Attachment A
Analytic Support to Mitretek Comments on the
Selection of the North American Numbering Plan Administration

This attachment provides the analytic background for the Mitretek Comments on the Selection of the NANP Administration.

A1. Parameters Fundamental to the Proposed Number of Staff. Two parameters are fundamental to the proposed number of staff: the number of NPAs in relief planning per year and the staff load required for each NPA in relief planning. An NPA is considered to be in relief planning for the 3-year period[40] immediately preceding the date of the NPA's split. The number of NPAs in relief planning, for any given period of time, is simply the number of NPAs with relief planning cycles that overlap the given period of time of interest.

A2. Number of NPAs in Relief Planning Per Year Specified in the Requirements Document. The NANC[41] specified the number of NPAs requiring relief for two time periods as shown in Figure A1. Each entry in this figure represents the number of NPAs requiring relief in the specific time period noted. In order to determine the per year NPA relief planning workload resulting from the numbers in this figure, four steps are required. First, the contribution of NPA 809 (i.e., 18 NPAs in relief for the period 1997-1998) must be subtracted since the participating countries in

[40] The current implementation of the industry guidelines (ICCF 92-1127-006 *Industry Notification of NPA Relief Activity Guidelines* and INC 94-1216-004 *NPA Relief Planning Guidelines*) for a relief planning cycle is three years.
[41] NANC Requirements Document at Attachment 2.

Administrator Company	NPA Relief* In Progress (1997-1998)	Future NPA Relief* (1999-2004)
Ameritech	7	11
Bell Atlantic	6	7
Bellcore (809)	18	0
BellSouth	14	10
Cincinnati Bell	1	0
GTE	0	2
NYNEX	2	1
Pacific Bell	10	6
Southern New England	0	2
Southwestern Bell	4	10
US West	5	5

* Based on when permissive dialing begins

Figure A1. NANC Requirements Document Specified Number of NPAs in Relief

NPA 809 will perform these relief planning activities. Second, the number of NPAs requiring relief must be distributed over the NANPA term to obtain the number of NPAs requiring relief in each year. Third, the industry guidelines[42] must be applied. Specifically, with a 3-year relief planning cycle, the number of NPAs in relief planning is the sum of the number of NPAs requiring relief during the year of interest and during the next two years. Fourth, a specific start date (i.e., the date of the FCC selection of the new NANP Administration) must be assumed and applied. The derivation of five distinct numbers for the yearly NPA relief activities from the two columns presented in the Requirements Document is extremely sensitive to the

[42] ICCF 92-1127-006 *Industry Notification of NPA Relief Activity Guidelines* and INC 94-1216-004 *NPA Relief Planning Guidelines.*

details in these four steps. For example, is it appropriate to divide by 6 (the number of years in the label of the second column in the Requirements Document) or 3 (the number of years remaining in a NANP Administration term that includes 1997 and 1998, as suggested by the first column in the Requirements Document). As a second example, if a late 1997 or 1998 start date (i.e., the FCC selection date) is assumed,[43] a different mix of requirements from the first and second columns in the Requirements Document would be appropriate and would change the NPA relief activities per year. Given this potential ambiguity in the Requirements Document, the publicly-available (i.e., available to all of the respondents) COCUS data is a more appropriate basis for the NANP Administration workloads and proposed staffing levels. This COCUS data was, most likely, the source of the Requirements Document data. In deriving the workload and proposed staffing levels, the COCUS data for the last several years, not just a single year's COCUS data, must be examined.

A3. Derivation of the Number of NPAs in Relief Planning Per Year By Examining COCUS History. The most definitive source of NPA relief activity is the annual COCUS report, which lists relief activities in progress and projects the exhaust of individual NPAs by quarter over a 9-year planning horizon. The most recent forecast was presented in January 1997; the most recent data was presented in June

[43] The start date was never specified, even though the respondents requested one in their pre-proposal questions. The start date could have been as early as 15 May 1997, the scheduled NANC recommendation date, or could be as late as 3 April 1998, the date through which the proposals were required to be valid.

1997. Mitretek used this data to examine the actual and projected relief dates for the COCUS-cited domestic NPAs requiring relief. For each NPA and per the current implementation of the industry guidelines, a 3-year planning period was assumed preceding the relief date. For each quarter, the number of simultaneous, on-going NPA relief planning activities was summed to obtain the number of NPAs in relief planning. Figure A2 shows the results of the 1993, 1995, 1996, and 1997 COCUS reports. This figure shows significant variability in the predicted amount of NPA planning activity; the 1993 forecast predicts relatively constant NPA relief planning activity, while the 1995, 1996, and 1997 forecasts show sudden peaking of the number of NPAs in relief planning. The 1997 peak was not even hinted at, yet alone predicted, in the 1993 COCUS (only three years earlier), and was considerably less in the COCUS one year earlier (i.e., in the 1995 forecast).

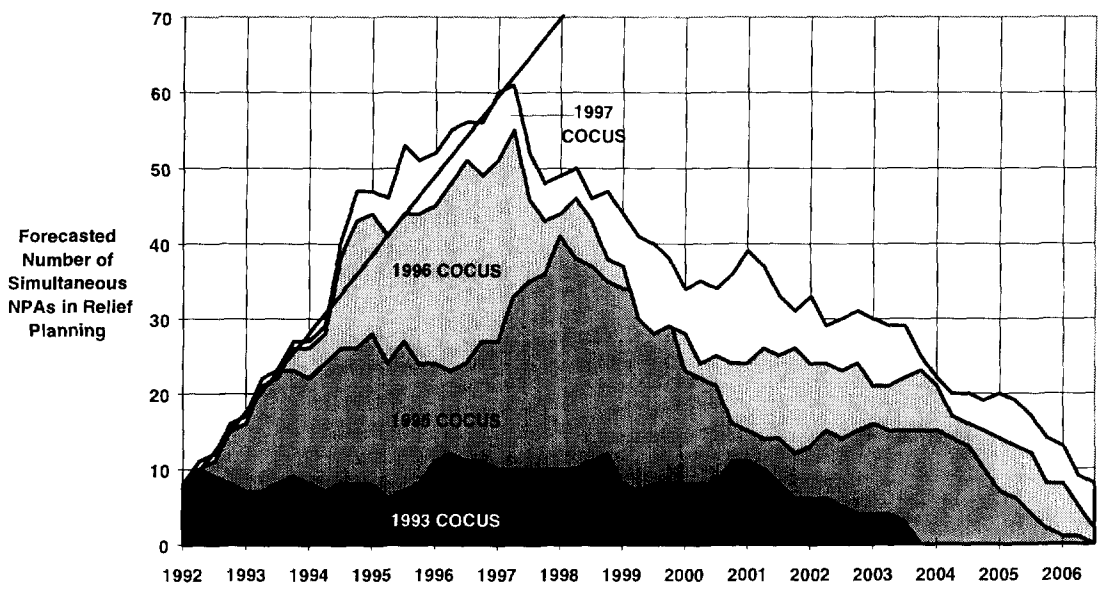

Figure A2. Number of NPAs in Relief Planning Per Year Derived From Recent History Reported in the COCUS Forecasts

The most recent forecast shows a reduction in simultaneous activity after reaching a peak of 61 NPAs in relief planning. However, actual activity since 1992, as shown in Figure A2, has always exceeded forecasts and the projected peak activity has increased in each edition since 1993 COCUS (i.e., the peak is greater than expected and the reduction after the peak has yet to occur). As shown in Figure A3, in the last 5-year period, the number of NPAs in relief planning has increased at a rate of over 10 per year. Given the 1997 level of 61, a level between 61 and 70 NPAs in relief planning can be expected in 1998.

	Year 1	Year 2	Year 3	Year 4	Year 5
Recent COCUS History	61	70	70	70	70

Figure A3. Number of NPAs in Relief Planning Per Year Derived From Recent History Reported in the COCUS Forecasts

Attachment B
Comments on NANC Identified "Cons" of the Mitretek Proposal

Organizational Structure

Con: Mitretek's decentralized CO code administration and NPA relief planning may negatively affect their consistency in applying industry numbering guidelines among the different central office code administration centers. There is no consensus that such a decentralized organizational structure is necessary to fulfill the responsibilities of NPA relief planning and CO code administration.

Response: A decentralized organizational structure is not required to minimally fulfill the Requirements Document. However, a decentralized organizational structure is required to be responsive and provide the minimum cost solution to all segments of the telecommunications industry.

Mitretek believes that local presence, knowledge of local environments, and accessibility are necessary to be appropriately responsive to the Commission, the NANC, local regulators, and, more importantly, the telecommunications industry and their customers. Mitretek proposed to the NANC a balanced approach that centralized to five locations—versus the current 12+ locations—for all NANPA, CO code administration, and NPA relief planning activities. Mitretek believes that NANP Administration presence in each time zone is an important factor ensuring customer satisfaction (primarily in the CO code administration and NPA relief planning functions), and is an important factor in minimizing the considerable travel required for NPA relief planning (i.e., the Mitretek five locations were selected, in part, to be accessible to major airline hubs allowing more "local" day

trips versus overnight stays). Additionally, Mitretek recognizes the importance of co-locating CO code administrators and NPA relief planners, since the CO code administrators will have a significant role in the presentation of the need for NPA relief to state/local regulators, local code holders and applicants, and the public. However, Mitretek proposed the necessary information systems and organizational procedures to ensure that this distributed approach was effective, responsive, and efficient. Hence, the Mitretek proposed organization distributed to five locations allows for the following benefits:

- Staff savings due to workload sharing as needed across locations
- Local presence of CO code administrators
- Co-location of CO code administrators and NPA relief planners
- No increase in planned CO code administrator travel to NPA relief activities
- Quality and consistency across all locations through organization of all CO code administration functions under one manager and provision of computer/ communications support systems

With respect to consistency of result and guideline implementation, the basic procedures for CO code administration are contained in the Industry Numbering Council (INC) guidelines, which must be followed by all administrators. Mitretek has proposed an information systems approach to improving the productivity and consistency all NANP Administration functions including CO code administration. A single database common to

all Mitretek NANPA functions and organizational components will contain consistent information about CO codes, dialing plans, and available resources nationwide. Each CO code administrator will have access to the same tools and data at the workstation, regardless of their location. This, coupled with common training and procedure manuals, will provide a consistency that was never before achievable in the industry.

Staffing

Con: Mitretek's proposed level of staffing (53 total), although sufficient, may be excessive (compared to Lockheed's proposed initial staffing of 25 employees) and could impose unnecessary cost on the industry.

Response: Mitretek has reviewed our proposed staff levels, the proposed staff levels from other respondents, as well as the underlying requirements (e.g., number of code assignments, number of NPAs in relief, and staff time required per code assignment or NPA relief). We compared our proposed staff levels to the three benchmarks available to examine NANP Administration staffing to ensure that our proposal was realistic. Specifically, we compared our proposed 53 staff (including all support staff) against:

- The Requirements Document,[44] which stated that there are at least 26 code administrators and relief planners, as well as 10 support staff, performing just the CO code administration and NPA relief planning functions in the incumbent CO

[44] Requirements Document at Attachment 2.

code administration organizations. These numbers are clearly a lower bound on the current staff levels since data from 4 of the 11 incumbent CO code administration organizations were not included.

- The Commission's previous estimate[45] of between 40 and 50 required staff for the new NANP Administration.

- The consensus position of industry and state government groups commenting before the California Public Utilities Commission,[46] which estimated that 9 staff were required to perform *only* the NPA relief planning and COCUS analysis function *just* in California.

- As a point of reference, Lockheed proposed 11 staff for all CO code administration and NPA relief planning functions in the United States. Mitretek proposed a staff of 27 code administrators and relief planners and 10 support staff to perform these same functions.

Mitretek stands behind the proposed staffing levels and believes that these levels are required to adequately perform NANP Administration. A proposed staff level of half of the Mitretek proposed level will not be adequate to perform NANP Administration, given the numbers of code assignments and NPA relief activities specified in the Requirements Document and the publicly-available COCUS data. The *total* prices in the Mitretek and Lockheed proposals are not comparable since the two proposals are based on significantly

[45] NPRM at paragraph 97.
[46] Public Utilities Commission of the State of California, Decision 96-10-067, 25 October 1996.

different estimated workloads for the new NANP Administration. The NANPA Working Group Evaluation Team noted that the *unit* prices of the Mitretek and Lockheed proposals were comparable and about equal. There are no unnecessary costs in the Mitretek proposal; rather, there are costs that are not included in the Lockheed proposal and that will be paid later by industry.

Con: Mitretek's industry experts represent experience from specific areas in the NANP and may not represent the NANP area as a whole.

Response: Mitretek assembled, for the purpose of proposal preparation, as well as performance of NANP Administration, a team of telecommunications industry experts with the skills and experiences necessary to implement the complete NANP Administration job. Specifically, Mitretek has employed:

- Numbering plan professionals with direct experience in the NANPA functions while at Bellcore
- Numbering plan professionals with direct experience in the CO code administration functions while at CO code administration companies
- Numbering plan professionals with direct experience in the NPA relief planning
- Numbering plan professionals with direct experience in the United States, as well as Canada
- Telecommunications professionals with direct experience in forecasting, optimization, and statistical methods

- Computer science professionals with direct expertise in the design and implementation of advanced computer/communications/database systems

- Professionals required to meet the qualities and attributes required in Section 3 of the Requirements Document

Additionally, Mitretek, as stated in our proposal, has conducted an executive search to contact and identify additional numbering plan professionals to assist in the implementation of the new NANP Administration. Mitretek has assembled a team with expertise and experience far broader than ever before available to the industry.

Innovation

No cons identified by the NANC.

Computer Systems/Technology

No cons identified by the NANC.

Communication

No cons identified by the NANC.

Intellectual Property Rights

No cons identified by the NANC.

Miscellaneous

Con: Mitretek's proposal may have been influenced by industry experience in California and, based on this experience, their proposal may have over-estimated the required resources.

Response: Mitretek's proposal was influenced by industry experience in California—but also industry experience in other states, Canada, and other NANP participating countries. Mitretek's proposal was also influenced by industry experience in the long distance, incumbent local exchange, competitive local exchange, and wireless segments of the telecommunications industry. Mitretek spent the last year and a half listening and talking to all industry segments and all stakeholders that were willing to discuss ideas for the new NANP Administration. We immersed ourselves in the many industry and government forums dealing with numbering plan issues. We participated in over 90 meetings of the INC, the NANC, its Steering Group, and working groups. Mitretek attended over 35 meetings in Washington, DC and over 20 meetings outside of Washington, DC; and we participated in over 35 conference calls. We conducted detailed analysis and prepared forecasts from perspectives not considered by the incumbents. We prepared white papers identifying to the NANC and the Commission issues and solutions for the new NANP Administration. Mitretek's proposal was influenced appropriately by all that we heard, learned, and developed.