



IBM USER EXPERIENCE

**Mobile Applications and  
OpenTravel Specifications**

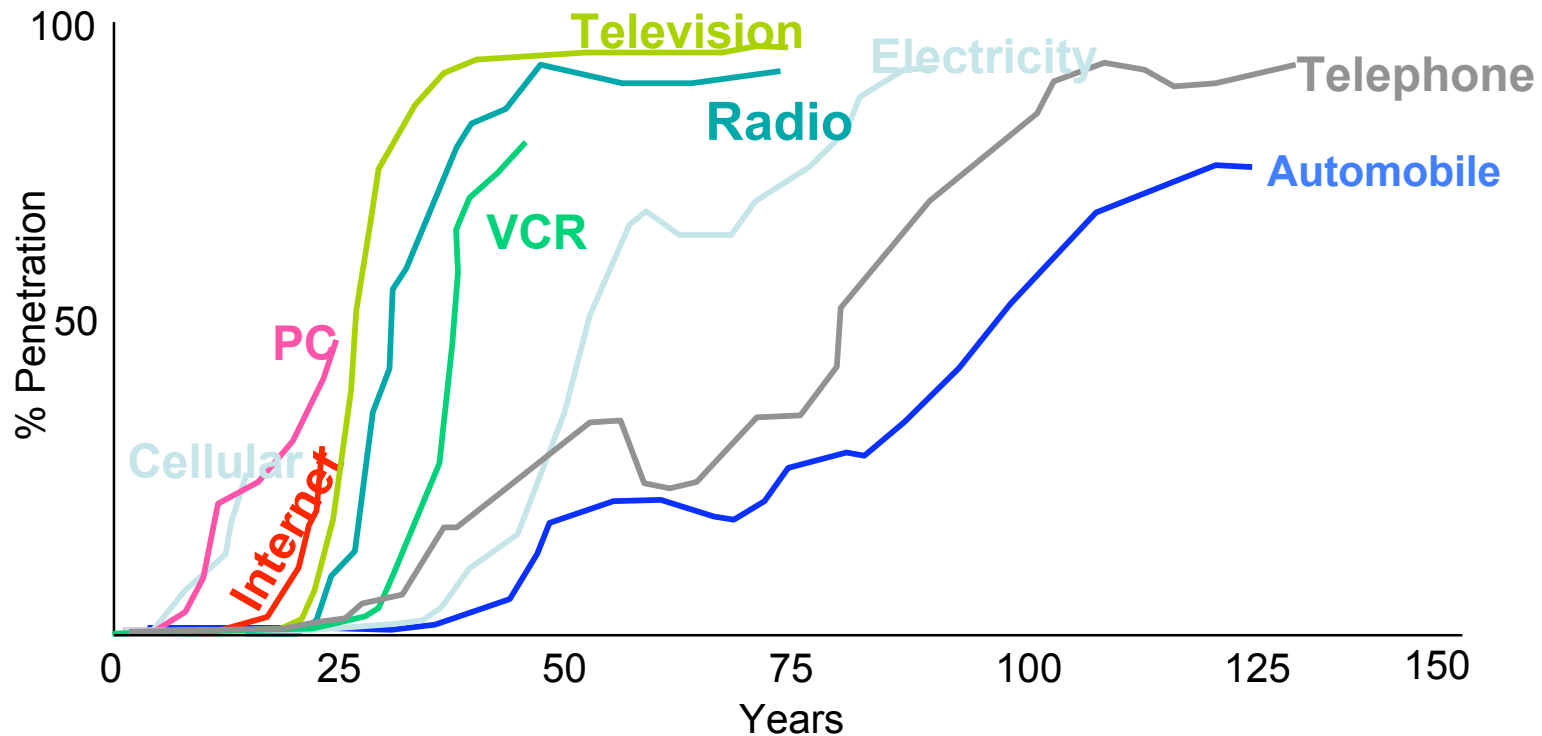


## AGENDA

- Introductions
- Is the Mobile channel important?
- What is the next generation of mobile applications?
- How do Open Standards come into the equation?
- Questions & Discussion

## The pace of innovation and technology adoption is accelerating

Newer technologies are taking hold at double or triple previous rates



## Is the Mobile channel important?

- “By 2010, the number of cell phone users worldwide is expected to hit three billion”
  - National Post, April 2007
- “By the end of 2010, almost 40% of handsets will support GPS or A-GPS”
  - Gartner, November 2006
- “31% of US travelers who own a wireless-enabled device used it for text messaging, email, the Internet or other wireless data services”
  - Forrester, January 2007
- “Mobile phones are cheaper than PCs, there are three times more of them, growing at twice the speed, and they increasingly have Internet access. What is more, the World Bank estimates that more than two-thirds of the world’s population lives within range of a mobile phone network. Mobile is going to be the next big Internet phenomenon. It holds the key to greater access for everyone - with all the benefits that entails.”
  - Eric Schmidt, CEO of Google

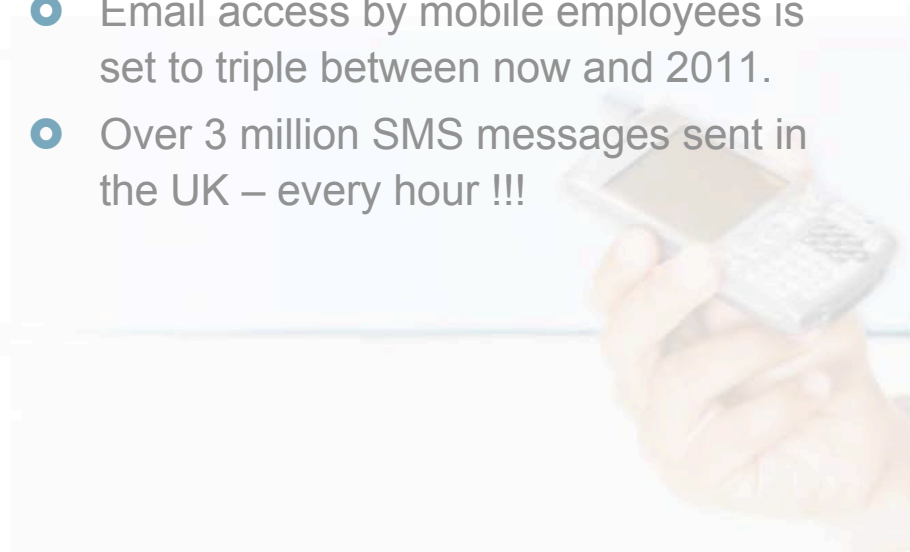
## What are today's wireless "killer applications"?

### Voice

- In the U.S., at least 70 percent of telecommunications revenues come from voice services (including cellular)
- 20 to 30 per cent of RIM's Pearl smart phones, introduced last year, are being sold by U.S. carrier T-Mobile without data plans.
- "The killer app (on mobile phones) is making calls" - Steve Jobs, introducing Apple's iPhone.

### Text Messaging/ E-mail

- At end of 1Q, 2007 the total BlackBerry subscriber account base was approximately 8 million with over 1 million users added in the quarter alone.
- Email access by mobile employees is set to triple between now and 2011.
- Over 3 million SMS messages sent in the UK – every hour !!!



## What makes these applications successful?

- They are widely available and portable
  - ⊙ Wide coverage within geographies.
  - ⊙ Improved cross-geography compatibility.
  
- They fulfill an immediate need / want
  - ⊙ Individual's need to feel connected at all times
  - ⊙ Immediate access to information
  - ⊙ Tool for social interaction
  
- They act in an asynchronous manner
  - ⊙ Interactions need not be initiated by the user
  
- They are easy to use
  - ⊙ Interface is intuitive and does not require a learning curve.

## What will be tomorrow's "killer application"?

### Browser/Mobile 2.0

- Builds on Web 2.0 ideas
  - Software as services
  - Collective intelligence
  - Lightweight programming models
  - Software above the level of a single device
- Browser plays several roles
  - Allows access to a wide range of content sources.
  - Acts as delivery mechanism for connected applications (OTA provisioning)

### Payments

- Already gaining significant presence in some geographies (e.g. Japan, EU).
  - Over \$900 million worth of payments in Japan during 2006.
- Currently focused on person-to-person transfers.
  - TextPayMe, PayPal
- Wide adoption in the U.S. (especially around retail) still limited as a result of growing pains and conflicts amongst key players.
  - Telcos vs Banks vs Credit Cards

## Mobile 2.0



## Mobile Payments – Various Approaches

### Mobile wallets

Telecom providers such as NTT DoCoMo and T-Mobile and cell phone producers such as Motorola use NFC chips built into mobile phones to introduce mobile wallet services. These chips store either value or credit card information which can be used with special terminals at checkout



### Contactless chipcards

Public transport providers, oil companies, credit card companies and others provide customers with NFC chip or “smartcards”, e.g. Octopus – originally a ticket for all forms of public transport in Hong Kong but today also a payment mechanism at convenience stores, supermarkets, fast-food restaurants, parking meters, service stations, vending machines and for making charitable donations. The system is also used for access control to offices, schools and apartments.



### Text-payment services

Users send text messages (verified by PIN-code and/or other commands) initiating payment. In some cases software is downloaded to the cellphone and money is transferred through menu applications. Galeries Lafayette sends customers monthly account overviews by SMS which are authorized for direct debit by the customer in the same way. Charges and conditions of use vary.



Source: IBM Institute for Business Value

## What role should OTA play?

- Enhance existing specifications to accommodate mobile channel
  - Look at reducing the “chattiness” of the specification
  - Simplify the data model to take into account the device’s limited processing capabilities.
  
- Aim to “Expose Your Enablers”
  - Encourage third party developers to use specifications to enhance the traveler's experience.
  - Consider allowing usage of specification without requiring formal agreements.
  
- Foster the critical mass required for applications to take off
  - Help solve the chicken and egg problem

## Questions / Discussion

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