

## 0 Executive Summary

The mobile industry is currently undergoing a rapid stage of evolution and development, and 3G portal services are at the heart of this evolution. With a 3G portal services revenue potential of over \$200 billion by 2010<sup>1</sup>, a number of industry participants are actively engaged in developing the 3G portal services market.

The UMTS Forum is at the forefront of 3G developments and has published a series of studies including market forecasts for 3G service revenues for 3G network operators. Many of the services, which are identified and analysed in these studies, will be experienced by end users via 3G portals. Therefore the importance of portals cannot be understated.

The need for this 3G portal study was identified at the April 2001 UMTS Forum/3GPP workshop in Sophia Antipolis, "Assessing the Requirements for Deploying 3G Services". The need was identified for feedback and guidance to industry in order to smooth the implementation and customer up-take of 3G services. The existing plethora of technology, standards, browser types, and options would otherwise hinder market developments.

The UMTS Forum decided during the above-mentioned workshop to undertake this 3G portal study in order to support the industry with information and guidance, and to help to identify standardisation requirements and implementation issues in this crucial area.

This "3G Portal Study" takes a snapshot of current trends in mobile portal technologies, standards and services, and provides a quick reference to mobile operators, portal operators, manufacturers and content developers. The report identifies and discusses the most significant issues. The purpose is to provide guidance to the industry that will facilitate the development and adoption of 3G portal services. A concerted industry effort to address these issues will create a more harmonious industry environment for the success of evolving mobile services.

This report has identified three major approaches to resolve issues related to the development and deployment of 3G portal services:

- Convergence
- Market Decision
- Technological Research and Development

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<sup>1</sup> UMTS Forum, Report 13

Interviews with major industry players from the Internet and the mobile sectors of this industry have revealed a common interest in resolving technical and market issues that will enable all players to achieve the needed scale for economic viability. However, the current focus is quite different. Those from the traditional Internet space are more concerned with the consistent packaging; delivery and presentation of content across mobile and fixed devices; while those from the mobile industry are more focused on resolving the technical issues to enable data transmission on historically voice-centric networks and devices. Both parties are now beginning to appreciate the need to work together to resolve the market and technical issues involved.

This handbook has identified three topic areas that the industry is working on to create a mass market for 3G portal services. These topics include:

- Portal application development
- Mobile terminals
- Critical portal service enabling capabilities

Furthermore, each of these three areas includes details on:

- Important issues and trends
- Technology and standards discussion
- Mobile industry implications

A number of critical capabilities have been identified in this 3G portal study for successful development and delivery of 3G portal services. These capabilities include:

- Security
- Privacy
- Billing and Payment
- QoS
- Interoperability
- Content Format/Compression

In order to analyse 3G portal service development and delivery issues identified in this report, three functional sets have been defined to cover the following perspectives:

- Timeframe required for issue resolution and commercialisation into 3G portals  
(Functional Set I)

- Role of industry players in capability selection (**Functional Set II**)
  - Mobile operator
  - Content developer
  - Portal Operator
  - Manufacturer
- Status of issues relative to a number of capability considerations (**Functional Set III**)
  - Current Standards
  - Market Decision
  - Terminal Types
  - Technology

The 3G portal study recommendation section includes:

- 3G service enablers
- Key issues
- Recommendations
- Action needed

The most important recommendations are:

- The markup languages XHTML and HTML are preferred.
- The open content format and compression standards are preferred: JPEG 2000 for images, MP3 and MP3 PRO for audio and music and MPEG-4 for video.

The 3G portal services industry is a very young industry with a tremendous momentum to advance forward. This report has identified key trends in technologies that will pave the way for the growth of the market. Critical service delivery issues of billing, security, privacy, QoS, interoperability and content format will need a concerted industry effort and resolution to realise the full potential of 3G services.

A number of progressive trends have been identified in the processor, memory, battery, display, operating system, and browser technologies. Collectively these advances will create a new family of harmonised and user-friendly 3G mobile devices. A richer end-user usability experience on these new devices will promote the growth of 3G portal services.

While the mobile industry has to address all the technological issues to create a 3G network and marketing infrastructure, it must maintain its focus on the needs of the end-users. It's the end-user who decides the success of a particular service. The end-user needs a simple mobile device and all the complexities of operating system, browser, and media player should be hidden within the layers of technology. Insulating the customer from these tech-

nological complexities will provide the ease-of-use and increase the usage and growth of 3G portal services. In the long term an end-user should simply be able to talk to the mobile device and ask for a movie, a song, selected weather report, customised sports news and/or directions to a restaurant from a 3G portal.