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Foreword

To be or not to be Wireless

Time flies and we have come to the middle of 2007. In the last 6 months, we have seen some happenings in the wireless arena.

The growth of wireless connectivity has spawned some questions on Wi-Fi Mooching over the past few months; **Wi-Fi Mooching** refers to the trespass or use of a wireless network that you do not own or one that is not free for use. Should a Wi-Fi moocher be persecuted by the law? Public opinion seems to split on this issue. Nonetheless, however differing public opinion may be, Singapore has prosecuted its first Wi-Fi moocher late last year suggesting that none should take Wi-Fi Mooching lightly. With the proliferation of free Wi-Fi hotspots over the island, perhaps Wi-Fi Mooching will become a thing of the past.

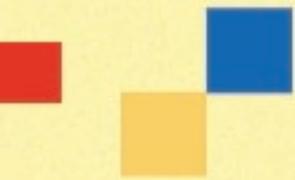
On a brighter note, the much awaited Nintendo Wii was launched in Singapore in April 2007. The article '**Wee Woo Wii**' introduces this revolutionary gaming console that has been the hottest topic among gamers. The feature that sets Wii apart from its competitors and predecessors is the use of motion-sensing technology in its remote control device. Instead on a bulky, button-studded game control, Nintendo has produced a game control that looks like a slick TV remote control which is connected to the game console wirelessly and equipped with an innovative motion sensor that detects movement in 3 dimensions. Wii, which enables players to physically interact with a virtual world, has significantly changed the gam-

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ing experience.

A decorative graphic consisting of four colored squares: a red square, a yellow square, a blue square, and a white square, arranged in a 2x2 grid.

'Wireless – A Green Technology' and **'WRU? LBS have the answer'** introduces other developments in Wi-Fi applications that benefit the community in enhancing productivity, convenience and promote a 'greener' Earth.

For those looking for mobile computing power that fits snugly in your pocket, check out **'PC in the Pocket'** before you hit the stores; this article features some of the latest and coolest handheld gadgets.

So the question is not 'to be or not to be wireless'; wireless is here to stay, with it brings about much benefits and innovation to the user community. Wi-Fi, as with other technology, may bring about certain vices but with greater Wi-Fi security awareness, we can use Wi-Fi to our benefit!

Enjoy!

Cordelia Chee,
ACIS



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ARTICLE



WRU is a common abbreviation in the late-90s era when slow rock and SMS hit the street. It faithfully stands for 'where are you' in short and, in my opinion, it is the most frequently used abbreviation whenever you need to know the location of your loved ones, friends or even enemies. In Maslow's Hierarchy of Needs, 'Communication' can be crudely classified as one of the Physiological needs.

Besides food and oxygen, there is a need for us to communicate with one another. When we have the ability to communicate, we can then satisfy higher levels of needs classified in this hierarchy (Note: higher levels of needs can be briefly described as Safety Needs, Needs of Affiliation, Needs of Self-Esteem and Needs for Self-Actualization). Somehow, it has the same magical adaptation in this wonderful world of technology. In the early 21st century, we are empowered with numerous communication tools such as instant messaging (in short, IM, which is now the de facto application). In order to extend our needs to higher levels through the use of these dedicated communication tools; this half-baked solution called WRU was born because IM simply cannot display its users' whereabouts. Probably by now, you may have heard some news that some kind of 'higher level' tools are being developed and it is plainly named



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as Location Based Services (LBS) or location awareness applications.

Actually, LBS is not a new technology so as to speak since GPS (global positioning system) was invented in the 1960s. However, for an average consumer to know that a little red dot beeping on the map is he himself is definitely not a big 'WOW'



factor, at least not in today's context. In order to capture the heart of our modern mass market, some innovative companies (such as Map-Quest, Inc. – <http://findme.mapquest.com/>) have interesting features of LBS that offer a brand new way for people to interact and network. Most importantly, LBS must not be restrained by the type of hardware you have in your pocket. Therefore, modern LBS should work with the most common devices such as mobile phones, wireless-capable personal digital assistant (PDA) and portable computers.

As a matter of factor, LBS influences the way you choose to communicate and your present location is usually a determinant factor. Then again, for the whole LBS concoction to work, you need to have informational profile that represents yourself and tags to your portable device. Lastly, and also the most challenging part, the service providers or carriers must provide the necessary infrastructure and tools for LBS to work. In America, all mobile carriers are required to provide wireless enhanced-911 service that provides geographical location of



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the person who dialed the emergency number (911) using a mobile phone. Technically, this can be achieved through radiolocation using mobile phone base stations and sophisticated algorithms. Sad to say, this initiative is driven by hard legislation instead of business needs or market demand. Therefore, for our 'Singapore, Inc.' to have the LBS infrastructure and tools, our population has to strive hard to drive that demand so that our service providers can realize that there is a business case for one, but then again, it can be a chicken-and-egg issue. In this competitive market, LBS will eventually be a prevalent need for the providers to stay ahead. And when that time comes, we will experience an explosion of location awareness applications just like what happens to the IM rage of recent years.

Now, let us imagine these few scenarios:

- (1) Your class just ended on a Friday afternoon and you are trying to figure your next program;
- (2) You have joined a new project team and hope to know more about your new team mates;
- (3) You are rushing your course project in the campus on a late evening and you do not feel safe. As of now, you probably have to settle for not-so-good solutions such as going home straight after class or spend lots of time to understand your team mates one-by-one.

Can LBS and its supporting applications offer better solutions for these scenarios? Oh yes, it can.

- (1) LBS have the capability to find your buddies, search the nearest restaurants and give the directions to get there through a mobile phone.



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If you like to visit the restaurant again, you can store the details of the restaurant and its directions in your address book of your mobile phone.

(2) Since your profile contains some information about you, your interests, your favourite places and things, LBS can share this information with the rest of the team or alert you that someone in the team shares the same interests as you. So, this is a convenient way to know everyone and probably you want to spend more time with people of the same interest.

(3) For safety reasons, you can alert your family and they can track your whereabouts online through LBS. In addition, if you have not reached a pre-determined safe location (e.g. your hostel room) within certain duration, LBS will automatically alert the campus security with your profile, timestamp and last known location.

So now you can see the benefits of using LBS and its supporting applications in addressing our needs for communication and safety. Although they are already available in America, we still need some time for it to realize in Singapore, and hopefully not through the hard way like the Yankees did. Nevertheless, let us be patient for this revolutionary technology to be made available in our pocket and also light on our wallet.



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LIFESTYLE

PC in the Pocket: Coolest Phone in the market!

Looking for a classy phone to suit your mobile needs? Check out these mobile gadgets that may be the coolest handheld that was ever produced.

Nokia N95

Finnish phone maker has got it right again in the newest addition to its popular N series. This phone boasts a 5 megapixel camera that produces good photos and video that is a first in the cell phone and smart phone world.

N95 comes with a Carl Zeiss Vario-Tessar lens. (Carl Zeiss was an optician who first started manufacturing lenses for microscopes and then used his expertise for camera lenses.) The breadth of customization and editing options available on this phone is astounding--almost like an actual digital camera. You can choose from seven shooting modes, ranging from close-up to sports to night portrait, and five quality settings. You can adjust the brightness, contrast, white balance, color tone, ISO light sensitivity, and exposure value to get the best picture possible. The flash even has a red-eye reduction option. Plus, there's also a self-timer and a sequence mode





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for multiple shots.

The N95 can record video at a maximum VGA resolution (640x480) at 30 frames per second. You get two shooting modes (automatic and night) and white balance and color tone settings. In addition, there's a video stabilization feature to help reduce camera shake as you're recording video.

As a multimedia computer, the Nokia N95 isn't limited to just pictures and video. There's also an integrated music player that supports MP3, WMA, W4A, AAC, AAC+, and eAAC+ files. The music library categorizes tracks by artists, albums, genres, and composers; you can also create playlists right on the phone and adjust the sound with the built-in equalizer. The N95 also has an FM radio, though you'll have to use the included headset to access the radio, since it acts as the tuner. RealPlayer is also onboard with 3GPP and MPEG-4 video streaming support. Again, we applaud the decision to incorporate a 3.5mm headphone jack, which goes a long way in making the multimedia experience that much better.

On top of all that, Nokia has also packed a GPS receiver into the N95, along with a mapping application. With it, you can get color maps, route planning, and a healthy points-of-interest database. There's also a trip computer that shows you information about the total distance, time, average speed, and so forth.

N95 also ships with wifi and 3G compatibility for the surfers on the go.



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Dopod U1000

Dopod has launched its notebook like windows mobile smart phone that fascinates the internet surfers on the go. The main distinguishing feature of the U1000 is certainly its 5-inch VGA



screen, one that is very clear and bright and largest in the smart phone market. As a touchscreen, it is responsive and would enable the user to enjoy a tablet-like experience lifting limits of usual 2.8" PDA screens.

Connectors are found on the left side of the device. Besides the regular mini-USB jack for charging and syncing, there is also a 3.5mm audio jack for connecting a headset or a pair of headphones for music playback. This is a good inclusion as no adapter is required to hook up a favorite set of headphones.

That feature is especially useful considering the U1000 has an 8GB MicroDrive built in. This makes it a perfect candidate as a portable media player. Music playback is good, comparable with most flash-based MP3 players, though the Audio Manager application may not be as advanced as those found on dedicated MP3 players. For videos, most files that will run on your desktop's Windows Media Player will run fine on the U1000 as well. The third connector right beside the other two is one that lets you attach a provided accessory which ends in a VGA connector. A monitor or projector can then be hooked up to the U1000,



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displaying whatever that's on the 5-inch touchscreen on a much larger display. Together with Office Mobile, this feature makes it possible not to have a notebook around and still be able to give a presentation.

Surfing on the U1000 as an Internet device is fantastic thanks to the many wireless options. Wi-Fi at hotspots usually gave us the best connection speeds when outdoors, but when that was not available, we went online using HSDPA and 3G. The Intel 624MHz processor made sure that was very little slowdown, which added to the browsing experience even when we loaded graphics-intensive sites.

Also in the U1000 is the ATi Graphics Chip W2284. There are not too many handheld devices that have a dedicated graphics chip, and so very few applications specifically make use of them. But the fact that it is present in the U1000 helps to relieve some load off the main processor whenever images are displayed, thereby making it more efficient when running other applications in the background.





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MORE UPCOMING PHONES

Apple iPhone

Imagine an iPod with a 3.5" large display that would make fulllength movie viewing a much better experience compared to the present 2.5" screens of 5G iPods. Add in GSM phone features would make it an interesting gadget to carry around. Its vivid and minimalist design is clean and attractive and its mostly driven by its touch screen control.



Watch out for it in Asia in '08.

Nokia 888

A new launch by Nokia, this slim paperlike phone has a lot of features which people just used to imagine about. The piece is designed by "Tamer Nakisci", who has already won "The Nokia Benelux Design Awards" and now is a jury member of Apple iCan 06.

The phone is completely flexible and can be carried any where and in any form. It can be bended in any shape, or can be rolled up round the



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wrist, or if at all you are not comfortable with this, then you can just use the phone as a clip for your shirt.

This phone can change it's own shape whenever you need to talk like a normal phone. Talk without words, but with emotions which can be sent and recieved by other Nokia 888 users.

Things like liquid battery, speech recognition, flexible touch screen, touch sensitive body cover and extremely new ones into the world of Nokia Mobiles.

The colour can be changed along with the shape of the phone.

Release date: A couple years before we see it in market.





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LIFESTYLE

Wee Woo Wii

What does a steering wheel, a tennis racquet, a golf club, a fishing rod and a pair of boxing gloves have in common? The Wii controller easily emulates all these!

Introducing the Wii, a different kind of a gaming console.



Wii (pronounced We) is the fifth home video game console released by Nintendo, a successor to the Nintendo GameCube. Wii is a seventh generation console, competing alongside Microsoft's Xbox 360 and Sony's PlayStation 3. What sets the Wii apart from the other consoles is the unprecedented mode of play, made possible only by wireless technology.



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The Wii provides you with two controllers per player - a primary controller known as the Wii remote and an attachment unit called the Nunchuk. The controllers are to be held one in each hand, and they let you interact with the game using physical gestures, while

holding these controllers.

The controllers make use of a combination of accelerometers and an array of infrared sensors to sense changes in their position in 3D space; This information, together with the button presses, is then transmitted to the game console via Bluetooth, eliminating the need for wires, and giving you unsurpassed freedom in movement and expression in game play.

Each Wii comes with Broadcom chips powering both Bluetooth for the controllers and Wi-Fi for network access to the Internet. Although Wi-Fi has been widely used in many gaming consoles, this is a first time in history that a gaming console uses Bluetooth as a standard right out of the box. Broadcom claims use of Bluetooth “significantly increases the level of performance in the game controller, with special enhancements that provide low latency.” The chipmaker also says its Bluetooth silicon uses very little power, and that this will maximize controller battery life.



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Wii games are designed with this distinctive mode of play in mind. Wiis sold in the US come bundled with a suit of short games known as Wii Sports that illustrate the use of the controller to play games.



Most of these games require you to twist, turn, swing your controller to play, and the Wii interacts with you according to your actions. One of the most recent releases for the Wii is the Spider-Man 3 video game. One of the coolest parts of the game is the ability to go web-slinging in New York city just by swinging your Wii remote.

Multiplayer games in Wii are a breeze too. Invite your friends over, and ask them to bring their Wii remotes. That's all you need for multiplayer. No more messy wiring and limited connections. The controllers automatically connect via Bluetooth.

Multiplayer across the Internet is no hassle too. Each Wii comes with Wi-Fi that connects to your existing wireless network and Internet connection at home. Wi-Fi inside the Wii comes from Broadcom's single-chip 802.11g using BroadRange for extended distance from your wireless network. The Wii's WiiConnect24 Internet connection service runs when the console is turned off to get game updates. It even comes with the Opera web browser to allow you to surf the net using your Wii. Wii can also play with the Wi-Fi services built into the handheld Nintendo DS game system.

With some 7.31 million units of Wii sold, and thousands of game com-

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panies creating games for or porting their games over to Wii, the Wii looks like a promising console, and is likely here to stay.

So don't miss out the fun! Pick up the controllers, let's go web-slinging together, or whip the after life out of zombies. Your move!



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ARTICLE

Wireless – A Green Technology

By Jeffrey Hong, CSC

Global warming technically means the increase of average temperature of our Mother Earth's surface and oceans. Unfortunately, it is a burning issue for our present and future generations as long as Earth remains the only place we can live in. Scientists and environmentalists are working hard to harness technology to lower the side effects of global warming and, hopefully, to steer mankind away from the path of self-destruction. As an ordinary consumer, I can do my part to 'save our earth' through little gestures like using re-usable bags instead of plastic bags and install wireless access points in my home. It isn't hard to imagine why wireless technology is related to this save-our-planet project because wireless is inherently a green technology.

Being mobile through wireless technology means we tend to travel less because it can connect us to our colleagues, friends, customers, and loved ones anytime and anywhere. For example, I do not need to rush to my office to retrieve vital information if guest networking is provided at customer's site. Thus, it makes less sense to utilize any transportation tool that spills tons and tons of carbon dioxide and other environmentally harmful chemicals. Besides promoting mobility, wireless technology also creates a sharing environment where multiple agencies and entities can be connected together without the need of physical cables. In other words, a single base station or access point is capable of serving many users simultaneously. Consequently, it



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reduces the amount of materials needed and significantly simplifies the whole infrastructure.

In addition, we can use wireless technology to promote awareness for a specific cause among the community in a fun way. Let's look at the 'One Ton Tree' initiative by Seventh Generation, Inc. (www.seventhgen.com). By using cell phone to dial a toll-free number, anyone can seed a virtual tree. By going online using WiFi hotspot, the seeder can view and print the virtual tree that he or she has planted earlier on. For every 40 thousands virtual trees created, the company will donate USD\$1 to the Replant New Orleans organization that oversees the urban reforestation project in New Orleans which has seen 50 thousands of its trees being uprooted by Hurricane Katrina.

Meanwhile, we have smart people who have brilliant ideas of using wireless technology to improve our environment. We have seen articles on embedding wireless technology into environmental sensors that monitor pollutants, chemicals, climate changes, hurricanes and etc. Once coupled with solar power, these sensors can do their job without generating any unnecessary waste. Although we are increasing the involvement of wireless technology in serving the needs of mankind and Mother Nature, it is still not the perfect pill to cure all our environmental woes.





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How To Report Low Wireless Coverage

Computer Services Centre encourages all users of Wireless @ NIE to report any poor wireless coverage in NIE Yunnan Garden Campus and Townsville Campus. You can visit Wireless Support Website (<http://wireless.nie.edu.sg>) and fill in the Feedback Form. Though we can't guarantee immediate fix for every area, your valuable feedback will help us to plan and extend the wireless coverage accurately.

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