

## Euro Innovations Newsletter

Welcome to the first issue of Euro Innovations, a publication that will focus on areas where Europe occupies a leading position. These include mobile networks, IMS, fixed-mobile convergence, IPTV and Triple/Quad play. This is not a flag waving exercise, but innovation in these areas means that Europe is well poised to take a lead in the strategies, services and applications that will shape the way we communicate and collaborate and access information and entertainment content in future.

That bold statement is based on the fact that we have become a mobile society and we can foresee the day when broadband wireless connectivity will be pervasive in the industrialized countries. Moreover in a few years around five billion people will be using a mobile phone. Thus, it is hard to exaggerate the importance of the wireless technology.

### Would you like to Contribute?

Contributions to this newsletter are welcomed. Please email them to [ei\\_contribute@pulvermedia.com](mailto:ei_contribute@pulvermedia.com)

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## The Wireless Internet

In the late '90s and at the beginning of this decade the "Wireless Internet" was white hot. The magazine Wired ran a special edition that had Nokia's CEO on the cover and something called WAP was hyped to the hilt. WAP was going to let you browse the Net and obtain information at anytime from anywhere. Data rates were seriously slow, the cost of cellular connections was high, and the lack of useful information another problem. It would have failed even if the bubble hadn't burst.

Well, it's déjà vu time. Mobile rates are good and getting much better. Information is accessed over a packet-switched data channel and many operators have a flat-rate plan, so cost isn't an issue. And phones now come with bigger screens, but there is an issue. Using a browser to pan and zoom around an Internet site is a miserable experience, as evidenced by these stats: Mobile Web penetration is high: 77% in Europe (76% in the USA), but usage is a lowly 31% (32%).<sup>1</sup>



Content created for the Web can be converted into the smaller form factor of a mobile phone, but different models have different sized screens and there are other issues. However, as illustrated, there is technology – it comes from Pictel Technologies – that is delivering a rich user experience and it can be realized on each and every device.

*The phone is my Nokia E61 and this is a life-size display of PriceRunner, a "best buy" comparison service. The content is the same as that of the Web and although the screen is much smaller than a PC, the user experience is the same.*

*As illustrated, the display is exceptionally sharp. This is because special fonts and anti-aliasing are employed. Anti-aliasing is a professional graphics technology that is used to give crystal clear edges to alphanumeric characters.*



# Monthly Newsletter from Pulvermedia

Edited by Bob Emmerson, European Editor of VON Magazine

Euro Innovations • Volume 1

## Picisel Delivers Perfect Content

Picisel ([www.picisel.com](http://www.picisel.com)) is an international company headquartered in Glasgow, Scotland. Their technology was designed to optimize the delivery of content to mobile devices and the publishing “platform” incorporates an innovative rendering technology that brings spectacular results to the small screen.

As indicated earlier, there has been a false dawn – the pre-bubble Wireless Internet – but now we are witnessing the birth of a huge new market for mobile content and services. The ability to display rich content used to be constrained by the resource limitations of the devices as well as the delivery mechanisms, but those days are over. However, the optimum user experience cannot be realized simply by reformatting Internet content for smaller screens. And it has to be realized if this new market, estimated to be over US\$42 billion by 2010,<sup>2</sup> is to fulfil its potential. Around 2 billion phones are currently deployed and this figure rises by 1.6 million every 24 hours.<sup>3</sup>

These devices have different processing and display resources, which means that there cannot be a “one-size-fits-all” optimization process. It has to be realized across the installed base – all model types from all manufacturers – in order to enable the delivery of that rich content experience to each and every subscriber and thereby “make the market” for mobile content.

### Many Market Segments

Content can be segmented by topic or by medium, i.e. TV, print and radio. The mobile equivalent service would normally complement the online experience, as would online shopping. Time will tell, but market research indicates that online “services” may be the biggest market sector, for example, “best buy” services such as PriceRunner enable price comparisons to be made in retail outlets, i.e. at the point of purchase.

### Cool Technology

Users can register in different ways, e.g. send an SMS message with a keyword to a short code number that is provided by the mobile network operator or a content aggregator. A module in Picisel’s server then pushes a message back to the user’s phone. This is used to identify the phone model and the relevant client content player software is downloaded to the phone. This software renders the content so that the optimum display is realized on that particular model. The result will depend on the screen size and the computing resources of the phone.

Once the appropriate version of client software is known, it is combined with the user’s unique “DNA” to create an individual application to be provisioned (downloaded) onto the handset. By embedding the DNA with the application in this way during provisioning, the system as a whole is able to identify and track every individual activity from every separate user on the system.

Picisel software has been embedded in more than 100 million handsets worldwide and a long list of national and international content providers and vendors of mobile-centric services has recognized the business value of transforming mobile content into a medium in its own right.



## Mobile Payments

De Lijn is the bus and tram service in the Flemish part of Belgium and in the two principal cities, Antwerp and Ghent, the transport company is trialing SMS-Ticketing. Using the mobile phone to pay for journeys should result in a more punctual service since it reduces the sales in the vehicle. The new payment system was developed together with Proximus, which is Belgium's the largest mobile network operator.

## IMS: There is a Killer App

IPTV and Triple/Quad Play services can be delivered via an architecture based on soft switches, however when Thomson was making acquisitions in order to build their end-to-end solution they included an IMS company – Cirpack. The architecture of an IPTV solution is complex since it involves a long value chain comprising back-end content and aggregation servers, DRM encryption, middleware, access and set-top boxes. And since the service is relatively new there are no standards and therefore no APIs. It is hard to get all the links in the chain to interoperate. Thomson and other players saw IMS as an architecture on which a standard could be based.



IPTV is set to become an IMS application when the specification is finalized within ETSI's TISPAN later this year or early next. As illustrated to the left, Thomson is already able to demonstrate the integration of Video and Telephony applications. Moreover the IMS architecture will enable the same wireline video content to be displayed on mobile devices.

The ETSI standard that will be specified in TISPAN will allow Thomson to transition their solution to make it fully compliant. Some middleware network functions will go to one of the IMS servers and the middleware will become an application server that sits above the Cirpack IMS core.

An IPTV service based on the IMS architecture facilitates integration with the other services that make up a Triple/Quad play offer. Moreover it allows subscribers to view the same video content and the electronic program guide (EPG) on their mobile phone. Thus, there is no need to pay for a separate mobile video service and having access to the EPG allows users to instruct the service to record a program that they would otherwise have missed.



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## HSPA Hits the Mass Market

The wireless industry loves acronyms and it keeps on inventing new air interfaces. Right now there are nine major standards that have different speeds and ranges, thereby enabling them to match different needs. HSPA (High Speed Packet Access) is a combination of two technologies, one for the downlink and one for the uplink. The goal is 14 Mbps down and 5.8 Mbps up; right now Ericsson has achieved impressive, but lower figures of 7.2 Mbps down and 2.9 Mbps up. These speeds equate to DSL, but bear in mind that air interfaces are a shared resource.

HSPA hitting the mass market refers to Ericsson's introduction of their "U335 WCDMA mobile platform". The platform consists of a chipset together with design guidance and proven software, that will make it fast, easy and cheap for the vendors of mobile phones, notebook PCs and USB dongles to incorporate the technology in their products. In turn that should kick-start the introduction of mass-market, mobile multimedia devices capable of new services such as mobile TV, mobile video blogging and other services demanding both high uplink and downlink data speeds.

The U335 combines high-speed data with state-of-the-art multimedia functionality at a price level that makes true mass-market consumer devices possible. It differs from Ericsson's previously announced HSPA platforms, which focused primarily on network access for PC-card products and high-end feature phones. Thus, the U335 the first platform that enables HSPA devices for all market segments.

The company views the U335 as a flagship product that will support not only higher uplink data speeds than its predecessors, but also incorporate several mobile TV standards and advanced multimedia features. Products built on this "platform" should ship in volumes in the second half of 2008.

## A Sweet Spot is Emerging

Right now a sweet spot is emerging as a result of: improvements in the efficiency of wireless spectrum; the declining cost of wireless delivery and the increase in data rates. In addition, Moore's Law is enabling more wireless capabilities to be put onto computer chips. We are therefore witnessing the benefits of the computing world – innovation, short development times and low cost – being extended to wireless communications.

One development that's coming over the horizon is always on line, broadband connectivity. HSPA will be giving us DSL data rates and competition will lead to more and more operators going down the flat rate route. This is an area that the newsletter will continue to cover, along with a new class of "always-on" Internet connected products, which ABI Research has dubbed "Ultra-Mobile Devices."

<sup>1</sup> Research conducted by the Online Publishers Association

<sup>2</sup> Source: Informa Telecoms & Media

<sup>3</sup> Source: The Economist

