



Forum

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Newsletter of the Federation of Telecommunications Engineers of the European Union

August 2003

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Congress 2003 in Germany's capital city



CD Member Guntram Kraus and his task force from the FITCE Group Germany, including Klaus Schenke and conference manager Hans-Otto Ehmke together with their teams, are working hard to make FITCE's 42nd Congress in Berlin in just a few days time an unforgettable occasion. This is the sixth time that the Congress is being held in Germany, and this year's event promises to be highly successful.

Much attention has been paid to build a conference programme which will achieve an informative and spectacular event.

One highlight, for example, will be a special presentation of the most recent applications of UMTS presented by T-Mobile Deutschland GmbH.

The technical programme comprises papers grouped into six main sessions:

- Mobile Services and Applications,
- Competition in the European Information and Communication (ICT) Sector,
- Business Opportunities with Wireless LANs,
- Broadband Experiences,
- Moving Voice to Packet Switching, and
- Future Developments and Dreams.

Giving the keynote speech for the Congress will be Klaus Hummel, Member of the Board of Management, T-Mobile Deutschland GmbH. A number of keynote speakers will introduce the sessions and give focus to the issues. For example, Kimberly Daly, Communications Microsoft EMEA, France, will speak on 'Microsoft's Vision for

the Network Service Provider Industry'. Another keynote speaker is Dieter Engel, Head of Product Development, T-Online International AG, who will speak on 'Applications and Technologies for the Future of Broadband Internet'. In the final session, Werner Lauff from PricewaterhouseCoopers in Germany has an intriguing talk 'Communications in Century C', and Joachim Claus, Senior Consultant Innovation Management, Deutsche Telekom AG, will give 'Vision 2010—Telecommunications Wonderland or Reality'.

This year's Congress has all the traditional ingredients of FITCE's long-running reputation of excellent Congresses. As well as the

full and interesting technical programme for delegates, accompanying persons will enjoy a full programme of their own, and the event will close with a Gala Dinner. Participants will be able to experience and feel the re-emerging spirit of Germany's capital city as it is today.

Once again the Proceedings of the Congress is being produced in collaboration with The Communications Network in the UK and will be distributed to FITCE Members after the Congress.

Despite all the difficulties in the telecommunications industry, many sponsors have seen the enormous value of the FITCE Congress and have readily come forward to provide their financial support. Without them of course our Congresses would not be possible, and we record our grateful thanks to them all.

As we look forward to Congress 2003, we also start to think of Congress 2004—'to boldly go....'—see page 8. Make sure the dates are in your diary!

FITCE Forum

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Brandenburg Gate in Berlin

For latest Congress information, visit www.fitce.org

Letter from the President



Just before the end of my two-year mandate as the FITCE President, I would like to reflect on this period and the past developments for our European federation.

The past few years have not been brilliant economically. Due to the lack of financial resources, investments in telecom equipment are at a very low level. This also impacts FITCE. But, especially in less prosperous times, it is important to show our trust and optimism in the development of our sector. It is important that there is strong cooperation between all players (the government, especially the operators, and the industry). And between all those associations and groups active in the sector, we're convinced that there is still a place for FITCE.

One of my objectives was to stimulate the ongoing openness of the FITCE associations towards the new open and highly competitive market and beyond the incumbent operator. This has been implemented recently in several national associations.

The most significant activity of FITCE Europe is the Congress but this is not sufficient. The web and the *Forum* have been adapted; the creation of a web-based exchange system was an excellent idea that will be further developed. A proposal for new workgroups has recently been examined, and those groups will become active in the coming months. I would urge all National Associations to develop their own calendar of activities, and so promote also the European values. I am a firm supporter of this.

As a European association, FITCE should furthermore enhance the relationship with the European Union, all European countries and other international organisations. Thanks to fundamental political changes over the past decade, the eastern part of Europe is now showing an interest in FITCE. Last year, Poland joined FITCE, as the second East European country to join, and 13th full member country. New organisations have been established in Bulgaria and Romania, countries where I recently have had the opportunity to promote FITCE. We have also worked on creating awareness in some absent countries, such as Scandinavia, and are re-establishing relationships with others; for example, Portugal.

Despite the financial difficulties in the industry FITCE managed to organise an excellent Congress in Genoa, and we are looking forward to the Congress in Berlin in just a few days. Our Congress is also guaranteed for the following years.

All of this is only possible thanks to the unselfish work of so many colleagues, who, in addition to their daily work, dedicate so much time to FITCE. But, we see a decline in involvement due to the ever-increasing demands of our daily work. The solution to this problem would be working with a regular administration and/or paid officers, but this will have a huge impact on the budget and is for the moment not possible to implement.

I have very much enjoyed my term as your President. There are still many challenges ahead for FITCE but I am convinced the future is positive.

I look forward to meeting many of you in Berlin.

José Van Ooteghem
Belgacom, Brussels

FITCE is introduced in Bulgaria

On 15 April 2003 the Bulgarian Association of Telecommunications (ASTEL) organised the 1st International Telecommunications Conference under the title 'On the day after the Demonopolisation?'

This questioning title envisaged the process of demonopolisation of telecommunications which has begun in Bulgaria after the 'fall' of the Bulgarian Telecommunication Company's (BTC) monopoly over leased lines and international voice traffic. BTC is still 100% state-owned, though in a process of privatisation, but the liberalisation of the market is enforced as of the beginning of this year by virtue of the Bulgarian Telecommunication Act.

ASTEL had invited FITCE's President Mr. José Van Ooteghem to take part in the Conference, presenting FITCE to the Bulgarian participants. His presentation called 'FITCE: An Opportunity for European ICT Professionals' gave the perfect idea to the audience about FITCE from historical, conceptual and prospective points of view. The participants were acquainted in detail with the main principles and development through the years of the organisation.

The general conclusion was that in view of the speeding up of the opening of Bulgaria to Europe and the world in every aspect, in parallel with the liberalisation of the Bulgarian telecommunications market, Bulgarian membership of FITCE is one of the next most logical steps the Bulgarian colleagues should take.

After giving his presentation to the Conference, José Van Ooteghem was invited to the ASTEL cocktail, which gathered many professionals from the branch to celebrate the first anniversary of the Bulgarian association. The contacts there and the meetings after showed that Bulgarian participation in FITCE is only a question of time. Very short time.

Irina Vasilevska

Legal Advisor, GloBul, Sofia, Bulgaria

...and in Romania too

On 24 February 2003, in Romania, a new professional, non-governmental, and non-profit organisation was born, taking the responsibility to represent and support the rights and interests of the telecommunications engineers in Romania.

The Romanian Association of Telecommunications' Engineers—AITR—was founded by a group of well-known personalities in the Romanian communications industry and is aiming at promoting science and technology development, and close cooperation between industry experts.

At AITR's invitation José Van Ooteghem, FITCE President, and Miltiadis Goumas, President of FITCE in Greece, visited Romania in June 2003.

Discussions focused on acquainting participants with FITCE and AITR aims, objectives and results. The AITR founding members were highly interested in finding more about FITCE and expressed an interest in joining this renowned European forum.

As a way of promoting inclusion of their Romanian counterparts, José Van Ooteghem invited AITR representatives to join the next FITCE Congress in Berlin. The invitation will be honoured by representatives of AITR.

Lucretia Maiorescu

General Manager,
Subsidiaries & External Coordination Division
ROMTELECOM S.A., Bucharest, Romania

UK stages 'mini-Congress' in Wales

'Mobility and Disruptive Technology' was the theme for a half-day colloquium organised by FITCE UK and the Wales branch of The Communications Network at the Caerleon Conference Centre, University of Wales, Newport, on 7 April 2003. The event was held in association with Alcatel.

The audience enjoyed an afternoon of excellent presentations, three of whom gave papers at FITCE's Congress in Genoa in 2002.

Chairing the event was Professor John Griffiths, from Queen Mary, University of London and a member of the FITCE UK committee. After some welcoming words from Jon Inchley, TCN's CEO, and Charles Matthews, CEO of Alcatel UK, Peter Walker, Director, Technology, Oftel, and President of FITCE UK gave the keynote speech and set the scene for the afternoon's presentations.

Frank Kroon from Cap Gemini Ernst & Young in The Netherlands then gave his talk 'Building Services on Heterogeneous Networks'. He was followed by Louise Carter and Claire Ford from BT Exact who between them gave a talk on 'Minimising the Cost of Deploying 3G'.

After a short break for refreshments, Neil Baucutt, from O₂, took the floor to discuss mobile data, and in particular delivering an excellent customer experience. Dirk Markner, Product Marketing Manager from Materna in Germany spoke about multime-



Speakers at the Wales colloquium (photo: chriswaite.com)

dia messaging (MMS), where he tackled the question of whether MMS was the next killer application in mobile business. Finally, Michael Lawrence, Product Development Manager from Orange, gave a mobile operator's perspective of disruptive technologies.

The event was a huge success with some 180 people attending. One of the

major benefits of the FITCE Congress is that it brings together speakers from a wide range of backgrounds and countries on a common theme. National Associations could perhaps invite Congress speakers to their own events and thus bring the benefits of the Congress to a much wider audience.

35th World Telecommunication Day celebration in Poland

The World Telecommunication Day (WTD) is a prestigious event which, following many year's tradition, was organised this year by the Ministry of Infrastructure in cooperation with the Association of Polish Telecommunications Engineers (SIT). The International Telecommunication Union, based in Geneva, chose for this year's celebrations the theme: 'Helping all of the world's people to communicate'.

The first day of the celebrations of WTD in Poland took place on the 15 May 2003 and focused on the presentation of matters relating to the building up of the information society. Three parallel events took place: the 4th Round Table Conference 'Poland towards the Information Society', the FORUM of digital telecommunications technologies and the Internet conference with ministers of telecommunication of Central and East Europe.

On the 16 May 2003 the official session of WTD took place. As is traditional, government officials, MPs, science and business representatives, representatives of companies associated with telecommunications, IT and media representatives took part in the session.

In the morning a meeting took place with FITCE President José Van Ooteghem, FITCE President, and Mr. Krzysztof Heller, the Sub-secretary of Ministry of Infrastructure, in the Ministry of Infrastructure premises. They discussed the FITCE and SIT organisations.

In the afternoon the seminar 'Science helping people to communicate' took place in the Hotel Novotel Centrum Conference Centre. José Van Ooteghem gave an introductory speech and Mr Krzysztof Heller took part in a discussion panel named 'Telecommunication in the rural area'. Prof. Andrzej Zielinski, Dr Andrzej



José Van Ooteghem (left) with Mr Krzysztof Heller

Simiakiewicz and representatives of companies associated with telecommunications presented the status, prospects and telecommunication infrastructure overview in the rural areas in Poland and EU.

In the evening of 16 May 2003 in Novotel Centrum hotel a traditional cocktail party and meeting for the SIT friends was held.

Mobile and disruptive technologies

by Peter Walker

President, FITCE UK, and Director, Technology, Oftel

This article is based on a keynote address given by Peter at a joint colloquium organised by FITCE UK and The Communications Network held in Wales on 7 April 2003 (reported on page 3).

When I was first asked to speak on the topic of Mobile and Disruptive Technologies, I wondered if these were two separate subjects in one colloquium or whether they should be considered together. Certainly some aspects of the development of mobile services have been quite disruptive in the industry as a whole, but I think it might be instructive first of all to consider what we mean by disruptive technology. In my view, a disruptive technology is one that seems to come out of nowhere, very quickly, and destroys somebody else's business plan. The nature of such technologies is that they're not produced by the same mainstream industries whose businesses are attacked.

A good example might be the electric light bulb, which was certainly not invented by either the makers of candles or gas mantles, but nevertheless the electric light bulb was quite successful in attacking the lighting market.

I suppose a true disruptive technology is one where the companies attacked cannot easily migrate to adopt the new technology itself because it involves completely different skills and manufacturing processes. Another classic example of a disruptive technology would be the electronic calculator, which in a couple of years completely destroyed the market in slide rules. Clearly the manufacturers of slide rules were not really capable of moving into the electronic calculator market.

Telecommunications

In telecommunications things are perhaps different, as it is often possible for manufacturers and telecom operators to spot new technologies and move into them, and examples of truly disruptive technologies are rather rare.

Indeed many of the technologies that are often quoted as being disruptive technologies, were merely ones that were very good *evolutionary technologies*; to the point perhaps where you could say they were *revolutionary* technologies, but nevertheless were

not disruptive in the sense that players who were affected could not adapt to the new environment.

Perhaps we can consider whether the transistor was really a disruptive technology or whether in replacing the valve it was purely a revolutionary adaptation. Equally the invention of the IBM PC in 1982 might not be described as disruptive, given that there were plenty of personal micro computers around in the market since the mid 1970s. However, there were a few mainframe manufacturers that didn't really spot what the PC was going to do to the computing market and so microcomputers as a whole might be considered as a disruptive technology.

Having looked at a few examples it might be instructive to go back in history and look at other technologies that might qualify to be described as disruptive. There is no doubt that in the late 1870s the British Government did consider that the invention of the telephone was going to be disruptive to their telegraph monopoly and did everything they could to control the scope of the emerging telephone companies. Yet despite that, the telegraph traffic continued to grow and traffic peaked as late as 1919, so I don't really think that the telephone was as much a disruptive technology as was feared. It turned out to be broadly complementary; and indeed the telegraph evolved through telex to the modern Internet and email systems of today.

It would be fairer to nominate the telegraph itself as being a disruptive technology. Working in a symbiotic way with the other great invention of the 1830s, the railway, communications for the first time became faster than the speed of a horse—aside from the mechanical telegraphs, which were solely in the hands of the military. And the railways, of course, had a disruptive effect on both mail coaches and the canals.

What about Marconi's radio—was that a disruptive technology? Well, certainly it was quite revolutionary at the time, but its early application was to maritime purposes where it significantly improved the safety of



ships at sea. It wasn't until the 1920s, when high-powered short-wave beam radio services started, that radio really took on a disruptive characteristic. At that point the lower cost of short-wave radio looked to completely destroy the Eastern Telegraph Company and its massive telegraph network that spread around the British empire. This alarmed the British Government to the point where it worried that the Eastern Telegraph Company would completely fail and that would put at risk connections to those countries not then served by the new radio technology. So the Government held a conference in 1928, and put together what we would today call a public/private partnership. All those with interests in both the radio technologies and the cable systems were invited to combine into one company, a private company to be known as *The Imperial and International Communications Limited*. A couple of year later they renamed themselves *Cable & Wireless*.

So in that instance the Government recognised the disruptive technology, addressed the problem in a novel way and both cable and wireless methods of transmission were able to continue in partnership.

Many of us who saw the final closing of the inland telegram service in the early 1980s thought that telex would be next to go. Something would attack telex and take the market away and we all assumed it would be email, but in fact it wasn't, it was the rise of Group 3 fax, that over a very short period seemed to come out of nowhere and destroy the telex market.

The fax itself has a very long history having been invented originally for use on telegraph circuits in the 1840s, but the rise of Group 3 fax and the way it took over the telex market had a lot

4 → more to do with the fact that it revolutionised communications by putting the fax machine in the hands of everyone, rather than one having to send messages via a telex machine which was usually situated in the typing pool. So the fax might just be considered to have been a disruptive technology, if only because the pundits got it wrong.

What about the Internet? Many people would argue that the Internet is a disruptive technology, but I think that would be incorrect. The Internet itself started in 1969, and was around for a long time before it really had an impact on the market. What really made a difference was the introduction of the World Wide Web with its simple to use browser and hyperlinks and this has a radical effect on the way we communicate.

It could have been that the World Wide Web was an application that could have ridden over the top of several transport networks, as many new applications today can. But it was firmly based on being built over the TCP/IP stack and therefore had the disruptive effect, as we now know, of destroying the X.25 data networks which were largely provided by telcos. All this was despite X.25 being a newer protocol than TCP/IP.

But at the early stage of Internet development many telcos did not believe that the TCP/IP stack was superior to X.25 and didn't see any point in launching commercial Internet services. It took companies like Pipex and Demon in the UK to start Internet service to the wider public. But as we've seen, to be truly disruptive, you must launch a technology that the opposition cannot also move into and there is no doubt that all the telcos, having first stumbled, recognised the power of the Internet and have moved into the field. Indeed with the honourable exception of AOL, almost all our major ISPs in the UK are now owned by telephone companies.

Supply side substitution

It's this ability to do what economists call 'supply side substitution', that will make the difference between better technologies and truly disruptive technologies. Building a better mouse trap isn't enough.

Let me give you some examples:

There is no doubt that the introduction of pre-pay mobile phones made a huge difference to the growth of the mobile market and of wider handset ownership, but it was exactly the same companies who produced pre-pay that were already in the post-pay contract market.

Another example is on the Internet, where the introduction of flat-rate Internet access as opposed to the pence per minute model, created a huge surge in Internet penetration in the following year. But this

wasn't coming from completely unknown market entrants: all the major telcos and ISPs have adopted the flat-rate model as part of their portfolio.

Optical cross-connects may kill off high-end SDH cross-connects, but their manufacturers are already well prepared to exploit this migration.

So what are we to make of disruptive technologies? I can't help thinking that, at one level, it's just a very fashionable tag. In the past we used to talk about killer applications, or trying to understand paradigm shifts, now we tend to talk about trying to spot disruptive technologies, although perhaps the whole point of disruptive technologies is that most of us will miss them.

It's certainly a very fashionable phrase today and produces around a hundred and twelve thousand hits on Google.

Looking ahead

So looking ahead, what are possible candidates for disruptive technologies? Well, even speaking as somebody very well connected within this industry, I'm sure if I recognised a disruptive technology it wouldn't be one, because the whole point is you don't see them coming. But there are a number of candidates that others have suggested.

One is wireless LANs. Will they take away the market from 3G? Most people I speak to seem to conclude that these will probably be complementary technologies, one does not completely destroy the business plan of the other, although it has to be said that wireless LANs do have some strong characteristics of disruptive technology, because they didn't come out mainstream telco thinking and many mobile operators today still like to play down their possible significance.

Another example is the personal video recorder (PVR), which can store all your TV programmes on a hard disk instead of using tapes. Will PVRs be a disruptive technology? They enable us to enjoy all our television in a time shifted way, take away the power of the schedulers and attack the advertising market. Many like to suggest this, but so far sales of PVRs have been rather disappointing. It seems that couch potatoes are just that, they really do get confused by too much choice.

Another example of a possible disruptive technology, is the so-called *parasitic network*, sometimes known as *ad-hoc peer-to-peer radio*. The idea is that every mobile phone would also be a network transceiver and part of a wider collaborative network allowing messages to move in some sort of dynamic way through the network to their final destination, without necessarily being under the control of traditional telcos.

One possible comment about that particular technology is that for a disruptive technology to successfully destroy another, it has to have a viable business case and the problem with a lot of parasitic networking and indeed of some peoples' dreams relating to current wireless LAN networks, is that there really is no such thing as a free lunch.

And in the end people are not going to carry other people's messages and have to thereby increase their capacity and do it for free.

But some of this idea of receivers also being transmitters is being embodied in the new generation of mesh radio, which certainly might play a significant part in the roll-out of broadband in the future. But this will almost certainly be as a complement to wireline broadband and is unlikely to be a disruptive technology that destroys everything that's been done to date.

Some people would like to think that Napster and other peer-to-peer file sharing technologies represent a disruptive technology. Indeed the Napster phenomenon certainly came out of nowhere and caught everybody napping. But let's face it, as telecoms engineers, we've built telegraph networks, telephone networks, telex networks, data networks and most of them have been peer-to-peer networks. Why should we be so surprised that peer-to-peer services emerge in the Internet? Not everything has to be according to the client-server model. As we've also noticed a disruptive technology has to have a viable business plan and many of the peer-to-peer applications, even those that survived the collapse of Napster, seem to work on the basis of illegal copying of digital material, hardly a basis for a long-term viable business case, that is going to destroy somebody else.

The fact is that the media industry has long been concerned about things that would destroy their business. Television did not destroy the cinema. Cassette tapes didn't destroy the LP market—it was the technology shift to CDs that did that. Similarly, VCRs haven't killed TV or cinema: Many machines are used primarily for playing pre-recorded tapes from the local video store, and many people remain unable to make their video machines work as they would wish for time-shifted television.

What about mobile?

Turning to mobile, I've already mentioned my view that wireless LANs are not likely to completely destroy 3G and are likely to be complementary. But is 3G itself a disruptive technology? Most certainly not I'm afraid. 3G, like 2G before it, has been planned and in the standards bodies for many years. We've seen it coming and like

5 → 2G seems to arrive much later than we had originally hoped.

3G is struggling to find its viable business plan, and while it contains some revolutionary CDMA technology it doesn't seem to qualify as a disruptive technology. But some people are betting that the future revenues in the mobile market will come from picture and video services—and they may be right.

The mobile industry generally has been innovating at a much faster rate than the fixed networks for sometime. I sometimes wonder when the phrase 'fixed-mobile convergence' is used, whether 'fixed-mobile divergence' wouldn't be a more apposite phrase. Looking in historical context, it's interesting to note that even in the beginning of data networks, that is the telegraph, we had intelligent operators at the end of the connection and a dumb piece of wire in the middle. Later on we had fairly intelligent teleprinters on the end. Now we have PCs. In contrast, the telephone network works the other way. It has a fairly simple instrument at the end and all the complexity is in the network.

So if we generalise that good data networks have got the intelligence in the terminal and less in the network, then the mobile networks are surely well placed to move from their current position of being largely a voice phenomenon into data, because the processing power in the typical modern handset is really quite awesome. For example: in a typical high-end mobile phone today there is 20 000 times the processing power that was in the lunar landing module that landed on the moon in 1969.

But it doesn't have to be just about visual and video services. There are many location-based services that could also

thrive on mobile networks. The issue here seems to be more how the mobile networks will collaborate with service providers. The relationship here should be symbiotic. The mobile networks need good content services, and the service providers need a network to deliver them. But clearly everyone would like to capture as much of the consumer's cash as possible, and it is actually rather hard for service providers to generate revenue from mobile applications. Mobile networks are much more closed than the Internet and it's entirely possible for the mobile networks to set their own terms over how services will be delivered. But it would only take one of the five operators in the UK to break ranks and adopt a different relationship with service providers to trigger a big market shift. We've seen such big shifts before. Originally mobile operators saw SMS as a specialised business service to send messages to staff in the field. In order to capture all of the company's field force, it was not in their interest to interconnect SMS with other operators. But once they were forced to interconnect by Oftel's requirement for mobile number portability, the SMS market took off in a big way and it didn't turn out to be a niche business service after all. I'm sure we will watch these commercial developments with interest.

But it is that desire of the mobile companies to try and keep control of the entire consumer experience, that has perhaps caused some mobile people to worry about the impact of wireless LANs, as certainly these are largely outside of the mobile networks' control, and the degree to which other forms of competition will be allowed in the mobile space will be a key factor in how the market develops.

Will application service providers make a big difference?

Will mobile virtual network operators (MVNOs) play a key role?

The point I'd like to make here is that MVNO is one of these ill defined terms that seems to be the vogue way to describe air-time service providers—which is all that Virgin Mobile really is. I would suggest that a true MVNO is one that has its own home location register and, while using a mobile operator's network, can influence the way in which calls are set up and even be able to interconnect with its own physical network for value-added services.

Will the new 2G/3G networks be unbeatable? Will the mobile network operators recognise that they don't have a monopoly on innovation? What will happen to the various legacy mobile technologies that are still with us, such as paging, Mobitex and TETRA?

The present economic conditions have certainly slowed down the roll-out of new 3G technologies and innovation is being focused on services that can be implemented just as easily on 2G technology, such as picture messaging. Remember it is applications and not networks that customers buy, so MMS will probably succeed as an application where WAP as a network didn't.

Killer applications

In telecoms, truly disruptive technologies are rather rare because of supply side substitution. The things that seem to make most impact are technologies that have been around for a while but suddenly have a greater impact. This may be because of a significant cost reduction, a new charging paradigm or greater usability. Perhaps we should be looking for killer applications after all.

AIIT day on wireless LAN

On 23 January this year, the AIIT—the Italian Association of Telecommunications Engineers—promoted the Wireless LAN Day at Ministero delle Comunicazioni Main Hall in Rome.

More than 400 participants were registered. Such a large number of participants is the direct recognition of the interest and the topicality of the subject.

The day was split into three parts: the first two in the morning and the third in the afternoon.

The first part, after two short welcoming speeches by Mr. C. Basso, Technical Director of the Italian Communication Ministry, and by Mr. Casale, in substitution of Mr. Pileri, President of AIIT, presented a tutorial to acquaint participants

with the development stage of wireless LANs (WLANs) and with the status of the national and European regulatory aspects.

The second part, which was a round table with a free discussion, gave the opportunity to the main national operators—of both mobile and fixed networks—to present their points of view. Telecom Italia presented their experience of the first hot-spot coverages and Omnitel (Vodafone) their lab studies and experiences.

During the afternoon, the third part, which was a round table too, addressed the security and regulatory aspects concerning the efficient public use of the assigned access bands. The participants at the round table, coming from the main telecommunications suppliers, focused on the necessity

to find the rules for the correct use, without interferences, of the available bands.

The major three requirements, which came out of the discussions to get WLAN applied extensively and correctly, were:

- to define a rule for the use of the band in a public covered space;
- to establish the roaming agreements among the different operators/owners of the hot-spot coverages, and
- to integrate the service with the cellular mobile access in order to deliver, for the clients who would like, a unique bill and security for both data in mobility with GSM (or UMTS) and data in hot spots with WLAN.

Maurizio Santinelli

Call for Papers XVth International Symposium on Services and Local access

organised by the IEE

Edinburgh Conference Centre, Heriot-Watt University,
Scotland, UK

21–24 March 2004

<http://conferences.iee.org/ISSLS2004/>



With its excellent reputation and tradition for quality, informative and thought-provoking papers and discussion, ISSLS has become the focal point for setting directions for access networks and service evolution. Special emphasis is given to interaction between authors and participants.

ISSLS 2004 in Edinburgh will provide the platform for access network operators, service providers, industry suppliers and researchers to engage in fruitful dialogue. In addition to published proceedings, speakers will provide updated presentations to reflect the latest developments in their topic.

Papers are invited in the areas of

- Access Infrastructure
- Business Challenges for Network and Service Providers
- Evolution of IP and other New Digital Services
- The Development and Impact of Wireless Services
- Visions for the Future of the Network.

All topics are welcomed. Particularly relevant topics are listed in the Call for Papers at <http://conferences.iee.org/ISSLS2004/>.

Submissions

For details of submitting papers or paper presentations, see: <http://conferences.iee.org/ISSLS2004/>

Paper Summary

Minimum 800 words, maximum 3 pages including diagrams. MS Word or PDF, emailed to issls2004@iee.org.uk. Summaries must indicate the topic or topics covered, and how the summary will be extended to a full paper. Summaries must include a brief paragraph describing the novelty of the submission. At least one presenting author will be expected to register for the conference.

Schedule

Paper Summary Submission: 19 September 2003

Notification of Acceptance to Authors: 31 October 2003

Full Paper Submitted: 30 January 2004

Conference: 21–24 March 2004

ISSLS 2004 Conference Organiser:

IEE Event Services, Michael Faraday House, Six Hills Way,
Stevenage SG1 2AY, UK

Tel: +44 (0)1438 765649; Fax: +44 (0)1438 765659

Email: issls2004@iee.org.uk

*FITCE is an Associated Society of ISSLS 2004
Members will be able to register at IEE Member rates.*

Call for Papers Telecommunications Quality of Service: the business of success (QoS 2004)

2–3 March 2004, The IEE, Savoy Place, London, UK

Following the success of the first conference, this conference will focus on the technical issues of quality to ensure business success. The scope of the conference encompasses the migration to next generation IP based networks. From VoIP to PSTN interworking, mobile network evolution (from 2G through GPRS to 3G and emerging 4G), broadband fixed access, core network evolution and the evolution of operational support systems, etc.

The conference will have a core of invited keynote speakers and papers from open call in the following topic areas. Please note that the conference will be a single stream format, which means that only the most relevant of the accepted papers will be presented. Papers not presented may be published in the proceedings.

- VoIP to PSTN Interworking.
- Dimensioning for varying levels of quality of services in connectionless networks/local control/resilience.
- Migration of QoS mechanisms with networks.
- Mapping of subjective QoS to network parameters.
- How to set QoS requirements for new services.
- QoS management for services that are provided over multiple networks/service providers (e.g. how poor quality on a video on demand service which can result from problems with the content provider, service provider, network providers or consumer equipment can be resolved).
- Specification and measurements for multimedia QoS.
- Practical measurement techniques.
- How to effectively measure end-to-end QoS.
- Mobile communications.
- Managing customer service teams, CRM issues.
- Relating what users appear to want and what the systems can manage.
- Vendor sustainability and management of customer-vendor relationship.
- Mathematical modelling of network performance.
- Methodologies for objective monitoring and control of QoS.
- Economics of emerging services and network transitions (where savings are made, impact on QoS, etc).
- Economic aspects of QoS.
- Benchmarking.
- E-commerce QoS issues.
- Benefits, options and compatibilities of QoS.
- Security improvement in IP networks.
- Issues for disabled.

Authors wishing to contribute to the Conference should send a title and a one-page abstract highlighting the important points of the paper to the Event Organiser on or before Monday, 8 September 2003. Submissions can be made by email as MS Word-97 or .pdf attachments to: qos04@iee.org

Authors whose abstracts are selected for development into full contributions for further consideration will be required to send (electronically) a typescript of no more than 5 pages (including text and illustrations) as MS Word-97 or .pdf attachments, by Monday, 10 November 2003 to the QoS 2004 Event Organiser.

All contributions will be published as part of the IEE Conference Proceedings series and will be available to all delegates at the event.

It is also expected that at least one author for the paper will register in full to attend and present the paper at the Conference.

The working language of the Conference is English, which will be used for all printed material, presentations and discussion.

*FITCE is an Associated Society of QoS 2004
Members will be able to register at IEE Member rates.*