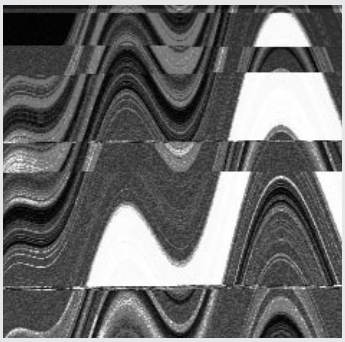
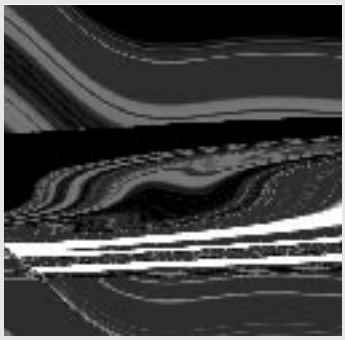
REPORT

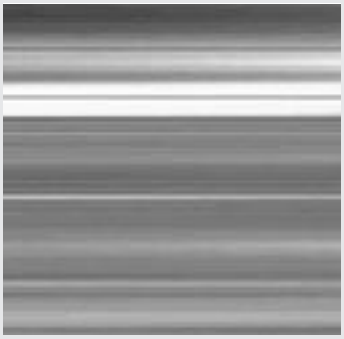
FEBRUARY 2003

8th ART Conference

28 october 2002

«Standardisation and regulation : Interactions and issues»



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INTRODUCTION

Michel FENEYROL

member of the board, ART

It is a great pleasure for me to welcome you to this eighth Conversation with the French Telecommunications Regulation Authority.

I thank Mr Karl-Heintz Rosenbrock, Director-General of ETSI, for joining us and for his agreeing to introduce this discussion together with myself.

The subject that we have chosen has proved to be a surprise. Going by the number of guests who have honoured us by attending today – and they have my thanks – it has captured your interest.

"Standardisation and regulation: interactions and issues". Regulation must necessarily act on the market in the fairly short term for the good of the consumer, with the aim of fair competition between actors while seeking to smooth over the inflationary or recessionist extremes of the market.

Standardisation for its part seeks to encourage the process of technical progress, to ensure that new services and new networks emerge. It tries to encourage the worldwide interoperability essential to the development of any telecommunications service. The process extends over periods more in the order of 10 years at a time. On the one hand we have the market with a short-term cycle for regulation, and on the other we have technical application, with a long-term cycle.

Can there also be strong interaction with convergence? Let us look at some recent events and I think you will see what I mean.

UMTS, mobile third generation: in Europe, the directives require us to open up services as from January 1, 2002 while the work on introducing rules for their industrialisation are far from being completed. Poor synchronisation between standardisation and regulation may help to destabilise a whole sector of the economy.

Another area: high speed ADSL: a standardising process which from the start resulted in over-loose specifications. The result: modems that are not interoperative, that work on certain manufacturers' hardware and not on others'. So, how can the regulators ensure an opening up of markets at the quality level required by consumers? Here are two very specific cases that have recently shown that regulation and standardisation can interact quite substantially.

And the fact remains, all the more so, that after a period where the regulators have done a great deal of work on opening up the networks and existing services to competition, they are now faced with the problem of the emergence of new infrastructures, new applications and also by what is called convergence, though I think generalised inter-dependence is a better name. Each service may make use of different networks and each network may carry services complying with different regulatory principles.

The way a world of this kind works contributes directly to the effectiveness of standardisation. The regulators are faced with many questions. Before starting our discussion, I will mention a few of these directly: should we open up to competition wholesale or by a single open standard? Interoperability? How do we regulate if the standards are too woolly and open to many different interpretations? Technological neutrality? As each technology is different, how can standardisation encourage neutrality of use without eliminating the specific advantages of each of them? Consumers, ease of use: a challenge to standardisation and regulation jointly. How do we make simple what is increasingly complex? Organising management of scarce resources – frequencies, dialling systems, nomenclature – with convergence? Can we have highly disparate methods for managing these resources? And, finally, how do we organise to ensure that standardisation and regulation take better account of their mutual needs?

These are some of the questions which will be highlighted in the two general discussions that are to follow. I hope that these discussions will clarify our debate which, I feel, will continue for some years to come.

Karl-Heinz ROSENBROCK

Director-général, ETSI

I thank the ART for its invitation to attend this conference. I had a talk with the Chairman of the ART who had promised me that we would do something together. I believe that this conference is one of the activities that we are taking up on a cooperative basis, so the promise has been kept! Many thanks for that.

The telecommunications landscape over the past ten years has seen fundamental structural change. I will give you some examples: firstly, the liberalisation of the markets and privatisation of the traditional actors, the arrival of newcomers and new activities, market capitalisation and global companies, and the regulator, a new actor in the market, of whom there were two in 1990 and we now have more than 100, 112 to be precise, in 2002. This is true of standardisation, a global multi-polar market, competition, and cooperation. ETSI can look back at its start with 120 members, chiefly in Europe. It now has more than 900 members, recruited from 50 countries throughout the world, on all continents. The present crisis has arisen in this radically transformed landscape. Simply summarising, we can say that there's nothing as constant as change. And what was the rule yesterday no longer applies today.

A both structural and economic revolution has occurred, creating a range of new problems unknown a few years ago. Today's ART discussions will consider the relationship between regulation and standardisation and more especially the position between regulation and standardisation in a market governed by competition. I think there's a good chance of cooperation between the regulators and standardisers – the term "co-regulation" even comes to mind – because there are plenty of occasions where the regulator can draw on a process that is characterised by such words as "being open", "voluntary" and "consensual", and where all the parties concerned can play a part, and I think that this forms a good basis for regulation. Cooperation of this kind may even produce cross-pollination. By this Darwinian logic, the economic relationships in the market, which the present crisis has highlighted, we can say that standardisation, like regulation, helps to create the rules of engagement. On the one hand, the economic and social rules on the regulation side – this means creating legal tools to ensure that the competition rules are properly observed – and, on the other, the more or less industrial rules, let's call them the standardisation rules – which means cooperating upstream to increase one's competitive advantage in the market. The philosophy of standardisation rests on the idea that drawing up rules will benefit the industry, users and market development in general. Specifically, this is done by ensuring that all actors in the market are represented in the process and an open, multi-retailer market is created where consumers and users are free to choose and even participate in this work. An optimum degree of inter-functioning, interoperability and inter-linkage. Reducing a multitude of technical options to an acceptable minimum agreed to by all will allow a critical mass to be created in the market and, of course, a single version would be ideal, which also shows the

differences in philosophy between Europe and the United States.
The regulator is both customer and producer of the rules insofar as the standardisation calendar anticipates market developments. Scarce resources must be managed, for example all the aspects of regulation. In this case, it is up to the regulator to ensure by participating in the standardisation process that the particulars that will be on today's agenda are taken into account. He helps to lay down the essential parameters for his task. By regulator, I mean the laying down of protocols for the inter-connection architecture, etc. The regulator ensures that the definition of these parameters will allow a network and services to develop that will benefit all, producers and consumers. Today, 8% of ETSI members – ETSI is an English acronym that stands for "Excellent Telecommunication Standards Institute in Europe" – are now the regulators and most of the others are manufacturers.
Today's conversation will give you some specific examples, some different points of view and, I am sure, an interesting debate. For example, the first general discussion will deal with the biggest "success story", if you will forgive the English expression, of the ETSI, namely the GSM and UMTS. The actors, manufacturers, operators and service providers, the regulators responsible for the regulatory framework and standardisation, etc, are now looking for economic and strategic models that will allow them to discharge their tasks, so that these are oriented on a search for profit and functioning acceptable to the market, as adopted in the past ten years. What the present crisis in fact shows – in this respect, it may perhaps in a few years' time be regarded as creative destruction – is that the actors are all interdependent, customer and provider for each other in turn, allies or competitors in turn, and that the bodies that permit the actors to create the rules on a cooperative basis are an essential element of the battle in which we all have to take part.
I shall end by paraphrasing one of your famous philosophers, who said in effect *"between the weak and the strong, it's freedom that oppresses and the rules that protect"* or as stated more prosaically by the president of a large American company a few years back, during the world-wide organisational standardisation – and now I will say it in English, because it's more original: *"We must clearly understand the fundamental law of standard developments which is that standards are never neutral"*. A pity…
They reflect the strengths and innovations of those who offer them to the committees. Not participating in standards abdicates the decision-making to the competition. Whether it'd be by company or nation.

8th ART Conference

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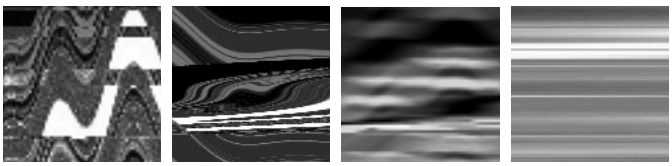
Standardisation and regulation : interactions and issues

1st round table

«*From GSM to 3G*»



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Presentation and leading

Jean-François DELPECH

Telecom analyst, Oddo Pinatton Equities

I am a financial analyst, so not a standardisation expert, but undoubtedly a symptomatic of what has happened in the mobile sector, since I saw and perhaps participated in the explosion in this area at the end of the 90s, with the market success that we know about, and since I am now seeing the difficulties in the telecoms sector, more especially in mobile telecommunications together with, in particular, on the stock exchange in any event, a substantial crisis in confidence, due partly to the evident breakdown, or at least the delay, in the emergence of new services, whether they are second or third generation.

If we take a quick look at the reasons underlying this breakdown, standardisation really seems to be one of the key elements, or at least one of the prime causes of the breakdown that has just occurred or which is occurring now. What is more, it is undoubtedly one of the subjects that we are most familiar with, in the market in any event, but not only in the market. On the consumer side, it is not the most obvious subject. The purpose or aim of this first general discussion is therefore to describe the situation in the mobile sector. Various experts will talk to you of their experience or their point of view regarding six different segments of the market, or we could say six different problem areas in the mobile sector, dealing with the question of standardisation and perhaps trying to answer some of the simple questions put by the consumer: do these services meet any purpose? Do they work? Who will keep track of the value of the sector: the operators, the service providers, the hardware manufacturers, the software suppliers, you name it! And, lastly, certainly because we are attending a symposium organised by the ART, what will be the role of the regulator or what role will it have in assisting standardisation, the success of the services and, undoubtedly, consumer interests, or at least in protecting these interests.

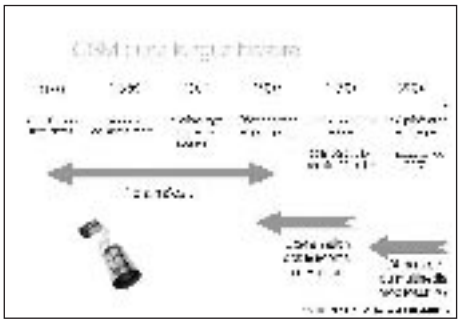
«From GSM to UMTS : a managed development»

Philippe LUCAS

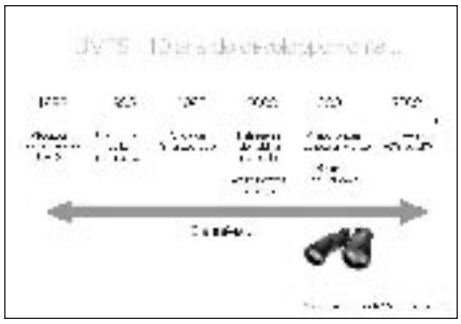
Standisation Director, Orange, GSM Association Executive Commitee Member and OMA Board (Open Mobile Alliance)

I shall try to be as clear and as exhaustive as possible. I will first off all explain to you how we transferred from GSM to UMTS, a development which we can say has been successful, and then describe to you some of the decisive points in the process of laying down standards and the way in which these are used in industry. A diagram that you must bear in mind is the development cycle for products and services.

Everything starts with an evaluation of market needs, this being the task of the marketing staff who have a good knowledge of the markets and can identify new service requirements. In addition, we find ourselves in a relatively "techno-push" sector – where technological innovation is predominant – and more often than not, we see that innovation precedes marketing demand, which is a relatively strong trend in the world of the mobile. We shall then pass generally to a standardisation stage which consists of laying down specifications to define products. The object of specifications is not simply to produce paper. I would nonetheless remind you that the GSM standard covers 5000 pages – I do not know many people who have it at their fingertips – which you may perhaps not find reassuring, but UMTS covers 10,000 pages and covers much of the GSM standard and expands on it as for radio elements, with a more substantial output availability.



So we develop standards and rules that are then used to make products. These products are developed by manufacturers. These manufacturers obviously introduce product definitions when developing specifications. The alternatives to be applied are therefore crucial to successful commercial development. Once the product has been achieved, indeed quite often at the design stage, they try to sell it to the operators, who are at the end of the chain in the world of the mobile. We therefore have a fairly complex machine. We create products and services to sell to our customers and we must be sure that at a point T, if we are an operator, we open up a service at a target date, the terminal, the SIM card, the after-sales services, the information system, the



network, and the radio all function simultaneously. That is the challenge we have to meet with each new launch of a key service. That is what we have to do and it takes a bit of time, to make sure it all functions correctly. It's a complicated process.

What is the time span of the development cycle that I have just mentioned, taking the GSM as an example? I shall not go into details as to all the various elements but it has taken 18 years from the first day when, in 1979, it was decided that "GSM frequencies will be allocated at European level" and the point when we succeeded in making GSM a commercial success … Obviously, something important happened at the end of the 90s, liberalisation of the telecoms world. And we can say that operators have in three years proceeded from 33% to 75% penetration. We made a particular effort in that time to develop our GSM availability and everything that Mr Rosenbrock has just said is quite correct: we have rather abdicated at standardisation level. It is certainly true that many manufacturers have rather held back and did not always apply the resources and the dedication that were needed to prepare for a structured and cohesive future. I can say without doubt that there has been a reawakening of interest today. Besides, I think that this general discussion could not have taken place two years ago. I am happy to see that there is really a reawakening of interest and that we can at last see that standardisation is an essential element in the process.

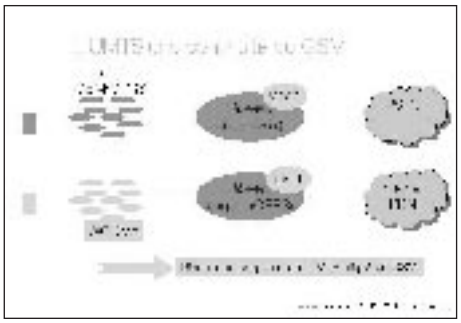
I would just like to mention one thing about UMTS, a small reminder. I started to work on UMTS in 1990. Frequencies began to be allocated in 1992, so ten years ago. Just ten years ago, which is not the 18 years it took GSM … I hope it will need less work than GSM, but we must recognise that there is a cycle, a long one … We must certainly bear it in mind: systematic telecoms development does not take a few days, whatever some people may say or have us to believe.

Standardisation is above all a long distance event and not a sprint. I must tell you of one thing that struck me particularly with UMTS. The first time I saw the word UMTS written down, it was in Les Echos in December 99 – I think I won't forget it quickly – and it was written "UTMS". A typesetting error as often happens with new things, but I would remind you that three months after they were selling licences at auction in Britain … with colossal sums on offer, Frs 230 billion for all licences in Britain. An interesting fact, since one notes that the number of persons concerned during these three months was not necessarily exactly the same – or in any event they were not the same people – as those that were involved during the ten years preceding these three months, which I would regard as a period of insanity in the telecoms world.

You will remember that the standardisation for UMTS had its first version printed on paper in June 2000; that was three months after we granted UMTS licences in UK. Sometimes the cart should not be put before the horse, which is rather what happened. When GSM was developed, it was successful because people in Europe sat around a table and talked the same language and said: "We are developing a true industrial policy". In fact, the operators "drove" the manufacturers and the actors worked together. That was not always easy, but a standard was achieved which is now accepted in 170 countries throughout the world.

Moreover, interoperability was ensured between the equipment and for customers (cohesively everywhere in Europe), which led to an explosion in the market. This created de facto economies of scale for the manufacturers on the rebound, as they were able to approach an enormous market, not simply in Europe but eventually worldwide. We therefore succeeded in developing an industrial eco-system, a "*win-win*" situation from which the whole world benefited, not only the operators, but also the manufacturers, and the customer. GSM nonetheless saw the fastest penetration in the history of technology.

A second point, we must devise standards for quality. This is something that has rather been forgotten in recent years. Quality is not a sprint, either, as I mentioned just now, but a long distance event. We forget small things in the standard. We must make sure that it all works and that our objectives have been achieved. Nothing is easy and we must check, check and check again to ensure that everything functions cohesively.



A last point: there has been a revival of interest in standardisation. I will mention just one point, namely that GSM operators have now been restructured and the chairmen of the main operators are beginning to plough back funds into standardisation and to regain leadership in this area. It is also evident that the spontaneous generation of micro-forums that has emerged in recent years has now come to an end and the aim is to rationalise and reconsolidate these scattered initiatives That is why the actors in multimedia mobiles have recently set up the Open Mobile Alliance. All this in order to tell you that the aim is to recreate a virtual circle so they can then function together that this is really progress for all actors in the industry.

What are the high stakes for today. True, UMTS is frequently mentioned but we must nonetheless make sure above all that the next stage, which is a mobile Internet, functions. The stakes are substantial: to be able to introduce the Internet into the world of the mobile with viable, economic models for everyone, not only for manufacturers or operators or content providers, but for the industry as a whole. We must make sure that the economic model of the Internet, which has not exactly been a great generator of value added, can adapt its potential to start up a virtual circle.
A last point: the standardisation of UMTS is not of course entirely at an end. A certain number of functions are being added, a continuous process, the object being to make it interoperable, as well, as effectively as possible in the very short term.

«3G : global standard or standards war ?»

Joe BARRETT

Director, Strategic marketing, Nokia Networks

Je m'intéresserai aujourd'hui à trois sujets. Le premier sujet, évoqué par Monsieur Lucas, avec qui je suis entièrement d'accord, est celui des économies d'échelle. C'est un sujet très important et nous travaillons tous en pensant au long terme, c'est-à-dire à l'avenir, et non pas au lendemain. Il est important de disposer de modèles économiques pour l'ensemble de l'industrie ; c'est un sujet sur lequel nous sommes entièrement d'accord. Ce que je voudrais vous expliquer aujourd'hui repose sur des faits ; ce n'est pas simplement du vent. En effet, il me semble que nous avons un besoin de plus en plus important de faits avérés dans cette industrie. Or il se trouve que c'est ce qui nous manque le plus cruellement. A chaque fois que je rencontre des opérateurs, je les encourage à parler ouvertement des faits (qui ont pu être confidentiels par le passé, étant donné qu'ils n'ont jamais voulu trop en parler), de leur croissance ou de leur croissance simplement en termes de pourcentage. Il y a des besoins spécifiques à cette industrie et les investisseurs, eux, ont besoin de faits pour accroître la confiance générale dans nos marchés et nos entreprises.

Je dirais donc que le premier fait à retenir est que, globalement, c'est le GSM qui est à l'origine de la plus grosse part de la croissance et c'est lui qui offre les meilleures performances en termes d'envoi de données. Les opérateurs de GSM se sont effectivement classés devant tous les autres opérateurs en ce qui concerne la part des données générées, sur la base de l'ARPU.

C'est la technologie GSM/EDGE qui prend en charge les quantités de données les plus importantes au plus bas prix, tout en garantissant une qualité de service supérieure à celle de toutes les autres technologies. Enfin, elle tire parfaitement son épingle du jeu en matière d'économies d'échelle.

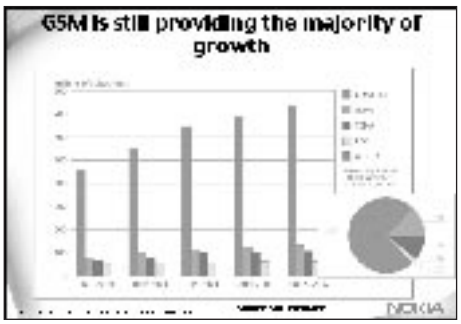
La technologie WCDMA sera, quant à elle, nécessaire pour, à l'avenir, accroître les capacités, améliorer les coûts d'acheminement, la rapidité, et la qualité du service sur les réseaux mobiles – nous pouvons en être certains.

Si on regarde la croissance des nouveaux abonnés, puis celle de l'industrie en tant que telle, on voit que, depuis deux ans, c'est le GSM qui est à l'origine de plus de 70 % de la croissance de l'industrie. Je précise qu'il dépasse toutes les autres normes, y compris les normes numériques ; on s'aperçoit en effet que les normes traditionnelles sont en baisse. Les ordres de grandeur, avec le GSM, ne sont pas les mêmes. Je dirais donc que dans 75 % des cas, la croissance est attribuable au GSM, le reste étant assuré par les autres technologies ; en avril 2002, le chiffre était même plutôt de 80 %. Ainsi, il existe une différence énorme entre le GSM et ces autres technologies.

En ce qui concerne la vitesse de l'envoi des données, la vitesse du GSM, globalement, avec le GPRS se situe entre 30 et 40 ko/s, alors que la vitesse des données d'utilisateur CDMA 1X varient entre 40 et 90 ko/s, ce qui est très élevé, mais je rappelle qu'il s'agit du marché très fragmenté de la Corée, où les trois opérateurs disposent de logiciels d'intermédiation différents ; de plus, ils ne les déploient pas de la même manière. Autrement dit, ces applications ne sont ni transportables, ni portables entre les différents opérateurs. Le marché est fragmenté et met en œuvre des solutions propriétaires. C'est donc assez dispersé. Ensuite, aux Etats-Unis, nous avons également mesuré les réseaux et avons enregistré des taux autour de 43 ko/s.

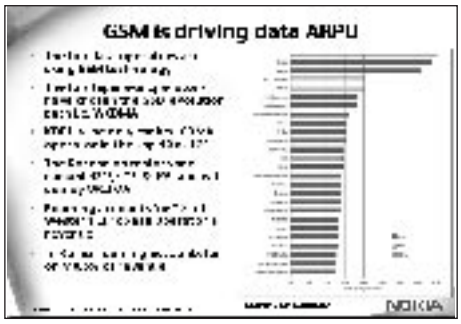
Autrement dit, la technologie GSM EDGE donnera une vitesse, sur les données d'utilisateur l'année prochaine, de 80 à 100 ko/s avec les premiers appareils ; après ce lancement, on pourra atteindre 160 à 200 ko/s avant 2003.

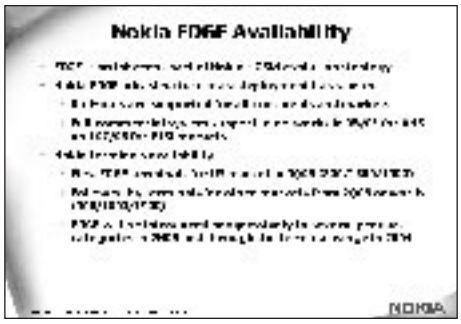
Les réseaux WCDMA ont été lancés sur un périmètre restreint il y a quelques semaines et nous sommes toujours en phase de test opérationnel, avec validation et tests en permanence. Je pense que nous sommes tous d'accord pour dire que le WCDMA ne s'imposera pas du jour au lendemain ; il faudra un peu de temps, encore un peu de travail, puis il faudra assurer l'intégration et réaliser tous les différents tests avant que le réseau ne soit opérationnel.

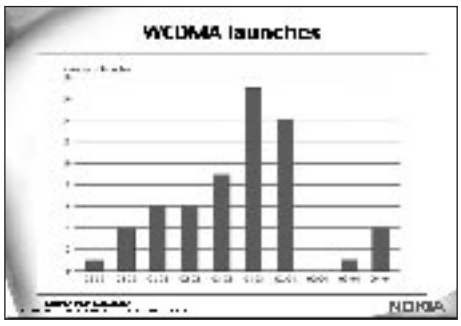


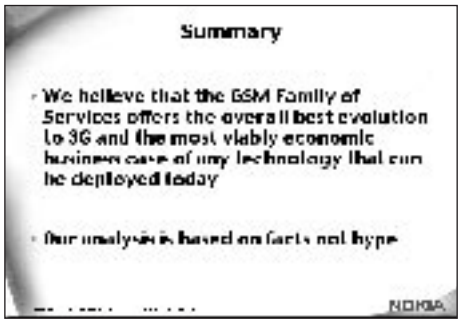
Pour l'instant, ce qui est acquis, ce sont les terminaux : ils ont été validés, à la fois en Europe et au Japon.

Arrivé à ce stade, je tiens à souligner une chose. Je voudrais rappeler un élément important, qui mérite d'être débattu, parce qu'il me semble que c'est quelque chose qui échappe à beaucoup de gens ; il s'agit de pouvoir proposer un service instantané – c'est cela qui permettra d'imposer ces réseaux, bien plus qu'autre chose. Peu importe que nous transportions 200 Mbits par utilisateur par mois, ou 1 Gbit par mois si ces quantités sont réparties dans le temps. Ce qui compte, c'est le degré d'instantanéité que nous pourrons atteindre. Donc, par exemple, si nous devrons transporter de l'information sur une application, cette information aura une valeur limitée dans le temps. Autrement dit, elle ne sera valable que si elle est livrée dans les 30 minutes. Mais s'il y a un million de personnes qui sont abonnées à ce sevice, il faudra envoyer 1 million de messages dans les trente minutes, ce qui risque de créer un pic énorme sur le réseau. La situation est comparable à celle du secteur de l'énergie, où les compagnies d'électricité ont une capacité d'approvisionnement fondée non pas sur une moyenne de rendement ou de performance, mais sur le fait que, dès que les gens ont fini de regarder leur feuilleton télévisé préféré, ils vont dans la cuisine,









font marcher la cafetière ou allument une plaque électrique pour faire chauffer de l'eau, ce qui peut à tout moment saturer le réseau.

On retrouve cette situation dans l'industrie des télécommunications. Les besoins en capacité du réseau dépendra donc de deux choses : la qualité du service, c'est-à-dire le bon acheminement des données grâce à l'application mise en œuvre, les éventuels pics étant dus à l'instantanéité du service. Mais si nous n'arrivons pas à tenir ce pari, alors l'expérience de la téléphonie mobile perdra de son attrait, la qualité du service baissera et il y a des chances pour que la satisfaction clientèle diminue, que la croissance ne sera plus aussi importante et les utilisateurs pourraient même se désintéresser du service. Pour résumer, plus la création de pics se fera naturellement, plus nous aurons de charge à transporter.

Cela nous ramène aux économies d'échelle, j'entends par là, les fondements économiques du mécanisme : en effet, nous pourrons toujours créer de la capacité en utilisant d'autres technologies, mais ce seront les WCDMA et les EDGE de ce monde qui continueront de constituer le meilleur rapport coût-efficacité, la meilleure capacité et même des possibilités d'accroître la capacité, avec la qualité de service requise. Ainsi, comme je l'ai dit, il n'y a pas de doutes à avoir sur la nécessité d'adopter la WCDMA ; c'est une question d'économie.

Je vous présente des données tirées de la récente base de données EMC, et du document World Mobile Data, où sont répertoriés les opérateurs les plus importants en termes de quantités de données transportées, rapportées à l'ARPU. En tête de liste, vous voyez deux opérateurs de GSM, Smart et Globe, qui tirent déjà 38 % et 36 % de leur ARPU des données. Les premiers opérateurs japonais de l'époque, DoCoMo et J-Phone ont tous les deux choisi la voie GSM pour mettre en œuvre la technologie WCDMA, et reconnaissent la nécessité d'une norme mondiale unique et d'économies d'échelles mondiales. Le premier opérateur CDMA du Japon, KDDI, se classe à la douzième place ; le succès des technologies GSM est évident. Mais qu'en est-il des opérateurs coréens, perçus comme étant les meilleurs du marché ? Je lisais aujourd'hui un article qui indiquait que les opérateurs d'Europe occidentale sont nombreux à consulter SK Telecom, de même que d'autres opérateurs coréens, pour savoir comment transposer l'expérience coréenne à l'Europe ; en effet, les abonnés coréens choisissent à 40 % les services mobiles.

Or ils se classent à la 42ème, 47ème et 49ème place sur ce tableau et réalise un rendement par abonné données inférieur à celui des opérateur de l'Europe de l'Ouest. Et puis, pour revenir à la clientèle nomade, les comptes nomades représentent environ 7 % du chiffre

d'affaires des opérateurs d'Europe de l'Ouest, contre seulement 0,5 % chez les opérateurs coréens. Ce que l'on peut constater, en tout cas, c'est qu'il y a 39 opérateurs de GSM classés devant les opérateurs coréens. Le GSM représente, à mon sens, une technologie extrêmement performante pour le transport de données et constitue, de loin, le premier moteur de l'ARPU et du chiffre d'affaires aujourd'hui.

Par rapport à EDGE, donc, EDGE a toujours fait partie de notre stratégie et nous avons commencé à mettre en place les infrastructures EDGE en vue d'un déploiement généralisé, il y a deux ans et demi. Sur le plan technique, nous avons distribué des équipements et des bases qui pourront fonctionner avec EDGE. Puis, depuis un an, nous distribuons des réseaux EDGE, le déploiement ayant eu lieu sur tous les marchés et tous les continents. Les équipes commerciales seronten place dès le mois de mars prochain aux Etats-Unis, et les premiers terminaux devraient voir le jour au cours du premier semestre de l'an prochain.

Ces données proviennent également de la base EMC : il s'agit du nombre estimé de lancements de terminaux WCDMA au cours des deux-trois prochaines années. Il y aura le produit Sonera, en Finlande, par exemple, puis une poignée d'autres lancements cette année, avec une accélération à l'approche de 2003.

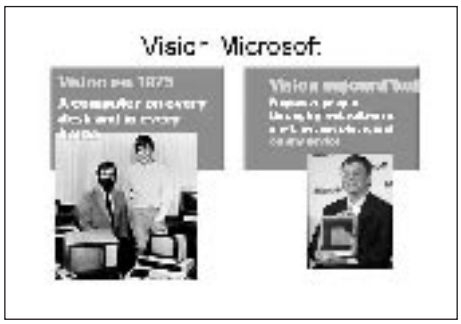
Alors, pour résumer, nous estimons que la famille de services GSM permettra globalement les meilleures évolutions pour la troisième génération, tout en reposant sur un modèle économique qui est le plus solide du marché des nouvelles technologies et le restera l'année prochaine. Enfin, je rappelle que notre analyse est le fruit de faits constatés et de chiffres ; ce n'est pas du bruit médiatique. Je vous remercie.

«From PC to mobile equipment»

Christophe STENER

Strategic Relations Director, Microsoft France

My comments will be fairly down to earth and I shall only tackle two points, very simply: the first, what is the point of mobility? And the second: does it work? I will not talk to you about standards and I will not necessarily talk about high strategy.



Here, on this slide, you have a family photograph. You can see that the boy on the left (Bill Gates when young) has aged a bit; it's still the same person except that quite simply mobility presupposes a certain redistribution of weight and flexibility of material, and what Bill Gates has in his right hand is a Tablet PC … Although I mention Tablet PC, I am certainly not talking about marketing. I would say that regarding the problems Microsoft has with vision, we have gone on from comprehension or the idea that you must look forward to when every house has a PC, on every desk, to a vision that now consists of saying that the true challenge for everyone, for all actors on the market, is to ensure the possibility of true accessibility, sure, reliable, easy to use, easy to learn, and interoperable as between all hardware, wherever you may be and whatever the circumstances in which you want to use it.

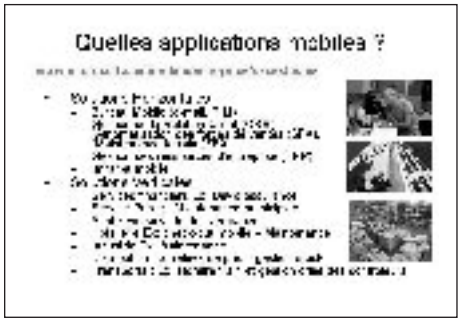
Microsoft's problem and its vision – which is perhaps ambitious – is to be one of the actors who will enable the solution brickwork to be applied to this interoperability and that is what I shall try and illustrate here.

The fundamental question is therefore to some extent the same point of view that Microsoft supports: mobility as such is not an end in itself. What therefore does mobility serve, and what does the market expect of it? Are there applications that can become sufficiently new, innovative elements, different from what we can do today in order to start up this market and ensure both that operator-actors have the traffic and that actors offering hardware for software solutions to have real demand? I will give you three or four specific examples of projects embarked upon regarding mobility; this will be more specific than a shopping list of everything that can be done.
First illustration: an application very much in the public sector, at present adopted by the Fire Brigade in Paris, namely real-time management of incidents that they may encounter, allowing input on an I Pac – the equivalent of a PDA – and implementation of an electronic report to be sent to all actors participating in

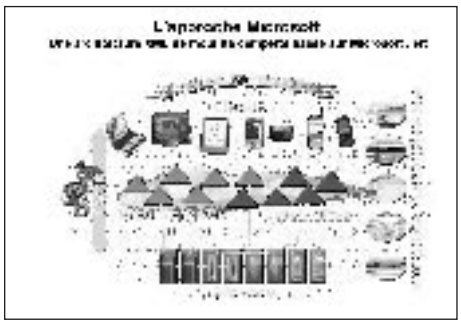
the emergency service. The virtues of this solution are obviously reliability, security, non-reinput, elimination of errors, and the possibility of combining image, sound, handwritten text, etc.

Second example of an application: applications in use by the leading insurers. These are insurers who proceed to settle claims, who examine the damage to a building on the spot, take a photo, contact the insurance database, who can establish rights, be able to make advance payments, to contact partners, etc. These are highly specific applications which we can now see are not particularly easy to address; by using converging hardware and convergence packages, there is a real possibility of increasing the efficiency and productivity of a person working at his job.

Third example; this is something that you and I will be seeing put to very rapid use in a very much day to day situation, namely the railways, the train. The French railway inspectors will be replacing their enormous satchels with I Pacs on which they will be able to issue travel tickets or advise travellers about weather conditions, the traffic situation, and hotel availability, all by using what today are generically called "web services". This highly specific application, which will really become very obvious to the general public, is an immediate illustration of two things: on the one hand, that a great deal more can be done with mobility, and on the other, that it is effectively possible to increase job satisfaction. I will not talk too much about application, but the starting position at Microsoft was to say are there really new applications for the individual, for the private user, or for the white collar worker, for the blue collar worker, and can they ensure value added? We personally feel that there is value added and this is a key element in activities in the market for the PDA and in mobility generally.



What does this architect's plan tell you? That interoperability between all hardware somewhere presupposes a capacity for dialogue. The starting point and the fundamental principle of the Microsoft approach to what they call architecture.net.



Architecture.net is based on the standards and on XML in particular. XML was felt to be the best standard or rule. There are specialists here too who will find this a rather vague statement; I can tell them that it is the best Esperanto today on which they can base themselves to achieve interoperable architectures other than architectures specific to a supplier of an "operating system" or given hardware and which really allow scenarios and end-to-end, complex processes to be created which allows several actors to converse at this point which, essentially, on the Internet is a place where information is transported at a good level reliability and security and that the common vocabulary is XML.

You will begin to see the coherence of the Microsoft approach. New functions are awaited. These functions presuppose that the final user has freedom of choice as to his way of accessing information and of feeding back information. We can anticipate

that the common elements of the operating system, Microsoft in this case, will be available on these various terminal elements, which explains why on a type I Pac PDA, you have the equivalent of an XP in the same way as you have the equivalent of Windows XP on an intelligent telephone. It's always the same problem, which is to ensure playable, coherent, secure scenarios.

The second point I wish to tackle – **does it work?**

I don't know if I have convinced you but is there any need? I believe everyone has a PDA in his pocket. Sometimes, people are holding several kinds of hardware … Does it work and will it work? I think we all agree that the convergence in the telephone, which is a hybrid object in which you have data functions as on a PC, offers all the facilities of a PC; you have everything that a good speech telephone has, together with organiser functions, and, above all, what has been missing up till now, ongoing end-to-end synchronisation, ensuring that you can be linked up and that you can yourself synchronise your activities with your own office, but above all with the activities of your organisation. This telephone, which will be marketed under the name of Orange SPV or "Sound Pictures Video" is a reality which will therefore be available on an OS a "Microsoft Smart Phone 2002" and what is very important is that a set of technological facilities will be available on this hardware that are probably one of the final terms of the state of the art.

The question is not who is the only one or the best. That's not where the question lies. I think that the question is to show to you quite specifically that we are concentrating on the subject, that we will be an actor in this market and that, as Mr Delpech said in his introduction, what is it that drives the market? I would say that, in addition, the first concrete applications and the first special functions are extremely experimental since on this portable you will be able to find all the navigation aids and various Internet modes that you may desire. It's a very high quality appliance in demonstration terms. It offers converging applications which I would describe as personal in PIM terms, like games, or professional applications if the terminal is a remote input source, for example for a logistics operator who wants to do a stock take, for a doctor, or for someone who wants a specific work on the software. This is an important statement, one that shows confidence in two leading actors in the market as to the extent of mobility and the involvement of its terminals. I shall finish my introduction by saying – does it work? Yes, it works and if any of you would like to have a small de*monstration – since Microsoft is above all a marketing company as well as in research and development, please excuse this sales plug – I shall be pleased to arrange it.

«The value chain and intelligence networks»

Denis ATTAL

Director General, Nextenso

At the forefront of our minds at present is the crisis in the telecoms industry and its operators, debts and other difficulties, but beyond this crisis, which will be with us for some time, what is more important in my view is that behind this upset in the market a major change is taking place in our industry, especially in the definition of the role of the operator.

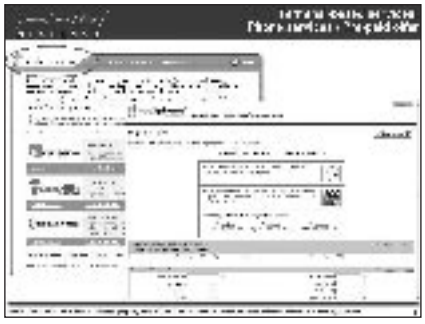
What developments are in progress?

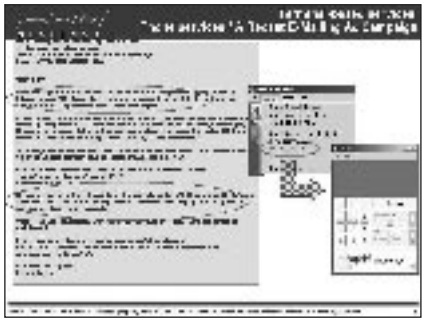
In fact, operators in the telephone industry today supply two things: information transfer and various kinds of services based on this transmission of information. These services and the network are integrated into the same dimension. The best proof is SMS, where the ratio of number of bits/selling price is very high compared with the selling price for voice transmission. The example of international video conferencing is also meaningful; if you have an inclusive subscription, you will find that your communication is "free". We therefore have a highly paradoxical situation where we can argue with regard to services for which users find it normal to pay a reasonable price rather than in terms of a quantity of bits. Operators supply services thanks to this actual grouping as between services and networks.

With the arrival of the Internet and the IP protocol, the natural link that exists between network and services is taking off since IP will redistribute the cards. Three kinds of operator are cohabiting on the telecoms market, the one emerging after the other:

- Level 1: the "carriers" which sell various kinds of services based on the transportation of information rather than its actual transportation.

- Level 2: the ISPs (Internet Service Providers) or IAPs (Internet Access Providers)





- Level 3: the "terminal operators" which manage the "terminal/server" relationship without taking account of the middleware.

And as in any situation where the levels are superimposed, a higher level conceals the lower levels.

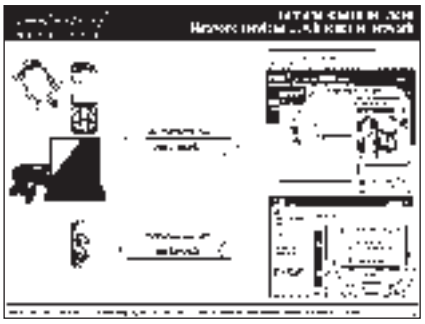
A second category of operators, the ISPs, has just been grafted on and will provide IP connectivity. IP is becoming a normal means of exchange and information where everything is linked up, and where one can proceed quite simply from one point in the world to any other point in the world without taking account of the hardware support.

But users do not only exchange bits. They use more sophisticated services. This has led to the emergence of a third category of operators, the "terminal operators" which provide more sophisticated services by integrating software on the terminal side and server side. Amongst these operators there are Microsoft and Club Nokia, who have developed extremely powerful networks, benefiting from the absence of standardisation and regulation at this higher level.

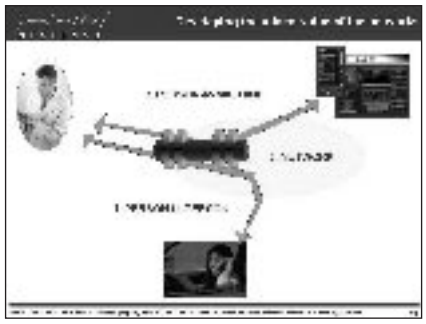
With the powerful and worthwhile services they provide, level 3 (terminal) operators rely on a number of substantial subscribers. I do not know the membership of the Nokia Club, but I have obtained details about Microsoft. There are, it would seem, some 400 million subscribers at present, i.e. more than Vodafone and Orange combined. These services are available either in the form of middleware – tools permitting other applications to use them – or in the form of services in directly usable form (electronic mail, video conferencing, etc) which are provided by this third level of operators and not by the lower categories. This means that when, for example, you undertake a video conference on IP (service provider by Microsoft) the operator does not have the slightest idea of what is circulating on its network. The only information that it has is that 0s and 1s are circulating on its network and that the operator level is provided by Microsoft.

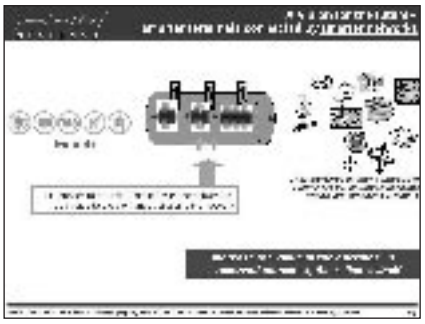
These services are very substantial; they may be e-mail services or speech services – prepaid or inclusive – handled by this third category of operator. Sometimes this third category of operators even competes directly with the speech operators since the strongest today is a terminal/service combination; a certain number of services are provided by means of the link-up developed between the terminals, the software embedded in these terminals – PC or mobile system – and the various servers. These terminal operators have also worked up IP telephone packages.

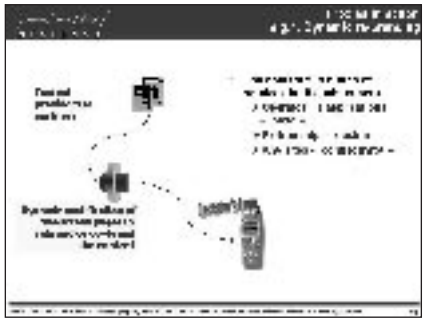
To benefit from this analysis, I would suggest two thoughts.

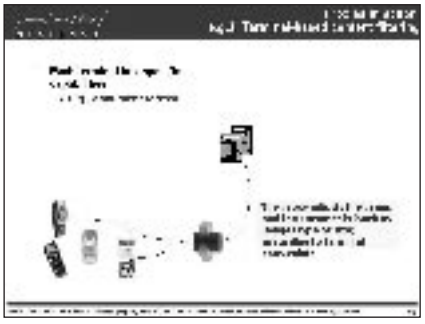


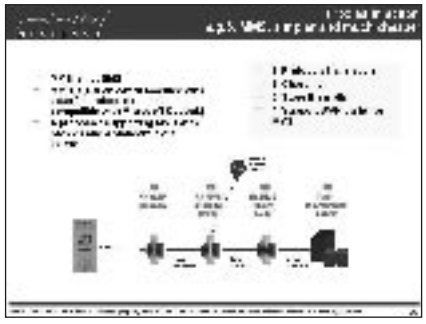

A proposal for the Internet future
Putting more value in the network

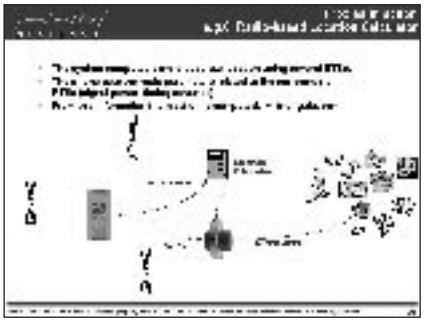


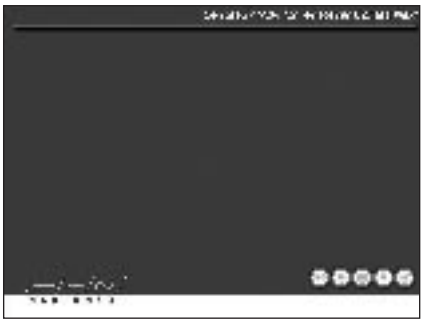












The first is to assume that level no.1 – I would say traditionally the operator level – is standardised today. It is standardised, like the IP level, by organisations known as 3GPP, EETSI, IETF and W3C. The regulatory authorities regulate, allocating frequencies. IP regulations apply to part of the link, a number of precautions having been requested by the regulatory authorities recently, in particular, in connection with certain attempts at protection against sexual child abuse. But the third class of operators today are neither standardised nor regulated. I do not know whether it is possible or not, and it would be worth hearing the opinions of our colleagues at Nokia and Microsoft. Should standards be applied to this third class of operator? Would it be preferable for the operators also to be manufacturers? The second thought is that the customary operator layers should not be lost as such as a result of value added, and that there are possibilities for injecting value into the network, independently of the terminal/service link. It is important, if not essential, for traditional operators to build up the value of their network if they do not wish to see a drop in their income per subscriber. For example, by making use of an important element of the IP standard, namely the possibility of using proxies who can execute a whole processing series on the trot in the network and add value. A proxy is one of the three elements that constitute the IP network. It is inserted into the network and changes its flow. What we have developed, for example, is a platform allowing dataflows to be processed in a burst and value to be added, with position finding systems, error correction, colour, instant messaging/presence, MMS/e-mail conversion, etc; a whole series of services at network level.

Thanks to the development of value in the network, level 1 (network) and 2 (ISP) operators can balance their value added in relation to operators at level 3 (terminal) and therefore be assured of their income.

«What about users ?»

Jean-Michel PLANCHE

Chairman of the Fondation Internet Nouvelle Génération (FING)

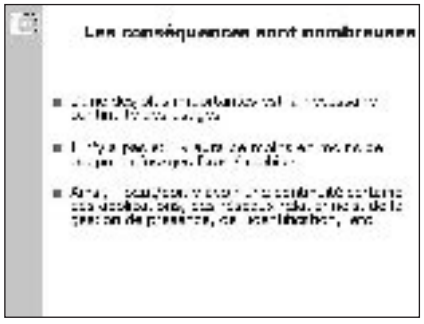
I would just like to refer back to the terms of reference and to the opening comments; I am particularly grateful to the ART for having thought about the users and deciding to invite us. I wondered in which room I would be sitting and what I was going to say, especially knowing that, above all, effectively through the kindness of my heart, I am chairman of FING, but professionally speaking my customers may well be in the room… I could therefore start by saying that regulation or standardisation is something that is not necessarily good for users, which could put me in rather a delicate professional situation! I wondered how I should phrase this introduction or this transfer of power, and I would like to come back for a moment to the previous presentation, which gave us two lines of thought on value added and would suggest a third one.

Our standardisation and regulation meeting is something new for me. To talk about "GSM to 3G" in an open discussion is for me effectively something to do with the IP world and the Internet world. I wondered what I would be able to say, especially since from the previous papers I learned of other terms – GPRS, CDMA, MMS, WCDMA and I may have missed out a few – and the guests, an operation leader, a construction leader, an editors leader and I amongst them, I am not going to make you weep but will just add a drop in the ocean, or I would rather say a grain of sand in the well oiled mechanism… I was asked in fact as Chairman of the Association for the New Generation Internet Foundation to tackle the subject of users.

Users, what are they into?

It is true that the user is an unpredictable animal, but the first comment that I would like to make is that there is a common denominator to the presented papers. I don't know whether you noticed it, but everyone made his presentation from left to right. On the left, they said there was a need for a market or a technical innovation and on the right, there are "happy customers". On the left, there is the standard, on the right, the service. Consequently, the traditional chain is: technical innovation, standard, product, service, "happy customer". And oddly enough, the standard is on the left side. It's not on the right side. It's not something that cuts across the infrastructure or the service; its something, which is rather, graduated, or supposed to be graduated, on the supply side and not on the demand side.

Consequently, as far as this rather unpredictable animal, namely the user, is concerned, the first thing that I wanted to say to you was that I take absolutely nothing for granted, but am full of doubt. You really cannot foresee use. One cannot really predict technical-economic trends either. I think that the past will prove me right on this; here at least I am not usually wrong. One of the last points, as well – I think that it was referred to as a fact – the strength of the Internet model, which is after all to propose a network with no



regard to use, is something highly systematic in relation to what will be said. What could be done, when I spoke just now about the third track to create value? What could be done in this environment where even now we do not know much?

I would like to suggest a third track to you, the track of the side taken in freedom of choice. What can we say ? It's not simply **freedom of choice** for the operator, which is obvious; I believe that the user wants to go further, wants to be able to do what he wishes whenever he wants on whichever network he wants – which for the present is only logical – with the appliance that he wants or which is at his disposal. I must assure you straight away that I have not been financed by my friends at Microsoft; it is, rather, only natural to want to do what you want, with what you have. But that implies a deal of things, as we shall see. The consequences are in fact fairly breathtaking.

The first consequence of use. Someone spoke just now about products and services but I have never heard use mentioned. The first thing I would like to say, if we agree that one likes to do what one wants when one wants – for example, in the area of the Internet, we like to receive an e-mail without necessarily being connected up or go through the process of being connected, we like to have a permanent link – the first thing is continuity of use on most of the networks at our disposal. I strongly believe that there is not, and there will be less and less, any break between permanent use and mobile use; this is the good news for mobile operators – but may be bad news for permanent operators – but these are big discussions that take place in big firms I also feel that Wi Fi is a great eye-opener. So is the rise of continuity techniques between local networks and mobile networks. There is a whole industry now devoted to providing us with convergence packages between permanent and mobile. I strongly feel that there may be – or rather that there should be, continuity between applications, relational networks and presence management; this has not been talked about much in standardisation but if we want continuity of use, the presence of a person or his absence and identification must be managed.

The term is a strong one: a great deal has also been said about interoperability; I prefer to use the term **continuity**; I am not disparaging them, but somehow, if the one can be a means, the other is undeniably an objective. It is not so simple, but it's possible. True, in a world which is prey to doubt today, it is no longer easy to know what to do to recreate a value. And if we say "where does value lie?" it's ephemeral! Does it lie in the network, does it lie in the IP world, does it lie elsewhere, or where does value lie? As we have often seen in industry, when one is prey to doubt, the first of the natural human tendencies, one closes ranks and the level of protectionism that can be achieved may be a problem in creating use. Closed circuits have always been dangerous; 15 years ago, I was advocating the open versions, the Internet version of electronic mail, as against X440, as against X25; it's a debate that would not gel. Nowadays, there's no general outcry; there are simply

people who kindly say nothing and wait and see… But I am convinced that closed versions have always been very dangerous.

Another natural tendency we are beginning to see – and which I consider just as dangerous – is "bundling", linking high-speed networks with the hardware, linking access to services. It puts competitors in jeopardy; it's not the end of the world – you may say – and an operator more or less, is not a problem, but all the same, it's something of a problem. I will go further – it's dangerous especially because it prevents networking from bearing all fruits in terms of use and user benefit. As soon as you have pre-set the work for a user, as soon as you have told him how he should be thinking, how he should use his hardware, I would not say he has been lobotomised but it's not exactly a viable, value-added creating model in developing use and new services. I strongly feel that it is in returning to greater neutrality in the network, in a move towards interconnection – as has been said -, in mutual recognition - as has less been said -, but in operability – as has been much said -, that the key to future growth of use lies. I would reassure you. It is entirely commercial and entirely lucrative, not at all far-fetched, I am not trying to return to free, unlimited use of the Internet, even though this model looks very much like the Internet. However, and despite this, I do not want to sound like Cassandra but whenever we have wanted to set up closed systems, whenever we have wanted to "bundle" too abruptly between the terminal, the network and the services, all that has had a social cost. There is a social cost in appropriation, and a social cost in delay.

To end with, I noted in the discussion a heap of possibilities for counter-balancing the value added chain, for creating a virtuous circle. I also once worked for an operator and I have heard people talk about this virtuous circle for years on end… it still worries me… The operator sells his services, not transmission. I would just like to finish on two themes. Also for years I have heard people say that the business of transmission is not respectable. I would like to reassure you. In my view, it is infinitely respectable. With transmission, there is an opportunity of creating value added, the possibility of making a margin to survive, and that is an infinitely respectable business. In my view, there is not necessarily any need to climb high on the value ladder to do ones job properly in the transmission field. At a given point, copper can be infinitely more valuable than optical fibre. The second point, to end my conclusion, Vinton Cerf hit the nail on the head when he said that in the area of the Internet we must understand telecoms, we must understand the model the way telecoms are thought out, and this standardisation – he did not mention regulation – and the process to arrive at it based on a standard needs a user who will himself suggest its use. But, he said, for the Internet we must do the opposite. I would not say that the telecoms world is something of the past and the Internet world something of the future – that might well be the subject for a future discussion – I will not say that telecoms were not a good thing and that the Internet is something of a very good thing, but we are now converging towards a system and a model that are almost unique and common, but there is one model for telecoms – a model which in fact creates value added in transmission – and another model for the Internet. The two do not conflict, the two can exist perfectly side by side, but there is a common denominator to all that, which is the user who, for his part, will decide whether it is successful. Because it is not the standard that creates success – as has been proved – and it's not even regulation here or there that will create success – look what happened with Napster and the big names in the recording world – we can see that at a given point, whatever we may do, we will not get there unless we offer intelligent systems to users. What makes a technology or a use a success is the user, whatever they may say.

«European expertise serving the growth of mobile networks and services»

Karl-Heinz ROZENBROCK

Director General, ETSI

European know-how, the sage of mobile communications in a nutshell. We must really be aware of the fact that standardisation is not a very short-term business. As far as major communication systems are concerned such as ISDN or GSM or UMTS, I feel that we must always think in terms of a decade and also that the creation of a process, of consensus, is also something that takes time. It is really essential that we realise this, as Mr Lucas has already shown to some extent, when he mentioned a period of 18 years.

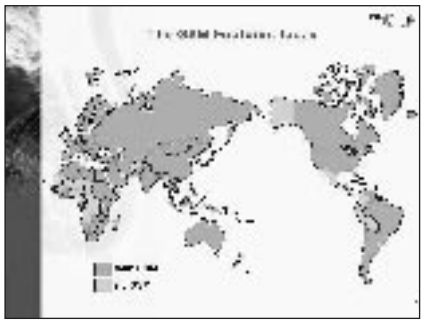
In addition, in the standardisation field, we need the CCCTs – *"Competence, Commitment, Continuity and Trust"*. Competence is the same thing in French; commitment means the commitment of your staff; continuity, is obvious and for "trust" we could say confidence. This is the necessary mix if we are to succeed in the area of standardisation.

The title to this discussion referred to mobile communications, which means all mobile or radio communications. We must therefore remember that, in addition to GSM and UMTS, there are quite a few communication systems which were developed and standardised within the Institute, such as DECT, which is wireless communication under the TETRA standard, SAS which is communication by satellite, DAB which is the digital broadcasting of sound programmes, DVB for broadcasting digital TV, and the *High Band Local Area Networks,* with major radio performance.

Now, I will look at GSM and talk a little about history. As Mr Lucas has already mentioned, to start properly in this area, the regulator had to find frequencies, which he did in the seventies and, at the end of that period, work started within CEPT – the Conference of European Posts and Telecommunications administrations. The real start occurred in 1984 with close Franco-German cooperation in the area of research. In 1988/89, the work was delivered to ETSI at the same time as standardisation activities ended within CEPT. The objective was actually to create something for the European market. In this connection, I wanted to mention a very clear aspect by comparison with the Americans, who have a different approach. You know that the generation preceding GSM was based on completely different systems. In Europe, it was like a patchwork. The idea was therefore quite clear: we needed a common solution and the objective was to create this GSM standard. This took up to 1992. I think it was in 1992 that the GSM system began to become operational and I still remember, as I was at the German Ministry of Posts and Telecommunications in 1999, when the two competitors came to me and said that they were going to start up the year following, in July 91. I asked them if they had already completed their tests etc? "No" they said, but they would not put back the

start-up date by a year because their director would not have allowed it. This, then, is a question of project management. And now, we are in a somewhat similar position with UMTS, but I will deal with this point later.

The title of my paper refers to *"European know-how"*. One odd thing must be stressed: the fact that most of the intellectual property rights came from an American company and that, nonetheless, GSM was a great European success. When we look at it today, GSM covers two-thirds of the market in mobile communications. It is also represented on 429 networks, in 174 countries, with more than 640 million subscribers.



This transparency shows the third generation partnership project for mobile communications, 3GPP. This is a cooperation between six standardisation organisations, ARIB and TTC for Japan, CWTS for China, TTA for Korea, T1 for the United States and, of course, ETSI. 3GPP is not a legal organisation but, as the name indicates, a partnership project with six equal partners, partners who represent the market. I should also mention that the objective was to lay down criteria for going on stream – this was when this partnership project was starting up – the objective was to start the service in 2002-2003. I think that this is worth mentioning – also to you, Mr Moderator, because you cannot blame us for being somewhat late. In my view, we are quite laid back as to the timing; what the operators may say to the regulators regarding the introductory date, that's another question, but from the standardisation point of view I believe that we have nothing to be ashamed of. The first series of standards were delivered with the "releases" for 1999 and we have now published a further two series, three and four, and we are in the process of tackling number 5, while dealing with inter-functionality, with the capacity of being "happier like" if I may say so, and I believe that with number 5 we shall really be in a position to introduce IP access into mobile communication, which is our ultimate objective.

Comments and questions/replies from the floor

QUESTION : I would like to say something about the introduction of i-mode in France, knowing that it seems to be quite like the portable robot which the last speaker but one said was a closed circuit system; true, there is the minitel business model of twenty years ago, but it is anything but open, and I would therefore like to have some comment both from the previous speaker and the ART itself, because these really are not standard.

Jean-Michel PLANCHE : The only good news is that the i-mode is based on usage and that it is perhaps this which has made it so successful in a country other than ours. I do not wish to make a meal out of success or failure, but only give the good news, namely that people wondered whom it would benefit, and how; all said and done, something was arrived at which is not much more intelligent than SMS, but SMS works well and it is a proven commercial success, although it never seemed obvious to the major marketing organisations, for them to base a new product on. Now, the fact that this is a closed model is in fact an enormous problem which makes things really difficult, like when they put a Wap on a telephone. When I heard that they could put the Internet on it, but there was not even an IP address in the terminal, I wondered what it was. I think it was Canada dry who said, without wishing to do a sales spot, that this looks like and it smells like but it isn't.

Karl-Heintz ROZENBROCK : The i-mode system was developed by NTT Docomo in Japan and I think that these are very interesting applications. To be frank, I rather regret that we did not include this in our standardisation work. The members of our institute are responsible since there must be at least four persons dealing with it, who can make proposals so that work can start.

QUESTION : A question concerning the social cost. When you look at the Internet and PC, broadly speaking, we have household penetration rates of 20 to 25% and what people pay goes some way towards endowing actors like Microsoft or Intel with things that are not necessarily highly optimised, but at least these are the people who hold the monopoly and who take in a large part of the value added. The mobile, even my grandmother has one, has penetration rates of 70/80%. There are substantial actors but I do not know of one that really makes use of all the potential. In fact, it needed a great deal of organisation to keep up, but is it as simple and easy as that to say that the standards have a social cost ? I am not so sure.

Jean-Michel PLANCHE : I said that to depart from the principle of network transparency will have a social cost. I did not say that the standards had a social cost. Be that as it may, the absence of standards has a social cost: this means the absence of interoperability for equipment, a nervous breakdown, anything you can imagine, people being trained on obsolete technologies in two days or in two months or in two years… I will not quote any examples of what France has done in the past but I believe that the social cost was there. It was there when they tried to introduce micro-computers into schools on a large scale, when they tried to make cable for cable, when they tried to do a great many things; it is not my intention to lecture you, certainly not, but the social cost is what it is, it means basing oneself on poor technology; we do not know what the users of our technologies will be doing tomorrow. So why lock ourselves up in a model?

Why actually remain stuck in a model where we start thinking for others? Nowadays, today as well, a fundamental error is being made on the Internet, which is to regard it as a broadcasting network. A complete amalgam has been made between the Internet and broadcasting on asymmetrical networks, because behind it they saturate you with things and the asymmetrical path – which is based on "you, what you have to tell me is less important than what I have to tell you" - generates a heap of social consequences. In fact, and we have only just begun to realise it, what is working? It certainly is not asymmetry but symmetry. If you take a look at the photo on the telephone, they are in the process of rendering the model and the network structure symmeterical while this was not at all the original intention. Nowadays, it is symmetry, and an Internet type network, the philosophy of an Internet type network, which is an exchange network, not a distribution network or a broadcasting network. Television does far more than an Internet work in broadcasting information. A satellite that broadcasts once only, information is put on it once only, and it comes down, it feeds millions of users, that is a magnificent distribution network; but the Internet, insofar as it was thought out, was not thought out to distribute information. t was thought out for exchanging and nowadays most of the uses that function on it and which have meaning are uses that were unheard of a while ago. If you take inter-personal messaging in business, this has been an extraordinary success. But there are system engineers and network engineers who are tearing their hair because the flows are jamming up today's networks, these are not web flows or e-mail flows, which can be regulated, but completely unforeseen flows such as inter-personal messaging, like "peer to peer" and exchange, things actually based on use. And to say that this does not exist, wanting to lock up the model by marketing prefabricated systems, yes, this will necessarily have an appreciable social cost if we turn to systems of this kind.

I would add two things: the first is that when GSM was started, I found a small internal document from Alcatel, one of the major French manufacturers, dating back to 91 and saying that ETSI had just standardised GSM, an extraordinary system which will permit mobile telephony for a maximum of 110,000 customers in France by the year 2000. We're not far from 40 million! True, we do not know whether what we are doing today will function tomorrow. The fact is there are factors, an environment that will ensure that it works or doesn't work. And an environment that works is an environment in which manufacturers sit around a table and decide to build things together. We were lucky at the time, because we did not have the spotlight on us, without real pressure from the investors, or the financial analysts and the market. And nobody really believed in it, it was wonderful! The actors could work at their own pace and together make things that worked. And from start to finish, the trick worked. Ten years ago I am certain that none of those present in this room would have thought that you had a portable telephone with you today. You said at the time, I have no doubt, *"I don't need it, I have my France Telecom card, I will go to the telephone booth at the corner and make the same call"*. But nonetheless, you all have one today. True, we are still unaware of all the uses of tomorrow. The fact is that GSM took ten years, possibly fifteen years, to become completely commercially viable. Whatever people say, it takes time, whatever you may think. Producing technology for it to work on a very large scale, as we have done – seven hundred million customers that use the same standard throughout the world – that takes time. And this time must therefore be taken to put things into place. This is not simply laying down standards and then making products, and then testing then, and then ensuring interoperability and that the day when the service opens it works, which is not all that simple. It is not enough to say: I want to lay down a new use, I want to lay down a new service, so that a new service can be developed tomorrow, in six months, in one year. No, it takes time.

QUESTION : At one time the network did all the work; now the network and service functions are in bits. Why do we not standardise, why do we not ensure interoperability? This is what the final user wants. You mentioned interoperability etc. It is no secret that when you undertake instant messaging, it usually works with Microsoft and Yahoo, but does not work at all with AOL. It seems to me that if the standardisation

committees – if I can be a little provocative – are interested in bit transmission layers without being interested in services on the Internet and are similarly interested in telephony, they are not providing standardisation and it can only be imposed on them.
A comment on MMS. What is an MMS? It is a service which has a great future ahead of it but what really is MMS? By and large, it is e-mail essentially modified by Nokia so as not to function with Microsoft systems. But it's the same thing, exactly the same thing, it's an e-mail! Since we are a little stupid and we are neither Microsoft nor Nokia, we have adapted software to a PC which converts everything that is MMS into e-mail and conversely. We have no scruples about this. But will the services themselves be standardised? Not necessarily the software – it is not a task of a standardisation body to standardise software – but standardise the basic functions, for example, a directory. Why do we access a directory on the Internet? How do we access a presence service? What do payments mean? In the telephony world, not merely the radio signals were standardised but a whole series of services. Why is there nothing on the Internet side? Faced with this vacuum, Microsoft is doing everything and they cannot be blamed for it. That's normal; they control nearly 100% of terminals. All terminals are intended to become Windows terminals sooner or later. I don't know whether you are going to be motivated by these high-level layers.

Philippe LUCAS : I have a secret. We set up OMA, the *Open Mobile Alliance*, four months ago, with exactly the same objective of standardising what you call the higher levels. A simple example: I am at present using an Instant Messaging service and I go to the Web and can do so if I am on Microsoft or Yahoo, but unfortunately if I am AOL the service is not compatible or you have to open an account with the other supplier. This is not serious since you do not pay; it comes free and its not a drama, but it is not very interoperable and not agreeable to customers.
What is the objective that you want to set up in OMA against this very precise example? With instant messaging I have my list of friends, persons who I want to contact, which will appear on my telephone and which will probably be linked with the idea of presence, as you can have already correctly said with your address book on your mobile telephone. We certainly know that our customers will not all have friends who will use Orange. They use SFR, Bouygues, Vodafone in Britain and other operators for remote friends. For these people what I would like is to have information that concerns them in terms of presence, in terms of instant messaging; and if I have things that were completely incompatible on clearly identified interfaces my customers would be overjoyed. If we develop interfaces on which all manufacturers, and producers of terminals with producers of servers and with operators, can adopt interoperable packages, this would benefit all of industry, I am sure.
Yes, we want to have interoperable things between mobile operators. This will take time, but I can tell you quite sincerely that mobile operators are all going in the same direction today and we meet very regularly in this connection. We are competitors from day to day, but that is far less true of the standardisation bodies, where globally we have common objectives. And I promise you that we shall do everything we can to achieve it.

Jean-Michel PLANCHE : So that you do not misunderstand what I have just said. My desire is not to bring about anarchy but to listen to users. We had a paper from a user who was perhaps outspoken, but who was perfectly in order as a user asking questions. I simply wanted to say that my heart bleeds and that I could not allow what I heard to remain unanswered, namely that there is no standardisation in the area of the Internet and the higher layers. On the contrary, I believe that IETF is doing a quite remarkable and quite fantastic job. Yes, there are de facto standards in the company directories, I think this exists at ELDAB, that this allows things to be done, there is not just one single standardisation. There are also rules for use, de facto rules, and otherwise, but I cannot let it be said there is no standardisation in the Internet and in the higher layers.

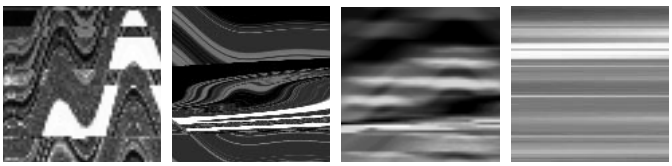
8th ART Conference

28 october 2002

Standardisation and regulation : interactions and issues

Round table 2

«*The Internet Challenge*»



ART Autorité de Régulation des Télécommunications
www.art-telecom.fr

«ICANN : Reform in progress»

Sabine JAUME-RAJAONIA

Renater,
Member of ICANN's Address Council

Good evening. I would like to provide you with an update on the reform currently being carried out on ICANN. You need to be aware that an ICANN meeting has been underway since yesterday in Shanghai. The conclusions resulting from that meeting will shape a number of decisions regarding the reform.

Let us look at the background. What is ICANN ? ICANN is an acronym that stands for *Internet Corporation for Assigned Names and Numbers*. It was founded in 1998, upon the impetus of the American government, as a non-profit organisation intended to take over the American government's role in running the Internet. ICANN will govern all aspects of the internet, from IP addresses to domain names and protocols—in short, the identifying components that allow machines to interact on the Internet network. It is thus a non-profit company based in the United States, with offices in Marina del Ray. ICANN is a private body intended to improve co-ordination and foster globalisation.

ICANN is composed of a Board of 18 people and a Chairman. Above the Board, I have shown the consulting committees, including RSSAC, the committee that runs the root servers, GAC, the committee on governments, also known as the Government Advisory Committee, and the Budget Advisory Group. However, there also exist a number of Task Forces which I did not include on the transparency, for clarity's sake. There are also Supporting Organisations: we divided the Internet into a number of sections, each governed by one of our bodies: these include the ASO (Address Supporting Organisation) for all things pertaining to addresses; PSO, the Protocol Supporting Organisation; and DNSO for all things relating to Domain Names. On the right, you see the "At Large" members of the Board. As you may remember, two years ago, an election took place, attracting a great deal of attention, as it allowed Internet users to elect the five members of ICANN's Board. Those five members were to replace the two initial directors. This brings me to the topic of the reform.

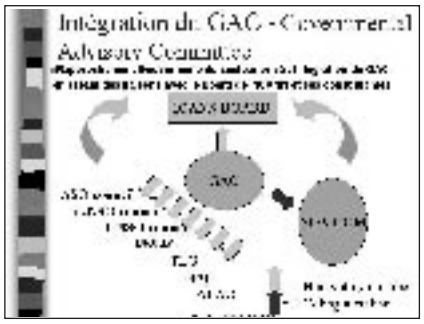
Why implement a reform? Actually, ICANN had been the target of a great deal of criticism. Some parties felt that the body weighed down by too much bureaucracy, as all decisions required the approval of all of the parties

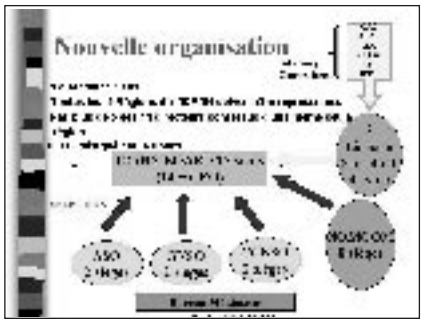
present—in other words, the processes were too cumbersome and hindered efficiency. It was also said that there was not enough financing and that the body could not set aside much reserve funding. This brought about the question of whether it might be more appropriate to set up a public-private organisation. The stages of the reform were established in a report by Stuart Lynn, President and CEO of ICANN: published in February 2002 and entitled "A Case for Reform", the report launched the reform process itself. In March, at the ICANN meeting held in Accra, a special committee was set up to deal with the reform: the infamous ERC, Evolution and Reform Committee, which has since issued a number of reports. One of the reports, entitled Blueprint, was approved by ICANN's Board at the June meeting in Budapest. Following the Blueprint Report, a whole series of reports were published, the final instalment of which came out on 2 October. It was the foundation for discussions and proposals made just last Friday.

As I stated earlier, major decisions will be made this weekend in Shanghai. All of the reference texts are available at http://www.icann.org/committees/evol-reform/links/htm. Another frequent complaint about ICANN was that its missions were not clear. In reality, ICANN's missions have always been spelled out in Article 4 of its Articles of Association, under the broad heading "Powers". Following the discussions on the reform process, the Articles of Association were re-written and now state the body's mission more clearly. From the very start, in Article 1, entitled "Mission and Core Values", it is stipulated that ICANN's mission is to co-ordinate and attribute unique identifying codes, but also to co-ordinate all things relating to address and naming policy, and deal with root server management.

A number of changes have also taken place within the consultative committees. First of all, Internet user participation has been instituted. In order to give users a say in the development of the Internet, it was suggested that an ALAC, or At Large Advisory Committee, be set up, consisting of around 15 people, from a variety of geographic areas. This concept is very important to ICANN. The organisation has defined five broad operating regions: Europe, North America, Latin America and the Caribbean, Asia Pacific-Australia, and Africa. There will also be a consultative committee in charge of all things technical: it is known as the Technical Liaison Group, and includes ETSI, ITU, W3C and IAB. PSO, however, the supporting organisation devoted to protocols, was eliminated. No changes occurred in the two remaining consultative committees: SAC, which handles all security-related matters; and RSSAC, which manages the root server. We only added links to the other bodies.

As regards the support organisations, the "domain name" portion, which I called DNSO, has been split in two, with the CCNSO, or Country Code Domain Names Supporting Organisation on the one hand, and the GNSO, in charge of generic domain names, on the other. In other words, the domain side has been split into two support bodies. No changes were made in the Address Supporting Organisation, which will remain in its original form. The only difference is the addition of a link to the





Governmental Advisory Committee, as I will explain a bit later. Recently, the registries in charge of assigning Web addresses to users proposed that a Number Resource Registry be created.

The reform also allows for closer relations between the government and theprivate sector, thanks to the integration of GAC, which now plays a somewhat central role. On this chart, I have shown all of the links between GAC and other units: it is linked to the address side and the naming side, as well as to all of the consultative committees. It has voting rights on the NOMCOM, the body that will choose most of the Board members. All of this gives GAC a rather central position, as it is aware of everything going on and can take action in all areas.

How would the new organisation look ? The Board would go from membership of 19 to membership of 15: there would be 14 Board members and one CEO. It would be elected for a three-year term, with geographic diversity being a key criterion. The Supporting Organisations, in charge of addresses and domain names, whether generic or country-based, will be allowed to elect two directors each; the NOMCOM, on the other hand, would be allowed eight seats. The NOMCMO is composed of 18 people, who come from both the Advisory Committees and support bodies; they will choose eight directors to sit on ICANN's Board, in order to make up the total number of Board Members. Below them, you will find all of the liaison groups, which have no voting rights, much like the consultative committees. Another new concept compared to the present situation is the marked desire for transparency and openness. The ICANN Reform Committee has suggested that a Ombudsman Bureau be established so that people can come with their comments or questions regarding the workings of ICANN. ICANN will also offer assistance in the form of additional staff to each support body.

ICANN is a complex organisation – it has many acronyms – but, as its purpose is to govern the global Internet, it remains, nonetheless, a key player. A reform is underway, both to reorganise the current structure, create more channels for communication and give greater importance to the government. If I were to leave you with only one key message, it would be that you need to participate, because all of the parties that play a role in the Internet can make important contributions to the discussions. Whether you are an operator, a brand with concerns over brand legislation and domain names, or a mere user, you can participate. There are discussion forums and a real bottom-up concept: you can discuss issues and have them relayed to higher bodies. I encourage you to go see what is taking place on ICANN's highly-documented site. There is also a French-language Web site, run by AFNIC, at www.gouvernance-internet.com.fr.

Philippe DISTLER

Head of «Interconnection and New Technologies» division, ART

ICANN's organisation is, as you illustrated, quite representative of the new Internet philosophy of direct democracy. Clearly, recognising the economic ramifications of Internet governance, that direct democracy is beginning to structure itself to take into account public policy.

I will now give the floor to Roy Blane, who will present the viewpoint of an Internet player, ITU, which results from an entirely different organisational structure. For those who do not recall, ITU is a specialised agency within the United Nations, and was founded at the end of the 19th century to manage the global telegraph network. As you can see, it has quite a long history and is currently governed by intergovernmental treaties, quite in contrast with the Internet's bottom-up model—in fact, it is structured entirely as a "top-down" organisation. Roy Blane, who works with Inmarsat, has been involved in international telecommunications for over thirty years and heads one of the study groups on technical standardisation founded by the International Telecommunications Union, more specifically the Group in charge of managing the global telephone dialling system.

«Adressing and Naming : the Issues»

Roy BLANE

Inmarsat,
Chairman of UIT-T-Study Commission 2

Je vous remercie, tout d'abord, de m'avoir invité à titre d'intervenant. Normalement, je devais être accompagné de l'un de mes collègues de l'UIT, mais comme l'a signalé l'intervenant précédent, il y a une réunion très importante à Shanghaï actuellement pour décider de la nouvelle structure de l'ICANN. Mon collègue de l'UIT, Richard Hill, se trouve être le conseiller du groupe d'étude 2 de l'UIT -T ; il est donc présent à Shanghaï, et moi je suis ici.

J'ai été très intéressé d'entendre les remarques et observations faites au cours de cette table ronde sur la normalisation. Je pense que l'on peut dire que les débats que nous allons voir lors de cette deuxième table ronde vont englober pas mal de cultures différentes. C'est une bonne analogie pour nous : en effet, ce même esprit ouvert sur les cultures anime notre travail sur l'Internet et notre travail sur les réseaux commutés existants et l'évolution de ces réseaux. En janvier 2000, le groupe d'étude 2 a organisé un atelier, où certains de nos confrères issus de la Mission pour l'ingénierie Internet (Internet Engineering Task Force – IETF) ont pu débattre de l'interopérabilité des télécommunications et de l'IP, en s'intéressant notamment à la numérotation, le nommage, l'adressage et le routage. Cette réunion a marqué le début de ce que certains appelleraient un déclin, et ce que d'autres verraient comme une pente à monter, selon que l'on est optimiste ou pessimiste sur la manière dont l'UIT et l'IETF peuvent s'imbriquer et les possibilités de collaboration pour eux sur des sujets communs. Il existe bien évidemment de nombreuses divergences et de nombreux sujets de désaccord. Je pense que, si je suis là aujourd'hui, c'est pour expliquer notre point de vue, à l'UIT, sur cette structure et ce qu'elle ambitionne d'être : c'est une ressource précieuse, qui pourra permettre à ces membres de résoudre les difficultés de l'interopérabilité entre les technologies existantes et celles qui doivent voir le jour et, si possible, de rendre la vie un peu moins pénible pour les utilisateurs finaux.

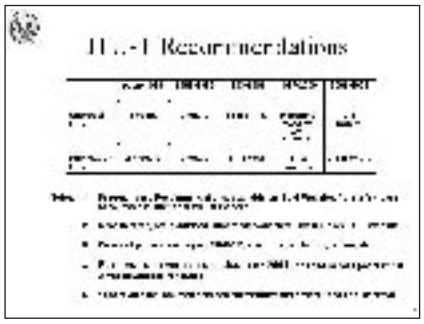
Je vais avancer dans la présentation pour vous faire un rapide exposé de l'organisation de l'UIT – je sais cependant que vous êtes nombreux à la connaître déjà, alors ce qui est important de faire, c'est peut-être de vous expliquer ce qu'elle ne fait pas. Pour ce qui est du contexte général, je me laisserai guider par les quatre grands points que vous voyez sur ce slide, pour vous donner une idée de ce que nous faisons en ce moment et ce que nous prévoyons de faire à l'avenir.

La structure même de l'UIT est assez facile à comprendre : il s'agit d'un organisme régi par des traités internationaux, qui a vu le jour il y a plus de cent ans. Il a subi de nombreux changements au cours de son existence, en fonction des besoins de l'industrie qu'il a pour mission de servir. Je pense que l'on peut dire

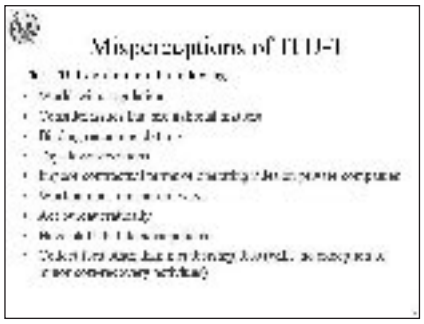
que ces changements ont été dans le bon sens : il faut espérer que l'UIT est devenu un outil plus efficace et qu'il progressera encore au fil du temps. C'est, à mon sens, un partenariat assez unique entre l'industrie et les Etats. Ce n'est jamais facile de marier les deux, mais ça marche quand-même et ça fait avancer les choses. L'organisme est composé de trois grandes sections, dénommées secteurs : le secteur du développement, qui s'intéresse de très près aux besoins des pays en voie de développement dans le monde ; le secteur des communications radio (dont l'ancienne appellation était le CCIR, certains d'entre vous doivent se rappeler), qui régit l'attribution des fréquences radio et des champs satellites, aujourd'hui connu sous le nom d'UIT-R ; et, enfin, le secteur de la normalisation, autrefois appelé le CCITT, mais aujourd'hui connu sous le nom d'UIT-T. L'UIT-T réunit, comme je le disais, de façon unique, des acteurs industriels et des Etats. On les appelle des Etats Membres lorsqu'il s'agit d'Etats et des Membre sectoriels lorsqu'il s'agit d'acteurs industriels. Comme je le disais, tout le travail de ces membres consiste à élaborer des recommandations.

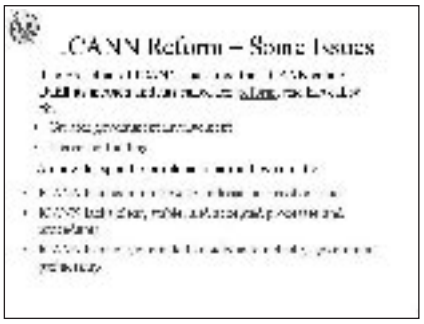
Il faut savoir que ces recommandations n'ont pas force de loi au niveau international, même si, dans de nombreux cas, elles sont transposées dans le cadre réglementaire national. L'élaboration et l'approbation des différentes recommandations reposent sur le principe du consensus. Pour l'heure, il n'existe pour ainsi dire pas de procédure de vote . Le travail est, le plus souvent, piloté par les membres sectoriels, même si cela n'a pas toujours été le cas. Ce n'est même pas le cas dans toutes les circonstances, parce que, si un Etat membre rencontre un besoin particulier, il peut tout à fait prendre un dossier en charge pour essayer de le faire avancer. En effet, n'importe quel membre peut et doit participer. Le processus part vraiment d'en bas. Nous visons la plus grande transparence, de même qu'une certaine sensibilité aux questions pouvant relever du droit des Etats. Qu'il s'agisse d'un très grand pays comme la Chine ou d'une petite île du Pacifique, la question du droit des Etats reste entière et l'UIT doit donc la prendre entièrement en compte, son contexte de travail étant non seulement international mais mondial. Bien entendu, les membres ne se voient pas imposer des contrats et ne sont pas tenus de respecter un règlement interne pour ce qui est de la teneur des recommandations ; c'est une donnée très importante pour les producteurs.

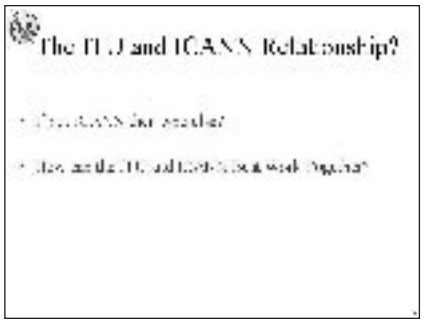
Il est intéressant de se pencher sur la procédure d'élaboration des recommandations pour observer toutes les petites modifications intervenues au fil des années. Certains s'accommodent très bien du système actuel ; pour ma part, ayant travaillé sur ce dossier depuis de nombreuses années, je trouve un peu difficile de tenir compte de tous les éléments que vous voyez sur ce slide. Ce qu'il vous montre par-dessus tout, c'est que les processus ont changé sensiblement. Au cours des deux ou trois dernières années, nous avons mis en place ce que nous appelons la procédure d'approbation



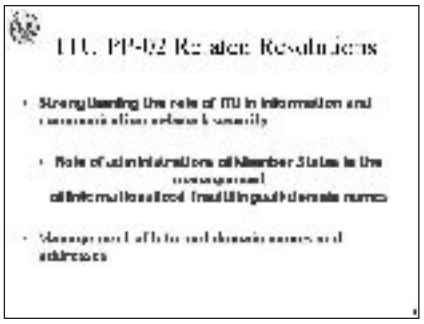

An example of ITU-T work


Misperceptions of ITU-T


ICANN Reform – Some Issues


The ITU and ICANN Relationship?


Recent ITU developments


ITU PP-02 Related Resolutions


Strengthening the role of ITU in information and communication network security


Strengthening the role of ITU in information and communication network security (continued)


Strengthening the role of ITU in information and communication network security (continued)


Role of administrations of Member States in the management of international Internet domain names


Role of administrations of Member States in the management of international Internet domain names
(continued)


Role of administrations of Member States in the management
(continued)

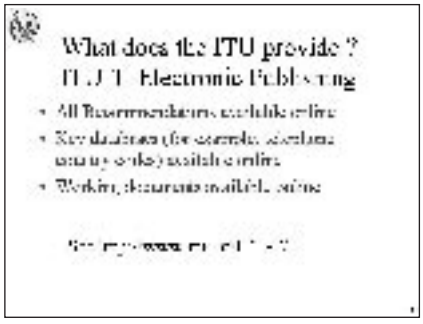

Role of administrations of Member States in the management of internationalized (multilingual) domain names
(continued)

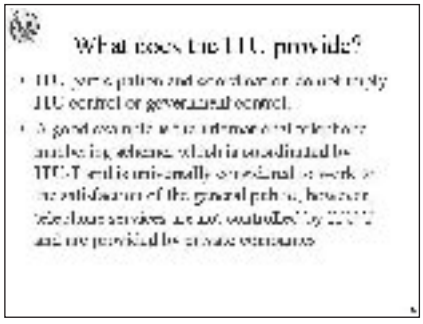

Management of Internet domain names and addresses

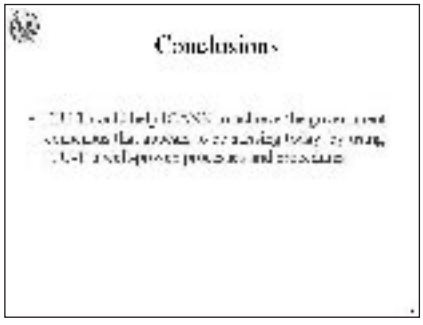
alternative, pour étudier les recommandations techniques, c'est-à-dire, celles qui n'ont pas de portée réglementaire. Depuis l'adoption de cette procédure alternative, on peut constater un changement radical dans le nombre de dossiers traités et le temps nécessaire sortir une recommandation. Avant 1998, il était assez courant de voir passer quatre ans entre l'élaboration et l'approbation d'une recommandation. Ce délai se raccourcit de plus en plus. Je pense donc, qu'en termes de productivité, l'UIT dispose maintenant d'un mécanisme assez efficace qui a été bien rodé et revu, sur de nombreuses années donc et le processus est tout à fait transparent.

En ce qui concerne l'UIT même, les relations que nous avons nouées et le travail que nous réalisons, j'attirerai votre attention sur un atelier que nous avons organisé au mois de janvier 2000, qui a permis de dégager un sujet qui nous occupe depuis ce temps : l'ENUM. C'est une technologie englobée dans le dispositif DNS, puisque, comme nous le disons à l'UIT-T, il y a un numéro de téléphone international E 164 intégré au système DNS. Ce travail est toujours en cours et de nombreux pays ont lancé des forums ENUM ; je sais que le forum en France est maintenant ouvert et il commence à donner quelques résultats. Au Royaume-Uni, nous nous trouvons à peu près au même stade. Le travail est réalisé en collaboration avec de nombreux membres de l'UIT, aussi bien des spécialistes de l'Internet que des acteurs traditionnels de l'UIT.

Nous n'avons pas de dossiers techniques difficiles actuellement, mais il existe un certain nombre de questions réglementaires très complexes à traiter. Ce travail se poursuit encore et, je pense, prendra un certain temps avant d'aboutir à une recommandation approuvée. On peut dire que ce travail a obligé l'UIT à engager le dialogue sur des terrains encore peu explorés. Je pense ici à l'organisme RIPE NCC et à la réflexion qui a pu être menée par le service de la normalisation à l'UIT et RIPE NCC, afin que les accords sur la gestion effective des numéros de téléphone et des indicatifs nationaux, en particulier, attribués à ENUM soient très clairs et pour que tout le monde, dans tous les pays, comprenne. La procédure a fait l'objet d'une nouvelle mise au point ces derniers mois et je pense que nous devrions voir encore des adaptations à l'issue de la quatrième réunion du Groupe d'étude 2 au mois de décembre. On peut dire qu'en ce qui concerne ENUM, ce n'est pas le TSB qui doit juger des méthodes et de la portée des attributions, mais aux Etats membres. Une fois de plus, vous avez un processus qui part de la base. Vous pourrez en savoir plus en vous rendant sur le site Web, qui est remis à jour en permanence ces jours-ci. Ce sujet a donné lieu à des débats très énergiques, non seulement avec l'UIT, mais également avec l'IAB et, je pense même, avec un certain nombre de membres de l'ICANN, au fur et à mesure des évolutions. La situation en ce qui concerne nos discussions avec ICANN est simple, puisque certains éléments au sein des deux organismes se sont rapprochés et travaillent en étroite collaboration. J'expliquais tout à l'heure que le







Government Advisory Committee compte un (deux, auparavant) collaborateur de l'UIT parmi ses membres. Cette personne travaille avec l'ICANN sur les différentes questions qui peuvent concerner la numérotation, le nommage et l'adressage.

J'avais également dit qu'il serait utile de vous expliquer tout ce que l'UIT n'est pas, c'est-à-dire, tout ce qu'il ne fait pas. Ce n'est pas un régulateur mondial, comme le pensent souvent les gens. Il s'intéresse à des questions réglementaires, mais ne traite pas celles qui relèvent du niveau national. Il émet des recommandations qui peuvent avoir force de loi si les pays les intègrent à leur législation, mais elles n'ont pas de caractère obligatoire au niveau international. Les recommandations ne partent pas d'en haut, au contraire, tout le travail part d'en bas. Les entreprises privées ne se voient pas imposer des termes contractuels ou des règles strictes et le travail est réalisé dans la transparence et non dans l'opacité.

L'UIT a fait l'objet de nombreuses critiques ces dernières années, notamment en ce qui concerne la lourdeur de ses processus. J'ai eu l'occasion d'assister aux discussions qui réunissaient le directeur du TSB et les membres du Groupe de pilotage sur l'ingénierie de l'Internet au mois d'août dernier. Je pense que les estimations ont changé considérablement au cours des dix-huit dernières années en ce qui concerne les possibilités de l'UIT dès lors qu'il reçoit des contributions écrites. Le personnel est extrêmement efficace mais il n'essaie pas de diriger le travail. En termes de coûts, l'UIT met en œuvre une politique non-lucrative et les frais qu'il peut demander correspondent strictement aux frais engagés pour réaliser ses différents travaux.

En ce qui concerne les résultats concrets des récentes réunions, on peut parler de la Réunion plénipotentiaire de l'UIT, qui s'est achevée il y a dix jours, à Marrakech. La réunion a donné lieu à de nombreuses modifications de l'organisation et de la convention de l'UIT, mais, qui plus est dans ce cas de figure, a donné lieu à trois résolutions. Il s'agissait de trois résolutions clés, issues de la conférence plénipotentiaire, qui ne manqueront pas de constituer les bases d'un travail fondamental pour l'UIT au cours des années à venir. L'une des résolutions porte sur le renforcement du rôle de l'UIT en matière de sécurité des réseaux de communication et d'information. La seconde traite du rôle des gouvernements des Etats membres dans la gestion des noms de domaines multilingues et internationaux. Enfin, la troisième propose la révision d'une résolution existante sur la gestion des noms et adresses Internet.

Sans entrer dans les détails sur ces résolutions, je dirai simplement que leur contenu ouvre des perspectives considérables pour de nouvelles contributions de la part des collaborateurs de l'UIT, tout en ouvrant grand les portes à des entités extérieures pour que celles-ci fassent connaître leur point de vue. Ce n'est jamais chose facile pour des acteurs extérieurs d'entrer dans un débat, mais il y a désormais, à n'en pas douter, des possibilités pour

qu'ils viennent mettre la main à la pâte et façonner les méthodes de travail de l'UIT. Parallèlement à cela, le dialogue avec l'ICANN commence à se solidifier, notamment par rapport à la réforme de l'ICANN, ce qui permettra d'approfondir considérablement le dialogue en cours depuis quelques années entre l'UIT et l'ICANN et d'avancer encore. J'espère que ces informations vous donnent une idée plus précise de ce que nous avons fait pour avancer sur les dossiers nommage et adressage, qui sont les principaux sujets de nos débats au sein du Groupe d'étude 2.

L'UIT est un organisme important, à n'en pas douter, et si vous regardez les slides, vous verrez aux environs des numéros 25 ou 27 quelques exemples du travail réalisé par l'UIT au fil des ans, travail qui se poursuit d'ailleurs. Le tout est de savoir ce que l'UIT peut faire dans ce domaine relativement nouveau dans lequel il entre sur la pointe des pieds. Pour moi, l'UIT constitue un forum où la participation et le travail de co-ordination se déroulent dans l'indépendance, sans contrôle gouvernemental de la participation – c'est donc un forum ouvert. On trouve un très bon exemple de ce qui se réalise au sein de l'UIT, où le plan de numérotation téléphonique international est géré à travers le plan des indicatifs nationaux E 164. Cela permet de comprendre pourquoi l'utilisation des indicatifs a été modifié et adapté en termes d'utilisation, pour élargir le nombre de possibilités en termes de services de télécommunications. Ainsi, l'UIT constitue réellement une plateforme où se retrouver, que l'on soit déjà membre ou que l'on soit de l'extérieur. On peut décider de venir participer aux forums et faire passer certain des changements que l'on juge indispensables. Les membres ont vraiment toute liberté d'agir.

Depuis l'UIT, la vision de l'ICANN est la suivante : nous reconnaissons la nécessité de prolonger le dialogue au niveau international. Pour moi, le problème le plus important auquel nous nous heurtons en ce moment est le fait que l'Internet s'est tellement développé, il s'est développé rapidement, passant d'un dispositif national universitaire à un outil international. Nous commençons à voir apparaître les problèmes liés à cette transformation en outil mondial, et j'espère que l'UIT pourra contribuer de façon utile à ce dialogue. Par ailleurs, je pense que les Etats membres ont là une bonne occasion d'apporter leur point de vue afin de faire avancer ce chantier. Pour conclure, j'espère voir l'ICANN, l'UIT et l'UIT-T en particulier se rapprocher pour avancer de concert (plutôt que chacun sur sa voie) et faire en sorte de trouver un consensus qui nous permette de progresser sur tous ces dossiers.

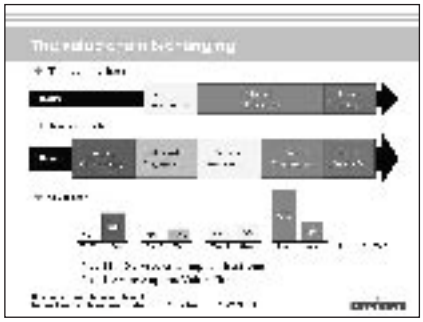
«Next Generation Networks and Internet: proposals for the future»

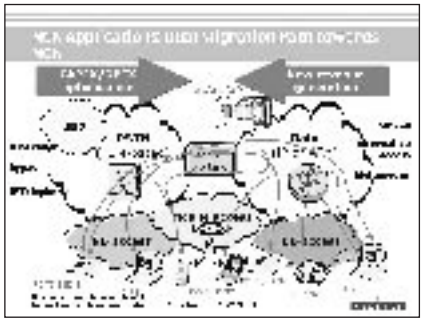
Alistair URIE

Alcatel, Standardisation Vice-Director, ETSI Board Member

Good evening. I am member of the ETSI Board and was recently Chairman of an analysis group on standardisation strategy for new-generation telecommunications networks. This evening, I will therefore be discussing telecommunications services on the Internet.

Developments on the Value Chain





In traditional networks, the infamous ARPU indicator (average revenue per user) amounts to approximately USD 40 per month. The indicator takes into account the service provision aspect (23%), operating costs (72%) and the price of the user's terminal. All of this will change in the near future. ARPU will probably increase to USD 60, or ¤60, approximately, as the cost base expands to include two new components, content provision (38%) and a value aggregation system (12%). These will come in addition to service provision (25%), network operating costs (25%) and terminals. The problem thus lies in the fact that, while new sources of revenue are appearing, the portion resulting from traditional sources is declining. The problem is particularly acute for operators, as the network operations budget will decrease. This will leave two problems to be solved: firstly, can part of the content provision revenue be recovered; and, secondly, how can operating costs be reduced ? These are the two aspects that need to be considered side by side when looking at new-generation networks.

Moving toward a new generation network?

Just what is a network ? The left side of the transparency shows the basic layout of a traditional telephone system: there is a narrowband access part and a commutated part. The commutated side obviously includes the large commutators' system and the intelligent server network. On the right-hand side, you see the Internet, rearing its head, which includes broadband access systems and backbone on IP and/or ATM, with routing. However, overall, this network is basically stupid. It contains a few Web services, but they are nothing much. All of the intelligence is located in the terminal. This difference in where the intelligence is located is fundamental in establishing a call: let me give you some examples.

The first involves a call between a mobile phone and a fixed telephone on a commutated network. Here, the call moves over a mobile access network and, via a commutated system, arrives inside the fixed terminal. Everything works according to plan and the system is simple.

On an IP network, it is also possible to make a call between an SIP-type terminal and a computer that also speaks SIP. This kind of call will probably use a "Web" service (Yahoo, IM, etc.) of some kind to properly guess the other party's IP address. Once the call has been established, the two parties can talk, they can send videos, do anything they like, exchange MP3 files of Britney Spears or anyone they want. The IP packages move along the access network and the backbone or core, but no one knows what is going on inside. In other words, the role of the network operator now boils down to nothing more than that of a "noble transporter", in exchange for which he recovers a few cents for each of the packages sent along, but enjoys none of the added value.

But we can change the picture: we can add functionalities and the whole thing will be different. First of all, we can add a box that makes the commutated network and the package network interfunctional. Then, we add a kind of server "nobly" known as soft-switch (the call server); all of the functionalities formerly found in the commutated intelligence network now reside on this server. With this, we can, for instance, make an IP-telephony type call, meaning a call between a computer connected on the right-hand side and fixed telephone on the left-hand side with classical dialling. But in order to establish a connection and let the two sides communicate, we will need a good deal of inter-functionality and help from a soft-switch type commutator.

Another example: we can make a classical call between a mobile and a fixed telephone, but the international pathway will, in fact, go through an IP service. This is very useful because, with this kind of system, an operator does not have to pay France Telecom for its international connections: as a result, the cost of operating the network falls, just as the cost of investment probably does.
Thirdly, of course, vocal calls can also be made, as in the past, but using classical telephones that are plugged into an IP access network. Before, in the IP telephony example, the call made was quite simple. Here, we are trying to plug a classical telephone into an IP network and will thus need many more functionalities in the network (in other words, in the soft-switch or the application server behind that) in order to simulate the services that we enjoyed previously on commutated networks.

All of these services succeed in sending vocal calls over IP networks. This is already somewhat of an achievement, but none of them create a new revenue source. But we may find some new opportunities as we move along – here is one example. If the operator really wants to make a start in multimedia services – for instance, between a 3G or 2G type mobile that is using MMS and computer connected via an ADSL connection – he will need new functionalities to find the right terminal on the other user's side, determine a common service format, make all of the protocol changes, etc. That service will be a form of added value.

What is missing

You have now heard a few examples of services using new types of services. They are relatively simple, all in all, but require intelligence on the network in order to succeed. Almost all of the services mentioned are

already being offered by major vendors, such as Alcatel. Thus, in fact, there is no need for new standards if we offer only those simple services. However, the flip side of the analogy is that, if we want to do more, if we want to design real services with decent quality, we will need new functionalities on the network in order to maintain that elusive quality of service. This is true in application layers, as well as in package or transport layers. Moreover, there is a need to add properties to the IP protocols, taking into account the new functionalities on the network. The problem with IETF protocols is that they are often protocols that connect two terminals. If we want to add functionalities with promise, and thereby add value, we will have to change the protocols—not drastically so, but enough to add functionalities that help the operators earn more money. That is why a number of players have begun doing somewhat basic, bothersome things, which Napster never did, but which, unfortunately, are being required by the regulators. For instance, in order to really offer services on the Internet, a player would need to do some legal interception. This means adding functionalities to the network in order to see who is talking with whom, what they are saying, etc. That is what is important. It is also necessary to establish emergency call numbers, like the now famous 112, on the Internet. That, too, is important. Of course, we will also need interoperability between operators and terminal manufacturers. The structure is now in place and we have made progress in a good number of areas. However, a lot remains to be done on ETSI, ITU and IETF, all over the place. The networks are nonetheless being deployed presently.

«Innovation and Standardisation»

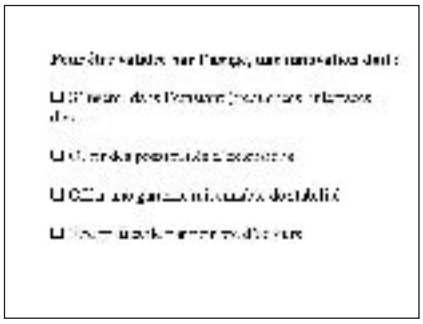
Pierre FRITZ

CGTI, Ingénieur Général

A lot has been said about standardisation and innovation: the two cannot be separated, but they form a stormy couple. In fact, they are not always a couple, since there exist situations where a single operator or a single agent manages to snag a large share of the market and thus have little concern for standardisation issues, or relatively little concern. However, most of the time – and we have heard this several times during the conference, with the representative of Orange being particularly articulate on this – a single operator cannot win over the entire market on its own; it has no choice but to come to terms with its competitors, ghastly as that may be! Then there are all of the other agents and all of the other players, who also want to get their word in, from their respective viewpoint. Thus, the two cannot be separated, as it is rare that any single party can do without standardisation in its move to innovate.

That being said, it has repeatedly been said that, just because something has been standardised does not necessarily mean that it will be taken on board by the parties involved. There have been cases where standardisation took place without any kind of standard being created: in other words, there was consensus on the market to do something without that having formally been approved by standardisation bodies.

There is a lot of fault-finding in our "couple". On the standardisation side, it is said that "consensus is a necessity", with that consensus being all the broader when global or very large institutions are involved. This, of course, means that the processes will require more time, and be more complex and bureaucratic, so as to keep the standard going. In addition, criticism is addressed to the other party: when innovation occurs without standardisation, it is generally because there is a desire for monopoly or oligopoly – of course, underlying this all is often a race to the market, since the first one to arrive will get the proverbial worm and, therefore, be predominant – and create diversity that is impossible to govern, along with hastily designed specifications. That is the kind of criticism that the two parties in our couple are likely to put forth.



Today, standardisation has prevailed as the "official" approach, as demonstrated by the founding of major international bodies such as ISO, the ITU and the EIC, which operate on extremely effective

principles: consensus, of course, between the many participants – and the more participants there are, the more difficult it is to achieve consensus; transparency; publicity; and global access to all research and findings. However, these bodies have been and are still criticised as being too slow. This is undeniably a bit unfair, as one previous presentation showed how quickly ITU's work has sped up. Nonetheless, the ITU is still criticised as being too slow. Regarding complexity, we need to be careful, because sometimes, complexity is just a way to shoot down a specification. We all know that, to shoot down a specification, all you have to do is complicate it enough to make it inextricable. The complaint that our organisations are too slow have given rise to a plethora of forums, consortiums and associations of all kinds.

Generally speaking, these kinds of organisations operate with a handful of carefully chosen participants, who are already in general agreement on what needs to be done, from the outset. They work in relatively small committees, produce specifications or work on existing specifications that they will complete, especially when the problem lies in interfunctionality – this is always a rather difficult problem – or format, so that there is total consistency between all of the players, right down to the end user. Obviously, there are so many of these kinds of forums today that we cannot say whether they all operate in the same way. Some of the organisations work as full-fledged arms of the formal standardisation process, even though, physically, they are nothing more than a small group of participants who agree to advocate a given option. Other organisations are focused much more on the commercial aspect, and want to be able to test something quickly, move very fast and create a fait accompli. This raises a real problem, to the extent that an observatory of sorts was set up to follow the workings of such organisations – some 150 of them have been identified, if I am not mistaken – and find a way through this jungle. The "observatory" includes AFNOR, along with a number of other participants, and is called Standard Media.

How can players make things move quickly and establish the standard ? A lot of work is required, of course – in the last ten years, e-mail has made it much easier for specifiers to work – but it is also important to get to the core of the issues, or at least to what one deems is the core. Traditionally, it is security that is most often foregone in the name of speed, because security – provided that the system is not too poorly designed, in any case – cannot be seen immediately and, moreover, is intrinsically an extremely complicated problem to solve. For example, there is a lot of concern over Internet security, and it has become clear that there are, indeed, quite a few problems that deserve attention. A few months ago, the Internet community, in fact, took quite a beating from the United States' special advisor to the President.

This is recognised by the authors themselves. In the Internet, there are a good many RFCs that begin with comments like, “the security aspect was overlooked because, at the time, the problem did not exist”. In reality, there was no need to be a psychic to understand that the problem would arise sooner or later. It was just that security was not a priority, because the priority was to see whether it would work and whether there were people who would use the thing.

Another area that is frequently overlooked, even though this may not be specific to the forums, is everything relating to operations, system maintenance over time, as this is a complicated issue and also because it makes it possible to reach a compromise between standardisation – an agreement between like elements – and the desire to maintain a small secret domain for each of the participants, where they will be able to do something specific to keep their clientele. And, it is true, operating problems are often reviewed very very late. At the same time, once again, the Internet can serve as an example of this kind of negligence due to the desire to move quickly.

When first comparing standardisation procedures, it is impossible not to draw metaphors with creationist or Darwinistic concepts. However, it is important to remember that, although Darwin’s theory works, it takes time, even when generations are very close, and not everything is suited to it in the same way. First of all, there are uncertainties depending on the areas involved – earlier, we saw that end users are highly unpredictable creatures – and there are subjects that are weighty, as well as subjects that are lighter. It is undeniably easier to experiment with Wi-Fi than to launch a generation of mobile telephones, given all that such an undertaking requires, not to mention the fact that any new generation of mobile telephony would have to compete with a generation that is already very effective; the new generation would thus have to be as good, and offer additional characteristics. Clearly, there are issues that cannot be dealt with using lightweight means, such as forums; they require much more detailed action.

Lastly, there is without a doubt a divide in this area, between the general public and the professional realm. Generally speaking, professionals have a somewhat sharper grasp on what they are expecting, whereas the average consumer is more or less unpredictable. As a result, it might be worthwhile to look at the respective roles of classical production channels and reduced production channels. At one point, it was thought that the classical production channels would become extinct. This, of course, did not happen, in particular because they were able to react and did not let go of their specific responsibility, that of creating new standards. Moreover, they play a part in reviewing and revising specifications that were originally designed too quickly, with the sole purpose of testing out the market. The forums and organisations that rapidly design specifications are not always equipped to keep those specifications going and adjust them according to user needs – as the specification develops, the number of par-

ties involved also grows, because the system has proven successful, and the number of players thus continues to expand – since, whatever people may say, it takes a great deal of organisation to develop a standard. Thus, there is a need for the standards to be reviewed and kept going. Lastly, there are issues in adjusting the standards to suit different environments: this is exemplified by ENUM, where there is, on the one hand, a telephone environment with which ITU is highly familiar, but on the other, an Internet environment that is incontestably controlled by IETF.

If we are indeed moving toward a system that is more or less governed by Darwinism, even if the actual extent is not quite what some parties may assume, the question arises as to what part the State should play. Is the State's only responsibility now to note the results of recent developments, enforcing sanctions where necessary ? There are, without a doubt, a number of fields where the State has an important part to play, by virtue of its specific functions, in particular in the field of frequencies, where, as we all know, there is a policy to enforce, subsidies to allocate according to specific rules – for these reasons, frequencies must be governed by classical, strict standardisation mechanisms. If payment systems begin to develop, there will be a need to look into how they might impact currency movements, security issues, emergencies and universal services matters.

All of those are duties that the State cannot overlook and that it continues to follow. The issue of maintaining the structures must also be taken into account. Whatever people say, the standardisation process is essential to innovation, and it is important that the State – with its responsibility to keep the economy alive and well – ensure that the processes are being executed properly to uphold those structures. Naturally, it is also important to ensure that the system is operating well enough for healthy competition to exist – that is the role of the regulatory bodies. There is also a need to be in line with the European standards and, in particular, to ensure that what occurs in France fits in well with what is going on at the European level.

In conclusion, just what does the State do ? As far as steering Community bodies goes, there is a group of senior civil servants working on standardisation, which ensures that Europe remains open to the sectors that appear attractive and promising or those that seem to be weak. The State also makes financial contributions, for instance to AFNOR and ITU, as well as to other organisations in which it is a member or in which it plays an important part. It takes part in research in certain cases, as some of the State's civil servants are responsible for a given sector in which the State happens to be a user of the standards established. Aid is also offered to market players, in particular through research institutes like INRIA, which make substantial contributions to developing standards. As you can see, the State is not yet out of the picture, even though we are far from the golden days of my youth when, at ITU, we could say, "France believes that…"

Comments and Questions and Answer Session with the Floor

Alain MODÈNE, Director General, AFNOR :
I would just like to add one clarification with regard to StandardMedia.com, which you mentioned earlier. Thank you for that. The service was launched just a few weeks ago in its operational format, and I encourage you to visit the site. It is always striking to see just how broad the field of standardisation is in the IT sector, and it was humbling to hear so many names and acronyms of organisations in just two hours – quite a memorable experience. StandardMedia.com can help you get a better grasp on things. My second comment is that, it is quite fortunate that we are talking about the Internet at this second round table. Internet has provided us, as standardisers, with a fantastic tool to work more effectively. Today, much of the work that we carry out in groups is performed using the Internet as a tool for communication and development.

Let me get to my question now: a lot has been said about users. In the first Round Table, it was said that users are unpredictable; in the second, a number of the major institutions represented here today mentioned user participation: I would like to ask them how they approach this, and which users they are talking about, for instance, at ICANN.

Sabine JEAUME-RAJAONIA :
I cannot speak on behalf of ICANN, as I am not ICANN. However, the users can be an operator who needs IP addresses and thus comes in contact with the organisations that give out IP addresses, or they can be a company that wants a domain name, and which will therefore look more at the domain name side of things. Each player can speak out and, in addition, elect the members of the Board of Directors. For these reasons, I feel that, thanks to all of the open policy forums that exist on the Internet today, it is possible for everyone to express an opinion and participate.

Roy BLANE : Pour moi, lorsque nous parlons des différents points de vue, il faut être très clair quant au type d'utilisateur auquel on pense, d'après la classification de l'UIT. Le Groupe d'utilisateurs de télécommunications international (INTUG) est membre de l'UIT depuis un certain temps et a participé aux différents groupes de discussion. Il est intéressant de constater que le sujet de la participation des utilisateurs finaux a été évoqué par le comité consultatif sur la normalisation des télécommunications (Telecommunications Standardisation Advisory Group).

L'un des Etats membres, à savoir, l'Australie, a lancé le dossier et nous allons maintenant entamer une étude approfondie des différents types de groupes d'utilisateurs possibles et nécessaires dans le cadre du débat en cours sur la normalisation des télécommunications internationales au sein de l'UIT. Il y a donc un certain nombre d'initiatives, des groupes qui existent depuis un certain temps, mais tous n'ont pas été aussi efficaces qu'il auraient pu l'être.

Mais s'agissant du monde de l'Internet, je crois que nous avons tous une expérience d'utilisateur. Nous avons tous dû nous trouver devant notre PC à un moment donné, en train de maudire ou d'invectiver l'ordinateur ou encore de le malmener pour le faire réagir. L'utilisateur ne sait pas exactement où s'adresser, dans quel forum aller pour évoquer ses problèmes, pour trouver une solution, notamment matière de compatibilité des produits. Quant à savoir si un dialogue est possible entre les utilisateurs du grand public et l' l'UIT, c'est une toute autre question. Ce sera certainement l'un des sujets importants à évoquer au mois de février 2003, lors de la réunion du TSAG à Genève. Ce sera très intéressant de voir quelles idées proposent les autres Etats membres sur cette question de l'utilisateur final, soulevée par l'Australie. Je vous remercie.

Alistair URIE : From my perspective, the answer is clear: users are the people who have bought a terminal that is not working. Either the terminal was actually produced with non-existent standards, in other words, the terminal was a proprietary one, but the buyer was not aware of this; or the user was connected to a network that did not use real standards. I would add that it is very easy to return an old non-operating terminal if the standards are not upheld.

QUESTION : The question I would like to ask deals with the issue of network access. What struck me in both discussions was that this issue was more or less disregarded. Let me give you an everyday example. Today, everyone knows that if Mr. X has Internet at home, it is because he uses a telephone network and, if that telephone network is in Mr. X's home, it is because there is a service that pays for the network to be deployed. Yet when we look at the issues surrounding so-called new-generation networks – which we are still trying to define – what is striking is the lack of progress achieved in determining who will pay for access, if indeed those networks are going to require a new type of access, commonly known as broad-band, whatever the type, whether it be UMTS, ADSL or any of the technologies I have not mentioned. So let me repeat my question: who is going to pay for access, and which model will be used? Will the model be more similar to the telephone network model, where the intelligence is in the network, or more similar to the Internet model, as FING's Chairman seems to imply, advocating freedom in choosing any kind of access. Fine, I would very much like to have that freedom, but who is going to pay for my access? I would be very happy to hear the views of the panellists on this.

Alistair URIE : Quite obviously, access will be paid for by the user. What is not obvious is that, in reality, it will be paid as part of an overall service and/or through a line on your monthly bill relating to access. That is the major question. Traditionally, access was actually paid for through the service. However, if we want IP to be totally transparent, we cannot continue that way. As a result, the user will either find himself paying a much higher bill, for the access itself, or we will have to change the system so that access is paid for through the service.

A Legal Specialist : What I find most remarkable in both of the workshops is the total absence of a connection between standardisation principles and a number of legal principles that are virtually universal today. We have tried to solve the issues of identification, authentification, electronic signature and payment. We have tried to solve the problem of data protection. However, all of this is difficult in an environment where the need to standardise and the need to consider legal standards are totally separate. In today's world, everything happens after the fact. It is now clear to everyone, before anything is done, that if we set forth a universal standardisation model, the related legal issues will grow exponentially.

Ten or fifteen years ago, there were only a handful of States that could deploy a number of standards, including the Internet. Today, every country in the world can do so. I am surprised that there is clearly no co-operation between the various international organisations on this matter, as it is precisely their duty to act as a contact point between the various governments.
Lawyers today are extremely concerned when they see that industrialists and marketers are propagating the illusion – a comical or sober one – that there will be a so-called universal system, when in fact, that system has never been subject to the slightest legal analysis. It is plain to the eye that the new standards need to come along with some form of guarantee for the end user, for instance on identity-related issues – his identity must be protected. Likewise, there should be some form of guarantee, again for the end user, that if he uses a credit card to pay, his credit card number will remain totally confidential, just as there should be a guarantee that all of his data will be protected. In the previous workshop, there were amazingly naïve discussions – admittedly, such talks might be necessary – about widespread interactions, interoperability and interconnection. But that is not how legal systems work, in the real world. I therefore get the impression that there is huge divide between a celestial ideal, involving the illusion of a widespread Web, and the world "on the ground", where users have problems with identification and payment, make mistakes and do not know who they are dealing with. Then, of course, as soon as the telephone becomes available, we will be tempted to say yes to all telephone salespeople and thus to sign a contract, but then, we will choose the wrong supplier, if we have not already chosen the wrong telephone.

What kinds of answers do we have, aside from standards themselves? Once upon a time, a few years ago, an American lawyer, Mr Lessig from Harvard, suggested that legal chips be implanted in the lowest layers of the technology. His idea was far from stupid and, seeing as we will do not know where we are going with respect to the major legal questions that I raised, I am surprised that there is no move to deploy, in full association with the standards that will enable the desired technological advances, a minimum set of legal principles that will guide and support the development of those standards.

Philippe DISTLER : We seem to be discussing two different matters. When we talk about standards, we are referring to technical standardisation. If I am not mistaken, the point you raised has more to do with regulations or public policy.

Karl-Heinz ROSENBROCK : If you will allow me to venture a response to your question, I think that there have been, as you implied, a number of changes in the standards that we have produced in standardisation organisations. At the beginning, the issue was to determine how we could be certain that the subscriber with whom we were in contact was indeed the right person. Now, the issues have changed, and to answer your question, there are supplier-client relationships, and to secure them, the UMTS standard, for instance, provides, from the outset, for mutual authentification between the service server and the user terminal. In other words, we make a promise, we provide a guarantee of sorts, on mutual authentification. That was one of the first components enabled on the UMTS networks and in the field of standardisation. That being said, there may still be broader contractual problems, but standards cannot do anything about those. They were not designed for that.

Pierre-Yves WEBER : I am Vice Chairman of ETSI's Shareholder's Assembly, and am thus a representative of the users. A few of the things I heard during this session made my hair stand on end. I fully agree that users are unpredictable creatures and that it is difficult to understand what they want until they actually have a machine before them with buttons that they can poke at. However, one of the main

problems that need to be dealt with in a standardisation environment like that of ETSI is that, even now – I heard many people saying earlier that they sat down together around tables to try to get away from the problems created by competition and really work on interoperability – but even now, every single manufacturer and every single operator feels that understanding the user is a competitive advantage. In my opinion, until we clearly set out the users' needs and work on them together, we will not make any form of truly meaningful progress in this area.

Philippe DISTLER : I am not sure whether the previous speakers share your belief in a top-down approach to user identification, but I would say that this is a truly philosophical question in and of itself. Perhaps we can take one last question?

Bruno SALGUES, Researcher, Evry NTI: I am very pleased to hear what the speaker from ETSI said just now, as it reflects exactly my opinion. Originally, many of the standardisation organisations were the result of user initiatives. Later, that power was taken over, or taken up – regulation occurred, whatever the name it is given, and the users were pushed out of the picture. The idea is that people often feel that they have the right to do so; the operators thought they knew the users, until they realised that they did not know him. The same is true of the manufacturers. Might I remind you that, when UTI was founded in 1865, it was not founded by States; it was only in 1932 that the States took it over. The same thing is going on in ICANN today. ICANN was not founded by States, but by users. And the fact that somewhat nasty people have been elected to run ICANN (including the President of the Computer Chaos Club, whose election was no accident – I was one of the people who put his name up for election and I am pretty thrilled that people are now saying, "Whoa, him as a member as ICANN's Board of Directors) is proof that, now, we are regaining that power.
So, my message is: watch out, because ETSI was not originally created by States; it was founded one fine day in Brussels by nine people, one of who was me, so I am qualified to tell you the story of ETSI… Today, a group of people are claiming control of the user; I heard this stated yet again in the first part of the session, I heard it again just now, and I am in full agreement with Mr Weber. So, be careful when claiming power over users.

Alistair URIE : The real problem is that users no longer attend the technical meetings and that manufacturers or operators sit around a table trying to imagine what those users might think and want. Then, from that, they try to design standards. Please, I ask you, send in the users and send away the operators. We do not want our technical meetings to turn into plenary sessions where the champagne flows! I am referring to the technical groups, here.

Discussion Summary

Emmanuel CAQUOT

Head of Division, DIGITIP, French Ministry of Economy, Finance and Industry

The Minister in charge of Industry is responsible for the overall standardisation process in France. The telecommunications sector has always been somewhat of an exception, historically, but now that it is open to competition and that France Telecom no longer enjoys a monopoly situation, we have worked to better define the French and international arena in this area, one that has probably seemed neglected in the eyes of many. This possible "neglect" very clearly raises the question of what role the public authorities should play in this area. To return to one of the topics we explored during these Talks, I should emphasise that regulation is, in fact, but one of the means that public authorities can use. As I see it, the question as to why we should even get involved in this whole thing – in standardisation in the broadest sense of the term, with all of its ramifications – is moot; standardisation is, simply, a key component in the field of information and communications technologies. Why? Because it is an economy based on the external networks and, thus, it is fundamental that there should be interoperability between the various layers of the network, at the international level, etc. I would say that this is a key element at the European level because the European market is segmented in such a way that harmonisation is needed for us to wield the same weight as the American market, or even the Chinese market. Thus, clearly, standardisation is a key component in harmonisation.

It is also a key component in an area traditionally dominated by the State – using rare resources. We saw this with dialling and frequencies. Lastly, I would say, even though the term may seem a bit antiquated, it is a key component of industrial policy. I do not think that anyone is blind to the underlying industrial battle for power in this area. So, if you all agree to this vision of the situation, it becomes clear – and today's Talks clearly showed this once again – that there are, undeniably, two quite different approaches. I did not think that, years after the creation of the various forums, debate would be as lively as this, but clearly, it is.

On one side, there is classical standardisation of telecommunications, with GSM being, in a sense, the most fully-realised version: everything had been planned out and decided in advance, making it into an industrial power of respectable proportions. We look back to it today, yearning for the olden days, in an attempt to solve the problems that still exist, quite naturally, in the field of UMTS. On the other side, we have the world of standardisation, more closely related to the world of computers. It might also be referred to as the PC or Internet world. These work very well too, but can very understandably lead – as tons of studies have shown in the software industry – to de facto monopoly situations which, in a sense, are the best form of standardisation around: with one manufacturer doing everything, life is a lot of simpler. There is no way around it: it may be due to international development, the speed of technological progress and, most of all, the speed at which everything circulates, but, given the cost of developing these technologies,

standardisation has become a key component. Thus, we are witnessing a true face-off between two approaches, and today's discussions have shown just how fruitful that face-off has been. As the two round tables showed, the face-off is, in fact, a war to seek out value on the part of the various players, much more so than a desire to differentiate networks and services.

These two approaches of course raise questions about the compatibility of the monopolies and market openings with the issue of competition. I understand why the ART is concerned about this topic, even though I could argue that it was not really dealt with in today's round tables. I feel that this is a truly fundamental issue. I would simply draw your attention to the differences between the field's various players. In the field of telecommunications, a regulated economy, it is important to still leave the players enough freedom so that, even though they may be subject to regulations, they can still give free reign to innovation. Likewise, when dividing the market up into sub-segments, with the aim of marking interoperability an obligation and thus fostering healthy competition, it is important not to go too far, and create a sterile environment. Therein lies, in my view, the crux of the matter, as well as one of the challenges for any regulator. Lastly, I would like to conclude by mentioning the Minister's action on the topic of standardisation in the sector of information and communications technologies, as regards institutional reform (whether at ITU, CEPT, ICANN, with which we have been working for many years, or ETSI) and the overhaul of the French system, with the support of AFNOR, which needs to play an important part in this field, in particular with respect to telecommunications. In addition, the Ministry provides the aforementioned bodies with EUR 12 million per year – needless to say, in times like these, when budgets are being streamlined, we want to ensure that those loans are used in the best possible way, for the benefit of the industrial community as a whole and the users. Lastly, the Ministry takes action by establishing required standards – it is often forgotten that, in many areas, standards are mandatory – in particular, in the areas of rare resource use, frequencies, numbers, addresses and compatibility with common law, as well as in the field of security of goods and people. Naturally, one important point to remember is that a particularly large order on the part of a public authority can lead to a particular type of standard, as it usually involves very high investments, especially in the field of ICTs. I should also mention the Ministry's support for innovation. In order to encourage the development of new standards through co-operative research and development programmes, we invest nearly EUR 250 million each year to finance the programmes in the field of ICTs, whether in terms of technology, with the major standards – IPV6, new generation networks – or use.

We are thus working to make the framework suit the situation; it is now up to you to use it to its fullest. In these times of economic duress, it is important to call together all of France's players, operators, industrialists and users. It is my understanding that a number of mobile operators have made an effort to do so, and I am very pleased about that. In particular, I think– since this was somewhat of an "ETSI Day" – that ETSI's current programme would provide the perfect setting for a joint initiative.

In closing, I would like to thank the ART for having organised these Talks. The variety of contributions heard here shows just how important the topic of standardisation is today, despite the fact that it may have seemed a bit backward at one point. This event clearly needs to be followed by other initiatives.

Conclusion

Jean-Michel HUBERT

Chairman, ART

On our behalf and on yours, I would first like to thank all of the people who, in one way or another, contributed to this session and to what I feel were extraordinarily productive discussions. They gave us an opportunity to hear a variety of positions as well as cogent feedback on issues that were, in many cases, forgotten over the past few months, or even years, given the economic environment that prevails today. Many thanks to those who organised the session, to Michel Feneyrol, who was a real catalyst, a project manager and an organiser. Many thanks to Mr Rosenbrock, for the contribution that ETSI made through him and other participants in the session. I told you, a bit over one year ago that I hoped we would be able to organise a session to reflect on the word couple "regulation and standardisation". We have done so and I must say that, tonight, I am glad that we did. Thanks also to the many speakers and contributors who spoke out in earnest and with an eloquence and skill that we all appreciated – I have no doubts as to that.

A few quick comments: I think that the discussion, first of all, showed the interacting issues that exist around standardisation and, I would say, regulation and government. We heard it clearly stated that regulations and government are both clients and producers of standardisation. What I think is certain is that we are moving toward a system where the role of the State, which Emmanuel Caquot just reviewed, in terms of importance, is nonetheless played out in a type of organisation that needs the involvement of a number of different players, from equipment manufacturers to operators, suppliers, administrations and users – I do not want to leave them out – and I believe that this is an important factor that is reflected in the fact that standardisation and regulation must show a certain form of consistency, which I believe to be vital. Standardisation is sometimes one step ahead of regulatory action. It conditions and contributes to the structuring of the market as well as its development. We are all aware of this, so let us not be naïve about it: a standard is never neutral and is considered a meeting ground between players because it results from and reflects consensus – we heard that word several times today – on the way in which standardisation should be expressed and generated. Because of this, the process needs to comply with clear rules that are an inherent part of the regulatory action: transparency, openness, consensus once again. In a sense, the opening of the market in which the regulator participates cannot be dissociated from the many types of contributions that make up the standardisation process.

Let us look at rise of mobile services, which was the focus of the first round table. The discussion provided what I feel was a perfect presentation of the issues surrounding inter-operability – inter-operability or continuity, I will not choose between the two words – and also gave insight on freedom of choice for users, which I believe is an essential component. The still recent success of short messaging, one of the topics

discussed, demonstrates what inter-operability and interconnection between operators can contribute when combined: in particular, they build up a substantial market, even as control of the entire value chain by a single actor, through whatever approach he uses, be it proprietary or un-proprietary, can only fragment the market to the disadvantage of the consumer, thereby giving rise to the risk of capturing clients. Thus, we saw that an open inter-operable model stimulates competition; this is; without a doubt, a vision of the market that the regulators would support, building their action upon and fostering the widest collaboration possible between all players present. Regarding mobile services, I would like to stress how interested I was in what was said about the time required to design and implement standardisation. People spoke of 10-year, 15-year or 18-year waiting periods; I also heard two other figures in the first presentation, by Mr Lucas, who spoke about GSM standards. Those 5 000 pages… UMTS standards require something more like twice that figure. I think this calls up something we have been hearing for a number of months, regarding the speed of UMTS development and implementation in a number of countries. Over the past year, I have had many an opportunity to call attention to the importance of standardisation in a field where many of the forecasts were looking overly optimistic, when they were not irrational – in other words, I was saying that the development process just might not have been lagging behind as much as some parties claimed. What we heard tonight confirms this, in a way; I take it as an additional sign, given the co-operation efforts going on between a number of players (the Open Mobile Alliance was mentioned), that there is a need for the sector to continue proving itself and showing confidence in the years to come. It will take a bit more time, but UMTS will be successful, without a doubt – this was something I vitally wanted to express before you.

As regards the contribution of standardisation to the Internet challenge, one question struck me in particular and I would like to linger on it for a little while. It was asked at the end of the question and answer session: Who is paying? Who is paying for all of this? Well, I would like, if you please, to come back for juts a minute to the fact that we, in France, are currently going through a period, and have been going through this since last Summer, where the access and service markets are experiencing fundamental changes, moving ahead quickly, and I think it important to note that this is the result of the initiatives launched by all of the players, operators, service suppliers and operators – the incumbent and its competitors alike all have their part to play. But allow me to add – because I would not like this to be forgotten, and forgotten quickly – that the only reason why the market has been bubbling and booming since early September is because, for nearly two years, the Authority, along with all of the market players, took action to ensure that the technical conditions and pricing mechanisms were in place, so that competition could play out to its fullest on all market segments, contributing to the development of services through fairly priced systems and facilitating access to technical conditions and pricing mechanisms that were fair and acceptable to as many consumers as possible. This is one of the points I heartily wanted to recall this evening, because I am very pleased – and oh how pleased we all are here at the ART – about the new take-off observed in the sector over the past few weeks. The work that was carried out and the decisions that were unveiled over the course of July contributed to this.

Regarding the debate over the standardisation of the Internet, I clearly noted the difference in approach between ICANN, on the one hand, and ITU, on the other, which represent the two major trends in the various layers and institutions involved in the Internet today. As one of the speakers pointed out, it would be best that the two approaches find a way to converge in the near future, so that both the responsibility of the States, as described in summary by Emmanuel Caquot, and the role of the various players be recognised and upheld. In any case, rest assured that the ART is strongly committed to getting involved in as many institutions as possible, in order to offer them what I hope is added value, based on our expertise and understanding of market needs.

These are some of the ideas that I wanted to bring forth tonight. In conclusion, two last items: firstly,

I strongly feel the need for consistency and joint action at the European level, as a start. In the acronym ETSI, the "E" may well stand for excellence, but it also stands for Europe, let us not forget that. Last Friday, I attended the first meeting of the European Group of Regulators, the formal embodiment of what some of you may already take part in at your level; it came into existence five years ago, when I took the initiative of bringing together a group of independent regulators. At that first meeting, which was held in Commissioner Liikanen's presence, we identified the most effective avenues for exchanging ideas with the Commission in the most constructive way possible regarding the incorporation and implementation of the Directives, which is the duty of the regulators, as well as a number of timely issues, such as third generation technology. Let me tell you, I hope that this group will realise something that I feel very strongly: namely, that the regulator, as part of its duty to implement regulations, must also shoulder part of the industrial responsibility, insofar as our decisions will, without a doubt, have an effect and an impact on that aspect of market development. This is an important point, considering, once again, that these are European initiatives. I will conclude by mentioning, one last time, the fundamental need for compatibility and consistency between standardisation and regulation. Without standardisation, any form of freedom of choice, whether in terms of services or equipment, can end up shrivelling away, to the great disadvantage of the consumer. Those are a few of the somewhat unprepared remarks that I wanted to make to conclude today's session. Once again, thanks to you all, to all those who participated, thanks to the speakers, thanks to you for your continued support and attention throughout the session.

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