Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Numbering Resource Optimization	)	C.C. Dockett No.99-200

COMMENTS OF THE BURROWS RESOURCE GROUP INC (BRGi)

Dated: July 30, 1999

Hugh R. Burrows
The BURROWS Resource Group Inc.
P.O. Box 5000
Lanark, Ontario
Canada K0G 1K0

Tel: +1 613 259 5000
Fax: + 1 613 259 5001
E-Mail: burrowsresourcegroupinc@sympatico.ca

TABLE OF CONTENTS

PAGE

SUMMARY……..……..iii

1.0 INTRODUCTION ……2

2.0 NANP EXHAUST/EXPANSION……3

3.0 'D' DIGIT RELEASE……4

4.0 LONG TERM DIALING PLAN……5

5.0 NUMBER POOLING……6

6.0 FEES FOR NUMBERING RESOURCES……7

7.0 BRGi CONCLUSIONS……8

SUMMARY

The Commission's initiative to optimize NANP resources is a major and admirable undertaking, which we fear may be too little too late. We are also concerned that focus is on the symptoms of a problem and not the root cause. It is our opinion that the current problems with the NANP are being caused by the force-fitting of a multi-vendor competitive market place into a network infrastructure which is built upon a monopoly-based rate center structure. The result is a perpetuation of the need to assign large blocks of numbers (10,000 or 1,000) to every carrier operating in a rate center area. Until either the rate center infrastructure is abandoned or the NANP is redesigned to accommodate it more efficiently, resource consumption will continue unabated.

It is our conclusion that the NANP will exhaust sooner, not later, and that the question is not whether, but WHEN! Therefore, it is essential that a viable NANP expansion plan be established and that this expansion plan with its consequences and costs become a intregal part of any Numbering Resource Optimization initiative.

With regard to number pooling, we have serious doubts that the advertised benefits are real and are concerned that focus on pooling is taking attention and resources away from the real issue(s).

Activity to date at the Industry Numbering Committee on NANP expansion has identified two significant policy issues. These are the release of the 'D' digit, and, the implementation of the INC Uniform Dialing Plan. In order for the NANP expansion project to move to a successful conclusion, these issues require resolution at the national level in all participating NANP countries.

Finally, on the subject of taxing NANP numbering resources, we find this proposal has no merit other than to contribute to government coffers. Neither the industry nor its consumers will benefit from such a taxation scheme.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Numbering Resource Optimization	)	C.C. Dockett No. 99-200

COMMENTS OF BRGi

The BURROWS Resource Group Inc. (BRGi) is an independent Canadian telecommunications consulting company, which specializes in the design, management and administration of telecommunication numbering resources. BRGi is actively engaged in resolving numbering issues at the domestic (Canadian), North American, and international levels. The comments contained here-in are based on our 30 years of experience in telecommunications numbering, addressing and routing, and our understanding of the current issues relating to the North American Numbering Plan. Our comments do not represent the position of any client, nor do they reflect any direct connection to the fact that Mr. Burrows is currently a Co-Chairman of the NANP Expansion Workshops at both the Industry Numbering Committee (INC) and the Canadian Steering Committee on Numbering (CSCN).

1.0 INTRODUCTION

The Commission appears to have concluded that NANP exhaust is preventable. This is a false assumption. The question is not whether NANP will exhaust its resources, but WHEN! Starting from the position that the need for NANP expansion is inevitable, one may choose a different course of action than if it is falsely presumed that NANP expansion costs and disruptions can be avoided.

Therefore, while most or all of the "optimization" techniques listed in this NPRM appear to have merit, none can be viewed in isolation of the whole. The future strategy for prolonging the life of the NANP and ultimately expanding its capacity must be viewed as a single project with a logically orchestrated step-by-step approach, which ends in NANP expansion. Each step must be subject to cost/benefit analysis, which ensures that any monies spent will provide more efficient use of resources and thereby prolong NANP life. Conversely, money and time spent on marginal or ineffective optimization measures is both wasteful and distracting of resources.

From a different and perhaps larger perspective, the "problems" with the NANP are not the numbering plan itself, are not the industry developed guidelines and are not ineffective administration, but, the rate center based infrastructure that the NANP apparently must continue to support. Thought needs to be given as to how to break out of the "rate center" building block structure on which all legacy routing, rating and billing systems are based, and into which all new entrants are being forced. It is this virtually obsolete monopoly era infrastructure which requires blocks of numbers (10,000 or 1,000) to be assigned to each entity, whether they need them or not. It is possible that, if a basic infrastructure change were to be mandated (and that is the only way it will

ever happen), that a redesigned and expanded NANP could be achieved simultaneously with marginal additional costs.

2.0 NANP EXHAUST/EXPANSION

As stated, we believe the question is not whether the NANP will exhaust, but WHEN! It is clear that a NANP Expansion Plan must be implemented before the exhaust of existing resources occurs.

Since the last major expansion of NANP capacity (interchangeable NPA codes) in 1996, no plan for further NANP expansion has been agreed to. The Industry Numbering Committee (INC) is tasked with developing a NANP Expansion Plan. The NANP Expansion Plan must become the final chapter in any comprehensive and complete Numbering Resource Optimization strategy.

The NANP Expansion Plan must consist of the following components:

- a precisely defined expansion strategy
- a detailed transition plan
- identified timing, trigger and monitoring mechanisms
- identification of any prerequisites to the expansion plan (e.g., 'D' digit release)
- scheduled sanity checks and updates
- identification and reservation of the conduit required to move to the next expansion plan

In order to be meaningful, the NANP Expansion Plan will need to be ratified and endorsed by the national telecommunications regulatory authorities in all participating NANP countries.

The NANP expansion cost estimates (50-150 $B) quoted in the NPRM are of interest and concern. No such estimates have been provided to, or discussed at the INC. As we know neither the details of the expansion plan nor its timing, such estimates can not be considered to be reliable and are therefore potentially very misleading and self-serving, if one has a vested interest in promoting number pooling, for example.

Regarding the exhaust of the NANP, although no exhaust date has been agreed to, industry must be prepared to react to near term dates and not remain paralyzed by false promises of eternal NANP life. Of further concern is that even the worst case NANP exhaust predictions do not take into account, the very real possibility that millions of NANP numbers may be required in the near future to support telephony service from the PSTN to the Internet. In fact, any Internet terminal wishing to receive telephone calls from the PSTN must be assigned a new NANP number. This could have a significant impact on the NANP exhaust date.

3.0 'D' DIGIT RELEASE

The current restriction (i.e., 2-9) on the 'D' digit was initially imposed to accommodate limitations in early switching systems (e.g., SXS, electromechanical, etc.) and to enable seven digit local dialing. This restriction effectively precludes the assignment of 20% (i.e., 200 NXX's per NPA code) of the NANP's potential resources.

Two roadblocks now stand in the way of 'D' digit release. First, seven digit local dialing still exists, and as long as it does, 'D' digit release can not be achieved (Ref: Section 4.0 – Long Term Dialing Plan). Second, the industry is using the 'D' digit restriction (i.e., no NANP numbers with a '0' or '1' in the 'D' position will be assigned to

subscribers) to achieve internal routing, identification, accounting and billing functions. This use must be considered as "unauthorized" as no authority, either regulatory or administrative, has ever assigned these numbers for this purpose. However, this use is pervasive and the functions are necessary. Industry's shortcoming is not having developed an alternative internal network addressing scheme to support these requirements which does not preclude the assignment of NANP numbers.

It should be noted that all NANP expansion options, being actively considered, call for the release of the 'D' digit coincident with the implementation of the expansion plan. As networks and systems not clearing the 'D' digit will not be able to route/bill calls to NANP numbers in the released format, 'D' digit release requires all unauthorized use to be discontinued. Implementation and 'D' digit routing must become ubiquitous throughout the NANP serving area.

The matter of 'D' digit release and its impact on resource optimization and the NANP Expansion Plan is a national policy issue which must be understood and resolved in all participating NANP nations.

4.0 LONG TERM DIALING PLAN

In 1997, the Industry Numbering Committee created and approved the INC Uniform Dialing Plan (i.e., INC 97-0131-017 – Uniform Dialing Plan). In 1998, the Canadian Steering Committee on Numbering adopted this plan for use in Canada. The plan calls for the elimination of both the use of the prefix ‘1’ and seven digit local dialing, all intra-NANP calls are to be dialed with 10 digits (i.e., NPA NXX XXXX) and only ten digits. It is recognized that this plan has significant socio-political impacts and that without regulatory endorsement and enforcement, it will likely never happen.

This issue must also be treated as a national policy matter, which must be resolved in all participating NANP countries.

Some considerations include:

- The existence of seven digit local dialing precludes the release of the 'D' digit.
- The INC NANP Expansion Report currently assumes the implementation of the Long Term Dialing Plan. Further, four of the eight expansion options under consideration at INC call for the reintroduction of the prefix '1' to support post expansion call routing and digit analysis requirements.

5.0 NUMBER POOLING

The Commission appears to have already concluded that number pooling is a "good thing". The fact is that the real benefits of pooling in terms of prolonging the life of the numbering resources in a "pool area" or the overall NANP has never been proven. Many experts, including BRGi, have serious doubts that 1000 block number pooling will provide any real benefits in terms of significantly increasing the NANP's life expectancy. This is basically because, due to the LNP prerequisite, pooling will most likely be possible where it will do the least good, and, not be possible where it could do the most!

What is predictable, without doubt, is that number pooling will not only be extremely costly to implement, but will require ongoing and intense administration. We therefore recommend that any and all potential number pooling implementations be justified by a comprehensive cost/benefit analysis. Further, we re-emphasize that number pooling is but one piece of a larger puzzle and its merits, costs and availability must be taken into account as only a potential part of a total solution.

Another serious concern regarding number pooling is timing. How many NANP resources will be left by the time the purported benefits of pooling are realized?

6.0 FEES FOR NUMBERING RESOURCES

We find the concept of a government charging fees for numbering resources, whether as a deterrent or simply a new source of income to be unconscionable and anti free enterprise. The fact is that these numbers, in and of themselves, are worth nothing without the systematic and extensive (and expensive) infrastructure that the telecommunications industry has established to support and use them. Therefore, the industry has already paid and continues to pay for the creation and manifestation of the resources in the North American Numbering Plan. To be forced to pay a second time is an unjustifiable burden.

These numbering resources are enablers. They are required for all telecommunications services and therefore, any deterrent fee must also be viewed as potentially deterring new services and new service providers. Further, some of the fee setting schemes in the NPRM could in fact work to stifle competition, and in fact seem to favor the rich over the poor. This contradicts the fundamental principles of both numbering and competition.

The administration (e.g., fee setting, collection, accounting, dispersal, etc.) of such a scheme would be a massive and ongoing undertaking. We question the benefits and wonder what costs would ultimately be passed on to consumers.

In short, despite the rhetoric of rationalization in the NPRM, this idea is nothing short of turning "public resources" which have been created by the private sector into a government "cash cow".

7.0 BRGi CONCLUSIONS

It is concluded that:

- The NANP will require expansion in the short term (10-15 years), and not the long term, and therefore;
- A NANP Expansion Plan must be developed and agreed to as quickly as possible (1-2 years), and that;
- Prerequisites to NANP expansion (e.g., 'D' digit) must be identified and put into place in time to ensure expansion can take place when it is needed,
- Policy issues involving all participating NANP countries have been identified and must be resolved,
- Monies may be better spent redesigning and expanding the NANP in the near term, than monies spent on unproven optimization measures,

And that,

- There is no justification for imposing a tax on numbering resources.