

SECURING A PIECE OF THE



Jean-Luc Jezouin

WHICHEVER BUSINESS MODEL MOBILE OPERATORS CHOOSE TO FOLLOW TO ENSURE THAT THEY REMAIN KEY PLAYERS IN THE MOBILE TV VALUE CHAIN – THEN THE PROTECTION OF THE CONTENT THEY SERVE TO THEIR USERS WILL BE KEY. KEITH DYER HEARS FROM JEAN-LUC JEZOUIN, SENIOR VICE PRESIDENT, MOBILE BUSINESS, NAGRAVISION – KUDELSKI GROUP, HOW OPERATORS CAN MANAGE MOBILE TV SUBSCRIBERS AND CONTENT PARTNERS TO THEIR MUTUAL BENEFIT.

MOBILE EUROPE: Perhaps it might be a good starting point to ask what benefits mobile broadcast TV offers to mobile operators. After all, with broadband mobile networks such as HSPA now widespread, operators are already seeing success with streaming 3G – why the need for broadcast?

JEAN-LUC JEZOUIN: As your readers may know, I have 15 previous years working in the UMTS and HSPA field around the world, with Nortel and latterly with Alcatel-Lucent. And, yes, there are about 12-15 million mobile broadcast TV users in the world and 30-35 million 3G streaming mobile users in the world. So why the need for broadcast? The truth is they are complementary. If you only use 3G mobile for TV then fairly soon you have to start dedicating radio carriers to cope with the extra traffic. To install another carrier is simple operationally, but it's a high value solution in terms of

the resources required, from engineering, to the radio power amplifiers and channel cards required. Second, it places a great demand on bringing transmission lines from the core RNC to the base station. And this backhaul opex cost is today the number one focus of attention of mobile operators. That's why broadcast technology is good for network operators faced with rising transmission costs. And you know, in recent meetings I have had with Vodafone, Orange and China Mobile, the number one focus they all expressed at the moment is the threat of spiraling transmission costs.

ME: So broadcast may help affray those backhaul and radio network costs, but is it not itself a fairly expensive solution to roll out nationally, for mobile operators?

J-LJ: The cost of a mobile broadcast network to cover a

large European country like Germany, France or Italy, will range from €3-15 million Euros per year per TV channel, depending on population served and coverage quality, from outdoor to deep-indoor. That's a lower number than many people expect. The reason is, if you start with the high points in a country, like an Eiffel Tower, you can broadcast to thousands of square kilometers from one point. There are perhaps 30-50 such points in a country, so it will not cost a fortune to achieve wide coverage. Most of these towers/ points are already equipped with DDT capability and could be used for DVB. Then you can add in the medium high points like 50-story buildings, and today from those points you can get good coverage in-building - certainly better than just into the front room of a building. So that's good enough to get started and if you need to get very deep inside buildings then

you can think of other cellular or femto/access point types of coverage. People tend to think you need a combination of cellular type coverage with the Eiffel Tower - but there's no need for that to get started.

ME: Even so, €15 million per channel requires a considerable return on investment. With many people used to free access to some broadcast services, do you think operators can sustain a "free to air" model for mobile TV?

J-LJ: Experience from the fixed TV world suggests that if advertising alone were to finance such costs, the average user would have to watch TV on his mobile for over one hour per day, which is unrealistic.

But the truth is, people are used to paying for broadcast TV, whether it is a few dollars subscription or by buying a piece of equipment, such as a set top box, which contains a fee invisible to the consumer.

MOBILE TV CAKE



Nagravision's micro-SD and SIM based Serviced Protection

The latter is what typically happens in the fixed Digital TV world.

Contrary to a popular belief, Korea exactly illustrates this point for Mobile TV. Even though seven million Korean consumers regularly watch mobile TV, none of the six terrestrial, and one satellite, operators is yet making money. As they need to expand their networks to increase delivery quality, they are starting to collect a fee per handset sold to fund such expansion.

Additionally, what's happening today in some countries is that governments give the market confidence – and that is good for business. In Japan and Korea, say, the government thinks, "Mobile TV is good for the country's economic development" so operators say, "We are going ahead, will try to make it work, and then after deployment make the money."

In Europe, with perhaps USA in the middle ground between the two, operators are more business case aware, and there's a mindset which adds up the pros and cons, usually with fairly conservative assumptions, and then they hesitate to get started.

ME: So one way or another, operators need to extract payment, what do you think the most likely sources of revenue are, and how can operators protect them?

J-L J: Market research and real

life experience consistently show that consumers will pay a moderate fee to watch TV on a mobile device – in different ways. In the first model, the fee can be collected from each mobile broadcast device sold, as we have discussed already; this one-time service access fee is invisible to the consumer and is used to fund the deployment of the network. This model can be used to deliver "free" channels without subscription. Alternatively, the fee can be a periodic subscription paid by the consumer, which is the most common pattern of pay-TV. Finally, the fee can be linked to individual purchasing decisions, such as pay-per-view, pay-per-time, etc. Of course all three methods can be combined to offer flexible business models permitting both free channels and pay channels to coexist and optimise operators' revenue.

The key to all this, even in the "free to air" model, is to ensure that the service access fee is collected, encryption of the video stream should be enforced, because even "free to air" doesn't really mean free.

For pay TV operators up to now, this has been critical. Protection just means the effective monetisation of the services provided. Yet in Pay TV, of course, the number one income flow is what customers will pay. In mobile TV, mobile operators' number one income is voice revenue, then comes data revenue. For them, pay TV

can be an anti-churn measure, or even a customer acquisition tool. For example in Italy, because Hutchinson 3G has a very good DVB-H network then they attracted premium subscribers from other operators. The crucial thing for mobile operators is to realise that content protection is just as vital to their business cases as it is to the fixed TV providers.

And Nagravision can offer a view of both worlds because it plays between two worlds. At Nagravision we have people from the broadcast and mobile industries who can cover both sides of the coin, spending time evangelising. It gives us a good idea of the sort of products required for operators to make money. It's given us a 95-98% DVB-H market share worldwide in the

Service Protection area, which in turn has given us real good life experience of network operator requirements.

ME: And what role do you think the nature of the content can play in boosting the mobile TV business case?

J-L J: The good news is that consumers have been trained for years to pay a premium for thematic channels, such as sports, news, or entertainment, and also for mobile communications, so there is little doubt that they will pay for Mobile TV, as long as attractive content and pricing are offered with simplicity and good usability. A prerequisite is the emergence of a media industry making content specifically designed for mobile consumption, ie short episodes measured in minutes, repetitive, likely several times per day, and interactive so that users can modify the course of the stories.

Even if someone has a broadcast-only device, their mobile handset will still be the natural place for them to interact, through SMS for example. So what is required is the ability to feedback through a nice GUI, or even through podcasting from your fixed internet connection at home or in the office. So you need that user experience with the right information protection, so that the user is serially protected too. That's



Service Protection in a secure SIM or micro-SD is key

"The secure element in the mobile device is invisible to most people but is indispensable to guarantee the generation of value"

why service protection is not just about securing the content.

ME: So service protection becomes a critical tool for mobile operators?

J-L J: Yes, the secure element in the mobile device is invisible to most people but is indispensable to guarantee the generation of value by this new industry. This can be a special variant of a SIM or a micro-SD card. Distributors, be they broadcasters or mobile operators, will be empowered in the value chain, if, and only if, they control a secure card in each mobile TV device. A software based approach is just not enough.

If the terminal has a built-in security mechanism provided by its manufacturer, for example by software, then distributors can (and will!) just be removed from the value chain, since an external server can simply introduce entitlements into the terminal without their approval.

Therefore a device-independent secure card is required in all devices to ensure that distributors are the ones who control the entitlements given to users and stay with a dominant role in the value chain.

At Nagravision, we work with SIM card vendors to integrate our security software on the secure chip of the SIM, implementing either the DVB OSF standard or the OMA BCAST Smart Card Profile

specification. We have also developed a micro-SD card, targeted at "non-mobile-phone" devices, such as pocket TV, PMP, GPS. The micro-SD format includes a secure computing chipset, as the SIM card does, plus additional memory in the order of several Gigabytes. This micro-SD form factor is very important, since markets which have launched mass Mobile TV teach us that Pocket TV's represent nearly half of all devices sold, the other half being mobile phones equipped with a tuner.

ME: With so much horse power in each device, you can surely do more than just decrypt the video streams, can't you?

J-L J: Absolutely. The micro-SD format can really turn a mobile device into a very powerful "set-top-box in your pocket". And then all the great innovations which have made the success of the pay-TV industry can be applied to mobile TV.

I can list many capabilities such as PVR; push-VOD, which optimises network bandwidth by pushing content outside of peak hours; usage monitoring, which provides user-by-user viewing information, which programme was watched at what time; datacasting, to deliver information truly in mass and real-time: stock, news, weather, government messages, and so on.

The secure micro-SD card can also be a micro-DVD to deliver encrypted premium content,

giving a lot of value to the consumer. And it can include a complete environment personalised with the distributor's look and feel in order to capitalise on, and greatly enhance, its brand.

ME: So how developed are these technologies, and what do you see as being the big issues the industry will address in the first half of 2008?

J-L J: The first shipment of commercial micro-SD cards will be made before the end of 2007 to one of our customers in Asia, and we continue to lead the race with OMA BCAST smart card profile, as witnessed with our full Interoperability Tests campaign at the November 2007 OMA test fest against real SIM cards and terminals of our partners Gemalto and LG for instance. And we also participate fully in the STIMI ecosystem in China,

MediaFLO with Qualcomm, and DVB-SH with Alcatel, the satellite-based evolution of DVB-H, which I believe will have a great role to ensure complete coverage.

As we move into 2008, I think we will see mobile network operators and regulators come together and find proper business models for this industry. Germany is moving slowly but a process is agreed in France. Italy clearly did this two years ago, but this will be the big thing in other markets in the first half of 2008. Regulators are keen for services to be available for the Football Euro 2008 and the Beijing 2008 Olympic Games. Even the UK has started to move, although it remains the only major country in Europe where frequency allocation is an issue in the short term.

We'll also be monitoring what's happening in Spain – where we are waiting to see the direction the newly-elected government will take in March/April.

We're also very active in promoting OMA BCAST to become the choice of service provider standard for 3G MBMS. We believe that at the end of the day users must have their TV rights follow them on any of their devices, be it a 3G HSDPA or MBMS phone, a DVB-H broadcast mobile device, and even on their PCs and TV at home.

We know we're ideally positioned to educate and support the industry as all these choices are made across the world.



Attractive services are vital