

3G Business Prospects and Planning

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Agenda


- 3G Market Drivers:
 - 3G is very capable, but ...
 - affordability will limit demand
- A vision for the 3G Market:
 - Segments
 - Services
- Who will deliver the value?
- 3G prospects for network operators
- Checklist for regulators
- Checklist for business planners




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3G Market Drivers




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Mobile Sector Status 2005

- the mobile phone is gaining in popularity as it becomes a multimedia tool
- new multimedia content services are being developed, mainly entertainment-oriented, supported by high speed data transmission networks
- Awareness of the data capabilities of mobile phones is increasing, as evidenced by:
 - the widespread success of SMS
 - downloadable ring-tones
 - downloadable games
 - MMS and Internet access (limited use so far)
- the foundation stones of a new era - the "all mobile" era in which mobile phones merge with computers/PDAs to "do it all" in a fully mobile environment



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2005 - the start of an era in which mobile phones/devices can do it all

- High-speed data transmission is now a reality, with UMTS/3G available in many countries. Benefits:
 - mobile services are more user-friendly
 - mobile browsing more practical
 - transmit more information in a shorter timeframe
 - easier to connect to any remote device.
- Mobile phones have become much more than entertainment handsets:
 - computing capabilities
 - business applications
 - convergence of the PDA, mobile computer and telephone in a single device.
- **Growth potential:**
 - voice market has matured
 - SMS traffic levels are reaching an upper limit, but ...
 - **Mobile browsing "always-on, always with you, Internet access" has strong potential for growth**
 - **Entertainment services e.g. TV to mobile – also strong potential**



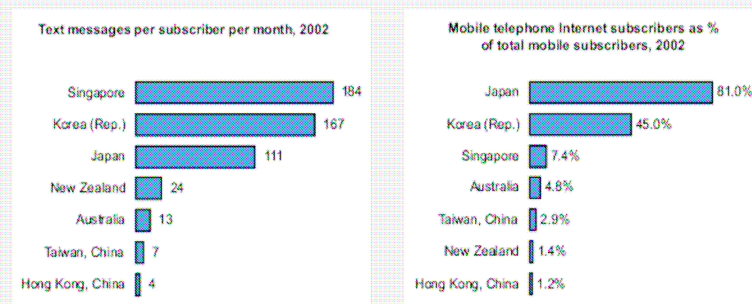
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Some countries are already well advanced in Mobile Internet access

Figure 2.14: Mobile Internet

Number of text messages per mobile subscriber per month (left) and mobile phone Internet subscribers as percentage of total mobile subscribers, 2002, advanced Asia-Pacific economies (right)



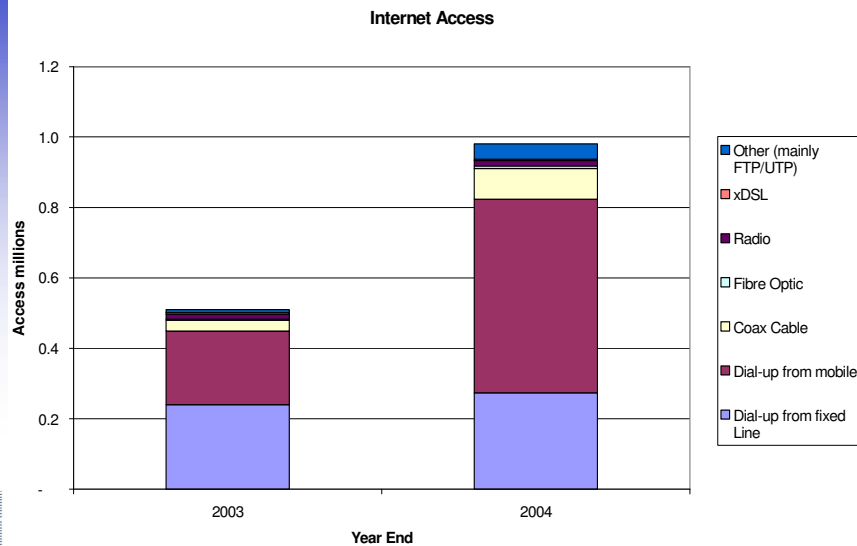
Source: ITU World Telecommunication Indicators database.



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Internet subscriptions are growing rapidly using a wide range of access technologies



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Drivers of growth for 3G

- Mobile services:
 - Internet/Data
 - Corporate Network Extension
 - Entertainment (audio and video downloads, TV to mobile)
 - Video Conferencing
 - Video messaging
 - Location-based Services
 - Convenience voice
 - Other Message services
- Greater Capacity at lower cost per unit:
 - More capacity = lower prices for calls
 - More users = more calling opportunities
- Universal Service:
 - Covering areas which fixed networks don't
 - Low-user tariffs and low-user subsidies



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But ...

- 3G networks are expensive to build – breakeven point may be extended
- 3G phones are more expensive to manufacture
- 2G/GPRS/WLAN handsets/PDAs may offer equally good services but be cheaper to serve in the network (2G + Wi-Fi hotspots for example)
 - Even in markets with established 3G networks practical solutions are still being pushed on 2G/GPRS – e.g. Blackberry for voice, e-mail and internet
- There are other technologies which provide high-speed connectivity, e.g. Wi-Fi, Wi-Max, UMTS-TDD
- Target ARPU must be two times or more the acceptable ARPU for 2G networks
- **Will enough customers be able to afford the services, or is 2.5G enough?**
- Ultimately it's a question of timing – eventually 3G equipment will become cheaper than 2G per voice channel and the prices of phones will start to converge – then 3G becomes the natural upgrade path for 2G in any case.



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Wi-Max and competing BWA technologies

- BWA technologies available today what may take WiMAX until 2007. For example, both Flash-OFDM (Flarion) and UMTS-TDD (IPWireless), are fully mobile and are available in PC card format for insertion into notebooks.
- IPWireless recently announced the production of a prototype UMTS-TDD handset. The device is expected to be commercially available about now.
- These technologies have a head-start in network deployment. In Europe alone, there are now commercial UMTS-TDD networks in
 - UK (PCCW)
 - Germany (AirData)
 - Portugal (Portugal Telecom)
 - according to IPWireless, there are currently trial networks in many other European countries
- Given the operator deployments of equipment such as IPWireless, by the time mobile WiMAX arrives (around 2007 according to Intel), there will be at least one operator offering mobile BWA services with a non-WiMAX technology in most developed communications markets.




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A vision for the 3G Market




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3G can mean many different things to different people

Segment	Services Required
Business	<ul style="list-style-type: none"> Access to Corporate Network and Applications Mobile E-mail and Messaging Location Services Audio and Video Conference Voice
Personal	<ul style="list-style-type: none"> SMS MMS Chat E-mail Location services Entertainment services (music, videos, TV, etc.) Games Voice



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Development of the 3G Market – status 2005

Global UMTS Network Status

	Networks
In Service	67
Pre-Commercial	9
Planned / In Deployment	57
Trial	14
Status Unclear	2
License Awarded	6
License Revoked	7
License Tendered	2
Potential License	32



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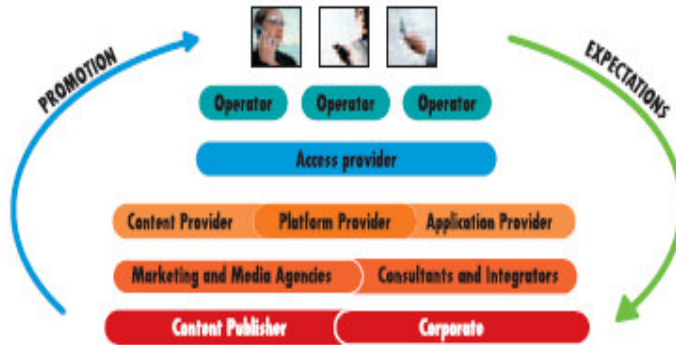
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Who will deliver the value?



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The new mobile services value chain



3G Business Structure will be more like Internet/Web than 2G mobile

- **Telecom Operators** carry voice calls, messages, and Internet traffic, bill end-users and collect revenue.
- **Access Providers** offer service providers access to a multi-operator network for multiple services (e.g. voice, SMS, MMS, GPRS, browsing):
 - manage commercial and technical relationships with telecom operators and guarantee a high-quality network.
- **Platform Providers** simplify the development of mobile services, including:
 - promotion, ordering, delivery, billing and customer care.
 - Platform providers need an in-depth knowledge of new mobile technologies, formats and features. They must work closely with access, content and application providers.
- **Content Providers** produce the mobile "content", such as news, horoscopes, logos, ring tones, directory assistance, TV listings, animated logos, videos, games and so on, that can be purchased by mobile phone users.

3G Business Structure will be more like Internet/Web than 2G mobile (cont.)

- **Application Providers** develop the interface programs that allow content to be sent and received in a user-friendly format to meet the demands of various business sectors, responding to the demand for corporate network extension, e-mail, e-commerce, TV voting, games, chat, etc.
- **Content Publishers** launch and advertise value-added services for mobile phone users, promoting brands, portals, magazines, newspapers, TV channels and any other company or organisation that wants to target a specific audience.
- **Corporates** will use the 3G mobile phone as a way of communicating with their customers, employees, suppliers and others.
- **Marketing and Media Agencies** advise companies on how to implement mobile marketing strategies.
- **Consultants and Integrators** advise companies on how to define, structure and implement their wireless strategy within their corporate information system.



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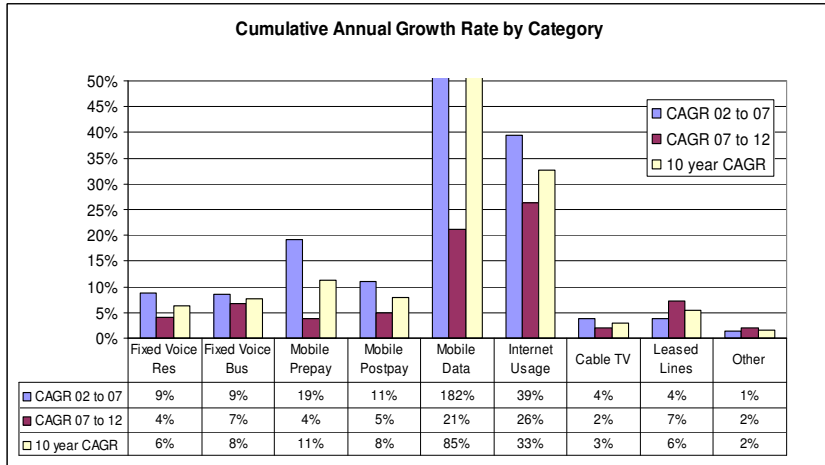
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3G prospects for network operators



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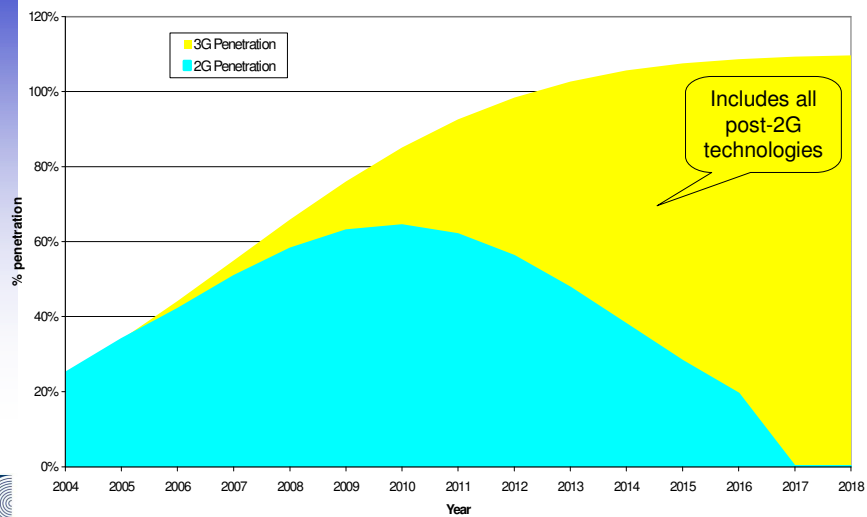
Growth is forecast to be strongest in mobile and Internet



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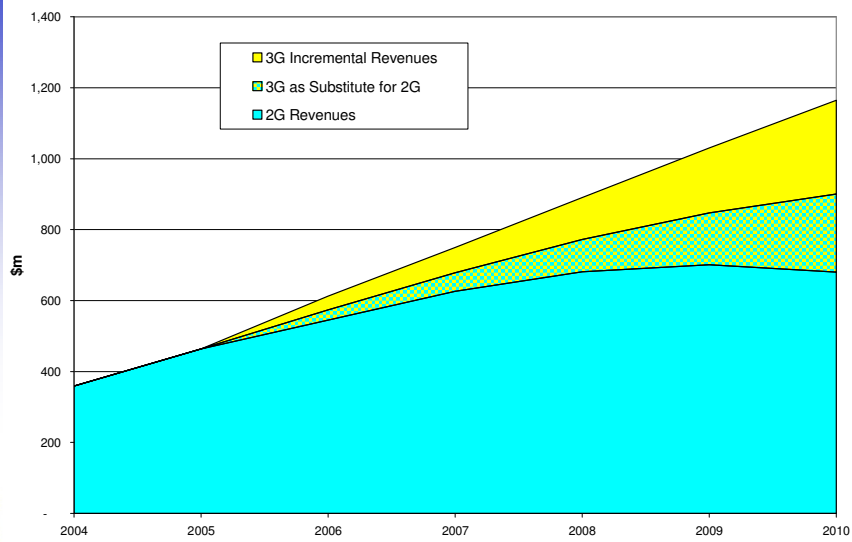
3G will be slow to take off but will eventually dominate the mobile sector



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As 3G Revenues grow, they will in part substitute 2G - the net benefit to network operators will be reduced



Checklist for regulators

Regulation of 3G

- 3G is a natural upgrade for 2G, so the regulatory task is to:
 1. Determine how many mobile networks can be sustained
 2. Free 2G spectrum and Issue that number of 2G licences
 3. Free 3G spectrum and license it to the 2G operators
 4. Increase competitive pressure if desired by enforced resale and MVNO provisions
- Remember benefits of complementary technologies such as WiFi, BWA (various) WiMax, broadcast to mobile, etc. Release/license these bands too, as appropriate
- Open or class licensing for the non-network complementary businesses*
- Issues such as market dominance, interconnection etc will be equally relevant in 3G as in 2G

* Businesses which do not supply telecoms services to consumers will not need to be licensed



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Checklist for business planners



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Plans and Forecasts for 3G need to be verified in the local context

Market

- How large are the potential market segments:
 - Business/corporate users
 - SMEs
 - Self-employed
 - Older personal users
 - Younger personal users?
- How much can they afford to spend on communications (and entertainment)?
- What share of this spend can 3G reasonably take?
- How many competitors will divide the cake? (inter-operator churn, etc.)

Investment

- How much coverage is required for a credible start-up network?
- Is infrastructure sharing allowed?
- Can a nation-wide network be profitable?



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For Network operators, partnerships may also be critical

- Access Providers
- Platform Providers
- Content Providers
- Application Providers
- Content Publishers



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Thank you


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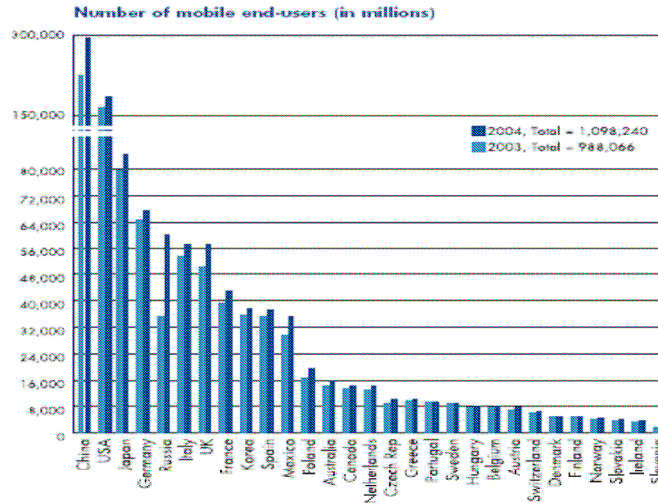


Spare Slides



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The mobile sector continues to be very successful



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