



# Monthly Newsletter from Pulvermedia

Edited by Bob Emmerson, European Editor of VON Magazine

Euro Innovations • Volume 2

## ■ 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?

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## ■ Why Europe leads in cellular telephony

We have become a mobile society and we can foresee the day when broadband wireless connectivity will be pervasive in the industrialised 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 wireless technology leadership.

This fortunate position is the result of hubris: AT&T was market leader in analog cellular telephony, AMPS (Advanced Mobile Phone Service) being the de facto standard: Europe had several standards and roaming was not possible except in Scandinavia. When it came to digital cellular technology it was clear that the nationalistic nonsense had to stop and a pan-European standard – GSM – was established. It was a very slow process and AT&T chose to sit on its laurels, so by the time GSM rolled out it was too late. D-AMPS (D for digital) was a flop. Later on Qualcomm introduced CDMA as a US alternative to GSM. Technically it was superior, but it was too late: GSM had established a global footprint and the rest, as they say, is history.

Another factor that has driven innovation is the competitive environment. Consolidation in the US has resulted in four large carriers who are geographically dispersed and they tend not to invade each other's backyard. When you don't have to compete hard then there is less need to innovate. In Europe the situation is very different. The big telcos, the former incumbents, invade each other's territory and competition is intense.



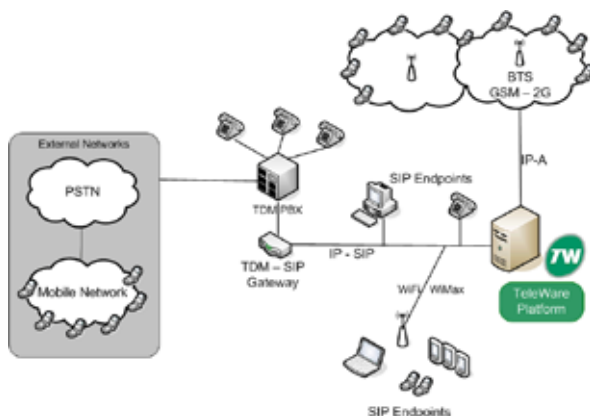
## VoIP over Wi-Fi

The US is definitely the leader when it comes to converged voice and data and VoIP and right now – on both sides of the Atlantic — there is a lot of VoIP over Wi-Fi activity. This is clearly an important development for consumers given the relatively high cost of GSM telephony but for enterprises it can be a problematic solution. Engineering a Wireless LAN (WLAN) for voice is not easy and it's not cheap. An awful lot of internal GSM-to-GSM calls would have to be made before any return on the investment could be realized. In addition, call quality isn't great and the air interface is a shared resource, so network coverage and quality go down in line with increased usage. And perfectly good 2G phones would have to be replaced by dual-mode devices.

This is something the operators can step on by offering special deals to their big customers, e.g. free GSM-to-GSM inside the office and special rates to employees outside. But what the market really wants is to combine the convenience of the mobile phone with low rates and all the functionality of the PBX. Here are two examples.

### 1) Privately owned and managed mobile networks

TeleWare's solutions are based on the ability to create intelligent mobile networks in which GSM devices function as fully featured PBX extensions. It comes as a result of a groundbreaking development: the replication of a cellular network in software. In other words, the functionality of a mobile switching centre and a base station controller is enabled in software that runs on a regular enterprise-class server.



*This is a fully converged, seamless fixed-mobile environment. The key that unlocked this concept was the decision to auction so-called low-power GSM spectrum to UK niche players that have different agendas to those of MNOs. Low power limits the reach, i.e. it works for micro-cellular areas such as office buildings.*

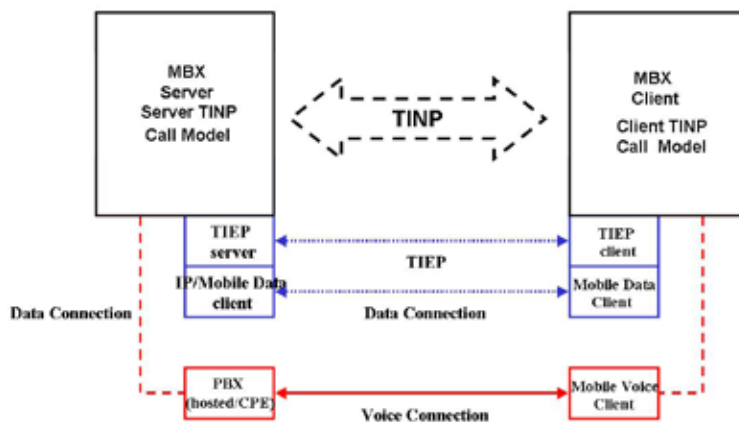
These privately owned and managed mobile networks form part of an enterprise's communications infrastructure, i.e. they have the same functionality as the other devices and are managed in the same way. Internal mobile-to-mobile, fixed phone to mobile, and mobile to fixed phone calls are free. Mobile-to-mobile uses low power GSM spectrum that is leased by TeleWare. It's also available from ten other UK service providers. Calls to and from fixed line phones, both TDM and SIP, are transported as VoIP traffic over the corporate infrastructure.

## 2) Client-server solution enables fixed mobile substitution

The business proposition of OnRelay is very simple. Replace, or better still don't implement, wireline IP phones. They represent around 80% of the cost of the transition to IP, they're proprietary devices and most of the workforce are mobile most of the time, either as road or corridor warriors. However, the solution is not based on the use of VoIP over Wi-Fi using dual-mode phones. Instead it leverages the fact that Mobile network operators (MNOs) are offering fixed-rate / zoned service deals to their corporate customers.

The company's MBX offer sets a high mobility bar. The company employs an endpoint-centric architecture and all protocol intelligence is implemented in the client-server components of the system. The solution integrates to multiple PBX vendors, both TDM and IP, and on the client side it supports open operating systems, e.g. Symbian and Microsoft Windows.

In a nutshell, as illustrated in the schematic, the mobile phones communicate with the server, which in turn uses the data path to talk to the PBX. Wi-Fi interfaces can be used, but importantly, the solution works equally well on GSM / CDMA even when roaming. The solution can also be hosted by the MNO and be integrated with IP Centrex. In a CPE environment the server sits on the LAN behind the firewall.



*OnRelay's solution is distinctively different because it employs a patented protocol: TINP (Telephone Internetworking Protocol) as well as TIEP, which is a proprietary component of TINP (its data language). The software was developed in order to solve the complex integration issues that arise when trying to make wireless and wireline telephony interoperate. The server communicates with the PBX using a data connection, which allows the solution to scale up to the limit of the switch.*

The tight integration with the PBX, TDM as well as IP, allows the mobile phones to perform as regular extensions, which in turn leverages the existing back-office telephony related investments including voicemail systems, billing and call accounting systems, conference bridges, voice recording, CRM systems, fraud detection mechanisms, etc. Another nice feature is the ability to use the same device for business and personal calls, i.e. change the profile. Personal calls are then billed to the individual, not the company.



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## Not so Fast on Femtocells

We ran a survey recently and while the numbers don't represent absolute, quantifiable figures the trends were very clear. Very few of the people in Europe feel the need to install a femtocells in order to boost indoor GSM coverage: right now around 75% of the people we polled indicated that they had no signal strength problems. However, the key application is in the home and rollout to consumers has only just started. Phones communicate with femtocells using a cellular air interface, but the call is converted to VoIP. It travels over the DSL line and the operator's network, the core of which has transitioned to IP in order to reduce OPEX. This allows operators to offer flat rate plans. We can therefore anticipate a rapid take-up of femtocells when this message works its way through to the consumer sector.

Another interesting stat was the high take-up of a triple play service (40%) but the low figure for quad play (20%), i.e. they are not using the same carrier for fixed and mobile telephony. Given that the subscriber agreement for broadband prohibits traffic to other service providers and the only explicit need for femtocells in Europe is the migration to 3G, we can assume that it is going to be slow adoption of quad-play bundles.

As indicated earlier, this is not a definitive sample so we invite you to add your voice to the survey and maybe get a colleague and/or friend to participate.

The link is: [www.tinyurl.com/yptdra](http://www.tinyurl.com/yptdra)

And the results to date can be found at: [www.tinyurl.com/2y9k63](http://www.tinyurl.com/2y9k63)

## Jabber in BT's 21st Century Network

BT has selected Jabber XCP to provide instant messaging for their groundbreaking 21st Century Network (21CN) program. The new services will give BT customers a centralized view of customizable and intelligent message routing, one-to-one IM, group chat, offline messages, message history, file transfer, and interoperability with other messaging systems such as Yahoo!, MSN, Google, and AOL. This will also allow BT to build a user community with aggregated points of communication across multiple channels including mobile devices, televisions, softphones, gaming consoles, and PCs.

## NeuStar Helps 3's Launch of Yahoo! Messenger

NeuStar has helped network operator 3 bring Yahoo! Messenger to their mobile customers in the UK. The service runs on NeuStar's Mobile Messaging Gateway solution. The success of the earlier Windows Live Messenger service prompted the MNO to offer an additional IM solution. The company claims that it works with more operators worldwide than any other company offering Mobile IM services.

## IMImobile to Power Jamba's New Services

Jamba, creator of the 'Crazy Frog' phenomenon, has selected IMImobile as its exclusive managed service provider for its new services. Portals and Mobile Operators are faced with the challenge of maintaining increasingly complex and expensive value added service (VAS) platforms, e.g. mobile content management systems. IMImobile solves this problem by managing the platforms and the delivery of VAS on behalf of its customers.



## ■ IP DECT phone does VoIP



snom technology has launched a new IP DECT phone for VoIP users. The snom m3 is the company's first cordless product and it is designed for use in the home office, SMB or enterprise. DECT is a very robust technology that does true seamless handoff as users move around in office environments so the addition of VoIP is an interesting and logical development.

The indoor range is 50 meters; outdoors it's 100 meters. It's a multi-line system that can handle up to eight handsets and up to three parallel calls. Features include: three-way conference calls, call transferring, music while on hold, call forwarding, and speed dialing with a 100-entry address.

## ■ New phones from Doro



Doro has introduced two new IP phones, wireless ip510w and the illustrated corded ip520c, as well as the ip500bpxw, which is compact broadband gateway having PBX functionality. Basically this is a small but complete solution that combines fast, secure Internet connection with fixed network access and IP telephony options for up to eight users.

In addition there are four new products in the ip800 series. All are based on the new SIP2.0 standard; they have integrated security features and can be used with an IP PBX or Centrex system.

## ■ Multi-Service Access Nodes from NSN

At the European Broadband World Forum 2007 in Berlin Nokia Siemens Networks (NSN) presented its strategy for Multi-Service Access Nodes. When broadband technology was introduced in fixed networks, DSLAMs went into Central Offices to be installed in parallel to the TDM switches. This principle is valid as long as voice service connections exist in a POTS/ISDN-connection based network. On the other hand VoIP has become a standardized and commonly used technology, and it will replace the obsolete PSTN equipment. The transition from TDM-based voice to VoIP in the Multi-Service Access Node saves CAPEX and OPEX. Both protocols - H.248 and SIP - are currently being used, but a clear trend toward SIP is visible. Thus, this multi-service approach will facilitate the transition to fully-integrated, simpler networks.

## ■ Kapsch CarrierCom adds Remote Speech Control

Kapsch CarrierCom has introduced "Remote Speech Control" for their MissisSIPpi mobilePBX. This function allows the PBX to separate the voice traffic from call control on different end devices. Thus the mobile "SIP Call Operator" function still works in areas with weak to non-existent 3G coverage by connecting via a narrowband connection. The call completion, termination or transfer can be controlled via the Call Operator client on the PC/Laptop, and the voice will be forwarded to a GSM mobile phone. The new Kapsch solution thereby enables the full functionality of a call operator client even in narrow bandwidths. In addition Kapsch has added IVR-Assistant, which allows companies to provide their customers with configurable, customized IVR menus that process incoming calls automatically.