

Open Source Mobility

Software Freedom Day 2007

William Emmanuel S. Yu
Novare Technologies Inc.

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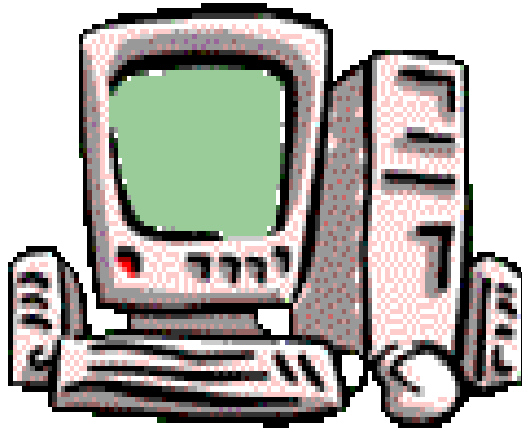


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Introduction

3 Major Movements

1.



3.



2.



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3 Major Movements

- **Internet**
 - Connecting both peoples and networks
 - Provided true global communications to more people
 - Encouraged sharing of information
 - **Open Source**
 - Fueled by developers around the world
 - Made possible by the Internet
 - **Mobile Telecoms**
 - Provided network connectivity to an even greater number of people
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The Numbers

Mobile

- **2.7 Billion** GSM Users and growing!
- Over **700 GSMA** Operators in **218 countries**
- **1.6%** of the world's GDP (transactions)
- Up to **1.5 Billion** SMS daily in the Philippines alone

Internet

- **1 Billion** Internet Users
- **80 Million** Registered Domains
- **100 Million** Websites
- **100 Million** Daily Video Streams from YouTube
- **14 Billion** IMs daily
- **6 Trillion** Emails daily

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- **Internet + Open Source**
 - Have largely been tied together
 - Open Source made possible with the Internet
 - The Internet made possible with Open Source
 - **Mobile + Internet**
 - Have own discrete communities – beginning to merge
 - Mobile players doing Internet things
 - Internet players doing Mobile things
 - Tools move across
 - **Mobile + Open Source (Next Big Leap)**
-

Mobile + Open Source

Tools of the Trade

Telecoms

- ◆ **Interface Tools**
 - ◆ SIM Toolkit – Mobile
 - ◆ Proprietary Firmware
 - ◆ Closed Platforms
- ◆ **Backend Tools**
 - ◆ SS7 Signal Manipulation
 - ◆ Proprietary Interfaces

- ◆ Mostly **closed proprietary systems**

Internet

- ◆ **Interface Tools**
 - ◆ HTML, CSS
 - ◆ Javascript
 - ◆ ActiveX, J2SE
- ◆ **Backend Tools**
 - ◆ PHP, ASP, J2EE
 - ◆ MySQL, MS-SQL

- ◆ Diverse **open standards-based systems**

- ◆ Movement from **proprietary and complex** systems to **open and simple** systems

 - ◆ **Open Systems**
 - ◆ J2ME, Symbian, Windows Mobile, Palm, Flash
 - ◆ From closed and proprietary CPE Interfaces
 - ◆ **Standardized Protocols to Backend Systems**
 - ◆ Greater use of XML and Web services
 - ◆ Standardization with Parlay/OSA and JAIN
 - ◆ **Simplification of Network Protocols**
 - ◆ Signaling is moving from complex SS7 to simplified SIP or H.323 (with the advent of VoIP)
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What does this mean?

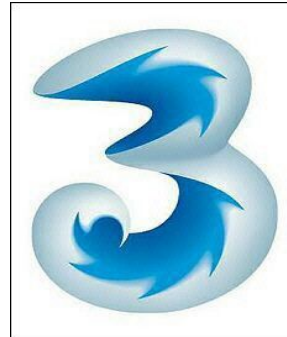
- ◆ **Tools are now publicly available**
 - ◆ Can be downloaded from the Internet
 - ◆ Open source software exists

 - ◆ **Protocols are becoming more Internet-like**
 - ◆ With the use of XML and Web services, it is easy to simulate these systems on existing Internet software
 - ◆ No need to interface directly with production telecoms hardware

 - ◆ Of course, **not all systems are open ... yet**
 - ◆ But, most mobile phone systems are standardized
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Opportunities

Internet on Mobile



- ◆ **Internet Browsing** on Mobile Phones
 - ◆ Just need a better browser and mobile-friendly pages
 - ◆ Check out **W3C's Mobile Initiatives**
- ◆ **Internet Services** on Mobile
 - ◆ Skype, MSN, Yahoo, Google, Sling, Ebay

Internet on Mobile



The Web is your App

- ◆ Poster child of Internet on Mobile
- ◆ No more native applications
- ◆ Everything is a service to be consumed off the Internet
- ◆ Ecosystem grows

Internet Messaging

- ◆ Allowing **Internet messaging (IM) systems** on Mobile
 - ◆ MSN, AOL, Yahoo, ICQ
- ◆ Build own communities
 - ◆ Check out the **GSMA's Personal IM Initiative**
- ◆ Allowing other Internet messaging forms like **Email**



Enabling Mobile



- ◆ Mobile **Entertainment**
 - ◆ Content Delivery
 - ◆ Mobile Games
 - ◆ Television
 - ◆ Mobile Blogging
 - ◆ Integrated Devices
 - ◆ Music and Radio
 - ◆ Imaging / Camera
- ◆ Other **enablers**
 - ◆ Location-based Services
 - ◆ Touch Commerce
 - ◆ Alternative Access

3rd World Mobile



- ◆ Bridging the **technology gap** is key!
- ◆ Cheaper Handsets! (\$30 GSM, \$100 laptop)
- ◆ Mobile pay phones
- ◆ Banking the Unbanked
- ◆ Increase access to **services**



- ◆ Creating solutions to bridge the **technology gap!**
- ◆ Literacy and language barriers
- ◆ Access to technology
- ◆ Alternative uses

Finding something for the **NEXT BILLION** Users

- Majority of new mobile phone subscribers will be coming from **3rd World Markets**
 - Find them in **BRIC, Next 11** and **G20** countries
 - Must find applications and services that appeal to this demographic
 - The **Low ARPU - High Volume** Game

Now What?

Where can I start?

- ◆ **Handset Application Development**
 - ◆ Java Mobile Edition (JavaME) from SUN
 - ◆ Eclipse or Netbeans IDE (w/ Mobility Pack)
 - ◆ Symbian S60 SDK and Carbide from Nokia
 - ◆ C++ with Palm SDK from Palm Source
 - ◆ MS Visual Studio and Mobile SDK from Microsoft
- ◆ **Backend and Web Services Integration**
 - ◆ Telecoms APIs such as JAIN and CORBA
 - ◆ Learning SOAP or REST-style XML web services
 - ◆ Know the platforms J2EE, dotNET and LAMP
 - ◆ Practicing with AJAX might be helpful
 - ◆ Know message brokering and OR mapping

Conclusions

- ◆ The Mobile and Internet worlds are showing **spectacular growth!**
 - ◆ Bigger market place with **new and diverse needs**
 - ◆ **Opportunity** for new players
- ◆ Worlds are beginning to converge
 - ◆ Room to create **exciting combinational services**
 - ◆ Models, tools and technologies are beginning to coalesce to **simpler and open standards**
- ◆ Traditional **barriers to entry are disappearing!**





More Information

Novare Technologies

URL: <http://www.novare.com.hk>

Email: recruitment@novare.com.hk

Hong Kong Number: +852 3101 8198

Manila Number: +63 2 8131329

Myself

URL: <http://hip2b2.yutivo.org>

Email: william.yu@novare.com.hk

Hong Kong Number: +852 3101 8198

Manila Number: +63 2 8131329

Thank You

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