies looking to find the right people to hire as well as other common functions plus a new interface and 'suggestive' search assistance. **www.linkedin.com**

Samsung BizBee is a new smart phone range aimed at business users who require full functionality of multiple communication formats and services when out of the office with the first model in the range called the BizBee i780 running Windows Mobile 6.1 now available. **www.samsung.com**

Lenovo have introduced the IdeaPad S10e netbook mini laptop which will come in at under $300 in North America. **www.sybase.com**

Number Resource Organization who operate the five Regional Internet Registries report that IPv6 registrations have risen 300% in the last two years mainly from developing countries such as India and China which are choosing to by pass IPv4 and start with IPv6. **www.nro.net**

EMC will be providing their RSA Data Loss Prevention product for inclusion in the bundled Microsoft security products suite. **www.emc.com**

Dell, in partnership with EMC for storage products agreed in 2001, is to run until 2013 and be extended to cover more products and better integration. **www.dell.com**

Salesforce.com now fully supports Google Apps as a service that can be integrated with other Salesforce.com services on the Force.com platform as opposed to the original agreement that provided simple access to the Google Apps as a standalone service. **www.salesforce.com**

VMware View 3 is the latest version of the Virtual Desktop Infrastructure product and includes View Composer to allow virtual images with different user data to be provisioned remotely and Office Desktop that allows a user to download their virtual desktop to different machines. **www.vmware.com**

Nokia N97 SmartPhone adds more features to the touch phone yet again and also adds a full slide out QWERTY key board as well as supporting 'always connected open windows' allowing the user to stay connected when using other services.

Nokia Ovi services have been extended to include messaging and other services as a well as new synchronization capabilities with PC based applications using Web Services. **www.nokia.com**

Palm is cutting $20 million from its operating costs by closing its Asian operations and moving the management to the USA, cutting back the scale of staffing in the USA, and reorganizing operations in all areas. **www.palm.com**

Sprint Nextel and Clearwire have completed their merger and plan to focus on a new WiMax wireless broadband service called 'Clear' with their existing offerings such as Sprint XOHM merged into the new offering. **www.sprint.com www.clearwire.com**

Yahoo will move its LaunchCast Radio services to CBS Radio giving CBS more than 300 webcast radio stations. Yahoo is abandoning its Music Player service as part of the deal. The Yahoo move into Build your Own Search Service (BOSS)—the provision of APIs that allows developers to embed the use of the Yahoo Search Engine into their apps started in July—is claimed to have added a further 10 million searches a day to the main search engine lifting their rankings to just behind ASK.com. Yahoo Mail Services are to be opened up to allow developers to develop 'smarter in box experiences' using the Yahoo Application Platform. Although the European Union has stipulated that user logs have to be maintained with user identification for 180 days Yahoo has announced that after 90 days they will make the data anonymous. **www.yahoo.com**

Fujitsu wants to sell its Hard Disk Drive business where it is in 6th place with some 6% of the market against the competition led by Seagate and Western Digital. **www.fujitsu.com**

Vodafone has made an offer to acquire Wayfinder the Swedish expert in the provision of location and navigation services for smart phones. **www.vodafone.com**

Skyfire mobile browser is now available as a pre release free download and will work on Windows Mobile 5 and 6, and Symbian based OS such as the Nokia S60 running on N and E series. **www.skyfire.com**

Jobs Watch:

Palm – 'a significant restructuring affecting global operations'

AT&T – cutting 12,000 jobs approximately 4% of Global Workforce

Sony – cutting 8,000 jobs globally as well as shutting 10% of manufacturing sites

Yahoo – cutting 1,500 jobs

About Capgemini and the Collaborative Business Experience

Capgemini, one of the world's foremost providers of consulting, technology and outsourcing services, enables its clients to transform and perform through technologies. Capgemini provides its clients with insights and capabilities that boost their freedom to achieve superior results through a unique way of working —the Collaborative Business Experience —and through a global delivery model called Rightshore®, which aims to offer the right resources in the right location at competitive cost. Present in 36 countries, Capgemini reported 2007 global revenues of EUR 8.7 billion and employs over 86,000 people worldwide.

More information is available at **www.capgemini.com.**

Andy Mulholland
Global Chief Technology Officer, Capgemini
Tel: +44 (0)207 434 2171
andy.mulholland@capgemini.com