



Capitalizing on the Potential of Application-Oriented Multimedia Services



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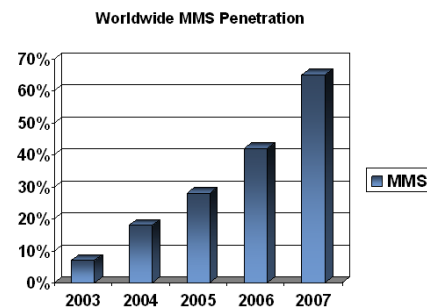
1 Introduction

To capitalize on mobile internet content delivery and marketing opportunities, mobile operators need to enhance infrastructure capacity to handle large-volumes of application-oriented multimedia messaging service (MMS) traffic. This white paper discusses the revenue opportunities for MMS services, the limitations of existing infrastructure and new approaches that leverage MMS bulk messaging engines to allow mobile operators to profitably deliver application-oriented MMS services that drive increased subscriber loyalty, market share and average revenue per user (ARPU) levels.

2 The growth in application-oriented MMS

Now more than ever, application-oriented MMS represents a tremendous opportunity for operators because key requirements for application-oriented multimedia services have fallen into place in many markets worldwide:

- MMS-capable handset penetration is at or above 95% in many developed markets such as North America and Western Europe
- Price cuts and creative service bundling approaches are for the first time making MMS affordable for the mass market
- Interoperability agreements are in place so that mobile operators can enable interworking between multiple carriers
- Subscribers are now familiar with the vast potential of MMS and mobile data services



Source: Ovum + Airwide

As a result of these key requirements finally being in place, MMS has been gaining momentum and shifting from a vision of the future to a real-world capability that can differentiate mobile operators and dramatically increase subscriber loyalty through rich multimedia services. Person-to-person (P2P) P2P traffic in markets such as North America, Asia, and Eastern Europe is experiencing torrid growth, and other markets—such as in countries in Western Europe—are also beginning to show signs of significant growth. Mobile operators are also now finding that application-to-person (A2P) MMS can be a valuable tool for stimulating high-value person-to-person (P2P) MMS uptake. A2P MMS is frequently used in educational campaigns, and services are being created to stimulate viral adoption.

For example, TIM in Italy gave people the opportunity to modify A2P content and forward it on to their friends for free. MMS supports the display of rich media presentations (pictures, audio, animation and video) in a structured manner. As a consequence, a multimedia message is a very persuasive communication tool. The end result is more effective campaigns and higher response rates. As a result, there is a driving interest in application-oriented MMS as a mobile marketing and mobile advertising vehicle. In addition to the renewed interest in the marketing potential of MMS, there is significant interest in the corporate and enterprise sector in using MMS as an e-commerce tool with applications like e-coupons and e-ticketing and in using MMS to deliver high-value content.

Brands, services and mobile operators are all seeking to use MMS as an enabler for complex applications. Web 2.0 services that rely on user-generated content are pouncing on A2P and person-to-application (P2A) MMS. Social networking sites such as YouTube, Flickr, MySpace



and Facebook all allow users to post and receive multimedia content. ABI research estimates that five percent of MMS traffic in North America and Europe this year will be mobile-to-web traffic where subscribers upload content from their mobile devices. Mobile operators are leveraging P2A MMS for their own social networking services as well; for example, UK mobile phone companies 3 and O2 offer the EyeVibe social networking service, which encourages mobile users to share multimedia video clips via MMS and lets them get rich if their clips becomes popular.

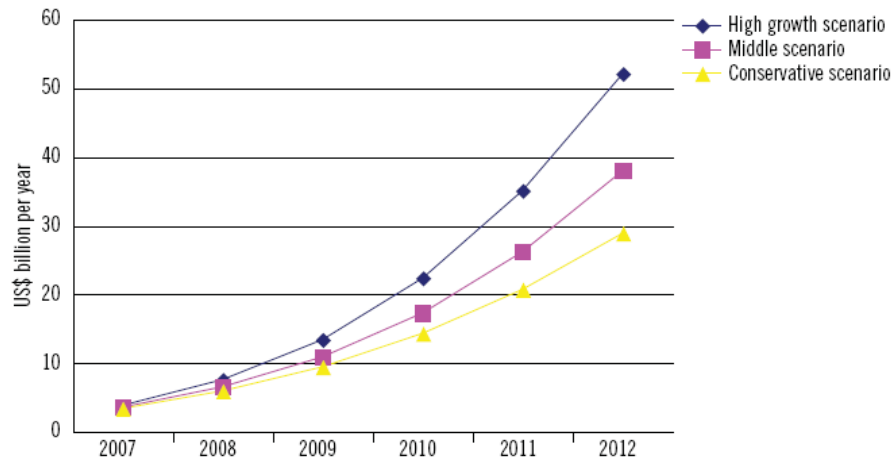


Figure 1 Global total mobile community revenues in three scenarios, 2007-2012.
Source: © 2008 Informa Telecoms & Media, Mobile Advertising 2nd Edition report

MMS alerts are rapidly becoming profitable services that are popular worldwide. Operators increasingly offer instant updates to major events to interested subscribers. For example, MMS goal alerts that update soccer fans on game progress and enable access to video clips are now popular throughout Europe, and the ESPN sports network offers diverse sporting alert services that are tailored by subscriber and enable click-throughs to video feeds. Major online brands are now delivering mobile access to rich media alerts. For example, traffic services can enable mobile access to multimedia traffic feeds and weather services can allow mobile consumers to subscribe to weather-based multimedia alerts. Users can subscribe to news alerts, financial alerts and sports alerts, and the richer the multimedia content that is offered, the greater appeal it offers to the consumer.

Robust and immediate multimedia content increases consumer “stickiness” and yields higher subscription and advertising revenue rates. It can also drive click-through to portal sites so that content providers can increase their advertising revenue rates because MMS is visually more appealing and because many mobile phones do not yet support hyperlinks in their SMS viewers. MMS also enhances the value of advertising because service providers can allow subscribers to forward multimedia messages to friends and colleagues who they think will be interested in the alert. At the same time, MMS provides control for managing the viral spread of content. If for an example a content provider does not want its message forwarded the company can use digital rights management (DRM) technology to prevent it.

Mobile marketing and multimedia advertising opportunities offer great opportunities for mobile operators. The growing acceptance of mobile messaging has created a pervasive and valuable new marketing opportunity for brands, which in turn is creating a significant revenue opportunity for mobile operators. With reliable infrastructure in place and a means to control and measure campaigns, mobile operators can create and deliver effective mobile marketing initiatives to subscribers, who are more receptive than ever to receiving relevant—and captivating—multimedia marketing promotions over their mobile handsets.



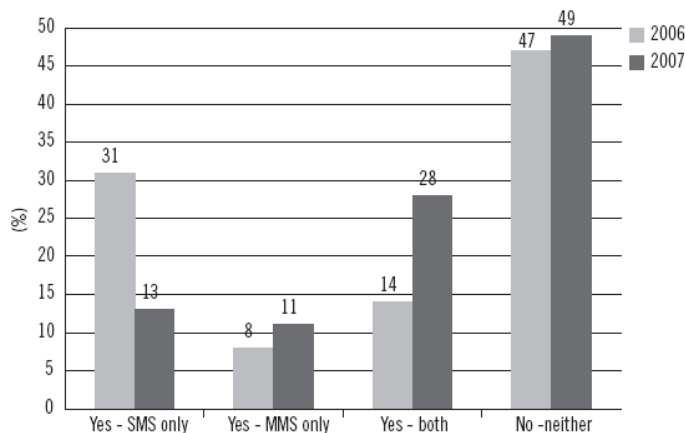


Figure 2 Are you considering implementing text messaging (SMS) and/or multimedia message (MMS) marketing in the next 12 months? Source: Airwide Solutions 2007

Promotions based on rich multimedia content deliver greater brand impact and higher response rates, and P2A campaigns that encourage consumers to communicate with applications increases subscriber involvement, which leads to more favorable brand recognition, increased response rates and greater subscriber loyalty. Multimedia marketing also creates opportunities for advertisers to move toward mobile advertising-based business models. For example, Blyk is a new mobile network in the UK that targets 16 – 24 year-old subscribers and it is funded by advertising from brand leaders anxious to address this valuable market segment. Blyk relies on MMS as a key element of its business strategy.

A2P MMS Helps China Mobile Sustain ARPU Despite Lower Calling Rates

China Mobile’s key focus last year was on increasing its value-added services, including its mobile newspaper service, which is delivered as a multimedia message. This operator launched a major marketing campaign and offered incentives to link employee performance with service adoption rates. The result was that in a single calendar year China Mobile increased its paid subscription rates more than four-fold, from 5.5 million to 23.6 subscribers by year end. China Mobile also saw substantial increases in its mobile music and instant messaging services, which together helped China Mobile to sustain its ARPU last year despite the lowering of voice tariffs.

Carriers are increasingly implementing bulk messaging campaigns to market their own value-added services as well as the value-added services of third-parties to existing subscribers to increase ARPU levels, create greater brand loyalty and drive revenue growth. MMS also creates opportunities for mobile operators to offer new applications that enhance the value of their services. For example, many carriers are offering enhanced services such as visual voicemail, which allows subscribers to circumvent voicemail IVR systems and manage and listen to their voicemails using their mobile phone graphic user interface (GUI). MMS offers a standards-based platform for new applications and offers operators tremendous potential for differentiating their services, increasing revenue and building closer and longer-lasting bonds with subscribers based on the reliable delivery of voice, data, images and video content.

3 Overcoming infrastructure limitations

Existing MMS infrastructure prevents operators from reaping the full potential of MMS, and a new approach is needed so that mobile service providers can capitalize on MMS market opportunities. Legacy MMS infrastructure lacks the performance and licensing terms needed for “spiky” application-oriented campaigns that need to potentially deliver massive amounts of MMS



traffic within tight timeframes. For example, goal alerts or traffic or weather updates must be delivered rapidly to provide maximum value to the subscriber; otherwise the messages become stale and of less interest to recipients. The value that subscribers place in many MMS services is directly tied to the immediacy of the information, and as time passes MMS alerts naturally decrease in perceived value to subscribers.

Mobile users don't care about yesterday's weather or this morning's traffic congestion, but they inevitably place great value in current information that impacts them immediately. Finally, existing architectures take a one-size fits all approach to MMS traffic and services. Using general-purpose MMSCs for both application and P2P traffic reduces the capacity and threatens the QoS of both types of services.

- **Currently deployed MMS Center (MMSC) infrastructure lacks the capabilities required for high-quality MMS offerings, and it is largely based on a peak-licensing model that penalizes spiky applications.** The peak license model was introduced in early days of MMS—when only P2P traffic had to be supported. This model is not suited for A2P because many high-value A2P services require large volumes of messages to be sent within narrow timeframes, which will lead to enormous licensing costs if charged under a peak licensing model. Moreover, peak licenses require operators to make substantial "bets" on their application-oriented business by requiring payment in advance for capacity they may or may not ever use.
- **Existing MMSC infrastructure lacks the scalability and the server footprint optimization capabilities needed to manage peak-period MMS delivery for bursty campaigns.** Mobile operators need to deploy MMS infrastructure that will provide the performance and scalability required to support spiky A2P MMS campaigns without massive investments in racks of infrastructure equipment. Mobile operators also need the ability to guarantee delivery of MMS services, which becomes particularly critical when the operator is hosting the MMS infrastructure or centralizing the MMS capacity. Infrastructure selected to support the steady—and lower—traffic levels of P2P traffic is insufficient for meeting the demands of delivering spiky MMS traffic.
- **Existing MMSC infrastructure does not separate application-oriented and P2P traffic.** Mobile operators who make a concerted effort to leverage MMS applications will eventually find that using P2P infrastructure for both P2P and application requirements fails to meet the capacity and QoS requirements of either. Application-oriented traffic will threaten P2P QoS or vice versa, and the costs of expanding P2P infrastructure capacity to meet application-oriented requirements as well as P2P requirements will simply be unsustainable.

4 A more effective MMS approach

Mobile operators need a new approach to address the emerging requirements for high-performance, scalable and reliable P2P and A2P MMS infrastructure. Application-oriented MMS services require the ability to cost-effectively increase capacity to accommodate the demands of bursty MMS services.

One option for supporting growing application-oriented requirements and spiky applications is to upgrade to the latest general-purpose MMSC infrastructure available from legacy equipment vendors or specialist messaging vendors. Because of the increased demands for MMS capabilities, these vendors have not been standing still and have generally increased performance and capacity. But it is still disruptive to perform the required forklift upgrade of the MMS infrastructure necessary for meeting today's service demands, and only moderate performance improvements lead to space and utility-hungry footprint requirements. Given the rapid growth in demand for application-oriented MMS, this approach is at best a very expensive



stopgap measure. Moreover, mobile operators need the ability to separate application-oriented traffic from P2P traffic, and they need the ability to profitably address today's licensing models that penalize A2P traffic.

A far more effective approach to capitalizing on application-oriented MMS is to augment monolithic MMSCs with separately scalable bulk messaging components. Bulk messaging technology takes into account the particular characteristics of application-oriented messaging to achieve much higher per-node performance levels than achievable on P2P systems. This technology can be employed using dedicated bulk messaging engines or even using messaging gateways that employ bulk messaging technology. This allows mobile operators to bypass expensive MMSCs and implement a cost-effective and highly scalable solution to current and future application traffic needs. It lets service providers segregate traffic flows and protect high-value P2P traffic from A2P and P2A traffic so service providers can optimize the subscriber experience. The use of separately scalable bulk messaging components also allows operators to dedicate enough application-oriented capacity to ensure a consistently high quality of service for important applications. Mobile operators can successfully capitalize on the potential of both P2P and A2P MMS offerings by selecting A2P infrastructure that:

- Provides high-performance and scalable delivery of ever-increasing volumes of multimedia content
- Enables stable and reliable delivery of time-sensitive messages. Mobile operators need to offer high-value MMS offerings that are always available, without the risk of network outages during peak capacity time periods
- Is based on solid vendor experience and familiarity with operator and network infrastructure
- Is based on high-quality products that enable dependable, around-the-clock MMS service delivery
- Enables efficient and trouble-free integration with existing network infrastructure resources
- Offers alternative licensing terms that accommodate the usage demands of both P2P and A2P multimedia services

5 Capitalizing on an innovative MMS solution

As the global-market-leading provider of next-generation mobile messaging and wireless internet infrastructure, applications and solutions, Airwide Solutions has one focus: To enable your revenue to keep pace with the burgeoning consumer-driven mobile messaging and wireless internet market. We offer powerful MMS infrastructure solutions that allow you to profitably capitalize on the potential of application-oriented MMS.

For more than 15 years, Airwide has helped boost our customers' messaging revenue streams and subscriber confidence while protecting infrastructure investments. Our open architecture enables operators to effectively monetize their mobile messaging growth without disrupting existing infrastructure. From the first text message ever sent to the introduction of the first SMS router and A2P bulk messaging engine, Airwide continues to pioneer new technologies.

AirGate MultiMessaging with MMS Direct Delivery bypasses expensive legacy MMSC infrastructure allowing spiky and high volume MMS traffic to be delivered directly to the end-user. Utilizing the latest in bulk messaging technology, AirGate MultiMessaging allows operators to achieve separate scalability and optimized support for P2P, A2P and/or P2A. This scalability and flexibility enables the low cost per message and QoS needed to offer compelling A2P, P2A and P2P multimedia messaging services, capture additional market share, control capital and operational costs, and increase revenues.



The ability to separately scale spiky application-oriented traffic offers a growth path for performance intensive services and burgeoning application-oriented traffic. Adherence to industry standards, and AirGate MultiMessaging's flexible business logic enables it to be deployed, integrated and operated with the lowest total cost of ownership and represents a future-proof solution. AirGate MultiMessaging's robust VASP and campaign management capabilities, make it a complete solution for all an operator's application-oriented business requirements.

A Snapshot of the Fusion Architecture

Airwide's tiered mobile messaging architecture, called Fusion, puts control back in your hands by taking advantage of today's efficient network environment in order to separately scale network elements by function - application, delivery, storage and policy management, and traffic type, for a higher degree of flexibility and control. Our Fusion tiered messaging architecture has evolved through more than 15 years of development and supports some of the most complex, high-performing mobile networks around the globe. Fusion helps you break down the silos of different messaging services and allows you to rapidly deploy services to attract subscribers and generate incremental revenues. Fusion is a next-generation architecture built on real experience from practical implementations, and all Airwide products are built on this architecture, which means you can benefit from it today and tomorrow.

6 About Airwide Solutions

Airwide Solutions is the leading provider of next-generation mobile messaging and wireless internet infrastructure, applications and solutions. Its products help more than 140 wireless operators worldwide drive mobile messaging usage and revenues and enable them to leverage multiple delivery channels and next-generation infrastructure in new and more powerful ways. With a history of industry firsts—including the first text message ever sent, the introduction of the first SMS router, the first A2P MMS solution and mobile service control which enables mobile context, personalization and profiling—the company continues to pioneer new technologies. Airwide's open, tiered Fusion architecture offers mobile operators advanced revenue options, a practical pathway to Mobile Messaging 2.0 and a foundation to bridge mobile messaging and the mobile internet. Airwide Solutions operates globally with offices in Europe, the Americas, Asia Pacific, India, the Middle East and Africa. For more information about Airwide Solutions, please visit www.airwidesolutions.com.

