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Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Network Aspects (NA).

Introduction

The present document forms the ETSI response and comment on the Commission of the European Communities Green Paper on a Numbering Policy for Telecommunications Services in Europe [1]. It is suggested that those readers who only require knowledge of the ETSI response to the proposals made in the Green Paper turn to section 8. An Executive Summary is also provided in annex A.

1 Scope

The present document reviews the Commission of the European Communities Green Paper on a Numbering Policy for Telecommunications Services in Europe [1]. The issues raised within the Green paper are discussed and commented on. Where appropriate reference is made to earlier ETSI NA2 documentation produced on European numbering matters.

Some comments may be repeated in different clauses of the present document as it follows the format of the Commissions Green Paper in which the same arguments and proposals are made within a number of sections. The present document endeavours to provide a full response on the Green Paper and comments on each section where it was considered appropriate.

2 References

References may be made to:

a) specific versions of publications (identified by date of publication, edition number, version number, etc.), in which case, subsequent revisions to the referenced document do not apply; or

b) all versions up to and including the identified version (identified by "up to and including" before the version identity); or

c) all versions subsequent to and including the identified version (identified by "onwards" following the version identity); or

d) publications without mention of a specific version, in which case the latest version applies.

A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1] Commission of the European Communities Green Paper: "Numbering Policy for Telecommunications Services in Europe", COM(96) 590. Brussels 20 November 1996.

[2} Council Resolution 92/C 318/02: "Promotion of Europe-wide co-operation on numbering of telecommunications services".

[3] ITU-TSB draft Recommendation E.164: "The numbering plan for the ISDN era".

[4] ETR 158: "European numbering initiatives - Background and strategic directions".

[5] ETNO Questionnaire on availability of common numbering space in European countries.

[6] ETR 134: "Network Aspects (NA); CEC initiatives on a unified European numbering plan".

[7] ETSI NA2 Report: "European Telephony Numbering Space - Analysis of preferred options".

[8] ECTRA Consultative document: "Strategic for Numbering of telecommunications Services in Europe" (ECTRA PTN document 187).

[9] ETSI NA2 Response to the ECTRA Consultative exercise: "Strategic for Numbering of Telecommunications Services in Europe".

[10] ITU-TSB Recommendation E.161 option A: "Arrangement of digits, letters and symbols on telephones and other devices that can be used for gaining access to a telephone network".

3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

CC	Country Code
CEPT	Conférence Européenne des Administrations des Postes et Télécommunications
CEU	Commission of the European Union
CIC	Carrier Identification Codes
CLI	Calling Line Identification
CPE	Customer Premises Equipment
ECTRA	European Committee of Telecommunications Regulatory Affairs
ENF	European Numbering Forum
ENTF	European Numbering Task Force
ETNO	European Telecommunications Network Operator's association
ETNS	European Telephony Numbering Space
ETO	European Telecommunications Office
GII	Global Information Infrastructure
GMSS	Global Mobile Satellite Systems
GSM	Group System Mobiles
IANA	Internet Assignment Naming Authority
IFS	Information File Separator
IN	Intelligent Networks
ITU-T	International Telecommunications Union-Telecommunications standardization sector
ITU-TSB	International Telecommunications Union-Telecommunications Standardization Bureau
NAFTA	North American Free Trade Association
NDC	National Digit Code
NPTF	Number Portability Task Force
PCS	Personal Communications Systems
SG	Study Group
UIFS	Universal International Freephone Service
UPT	Universal Personal Telecommunications

4 European numbering background

4.1 Early history

The basis for the European co-operation on European numbering was Council Resolution 92/C 318/02 [2]. This Resolution requested co-operation at the European level on numbering arrangements, facilitating the development of common European positions in relation to global numbering developments, and the creation of a European telephony numbering space.

European countries were invited to co-ordinate within CEPT and to co-operate with ETSI in order to take full account of the link between standards development and numbering resource management.

Following early debates between all relevant parties responsible at the European level (ECTRA, ETSI, ETNO, CEU) the European Numbering Forum (ENF) was established.

4.2 ETSI activities on European numbering

ETSI NA2 have the responsibility for numbering and addressing activities within ETSI. As such they represent ETSI within the ENF and establish and co-ordinate European numbering standardization activities within ITU-TSB. In recent years as well as providing input to the ENF, ETSI have studied and produced a number of deliverables focusing on European Numbering activities. These are listed in clause 2. In conjunction with the CEU, ETSI also established the European Numbering Task Force (ENTF) which is working towards producing the necessary standards for the introduction of an European Telephony Numbering Space (ETNS).

4.3 European Numbering Forum (ENF)

The ENF was established following the Resolution of the Council of Ministers on Europe-wide co-operation on numbering of telecommunications services [2]. It is a forum for the exchange of information, expertize, co-ordination, consultation, discussion and common studies on European numbering, addressing and related issues.

Its creation has ensured that the views of all parties that carry a relevant interest in numbering and addressing on a European level have been taken into account. The ENF forwards proposals, recommendations and reports to ECTRA for decision or other members of the ENF for action. ENF conclusions on European numbering issues are derived by consensus.

5 Comments on the Green Paper

5.1 Initial comments

It is the view of ETSI that facilitating the needs of users should be the main focus when numbering policy is determined. Although the reasons for attempting to achieve political goals through the management of this resource are appreciated they should not be viewed as the main drivers. However the need for regulatory intervention in order to ensure open and competitive access to numbering resource is both recognized and supported .

The need to reform national numbering schemes in order to facilitate full and open competition in a liberalized European market cannot be disputed. However, complete harmonization across all European countries, while being a commendable aim, is not always in the interest of the majority of users. This is particularly true when the realization of this necessitates change to established practices for the majority, which have been honed by both culture and habit. Neither should human factor issues be overlooked.

NOTE: For the purposes of the present document, the term "European Countries" is taken to mean "all CEPT member countries".

The recognition within the Green Paper that "active discussion" is required is considered to be a positive step in formulating a way forward for Europe that will facilitate the growth and needs of customers across all European countries. ETSI also support the principle set out in the Green Paper that it is "on the basis of this consultation that political decisions will be taken".

5.2 Comments - Why numbering reform

Green Paper. Section I, page 1

ETSI has actively supported the work aimed at providing a pan-European numbering space in order to promote the emergence of pan-European services, the work of the ETSI ENTF being the prime example. User demand for these services does however remain difficult to quantify. Earlier studies have failed to produce a "killer service" on which to base this drive. It is recognized that this could be caused by a "chicken and egg" situation; no numbering space, no service demand, or no service demand, no numbering space. The provision of a pan-European numbering space will resolve this issue.

NOTE 1: The ETSI ENTF is currently working on a number of key issues aimed at establishing a pan-European numbering scheme including:

- management of a ETNS;
- portability aspects of pan-European services;
- routeing of pan-European services;
- human factor aspects.

National numbering reform is also taking place and it is accepted that differing approaches are being taken. However current studies being undertaken by the European Telecommunications Office (ETO) should help resolve this matter by providing a set of criteria on which to judge their openness. If issues cannot then be resolved in a satisfactory manner by the administrations concerned, additional action at the European level may be required. When national numbering schemes meet the criteria then the vast majority of competitive and consumer issues related to a multi-operator environment will be met; those that are not should be taken care of through the use of either regional (European) or global schemes. ETSI hold the view that where global schemes exist for a particular service, regional schemes should not duplicate this resource. ETSI also wish to point out that any attempt to use a regional numbering scheme in this way could infringe ITU-TSB draft Recommendation E.164.1 [3] and could result in that resource being withdrawn by ITU-TSB.

NOTE 2: ITU-TSB draft Recommendation E.164.1 [3] is currently scheduled to be put forward for Resolution 1 approval in May 1997.

It is stated that the total cost of change for companies providing pan-European services to customers could be minimized if unco-ordinated changes to national numbering schemes can be avoided, and a stable long term plan is adopted. It remains unclear what pan-European services are being discussed here, but assuming that they could be provided through a pan-European numbering space does not necessarily overcome any of the problems associated with national schemes. Most of them have already, or will have to go, through a process of change in order to facilitate a competitive environment. Even the most optimistic view does not foresee a quick and easy way of overcoming this problem. Even without considering either technical or political barriers, the more radical proposals for the complete overhaul of European numbering schemes cannot be realized in the short term. Earlier work on the issues by ETSI has suggested that the more radical schemes would take a minimum period of 15 years to implement.

NOTE 3: See ETR 158 [4] European numbering initiatives - Background and strategic directions.

History has proved that all numbering schemes, including those considered to have adopted a long term view are unlikely to avoid additional unplanned changes at a later date. Currently the UK and US are considered to have open competitive national telecommunications markets, Both of these have recently faced major changes to their numbering schemes; London in particular is facing its third major change in less than a decade. The impact of this on customers underlines the fact that changes should only be contemplated when needs dictate, and that even the best assessment and long term planning considerations will not be immune to subsequent change. Setting in place a long term strategy is a difficult task, ETSI suggest the best way forward is to meet current and foreseeable demand whilst maintaining maximum flexibility to ensure emerging requirements can be met as they arise, rather than setting long term plans in stone. Harmonization in itself is no reason for change.

The proposal to support a standard telephone keypad in order to offer and market a range of new and existing services is supported. It is the view of ETSI that the standard adopted should be that contained in ITU-TSB Recommendation E.161 option A [10]. It is recognized that there is a large installed customer base that does not comply and changing this will impact on implementation timescales.

NOTE 4: Recommendation E.161 option A is only for the latin alphabet.

5.3 Comments - the current situation

5.3.1 The organization of numbering policy at a global, European and national level

Green Paper. Section II.1, page 2

Reference is made in the Green Paper to the fact that only Country Codes (CC) 85 in ITU-TSB Recommendation E.164 [3] remain unallocated and the limitations of the global numbering plan are becoming apparent. Whilst this figure is representative of the current situation ETSI wish to underline the view taken within ITU-TSB Study Group 2 (SG2). That is; potential resource limitation offers no reason to deny assignment. The problem has been recognized and a high priority project aiming to resolve this matter and top up the resource will be launched at the first meeting of ITU-TSB SG2 in the new study period (May 1997). It is planned that this project will be completed within two years.

With regard to common European positions being taken presented in ITU-TSB, ETSI wish to point out that on standardization issues this is clearly their role and that they have successfully fulfilled this task when required since the creation of ETSI.

Reference is also made to the extensive resource required to follow the work in ITU-TSB and that common positions represent the only practical way forward. Whilst such an approach helps it does not remove the burden of attending ITU-TSB meetings. The only way to influence debates is to take part. Sending in contributions reflecting common positions is likely to fall short of the objective if participants are not there to actively argue and support the case. There are no short cuts.

5.3.2 Much has already been done in the field of numbering.

Green Paper. Section II.2, page 3

Common Europe-wide numbers for emergency or international calls in Member States (page 3)

Acknowledgement is given to the introduction of a Europe-wide access code for emergency services across Europe (112) and the standard international dialling prefix (00). However both of these were implemented over a long period of time, and most countries see a long period of parallel running both the old and new (112) code. This underlines the difficulties associated with both harmonization and change.

A clear role for national regulatory authorities (page 4)

ETSI agrees that there is a clear role for national regulatory authorities and support all of the bullet points listed in section II.2, page 4.

Establishing a framework extending beyond the European Community for co-operation on numbering (page 5)

In the fourth point on page 5, the Commission state that "considerable effort is devoted by the Commission in promoting common European positions (within ECTRA) which can then form the basis for negotiations with ITU and other fora". Whilst commending this action, ETSI wish to point out that common European positions should be achieved through consensus in the ENF if Europe is to succeed in taking things forward, not just through the views of ECTRA. Along with other bodies represented at the European level ETSI are also putting a lot of effort into advancing this work. ETSI also wish to state again that negotiation with the ITU-TSB on standardization issues remain the purview of ETSI, as agreed within the Terms of Reference and working methods for the ENF.

Towards a European Telephony Numbering Environment (page 5)

When referring to the ECTRA consultation exercise (also detailed in annex A) it is claimed that "there was a clear split of opinion between incumbent operators and new market players with regard to the need for rapid progress on options 3 and 4". This statement is not accepted by ETSI following a review of the responses received. A detailed analysis clearly indicates that the vast majority of respondents offered little support for option 3 and almost no support for option 4. Those who did indicate that they were not opposed were generally small niche market players who would be totally immune from both the cost and disruption imposed by such changes. Few of them had been involved in the full debates or exposed to the intricacies of the proposals.

Although option 4 would meet all of the needs of the Commission the results of the earlier ECTRA consultation should not be presented in a manner that is not supported by the data. Option 4 was not supported by the vast majority.

5.3.3 But key regulatory decisions are increasingly urgent

Green Paper. Section II.3, page 6

Responding to user and market needs (page 6)

The Commissions view that numbering schemes should be opened to competition is supported.

New operators being able to be assigned equal quality numbers is a crucial factor.

It is not just getting numbers that is crucial, its obtaining access to numbers which appeal to users and allow new entrants to match the offerings of incumbent operators that counts. Carrier Selection capabilities and number portability capabilities should also be used to level the playing field if competition is to thrive.

ETSI endorses the view that Europe should work towards ensuring that the benefits of the Information Society are realized and strengthen Europe's telecommunications industry. However, it is the view of ETSI that this cannot be achieved by being inward looking. In order to take its rightful place at the forefront of technology Europe has to be in a position to contribute and compete on the world stage. As stated previously there is no support for providing pan-European services such as freephone when they already exist at the global level. Claims that opening a European freephone market. in addition to the global scheme, would lead to incremental revenues of 4 - 5 billion ECU per year are not supported by ETSI or operators who have discussed this. The only benefit to be gained is political, and this is not sufficient reason to pursue such an approach.

Benefits from harmonization of dialling with respect to users who travel should be assessed against the impact upon users who do not frequently travel, as these form the majority. Achieving harmonization is difficult as previous studies have shown, as there is no number space commonly available to achieve this, see ETNO Questionnaire [5]. Change impacts heavily on all users, so there has to be quantifiable benefits across major sectors of the telecommunications community to support this. At this stage such benefits are not considered large enough to support wide scope changes although this remark does not infer that all changes, particularly those required to facilitate competition, should not take place.

Similar comments on cost and disruption apply to all proposed numbering changes and each should be judged on its own merits. The importance of recognizing the need for a long term numbering strategy is well understood. The difficulty always comes in ensuring the wide degree of flexibility necessary to meet requirements of the future that have yet to be identified.

ETSI agree that implementations should be correctly managed and to this end some timescales will be commented on as to their viability. ETSI consider that restructuring of national numbering schemes is needed to meet post liberalization goals. Not undertaking some national number changes prior to debates on numbering reform as put forward in the Green Paper (page 8) may conflict with the introduction of competition by 1998. It also conflicts the goals set by both the council and the European Parliament .

Responding to the political mandate for change (page 8)

As pointed out previously, within the present document, it is not accepted that studies have "shown an identifiable demand for pan-European services". This issue has been debated at length over the past few years during discussions on numbering at the European level involving all relevant parties, at independent conferences on European numbering, and considered during other ETSI reports, see ETR 158 [4], ETR 134 [6], ETSI NA2 Report [7], ECTRA Consultative document [8]. The case put forward by the CEU remains unproved.

5.4 Comments - the key tasks for a European numbering policy

5.4.1 Regulatory evolution "making competition effective"

Green Paper. Section III.1, page 10

The goals listed within this section are commendable and are fully supported by ETSI.

5.4.2 Economic evolution: creating an internal market for special services

Green Paper. Section III.2, page 11

ETSI comments on the claim that a strong demand exists for pan-European services has already been commented on in subclause 5.3 of the present document. The following additional comments are offered as a response to other statements made in this section of the Green Paper on much the same topic.

ETSI does not agree with the Commissions perceived threat of US dominance with global freephone. As explained previously evidence does not support this claim. Even if a regional scheme was introduced migration from one to the other could not be achieved in a manner that guaranteed users at the European level could keep their numbers when moving to a global scheme. The rest of the world would not accept that European customers got most of the better (or golden) numbers. The importance of these numbers to customers has already been recognized, resulting in special "day 1" procedures being introduced when the global implementation of Information File Separator (IFS) was launched at the beginning of 1997 to ensure fairness.

It should also be noted that it is not the European identity that is important to users or network operators, but the innovative nature of the service and the ability to provide user friendly access.

5.4.3 Technological evolution: promoting innovation

Green Paper. Section III.3, page 12

The demand for seamless service offerings is not something new. Much work is already going on in the international standards arena in order to bring this to the market place. ETSI have already produced standards on Universal Personal Telecommunications (UPT), mobile and other forms of personal communication, much of which has been built on and endorsed by the worlds standardization fora. Through this, Europe has led the world in a number of fields, Group System Mobiles (GSM) being a prime example. To date none of these schemes have used, or identified the need for a European numbering scheme. Most use national schemes and in the case of UPT have already set in place standards that enable a smooth migration from national schemes to a global scheme, whilst allowing users to retain their existing subscriber numbers. In the fast evolving world of personal communications geographic boundaries will have no significance.

5.4.4 Evolution of numbering from the customer's perspective: need for harmonization

Green Paper. Section III.4, page 13

It is difficult to understand the Commissions comments that regulatory intervention may be justifiable in order to overcome issues such as those related to different numbering structures being used for identical services, when on the other hand they are proposing to duplicate numbers being used for national and universal freephone offerings. These two points are diametrically opposed.

ETSI has already commented on alpha-numeric dialling issues in subclause 5.2. The agreed international standard is ITU-TSB Recommendation E.161 option A [10]. It is important that Europe adopt this and manufacturers should be encouraged to conform.

Footnote 39 on page 13 raises major issues for ETSI.

It is evident that the Commission have failed to understand the rationale for the current debates that are taking place in ITU-TSB on the allocation of E.164 [3] resource to networks.

It is not proposed to offer special CCs to networks/network operators as stated in the Green Paper. Most applicants for resource will only be assigned a portion of a CC. Even Global Mobile Satellite System (GMSS) operators did not get allocated unique CCs. The drive for network codes is seen as a key requirement as we move towards the Global Information Infrastructure, an issues that is also a key consideration for the Commission. ITU-TSB cannot continue to address just the needs of telephony and its related systems. Other technologies should be embraced and codes for networks is the first step along this path. It is NOT about Telco branding.

The Green Paper (note 39) also refers to "the growing power of commercial forces in ITU". Hard facts would suggest that in the numbering field it is the power of regulators that is growing, not commercial based organizations. More regulators attend ITU-TSB SG2 now than ever before and the presence of ECTRA members, both in the ITU and at national standards co-ordination activities, ensures fair play and regulatory concurrence.

NOTE: ITU-T SG2 Question 1 is the group responsible for numbering in the ITU-TSB.

ETSI supports the view that ITU-TSB should remain "open to all" and continue to work on a consensus basis. Any other approach will lead to the rapid growth of commercially led fora and the adoption of de facto standards which would hamper both competition and world trade.

It is not considered to be helpful for the Commission to criticize a well respected body of the United Nations in a publicly available document. Europe needs to work **with** the ITU-TSB not undermine it. Europe needs to support the development of world-wide standards in order to stop de facto regional standards hampering world-wide trade.

On this basis ETSI will not comment further on section III.4, other than to state that the arguments raised within this section are not accepted.

5.4.5 European numbering: a continuum between national and global numbering

Green Paper. Section III.5, page 13

Arguments against the views expressed by the Commission in this section in the context of global versus European numbering solutions have already been presented.

ETSI do not accept the case put forward to support European numbering solutions when compared with global schemes.

6 Proposals for action - comments

Green Paper. Section IV, page 15

It was noted that, throughout the document, some proposals appeared to apply to all CEPT countries, others to the Union. It is the view of ETSI that the requirements for European numbering policy should stem from all CEPT businesses and customers not just the Union.

Current ECTRA and ITU activity is considered effective and sufficient to meet the needs of the post-liberalized market. ENF activity is also considered to be beneficial and sufficient in providing a broad regulatory and industry framework facilitating the open environment now, and in the future (including ETNS).

Effective mechanisms should aim to avoid distortion of competition between countries and operators. In general, little account has been taken of existing competitive environments in some European countries.

6.1 Ensuring effective competition

Green Paper. Section IV.1, page 15

6.1.1 Carrier selection

ETSI offer total support for the entitlement of operators to have sufficient access numbers of the right quality in each country in order to compete at the same level with incumbent operators. Simple dialling codes are also considered essential in facilitating an open environment. Carrier selection is one of the key factors in achieving this. Of the three options shown on page 16 of the Green Paper ETSI support the view that the last option (assignment of carrier selection codes for all calls) is complex for users and therefore undesirable.

It should be recognized that the management of carrier selection codes at the European level can only be achieved in the long term. Also, all countries would have to make changes in order to free a common space that could be used for access. Some countries already have Carrier Identification Codes (CIC) defined, others have advanced plans for their introduction based on the availability of these codes today. The future harmonization of these codes would require costly modifications to both network and customer equipment, as well as service disruption to users during any changes. Billing requirements also form a key component of carrier selection that have to be considered. Little mention of this is made in the Green Paper but various billing models can be identified, the choice of which will dictate the level of administrative burden placed on the networks involved.

Management of carrier selection codes at the European level requires national administrations relinquishing control over part of the national numbering resource. Decisions would need to be taken at the political level. It should also be stated that implementation dates quoted within the Green paper do not apply to countries which were granted additional implementation periods under directive 96/19/EC.

ETO should be urgently requested to carry out a study of billing requirements in a multi-carrier environment in order to meet proposed timescales.

6.1.2 Number Portability

The ability to implement number portability is considered to be a key issue by ETSI in providing an open competitive environment. In order to actively assist in achieving this goal, ETSI have recently formed a special task force to advance this work, bringing together experts from a number of Sub Technical Committees with expertize in relevant areas. This group commenced their studies in December 1996 and plan to complete all studies for both geographic and non-geographic numbers by the end of 1999. Timescales given in the Commissions proposals and those set for the task force need to be aligned in order to facilitate the introduction of this capability at the earliest possible date.

Dates for implementation of mobile number portability also need to take account of the current ETSI studies which are being undertaken at the request of the Commission (this is a separate activity being undertaken by ETSI and does not constitute part of the Number Portability Task Force (NPTF) work).

Within the Green Paper three specific types of number portability are listed; location portability, service portability, and service provider portability. These can be provided in a variety of ways relating to both geographic and non-geographic numbers and this can lead to confusion. Location portability is also considered to have varying types within it, which again, adds to the level of confusion. It is therefore urged that great care is given to the terminology used when this subject is discussed and clear, easily understood definitions are used. The following example illustrates the potential confusion; the text in section IV.1 on number portability refers to service provider portability as encompassing only changes at the same address, changes within the same exchange area (donor network assumed), or changes within the totality of the local call areas. These textual nuances have serious implications for implementation. In the summary on page 25 the more generic term "particular location" is used, which may, or may not, mean the same.

The term "major centres of population" used in the proposal on page 17 also needs to be clarified. Across European countries this could be interpreted in a number of ways due to the differing topology and geographic structures that exist.

It should be stated that service portability should be considered on a case by case basis. Portability between incompatible service types is not supported as it would cause customer confusion e.g. portability between freephone and premium rate services.

Currently limitations on the ability to introduce number portability also exist due to technical restrictions related to analogues/PCS exchanges, and these should be recognized.

6.1.3 Restructuring national numbering schemes

This section of the Green Paper makes no recognition of the fact that a number of countries have already changed, or have approved plans to change their numbering plans. Although the aim is to open up these schemes to competition, in some cases those planned changes cannot be delayed if recognized user demand is to be met. Stability of numbering plans is also important for all parties. Those countries that have recently changed would not want to change again in the near future purely on the basis of achieving harmonization.

Change cannot occur without cost and disruption for all and harmonization alone is no reason for change. There have to be tangible benefits.

Desirable characteristics for national numbering schemes should be derived from the ETO Studies. Until guidelines have been set and agreed through consultation with the industry, there can be no firm commitment to implement changes. Further integration of national numbering plans also requires both open consultation and political will. Until this has been achieved this proposal should remain an open issue. It is imperative that ETO conclude their current studies as soon as possible.

It is proposed in the Green Paper that Member States "should not allocate numbers beyond the length of 13 digits". No justification for this statement is given. Without this information responding is difficult. However, ETSI wish to point out that some countries either have, or already plan to, move beyond this number length already.

6.2 Facilitating a single market

Green Paper. Section IV.2, page 19

6.2.1 Establishment of a European Telephony Numbering Space (ETNS)

The main benefit to be gained from the introduction of an ETNS is the ability to introduce new services on a pan-European basis when global equivalents do not exist. It is anticipated that in today's dynamic telecommunications environment, liberalization will enhance the development of market driven, innovative services. ETSI have been actively involved in developing the ETNS, playing a major role in ITU-TSB and the ENF as well as progressing the work within the ENTF.

It is anticipated that in today's dynamic telecommunications environment, liberalization will enhance the development of market driven, innovative services.

Again a key element of this initiative for ETSI is that services should be provided on the basis of customer demand, rather than political will. Unless operators and service providers are able to anticipate a viable return on investment they will not be willing to provide any service. Attempts to force the pace in order to achieve political aims can only damage Europe's ability to compete in the global market place.

Whilst the Green Paper suggests that the commercial negotiations between operators wishing to provide a Universal International Freephone Service is likely to result in fragmented service offerings, this is only the case when viewed from a political perspective. From a user perspective the market will be both open and competitive. There are no limitations on the number of operators who can provide the service and the level of competition, provided on a world-wide level, should result in users benefiting.

The introduction of the ETNS is (optimistically) planned for January 1998 (see ETSI NA2 report to the ENF [7]). 18 months is required to implement after the decision is taken. The commission are requested to amend the date for the introduction of an ETNS to "January 1999 at the earliest".

ETSI wish to express their concern that the Commission continue to offer support for the introduction of a pan-European Freephone Service despite the ITU-TSB led global scheme becoming operative at the beginning of 1997. The global service embraces and facilitates all the requirements of a regional scheme, providing a seamless service to all users. ETSI as well as a number of other European Telecommunications Industry organizations have repeatedly opposed this proposal.

The introduction of pan-European freephone, shared cost and shared revenue services are not supported by ETSI because global equivalents either exist or will in the near future, which meets all the needs of the European telecommunications community.

The reality is that economies of scale could actually result in a global scheme being offered to European users at cheaper rates than any regional scheme. A regional scheme would also be less user friendly as most national schemes utilize the "800" code and the global scheme uses CC "800". Europe cannot provide access using the same common code, which is now universally recognized. ETSI also wish to point out that using an E.164 resource allocated for regional purposes to duplicate a service provided on a global basis is likely to infringe ITU-TSB Recommendations, and could result in ITU-TSB withdrawing the resource.

The last sentence in footnote 50 of the Green Paper (page 20) which states; "that control over the revenue stream gives the freephone operator a strong bargaining position in relation to local network operators in the countries where the calls are originated", is disputed by ETSI. Without the co-operation of local network operators, freephone would not exist. Other assumptions are also considered to be inaccurate. The universal implementation of IFS provides an equal opportunity to all. There is no advantage to be gained by the US, as quoted, or any other player. In fact it is the opposite, the US have the most developed freephone market in the world and the introduction of Universal International Freephone Service (UIFS) opens this market to competition at the world-wide level. This is one of the reasons that progressing the standardization work on freephone within ITU-TSB proved to be such an emotive, hard fought battle. ETSI also disputes the claim that UIFS will be operated by a small number of global telecommunications consortia. Current evidence does not support this claim.

See comments on annex IV (Personal Communications) in paragraph 8.

6.2.2 Private and corporate networks

ETSI offer their support for the statements made regarding private and corporate networks within the Green Paper and endorse the need to develop European solutions in this field. Solving these requirements through the use of the ETNS appears to be a good solution. Large networks would clearly benefit from a scheme that provides the same functionality across European countries, rather than a disparate approach. The initial studies undertaken by the ETSI ENTF have already identified corporate networks as a prime candidate for the ETNS.

There is also a need to consider a global solution to this problem, particularly as the European solution imposes barriers for networks that span areas outside of Europe. A study item has already been agreed in ITU-TSB for 1997-2000 study period and this work needs to be monitored within Europe.

6.2.3 Need for a new structure for regulation and administration of numbers

Support is offered for the concept that an appropriate administrative structure for European numbering should be developed, but only in the context of the ETNS, not for national resources.

It is the view of ETSI that control of national numbering resources should remain with the administrations. If an integrated European scheme should evolve in the future then the situation could change, but not before.

Any new administration structure would only be required to align with the implementation date of the ETNS, which is January 1999 at the earliest.

Terms of reference would need to be produced and agreed for the new body.

6.3 Adapting to the information society

Green Paper. Section IV.3, page 22

6.3.1 Long term European numbering plan

The 1992 Council Resolution 92/C 318/02 [2] only covers the ETNS.

The possible introduction of a long term European numbering plan would require a new Council Resolution.

At this stage no decision has been made to use CC 3, yet a reference scenario is given both in this section and in annex V. This can only serve as a possible example and should be treated in that way. Any reference to "implementation" is considered premature. Despite contrary claims by the Commission in the Green Paper, there was very little support for either options 3 (this option) or option 4 (a single code for Europe) when they were put forward in the ECTRA Consultative document [8]. ETSI do not accept that the results of that exercise showed a clear difference of opinion between incumbent operators and new entrants. This is considered to be a distortion of the true picture. It also has to be appreciated that a political decision is required by ALL of the CEPT countries. If one country with an existing CC in the "3XX" series refuses then the proposal falls. The need to implement parallel running is required at all stages of change in order to avoid world-wide customer confusion.

It is clear that no decision can be made without further study of migration paths etc and the problems that have to be faced by all parties involved, some of which have already been exposed as a result of earlier work undertaken within ETR 158 [4], ETR 134 [6], ETSI NA2 Report [7].

Different scenarios need to be studied in order to identify all the options and issues associated with each. Some solutions may require a political decision, others may not, and some require agreement on implementation by all. It is proposed that studies similar to those undertaken by ETSI in the past are set up to help resolve these questions. A first stage should be the study of requirements.

The studies referred to in the footnotes are not considered to provide an adequate basis on which to proceed and the Green Paper lacks material to support the proposals that are made. The starting point for any study should be to clearly identify requirements. This has yet to be done, but ETNO have indicated that they could assist by undertaking this task. The additional studies required indicate that the proposal to develop a long term strategic plan for numbering in Europe by 1 January 1998 will be difficult to achieve. In the proposals the Green Paper already assumes the outcome of the strategic study in its reference to "the creation of a European CC (3XX) with transfer of responsibility of administration and management of the last two digits to Europe and a unified numbering scheme by the year 2000". Such an approach is not considered helpful at this stage of the proceedings. There is little material in the Green Paper to support this thrust and it is important that the difficulties and the impact of changing numbers throughout European countries are clearly understood before any decisions are taken.

ETSI have already provided input on this matter in earlier studies, ETR 158 [4], ETR 134 [6]. Major difficulties were exposed with the proposal to migrate existing CCs behind a single European code such as that shown in the example on page 23 e.g. misdialling problems, long implementation timescales and major impact and costs falling on users, network operators and service providers.

A more detailed assessment of this type of proposal and the even more difficult proposal to move towards a fully integrated numbering plan taken from the earlier ETSI studies are given in annex B of the present document.

NOTE: Both of theses proposals were referred to in the ECTRA Consultative document "Strategic for Numbering of telecommunications Services in Europe" (ECTRA PTN document 187 [8]), and were known as options 3 and 4 respectively.

Both ETNO and ECMA have produced documents resulting from their own studies on the cost of change. All of these studies need to be taken into account when proposals are evaluated. Neither should the fact that pan-European services can be provided through the use of an ETNS without any such changes being made, be ignored.

6.3.2 Naming in the Internet

The rapid growth of the Internet has occurred in what has been an unregulated environment. It provides a good example of a business sector being driven by dynamic market forces in order to meet user needs. It is questionable whether such growth would, or could have occurred if regulation had been applied during that period. Imposing regulation now, without a firm rationale, is not considered helpful and could in fact hamper future growth. ETSI support the view that domain name administration issues should remain industry driven, although it should be undertaken by a neutral body in order to ensure fairness. On that basis regulation should be minimal, possibly just oversight to ensure the above aims are achieved, and carried out in conjunction with existing bodies (North American Free Trade Association (NAFTA) etc.).

Internet naming doesn't impact on the main European numbering proposals, although it may require additional focus as we move towards the Information Society. Inter-dependency of addressing schemes are already being studied by ITU-TSB particularly in their work on the Global Information Infrastructure (GII), and ETSI in the context of the European Information Infrastructure. It should also be noted that other parties (including ITU-TSB) are already involved in trying to resolve address administration issues. At this time no specific regulatory action appears necessary.

7 Summary in Green Paper

Green Paper. Page 25

Detailed comments on the proposals are contained in the relevant sections of the present document and an Executive Summary as annex A.

8 Conclusions of the Green paper

Green Paper. Page 26

In conclusion ETSI welcomes the opportunity to take part in the active discussions that should lead to a consensus approach to European numbering policy. It is hoped that a full analysis of the responses will be conducted within the public arena and the Commission will develop a European numbering strategy that aligns with the views expressed by the industry. Requirements for European numbering should stem from all CEPT countries, not just member states.

With reference to the individual proposals made ETSI support the following views.

Carrier Selection and openness of numbering schemes

Carrier selection is considered one of the key mechanisms in ensuring competition.

Harmonization of carrier selection codes would be costly and disruptive.

Further studies of billing requirements related to carrier selection is required.

Number Portability

Number portability is a key measure in providing an open competitive environment.

ETSI Numbering Portability Task Force should assist in advancing this work.

The terminology used within the number portability section of the Green Paper is confusing and likely to lead to a mixed response to the issues raised.

The aim of providing portability in major centres of population is likely to lead to a disparate approach across Europe due to different topologies.

Service portability can only be considered on a specific case by case basis. Portability between incompatible service types is not supported as it would cause customer confusion e.g. portability between freephone and premium rate services.

Restructuring National Numbering Schemes

Little recognition is given to the fact that some countries have, or have firm plans to, change their numbering schemes.

Stability of schemes is important to users.

No changes can be achieved without all parties suffering costs and disruption.

There have to be tangible benefits resulting from any change.

Support is offered for the view that entitlement to numbers of the right quality should be achievable to both incumbents and new entrants within all national numbering plans.

Desirable characteristics should be derived from ETO studies.

Establishment of an ETNS

ETSI have already demonstrated their full support for this issue through the work of the ENTF.

Services should be provided on the basis of customer demand.

The proposed date for the implementation of an ETNS (January 1998) is considered unachievable and should be amended to January 1999 at the earliest.

No support is offered for a pan-European Freephone service using numbers from an ETNS. All requirements are embraced within the ITU-TSB global scheme.

No support is offered for the introduction of shared cost, shared revenue, or any other service which is currently under study within ITU-TSB and scheduled to be provide on a global basis in the near term.

Private and Corporate networks

The need to develop European solutions is endorsed.

There is also a need to take into account potential global solutions.

New Structure for the administration and regulation of numbers.

Support is offered for the view that an appropriate structure for the administration of numbers should be developed but only for an ETNS.

Control of existing numbering schemes should remain with national administrations.

The implementation date for a new structure should align with the implementation date of the ETNS.

Long Term European Numbering plan

The introduction of a long term European numbering plan as proposed within the Green Paper would require a new Council Resolution.

No decision can be taken on the proposals put forward which use CCs in the 3XX range, these can only be considered as one example of a way forward.

Earlier ETSI studies have identified major implementation and migration problems with these proposals.

The need for additional studies is highlighted commencing with the need to firmly establish requirements.

Costs and impact of change should be taken into account.

It should be recognized that these proposals have already been overwhelmingly rejected in an earlier consultations exercise.

Only the CEU appear to support proposals such as this.

Naming in the Internet

Domain name industry administration should remain industry driven.

Regulatory intervention should be minimal.

No additional regulatory action related to the work on the Information society is considered necessary at this stage of the debate.

9 Comments on annexes

9.1 Annex I - Comments on ECTRA strategic options - analysis of the response

Green paper. Page 28

Members of ETSI NA2 also reviewed the responses to the earlier ECTRA Consultative document on Strategic Options (see ECTRA Consultative document [8]), and strongly disagree with the conclusions presented by the CEU within the Green Paper in annex I.

The statement that "incumbent operators further suggested that further opening of any pan-European services should be a matter for commercial agreement between operators involved" is used in a manner that is misleading. This point was stated by both incumbents and new entrants and is, of course a statement of fact. Without acceptable commercial and interconnect agreements being in place international services will not be accessible to the vast majority of users. Legislation alone cannot force operators to provide new services that are not commercially viable or do not align with operators commercial strategy.

It is also unacceptable to ETSI that claims are made that there was a clear split between incumbents and new market players with regard to options 3 and 4 in the ECTRA document. Option 3 was supported by a minority and option 4 received minimal support, mostly from fringe players who had not been involved, or exposed to the full debate and for whom impact would be minimal.

ETSI have already commented on the validity of claims made in support of pan-European services such as freephone elsewhere in the present document. Other services that are mentioned as potential candidates for pan-European services are shared cost and shared revenue. Within the ITU-TSB work is already advancing on defined global solutions for these services and is likely to result in them being launched on a global basis within 2 years. Again, no support is offered for the introduction of any pan-European service that are available as a global service.

9.2 Annex II - Comments on Carrier selection

Green Paper. Page 31

Within ETSI there was no consensus on the question of whether the pre-selection method of carrier selection should be implemented. However, if it were introduced there was support for its introduction being based on the results of operator's marketing campaigns, not through balloting procedures. Experience of balloting in other countries suggests that neither users or operators benefit from this approach.

The Green Paper proposes a harmonized short code for carrier selection 10XYZ or 10ABCDEF. The choice of 10 is premature as detailed studies have yet to be undertaken. The initial study of short codes undertaken by ETNO initially indicates that the 11X range of codes provide the best opportunity to achieve harmonization.

Much of the annex is given over to cost benefit details pertaining to the introduction of carrier selection in a number of countries. Although comparisons are drawn, the validity of such an assessment is questioned as it is not possible to compare like with like.

9.3 Annex III - Comments on Portability (for non-geographic services)

Green Paper. Page 35

In the section focusing on number Portability for non-geographic services a case is made for portability of freephone service. It should be noted that within the ITU-TSB global scheme, number portability is already provided on a global basis. This meets the requirements for this capability within any regions of the world.

9.4 Annex IV - Comments on Personal Communications

Green Paper. Page 40

In order to ensure that a clear understanding of the Personal Communications environment is obtained, ETSI offer the following comments on this annex:

Universal Personal Telecommunications (UPT) and Personal Communications Systems (PCS)

UPT in ITU-TSB was driven by the European Telecommunications industry, with all sectors being involved in the debates that have resulted in today's standards. Suggesting that UPT puts mobile and cable operators at a disadvantage as they lack an Intelligent Networks (IN) seems to suggest that services are only provided when similar capabilities are freely available. Such a view appears to argue against innovation, competition and customer choice. UPT is an umbrella concept that is both network and terminal independent.

UPT is different from PCS as in European terms PCS utilizes numbers for mobile terminals. UPT uses location independent or "personal numbers" that are translated into routeing numbers which enable calls to be terminated on any type of terminal (fixed or mobile). The definition for PCS used in this annex of the Green Paper is considered to be more related to UPT than PCS. However it is appreciated that a clear and easily understood definition of PCS is a difficult thing to achieve,

Both UPT and PCS have their place within the telecommunications world. Current studies related to fixed mobile convergence will see future technology embracing both. Therefore they should not be considered exclusionary as these sectors are converging in order to provide users with a seamless service.

Europe has also learnt much from the outstanding success of GSM and the fact that this was achieved using existing national numbering resource should not be ignored. It is the view of ETSI that all business opportunities/targets can be achieved within either national or global schemes. Providing existing mobile/personal services through regional numbering schemes is not appropriate or needed.

If the Commission consider PCS numbering issues demand more study ETSI are willing to consider undertaking these studies but clarification of what needs to done would be required.

9.5 Annex V - Comments on reference scenario for a unified European numbering environment

The following comments and issues underline the fact that this material cannot be considered stable or a suitable basis for making long term decisions. Other studies should be undertaken to identify and assess alternative scenarios before firm decisions are made.

ETSI considers publication of this annex is premature at this stage of the debate. Some of the information contained in this annex is also considered to be inaccurate.

Additional consideration of these issues from earlier ETSI studies is provided in annex B. A brief synopsis of issues that were readily identifiable from the text in the annex of the Green paper is given below:

STEP ONE

Implementation of an ETNS will take a minimum of 18 months from the time agreement is given by ITU-TSB to the use of a CC for that purpose. The earliest date for this is May 97. Therefore implementation will not take place before the end of 1999.

STEP TWO

Timescales are not realistic. Transition towards a 3-digit CC cannot be achieved by late 1998.

The inability of some CCs changes to run in parallel due to misdialling problems, such "33" for France and "34" for Spain will pose difficult problems in all countries throughout the world. Therefore codes that suffer from these problems must be changed first.

A period of stability is require before any further migration e.g. "49" for Germany to "349" should not occur until the current code for Spain ("34") has been dormant for a substantial period of time (about 5 years).

It also has to be realized that changes to CCs impact on all other countries. Each time a change is made the world's international switches have to be programmed to recognize the change. Agreement is also required from ITU-TSB before the proposed changes could be made.

The fact that the proposed change could not occur if ANY countries with the "3XX" range of CCs refuses to change is not acknowledged.

STEP THREE

Again timescales for the proposed change are unrealistic.

This proposal implies that ITU-TSB would agree to allocate the full 3XX CC range to Europe. Such an assumption should not be taken for granted, even if Europe did agree to relinquish the "4X" range of codes.

These proposals go against the principle of subsidiarity (implies giving national control of all numbering resource to Europe).

STEP FOUR

Assumes other proposals have already been adopted. If this is not the case step 4 cannot be implemented. Other changes that would need to be made in order to implement step four are:

- a change to carrier selection codes, which in themselves are considered anti-competitive or not user friendly (dialled number length is greater than now). Proposals would interfere with the current UK scheme (e.g. Mercury = 132);
- changes to current short codes, Such proposals interfere with operation of UK Calling Line Identification (CLI) and directory enquiry services;
- changes that would need to be made in all countries having subscriber numbers commencing 1.

The proposals do not align with the current E.164 approach to numbering where zonal numbering is no longer recognized and only 3-digit CCs are allocated.

Annex A:
Executive summary

CEU Green Paper:

Numbering Policy for Telecommunications Services in Europe

A.1 General Comments

User needs should be the main focus when numbering policy is determined. The need for regulatory intervention in order to ensure open and competitive access to numbering resource is also a key aim which is fully supported. Harmonization of all European numbering schemes raises other issues. It is a commendable aim, but is not always in the interest of the majority of users, particularly where its realization necessitates major changes and disruption for little tangible benefit.

It is disappointing that the Green Paper makes so many loose assumptions. Whilst these are not supported by firm evidence, they are promoted in a manner that suggests they are hard facts. Despite many studies having taken place over the last few years, this is still not the case.

In many instances the timetable for change promoted within the Green Paper is also considered unrealistic and far to short. As an example when considering the reference scenario for moving to an open and unified European numbering environment it is suggested transition towards a 3-digit CC should take place in 1998, with the transfer of responsibility for managing the last two digits of 3-digit codes moving to a European body in 1999. Earlier studies by ETSI and others have suggested that changes such as these would take up to 15 years to achieve.

There also appears to be a conflict between the stated view that no changes to national numbering schemes should occur before changes are agreed within Europe, and the urgent need to open up numbering schemes to facilitate competition and meet the goals of 1998. It is not possible to plan and implement numbering changes overnight.

A.2 Brief overview of response to proposals

A.2.1 Carrier selection and openness of numbering schemes

The importance of Carrier selection is fully recognized but harmonizing carrier selection codes would be costly and disruptive. Additionally studies of billing requirements related to carrier selection are required in order to set in place appropriate arrangements.

A.2.2 Number portability

Number portability is crucial in facilitating an open competitive environment and the work of the ETSI Numbering Portability Task Force should assist in advancing this work. Within the Green Paper, the terminology used is considered confusing and likely to lead to a mixed response to the issues raised. The aim of providing portability in major centres of population is also considered likely to lead to a disparate approach across Europe due to different topologies. The implementation of service portability raises many different issues and can only be considered on a specific case by case basis. Portability between incompatible service types is not supported as it would cause customer confusion e.g. portability between freephone and premium rate services.

A.2.3 Restructuring National Numbering Schemes

Little recognition is given to the fact that some countries have, or have firm plans to, change their numbering schemes. Stability of schemes is important to users and this factor needs to be weighed carefully against the costs and disruption from change which impacts on all parties. There have to be tangible benefits from any change. Supporting the thrust for

effective competition, ETSI offer the view that entitlement to numbers of the right quality should be achievable to both incumbents and new entrants within all national numbering plans. ETO studies should assist in achieving this.

A.2.4 Establishment of an ETNS

ETSI have already demonstrated their full support for this initiative through the work of the ENTF and will continue to do so by completing the planned ETSI work programme. However the proposed date for the implementation of an ETNS (January 1998) is considered unachievable and should be amended to January 1999 at the earliest. Such a change would enable the required processes and procedures to be implemented in a timely manner following the conclusion of actions required within ITU-TSB. Until this is done, work on providing pan-European services through the use of a "European" CC is inhibited. Services provided through the use of a ETNS should be on the basis of customer demand, not political goals. No support is offered for a pan-European freephone service using numbers from an ETNS. All requirements are embraced within the ITU-TSB global scheme. Neither is any support offered for the introduction of shared cost, shared revenue, or any other service which is currently under study within ITU-TSB and scheduled to be provide on a global basis in the near term.

A.2.5 Private and Corporate networks

The need to develop European solutions is endorsed, but due account needs to be given to the potential introduction of global solutions.

A.2.6 New structure for the administration and regulation of numbers.

Support is offered for the view that an appropriate structure for the administration of numbers should be developed but only for a European Telephony Numbering Space. Implementation of the new structure should align with the implementation date of the ETNS. The control of existing national numbering schemes should remain with national administrations.

A.2.7 Long term European numbering plan

No decision can be taken on the proposals put forward in the Green paper which use CCs in the 3XX range, these can only be considered as one example of a way forward. All proposals would require full consultation and agreement within ITU-TSB. It is not the first time that such proposals have been put forward by the CEU and earlier ETSI studies have identified major implementation and migration problems with these schemes. It is suggested that additional studies are required commencing with the need to firmly establish requirements from user perspective. Costs and impact of change also raise many issues that should be taken into account. It has t be recognized that these proposals have already been overwhelmingly rejected in an earlier consultations exercise, and only the CEU appear to offer full support.

A.2.8 Naming in the Internet

The degree of Regulatory intervention required within this sector is considered to be minimal. Domain name industry administration should remain industry driven. Regarding the Information Society, the work being undertaken within standardization fora needs to be monitored, but at this stage no regulatory action is considered necessary at this stage of the debate.

Annex B:
ETSI Evaluation of long term European numbering plans

B.1 Brief introduction and background to earlier ETSI studies

In 1994, ETSI NA2 produced ETR 158 [4] titled "European Numbering Initiatives - Background and Strategic Directions". ETSI NA2 later produced a report [9] in response to the ECTRA Consultative exercise "Strategic options for numbering of telecommunications services in Europe, ECTRA PTN 27 July 1994" [8]. These documents commented on a number of alternatives for pan-European numbering, including those referred to within the ECTRA proposals [8]. This annex reproduces below relevant parts of those ETSI documents that comment on the long term proposals for European numbering that are now being promoted within the Green Paper.

B.2 Migrating to 3-digit CCs for all European countries

This scheme calls for all European countries to change to three digit CCs behind a common first digit. Most European countries had either a two digit code beginning with the digits "3" or "4", or a three digit code beginning with "3", although there are a few exceptions. Implementation of this proposal would effectively sterilize all codes behind the selected initial digit, other than for use within Europe. This would require an ITU-TSB agreement. A few years ago, ITU-TSB-T SG2 agreed to drop the principle of allocating CCs in world "zones". As a first step an ITU-TSB bulletin was issued showing the codes allocated in numerical order with no reference to the previous zone structure. Adoption of this proposal contravenes that decision.

The proposal is that all European CCs should become three digit codes behind the initial digit "3". With this scheme the impact of change is very high for both network operators and users. It also impacts on all countries around the world. Although this change cannot be introduced without the full co-operation of the rest of the world, outside of Europe there is no benefit to be gained from such a change other than the potential return of the number space behind the initial digit "4". From a European perspective giving up the digit "4" range in itself leads to a reduction in the total capacity available to Europe anyway. Furthermore, this numbering capacity is not shared between European countries according to their respective sizes.

Irrespective of what scenario is used to implement option 3 the changes are complex. The ability to trap misdialled calls is a key requirement that is difficult to achieve. In fact there is no scenario that does not have its own particular degree of difficulty. An example of how codes can be changed is given below.

Existing European CCs, formerly in world numbering zones 3 and 4, have the following structure:

3X	where	X = 0, 1, 2, 3, 4, 6, 9
3XY	where	X = 5, 7, 8
	and	Y = 0 through 9
4Y	where	Y = 0 through 9

as well as changing existing "3X" codes to three digit codes, all the current "4Y" codes have to be moved into the "3XY" range.

As a minimum, the changes would need to be progressed in two separate stages. The following outlines one possible scenario:

Insert the initial digit "3" in front of all existing two digit codes.

Stage 1 - both France (existing CC "33") and Spain (existing CC "34") have to change to CCs "333" and "334" respectively in order to free the numbering space for the other countries to move into. Parallel running cannot be implemented by either France or Spain in this instance.

Stage 2 - all remaining countries with two digit CCs change to three digit codes by inserting the initial digit "3" in front of their existing codes.

When CCs are changed all international gateway switches which require access have to be modified. On top of this a global customer awareness programme has to be set in place. A prime requisite of any successful number change is the ability to trap calls. For a change of this magnitude it is considered as preliminary requirements. With this scenario only limited call trapping mechanisms can be set in place. At stage 1, calls destined for France which are mis-dialled using the old code "33" followed by any French National Digit Code (NDC) beginning with "4" will route to Spain. No call trapping is possible to counter this. The situation is even more serious at stage 2, where any mis-dialled calls to France or Spain using the old CCs will route to a number of other countries depending upon the next digit dialled.

The scale of this problem should not be underestimated. International numbers are advertized across the globe in a variety of ways, some of which may never be amended but will still perpetuate the use of the old number. As well as this some users will only make international calls irregularly, but may have a mental picture of what to dial etched in their mind over a period of time. No matter how much a change is publicized, mis-dialled calls will occur for a long period of time following the change. For a change of this nature it is advocated that where call trapping mechanisms can be used they are left in place for a minimum of one year, but ideally for at least two. For Europe this impacts on the time required to make the proposed changes. If the driver is political unity behind the digit "3" then expecting the rest of the world to accommodate changes of this magnitude, which will not be without cost for little benefit to them, is difficult to justify.

Difficulties may also increase if countries outside of the previously recognized European numbering zone, such as former USSR states, demand "3XY" codes from the ITU. Questions also remain unanswered over the former world zone "2" countries of Greenland and the Faeroe Islands. Although it would be possible to incorporate them into the proposed scheme.

B.3 Cost issues

It is recognized that quantifying costs for numbering plan changes is always a very difficult task, although the importance of this issue cannot be expressed too strongly. The attention that recent national numbering plan changes have received underlines this point, much of it coming about as users realize that in the end they bear both direct and indirect costs. Attributing costs to network operators or service providers only masks the true picture from users.

At this point it is only possible to identify the magnitude of costs likely to be incurred. Direct cost will be incurred by operators (having to adapt their systems and networks), service providers and users. The cost to users should not be underestimated: as well as having to amend stationery, advertising, business cards etc, many will have to reprogram Customer Premises Equipment (CPE) in order to either access or bar service offerings using the new scheme. In many cases this will be an additional burden placed on them following recent (or planned) changes to their national numbering schemes. No matter how this is promoted, it is unlikely to prove a popular action.

History

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