

5 Conclusions

The marriage of multimedia content with mobility represents revenue opportunities to the mobile operator estimated at \$322 billion worldwide by 2010. However, past experience has shown that end users will resist adopting new technology services that are either too complex or too cumbersome. At a minimum, most mobile data users will demand the same quality, ease-of-use and ubiquity that they currently experience in mobile voice services. The end-user experience counts. The quality of the end-user experience will ultimately determine the end-user willingness to adopt, pay for, and continue to use a service. Seemingly subtle differences do matter in using a service at all, and can be the deciding factor for the end user in making competitive choices.

Several factors contribute significantly to the quality of the user experience and therefore significantly affect user adoption and operator revenues:

- **Service Transparency:** *the result of seamless integration and interaction of services that allows users to perform their desired tasks easily and naturally*
- **Service Customisation:** *allows users to choose the service to more closely match their individual needs and work style from a wide selection of service possibilities, and to customise that service through an easy-to-use Web-like interface*
- **Global Roaming:** *allows users to use their advanced services anywhere, across multiple operator networks*

Fundamentally, IMS is about service creation. Though the technical feasibility exists to create innovative services using a proprietary, non-IMS platform, the ability of the operator to continually satisfy user expectations, over time, in these areas is limited. IMS enables mobile operators and other industry participants to quickly and successfully address user needs in each of these areas.

- **Service Delivery:** *IMS allows mobile operators to create and deliver more services more quickly*
- **Service Customisation:** *IMS increases the operator ability to provide services to end users more quickly and with a greater degree of customisation to smaller segments*
- **Service Ubiquity:** *IMS increases the operator ability to offer a consistent experience between mobile and other IP networks*

In order for the projected \$322 billion revenue opportunity to be realised, mobile operators must utilise the power of IMS to create well integrated, easy-to-use services that enhance rather than frustrate the end-user experience.

The IMS platform provides that enhanced experience and is the gateway to future 3G revenue opportunities.

5.1 Operator Challenges

IMS represents a challenge and opportunity to operators. The evolution of mobile networks to 3G/UMTS IMS-based platforms has profound implications for the mobile industry as well as the individual mobile operator. Technology and adoption issues aside, the adoption of IMS has the potential to dramatically alter the value chain of the industry as a whole. While this report has focused on the enhancements to the end-user experience, the following observations should be noted and considered for further evaluation. In addition, a technical annex, "Technology Enablers" is also available for this report.

- IMS-based voice quality must be at least comparable to 2G mobile voice and be as spectrum efficient as 2G. Some of these technical issues are still being resolved.
- The interoperability of IP networks and the rapid service creation enabled by IMS effectively reduce the market entry barriers for new or additional service providers. Incumbent mobile operators will face new competitive threats as well as find new opportunities for partnership and service innovation. The existing industry structure and value chain will change.
- Service ubiquity and global roaming may not be achieved in the short-term because operators have varying deployment strategies and timetables. The issue of how much ubiquity, by customer segment and by market, is needed to prompt market adoption requires further analysis.
- Acceptable quality of service and security are critical functions for user adoption of any IMS services.
- There are some technology enablers for which the industry has to decide upon a deployment policy, either collectively or as individual operators. These issues are addressed more fully in the Technology Enablers Annex to this report. These include:
 - *IP transport in the RAN (backhaul links).*
 - *"IP based RAN" (efficient IP over the air including techniques such as Robust Header Compression).*
 - *RAN capacity enhancing techniques such as High Speed Packet Downlink Access.*
 - *SIP Proxies in the core network.*