ICT is about *Quality of Life*

Congress 2004, Ghent

The 43rd European Telecommunications Congress organised by FITCE from 8–11 September 2004 in Ghent, Belgium, in line with past Congresses, proved once more to be a milestone. Nearly 250 professionals from 17 countries gathered to engage in a lively exchange of ideas under a motto, borrowed—with a twist—from Captain Kirk of Star Ship Enterprise 'To boldly go …on-line any time, anywhere. A vision for the future of ICT services'.

FITCE President Carlos González Mateos speaking at the Opening Session of Congress 2004

With an obligatory salute to Captain Kirk, Marlène de Wouters, hostess to the event, got the Congress straight off the ground into the lofty realm of broadband communications, whose evolution in fixed as well as in existing and new mobile networks was the focus of the Congress. The stylish ceremony continued with speeches by José Van Ooteghem, president of the Congress; Carlos González Mateos, President of FITCE; Frank Beke, mayor of the city of Ghent; Christophe Van Vaerenbergh, cabinet secretary to Marc Verwilghen, Flemish minister for economy, energy, foreign trade and science policy; and finally Anne Bucher, head of unit for 'Analysis, Policy Planning, eEurope' in the European Commission, representing Olli

Rehn, the EU Commissioner for Enterprise and Information Society. And of course, as befits such ceremonial sessions, musical intermezzi were brought by KOA, a fine quartet of young musicians who brought a variety of mostly modern guitar music.

The conference was addressed by speakers from across Europe and other countries. The programme comprised 10

Opening Session: Anne Bucher, European Commission

sessions, each addressing a particular topic, and a round-table discussion as closing session, highlighting the Congress' key messages. The following summary is to a large extent based on the input of the session chairmen in this round table.

The first session—without any doubt—fulfilled the ambition embedded in its title 'Vision Towards 2010' with four excellent keynote speeches recommending approaches to assure a future for the ICT industry of the European Union. Despite good penetration results of some EU countries with respect to broadband access, the bigger challenges are still ahead of us. We need to further improve access and services through huge investments to introduce fibre deeper into the network with the iDTV as the logical next device to focus on. It will be necessary to increase the interdisciplinary research and development to close the gap with the US, aiming at easy-to-use ICT systems to improve quality of life. Regulators need to stimulate operators to make these investments by means of the new flexible EU regulation aimed at 'only regulate when/where needed'.

Session 2 addressed iDTV as a platform for the future broadband services. iDTV services are seen as potential new services which may be delivered by network operators via their evolving ADSL networks. Since network operators and cable operators are in fierce competition

2 ➡

Professor Paul Lagasse, Ghent University, speaking on 'Broadband for All' in the keynote session 'Vision Towards 2010'

for the end-customer for broadband Internet access services, both parties try to become a 'triple play'-er (providing telephony, Internet and television). In this issue lies one of the biggest challenges: which interactive, personalised services will the consumer prefer and buy and how complex will the service platform be to deliver these interactive and personalised services. These new services will also introduce additional challenges to be addressed, such as the access network architecture (for example, where to place the content servers), the middleware platforms to provide these services to the homes and new businesses models.

The third session 'Delivering Services to the Home' focused on the future comfortable and intelligent in-house ambient. The evolution goes towards IP-based digital homes with a myriad of devices and appliances: set-top boxes, videophones, domotics bridges, …. Their control will be enabled via mobile phones, PDAs, Internet, … Access will be possible from everywhere including the workspace and even cars. The

Congress speaker: Nico Baken, KPN

challenge is to merge today's technologies for entertainment, Internet and mobile into one platform.

Advanced Mobile Developments (Session 4) looked at the potential for innovative in-vehicle services, mobile instant messaging and ad hoc networks' applications and challenges.

Session 5 discussed the Mobile User Needs ('Is the progress of UMTS noticeable in the market?') as well as the New European Regulatory Framework for Electronic Communications with the goal to reduce regulation and come to effective competition. Also an approach to split the location-based services over the mobile network and application domain was discussed.

Session 6 on Fixed Mobile Convergence (FMC) concluded that although the convergence is definitely happening, perhaps it is not in the way most people expected it when FMC was first identified as 'voice services seamlessly transported over fixed and mobile networks'. Instead, the emerging convergence is for non-voice (that is, data) services, and the network elements are radio for the fixed (for example, Wi-Fi) as well as mobile (3G).

The key message is that the emerging specification for the next-generation of mobile (4G) is fundamentally for a fixed-mobile system. The technologies and structures of 4G will offer a range of mobility from stationary (fixed) through medium (walking) to high (vehicular). An important consequence of future converged networks is that of personal networking, which might use, for example, ad hoc networks to dynamically reconfigure to

make the best available use of the fixed and mobile capacity. Such future networks may be defined as a four-tiered hierarchical model (fixed wired, pico cells, micro cells and macro cells).

Another important concept in the converged world is that of wireless mesh networks to create hot zones: overcoming the lack of bandwidth in cellular mobile and the isolated hotspots of 802.11 sites, and giving coverage flexibility indoors and outdoors. The all-important ability to interwork securely between 3G mobile networks and wireless LANs can be achieved using the appropriate measures at the WLAN link layer, tunnelling and at the application layer, HPPDS. WiMAX is likely to be deployed as fixed broadband access, mobility enabler, and Wi-Fi back-haul.

Session 7 dealt with the subject 'Running the Network' and mainly addressed the concern of 'Keeping it Running'. The environmental degrading aspects of the physical communication channels (optical fibre connectors) proved a surprisingly fascinating subject, as well as automatic switched transport routing in networks when the communication between nodes degrades below acceptable thresholds or fails.

Another topic dealt with 'enhancing the management of the network and how to gain money out of it'; that is, integrated service management with operations support systems.

Session 8 on Delivering Service to the Office concluded that a user-centric approach must be used for business consumers, thus telecom service providers are confronted with the decision of just being providers of connectivity or climbing up the value chain to offer a variety of services and applications. Vertical integration of activities for incumbent telecom operators, although attractive and tempting, would be difficult from the point of view of regulation and competition by new entrants. In this paradigm, voice (probably in the form of voice over IP (VoIP)) and video, will just be another application on a network that uses IP as the glue technology.

Businesses will pioneer the use of applications (VoIP being a good example) that later will be adapted and made available to residential users.

The impact of the deployment of these applications will be huge in terms of lowering entry barriers to the market, in the degree of competition and in the offers available to final users.

Services of the future network (Session 9) will have to be able to handle a

Congress delegates at the international fair 'Broadband Technology in Daily Life'

Fientje Moerman, Vice Minister-President Flemish Government

combination of different but complementary access technologies allowing the design of low-cost, flexible and scalable systems and enabling the provisioning of network resources in real-time. They support the delivery of added value in customer business models by pulling intelligence and switching to the network's edge and support a unified user experience and personalisation through fixed-mobile convergence. New business models will be required.

During Session 10 on Future Network Challenges, some important aspects of network evolution were described, including elements of novelty and originality. New-generation network (NGN) was defined as 'a roadmap for the removal of service-specific networks'. It was evidenced that the status quo is not an option for network operators, so that the replacement of time division multiplex (TDM) architectures with Internet protocol/multi-protocol label switching (IP/MPLS) cores and the migration to VoIP is a growing trend in most important networks. It was stressed that regulators have the strongest influence on telecom operators' investment decisions with as much as 90% of the variation between OECD countries in level of investments being explained by the quality of the regulatory environment.

Advances in ICT and in standards are improving flexible working, making true such statements as 'work should be an activity, not a location' and 'work is something people do and not somewhere they go'.

The main concern of network executives is the issue of security, as networks become more vulnerable every year. Fortunately new useful tools are being made available, such as the ITU-T X. 805 Recommendation that provides a sound framework for the detection, prediction and correction of network security vulnerabilities.

In the concluding round table session, the trend of convergence between information, communication and entertainment was confirmed and the Congress' conclusion is that now the new challenge is to put the user even more in the centre. As such the yardstick for evaluating a new service will be its contribution to the 'Quality of Life'.

And then of course there was also the social programme, a revered tradition of FITCE Congresses. It started on the opening day with an extensive reception at the town hall where we could also enjoy a

guided tour of the premises of this truly historic building.

On the next day, we went to the Castle of the Counts, a medieval fortress in the middle of town where the Flemish counts resided for centuries. We were treated to a medieval festival of sorts with falconers, jesters, damsels and even an executioner who passed anyone to the block or the axe who felt like it. And we enjoyed a buffet meal which we, the locals, call a Breughel feast. Beer and wine flowed generously and so did the emotions.

On the third day, the whole party was invited by the Flemish Vice Minister-President Ms Fientje Moerman to the site of the yearly industries fair where there was a special exhibition around broadband applications in the home.

And finally, on closing day, we had of course the gala dinner, where also the prizes were announced (see panel).

No good management without numbers. The questionnaires that were filled in by a record 45% of the attendants, confirmed the general feeling

Congress awards

Best paper:
'An Overview of Mobile Ad Hoc Networks: Applications and Challenges' by Jeroen Hoebeke, Ingrid Moerman, Bart Dhoedt and Piet Demeester, Ghent University (pictured left to right)

Best Presentation:
Gery Pollet, Aquanta

Best Young Presenter:
Robert Wu, Barco

that this was once more a successful Congress.

These are the most important scores given (on a scale from 1 to 5):

Value for money	4.08
The balance of presentations	3.78
Conference networking	4.02
Congress social programme	4.39
Duration of the Congress	3.88

And ratings of the presentations (%):

Very Interesting	27.41
Interesting	37.50
Just OK	25.62
Not OK	9.38

The complete survey can be found at www.fitce.be/Questionaire Ghent congress.ppt.

What were the factors that contributed to the success of the Congress? The president of the Congress, José Van Ooteghem, can think of a few:
• The Congress was built on strong partnership. As of the start of preparations, two years ago, FITCE Luxembourg joined with the Belgian team in assuring support from key players in the business. An extensive partner prospectus was prepared for a meeting with top management of selected companies where partnership for the Congress was proposed. This laid a solid basis for the acquisition of partners, eventually leading to the availability of sufficient means to ensure a high quality for the Congress.
• Partners were not necessarily local. In most cases the partnering entity was the headquarters of companies with a local presence.
• There was strong involvement from academia, not only in technical matters like paper selection but also in paper submission and even in partnership. UGent, the university based in Ghent played a prominent role.
• The Congress was intensely promoted. FITCE Belgium itself sent the Congress

(Below and right): Town Hall reception

Gala Dinner: Dutch elegance

brochure to all the European FITCE members. In Belgium, the brochure was also sent to a long list of people figuring in the marketing database of the association. A flyer was included in the magazine *Data News*, the most widely distributed ICT publication in Belgium. The same flyer was also added to the corporate publication of some of the partners.
• The registration procedure was modernised to allow central registration and collection of fees as well as credit card payment.
• A large number of keynote speakers were solicited in order to build an interesting programme around them and so attract more participants.
• A good connection was established with the European Commission.
• The insertion in the programme of a closing session where the key messages of

Castle of the Counts

the Congress were presented by the session chairmen and summarised by Professor Piet Demeester of UGent proved a successful innovation, drawing a large number of the Congress participants.

Time now to start practising our waltz so we can do justice to wonderful Vienna where the next Congress will undoubtedly score high again on the FITCE scale of things.

Marc Lambert and Marc Verbruggen

Interoperability has a major positive impact on innovation, growth, employment, efficiency and competitiveness

Interoperability is defined as: The ability of two or more networks, systems, devices, applications or components to exchange information between them and to use the information so exchanged.

Interoperability is key to increasing user confidence and value: With interoperable products and services, the user does not need to choose a specific technology or replace equipment as often. For a user, interoperability exists when services and devices can be assumed to work together in the expected way and are able to 'talk'—communicating by exchanging information and data.

The digital format of information and connectivity of user devices to multiple sources of content result in the promise of richer services through convergence; but also in an increase in technical complexity and variety of technologies, contributing to a greater risk of fragmentation delaying or blocking mass market adoption. Therefore, industry (EICTA) considers that building, maintaining and support of interoperability by all market participants is more important than ever.

The main messages from the information and communications technologies and consumer electronics industries in relation to interoperability are:
•   Industry has wide experience in the delivery of interoperable solutions and is increasing its efforts to meet the growing challenge.
•   Interoperability has a major positive impact on innovation, growth, employment, efficiency and competitiveness.
•   Interoperability is in the interest of all stakeholders in the value chain—and requires active measures from all of these stakeholder groups.
•   While interoperability may not be a prime consideration when new technologies are introduced and used by groups of early adopters, achievement of broad-based interoperability based on open standard specifications becomes progressively more important as a larger market develops.
•   For an interoperable competitive multivendor environment, interoperability is best facilitated by interface specifications adopted by standards organisations (including industry forums) that meet the criteria for 'openness'.
•   Both proprietary products and open source products can deliver good multivendor interoperability using open standard interface specifications.

•   Governments should develop public procurement policies that promote interoperability, in particular by purchasing solutions compliant with open standards developed and supported by industry and thereby ensuring that government installations contribute to interoperability. Public administrations should aim to operate highly flexible, vendor independent, interoperable ICT architectures, which are responsive, open to new technological developments and value-driven.
•   Public authorities should maintain technological neutrality and provide incentives to continue to innovate. Any

Filip Geerts
Secretary General FITCE, Member of EICTA (European Information and Communications Technology Industry Association)

procurement decisions should be made on solid business rationale such as degree of interoperability, cost, functionality, security, innovation, support for open standards and adaptability to future technologies.

European Networks of the 21st Century

FITCE UK, in conjunction with The Communications Network, ran a half day colloquium at the Royal Institution of Great Britain on Monday 29 November 2004. The event, attended by some 150 people, was aimed at bringing a flavour of the FITCE Congress to London and was extremely successful. The theme for the event was 'European Networks of the 21st Century'.

The presentations were a selection from this year's Ghent Congress and the speakers were Marc Roelands (Siemens), Barry Reynolds (Eircom), Phil Healy (Marconi), Tim Hubbard (Nortel) and Peter Zwinkels (Nortel). The colloquium was chaired by Professor Andy Valdar of University College London, who invited us all to participate in the round-table discussion that followed. CEO of The Communica-

tions Network, Peter Blake, said that the event provided '… an opportunity not only to share the knowledge and experience of our presenters, but also the opportunity to challenge and question their views and opinions … we are proud that today's colloquium continues to mark our progress and development within the communications arena'. Jeremy Randles, FITCE CD member for the UK, said that the event has truly brought a flavour of the FITCE Congress to London. He particularly thanked Kim Cunningham of The Communications Network for her hard work in organising the event. Jeremy said, 'The venue is a fantastic one for this type of event and I hope that we may have created some enthusiasm among members and guests to participate in the Vienna Congress'.

Round table discussion at the Colloquium staged in London by FITCE UK and The Communications Network: (left to right) Andy Valdar, Peter Zwinkels, Barry Reynolds, Marc Roelands, Phil Healy and Tim Hubbard

Photograph: Peter Arkell

Hotspots

Synthesis of three FITCE Belgium Lunch Sessions

by **Prof. dr. ir. Leo Van Biesen**
Vrije Universiteit Brussel, Dept. ELEC
Pleinlaan 2, B-1050 Brussels, Belgium
Email: lvbiesen@vub.ac.be

Introduction

Wireless technology in general is currently experiencing a major boom. With respect to implementations in the field of wireless local area network (WLAN), the technology is maturing after a short childhood of only about 15 years. Motorola had already developed the first commercial WLAN in the late-1980s when in 1990 the IEEE Standards Association initiated the 802.11 project. The Institute of Electrical and Electronics Engineers approved the 802.11 family of specifications, developed for wireless LAN technology, in 1997 (international interoperability standard) and ratified the 802.11a and 802.11b standards in 1999.

Briefly, several specifications are present in the 802.11 family:
* *802.11*: applies to wireless LANs and provides 1 or 2 Mbit/s transmission in the 2.4 GHz band using either frequency hopping spread spectrum (FHSS) or direct sequence spread spectrum (DSSS).
* *802.11a*: forms an extension to 802.11 that applies to wireless LANs and provides up to 54 Mbit/s in the 5 GHz band. 802.11a uses an orthogonal frequency-division multiplexing encoding scheme rather than FHSS or DSSS.
* *802.11b*: (also referred to as 802.11 High Rate or Wi-Fi) is also an extension to 802.11 that applies to WLAN and provides 11 Mbit/s transmission (with a fallback to 5.5, 2 and 1 Mbit/s) in the 2.4 GHz band. 802.11b uses only DSSS.

WLAN certainly boasts some advantages over wired or other wireless communication technologies:
* *Mobility*: access can be granted from anywhere as long as the user resides

Attentive class during Session 1

within the range of an access point and remains more or less static (person sitting at a table or in a parked car, or slow moving pedestrian). WLAN is not suited for wide-range or high-speed mobile users, who will have to continue to rely on GSM, GPRS or UMTS for their mobile communications.
* *Bit rate*: the performance, independent of the implemented technology (802.11a or b), is much higher than that offered by cellular networks (GPRS or UMTS) or by the wired ISDN. It remains in the range of the wired ADSL+ and ADSL2, but will be surpassed by VDSL.
* *Scalability*: WLAN networks are easily scalable.
* *Regulation*: no specific regulation, hence anyone can deploy hotspots and install access points. BIPT-IBPT states that: 'A WLAN access point (hotspot) is regarded as an apparatus capable to deliver a connection between an end-user and a network. The apparatus doesn't offer additional services. The hotspot itself, therefore, need not to be declared'.

WLAN has some disadvantages, which can result in serious obstacles for some applications:
* *Security*: Wired equivalent privacy (WEP) is insecure since most public wireless LAN access points (that is, airports, hotels, etc.) do not enable WEP.
* *Range*: Access point (AP) range is restricted to about 300 m outdoor and 50 m indoor.
* *Interference*: Signals may be weakened due to interference between several access points and other wireless devices.
* *Internet connection speed*: several users share APs so that the Internet access speed can be considerably reduced to rates much lower than that of the WLAN.

Since WLAN is gaining importance, both on the consumer home market and in industry, the board of directors of FITCE Belgium decided to organise lunch sessions on this important subject. The three lunch sessions offered a unique opportunity in Belgium to familiarise with the new concepts and exhaustively reported on the experience of operators and users with the fast emerging WLAN systems. The complete report can be found on www.fitce.be/lunch_session_2003-04.pdf.

Short overview of the lectures

In the first presentation, entitled 'Hotspots: Hype or Business Need?', Mr. Jeroen Meens, Marketing Manager of Sinfilo, gave an excellent overview of the emerging market for hotspots in Belgium. SinFilo is the largest player on the hotspots market in Belgium and was recently acquired by Telenet.

He formulated the current status of hotspots, identified the current Belgian players in the field and proposed a business model for the public WLAN. He outlined the importance of WLAN products both for the fixed network operators—for example, to extend broadband services beyond fixed locations—and for mobile network operators—for example, to reduce network costs in areas subject to congestion. Mr. Jeroen Meens also supplied a possible scenario for concurrent access of 2.5 and 3G mobile networks and WLAN. The suggested mixed use of the distinct wireless networks is depicted in Figure 1.

Figure 1—Possible scenario for the mixed use of wireless mobile and fixed networks
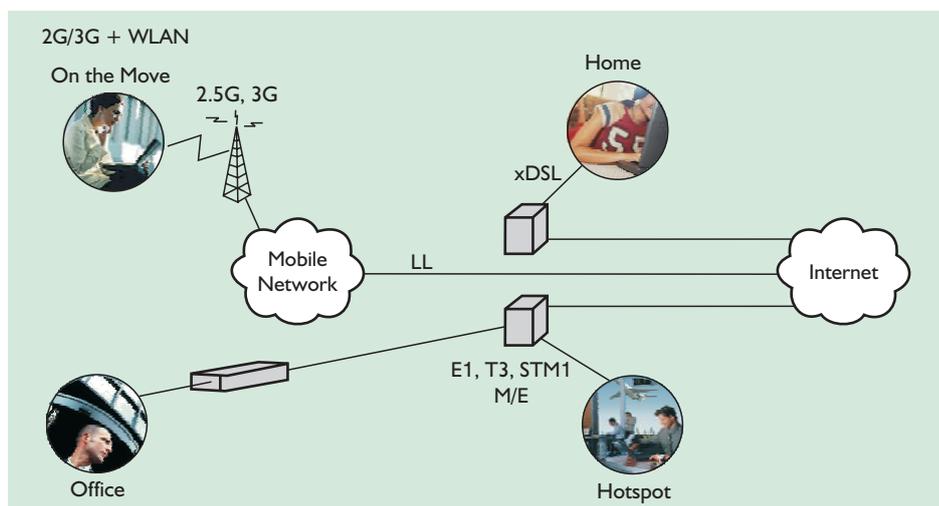
Speakers: (left–right) Mr Jeroen Meens, Marketing Manager, Sinfilo—Session 1;Mr Philippe Ribonnet, Director Strategy, Proximus—Session 2; and Mr. Veijfeijken, Project Coordinator and PR and Communication Manager, Provinciale Hogeschool Limburg—Session 3

Finally, he expressed his vision that Wi-Fi will unlikely be a threat to voice services, because the implementation will be using voice over Internet protocol (VoIP), suffers still from the lack of handover, and does not allow incoming calls. He concluded his presentation with a report on the Sinfilo achievements in the Carestel restaurants in Belgium.

During the second session, Mr Philippe Ribonnet, Director Strategy of Proximus, treated the subject 'Hotspots and a Mobile Operator: a happy marriage?'. In this excellent lecture, he discussed the challenges and opportunities that public WLAN poses to the cellular operators. He explained the role of the different players on the Belgian market and made a distinction between mass markets and situations where there is synergy with a broadband access offering (where hotspot implementation acts as a differentiator in the battle for the residential broadband operations) on the one hand, and the business market, directed to the seamless offering of data to mobile users (GPRS, Wi-Fi, UMTS), on the other hand.

He pointed to the possible threat of offering charge-free services endangering the development of a healthy business.

He depicted the view of Proximus that considers WLAN as a natural extension of its GPRS/3G networks for low mobility/very high bandwidth needs, which gives their customers total mobility solutions, especially for converged mobile/WLAN devices. This view is depicted in Figure 2.

Mr Ribonnet then addressed the problems concerning roaming. First, technology roaming (GPRS, UMTS and WLAN) with seamless handover between the different technologies should be solved. Next, international roaming must be set-up, allowing for example SIM authentication, and all-in-one invoice (bundled GPRS and WLAN) should be provided. He concluded with valuable recommendations to address the security problems in using WLAN for more demanding customers: the establishment of a virtual private network (VPN). A VPN client on a remote PC, communicating with a VPN device at an enterprise, creates a secure connection over the Internet allowing a private network to be accessed as if one would be an on-site user.

At the third and last lunch session on hotspots, Mr. Jos Veijfeijken addressed a real-life application in 'Campus Community Hotspot: a case study'. His exposé on the Laptop Project at the Provinciale Hogeschool Limburg (PHL) was very much appreciated. Mr. Veijfeijken is Project Coordinator and PR and Communication Manager at that school. In the project, every student of the PHL is equipped with a laptop, which he/she can use to connect to the school's network through some 350 hotspot access points. The students are thus provided with an easy access to the wealth of information stored in the school's library and, of course, the Internet.

The WLAN at the PHL campus has currently about 3500 users and is as such the largest campus network in Europe. It is connected by fibre optic cable to a 1 Gbit/s

Left-right: Professor Leo Van Biesen, author of the report; Mr. Veijfeijken and Marc Verbruggen, FITCE Belgium, coordinator of the lunch sessions

backbone switch and the different locations on the campus are interconnected with each other using a Belgacom 100 Mbit/s fibre connection. Other installed equipment in the wireless network (access points, switches, authentication server, etc.) is from Cisco.

Mr. Veijfeijken concluded his interesting lecture with an overview and description of the software, which is used at the PHL.

Conclusions and acknowledgements
The subject proposed by the FITCE Belgium board of directors solicited considerable interest by the Belgian telecom industry and sector. Integrated use of the different wireless networks and seamless handover and roaming between the different technologies will have a very large impact in daily life and industrial operations in the next decade. This future is currently under preparation and involves large industrial teams working on solving these problems together with innovative SMEs and university research teams. Seamless connectivity for mobile users (low, moderate to high-speed mobility) is part of future 4G mobile communications (UMTS, that is 3G, is currently in full deployment). The development of future multimode terminals and the expected costs of the use of roaming between operators, however, will determine to a large extent the success of the new 4G mobile communication technology.

The author wishes, finally, to thank FITCE Belgium for the invitation to act as a moderator and to host for the third time the lunch sessions. It has been a great experience, and the collegiality between industrial competitors, academic researchers and regulators or administrative decision-makers has been particularly appreciated. It is hoped, therefore, that this kind of activities, at very affordable conditions, will be continued in the future.

Figure 2—The goal for future seamless connectivity aimed at low-speed mobility users

44th FITCE Congress:
1–3 September 2005, Vienna, Austria
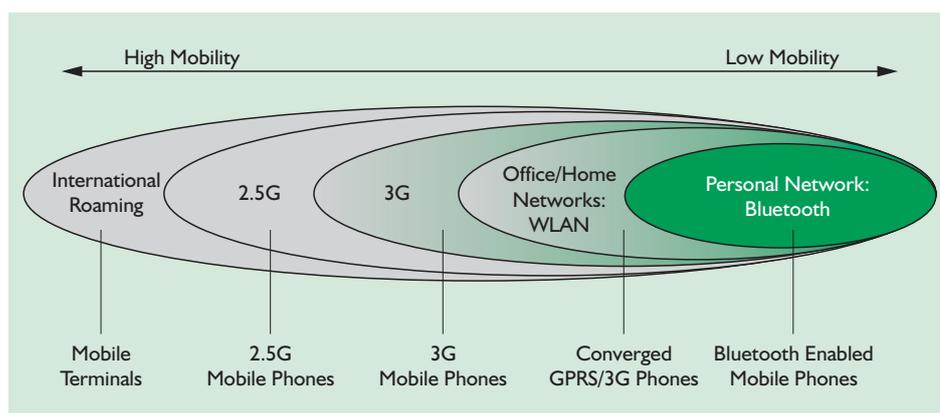
Call for Papers

Contributors are invited to address the theme:

'The Magic Potion to Meet Customers' Desires!'

Media technologies are changing continuously leading to consumption of different service offers provided by various infrastructures and devices. The phenomenon of convergence meets customers' desires as 'information at your fingertips'—the challenge is to realise intelligent applications, next generation networks and thus provide a personalised communication interface.

Papers from across Europe are invited for the 44th European Telecommunications Congress of FITCE.

The topics of the congress are:
- Convergence
- Interactivity
- Service Innovation

Each of the subjects will be covered by:
- Vision
- Technology/Infrastructure
- Services/Applications
- Marketing/Socio-Economics

Topics suggested (but not limited to) are listed below:

	Themes		
	Convergence	**Interactivity**	**Service Innovation**
Vision	• Information and communication at your fingertips • What are the customers' desires? • Which devices are required?	• Information and communication are coming closer together • Are smart agents acting as a network interface?	• Does individualisation lead to new services? • New devices enable new applications
Technology/ Infrastructure	• NGN Wireline – Wireless • Broadband wireless networks • Multi-network devices	• Real time information • Individualisation • Reachability	• Context based applications • Seamless media
Services/ Applications	• Personalised applications • Video on demand • E-commerce	• Interactive gaming and entertaining • Chatrooms	• ASP services • What next generation applications will be possible?
Marketing/ Socio-Economics/ EU Legal	• Customer interface vs. network access • Which type of carrier will survive convergence?	• Media content • Private content	• Is outsourcing still a trend? • How will free Internet applications fit into business models?

Submissions

Submissions should contain the following:
- An abstract of 200 words (in English).
- A brief biography of the author(s).
- An outline describing how the paper will be structured (table of contents + brief 'bulleted' overview of the actual contents that will be developed; limited to 2 pages).
- Full contact details (email, telephone, fax and address).
- Name and function of the sponsor of the topic.
- Name of the national association.
- Upload your abstract: http://upload4abstracts.fitce.at

The papers will be selected on relevance and originality of content. Please find further details on http://congress2005.fitce.at

Contact Details

Peter Haas — papers@fitce.at

Timeline

- **Deadline for the abstracts is Friday, 18 February 2005.**
- Authors wil be advised of the outcome of the paper selection before the end of March 2005.
- The full text of the selected papers (maximum 10 × A4 in English) is required by Sunday, 15 May 2005.
- The presentation material is required by Friday, 15 July 2005.

The presentations will be strictly limited to 20 minutes and there may be time for questions. All contributors selected will be requested to follow the 'Instructions for Authors and Speakers' on http://congress2005.fitce.at

Awards will be presented at the congress for quality of presentation and for the best written paper.

FITCE looks forward to receiving your abstracts!
For information about FITCE's 2005 Congress in Vienna: http://congress2005.fitce.at