3G Technology - Promises and Challenges

By Colin Ong TS

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Introduction

Imagine a situation where you are about to make an important Sales Presentation. You realize that you have brought the wrong presentation slides and you call up your colleague. She immediately emails the file to your 3G terminal and you transfer it to your laptop. Another scenario is having video−conferencing and sending character−based messages simultaneously with your clients. With 3G, the possibilities for wireless applications are numerous. For instance, imagine calling up a map in your car, conducting a video conference over wireless phones, checking e−mails, and browsing the web − wirelessly.

3G Defined

3G stands for the third generation of wireless communication technology and the industry direction are to raise speeds from 9.5K to 2M bit/sec. According to 3gnewsroom.com, devices will fall into four categories. The first category includes the basic 3G phones will be used mainly for talking and will store all their information on the network. The second category will support video−streaming, and will provide the user with news and web content. More sophisticated models will be information centres which let users download information from the Internet and store data on the device.

A recent initiative by four leading handset manufacturers-Ericsson, Motorola, Nokia and Siemens-plus the messaging companies CMG, Comverse and Logica was motivated by the launch of 3G. The companies hope to create awareness and foster development of multimedia messaging service (MMS) by making audio, video, photographs and other images to accessible to handsets.

3G and the Growth of the Wireless Mobile Market

The wireless mobile market is set to explode and this will provide fresh graduates with exciting job opportunities. According to Will Daugherty's The Growth of Wireless Mobile in Business 2.0, there will be 3 waves of mobile data services. The first wave is linked wireless access to existing information and

data applications. The current second wave takes advantage of wireless−specific functionality. The third wave will bring rich graphics, video, real−time multiplayer games.

Need more convincing and statistics?

According to the findings in Wireless Portals: the Information Gateway to the Wireless User, by the end

of 2006 there will be close to 1 billion wireless portal users worldwide. The bulk of these users will be wireless voice users, WAP users, 2.5G and 3G subscribers, and other wireless device users such as those using PDAs. Multi−modal users worldwide will stand close to 282 million in 2006.

The Reaction of 3G in America

The importance of 3G technology can also be gauged by the stance of the National Telecommunications and Information Administration (NTIA), an agency of the U.S. Department of Commerce, which is the Executive Branch's principal voice on domestic and international telecommunications and information technology issues. NTIA recently published a report entitled "WIRELESS" INTERNET: What the 3G Challenge Means for U.S. Competitiveness where it insisted that 3G is important for the future of America's global competitiveness amongst other things and that the Europeans and Asians view 3G development as their golden opportunity to beat the United States' in the area of telecommunications and ecommerce. The report also went further to state that the US will remain two years behind many Asian and European countries on 3G services.

In contrast in another report entitled "Can U.S. Wireless Firms Ride Business Applications to Global Leadership?," Summit Strategies Practice Director Warren Wilson argues U.S. vendors and service providers stand to win the strategic high ground, first in their home markets and then internationally. "Japan and Europe are leading the way in consumer−focused wireless applications, but business applications will drive U.S. markets," Wilson says. "North American vendors and service providers that correctly gauge which business applications to offer, and the development and deployment models that serve customers best cannot only catch up to global competitors, but even turn the tables and claim leadership roles in wireless data. It won't be easy, but it's far from impossible."

The importance of 3G and Wireless collaboration with the US has not been lost with NTT DoCoMo which understands that in order to move towards 3G, it must persuade other carriers to follow suit. DoCoMo's USD$10bn investment in AT&T Wireless came with the agreement that AT&T transferred towards W−CDMA.

I will highlight some promises provided by 3G Technology:

1)3G and Workplace Dynamics

3G Technology is an enabler of the development of the Wearable Computing Industry. The WearTel (TM) phone, for example, uses EyeTap technology to allow individuals to see each other's point of view. Therefore, the miniature laser light source inside the WearTel eyeglass−based phone scans

across the retinas of both parties and swaps the image information, so that each person sees what the other person is looking at.

This technology will enable the HR manager to have a better understanding of how to motivate and reward their employees as personal documentaries of their work−life will be shot from a first−person perspective. HR managers can provide better advice about handling difficult customers or closing sales. However, the immediate benefit is that this technology can be used as a training tool. The reason is that privacy laws have to be reviewed and updated in order that customers are adequately informed of this technology

2)3G and Mobile Job Interviewing

With an attached camera in a mobile device, job interviews can be conducted as video−conferencing between the HR manager and the potential job applicant. Initially, the job candidate can answer basic questions like his highest qualification and salary expectation by pressing the key−pad of the mobile device. If successful, he can proceed to have a face−to−face interview.

3)3G and Mobile Advertising

3G technology will enable advertisers to send more sophisticated and customized permission−based advertisements to their target audience's mobile devices. This will be an improvement from the current SMS. There will be a convergence between the internet and wireless technology as the target audience can request that more product information be sent as email. It is unlikely that these services will provide a sustainable advantage over the long run but they will shape the brand perception of an operator at the initial stage of the introduction of wireless Internet services.

However, with the rise of m−commerce, `business−webs 'will become even more powerful as every customer will become linked into the web. According to Keith Shank of Ericsson, wireline operators will have to find a way to integrate with wireless by providing a package of combined service capabilities and transparent coverage. Demanding consumers will want convergence of wireline, wireless and data services.

4)From E−Learning to M−Learning

The future holds a lot of promise for the E−Learning Industry. Martyn Sloman, author of The e−learning revolution has been quoted as saying "The pace of change in the global economy and advances in communications technology means that there is no debate about whether e−learning is the future or not. It clearly is. Latest assessments indicate that competitive organisations will soon be delivering up to a fifth of their training through the Internet, intranets or the web."

With the greater acceptance of e−learning, mobile learning (m−learning) will be thrive. An example of how 3G can power m−learning is when a student who may be late for a lecture can view the entire proceedings through the screen of a mobile device. It is also not far−fetched idea that the same student can even sit for a test by entering a password through the mobile device.

Challenges Ahead

Privacy is a huge question as in the case of m−commerce, each of us will leave a trail of "digital crumbs". With the increasing likelihood of a convergence between the net and wireless technology in many facets of social and business interactions, each of us will leave a mirror image of ourselves as we travel around.

Another problem that is highlighted by Eric Schonfeld of eCompany is getting developers interested in creating the applications that 3G phones can run. Currently developers tend to ignore markets with fewer than 1 million customers and concurrently, demanding customers insist that 3G phones should have lots of new applications to hold their attention.

Lastly, as sourced from the University of California's Berkeley School of Information Management and System (SIMS) report "How Much Information?" Professors Hal Varian and Peter Lyman analysed industry and governmental reports for production of information in terms of paper, film, optical and magnetic data. Among some of their findings:

§The direct accessible "surface" Web consists of about 2.5bn documents and is growing at a rate of 7.3m pages per day.

§Counting the "surface" Web with the "deep" Web of connected databases, intranet sites and dynamic pages, there are about 550bn documents, and 95% is publicly accessible.

These findings show that we are already taking in a lot of information even before the introduction of wireless communication through 3G. Will there be further information overload or will mobile devices help us manage our daily affairs better?

The concluding 2 sections will provide some pointers:

1)Towards An Information Society

In the Foresight Project, an initiative led by New Zealand's Ministry of Research, Science and Technology has stated that in an information society, individuals who are well−educated, self−motivated, and linked into information networks, are the most likely to live prosperous and fulfilling lives. Enterprises that are attuned to their customers' requirements, employ educated workers, encourage innovation through their workplace organization and, and know more and learn faster than their competitors, are the most likely to succeed and grow.

Reinforcing this point, according to Peter Drucker, there is the discipline of innovation. This is translated into having a clear mission and defining the measurement of results. In the event that there are no results, the organization should abandon the idea and then continue to seek for new and unique opportunities.

2)Future Challenges of a Knowledge−Economy

According to Dr Johari Mat, Secretary General Ministry of Education (Malaysia) at the First SEAMEO Education Congress, a Knowledge Economy Index developed using selected key elements required to drive a K−economy such as computer infrastructure, infrastructure, education and training, research and development and technology shows that most countries in this region lag behind developed and newly industrialized countries in terms of readiness to become a K−economy. For instance, the Knowledge Economy Index is 3877 for Singapore, 2460 for Malaysia, 1705 for Indonesia, and 1648 for Thailand while the Index is 6650 for USA, 5908 for Japan, 4901 for Australia, 4686 for UK, and 3912 for Korea, thus, to make a transition to the K−economy, countries in this region face the daunting task of putting in place and strengthening the core elements required to support the K−economy. Efforts need to be accelerated in the priority areas of human resource development, science and technology, research and development (R&D), ICT, and lifelong learning.

To conclude, 3G is definitely here to stay despite the early glitches.
The opportunity of being truly wireless and mobile is just too enticing.

Colin Ong TS is the Managing Director of MR=MC Consulting PteLtd (www.mrmc.com.sg). He is a prolific writer on HR , CorporateLearning and New Technology issues. His writings have appearedin a number of global portals(http://www.mrmc.com.sg/research.html) He has recently launcheda free

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Finding The Best Technology Schools

By Matthew Noel

Technology schools are schools that are designed to allow children from elementary, middle, high school and college levels to achieve specific goals in education. It is through these goals that children will find many of the opportunities that they have found powerful, meaningful, and interesting. Technology schools are an excellent opportunity for most children who are geared towards learning in this scientific, specific manner.

For our purposes, though, we will talk mainly about the college level experience of technology schools. If your child has displayed characteristics of enjoying subjects like math and science, these schools may just be the right place for them to go for their further education. In a normal school setting, the atmosphere is geared towards all subjects. The material in presented in such a way that allows for all children to grasp it in their own way. But when the school is geared towards technology, it is better able to accommodate the challenges and interests of its specific students.

If you are planning to send your child to a technology school, then carefully consider the options that are available to you both. For example, research opportunities not only in your area but also in others across the country. In fact, if opportunities are there, overseas study can be some of the most effective ways to learn about technology and all the aspects it can allow for. These schools are established throughout the country and all offer a unique range of study that cannot be found in schools that are

more taught for grammar. The technology school student's are those that love hands−on experiences that teach them through showing them.

Take some time to learn more about these technology schools right here on the web. Request information and provide opportunities for your child by taking full advantage of all that is out there and offered through these schools. Technology is amazing and if your child is geared towards it don't slow him down! Technology schools will foster and transform this into reality.

For more information please see

Finding The Best Technology Schools
Laser Printers Play Detective
What Publications Should Look for in a Technology Writer
Importance of Technical Education .
Debt Consolidation Online − 3 Things To Watch Out For

eBarteringTactics
How to keep up the SPICE in your Love Life.
Newbie's Guide to Stop Spam
IP Ad Websender − The Ultimate Promotion Tool
Real Estate Investment for Beginners