



Forum

www.fitce.org

Newsletter of the Federation of Telecommunications Engineers of the European Union

April 2001

• See pages 5–8 for registration and provisional programme information for the FITCE Congress 2001, Barcelona

Barcelona Congress— Telecommunications in the E-Society

Planning of this year's Congress, in Barcelona is well under way. The Technical Committee met in Madrid at the end of March and selected an excellent range of papers on the Congress theme—'2001 European Odyssey—Telecommunications in the E-society'.

The committee selected some 40 papers and divided them into 10 sessions: 'E-Society', 'Next-Generation Network', 'Access Network', 'Policy Issues', 'Mobile Network and Systems', 'Designing for Quality', 'The Mobile Society', 'The User Dimension', 'Evolving Infrastructure', and 'The E-Business'. The Technical Committee meeting in

Surroundings at the Hotel Fira Palace, Barcelona—home for the 2001 Congress



FITCE Forum

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Madrid comprised: Wim van der Bijl, The Netherlands; Antoni Elias, Spain; Georgios Tsiamas, Greece; Hans-Otto Ehmke, Germany; Alcibiade Zaganiaris, France; Julio Micelli, Italy; Francesc Torres, Spain; Paul Flanagan, Ireland; Egied Dekoster, Belgium; and John Griffiths, UK.

The provisional programme, including the papers selected, the social and cultural events, and the accompanying persons programme are given on pages 7 and 8 of this edition of *FITCE Forum*. For latest information refer to the FITCE web site at www.fitce.org.

A Congress registration form and hotel booking form are also included in this edition, on pages 5 and 6 respectively.

The Congress itself will be held in the Fira Palace hotel in the centre of Barcelona. An elegant contemporary hotel opened in 1992 and renovated in 1998, opposite to



Technical Committee selecting papers for the Barcelona Congress

the Congress Hall Fair grounds and next to the well-known Gran Via Avenue and Plaza Espana, the Fira Palace offers the largest bedrooms in the city, a restaurant which serves exquisite regional and international cuisine and excellent leisure facilities.

Delegates and their accompanying persons will have many social and cultural opportunities for building contacts. Accompanying persons also have the opportunity to enjoy an extensive range of tours of Barcelona and its surroundings.

In the great tradition of FITCE Congresses, delegates can expect a most stimulating, rewarding and enjoyable event.

Austria: ready for the future

During the last four years the Austrian public enterprise PTA was divided into three parts and into some stand-alone enterprises. One of these parts was 'Telekom Austria' with its four daughters 'Mobilkom', the 'Datakom', 'Jet2Web Internet Company' and 'Jet2Web Network Services'.

The situation of membership in our association 'VAPT' is that about 70% of the members belong to the Telekom Austria organisation and about 20% of members belong to the Post. Therefore the common interests are only focused on social events and not on the things happening in the different enterprises. The new company forced lean management and therefore many members retired early. Furthermore, in recent years only a few members have joined. These factors influenced the structure of our membership. Older and retired members dominated our events. The time had come to change our image.

We had extensive discussions about our new way. We defined our new aims under a

new name called 'J2W Leaders Community'. Highlights are:

- *Fun Community* Our leisure time is limited. Having fun together is one of the activities in our association.
- *Network Community* Network is the backbone of the new economy. The common interests are the success of our company, we are all shareholders of our new company Jet2Web, and this is the base of an informal platform. The FITCE membership is also a platform to support international contacts in common interests. The Internet is the focus to increase the efficiency of our network. Open space is the basic principle of the Network Community.
- *Leaders Community* All our members can participate on our high level Infotainment. An important matter of concern is the coaching of new blood.

Despite a lot of objection by the older members the new programme was accepted in January.

Snow in Dublin: Europe isolated!

Well, that's how it felt to nine FITCE members as they experienced delays of up to five hours in flights into Dublin on 28 February. They had been invited to address the FITCE Ireland seminar on 1 March, at the Institution of Engineers of Ireland's premises in Balsbridge (home of the Dublin Horse Show and close to Ireland's international Rugby ground in Lansdowne Road).

Most speakers made it to Dublin in time to have dinner with the President of the IEL, Professor Gerry Byrne. Addressing the gathering, which included representatives of FITCE Ireland's sponsor companies, Professor Byrne remarked on the growing importance of telecommunications to all economies, but especially that of Ireland, both as an island and as a country with a high growth rate in IT-based industry. He thanked the speakers, and their companies, for their contributions to the seminar, and indeed to the Congress in Limerick from which their papers had been selected.

The following day, Mr Liam Connellan, Chairman of the Professional Development Committee of the IEL, opened the seminar with similar remarks. He drew attention to the massive investments in infrastructure which are taking place in Ireland, and welcomed delegates from several of the companies who are making these investments. He was also pleased to welcome a number of third-level telecommunication engineering students. Handing over to John Lysaght, who chaired the seminar, he wished FITCE a long and successful association with the IEL.

The first presentation, from Patrick van der Duin of KPN, set the scene for the seminar by discussing KPN's scenario method for strategic forecasting. Mr van der Duin divided the future up into a manageable set of four alternative 'futures', each of which made sense on its own, and showed how this can be used to identify important strategic issues.

Marcel van Sambeek (KPN), Ali Salman (BT) and Johann Camps (KPN) discussed different aspects of IP networks

Geoff Shakespeare of Ericsson Ireland with President Gerry Byrne of the IEL at the reception for speakers



John Quist of eircom with Johann Camps of KPN at the IEL President's dinner for speakers

and services, and Claire Ahern (Tellabs) finished the morning by discussing the integration of GSM and PSTN networks.

The afternoon sessions started with Georg Hollmann (Siemens) on the Next Generation Network, followed by Anastasia Andritsou, whose presentation on Broadband Wireless Access was enthusiastically discussed. Marc Aafjes (Cap Gemini) spoke on business modelling, then Paul Kallenburg on new service planning. Finally, Michele Morganti (Siemens) shared a personal perspective on liberalisation and the effect on industry structure.

A group discussion followed the seminar. The delegates agreed that the most prevalent thread among the presentations was the state of tension between IP and ATM, with agreement that, even since the August Congress, the weight of sentiment in favour of IP was on the increase. The importance of 'shareholder value' as opposed to pure technical considerations in driving this became the issue on which the discussion was adjourned to the bar in the Engineers' Club, where delegates stayed for several hours after the formal close.

Some of the speakers met for lunch the following day at the Guinness factory, with a view of the city showing that the snow had melted away almost as fast as it had come.

At a meeting with IEL colleagues shortly after the seminar, it was agreed that this had been a very successful close to the Congress 2000 project. There is an expectation of

Speakers preparing for the FITCE seminar in the IEL premises in Dublin



FITCE web site www.fitce.org

Many new useful features are now available at the FITCE web site for members to use.

The FITCE Online Network is an exciting new feature that allows members to network online. An ever-expanding database holds details about the professional expertise, specialisms qualifications as well as contact details and personal interests of FITCE members. Other members can then search through the database to seek out people with the required criteria and make contact and share their knowledge. To add your details to the network click on the 'Register' option on the web site and complete a simple form.

A new 'Members on the Move' area allows members to notify others of a change of address or job. This is again very simple to use and keeps everyone informed of your new details. Both Members on the Move and the Online Network are fully encrypted and also password-protected so that only FITCE Members can access the information.

All the details for the 2001 Congress to be held in Barcelona are available on the FITCE web site, including booking details, hotel reservation, programmes for both delegates and accompanying persons, travel information and information on Barcelona itself.

Members can now subscribe to the FITCE mailing list that will keep them regularly updated on new features and content held on the web site by clicking 'Join mailing list' and leaving their e-mail address.

Also there is an electronic version of the *FITCE Forum* on the web site in pdf format so members can download a copy for future reference.

Remember that some areas of the site are restricted by password: username—'fitce033', password—'biology'.

Send all contributions to the web site to paul.e.nichols@bt.com.

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The Groupe Spécial Mobile finally done justice

Sometimes history takes an unexpected turn. Here is an example. Remember those technicians who worked in the framework of the CEPT on the European Digital Mobile System? French was still the major language in telecommunications at that time so this working group was called *Groupe Spécial Mobile*. They had a wonderful idea. In the United Europe of the future, borders would no longer exist and therefore they designed a system which was optimal for five or six European operators who should offer their services Europe-wide.

Technicians may dream, but politicians decide. Such a mobile system requires frequency allocation on a Europe-wide basis. National governments however considered, and in many cases still consider, frequency allocation as a national prerogative. It is an expression of the sovereignty of a nation. The principle of subsidiarity is immediately invoked by national governments in such cases. For those who are not familiar with the EU jargon, subsidiarity means something like 'anything you can do I can do better'. In the end national governments decide which decisions they hand over to Brussels and which not. The outcome for the GSM frequencies was that they were allocated on a national basis. The GSM group was in the meantime transferred to ETSI and could only watch amazed. The outcome was not a European system as was hoped for but a set of islands in which frequencies were allocated on a national basis. Yes, they used the same mobile system throughout the whole of Europe but across border communication was, and in many cases is, extremely expensive. In every country there are four or five operators which had to make roaming agreements with each other. Roaming is called *interconnection* in the fixed telecommunications environment. This is an expensive operation, not only legally but also technically. On top of this, especially in smaller countries, the allocation of frequencies is far from optimal because in the border areas the frequencies in use may interfere with those used in the neighbouring countries.

Fortunately the technical soundness of GSM turned it into a huge success and made governments realise that they had created a chicken that was laying golden eggs. So for UMTS the governments did every effort to make as much money as possible by selling the mobile frequencies which are still allocated on a national basis. The outcome of this process is that only very big players are able to play the game—perhaps four or five on a European scale. The first movements to create European operators are now on their way. Vodafone and Orange are just two examples. This is not far from what the Groupe Spécial Mobile originally had in mind. My prediction is that once these European operators have established themselves they will demand that their frequencies will be allocated to them on a European basis. This will certainly be the case for the fourth-generation mobile systems, but I would not be surprised if there is some reallocation between operators in the meantime.

Market dynamics will achieve what once was only a technician's dream; that is, real European mobile telecommunications networks. The greediness of governments in collecting as much money as possible from their mobile operators will then have resulted in a loss of sovereignty for those same governments. They have slaughtered their chicken that laid the golden eggs.

Ton de Liefde
(Columbi, The Netherlands)



The current low value of telecom and Internet shares: disaster or sound re-orientation?

The last few months have seen a dramatic downfall in the value of telecommunications and Internet shares. For companies that are expanding, this means that performing takeovers and financing them with stock is becoming increasingly difficult. UPC, for example, had to cancel their takeover of SBS6 due to low UPC share value.

Another example is the low credit rating of KPN, caused by a debt of over 40 billion guilders and a low share value. Yet another example is the fact that BT, also facing a lower credit rating, is seriously considering selling its real estate to reduce its debt. Other operators are going through the same evaluation process. Yet another example is DT who has experienced a lower credit rating by Standard & Poors due to their debt/equity ratio.

Stock market analysts are apparently tying the turbulence that we are facing today in telecommunications share value on the one hand and the similar turbulence in share value of Internet companies on the other hand, together. I think that they are right in assuming a strong link between the two: the success of Internet companies will have a major impact on the success of the telecommunications companies.

However, after having initially been overvalued, most of the telecommunications shares are, in my opinion, currently undervalued. Furthermore, there is a major difference between the two: a lot of Internet companies are mainly valued based on their hype value. In a lot of cases most of their value is based on hot air: on expectations that are lacking sound foundations.

The value of telecommunications companies, however, is based on three factors: their assets, the value of their traditional business and the (expected) value of their upcoming Internet ventures. I expect that the value of the telecommunications companies will eventually move towards a more reasonable equilibrium. This new and more realistic level will allow them to operate in a healthy fashion, provided they can reduce their debts to an acceptable level and that they can produce sound and realistic business models for their (future) Internet ventures.

The Internet-based companies face a completely different challenge. The time of burning money as the primary objective is gone. As, of course, it should be. These companies will have to turn to a more realistic view on running their business and thus face up to traditional economical laws: in essence to make more money than is spent. In doing so, they must keep in mind, however, not to kill all creative new ideas by demanding a return too quickly. As in the telecommunications sector, a new equilibrium has to be found here, and we can only hope that this will not take longer than necessary.

A bizarre example of the way it has been up till now with a lot of Internet-based companies, is the IPO of 'friedair.com'. Some practical jokers had started an IPO process for this company. Their IPO document was vague as one could expect for a completely fake company. Still they received from many investors the commitment for many millions of dollars. These people happened to be non-crooks, and they revealed the joke before collecting the money, so the whole deal was off.

In conclusion: for the telecommunications industry, low stock prices are a temporary discomfort. They shall reach a more realistic level soon. For the Internet-based companies the current stock-shock is a healthy wake-up call that will make everybody take up a more realistic view on doing business. There will be a severe shake-out which will separate the 'hot air' initiatives from the real business opportunities.

Frans Heitkamp (Columbi, The Netherlands)

T-Mobil gains GPRS pole-position worldwide

T-Mobil, the 100 per cent subsidiary of the leading German telecommunications provider Deutsche Telekom, has been offering its customers the new GPRS standard since the summer 2000; the commercial operation was launched on 1 February. T-Mobil is running the GSM network T-D1. Until July 2000 nearly 200 GSM providers worldwide had voted in favor of introducing GPRS. GPRS, an abbreviation for *General Packet Radio Service*, describes a standard for optimised transmission of data, using Internet technology based on the existing GSM network. By using GPRS a much greater transfer rate can be achieved than is currently possible.

Being built upon existing GSM technology, GPRS still uses the Internet protocol (IP) for transmission. Prior to transmission the data is divided into separated packages, which are brought together again on the receiver's side. This means that each data package can take a different way through the network. The result is a more efficient use of the network.

During the start-up period, this technology will be capable of transmitting data at up to 50 kbit/s. During the second phase the GPRS operators want to push the transfer rate up to more than 100 kbit/s. These transfer rates are based upon laboratory conditions; in reality the users of one GSM cell have to share this bandwidth. This will bring up a process of dynamical varying bandwidth.

How does GPRS work? Users transmit their data to the nearest GSM receiver of the T-D1 network. The receiver forwards the data to the GSN (GPRS support node), a switching node for GPRS, from where on they are further transmitted via special gateways to the Internet or other IP-based networks, for instance a WAP server. Switching nodes and gateways are connected through an IP-based network, especially established by T-Mobil. A complete update was necessary (hardware and software) of the standard T-D1 network, including an increase of switching nodes. In 1999 and 2000 this was an investment of about 300 million Marks.

Where are the differences between GPRS and the still-used high-speed circuit switched data (HSCSD) technique? Basically, both use a multislot technology: HSCSD offers a bundle of data channels based on switched lines; GPRS offers a bundle of data channels based on switched packages. Therefore, GPRS is a smarter solution in combination with the Internet.

As a result of this development, network providers are changing their business to Internet service provider (ISP). The typical application in this case would be Internet access with much more download than upload volume.

GPRS offers four *coding schemes* with different transfer rates. Each scheme gives opportunity for the use of eight time-slots. Currently cellular telephones use four time-slots in downlink mode, one time-slot in uplink mode. Some companies are discussing the change to a 2:3 ratio.

Depending on the coding scheme the transfer rates of a single time-slot increase from 9.05 kbit/s up to 21.4 kbit/s. This implies theoretically a maximum rate of 171.2 kbit/s. Outside of laboratory conditions this boils down to a transfer rate of about 50 kbit/s.

Especially for users who need intensive access to WAP or e-mail applications, GPRS offers many benefits. In comparison to standard cellular telephones the transfer rate of GPRS devices will be up to five times higher; mobile use of the Internet is another typical application. But there are still more advantages:

- **Always online** Once being connected to the Internet a GPRS device will stay online all the time. This offers quick and comfortable access to Internet applications like online brokerage or e-mail communication without any delay.
- **Telephone and Internet communication at the same time** While using a WAP application it is possible to use GPRS for voice communication at the same time. During the time of the voice call the WAP application will be on hold.
- **New dimension of billing** GPRS offers a new dimension of billing. The amount being charged no longer depends on the online time, but on the number of transferred (downlink and uplink) data packages.
- **Convenient handling** Switching up to GPRS services means no change in handling. The customers keep the GSM cards they are used to, except users with prepaid cards.
- **High transfer-rates** In comparison to the standard GSM network GPRS starts with a transfer rate more than twice as fast as GSM. During the second quarter of 2001, a new generation of end-user devices will offer transfer rates which are up to five times faster.

Most of the new terminals will be GPRS class B. That means, when establishing a connection, the user can either start up a standard GSM connection or a GPRS con-

nection. During on-line access it is possible to switch between both applications. Terminals that match class A, being technically more complex and expensive, offer the use of both applications at the same time. Class C terminals, the most simple ones, require an explicit decision for one application type (GSM or GPRS) to establish a connection. Once the connection is established the switching of the application is not possible.

How does the Universal Mobile Telecommunications System (UMTS) fit into this structure? Will UMTS substitute GPRS in the long run? There is a very good chance they will co-existence for a long time. UMTS depends on a complete new network. Therefore, it will take time until UMTS is available. GPRS is an existing service; therefore, no additional investment in a new network is required, apart from updating the existing structures.

How can GPRS and UMTS interact? Being a new interface between end-user device and network gateway the UMTS network will be based on a complete new technology. Thus, GPRS is a new GSM application, using existing GSM topologies. They are enhanced by IP components, like server and router. Therefore, they are available within a short period of time. And, as a matter of fact, UMTS will support GPRS applications. In comparison to standard GSM services GPRS offers high-quality services, even in a UMTS network. There is no loss of investment.

Hans Otto Ehmke
(T-Mobil, Gemany)



A note from the editor

The success of the *Forum* will depend on contributions from FITCE members themselves. We will welcome your articles. Only short articles are required, and of course photographs are very important.

Information on submitting articles to the *Forum*, including a list of suggested features, can be obtained from the FITCE web site, or from me.

Help us make your newsletter a great success.

Paul Nichols
(paul.e.nichols@bt.com)

40th EUROPEAN TELECOMMUNICATIONS CONGRESS
2001 European Odyssey—Telecommunications in the E-society
22–25 August 2001, Fira Palace Hotel, Barcelona
REGISTRATION FORM

Registration to be made before 30 May 2001 by sending the attached form, duly filled-in, together with payment to your National Association contact (see page 7). Send form to UNICONGRESS-ATLANTA Att. Paloma Herrero Fax: +34 91 319 57 46 and to Asociación Española de Ingenieros de Telecomunicación Fax: +34 91 447 23 18. Non-members in countries without a national association are requested to send their form to FITCE c/o Armada - Kruisbaan 3 - B 2800 Mechelen Belgium Fax: +32 15 459089.

Please write clearly. **This form is also available for download from the FITCE web site at www.fitce.org.**

Title	Mr./Mrs./Ms/Miss/Dr./Prof./Other
Family Name	
First Name	
Company	
Address	
Code/City/Country	
Telephone	
Mobile	
E-mail	
Fax.	
FITCE Member	Yes/No
Accompanying persons (please write the name of each person on a separate line)	Family Name: _____ First name: _____
Comments	
Signature	
Date	

IMPORTANT: remember to book your accommodation (see page 6) and flight.

Registration Fee	FITCE Member	Non-Member
Delegate	EURO 130	EURO 260
Accompanying Person	EURO 130	EURO 260

REGISTRATION FEE INCLUDES:

Delegates:

Attendance to all Congress sessions
 Coffees and work lunches during sessions
 Attendance at Congress social events
 Documentation

Accompanying persons:

Attendance at Congress opening session
 Lunch at the Congress venue on opening day
 Excursions mentioned in the accompanying programme
 Lunch during excursions
 Attendance at Congress social events

Registrations will be processed on the basis of first come-first served until the available space is filled.

40th EUROPEAN TELECOMMUNICATIONS CONGRESS
2001 European Odyssey—Telecommunications in the E-society
22–25 August 2001, Fira Palace Hotel, Barcelona
HOTEL BOOKING FORM

Room reservation is to be made before 30 May 2001, by sending the following reservation form, duly filled-in, together with credit card details or bank transfer, covering TWO nights payment to:

UNICONGRESS-ATLANTA Att. Paloma Herrero E-mail: unicongmad@unicongress.com Fax: +34 91 319 57 46

Please write clearly. This form is also available for download from www.fitce.org.

HOTEL RESERVATION FORM		40th European Telecommunications Congress		Barcelona, Hotel allocation: 21–26 August 2001	
Mr. Mrs. Miss Family name:			First name: No. of people:		
Contact address for reconfirmation:		Tel: Fax:		E-mail: Country:	
Billing address: Please fill-in if you need an invoice for your prepaid nights		Name: CIF		Address:	
Please reserve: (state number of rooms on appropriate box)					
<input type="checkbox"/> Single		<input type="checkbox"/> Twin		<input type="checkbox"/> Twin+extra bed	
				Hotel name	
				at: 1st choice 2nd choice 3rd choice	
Arrival date		Departure date		No. of nights	
Daily room rates including breakfast. VAT additional at 7%		Single room Ptas. Euro		Twin room Ptas. Euro	
Hotel Fira Palace ****		21.000 126,21		25.000 150,25	
Hotel Barcelona Plaza ****		19.000 114,19		21.000 126,21	
Hotel Taber ***		16.150 97,06		20.400 122,60	
Hotel Montblanc ***		16.150 97,06		20.400 122,60	
Hotel Nouvel ***		18.000 108,18		18.000 108,18	
Hotel NH Master ***		15.700 94,36		17.400 104,57	
Hotel NH Duc de la Victoria ***		15.700 94,36		17.400 104,57	
Hotel NH St. Angelo ***		15.700 94,36		17.400 104,57	
Form of payment: TWO nights payment to Unicongress-Atlanta at the moment of reservation (room rate + VAT). Balance of nights to be paid directly at the hotel upon departure.					
Credit card: the cardholder authorises UNICONGRESS-ATLANTA to debit his/her credit card.					
<input type="checkbox"/> Visa		<input type="checkbox"/> Eurocard/Mastercard		<input type="checkbox"/> American Express	
Number:		Expiry Date:		Amount:	
Cardholder name:					
Bank transfer: please attach copy of order to this form: BANCO SANTANDER CENTRAL HISPANO (BSCH) Acc no.: 0049 1028 31 2910026971 Bárbara de Braganza, 2 - 28004 Madrid					

GENERAL CONDITIONS

Reservations:

Reservations will be accepted together with 2 prepaid nights.

Reservations are guaranteed in your name.

You will receive a confirmation of the booking by return. Please let us know if you need an invoice by filling-in billing information.

Extra bed

Extra bed consists usually of a sofa or canopy.

Children under 12 are free of charge when sharing room with 2 adults.

Breakfast is included in extra bed supplement.

Cancellations:

Cancellation of rooms reserved is subject to a charge fee depending on the date of receipt of the cancellation request:

— Up to 60 days before arrival: full refund of the two prepaid nights less 1.500 Ptas./Euro 9 for handling fee.

— From 59 to 30 days prior to arrival: one night refund less 1.500 Ptas./Euro 9 for handling fee.

— Less than 30 days prior to arrival—no refund of prepaid nights.

Reduction of pre-reserved stay while staying at the hotel:

The hotel will charge to your credit card the total number of nights originally reserved.

40th EUROPEAN TELECOMMUNICATIONS CONGRESS
22–25 August 2001
Fira Palace Hotel, Barcelona
NATIONAL ASSOCIATION CONTACTS FOR REGISTRATION

AUSTRIA Kontonummer: 92.003.390 bei PSK. BLZ 60000	Alois Miedl Humboldtgasse 38 A-1100 Wien Tel.: +43 1 60505-1000 Fax.: + 43 1 409 8517-2403 alois.miedl@telekom.at	IRELAND	John Byrne FITCE Ireland (IEI) 22 Clyde Road, Dublin 4 Tel: 01 668 4341 Fax: 01 668 5508 iei@iol.ie
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CZECH REPUBLIC After receiving your application, an invoice for Congress Fee FITCE 2001 will be sent to you.	Ing. Petr Drincev FITCE CZ CESKÝ TELECOM, a.s. Novodvorská 14 C, 142 01 Praha 4 Tel: 02 7146 1671 Fax: 02 7146 1678 petr.drincev@ct.cz	LUXEMBOURG Compte No. 28970-64 FITCE Luxembourg	Joseph Glod Division des Telecommunications 2 rue Emile Bian, L-2999 LUXEMBOURG Tel: 04991 5520; Fax: 04991 1221
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GERMANY Konto Nr 342 000 - 608 Postbank Ffm, BLZ 500 100 60 FITCE-Gruppe Deutschland	Dipl.-Ing. Werner Hufnagel VTP Mittermayerweg 43, D 64 289 Darmstadt Tel: 06151 71 33 71 Fax: 06151 71 33 15 w.hufnagel@t-online.de	SPAIN Client's Code Account: Asociación Española de Ingenieros de Telecomunicación 2038-1849-86-6000277883	Adrian Nogales Escudero AEIT, Fernandez de la Hoz 7, 1', 28010 MADRID Tel: 09 1447 8177; Fax: 09 1447 2318
GREECE National Bank of Greece Number: 671-74694975 45.000/90.000 Drs	Miltiadis GOUMAS, Secretary General, FITCE Greece O.T.E. S.A. Constructions Department 99, Kifissias Avenue, 151 24 Marousi, Athens, Tel: +30 1 6117851 Fax: +30 1 6117187 mgoumas@ote.gr	UNITED KINGDOM Members and accompanying persons: £85 per person; Non-members and accompanying persons: £170 per person. Payment should be by cheque payable to FITCE UK, along with the printed application form.	Dominic Pinto Associate Director TCUK Unit 1.3, The Leather Market, Weston Street London, SE1 3ER United Kingdom Tel: +44 (0)20 7403 6550 Fax: +44 (0)20 7403 6550 Mobile: +44 (0)780 3028268 dominic.pinto@ieee.org

PROVISIONAL PROGRAMME

Tuesday, 21 August 2001

Afternoon Registration and welcome drink

Wednesday, 22 August 2001

9.30 Registration and Coffee
 11.00–12.30 **Opening Ceremony**
 13.00–14.30 Lunch
 14.30–16.00 **Technical Session 1 E- SOCIETY Chair: Carlos Martín Badell**
 ICT Changes Impacting the Evolution of the e-Society, *Giulio Miceli*
 Digital Archiving of High Value Data, *Trevor Wright*
 Open and Distant Learning at the Catalonia Open University, *F. Valverdú*
 Certificate-Based Distributed Firewalls for Secure E-Commerce Transactions, *Ivan Djordjevic, Chris Phillips*
 16.00–16.30 Coffee Break
 16.30–18.00 **Technical Session 2 NEXT GENERATION NETWORK Chair: Egied Dekoster**
 New Generation Networks—How IP, QoS, MPLS and DWDM with voice (over packet) are building the platform for e-society, *Gerd Schnaars*
 Next Generation Networks (NGN) Forcing Operators Towards New Design Principles, *Harrie Bastiaansen, Alexander Wisse, Erik Zwierenberg, Nico Bakken*
 Reflections on Migration Scenarios of Voice Networks Towards Next Generation Networks for Incumbent Operators, *Friedrich Suppan, Herbert Redl*
 Remote Management of NexGen PBXs via the Internet: Security Issues, *J.W. Knobbe, H. Kerkdijk*
 Evening COCKTAIL DINNER Casa Batlló*

Continued overleaf

7 → Congress 2001 Programme (continued from Page 7)

Thursday, 23 August 2001

- 9.30–11.00 **Technical Session 3 ACCESS NETWORK Chair: John Griffiths**
 Economic Prospects of Advanced Telecommunications Services, *Achilleas Kemos, Alcibiade Zaganiaris*
 Bypassing the Bottleneck with Broadband and Fixed Wireless Access, *Susan Smith, Tom Sheahan*
 Bringing Broadband to the Customer, *Geert Dobbelaere*
 Avoiding xDSL Provisioning Pitfalls: How to Mass Market and Roll-out xDSL Services, *Koen Van de Vel*
- 11.00–11.30 Coffee break
- 11.30–13.00 **Technical Session 4 POLICY ISSUES Chair: Giulio Miceli**
 Current & Future Aspects of Universal Service Obligations (USO) in Europe, *Ioannis P. Chochliouros*
 Is there still a role for government in the information society?, *Joost Laga*
 The Effects of Liberalization on Telecommunications Tariffs: Comparative Analysis of Significant Case Studies, *Serge Barbare*
 Overview of 3rd Generation Standardisation Activities, *Juan Manuel Vázquez*
- 13.00–14.30 Lunch
- 14.30–16.00 **Technical Session 5 MOBILE NETWORK & SYSTEMS Chair: Hans-Otto Ehmke**
 Next Generation Wireless. The Path to High-Speed Mobile Multimedia Services, *Wolfgang Groenen*
 From GSM to GPRS; The Evolutionary Steps to Cellular Wireless Data Transmission, *Spiros Louvros*
 Fractal Antennas(r) for 3G Networks' Smooth Implementation, *Carles Puente*
 Mobility Convergence in Heterogeneous (Fixed and Mobile) Networks, *Anastasia I. Andritsou, Nikos B. Pronios*
- 16.00 - 16.30 Coffee break
- 16.30 - 18.00 **Technical Session 6 DESIGNING FOR QUALITY Chair: Georgios Tsiamas**
 Security and Quality of Service for Networks: Components and Perspectives, *Lise Baudouin*
 Optical Technology in Telecommunications: Catalyst of the Information Age, *Miroslav Ziegler*
 Accurate Dimensioning of Service Level Agreements in Voice over IP Networks, *R. G. Stewart, J. A. Schormans*
 New Tendencies in Design for Mobile Network Planning Tools, *A.E. García, K.D. Hackbarth, J.A. Portilla*
- Evening CONCERT Sta. María del Mar Church*

Friday 24 August 2001

- 9.30–11.00 **Technical Session 7 THE MOBILE SOCIETY Chair: Alcibiade Zaganiaris**
 Beyond Mobility: Ubiquitous Services and Applications for a Wireless Society, *Michele Morganti*
 Delivering Content to the Location, *Jason Flynn, Daniel Ralph & Nigel Cook*
 Mobile Portals, *Olalla Hernández Carretero*
 Mobile User Support at the Construction Industry, *Lito Baxeavanaki, Theodoros Bozios, Ioannis Mathes*
- 11.00–11.30 Coffee break
- 11.30–13.00 **Technical Session 8 THE USER DIMENSION Chair: Paul Flanagan**
 Personalisation — 'How Does the Future Look to You?', *Neil Gerry*
 The Next Generation Residential Gateway, *Jan Bouwen, Tu-Anh Nguyen*
 Always-on Network Services: Why Bother?, *Michael Gardner*
 ASR Services Today—Where is the Rub?, *Bruno Jacobfeuerborn*
- 13.00–14.30 Lunch
- Afternoon Social Programme
- Evening VIP VERBENA

Saturday 25 August 2001

- 9.30–11.00 **Technical Session 9 EVOLVING INFRASTRUCTURE Chair: Wim van der Bijl**
 The Way Towards Broadband Services, *Cinzia Sternini*
 Dynamic Resource Management in Virtual Private Networks, *Veselin Rakocevic, John Griffiths, Graham Cope*
 Data Communications Network—Design Theories, *David Richardson, Johan Kardol*
 The Introduction of the Optical Network in Belgacom Backbone, *Marc Mignon*
- 11.00–11.30 Coffee break
- 11.30–13.00 **Technical Session 10 THE E-BUSINESS Chair: Francesc Torres**
 E-business in the B2B area: Deutsche Telekom's Strategy and Experience, *Günter Martin*
 Small and Medium Size Enterprises and the E-economy: Challenges and Prospects, *Francis Pereira, Elizabeth Fife*
 Internet Solutions for Small and Medium Enterprises, *Stephan Rupp*
 ICE, The 'Cool' Operating Support System and Interactive Customer Empowerment Tool, *Jos Gerrese*
- 13.00 - 14.30 Lunch
- 14.30 - 16.00 General Assembly
- Evening DINNER DANCE Marques de Comillas *

*Suggested programme, subject to confirmation

ACCOMPANYING PERSONS PROGRAMME

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| Wednesday 22 August | Barcelona half-day panoramic tour. |
| Thursday 23rd August | Half-day tour to Monserrat, including lunch in a local restaurant |
| Friday 24 August | Half-day tour to Penendes wine cellars, Cordoniu, Sant Sadurni D'Anoia—45 km from Barcelona |
| Saturday 25 August | Full-day tour to Figueras and Dali Museum, including lunch |