

## **Digital Rights Management Meets the Mobile Phone**

by Joseph Deutsch, NDS Director of Business Development, Mobile and New Initiatives

When discussing the future of mobile phones, the sky is the limit. Technological advances such as color screens and the ability to turn phones into cameras, audio and video players, as well as games stations have transformed handsets into advanced multimedia devices.

But it seems the market is reaching saturation. Voice services, which are the same for all operators, have been maximized. Forecasts indicate that increased competition and the worldwide economic slowdown are putting a ceiling on mobile services. Lower revenues from voice services and slower subscriber growth lead to lower average revenue per user (ARPU). The result is that mobile operators are going to great lengths to differentiate their services while looking for new ways to increase ARPU.

That's why sophisticated digital content is the next step in mobile telephone technology. It's an ideal way for operators to increase revenues and differentiate themselves from the competition. The business model suggests that digital content over mobile phones will increase revenue because it will increase air time, while at the same time, encouraging consumers to purchase more sophisticated handsets. All of this is in addition to the sale of content itself.

### ***Worldwide ringtone market***

If you're an average mobile phone subscriber, you are probably mildly amused by the "distinctive" rings you hear whenever you're in the supermarket, shopping mall or virtually every public place. However, if you are a mobile phone operator, you're laughing all the way to the bank. Industry analysts estimate that revenues from these ringtones reached almost \$1 billion worldwide in 2002. This has led mobile operators to try to figure out the next phase.

What do analysts forecast? Mobile operators are already adopting MMS technology that combines music with video downloads. If a number of technological issues can be solved, this premium content presents an opportunity of the highest magnitude for operators. It has been suggested that mobile data revenues in Western Europe alone are set to increase from about \$14 billion in 2002 (13.6 percent of all mobile revenues) to \$45 billion (33 percent of mobile revenues) by 2007.

### ***Introducing DRM***

However, the forecasts could all collapse like a house of cards if the digital content on mobile phones is compromised. The example of Napster comes to mind. According to the International Federation of Phonographic Industries (IFPI) report from June 2002, 99 percent of the music files that were available online in 2001 were *unauthorized*. In the short run, content providers can protect their content by limiting availability. But eventually this will have to change. They will have to find a middle ground.

In order to get content providers to agree to make their content available to mobile operators, a viable digital rights management or DRM solution will have to be in place.

What is DRM? It is a way to secure the distribution, promotion and sale of digital content. According to the Open Mobile Alliance, the international organization that is developing standards for the mobile telephony industry, the purpose of DRM is “to enable the controlled consumption of digital media objects by allowing content providers to express usage rights.” Examples of these usage rights include the ability to enable content to be previewed, to prevent downloaded content from being illegally forwarded (copied), and to otherwise control content distribution.

Because of the value of the content involved, any future plans will have to satisfy the concerns of the content owners, while simultaneously meeting the needs of the mobile industry. Until both sides are pacified, there will be no sophisticated digital content on mobile phones. The fact that mobile phone users are willing to pay for premium content – as the worldwide market in ringtones strongly suggests – can be expected to serve as an effective enticement for both sides to agree.

### ***Basic functionality***

The OMA is working on a DRM standard that includes the following:

**Forward lock.** Content is packaged in a manner that prohibits it from being forwarded to other handsets.

**Combined delivery.** An extension of forward lock, enables content to be delivered together with the rules (rights object) for its use.

**Separate delivery.** The rights object and the content are delivered separately. If content is sent to other users, they cannot use it until they purchase a license.

### ***NDS and mobile DRM***

NDS is prepared to roll out a mobile DRM system that is based on its experience with protection of high quality digital television content and data. As a world leader in the field of conditional access for Pay TV, NDS is prepared to apply its technologies to the world of mobile telephony. The NDS DRM system will enable mobile operators to ensure that they earn new revenue from the content they provide to mobile operators. Protection mechanisms will secure content and more important, secure the various business models that are applied to the content, so that when the content is used, it generates new revenue.

What is unique about the NDS approach is that the level of security can be upgraded and increased to support more valuable content which will be introduced in the future – with better bandwidth and better handsets.

With the sale of high quality content becoming the “next big step” in the world of mobile telephony, content protection in the form of digital rights management will become essential. By applying its pioneering research and development in the field of digital pay TV and other media, NDS has developed unparalleled expertise in the protection of digital content and management of rights to digital content – and is ready to ensure the future of the mobile telephone market.