WORLDWIDE MARKET ANALYSIS
AND STRATEGIC ASSESSMENT
2004-2009

Mobile Java™

Applications, Markets & Technologies

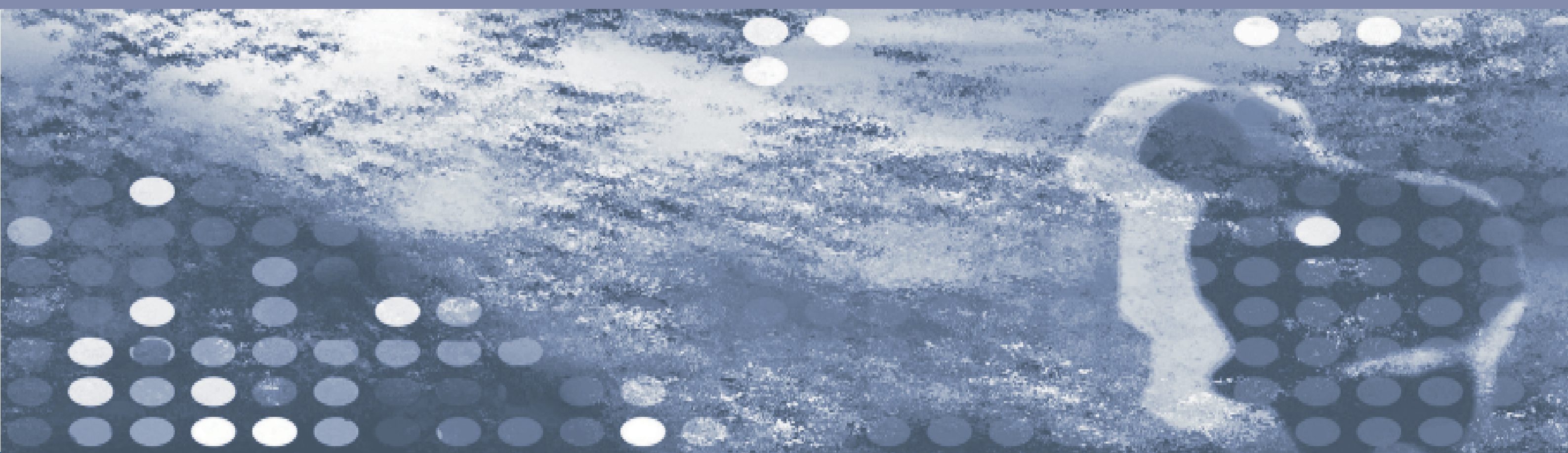
This report investigates the growing market opportunity for mobile Java™ application-downloads, with an emphasis on mobile games. It also considers the factors that are key to the successful launch and marketing of new mobile application services, drawing on the experience of industry pioneers.

Coverage

- **Market Forecasts** 2004-2009 - Extensive analysis by key region - revenues & shipments, Java™ and non-Java handsets.
- **Business Models** - Examination of different models & revenue generating opportunities. Case studies of BREW and iMode.
- **Platform Technologies** - Analysis and review of the main challenges, emerging developments and alternative technologies.
- **Player Strategies** - Plans and developments of infrastructure providers, operators, developers, handset manufacturers etc.
- **Results of Mobile Java Survey** - Expectations for adoption, development, applications, partner revenue sharing, barriers etc.

Audience

- Network Operators & Service Providers
- Component, Equipment & Software Vendors
- Venture Capital, Financial Institutions, Merchants & Retailers
- Media, Content & Application Providers
- Consultants & Strategic Planners



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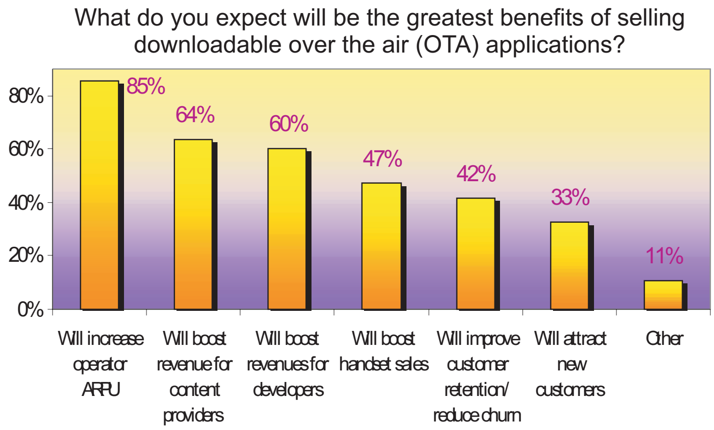
Mobile Java™

Report Overview

Mobile Java™ has generated much industry and media excitement since the first MIDP (Mobile Information Device Profile) specification was released in 2000. Java™ technology has been widely embraced by the mobile industry as the de facto standard for developing and delivering mass market mobile applications. New mobile Java™ download services open up many fresh business opportunities for network operators, application developers, content owners, content aggregators and handset manufacturers.

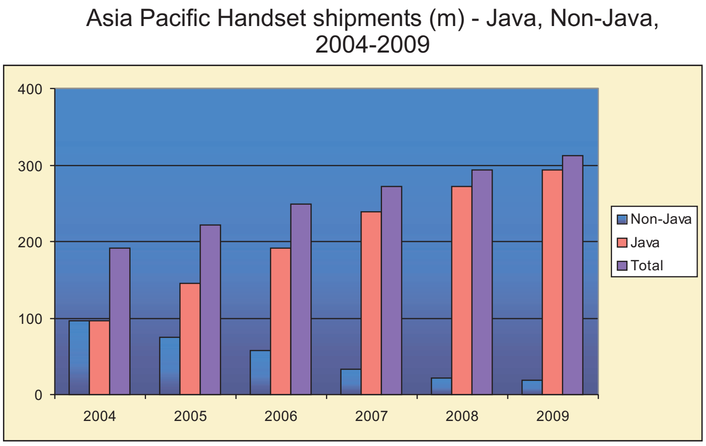
This report serves as a timely guide and reality check on the emerging market for new mobile Java™ services at a time when industry expectations are high and new services in Europe and North America are starting to take off. In presenting the findings of this report we have drawn on the experience of mobile industry pioneers including our survey of senior managers such as CEOs, Marketing Directors, CIOs etc. This helped us formulate our unique market sizing and growth model for the sector. Some key findings are shown in the graph below .....

Mobile Java™ Survey



The aim of the Mobile Java™ survey was to find out how industry leaders expected applications sold Over The Air (OTA) to develop, with a particular focus on Java™ based solutions as well as alternative options. Conducted during 2003/2004, the survey analyses answers from sixty six executives.

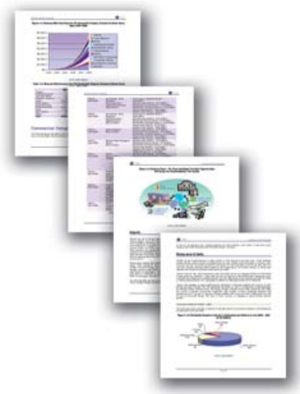
Mobile Java™ Forecast



Forecasts include revenue forecasts accruing from Java™ downloads between 2004 and 2009. The number of Java™ compatible handsets shipped, as well as overall shipments. We offer breakdowns by geographical region and technology.

about the author

Carl Potter is a Senior Analyst and Consultant with Juniper Research. He has over 15 years experience in the IT industry. Much of his work is currently focused on the mobile telecoms sector, particularly the consumer market. He has worked as the director of research/analysis with an international systems integration company and also as the head of research with two of Europe's leading IT analyst firms. Additionally he is the author and editor of numerous comparative reports on leading edge technology as well as media analysis consultancy reports for a number of global telecoms organisations.



Our reports are rich in tabular and graphical analysis, and comprehensively cover each issue from a technical, business and commercial point of view.

content summary

Executive Summary

Key findings of the report. The challenges.

1. Mobile Applications Market Landscape

Introduction - The big picture

Mobile applications and Java™.
Customer, industry & technology trends.

The mobile handset mega-trend

The best way to win.

More parallels with the PC industry

Open standards accelerate commoditisation.
Mobile phones, even more suspiciously like PCs on the inside.
Java™ unites them all.

Market Effects

Moulding the market into niches.
Race to discover new niches - only the most innovative need apply.
Designer quality. Haute couture phones for fashion victims?

The New Breed of Competition

Clones arise. Attack of the clones.
Operators flex their muscle.
Who else wants to roll their own clones?
New designer clones.

Application Opportunities

Niche applications, vertical markets, brands, games/ entertainment; customisation.

2. Mobile Java™ Technology

What Exactly is Java™?

What makes Java™ different?

Java 2 Micro Edition (J2ME)

J2ME - industry endorsement.

Profiles

Mobile Information Device Profile (MIDP), OTA support, improved security features.
JSR 185.
In the pipeline.
Other Standards Bodies.

Java Challenges

Platform independence, portability vs performance. Performance.

Benefits of Java

Client-server functionality; Ubiquity; Appeal to developers, operators, content providers/ aggregators, handset manufacturers & customers.
Rival/ alternative technologies.

3. Business Models - Show Me The Money!

Revenue Generating Opportunities

Ecosystem or Symbiosis?
Models - Operator centric; content provider centric, manufacturer centric.
Vertical market model.
Summary.

Case Study - i-Mode

i-appli - operator benefits of adoption.
Appeal to customers, content providers.
Business model - a benevolent patriarch.
A simplified value chain.
Co-ordination of content, devices and marketing.
Will i-mode succeed in Europe?

Case Study - BREW

The BREW distribution system, deployments, operator experiences - KT Freetel, Verizon Wireless. Implications & BREW challenges.
Conclusions.

4. Mobile Java™ Survey: Results, Analysis & Comments

Objectives, Respondents & Demographics

What is it, its impact, and who is involved?

Barriers & Benefits

- What do you expect will be the greatest benefits of selling downloadable over the air (OTA) Applications?
- What do you think are the top five barriers to selling downloadable OTA applications?

Revenue Expectations

- Which types of mobile content do you expect to be among the top five revenue earners in: 2003; 2005; 2007; 2009?
- Which mobile technologies (SMS, MMS, WAP/WML, Java™, BREW, MS.NET CF) do you expect to generate most revenue through data services in 2003, 2005, 2007, 2009?

Technology Adoption & Comparison

- What advantages do you think Java™ 2 Micro Edition (J2ME) currently has over rival technologies?
- Which technologies (Java™, BREW, MS.NET, Others) did/will you most use in 2003, 2005, 2007, 2009?
- Which technologies (SMS, MMS, WAP/WML, Java™, BREW, MS.NET CF) will you be using to develop data services in 2003, 2005, 2007, 2009?

Application Developers

- What type of applications does your company focus most effort developing?
- What is your preferred sales channel for mobile applications yo have developed?
- What is your preferred revenue sharing model with channel partners such as Operators, where they fund the marketing?
- What is the maximum percentage of revenue that you would share with channel partners?

Content Providers & Aggregators

- Who are your main customers?
- What services do/ will your company provide in 2003, 2005, 2007, 2009?
- Which types of content does/will your company provide in 2003, 2005, 2007, 2009?
- What is the maximum revenue percentage that you would share with a developer where the Operator funds the marketing?

Network Operators

- What is your expected OTA application revenues as a percentage of overall ARPU in 2003, 2005, 2007, 2009?
- European Operators: What percentage of your subscribers has/will have a handset that allows applications to be downloaded in 2003, 2005, 2007?
- What is the maximum percentage of revenue that you would share with an application developer, where the operator funds the marketing?

Summary of key findings

content summary

5. Mobile Java™ Forecasts

Methodology

Global Forecasts

Asia Pacific
Technology migration, Java™ revenues, Java handset shipments.

Europe
Technology migration, Java™ revenues, Java handset shipments..

North America
Technology migration, Java™ revenues, Java handset shipments.

South America
Technology migration, Java™ revenues, Java handset shipments.

Rest of World
Technology migration, Java™ revenues, Java handset shipments.

Conclusions
Important lessons.

6. Player Profiles

Mobile Infrastructure Providers

Openwave Systems
Overview; Java™ strategy; Progress; Developers programme

MX Telecom
Overview; Java™ strategy; Progress; Developers programme.

Publishers

Tira Wireless
Overview; Java™ strategy; Progress; Developers programme.

Network Operators

mmO2
Overview; Java™ strategy; Progress; Developers programme

Handset Platform Providers

Savaje
Overview; Java™ strategy; Progress; Developers programme.

PalmSource
Overview; Java™ strategy; Progress; Developers programme.

AlphaCell Wireless
Overview; Java™ strategy; Progress; Developers programme

Content Providers

WES
Overview; Java™ strategy; Progress; Developers programme.

Developers

ROK
Overview; Java™ strategy; Progress; Developers programme.

Xpherix
Overview; Java™ strategy; Progress; Developers programme

Smartner
Overview; Java™ strategy; Progress; Developers programme.

Mediation & Billing

Mobileway
Overview; Java™ strategy; Progress; Developers programme.

Highdeal
Overview; Java™ strategy; Progress; Developers programme.

Others

Motorola
Overview; Java™ strategy; Progress; Developers programme.

Handango
Overview; Java™ strategy; Progress; Developers programme.

End2End
Overview; Java™ strategy; Progress; Developers programme.

IN-FUSIO
Overview; Java™ strategy; Progress; Developers programme.

Esmertec
Overview; Java™ strategy; Progress; Developers programme.

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Symbian
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our background

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