



中国移动通信
CHINA MOBILE



北京2008年奥运会合作伙伴
Partner of the Beijing 2008 Olympic Games

JavaOne

Java™ Technology-Based VAS in China Mobile: Today and Tomorrow

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Goal of My Talk

Learn about the status of Java™ technology-based value-added service at China Mobile; understand the ambition and prospect of China Mobile for Java platform, terminal with Java technology as well as Java Community ProcessSM (JCPSM) Program.

Agenda

Introduction of China Mobile

Status of Java platform in China Mobile

Generic download platform

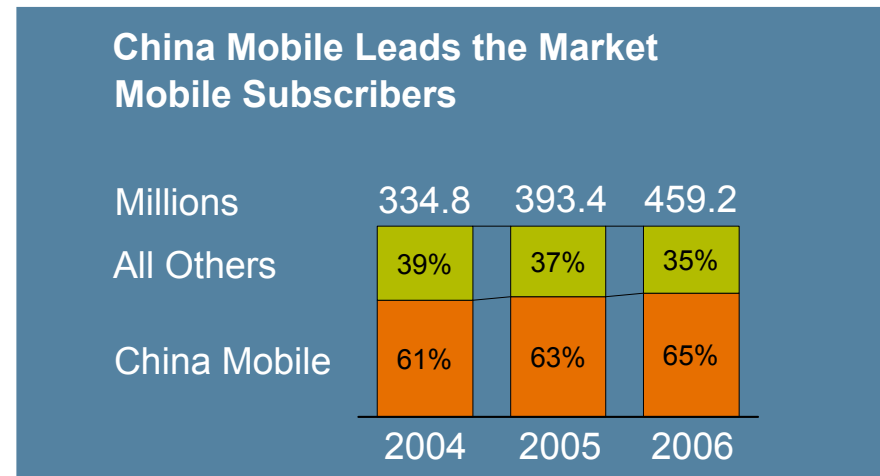
Java platform and customer experience

Terminal with Java platform—The prospect

China Mobile in JCP program and with developers

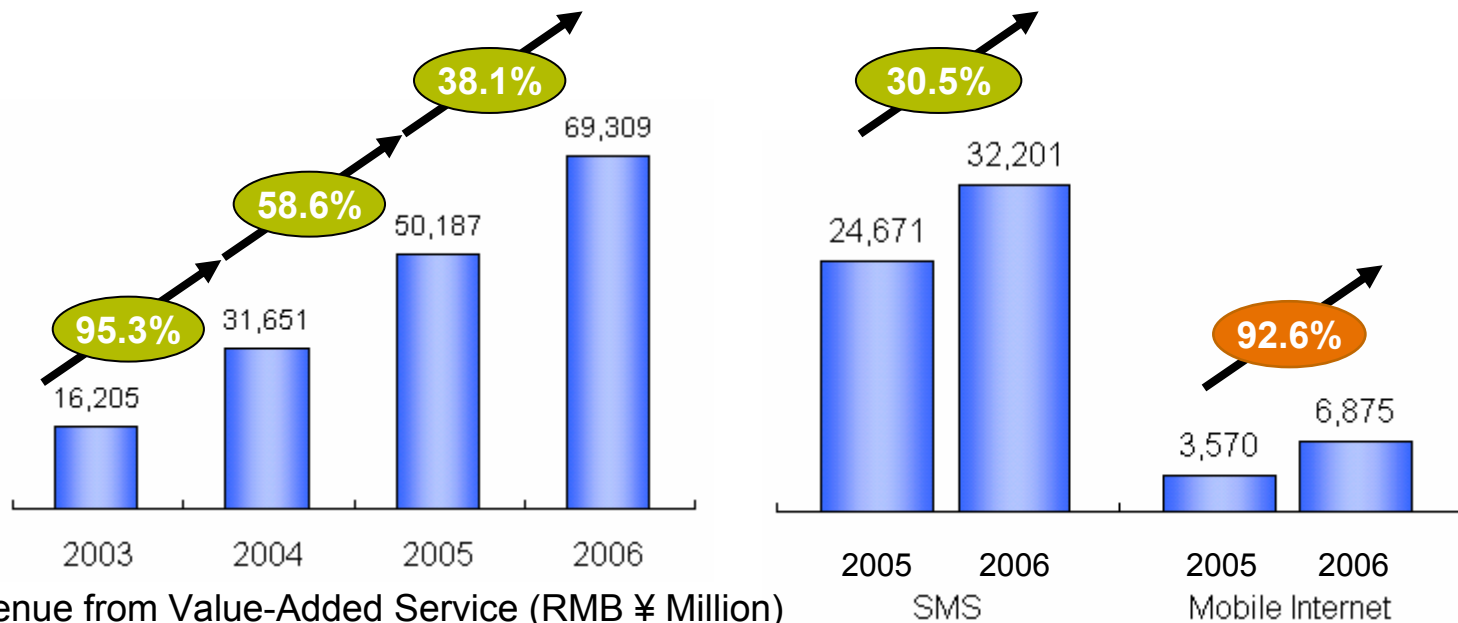
China Mobile (□ □ □ □ □ □)

- Publicly listed on NYSE (CHL) and Hong Kong Stock Exchange (941) since 1997
- Headquartered in Beijing with 31 regional branches
- Total subscribers: 310,996,000 (as of February 2007), representing world's largest mobile subscriber base
- Annual operation revenue in 2006: ¥ 295,358 million RMB (≈USD \$38 billion), about 21% annual growth from 2005

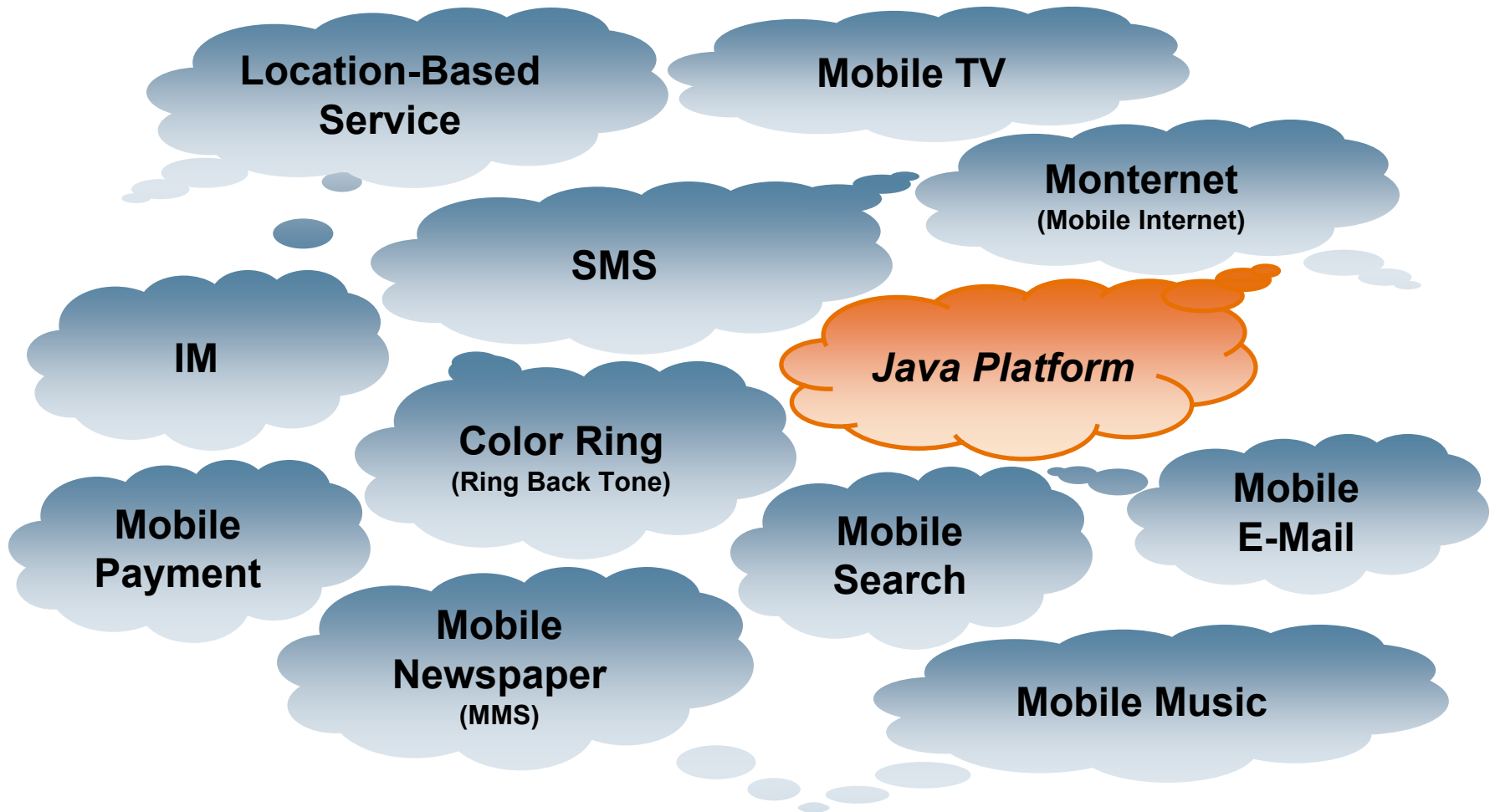


Continuously Strong Growth in Value-Added Service

- China Mobile's business in value-added service has been growing strongly; not only SMS but also mobile Internet
- By 2006, operation revenue generated from value-added service has accounted for **23.5%** of total revenue



Continuous Development on Current and Potential Value- Added Service



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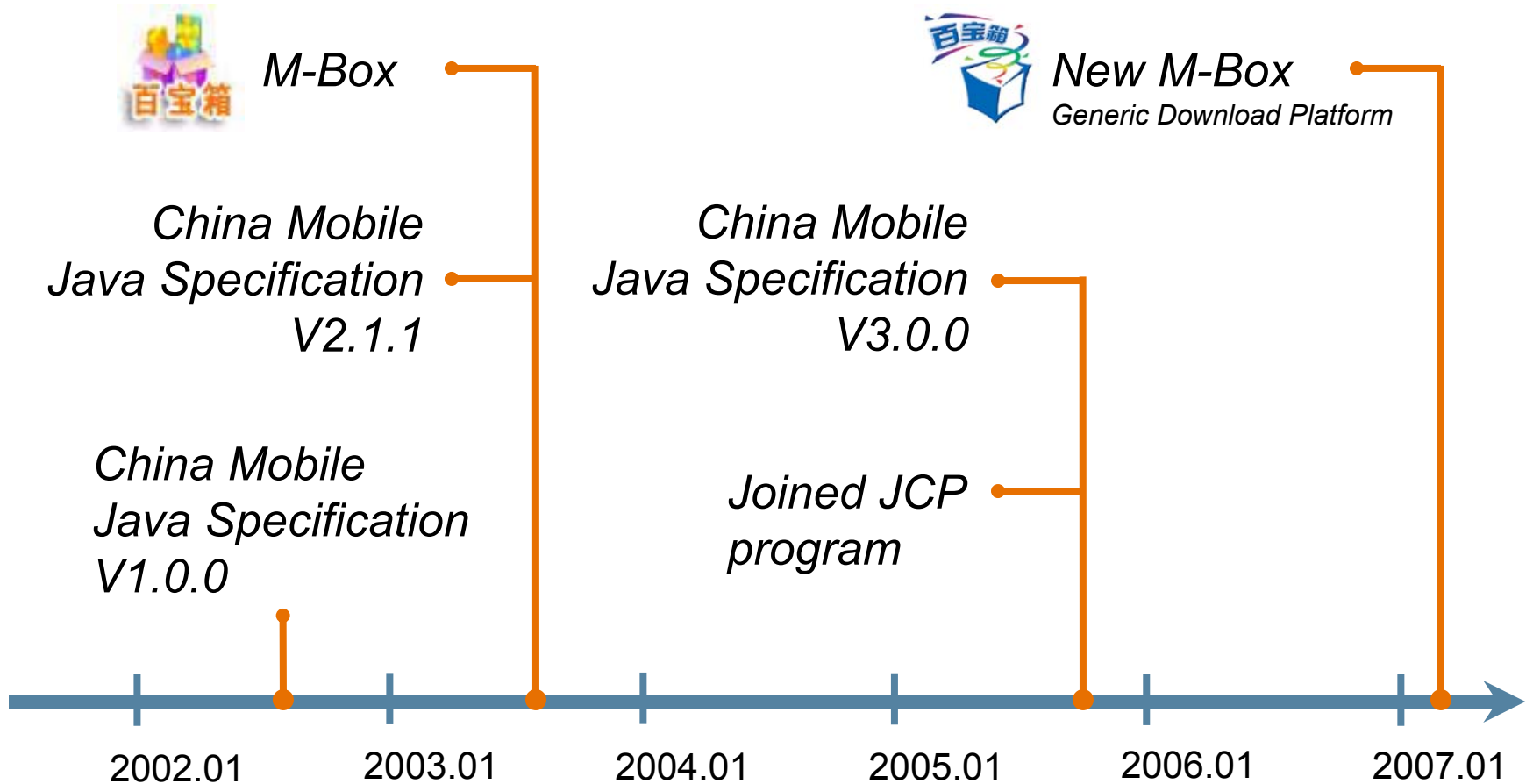
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China Mobile Devotes to Java Platform

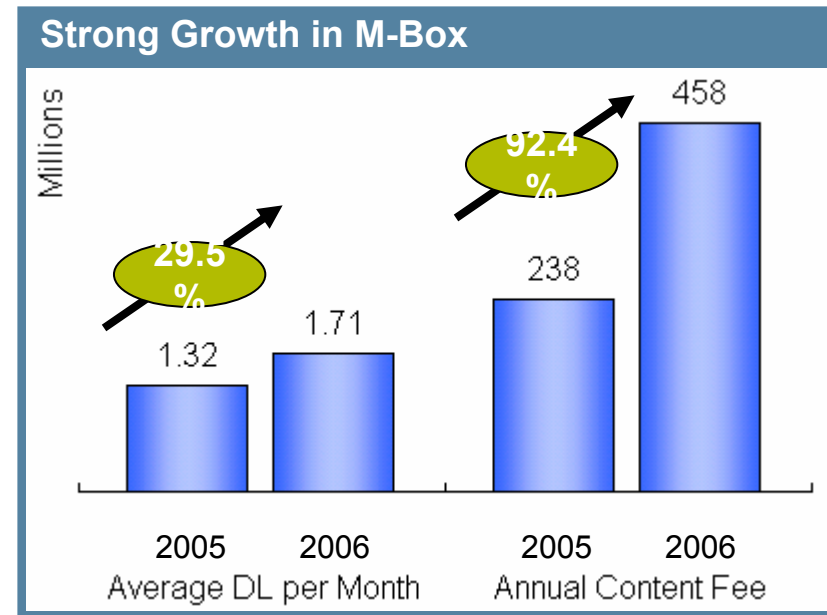
Continuous effort has been contributed to Java platform





China Mobile's M-Box (□□□)

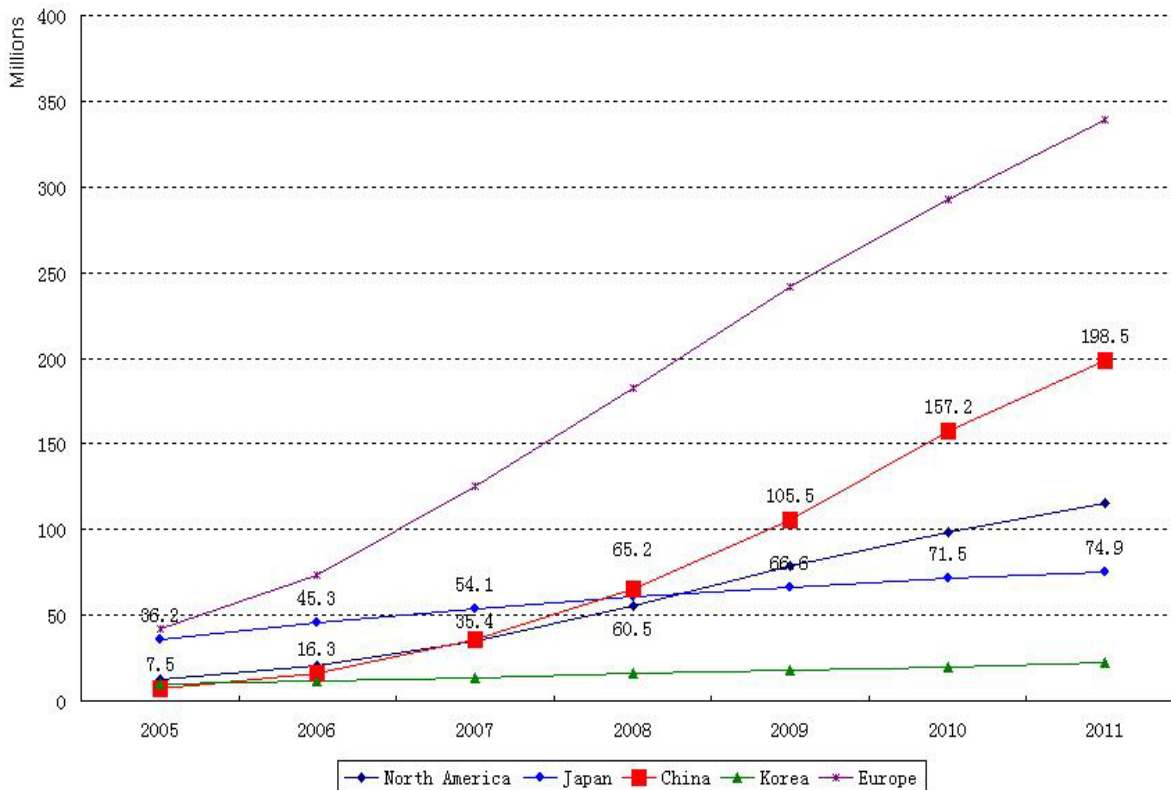
- Launched in July 2003, M-Box has been China Mobile's official Java platform service brand
- More than 64 million China Mobile customers already registered to M-Box
- More than 250 content/service providers, providing over 5,000 Java platform content for M-Box, with over 160 Java platform terminal models
- Main categories of Java platform content: games, screen saver, life, m-commerce, and other application
- Variety of billing models: per DL, monthly or daily fee, per usage, monthly package, free of charge



M-Box Still Has Huge Untapped Potential Amid Previous Strong Growth

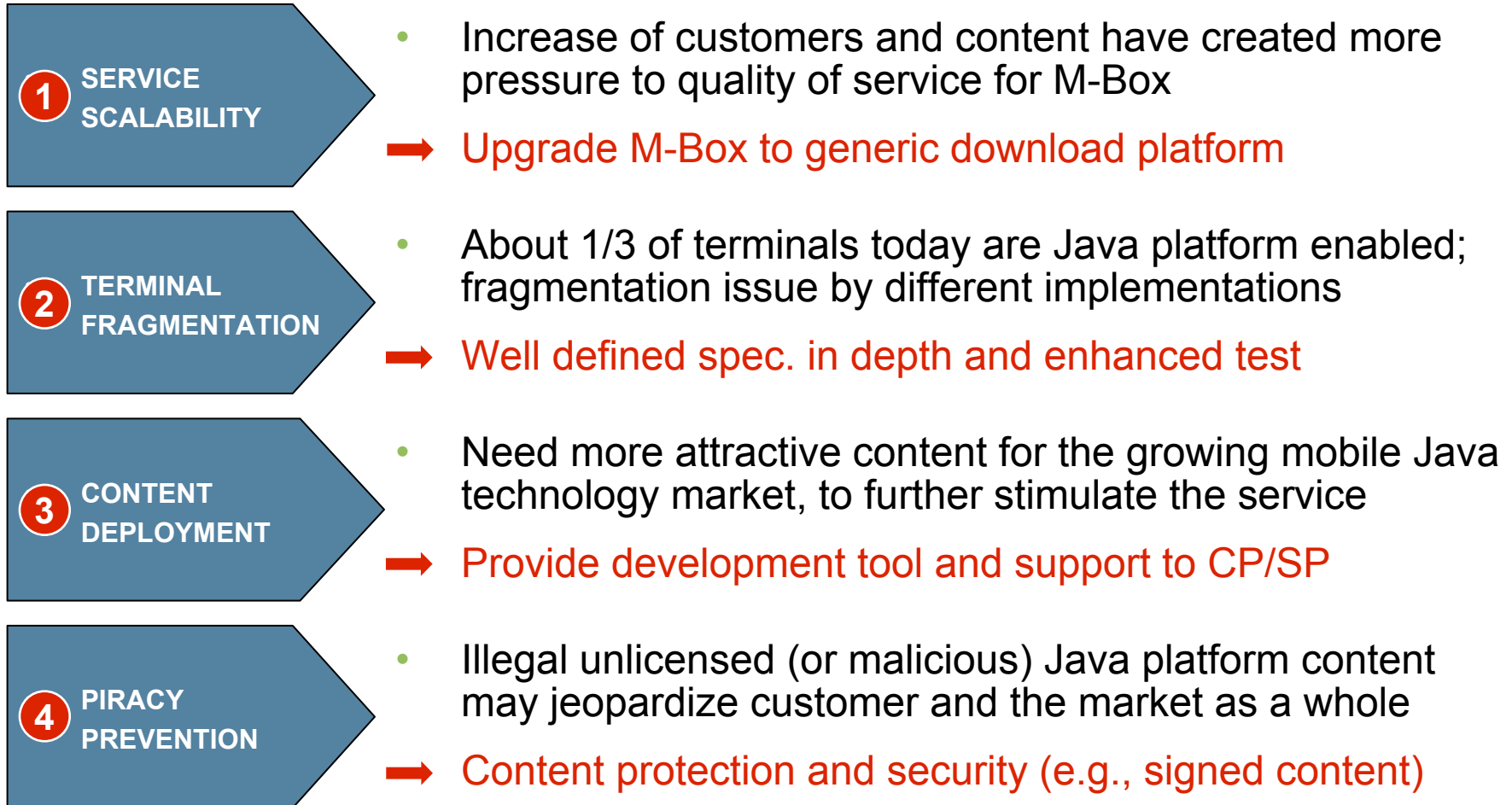
- Wireless Java technology in China will grow even faster, predicted by research!

Mobile Java Technology Users (Millions)



By 2008, China could become the 2nd largest Mobile Java Technology market (Source: Informa)

Challenges M-Box Is Facing Today



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Generic Download Platform

Sustain high quality of service for M-Box

- Launched in October 2006, the latest M-Box upgrade by March 2007; all M-Box traffic going through the platform today
- Establish a **nationwide multiple-node service architecture** to face the increasing need of content download service
- Provide more stable service to China Mobile M-Box customers with better customer experience
- The platform provides not only Java technology content, but also non Java technology content for Symbian and Windows Mobile

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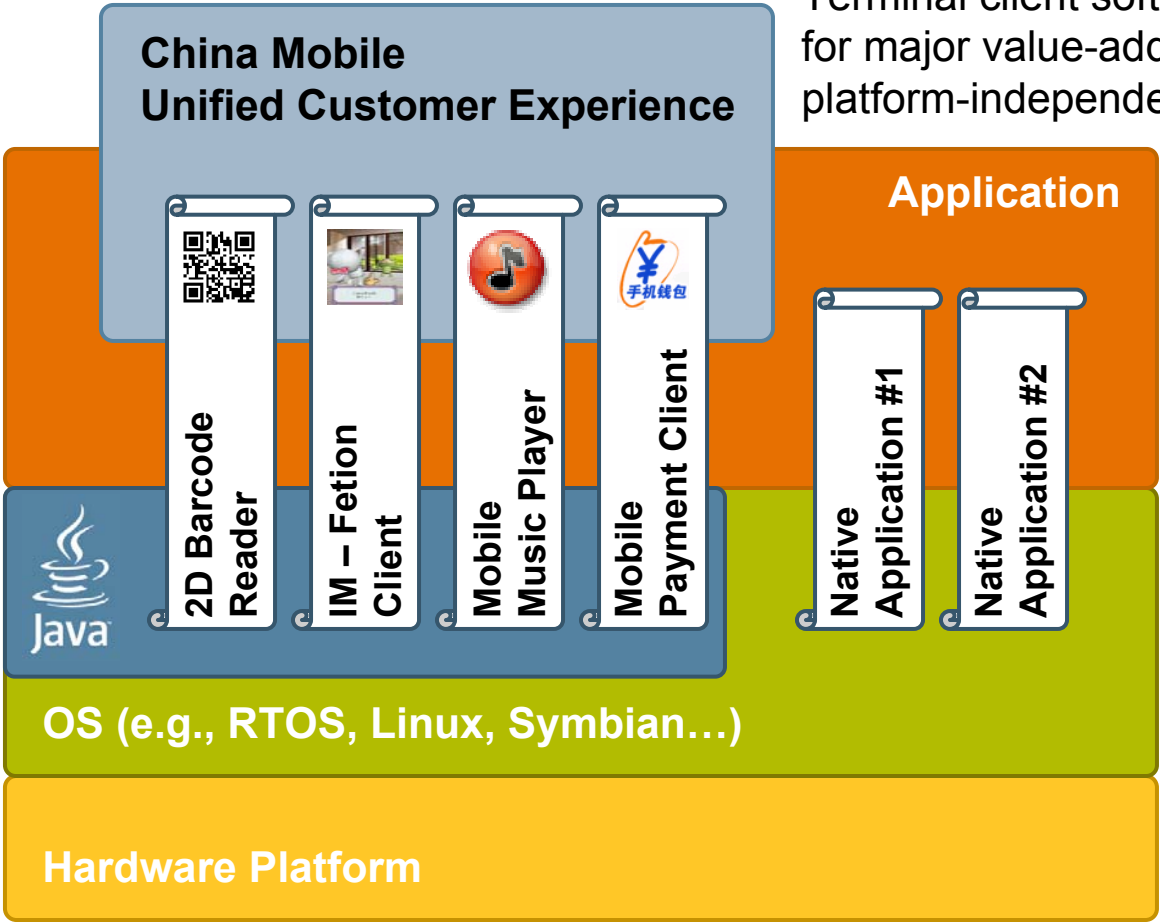
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Utilize Java Platform to Bring Better and Unified Customer Experience to Customer

- Variety of mobile phones in the market based on different platforms has caused complication for China Mobile to build consistent customer experience for value-added service customers; to resolve the problem, China Mobile is working on a solution at platform level, intending to leverage Java platform
- China Mobile will create **terminal client software based on Java platform** for major value-added services, to enable China Mobile to create better and unified customer experience across different platforms

[Example] Illustration of Unified Customer Experience Utilizing Java platform

Terminal client software based on Java platform for major value-added services will help to create platform-independent unified customer experience



Exclusive Java Platform Extension API on top of JCP program specs will make terminal client software be more attractive and useful; as a result, China Mobile will gain more market advantage

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China Mobile Java Specification ①

China Mobile's Java specification for mobile phone

- Current **Version 3.0.0** introduced in Sep. 2005 by China Mobile R&D
- Mandatory requirement for China Mobile customized mobile phones with Java platform feature
- Before entering into the market, all “China Mobile 3.0.0 compatible” mobile phones have to pass CETS test besides Java Specification Request (JSR) TCKs; and manufacturers shall submit mobile phones to China Mobile for further test



Selected Models of China Mobile 3.0.0 Compatible Mobile Phones in the Market

China Mobile Java Specification ②

Abstract

Low Tier

Middle Tier

High Tier

VM & Java™ Environment	<ul style="list-style-type: none"> • JSR 185 JTWI 1.0 	<ul style="list-style-type: none"> • JSR 139 CLDC 1.1 	
Communication and Connectivity	<ul style="list-style-type: none"> • JSR 118 MIDP 2.0 <ul style="list-style-type: none"> – CommConnection – HTTP/W-HTTP/HTTPS – Socket Stream – Secured Socket Stream – Datagram – Push (SMS) • JSR 120 WMA 1.1 • GB2312 Support 	<ul style="list-style-type: none"> • JSR 205 WMA 2.0 	<p>** Better clarify and define optional features or functions in JSRs to further avoid confusion</p>
Multimedia and Graphics	<ul style="list-style-type: none"> • Vibration 	<ul style="list-style-type: none"> • JSR 135 MMAPI 1.1 <ul style="list-style-type: none"> – MetaDataControl – RecordControl – MIDI (with RateControl) – Sampled Audio – Tone Sequence • Alpha Blending • Volume Key Control 	<ul style="list-style-type: none"> • JSR 135 MMAPI 1.1 <ul style="list-style-type: none"> – 3GPP TS26.234/RTSP for streaming – Audio Mixing (Two channels at least) – Video Playback (H.263) • JSR 184 Mobile 3D
Security, PIM, and Others	<ul style="list-style-type: none"> • JSR 118 MIDP 2.0 <ul style="list-style-type: none"> – Recommended Security Policy 	<ul style="list-style-type: none"> • JSR 075 PDA 1.0 <ul style="list-style-type: none"> – PIM 	<ul style="list-style-type: none"> • JSR 075 PDA 1.0 <ul style="list-style-type: none"> – FileConnection
Testing Requirement	<ul style="list-style-type: none"> • TCK Compliance for all JSRs • Amark 		

Expectation on China Mobile Java Specification Beyond Version 3.0.0

- Version 3.0.0 has been widely adopted by major manufacturers, as **China Mobile is pushing this specification strongly**, more China Mobile 3.0.0 compatible mobile phones are expected in the market
- China Mobile will keep eyes on the development of global standards, including JCP program and OMA, and make adjustment to the specification when appropriate
- To gain more market advantage, exclusive Java Platform Extension APIs have been in development, and may be put into next version of the specification; for example, 2D barcode APIs, mobile payment APIs, terminal motion APIs as well as industry-specific APIs

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China Mobile at JCP Program①

Strengthen our participation in JCP Program

- Representing world's largest mobile subscriber base, China Mobile understands the influential position to the mobile telecommunication industry in the region and shows its commitment to JCP program and Java community
- Based on sound experience from practice, China Mobile will provide constructive comments or suggestions on JSRs that related to mobile telecommunication industry
- For latest/upcoming JSRs related to business of value-added service, China Mobile will assign dedicated staff for expert groups, contribute to the specification

China Mobile at JCP Program ②

- China Mobile sees the needs for developing new JSRs for the industry and market in China as well as in Asia; by working together with existing partners (e.g., Sun, Motorola, and Aplix/iaSolution), China Mobile has interest in being Specification Lead for new JSRs
- [Example] Enable double-byte character (e.g., Chinese, Japanese, Korean, ...) direct input method in Java Platform, Micro Edition (Java ME platform), especially MIDP...
- [Example] Enable/control mobile TV in Java ME platform

China Mobile With Developers

- China Mobile welcomes worldwide Java application developers to bring their attractive Java content to China and participate in M-Box
- Content development tool, China Mobile Extension Tool Kit (CETK) for the Java platform, provided free to CP/SP
 - Based on China Mobile Java Specification Version 3.0.0
 - Developer can utilize CETK to develop and test their Java platform content on PC; content executed on CETK should be executable on all China Mobile 3.0.0 compatible mobile phones
- Revenue share business model with Java platform content/apps developers or content/service providers for M-Box



Q&A





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