

Each of the proposals offered by MCI, AT&T, GTE and ELI entails a conceptually different routing and addressing scheme. The MCI Metro proposal requires the allocation of a three digit Carrier Portability Code (CPC) per NPA per service provider; application of this dual number scheme beyond a few NPAs and a few service providers may quickly consume limited NPA resources and greatly complicates NPA code routing translation and number administration issues for every participating network entity. This consideration alone discourages its use. The MCI Metro proposal also appears to lack support for a number of critical interoperability and network interconnection standards. The MCI proposal also recommends forwarding calls from non-SS7 switches to adjacent SS7-capable switches. This will have a large impact on both switch and SS7 network resources. In addition, while MCI states that its solution can be implemented quickly, standards would need to be created to implement this alternative on a large scale.

The AT&T method, using a Location Routing Number, is interesting from a routing perspective since calls can route as they do today using existing translations. However, switch development would be required as would standards work to accommodate this addressing plan. This alternative will require database queries on essentially all calls in areas of portability due to the need to query on all calls to NPA-NXXs that have had numbers ported from them.

The AT&T LRN routing mechanism can be viewed as a one-to-one mapping with the existing SS7 network point code array. An LRN explicitly designates a network node and implicitly the incumbent or entrant entity to which the node belongs (each can simply be derived from the other). The network and the set of valid LRNs are equivalent, if growth is synchronized. However, the LRN is not presently recognized as an open industry standard.

The Seattle trial proposal (ELI) requires database dips on all calls whether or not the dialed numbers are ported. The ELI proposal replaces the entire called telephone number (CNA) with a 10 digit network node address (NNA). While not likely to exhaust in the near future, the complexity introduced for switch features, routing, charging, and billing databases, and service management systems (SMS) represents a significant impact on the existing network with high associated costs. SS7 ISUP messaging changes concerning the relative parameters of the CNA and NNA or CPC plus CNA also entail significant switch development costs. Substantial standards work is required.

Most of the industry proposals to date have been presented in a query by originating service provider (OSP) context.<sup>6</sup> Except under certain circumstances<sup>7</sup>, OSP implies that a query on almost every origination is necessary and requires an enormous initial investment in SS7 network facilities such as links, STPs, and SCPs. In networks where most numbers, and therefore most calls, are not ported, such investment would be excessive and cost recovery arduous. For N-1, (i.e., next to last network or office) the situation is only slightly improved, if at all, for high traffic interconnecting networks, unless the ported calls arrive from OSP networks which have marked the call so that an N-1 query is unnecessary. In the RTP alternative, costs are proportional to the presence of number portability calling in the network. Investment and cost recovery are directly related to market conditions.

B. The Proposal That Is Most Transparent To Customers Will Best Serve The Public Interest

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<sup>6</sup> The Pacific Bell *Release to Pivot* and the Nortel-BellSouth *Look-Ahead* proposals are exceptions.

<sup>7</sup> For example, designating only a very few portable NPA-NXXs per region, or a non-geographic NPA.

To serve the public interest, number portability should be (1) consistent with customer expectations (2) fair to incumbent and entrant service providers, (3) scaleable and interoperable from local to national networks, and (4) economically reasonable.

Consumers will certainly expect any solution to work with the emergency 911 system. Accurate Public Safety Answering Points (PSAP) mapping, based on location, must be assured by all service providers. Accurate Automatic Location Identifier (ALI) information will be required in addition to Automatic Number Identification (ANI) for customers. The PSAP must have capability for Automatic Call Back (ACB) and Automatic Recall (AR). Any solution that changes the formatting of signaling messages may affect E911 service and therefore necessitate changes in PSAPs and other 911 infrastructure.

C. Solutions Based On Nongeographic Numbers May Simplify Network Issues But Raise Marketing Issues

The general perception of N00 (500, 800, 900) numbers is that each type of N00 code provides unique services and functionality. For example, 800 is associated with having the terminating or called party pay for the call. 900, on the other hand, is perceived to be for information services and it is assumed that the calling party will pay for the call. More recently, the new 500 numbers are associated with a family of personal communications services provided by a given carrier. The concept of service portability between the different types of N00 services raises marketing-related issues. For example, businesses may not want to alienate their customers by charging callers for an 800 call (perceived to be a “free” call), or pay for someone calling their 900 number (when the caller expects to pay). 500 services may have either or both billing arrangements.

Service provider portability for 500 numbers is expected to allow customers to retain numbers while selecting their service provider based on the personal communication services provided. Implementation of the network to support 500 portability will require the addition of network-wide administration systems, regional databases, and switching software upgrades as detailed in the "INC Report on PCS N00 Portability." No specific cost estimates are currently available for the number administration portion (including the SMS) of such a network. The 500 SMS must address additional capabilities beyond those supported by the 800 SMS (e.g., billing indicator, SS7 point code). Estimates for the development and deployment of the regional databases for 500 service have not been developed as yet, though are expected to be greater than the costs of developing the 800 database solution for number portability since those costs were based on a clearly defined service with only one charging method (reverse billed), and do not include the capability of returning an SS7 point code when required.

Implementation of 500 portability will require development and deployment time to create detailed specifications, useful software models and administrative procedures. As the INC Report on PCS Number Portability recommends, an industry group will need to be chartered to manage such a development and to coordinate the deployment of 500 portability.

The NPRM also has requested information concerning whether it is feasible from a technical and economical perspective to provide PCS N00 service provider portability in a switched-based translation environment. Some vendor development would probably be required for an SSP-based 500 number service similar to 800. Decisive evaluation of technical feasibility would depend on the service order process required for PCS N00 deployment and the manner of rating and charging of PCS N00 calls, both of which are contingent on the possible business

relationships between the service providers, which in turn would determine the economic feasibility of a switch-based PCS N00 translation environment.

D. The 800 Number Portability Model Is Not Appropriate

The use of the 800 database as a model for POTS number portability is not appropriate for several reasons. The 800 database is essentially one master database. As such, a centralized SMS can efficiently be used to administer the database. Also, the size of the 800 database is small enough to allow all entries to be stored in primary memory which reduces access time during call processing. In the case of service provider number portability, multiple databases with independent data will probably be required. We also expect that the size of the databases will not allow storage of the entire database in primary memory, which can affect call set-up times.

E. Any Database Architecture Design Adopted Must Be Flexible

One may distinguish two operational databases in the number portability environment. First, there is the customer record for service management, billing services, and number administration. Second, there is the information necessary to properly route a number portability call in real time through a network or via network interconnection. These two database applications may be independent systems, segregated but collocated operating environments, or partitioned components of the same system. Concerns about the security of customer and service provider data have been raised. Number portability is likely to grow in regional “islands” of capability until merging into national connectivity. A distributed database architecture, administered islands, interactions between islands, and finally nationwide number portability would seem to be the most natural form of number portability evolution. In sum, it would not be necessary to duplicate the entire database at every service control point (SCP) node

and/or service management system (SMS) site, but rather locate, address, and query the appropriate SCP node and/or SMS site to provide the required information.

## **VI. SERVICE PORTABILITY WILL BE DRIVEN BY MARKET FORCES**

Service portability has not been discussed in great detail at industry forums and workshops. It is likely that end users will continue to evaluate the importance of service portability when contemplating switching from one service to another. From a competitive view, product differentiation factors stimulate customers to make changes in their telecommunications services. We therefore do not see service portability as a required mandate but rather driven by market demand.

One area that has been discussed, and the NPRM requests comments on, has to do with allowing customers to take a POTS number to a newly established ISDN service. It does not necessarily follow, however, that lack of service portability has impeded the demand for ISDN services. Our ISDN services for business and residence use are primarily provided for data applications. They consist of Telecommuting/Remote LAN access, Internet/On-Line Service access and Desktop Video Conferencing. The Basic Rate Interface (BRI) ISDN lines in these applications are usually not listed in the telephone directory, nor are they something that require continuity of service from an analog telephone directory, nor are they something that require continuity of service from an analog line. In most cases, the application is incremental to the business or the residence phone service.

The above applications will account for approximately three quarters of the ISDN lines we provide. The remainder will most likely be in the ISDN X.25 Point of Sale (POS) applications and voice applications, where Centrex ISDN plays a dominant role. At this point,

Centrex ISDN is growing and the absence of the service portability capability has not appeared critical to its success.

There do not appear to be federal policy objectives that would be served by mandating service portability. However, encouraging the implementation of service portability in a free market, where there is market demand and customer willingness to pay would be a better avenue for the Commission to consider on this issue.

**VII. LOCATION PORTABILITY SHOULD BE ADDRESSED AFTER SERVICE PROVIDER PORTABILITY IS SOLVED**

We do not believe that there are any federal policy objectives that would be served by mandating implementation of location portability in conjunction with geographic telephone numbers. In fact, mandating location portability would pose serious challenges to the continuation of the NANP. Location portability could also cause considerable confusion to end users who would no longer be able to know with certainty the geographic location (and the corresponding rating and billing) of a called number. Consumers generally know where specific NPAs and prefix exchanges are located due to their past calling patterns and information available in White Page directories .

Geographic telephone numbers today are “portable” within existing calling or exchange areas that serve a specific geographic area. It is a common practice among local exchange carriers to allow customers to maintain their geographic telephone number when changing from one geographic location to another, when the alternate location is still within the customer’s serving wire center. For example, a customer moving a few blocks, from an existing numbering assignment, many times is able to transfer the existing telephone number from one location to another. However, to take that number to another location outside the serving central

office is not possible because it breaks the linkage of the mapping of the telephone address that links the customer to a central office of a specific carrier.

We are unaware of any studies that discuss demand and willingness to pay for a service that allows customers to retain their number when they move outside their immediate area. The INC has deferred examination of location portability until a future date.

From a network engineering and maintenance perspective, the efficient routing and billing of telephone calls would be made considerably more complex with location portability. Any discussion of location portability beyond the limits of the local area will require a redesign of the entire nature of the network in order to be able to route, deliver and bill the call. It would require the creation of a national database query system.

The NPRM also seeks information on how to notify end users of the charge they may incur when calling a location-ported number. To provide dialing parties notification of the charge they will incur when they dial a particular number, considerable switch hardware and software resources would have to be added. It is also unknown how such announcements would interact with current automated calls in the network.<sup>8</sup> For example, variable announcements, where the wording is tailored to the dialing behavior of a specific user on a specific call, are used for CLASS features.

Emergency call identification could be a problem in a location portability environment because the NPA-NXX is no longer tied to a geographic location and therefore the nearest police or fire location cannot be readily identified or may be misinterpreted by the operator (using Automatic Number Identification (ANI) received with the call).

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<sup>8</sup> For example, variable announcements, where the wording is tailored to the dialing behavior of a specific user on a specific call, are used for CLASS features.

Operator services and directory assistance service would also be significantly changed by location portability. Billing systems will also be heavily affected by location portability. Traditionally, there are extensive edits within the systems to control number validation within a certain central office switch. Modification of these edits would be required to allow numbers that were formerly outside the scope of the switch to be stored in the resident accounting systems. AMA recording at the OSS will have to be modified to provide for accurate billing of ported number calls.<sup>9</sup>

#### **VIII. INTERIM NUMBER PORTABILITY**

The NPRM also requests comments on interim number portability. (NPRM at paras. 62-64.) Interim portability relies on Remote Call Forwarding (RCF) and Direct Inward Dialing (DID) capabilities. Both capabilities are technically feasible to implement in the near term since they are existing end office features. Both capabilities are operationally feasible to implement. However, RCF is less difficult than DID since existing RCF methods, procedures, and supporting systems administer it on an individual number basis, whereas DID administration would require significant modifications to change it from bulk processing (i.e. blocks of 100 consecutive numbers). RCF service was designed to accommodate an individual number or any series of numbers, while DID was designed to only accommodate a series of consecutive numbers. RCF is therefore less costly to implement than DID due to the added operational modifications needed for DID.

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<sup>9</sup> The Commission has requested additional information on 800 number portability. 800 numbers have been portable since May 1, 1993. We have no data that would indicate which of our customers subscribed to 800 service for the specific purpose of obtaining location portability.

The benefits of implementing an interim solution are time, availability, cost, and end user impact. Since the technology exists, no development or manufacturing time is required, no time is required to develop new standards, and, to the extent LECs and CLECs have purchased and deployed these capabilities, no deployment time is needed. No time is required to establish new network routing schemes. An end user's existing local service will be completely disconnected by the original provider and reestablished by the subsequent provider. No number change is required, and placing and receiving calls by end users should be relatively transparent assuming the appropriate interconnection trunk groups are preestablished. Emergency service [E911] effects can be mitigated by mapping the retained number as well as the CLEC provided number to the same end user street address.

The limitations of RCF and DID are those inherent in the technology and those created by using them for number portability. These limitations are applicable for both LECs and CLECs. Network routing of calls must be completed through the original carrier's switch and then through the subsequent carrier's switch since the telephone number is retained in the original carrier's switch. Two numbers are required to be used: the retained number, and the forwarded to or DID number provided by the subsequent carrier.

Interworking of CLASS features on non-ported numbers will continue to function properly. CLASS features provided to an end user, who also has a ported number, may experience a lack of functionality in some instances. This will occur on incoming calls to the ported number where the CLASS feature relies upon the calling party number. In the case of RCF, the number passed to the CLASS feature will be the end user's own ported number and not the calling number. Thus, Call Return, Caller ID, and Call Trace, for example, will not function

on these calls. These features would function however when incoming calls are placed directly to the end users's CLEC-provided number.

Since interim portability measures are either already implemented or likely to be implemented soon, cost recovery issues are being appropriately addressed at the state level. In California, cost recovery will most likely result in nominal charges to the CLEC, which may be passed on to the end user.

**IX. CONCLUSION**

Any service provider number portability solution(s) adopted must meet consumer expectations, be fair to all providers, be compatible between networks and be economically feasible. The FCC can aid in the development of such solutions by issuing national guidelines focused on creating service provider number portability that benefits consumers, minimizes the depletion of number resources and that facilitate interoperability between networks and services because they are compatible and economically and technically feasible.

Respectfully submitted,

PACIFIC BELL



LUCIE M. MATES  
THERESA L. CABRAL  
SARAH RUBENSTEIN

140 New Montgomery Street, Room 1526  
San Francisco, CA 94105  
(415) 542-7654

JAMES L. WURTZ  
MARGARET E. GARBER

1275 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004  
(202) 383-6472

Attorneys for Pacific Bell

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# **ATTACHMENT**

**A**



## **BACKGROUND**

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ConStat, Inc. is a full-service marketing research organization dedicated to supplying Product Managers, Marketing Strategists, Advertising Planning Groups and Corporate Research Departments with the highest quality primary research information. Our aim is to develop and deliver information needed by planners and marketers to make profitable business decisions.

ConStat delivers this information by adhering to three basic business principles:

### **COMMUNICATION**

Successful marketing begins with an understanding of the issues. ConStat takes the time to listen and learn your objectives and goals. We carefully blend our skills with yours to insure each research project delivers results that help you succeed.

### **EXPERIENCE**

When you select ConStat, you work with dedicated professionals. ConStat's senior staff is comprised of marketing and research professionals who have worked on both sides of the table – client and vendor.

### **COMMITMENT**

ConStat is dedicated to forming lasting business relationships. We accomplish this by maintaining the highest research standards, paying attention to details and treating your business as if it was our own. ConStat's staff will work with you to form a results-oriented team whose collective efforts will provide answers to your most difficult questions.



## **RESEARCH SERVICES**

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ConStat is a full service research organization with the experience and capabilities to meet your research needs. Whether you need ConStat to oversee all stages of the research process or just need field work, analysis, or questionnaire design, you can depend on ConStat to give that extra effort at all times.

### **CONSULTATION**

- Defining Project Objectives
- Developing a Research Approach (Methodology)
- Project and Research Management

### **RESEARCH DESIGN**

- Questionnaire Design
- Sampling Design
- Quantitative Surveys
- Qualitative Explorations

### **FIELD WORK**

- Telephone Interviewing
- Mail Interviews
- In-Depth Interviews
- Focus Group Moderation/Recruitment
- Editing and Coding
- Executive Interviews

### **ANALYSIS**

- Data Processing
- Statistical & Multivariate Analysis
- Detailed Reports
- Presentations



## **RESEARCH APPLICATIONS**

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ConStat has performed research services for a wide variety of industries and public organizations including Financial Services, Advertising, Telecommunications, High-Tech, Insurance, Hotel and Travel, Consumer Products and Print and Media Broadcasting. ConStat designs and conducts research studies in the following areas...

- Customer Satisfaction Studies & Measurements
- Corporate Image and Perception
- Market Segmentation
- Corporate & Product Positioning
- Demand Forecasting & Analysis
- Pricing Studies
- New Product Development & Testing
- Advertising Research Studies
- Sales Channels Development & Analysis
- Marketing Strategy
- Market Feasibility
- Media Research
- Employee Attitude Studies
- Readership Studies
- Public Opinion Polling
- Public Policy Analysis



## **STRATEGIC MARKETING MODELS**

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In addition to a wide array of standard methodologies, ConStat utilizes a number of leading-edge research approaches to address the unique strategic issues facing marketing managers in today's highly competitive business environments. Using advanced, multivariate research techniques, Strategic Marketing Models are developed that simulate customer behavior and reflect changes in the dynamic marketplace.

Once models are developed, what-if scenarios can be created and the marketing implications of any proposed action identified. The key advantage of Strategic Marketing Models rests in their ability to simulate market response and provide specific and actionable input for management decisions and strategic planning.

In responding to the specific strategic issues facing our clients, ConStat has developed numerous Strategic Marketing Models, including:

- Segmentation and Target Marketing (Cluster Analysis)
- Image and Market Structure Analysis (Perceptual Mapping)
- Product Positioning (Preference Regression)
- Product and Service Design (Conjoint Analysis/Choice Modeling)
- Pricing Research (Price Sensitivity and Brand Equity)
- Customer Satisfaction and Service Quality (Satisfaction Formation Modeling)



## INFORMATION TECHNOLOGY EXPERIENCE

With the advent of the "information revolution" and the on-going convergence of telecommunications and high technology, there has emerged a great need for companies within these industries to examine the dynamic marketplace and the ever-changing needs of their customers. ConStat has extensive experience and expertise in conducting research within this marketplace.

Critical to the success of any research project undertaken in this area is the ability to identify and reach the decision-makers who are responsible for purchasing or influencing the purchase of information technology products. Over the last several years, ConStat has successfully conducted over 200 research studies involving telecommunications, data communications, computers, networking and related information products and services.

Some specific technologies researched by ConStat include:

- ISDN
- LANs/WANs/MANs
- SMDS
- Chip Technology
- Wireless Data Communications
- T1 and Fractional T1
- 800 Services
- Key Systems, PBX and Centrex
- Personal Communication Services (PCS)
- Information Services
- FAX Mail
- Frame Relay
- Digital Cellular Technology
- Digital Data Services
- Long Distance Services
- CLASS Services
- Calling Cards
- Cellular Technology
- Voice Mail
- Bundled Network Products

Clients include:

- Intel
- Hewlett Packard
- Cellular One
- PacTel Cellular
- Sprint
- AT&T
- PC World
- Macworld
- PacTel Wireless Data Division
- Pacific Bell
  - Information Services Group
  - Data Communications Group
  - Network Engineering
  - Product Management
  - Marketing Strategy
  - PCS Group



## CLIENTS

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ConStat has conducted successful research projects with the following corporations and associations:

- Allstate Insurance
- American Academy of Ophthalmology
- American Hawaii Cruises
- AT&T
- BBDO/West
- Best Western International
- Cellular One
- Chiat / Day Advertising
- Coopers & Lybrand
- Dole Fresh Fruit
- R. H. Donnelly Publishing
- Foote Cone/Belding
- FCB Direct
- Hawaiian Pineapple Growers Association
- Hewlett Packard
- Hotel Information Systems
- Hyatt Hotels Corporation
- Intel Corporation
- J. Walter Thompson
- Jenny Craig Weight Loss
- KPMG Peat Marwick
- L. M. Berry Publishing
- Lodging Hospitality Magazine
- Macworld Magazine
- Marin Mountain Bikes
- Marriott Corporation
- Mountain View (California), City of
- National Yellow Pages Monitor
- Pacific Bell
- Pacific Bell Directory
- Pacific Telesis Group
- PacTel Cellular
- PacTel Corporation
- PC World Magazine
- Sierra Club
- Standard Rate & Data Service
- Sprint Telecommunications
- Supercuts
- US West Direct
- Wells Fargo Bank



## **RESEARCH FACILITIES**

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ConStat's corporate offices, interviewing center and focus group facility are centrally located in the heart of the San Francisco Financial District. Our offices include an executive conference room, a private working office for our clients and a beautiful view of the city and San Francisco Bay.

### **CENTRAL INTERVIEWING/RECRUITMENT CENTER (San Francisco)**

- 40 Telephone Interviewing Stations
- Full-time Field Director and Supervisors
- On and Off-site Monitoring Capabilities
- Full-time Interviewers
- PC-based Data Processing using A-Cross, SYSTAT and SPSS

### **CENTRAL INTERVIEWING CENTER (Los Angeles)**

- 75 CATI Interviewing Stations
- On and Off-site Monitoring Capabilities
- Full-time Interviewers
- Multilingual Staff
- Data Processing using Quantime

### **FOCUS GROUP FACILITY (San Francisco)**

- Executive, Conference-style Focus Group Room with Floor-to-Ceiling Mirror
- Client Office with Closed-Circuit Monitor
- Observation Room
- In-house Recruiting
- Full-time Recruiters
- Extensive Business-to-Business and Consumer Databases
- Professional Videotaping Capabilities



## PROFESSIONAL STAFF

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ConStat has assembled an experienced and skilled staff of research professionals to conduct and oversee all aspects of the research process.

ConStat's organization is comprised of marketing and research professionals from both the client and supplier sectors of business. In addition to years of practical business research experience, most of ConStat's senior staff have advanced or technical degrees. This breadth of knowledge and experience enables ConStat to go beyond the functional aspects of research to insure your project delivers results that allow you to make sound business decisions.

ConStat has designed its organizational structure so that each person working on a research project – from Interviewer to Senior Project Manager – feels responsible for that project. We have gone to great efforts to attract and employ experienced, permanent managers in key operating positions such as editing, coding and data processing. ConStat believes that every stage of the research process is extremely important and must be properly managed.



**Pacific Bell**

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**Analysis of Potential Local  
Access Competition and  
Interconnection Issues**

**-- Business Market --**

**Final Report**

**Prepared for:**  
Pacific Bell  
San Ramon, CA

**Prepared by:**  
ConStat, Inc  
San Francisco, CA

May, 1995



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Over the past several years, many changes and developments have been occurring in the telecommunications industry, from technological advances to regulatory changes. One of the most significant regulatory changes facing Pacific Bell is the advent of intraLATA and local competition. Although Pacific Bell has been the sole provider of local exchange telephone service in California since divestiture in the early 1980's, new regulations will soon allow other companies to provide intraLATA and local service to customers. The California Public Utilities Commission (CPUC) is currently drafting and reviewing several decisions on the regulatory structure required to enable open competition within the service area.

Pacific Bell's new competitors are likely to consist of Competitive Access Providers (CAPs), Interexchange Carriers (IECs), cable companies and other communications providers. However, these potential competitors have voiced concerns to the CPUC that Pacific Bell, as the current exclusive provider of local exchanges services, will have unfair advantages in this arena.

With the existing technology, customers will be required to change their telephone number if they choose to use a different provider for local exchange services. Given this, the new competitors claim that Pacific Bell will be able to retain an unfair portion of the market because customers will not want to change their telephone numbers. Although number portability (the ability to retain a telephone number regardless of the provider) would eliminate this problem, the technology is not as yet developed. However, there are several interim solutions that may allow customers to retain the same telephone number with a new service provider.

To better understand the issues involved with providing number portability, Pacific Bell wanted to explore the value of number retention (versus the ability to choose a preferred provider and specific incentives to switch providers) and determine the effectiveness of alternative number portability solutions among business customers. The Marketing Research Group at Pacific Bell asked ConStat, Inc. to develop a research study that would fully investigate the issues involved. The following report reviews the results of this study among Pacific Bell's business customers.



## Purpose and Objectives

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There were three major elements of this project that, of themselves, are individual areas of study with unique issues for exploration. These areas are: (1) the value of an existing telephone number to incumbent customers, (2) the relative influence of possible incentives to switch to a different provider relative to maintaining an existing telephone number, and (3) the effectiveness of different technological solutions to number portability. Although some of the specific objectives of this study were pertinent to Pacific Bell's market position if local telephone competition were to occur, this study was not designed to be a competitive analysis of the local telephone market after other access providers are allowed.

The specific objectives of this research, as they relate to the major areas of study, were as follows:

### Value of Specific Telephone Numbers:

- Determine the value businesses place on a specific telephone number(s) and identify the factors which create that value;
- Explore the problems and concerns that are perceived to be related to changing telephone numbers and how these problems contribute to the value of the number;
- Evaluate how many and which telephone numbers are critical to a company (e.g., is published with advertising, used as main inbound number, sales and support numbers, etc.);
- Determine how "telephone number value" differs based on certain business characteristics.

### Incentives to Switch to a Different Provider:

- Assess the likelihood of switching to a different provider given the current "playing field";
- Develop an inventory of incentives that are likely to influence business customers when deciding whether to switch local exchange services;
- Investigate the strength and influence of the specific incentives that might be offered by Pacific Bell or competing carriers;
- Determine whether these incentives, of themselves, outweigh the problems associated with changing telephone numbers.