iconectiv®

Catalog of Products and Services

TruOps Telecom Routing Administration

The industry Source for Routing and Rating Information

May 2019

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TruOps Telecom Routing Administration
Catalog of Products
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Welcome to the TruOps Telecom Routing Administration

Telecommunications data is in high demand. Service providers, database managers, and companies within and outside the telecommunications industry need and utilize this data to maximize their business potential.

Critical applications such as call routing, call rating and billing, numbering assignment processes, and nearly any application that utilizes TruOps Telecom Routing Administration's (TRA's) data on the Public Switched Telephone Network (PSTN) depend on having access to the accurate, timely, and comprehensive data provided by TRA data products. Data is also used by geographical information systems and applications, locator services, revenue assurance processes, financial services, customer relationship management, credit card services, least cost routing processes, call centers, law enforcement, mapping, and countless related types of services.

TRA has been providing data to the telecommunications industry since 1984. Many of our products are a mainstay in supporting the various offerings of service providers, in ensuring their networks are operating properly and efficiently and, bottom line, in ensuring calls placed by their customers and through their network complete without any problems. The extremely high percentage of call completion and billing accuracy that people have come to expect within the areas covered by the North American Numbering Plan (U.S., U.S. Territories, Canada, Bermuda, and parts of the Caribbean) are supported by the data that TRA provides. Numerous regulatory bodies, industry guidelines, and industry standards cite TRA products as necessary and critical to telecommunications products and services within the NANP. TRA works together with these groups to address completeness, accuracy, and consistency in as many areas as possible relative to the data it provides.

TRA products have been enhanced over time to encompass telecommunications data needs for a wide array of users (not just service providers), and to include data that extends worldwide (beyond the NANP).

Differences you can trust

- Our products contain data "directly from the source" (e.g., service providers, agencies assigning numbering, etc.) both domestically and worldwide, a large portion of which is directly input by service providers themselves.

- Because of our data sources, our data accuracy and timeliness are of the highest quality. Avoid increased operational and financial risks that could occur by using delayed, outdated, or incomplete data provided by other sources. Data quality is a major factor in regards to cost efficient operations.

Benefits of iconectiv TRA Data Products

- You will save valuable staff time and expense incurred in compiling, assessing, and maintaining data.

- Since the majority of our products constitute *data* in standard, easy-to-access formats, as opposed to hard-to-use, involved, self-contained applications, it is convenient for you to manage the integration of this data into your specific business applications, internal databases, and operational processes in a straightforward manner.

- Through the enterprise licensing of our products, you can extend the benefits of our data to everyone in your company to meet a myriad of needs based on a common and consistent source of data. Reduce the time spent on discrepancy resolution within your company as well as other problems that can result from obtaining similar data from a multitude of sources.

- TRA's customer care and technical staff are available to assist with your understanding of the data and in explaining how and why data variations may occur throughout the industry.

- Our ongoing interactions with industry service providers, regulators, industry standards groups, and other related services and products managed by iconectiv permit us to serve as a conduit to align your needs, questions, etc., with other companies, industry standards, and supporting applications, amounting to a win-win situation for all involved.

TRA is proud to serve as your number one source of telecommunications data. This catalog provides you an overview of TRA's products and services. In addition, please visit our website at www.trainfo.com, which provides additional information as well as free downloadable samples of most of our products.

If you have any questions that are not readily answered by this catalog or at our website, we welcome you to call the TRA Customer Care Center at 866-NPA-NXXS (866-672-6997) or 732-699-6700 so that we may assist you further.

Sincerely,

Telecom Routing Administration (TRA)

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iconectiv is a registered trademark and LERG™ Routing Guide, TPM™ Data Source, and CLLI™ Code, are trademarks of iconectiv, LLC.

User Profile and Benefits

Since their inception, TRA products have found their way into many different types of businesses to meet an increasingly wide variety of needs. While continuing to work within and support our historic focus on the telecommunications industry, we are constantly working with our customers, both inside and outside the industry, to develop new approaches to using our data, and maximizing its benefits.

The following few pages provide a quick summary of the type of jobs, functions, and processes that each product can support, as well as potential benefits to your company. However, these pages are just a guide and by no means all-inclusive. For additional product information, we invite you to review the product details provided in the remainder of the catalog, visit our website at www.trainfo.com, or call the TRA Customer Care Center.

TRA Product	Who Might Use the Product	Benefits to Your Company
LERG™ Routing Guide **LERG™ Tools:** • **LERG™ OnLine**	• Engineers responsible for call routing and switch translations • Engineers needing switch homing arrangements • Planners/architects needing to prepare for network changes • Those involved with preparing, supporting, and maintaining interconnection agreements • Companies entering the telecommunications industry or a new market area needing a recognized source for information on the existing circuit switched network elements in the area	• Properly route and complete all your calls • Avoid lost revenue and maintain customer satisfaction • Get physical routing details to support your interconnection agreements and save your company time and money • Prepare for the 2-3% per month network changes that occur when you get planned network change data months in advance • Get Rate Center information used in your rating and billing processes • View daily updates of changes using LERG OnLine
TPM™ Data Source	• Call rating and billing operations staff • Users needing to verify billing and call detail records	• Easy manipulation using Microsoft® Access database reduces need for complex programming • Data to support accurate billing and avoidance of revenue loss • Associate appropriate revenue accounting office (RAO) to NPA NXXs

Local Calling Area Data Source (LCADS)	• Wireless Providers • Local Exchange Carriers (LECs) and Competitive Local Exchange Carriers (CLECs) • Internet Service Providers (ISPs) • Coin telephone operations • PBX table maintenance staff	• Determine where to put a new cell site for service expansion • Build and maintain Trunk Groups, Routing Orders and Switch Translations • Helps determine new service areas • Provides list of numbers to use for local dial-up service
Telemarketing Data Source (TDS)	• Call center operations and database engineers • Anyone needing to distinguish wireless number exchanges from pager or landline ones	• Easy search function allows you to segment by State, Country or all records • Data file can be integrated with other databases you may use in assessing calls
NPA NXX Active Code List (NNACL)	• Telemarketers, credit card companies, customer service groups, and others maintaining customer lists/databases • PBX table maintenance staff	• Maintain your internal operations and processes at peak efficiency with a complete listing of all ACTIVE NPA NXX codes within the North American Numbering Plan • Includes Thousands–Block level details for areas where assignments are made at that level
NPA NXX Activity Guide (NNAG)	• Telemarketers, credit card companies, customer service groups, and others maintaining customer lists/databases • PBX table maintenance staff	• Prepare for all FUTURE NPA NXX codes adds, changes and disconnects with a complete code change listing within the North American Numbering Plan area • Includes Thousands–Block level details for areas where assignments are made at that level
LIDB Access Routing Guide (LARG)	• Alternate Billing Service providers and database maintenance staff • Users needing to route SS7 queries to LIDB databases	• Critical source of data to populate global title translation tables within the STP that will save staff time, increase accuracy and improve performance • Reduces misrouted or failed calls for third-party billing, collect calls and calling card calls • Recovers revenues and reduces customer complaints

Calling Name Access Routing Guide (CNARG)	• Service providers and database maintenance staff who need access to calling name information in order to provide calling party's name to end users	• A complete source of data to populate global title translation tables within the STP that will save staff time and money • Increase accuracy of data
Emergency Notifications (ENs)	• Engineers responsible for call routing and switch translations • Network planners/architects who need to prepare for coming changes • Call rating and billing operations staff	• Maintain accurate operations with information on new NPA NXXs that have been announced late relative to their effective date • Supports LERG™ Routing Guide and TPM™ Data Source products

Target Markets and Selected Benefits

TRA provides an array of products that serve the varied needs of local and long distance telephone companies, new competitive local exchange companies, wireless carriers, value added resellers, telemarketing, and customer care organizations, map developers and other businesses and organizations that depend on accurate "snap-shots" of the PSTN.

Examples of job functions or organizations using these products are:

- Engineers responsible for call routing and switch translations
- Network planners/architects preparing for changes
- Interconnection – ASRs, LSRs, CABS, etc.
- Groups maintaining customer lists/databases
- Switch manufacturers
- Signaling Network Control Center staff
- Marketing managers planning new service and product introductions
- Call rating and billing staff
- Forecasters (marketing, network, etc.)
- Operator services staff
- PBX maintenance personnel and PBX administrators
- Cartographers developing special purpose maps
- Telephone receptionists, secretaries, office administration staff
- Regulatory/Legal support

TRA products provide value and benefit clients in many ways. Some examples are:

- Data to properly route/complete calls to avoid lost revenue and maintain customer confidence and satisfaction
- Data to support and correlate with interconnection agreements
- Preparing for the 2-3% per month changes network configurations, numbering, etc.
- Being on top of planned NPA NXX codes, blocks, and new Area Codes
- Data for accurate billing settlements and revenue collection
- Vertical and Horizontal coordinates translations (based on Latitude and Longitude) for switches, Rate Centers, and points of interconnection
- A single source of data for populating LIDB and Calling Name global title translation tables within the Signal Transfer Points (STPs)
- Area Code, town, state, time zone data for placing calls and updating internal lists

How to Use the TRA Product Catalog

Each product description in this catalog contains information that discusses product applications, benefits and, in most cases, provides examples of data formats. Each product description indicates when the product is produced, its available distribution frequency, and its available distribution formats. Towards the end of the catalog is an explanation of our pricing, ordering procedures, Enterprise Licenses, and policies.

Note that TRA data products have been developed to support a wide range of users with varying needs. In this regard, some data elements such as NPA NXX block information are an integral part of, and common across, several products. In choosing a particular product to meet your needs, you should consider your need for the extent of data being provided in a given product, how the data is provided (e.g. ASCII files, database, etc.), the product's production schedule (e.g. monthly, quarterly, etc.), and the product's distribution format choices.

To ensure a smooth process for you and TRA, and especially if you are a new customer, it is recommended that you contact the TRA Customer Care Center with any questions about a particular product, and/or for assistance in completing the TRA Price and Order Request Forms.

Product Distribution / Format

Unless otherwise noted, all products are issued in their entirety with each issuance. For example, an annual subscription to a product created monthly equates to your receiving a full new product each month whose data reflects any changes that occurred since the previous issuance.

The most commonly used method of obtaining TRA products is via download from a secured TRA Internet website. Some products may also have the option of being distributed via email.

Note: Media availability varies by product

Web Download: TRA products can be downloaded from a secure, username/password/IP address protected website maintained by TRA. An account set-up form needs to be filled out and returned to TRA to receive products via this method.

Email: Some (smaller file size) products can be delivered via email.

Product Examples / Samples

In several product descriptions in this catalog, examples of data in a screen-print or report format illustrate the type of data a product provides. These examples, as well as this catalog in general, are provided to assist in your understanding of the pertinent aspects of a product. Examples should not be considered tutorials, should not be deemed to reflect the most recent information, and should not be considered all-inclusive.

In addition, several product samples, intended to provide you with an understanding of the nature of the product and its data, are available via download, at no charge, at www.trainfo.com. Samples include supporting document files regarding the product. The data included in these samples may be dated and comprise just a subset of the total records involved with each product; nonetheless, samples are comprehensive in representing the product.

Products

LERG™ Routing Guide

The LERG™ Routing Guide contains current information about the local Public Switched Telephone Network (PSTN) and includes scheduled future activity associated with the network. Initially designed for routing of interLATA calls by interexchange carriers, the LERG™ Routing Guide has evolved to provide support for information exchange between all local service providers (CLECs, wireless providers, ISPs, etc.), and has grown to serve as a source for performing network analysis, marketing and demographic analysis, and many other uses uncovered by our customers.

The LERG™ Routing Guide provides routing details to support your interconnection agreements, saving your company time and potential loss of revenue. It supports proper routing and completion of all calls, and thus helps maintain customer satisfaction.

The LERG™ Routing Guide contains fixed formatted data files as well as the same data pre-loaded into a Microsoft® Access database.

The LERG™ Routing Guide is a valuable resource for:

- Engineers responsible for call routing and switch translations
- Network planners/architects who need to prepare for future changes
- Those involved with preparing, supporting, and maintaining interconnection agreements
- Companies entering the telecommunications industry or a new market area who need a trusted source of information on the existing circuit switched network elements in the area

A free downloadable sample of a complete LERG™ Routing Guide, as you will receive in a standard issuance but containing slightly older data and a small percentage of the full volume of data, is available for your review at www.trainfo.com (catalog tab).

Each issuance of the LERG™ Routing Guide is a complete replacement of the previous issuance. Files exist that indicate records that were added, changed, or removed on a month-to-month basis.

The LERG™ Routing Guide General Information Section is included with each LERG™ Routing Guide and provides information on:

- Data Glossary (data definitions)
- System Codes (Routing Code 1XX), Service Codes, North American Numbering Plan Universal Central Office Codes (NXXs), and Operator Service Codes
- Signaling System 7 (SS7) Network Codes
- Vertical Service Codes
- Automatic Number Identification Information Indicator (ANI II) Digits Codes
- Also, high level information regarding:
  - 900 NXX Codes

- Toll Free (e.g. 800) Codes
- 5XX-NXX Non-geographic Codes
- 6YY Non-geographic Codes (Canada)
- 710 (US Government) NXX Codes

LERG™ Routing Guide data files provide data regarding:

- Operating Company Numbers, Company Names, Routing Contacts
- Country Code Assignments
- NPA Information (i.e., Area Codes)
- LATA Codes By Region
- Destination Codes (Area Codes / Prefixes) (NPA NXX Thousands-Blocks assignments for the United States and its territories, Canada, Bermuda, and 16 Caribbean countries)
- Oddball NXXs (e.g. 911, 976)
- Switching Entity Record detail (e.g. Equipment Type, V&H Coordinates)
- Rate Center details (e.g. V&H Coordinates) and Localities (including counties and postal codes)*
- Switch Homing Arrangements (tandem and other switch-to-switch interconnections)
- Operator Access Tandem Codes (ATCs)
- Location Routing Numbers (LRNs)
- Local Interconnection Regions (Canada)

Counties and postal codes currently pertain to only U.S. data

Fixed-Record ASCII Format Files

The fixed-record ASCII format files of the LERG™ Routing Guide are provided as multiple data sets/files and utilize several hundred MB of storage.

You may obtain a copy of LERG™ Routing Guide data file layouts and specifications at no charge by contacting the TRA Customer Care Center.

LERG™ Routing Guide:

Produced: first workday monthly

Distribution frequency: monthly or quarterly (March, June, September, December)

Distribution format: web download

The LERG™ Routing Guide has data provided in two formats: (1) fixed-record ASCII format and (2) a copy of the files in a pre-loaded Microsoft® Access database that permits users to utilize the selection, sorting, analyses and report generation capabilities of Microsoft® Access.

LERG™ One-Day Changes Process

Subscribers to the monthly LERG™ Routing Guide have the option to also subscribe to the LERG™ One-Day Changes Process at no additional charge. Data changes in the underlying databases are analyzed daily to provide files reflecting day- to-day changes. This produces a set of files that denote daily changes in a format consistent with the following subset of LERG™ Routing Guide files:

- LERG1 (OCN)
- LERG6 (NPA NXX)
- LERG7 (Switch)
- LERG7SHA (Switch Homing)
- LERG12 (Location Routing Numbers (LRNs))

The files provided in this process are in a flat (fixed-record) file format only. They contain only those records that have undergone a change (added, removed, and modified) each calendar day and are not a complete file replacement. Integration of the changes into the LERG™ is the responsibility of the end user since users handle the LERG™ Routing Guide data in many different ways.

LERG™ One Day Process data is downloadable from a secured Internet site and requires a logon and password from TRA (through this the user can also establish a daily email transmission of the files). The LERG™ One-Day Changes Process is available free of charge to customers with a monthly LERG™ Routing Guide Enterprise License.

LERG™ One Day Process:

Produced: daily (files issued each workday)

Distribution frequency: available to monthly LERG™ Routing Guide subscribers

Distribution format(s): web download, email

LERG™ Routing Guide Examples – Overview

The following pages provide LERG™ Routing Guide data examples from the LERG™ Routing Guide and are provided for illustrative purposes only. Displayed data from selected LERG™ Routing Guide files reflects the front-end interface provided with the Microsoft Access version of the data. Users can optionally use this front-end interface to view the data.

The examples represent just some of the data files in the LERG™ Routing Guide.

Since NPA NXX block data is a primary data element in the LERG™ Routing Guide, to which other data interrelates, this series of examples from the LERG™ Routing Guide begins with the LERG6 file which is the principal file containing NPA NXX block data.

LERG™ Routing Guide Example

LERG6 – NPA NXX Block Assignment

LERG6 contains data relative to assigned NPA NXXs. As of this writing, this amounts to approximately 205,000 assigned NPA NXX records, and over 850,000 assigned numeric blocks within NPA NXXs. In the example below:

- NPA NXX 732 699, BLOCK A, is shown. BLOCK ID A indicates the carrier is the high-level assignee of the NXX (which carries certain responsibilities). Numeric BLOCK ID ranges are from 0 to 9. For example, a BLOCK ID value of 4 indicates line range 4000-4999. If numeric block data exists for an NPA NXX, the block data information should take precedent over the "A" record relative to the assignee and certain other fields. 732 699 is active (i.e. EFFDATE=blank) as of the product date.
- 732 699 is an end office code (COCTYPE=EOC) (i.e. landline/wireline) with no special services (SSC=N) and rates to the RATE CENTER of NEWBRNSWCK in NJ which is in LATA 224. The LERG8 file (example not shown) translates NEWBRNSWCK to "New Brunswick" as the full name of the Rate Center. NEWBRNSWCK is also the identified primary LOCALITY for 732 699.
- Telephone numbers assigned in 732 699 are dialable by end users (DIND=Y).
- Telephone numbers are subject to being "ported" across carriers (PORT=Y).
- Assignments to carriers for this NPA NXX are not subject to assignments at the Thousands-Block level (TBP=N). Note that if a carrier has retained all 10 blocks from an NPA NXX, the NPA NXX was assigned prior to thousands-block pooling becoming effective and, as is the case in this example, the LERG™ Routing Guide will only show the A block with a TBP=N. In cases where there have been numeric blocks assigned, both an A block record as well as numeric block record(s) will exist with a TBP value of Y.
- Carriers completing calls to either the end office or to the access tandem should send the full 10 digit telephone number to the terminating switch in both cases (TD-EO=10, TD-AT=10).
- The switch this NPA NXX is native to is identified by the CLLI™ of PSWYNJPIDS5. The Switch Homing Arrangement (SHA) Indicator of 00 identifies the switch homing applicable to this NPA NXX / switch combination that can be determined from LERG7SHA.
- The NPA NXX has been assigned to Operating Company Number (OCN) 9206 (expanded further on the next page of this example). Data is administered for the LERG™ Routing Guide by AOCN (i.e. OCN) 9200.

LERG 6   **MENU**

NPA: 732   NXX: 699   BLOCK ID: A

STATUS: [ ]   EFF DATE: [   ]

COC TYPE: EOC   SSC: N   DIND: Y

TD-EO: 10   TD-AT: 10   PORTABLE: Y   1000 BLK POOLING: N

OCN: 9206   AOCN: 9200

RC ABBREV: NEWBRNSWCK   RC TYPE: [ ]   RC LATA: 224

LOC NAME: NEWBRNSWCK   LOC COUNTY: [   ]   LOC STATE: NJ

LINE FROM: 0000   LINE TO: 9999

SWITCH: PSWYNJPIDS5   SHA IND: 00

LATA: 224   LATA NAME: NORTH JERSEY NJ

TEST LINE #: [   ]   TEST LINE RESPONSE: [ ]   EXPIRES: [   ]

RECORD CREATED: 12/22/2004   "E" STATUS: 12/29/2004   LAST MODIFIED: 12/29/2004

LERG1 – OCN / Company Name / Routing Contact

LERG1 contains data covering more than 17,000 assigned Operating Company Number (OCN) identifiers.

Many LERG™ Routing Guide data elements, and especially primary data elements such as NPA NXX Blocks and switches, are associated with an OCN. The LERG1 file provides a mapping of this four-character identifier to a specific company name and related company information. The LERG1OCN file (example not shown), includes additional contact information for various organizations, functions, and services, for those companies choosing to provide it.

In this example,

- OCN 9206 shows as being assigned to Verizon New Jersey, Inc.
- The OVERALL OCN (a higher level of grouping, should it exist), in this example, is also 9206.
- The Operating Company is listed as a Regional Bell Operating Company (CATEGORY=RBOC). CATEGORY values, based on company, including CLEC, wireless, etc., can be keyed upon to further assess data in the LERG.
- The Routing Contact Information lists the name, title, company name, telephone number, and address for the person to call regarding routing questions relative to the LERG™ Routing Guide (this information is blanked out in the example).

LERG7 – Switching Entities

LERG7 contains high level (not homing) data regarding approximately 50,000 switch CLLI codes used in the LERG. Homing information is contained in LERG7SHA.

In this example,

- Switch PSWYNJPIDS5 is physically located within LATA 224 in Northern New Jersey.
- Its Common Language® equipment type designation, 5EH, is explained in a separately available document (BR 751-100-460, CL-DATA-SSC) available at www.commonlanguage.com.
- Vertical and Horizontal Coordinates (based on latitude and longitude) of the switch are provided (but noted in the example as 12345). Switch V&H values are often used in "access" pricing.
- PSWYNJPIDS5 has International Direct Distance Dialing (IDDD) capability.
- It is located at (street address is blanked out in the example) in Piscataway, NJ.
- The switch is owned by OCN 9206, which we previously noted as Verizon New Jersey, Inc.
- Data is administered for the LERG™ Routing Guide by AOCN 9200 (i.e. Verizon).
- The Switching Entity-Office Functionalities (SOF) noted by the data provider are End Office, Host, E.164, Local Number Portability (LNP) capable, 800 SSP support, serves as a CCS AC OFC, has CSP functionality, and is provisioned to support Intra LATA Presubscription. These functionalities are explained to a greater degree in the LERG™ Routing Guide Glossary file.

LERG7SHA – Switch Homing Arrangements

LERG7SHA contains information about switch-to-switch interrelationships (e.g. homing). More than 60,000 homing relationships exist in the LERG. In the example, the switch PSWYNJPIDS5 with a SHA Indicator of 00 (this is the switch and SHA Indicator that appeared for NPA NXX BLOCK 732 699 A in LERG6) is noted. The record shows several different tandems as well as an STP relationship relative to PSWYNJPIDS5 00. The originating and terminating tandems are the same for all the same functionalities. This is often, but not always, the case. This example indicates that traffic terminating to PSWYNJPIDS5 may be routed for Feature Group B as well as Feature Group D to NBWKNJNB05T; to NBWKNJNB04T in the case of local and intraLATA traffic; and to ELZBNJEL02T for operator services.

LERG8 files – Rate Center and Locality Information

LERG8, LERG8LOC, and LERG8PST contain information covering more than 22,000 Rate Centers within the NANP area, approximately 65,000 localities (e.g. towns) within those Rate Centers, and (currently only for U.S. data) each locality's county and associated USPS postal code(s) (some localities not defined in USPS data are being researched). In the example being used, NPA NXX BLOCK 732 699 A rates to the New Brunswick, NJ Rate Center which has the noted Rate Center V&H Coordinates and the NPAs that can be associated with it. In addition, the Microsoft Access query results depicted below combine LERG8LOC and LERG8PST data to indicate the principal localities in the New Brunswick NJ Rate Center, and each locality's postal codes and county.

RC NAME ABBR	LOC STATE	LOC NAME ABBR	LOC INDEX	POSTAL CODE	LOC COUNTY
NEWBRNSWCK	NJ	FRNKLITSHP	GL		SOMERSET
NEWBRNSWCK	NJ	FRNKLITSHP	SO	08873	SOMERSET
NEWBRNSWCK	NJ	FRNKLITSHP	WA		SOMERSET
NEWBRNSWCK	NJ	HIGHLANDPK	CA		MIDDLESEX
NEWBRNSWCK	NJ	HIGHLANDPK	MI		MIDDLESEX
NEWBRNSWCK	NJ	HIGHLANDPK	MI		MIDDLESEX
NEWBRNSWCK	NJ	MILLTOWN	MI	08850	MIDDLESEX
NEWBRNSWCK	NJ	MILLTOWN	MO		MIDDLESEX
NEWBRNSWCK	NJ	NEWBRNSWCK		08901	MIDDLESEX
NEWBRNSWCK	NJ	NEWBRNSWCK		08902	MIDDLESEX
NEWBRNSWCK	NJ	NEWBRNSWCK		08903	MIDDLESEX
NEWBRNSWCK	NJ	NEWBRNSWCK		08904	MIDDLESEX
NEWBRNSWCK	NJ	NEWBRNSWCK		08905	MIDDLESEX
NEWBRNSWCK	NJ	NEWBRNSWCK		08906	MIDDLESEX
NEWBRNSWCK	NJ	NEWBRNSWCK		08922	MIDDLESEX
NEWBRNSWCK	NJ	NEWBRNSWCK		08933	MIDDLESEX
NEWBRNSWCK	NJ	NEWBRNSWCK		08988	MIDDLESEX
NEWBRNSWCK	NJ	NEWBRNSWCK		08989	MIDDLESEX
NEWBRNSWCK	NJ	PISCATAWAY		08855	MIDDLESEX
NEWBRNSWCK	NJ	PISCATAWAY		08854	MIDDLESEX
NEWBRNSWCK	NJ	SOMERSET		08873	SOMERSET
NEWBRNSWCK	NJ	SOMERSET		08875	SOMERSET
NEWBRNSWCK	NJ	SOMERSET		08875	SOMERSET

LERG12 – Location Routing Numbers

LERG12 contains information about Location Routing Numbers (LRNs). LRNs are used in regards to Local Number Portability (LNP) call processing within the NANP. Approximately 45,000 LRNs are in the LERG. LRNs are related to NPA NXXs in format, and map to a switch for routing purposes. The NPA NXX 732 699 used in these LERG™ Routing Guide examples is not the basis for an LRN, nor need it be. However, the LERG12 file indicates that the switch PSWYNJPIDS5, used in these examples, has 7324579999 as the LRN. In this example, this happens to be the sole LRN associated with this switch. Therefore, any numbers "ported-in" to this switch would use this LRN for local number portability routing.

```
LERG 12                                               MENU

        LRN: 7324579999      STATUS:            EFF DATE:

   LRN TYPE: P               SWITCH: PSWYNJPIDS5

       LATA: 224          LATA NAME: NORTH JERSEY NJ

        OCN: 9206              AOCN: 9200

   RC ABBRE:                RC TYPE:            RC STATE:

              SHA INDICATOR: 00
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The previous pages have provided a brief insight into the data provided in the LERG™ Routing Guide. Screen shots of a few of the data files in the LERG™ Routing Guide have been depicted. Data provided is for illustrative purposes only and is presented using the front-end interface ("form" view) provided with the Microsoft Access version of the LERG™ Routing Guide data that can be downloaded from the web. This data is also viewable using Microsoft Access datasheet format. Users can *optionally* use this front-end interface to view the data. LERG™ Routing Guide data files are also provided in fixed width ASCII files that can serve as a basis for loading and processing by whatever applications a user may locally employ, and can be viewed with text editors.

A free downloadable sample of a complete LERG™ Routing Guide, the same as you will receive in a standard issuance but containing slightly older data and a relatively small percentage of the full volume of data, is available for your review at www.trainfo.com (catalog tab).

LERG™ OnLine

LERG™ OnLine is an offering separate from the LERG™ Routing Guide itself. It provides, via web access, the ability to access, view, manipulate, and download query results.

This is an easy-to-use web-based GUI application available only to monthly LERG™ Routing Guide Enterprise Licensees at a small increment above the LERG license fee. LERG OnLine is provided on an enterprise basis for the benefit of everyone in your company.

The LERG OnLine is a means to access up-to-date LERG™ Routing Guide data and isolate specific information that a user may be interested in obtaining for online review and/or downstream processing. LERG OnLine provides these capabilities to LERG™ Routing Guide Enterprise Licensees without their needing to expend time, effort, and expense to develop and maintain local processes; purchase and/or use third party software; or expend unnecessary manual efforts to obtain data from the LERG.

LERG OnLine data is updated daily! It is not just a monthly snapshot of the data. It provides the ability to access updated LERG™ Routing Guide data without necessarily having to locally develop processes that incorporate LERG One-Day Change Process data with the monthly LERG.

Data in LERG Online is essentially the LERG™ Routing Guide data that has been described previously in this catalog, although specific terminology may vary. Depicted below is the LERG OnLine welcome screen. The next page displays a basic query and results.

LERG™ OnLine:

Produced: updated every night

Distribution frequency: daily access (available only to monthly LERG™ Routing Guide Enterprise Licensees)

Distribution format(s): web access

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LERG OnLine Home Page

Welcome

Today is Thu Sep 06 20:49:56 UTC 2018

LERG OnLine provides the ability to query the LERG Routing Guide data via the Internet. This is an optional service that is made available to licensees of the monthly LERG.

The menu displayed at the top of this screen will appear on every page:

- Click LERG Elements to query LERG data elements such as NPA NXX Block, Switch, LRN, Rate Center, etc.
- Click Standard Reports to query on some of the LERG elements for limited data.
- Click Saved Reports to see all your saved reports.

This system is generally available 24 x 7, however system support is limited to 8:30am-5:00pm (Eastern Time), M-F (other than iconectiv observed holidays). Questions, comments, etc., may be directed to the Telecom Routing Administration (TRA) at tra@iconectiv.com or by calling 732-699-6700 or 866-672-6997.

LERG Online Example

LERG OnLine – Example of Query

The following LERG OnLine query screen is used to obtain NPA NXX Block data information. Enter selection criteria into one or more of the data entry boxes. Use of wildcards, listing of values, etc. can also be used as selection criteria. The results screen below shows all records that pertain to NPA NXX 732 699.

TPM™ Data Source

The TPM™ Data Source supports various systems used in rating and billing telephone calls and can be used as a source for certain data related to NPA NXXs.

The TPM™ Data Source is a useful resource for:

- Those who need to manage NPA NXX related data.
- Call rating and billing operations staff who need to associate the appropriate Revenue Accounting Office (RAO) to NPA NXXs.
- Those who specifically have a need for V&H and Rate Center information associated with NPA NXXs.

The TPM™ Data Source contains data for the United States, American Samoa, the Commonwealth of Northern Mariana Islands, Guam, Puerto Rico, the US Virgin Islands, Canada, Bermuda, 16 island countries in the Caribbean, and Mexico.

Data elements include:

Numbering Plan Area (Area Code)	Revenue Accounting Office (RAO) (Bill to/Send to)
NXX Code (exchange, prefix - with block)	Portability Indicator
Operating Company Number	Thousands-Block Pooling Indicator
IDDD Capability Indicator	NXX Type (wireline, paging, cellular, etc.)
Vertical (V) Coordinate	Time Zone
Horizontal (H) Coordinate	Daylight Savings Time Indicator
Rate Center	Company Type
Place Name	Special Calling Cards (RAO based)
State, Province, Country	International data - Mexico

More comprehensive listings of fields and files are noted in text files containing data specifications and layouts, and in a Glossary, all of which are provided with each product.

A <u>free downloadable sample</u> of the TPM™ Data Source, the same you will receive in a standard issuance but containing slightly older data and a relatively small percentage of the full volume of data, is available for your review at www.trainfo.com (catalog tab).

Each issuance of the TPM™ Data Source is a complete replacement of the previous issuance. Indicators exist on a month-to-month basis that flag those records that were added, changed, or are to be deleted.

Fixed-Record ASCII Format Files

The fixed-record ASCII format files of the TPM™ Data Source Routing Guide are provided as multiple data sets/files and consume approximately 150MB of storage.

You may obtain a copy of TPM™ Data Source data file layouts and specifications at no charge by contacting the TRA Customer Care Center to receive them by email.

TPM™ Data Source:

Produced: mid-month monthly (product issuances are dated the 15th of the month following creation)

Distribution frequency: monthly or quarterly (March, June, September, December)

Distribution format(s): web download

The TPM™ Data Source has data provided in two formats: (1) fixed-record ASCII format and (2) a copy of the files in a pre-loaded Microsoft® Access database that permits users to utilize the selection, sorting, analyses and report generation capabilities of Microsoft® Access.

TPM™ Data Source Example

The following screen shot from the TPM is provided for illustrative purposes only. Displayed data reflects the front-end interface provided with the Microsoft Access version of the data. Users can optionally use this front-end interface to view the data.

This example represents just some of the data files in the TPM™ Data Source.

Since NPA NXX data is a primary data element in the TPM™ Data Source, the file below (also called the TPM "File") provides information relative to NPA NXX 732 699.

TPM **Menu**

NPA	732	**MAJOR V**	05085
NXX	699	**MAJOR H**	01434
BLOCK ID	A	**LATA**	224
RANGE	00009999	**LATA SUB**	00
NXX TYPE	00	**RC NAME**	NEWBRNSWCK
EFF DATE LAST CHG	12/29/2004	**RC TYPE**	
EFF DATE ASSIGN	12/29/2004	**PLACE NAME**	NEWBRNSWCK
CHANGE CODE		**ST**	NJ
OCN	9206	**TIME ZONE**	7
COMPANY NAME	VERIZON NEW JERSEY / Imported from OCN file	**OTH LINE RS**	00
		POINT ID	0

1 Indicates Yes   0 Indicates No

AOCN	9200	**D'LIGHT SAVE IND**	1
CO CODE	06	**PORT IND**	1
CO TYPE	0	**TBP IND**	0
		IDDD	1
BILL TO RAO	094	**DIND**	1
SEND TO RAO	000		

Local Calling Area Data Source (LCADS)

The Local Calling Area Data Source (LCADS) is a database containing local calling area information for areas within the United States and Canada. TRA collects and maintains the local calling tariff database information by utilizing the governing sources.

LCADS is a valuable resource for:

Rating and Billing   Trunking / Traffic Routing   Least Cost Routing

Billing Operations Staff   Local / Toll Data

LCADS contains business and residential local calling area plans for various service providers. It is an aid for companies involved with designing optional calling plans, routing of telecom traffic, least cost routing, and validating and identifying local / toll calls. LCADS data is also correlated with LERG™ Routing Guide data monthly and can be cross-related with various data elements in the LERG™ Routing Guide.

Data elements include:

NPANXX   City Name   CO Type (e.g. LEC or Wireless)

OCN   Rate Center   State

LATA   Rate Center V&H   Dialing Plans

Calling Plans

Query: Telnums Local to me (Residential) - (TELNUMs that 732699 can call as a Local Call)

NPANXX	COTYPE	ST	OCN	CITY
908262	E	NJ	7232	Belle Mead
732302	E	NJ	5120	Bound Brook
732273	E	NJ	7232	Dunellen
732297	E	NJ	5120	Franklin Park
908930	W	NJ	6391	Metuchen

NPANXX = NPA NXX
COTYPE = LEC or Wireless
ST = State
OCN = Telecom Carrier Operating
Company Number (OCN)
CITY = Name of the Rate Center

Gathering and maintaining the local calling area tariff information is a labor intensive and involved process which TRA does for you in supporting the data in this product, thus saving you valuable staff time and expense. Invalid identification of local calling areas can create problems within a company's network routing and rating and billing of traffic, all negative impacts.

LCADS is updated monthly with new NPA NXX assignments and tariff changes as they occur. It is built with Microsoft® Access to allow for selecting, sorting, analyzing and reporting data based upon data tables and can be used as a standalone repository or can easily be integrated into your company Business Support Systems.

Local Calling Area Database Source:

Produced: 10th calendar day monthly

Distribution frequency: monthly

Distribution format(s): web download

Telemarketing Data Source (TDS)

If you have a need to know which exchanges (NXXs) are most likely cellular, landline, or paging, the Telemarketing Data Source is an economical way to keep up with this information.

If your company has call center operations, needs to verify phone numbers, performs processing of customer contact information, or needs to suppress wireless or pager numbers from a database application, or other similar needs, you will find the Telemarketing Data Source a valuable tool.

The Telemarketing Data Source provides a front-end application that permits you to extract the data provided relative to NPA NXX (prefix, exchange) and Thousands-Block assignments at various levels of selection criteria. Time Zone and Daylight Savings Indicators are also provided by NPA NXX.

The NPA NXXs that comprise the data in the product are those that are active (and to be active within the next two months) within the North American Numbering Plan (NANP) area (US, US Territories, Canada and parts of the Caribbean). The product is provided by web download, and is a complete set of data each month.

Note: The data in the Telemarketing Data Source reflects the NXX and, where applicable, Thousands-Block assignments. Companies specify the use of these NXX and blocks relative to their expected assigned use to new customers. However, due to portability of telephone numbers among service providers in many areas of the NANP, accuracy of a specific ten-digit telephone number correlating to the use designation indicated in this product, although very high, cannot be 100% ensured.

The following screen shots depict Multiple Prefix (many records) and Single Prefix (one record) selection screens. The output, based upon your selection criteria, is in ASCII text data file formats that then can be directly viewed or else loaded into local spreadsheets, databases, etc., as your needs may dictate.

Telemarketing Data Source:

Produced: first workday monthly

Distribution frequency: monthly

Distribution format(s): web download

Telemarketing Data Source (Release 4.2)

Data Source Date Stamp :12/01/2013

Single Prefix | Multiple Prefix

A. Select Category(ies) of Telephone Number Prefixes Desired:

☐ Landline ☑ Cellular ☑ Paging ☐ Select/Unselect All

(If you do not select any, all types are included in the output.)

Submit | View File | Reset
Help | Quit TDS

B. Select the State(s), Province(s) and/or Countries Desired:

United States | Canada | Caribbean Islands | Pacific Islands | NPA NXX Filter

☐ Alaska   ☐ Georgia   ☐ Maryland   ☐ New Hampshire   ☐ South Carolina
☐ Alabama   ☐ Hawaii   ☐ Maine   ☑ New Jersey   ☐ South Dakota
☐ Arkansas   ☐ Iowa   ☐ Michigan   ☐ New Mexico   ☐ Tennessee
☐ Arizona   ☐ Idaho   ☐ Minnesota   ☐ Nevada   ☐ Texas
☐ California   ☐ Illinois   ☐ Missouri   ☐ New York   ☐ Utah
☐ Colorado   ☐ Indiana   ☐ Mississippi   ☐ Ohio   ☐ Virginia
☐ Connecticut   ☐ Kansas   ☐ Montana   ☐ Oklahoma   ☐ Vermont
☐ District Of Columbia ☐ Kentucky ☐ North Carolina ☐ Oregon   ☐ Washington
☐ Delaware   ☐ Louisiana   ☐ North Dakota   ☐ Pennsylvania   ☐ Wisconsin
☐ Florida   ☐ Massachusetts   ☐ Nebraska   ☐ Rhode Island   ☐ West Virginia
☐ **Select/Unselect All**   ☐ Wyoming

C. Select Output File Format Options:

Select Fields to be Included in the Output

☑ Area Code (NPA)   ☐ State/Province/Country   ☐ Category Type (COCTYPE)
☑ Prefix (NXX)   ☐ Time Zone   ☐ Category Detail (SSC)
☑ Block IDs   ☐ Daylight Savings   ☑ Block Category (L/W/S)

Select a Field Separator
○ None ○ Tab ● Comma
○ Excel ○ Other [____]

Telemarketing Data Source (Release 4.2)

Data Source Date Stamp :12/01/2013

Single Prefix | Multiple Prefix

Query

Area Code (NPA) [732]
Prefix (NXX)   [699]

Submit | Reset
Quit TDS | Help

Example : If a phone number is 1-732-699-6700, then 732 is the area code (NPA), 699 is the prefix (NXX) and 6700 is the line number. The first number 6 in the line number 6700 is called the block number. Block numbers range from 0 to 9. Toll-free prefixes are not included. Note : For more information or explanation of the terms, please click 'Help' button. For additional questions not covered by the Help, please contact TRA Customer Care Center.

Results

NPA	NXX	Line Numbers	Number Category
732	699	0000-0999(G)	Landline
		1000-1999(G)	Landline
		2000-2999(G)	Landline
		3000-3999(G)	Landline
		4000-4999(G)	Landline
		5000-5999(G)	Landline
		6000-6999(G)	Landline
		7000-7999(G)	Landline
		8000-8999(G)	Landline
		9000-9999(G)	Landline

State/Province/Country [NJ]
Time Zone [Eastern]
Daylight Savings Observed [Yes]

Print

If the values for line numbers are generated from A block (see help for more information), then letter G is appended to the line numbers. Example : 1000-1999(G).

NPA NXX Active Code List (NNACL)

The NPA NXX Active Code List (NNACL) is composed of data files that help you maintain your internal operations, processes, and databases at peak efficiency with a complete listing of all active NPA NXX codes within the North American Numbering Plan area. Keep track of the ever changing world of these assignments through the NNACL.

This product is a useful resource for:

- Telemarketers, credit card companies, customer service groups, and others maintaining customer lists/databases
- PBX maintenance staff
- Database administrators
- Any party needing to confirm if a given NPA NXX has been assigned

The NPA NXX Active Code List lists all NPA NXX assignments that are active (in service) as of the product date. Data provided includes the assigned service provider (OCN) of the NPA NXX, the type of service that is provided (e.g. wireless) by the assigned service provider, the associated Rate Center and State/Province/Country, and a Portability Indicator. Also included is a file that can be used to translate the Operating Company Number (OCN) to a company name. A user-friendly and dynamic "search" program to facilitate data selection and extraction is also provided with each issue of the product. A general information section explains the data in greater detail.

NPA NXXs in the United States are also often assigned at the Thousands-Block level (e.g. line numbers 0000-0999, 1000-1999, etc.). Where such has occurred, the assigned service provider (OCN) of the block within the NPA NXX and all the data noted above at the NPA NXX level is provided.

As of this writing, approximately 205,000 NPA NXX records and over 850,000 blocks have been assigned and are included in the NNACL. The example provided at the end of this description is a depiction of results from the user interface provided with each copy of the NNACL. Results from queries generated through this interface can be downloaded to your local environment using various user-controlled options. Fixed-width ASCII files data feels are also included with each product should you which to directly use the data from such files in lieu of the user interface. This data can be locally imported into Excel, loaded into locally developed databases, and/or read with applications that can read text files (e.g. Notepad, Microsoft® Word). Reading and processing of the data is a local consideration, based on user needs, processing environment, etc.

Note that companies regulated in the United States by the Federal Communications Commission (FCC) and/or individual state regulatory commissions and, in Canada, by the Canadian Radio-television Telecommunications Commission (CRTC), for the most part, participate in telephone number portability (i.e. a subscriber assigned a phone number, under most circumstances, can have that number managed by any service provider that serves that area). However, the company assigned a numbering resource is the only company that can assign line numbers from that resource to new subscribers, but once subscribers are assigned a numbering resource, they can "port' their numbers to another provider. At times, this may cross over type of service as well (e.g. wireline to wireless and the reverse) however; the NNACL does not contain individual line level data. However, it does contain the primary company for the numbering resource (the assigned OCN). Also, from a type of service standpoint (disregarding the service provider), a high percentage of line level data is within the type of service defined by the assigned service provider.

A sample copy of the NNACL, containing abridged, slightly older data, is available for download free of charge, at www.trainfo.com (catalog tab).

If there is need to reference or track changes that occur between quarterly issuances of the NNACL, the NPA NXX Activity Guide (NNAG), with records formatted the same as in the NNACL, provides (only) activity (i.e. adds/deletes, changes to data), and is issued monthly. An integration application to directly update the NNACL data with the NNAG data is not provided due to the wide range of user environments and uses of the data; such must be developed by the user if needed. Due to the vast diversity among user environments integration of the data into your local environment is your responsibility; however, TRA can assist your staff through explanation of the data, etc.

NPA NXX Active Code List:

Produced: first workday quarterly (January, April, July, October)

Distribution frequency: quarterly (January, April, July, October)

Distribution format(s): web download

NPA-NXX Active Code List (NNACL)

| NPA NXX Block Search | OCN Search | Help |

Select Output Fields and Enter Search Criteria:

NPA ☑ `2*`   (Use ? to match any one number or letter, or * for more than one)

NXX ☑ [   ]   Portable (PI) ☑ [All ▼]

Block (B) ☐ [   ]

COC Type (COC) ☑ [   ]   Special Service Code (SSC) ☑ [   ]

OCN ☑ [   ]   OCN Name ☑ [   ]

Switch (SW) ☑ [   ]   Switch LATA (LATA) ☑ [   ]

Rate Center (RC) ☑ [   ]   RC State/Province (ST) ☑ [   ]

(Check/uncheck boxes to include/exclude the fields in the output)

Select Output Mode: **Select a Field Separator and Headers for File Output:**

◉ Display   ○ File   ○ Fixed   ○ Tab   ◉ Comma   ○ Excel   ○ Other [ ]   ☑ Add Headers To File

[Run Query]   [View Output File]   [Reset]   [Quit]

Results (Record count 24270):

[View Results in a Separate Window]

NPA	NXX	COC	SSC	OCN	OCN Name	Switch	LATA	Rate Center	ST	P
201	200	EOC	N	9206	VERIZON NEW JERSEY	JRCYNJBRDS5	224	JERSEY CITY	NJ	Y
201	201	UFA	N	MULT	MULTIPLE OCN LISTING	--VARIOUS--	99999	RATE CENTER NOT APPLICABLE	NJ	N
201	202	PMC	BX	6630	USA MOBILITY WRLS	WAYNNJ08CM0	224	HACKENSACK	NJ	N
201	203	EOC	N	325E	YMAX COMMS CORP. NJ	NWRKNJMDDSJ	224	HACKENSACK	NJ	Y
201	204	EOC	N	389C	EUREKA NETWORKS - NJ	NWRKNJMD7MD	224	JERSEY CITY	NJ	Y
201	205	SP2	S	6664	SPRINT SPECTRUM LP	TTBONJ12CM5	224	JERSEY CITY	NJ	Y
201	206	SP2	S	6664	SPRINT SPECTRUM LP	TTBONJ12CM2	224	HACKENSACK	NJ	Y
201	207	PMC	C	6391	VERIZON WIRELESS-NJ	JRCYNJ10CM3	224	NEWARK	NJ	Y
201	208	PMC	C	4036	NEW CINGULAR WRL DC	RCPKNJ02GT1	224	JERSEY CITY	NJ	Y
201	209	EOC	N	9206	VERIZON NEW JERSEY	JRCYNJBRDS5	224	JERSEY CITY	NJ	Y
201	210	EOC	N	7421	AT&T LOC - NY	MRTWNJMRNMD	224	UNION CITY	NJ	Y
201	211	N11	N	MULT	MULTIPLE OCN LISTING	--VARIOUS--	99999	RATE CENTER NOT APPLICABLE	NJ	N
201	212	SP2	S	6664	SPRINT SPECTRUM LP	TTBONJ12CM2	224	HACKENSACK	NJ	Y
201	213	PMC	C	6391	VERIZON WIRELESS-NJ	BBTPNJ06CM2	224	MORRISTOWN	NJ	Y
201	214	PMC	C	4036	NEW CINGULAR WRL DC	RCPKNJ02GT1	224	HACKENSACK	NJ	Y
201	215	EOC	N	2680	PAETEC COMM - NJ	NWRKNJ0209Z	224	BAYONNE	NJ	Y
201	216	EOC	N	9206	VERIZON NEW JERSEY	JRCYNJJODS5	224	JERSEY CITY	NJ	Y
201	217	EOC	N	9206	VERIZON NEW JERSEY	JRCYNJJODS5	224	JERSEY CITY	NJ	Y
201	218	PMC	C	4036	NEW CINGULAR WRL DC	RCPKNJ02GT1	224	HACKENSACK	NJ	Y
201	219	PMC	B	6630	USA MOBILITY WRLS	WAYNNJ08CM0	224	JERSEY CITY	NJ	N
201	220	PMC	C	4036	NEW CINGULAR WRL DC	RCPKNJ02GT1	224	HACKENSACK	NJ	Y
201	221	EOC	N	7143	TELEPORT COM NY - NJ	RCPKNJ02RMD	224	HACKENSACK	NJ	Y

NPA NXX Activity Guide (NNAG)

The NPA NXX Activity Guide (NNAG) helps you to prepare for all future NPA NXX adds, changes and disconnects, as well as last minute changes to active records. It can be considered and used as a standalone product, or as a complement to the NPA NXX Active Code List (NNACL).

This product is a useful resource for:

- Telemarketers, credit card companies, customer service groups, and others maintaining customer lists/databases
- PBX maintenance staff
- Database administrators
- Any party needing to confirm if a given NPA NXX has been assigned

The NNAG consists of NPA NXX records associated with future activity reported by service providers (generally covering several months ahead), as well as last minute changes made in the prior month. Data provided includes the assigned service provider (OCN) of the NPA NXX, the type of service that is provided (e.g. wireless) by the assigned service provider, the associated Rate Center and State/Province/Country, and a Portability Indicator. Also included is a file that can be used to translate the Operating Company Number (OCN) to a company name. A user-friendly and dynamic "search" program to facilitate data selection and extraction is also provided with each issue of the product. A general information section explains the data in greater detail.

The primary NNAG file includes an activity code associated with the NPA NXX and its data (E=establish, M=modify, D=disconnect), as well as the date that the activity is currently targeted to occur.

The NNAG does not list active NPA NXX information unless it is associated with a future modification or deletion however; the separately available NPA NXX Active Code List (NNACL) contains a complete list of active codes. TRA does not provide integration processes between the two lists.

The example provided at the end of this description is a depiction of results from the user interface provided with each copy of the NNAG. Results from queries generated through this interface can be downloaded to your local environment using various user-controlled options. Fixed-width ASCII files data feels are also included with each product should you wish to directly use the data from such files in lieu of the user interface. This data can be locally imported into Excel, loaded into locally developed databases, and/or read with applications that can read text files (e.g. Notepad, Microsoft® Word). Reading and processing of the data is a local consideration, based on user needs, processing environment, etc.

A sample copy of the NNAG, containing abridged, slightly older data, is available for download, at no charge, at www.trainfo.com (catalog tab).

If there is need to initialize or periodically maintain a complete set of active NPA NXX records, such is available quarterly through the NNACL product. An integration application to directly update the NNACL data with the NNAG data is not provided due to the wide range of user environments and uses of the data; such must be developed by the user if needed. Due to the vast diversity among user environments, integration of the data into your local environment is your responsibility; however, TRA can assist your staff through explanation of the data, etc.

NPA NXX Activity Guide:

Produced: first workday monthly

Distribution frequency: monthly

Distribution format(s): web download, email

File   Database   View

NPA-NXX Activity Guide (NNAG)

| NPA NXX Block Search | OCN Search | Help |

Select Files To Be Searched:
◉ Main Data   ○ Insert Data   ○ Both

Select Output Fields and Enter Search Criteria:

NPA ☑ `2*`   (Use ? to match any one number or letter, or * for more than one)

NXX ☑   Portable (PI) ☑ `All ▼`

Block (B) ☐

Status (S) ☑ `All ▼`   Effective Date (Date) ☑

COC Type (COC) ☑   Special Service Code (SSC) ☑

OCN ☑   OCN Name ☑

Switch (SW) ☑   Switch LATA (LATA) ☑

Rate Center (RC) ☑   RC State/Province (ST) ☑

(Check/uncheck boxes to include/exclude the fields in the output)

Select Output Mode:
◉ Display   ○ File

Select a Field Separator and Headers for File Output:
○ Fixed   ○ Tab   ◉ Comma   ○ Excel   ○ Other [ ]   ☑ Add Headers To File

[Run Query]   [View Output File]   [Reset]   [Quit]

Results (Record count 223):

[View Results in a Separate Window]

NPA	NXX	S	Date	COC	SSC	OCN	OCN Name	Switch	LATA	Rate Center	ST
201	255			EOC	N	6088	BROADWING COMM - NJ	JRCYNJ65DS2	224	UNION CITY	NJ
201	255	M	010714	EOC	N	6088	BROADWING COMM - NJ	JRCYNJ657MD	224	UNION CITY	NJ
201	377			EOC	N	6088	BROADWING COMM - NJ	JRCYNJ65DS2	224	JERSEY CITY	NJ
201	377	M	010714	EOC	N	6088	BROADWING COMM - NJ	JRCYNJ657MD	224	JERSEY CITY	NJ
201	378			EOC	N	6088	BROADWING COMM - NJ	JRCYNJ65DS2	224	RAMSEY	NJ
201	378	M	010714	EOC	N	6088	BROADWING COMM - NJ	JRCYNJ657MD	224	RAMSEY	NJ
201	379			EOC	N	6088	BROADWING COMM - NJ	JRCYNJ65DS2	224	TEANECK	NJ
201	379	M	010714	EOC	N	6088	BROADWING COMM - NJ	JRCYNJ657MD	224	TEANECK	NJ
201	663			EOC	N	6088	BROADWING COMM - NJ	JRCYNJ65DS2	224	FAIR LAWN	NJ
201	663	M	010714	EOC	N	6088	BROADWING COMM - NJ	JRCYNJ657MD	224	FAIR LAWN	NJ
201	696			EOC	N	6088	BROADWING COMM - NJ	JRCYNJ65DS2	224	HACKENSACK	NJ
201	696	M	010714	EOC	N	6088	BROADWING COMM - NJ	JRCYNJ657MD	224	HACKENSACK	NJ
201	733			EOC	N	6088	BROADWING COMM - NJ	JRCYNJ65DS2	224	CRAGMERE	NJ
201	733	M	010714	EOC	N	6088	BROADWING COMM - NJ	JRCYNJ657MD	224	CRAGMERE	NJ
201	735			EOC	N	6088	BROADWING COMM - NJ	JRCYNJ65DS2	224	ENGLEWOOD	NJ
201	735	M	010714	EOC	N	6088	BROADWING COMM - NJ	JRCYNJ657MD	224	ENGLEWOOD	NJ
201	777			EOC	N	6088	BROADWING COMM - NJ	JRCYNJ65DS2	224	RUTHERFORD	NJ

LIDB Access Routing Guide (LARG)

The LIDB Access Routing Guide (LARG) is a single source for Line Information DataBase (LIDB) access routing data. The data can be used to administer and maintain Signal Transfer Point global title translation (GTT) tables for routing to data sources supporting Alternate Billing Services (certain calling cards, bill-to-third, collect, etc.). It identifies the responsible Signaling Network Control Center (SNCC), the appropriate Line Information DataBase provider, the inter-network route effective date, and the capability code or pseudo point code data. The LARG's format and content are similar to the Calling Name Access Routing Guide (CNARG) that is used to manage access for database queries relative to Calling Name information.

The LARG is a useful tool for:

- Alternate Billing Service providers
- Database maintenance staff
- Increasing accuracy of queries
- Improving GTT performance

A text file that defines data fields, provides contact information, etc., is provided with each issue.

LIDB Access Routing Guide:

Produced: first workday monthly

Distribution frequency: monthly

Distribution format(s): email, web download

Calling Name Access Routing Guide (CNARG)

The Calling Name Access Routing Guide (CNARG) is a single source of information for accessing information relative to databases containing subscriber Calling Name information. The CNARG data can be used to administer and maintain Signal Transfer Point global title translations (GTT) tables used to route to points that contain this data. The CNARG's format and content are similar to the LIDB Access Routing Guide (LARG) that is used to manage access for database queries relative to alternate billing services information.

The Calling Name Access Routing Guide is a useful tool for:

- Calling Name service providers
- Database maintenance staff
- Increasing accuracy of queries
- Improving GTT performance

A text file that defines data fields, provides contact information, etc., is provided with each issue.

Calling Name Access Routing Guide

Produced: first workday monthly

Distribution frequency: monthly

Distribution format(s): email, web download

Emergency Notifications (ENs)

Emergency Notifications report last minute changes that are not included in the current month's products. Emergency Notifications are published at least once a week.

Emergency Notifications are useful for:

- Engineers responsible for call routing and switch translations
- Network planners/architects to prepare for coming changes
- Call rating and billing operations staff
- Recipients of the LERG™ Routing Guide and/or TPM™ Data Source that need to be aware of last minute NXX announcements (new code openings)

Emergency Notifications report new NXXs that are effective in less than 45 days from the date they are entered into the underlying TRA database by the service provider or its agent. Industry lead time for an NXX opening is a minimum of 45 days from the data entry date. However, for various reasons, exceptions may sometimes be necessary. Emergency Notifications may also provide information of general interest such as reported blocked calls, short notice homing changes, and Rate Center changes. High level information regarding Area Code Splits (dates and test numbers) are provided and summarized once a month.

Immediate Emergency Notifications are the same as the Emergency Notifications. These are immediately issued anytime a new NXX is in effect less than 15 days from the effective date. Emergency Notification subscribers receive the Immediate Emergency Notification service at no extra charge. Emergency Notifications are available by email only. Note that the EN / IEN service does not provide indication of late code openings relative to NPA NXX block assignments.

Emergency Notifications:

Produced: Each Tuesday and as may be needed otherwise

Distribution frequency: Each Tuesday and as may be needed otherwise

Distribution format(s): email

Product Pricing / Ordering / Licenses / Other Services

Product Pricing

Pricing is not included in this catalog. TRA products follow a value based pricing model. Value based pricing is a process involving an assessment of several parameters that attempt to determine the 'value' of the product to the customer. Parameters include the type of company requesting the product, size of the company, etc. This pricing process is an equitable process whereby similar types of customers, relative to the assessed parameters, are charged the same price. The pricing process is consistent with the general TRA philosophy of providing a fair and equitable environment relative to its customers. In terms of value based pricing, this can be best understood as weighing pricing to customers in consideration that larger companies may 'benefit' substantially more from the data in TRA products than smaller companies.

Product Ordering Process

Ordering a TRA product is a two-step process. Once you have decided on which products may meet your needs, please follow these steps:

Obtain a Price Quote - TRA products are priced based on value based pricing principles. Thus, prices can vary by company. To obtain a price quote, complete both pages of the TRA Price Request Form, then submit them to TRA. The first page is used to identify the product(s) you are interested in and the second page is used as input to determine pricing. Once the TRA Price Request Form is received by TRA, TRA will respond within two business days either with a quoted price(s) or, requesting further information that may be necessary to determine such.

Submit an Order - After reviewing the price quote, if you wish to proceed to order a product(s), you need to complete a TRA Order Request Form. Simply list the product(s) you have chosen to license along with the quoted price(s). Also, include the required shipping and billing addressee information and indicate the billing method along with any Purchase Order Number, if applicable, and sign the order form. The completed Order Form, along with any payment as may be applicable for the given product(s) should then be submitted as described on the form.

TRA Price Quote and Order Request Forms are available at www.trainfo.com, or by contacting the TRA Customer Care Center.

Renewals

Given various scenarios under which a customer may order and pay for a TRA product, specifics may vary, but in general, the renewal process for subscriptions is as follows:

A subscription to a TRA product is viewed as an ongoing (automatically renewable) annual subscription. TRA will issue a notice at a reasonable point before your annual subscription date indicating the product's pricing for the upcoming year. Essentially, if you wish to continue to receive the product you will just need to pay for the subscription once you are invoiced.

TRA Enterprise Licenses

- All TRA product licenses are "Enterprise Licenses" that grant ALL employees in a company or specific Line of Business (LOB) unlimited access to the TRA data product for internal job functions within the specific company Line of Business (LOB) obtaining the license.
- An Enterprise License for the monthly subscription LERG™ Routing Guide Data Product includes the LERG™ Routing Guide One-Day Changes Process product.
- The product may be copied, duplicated, or loaded onto any licensee's employee's local computer, a LAN, WAN, server, Operations Support System, or other networked device that is accessed by all employees and downstream systems.
- Data may not be extracted in whole or in part for use in derivative products or services for distribution, license, or sale outside the company or LOB.
- Standard pricing algorithms are employed to ensure prices to all clients are fair and equitable and consistent with TRA and industry-accepted Fair Share principles. Prices for Enterprise Licenses are determined by the use of product data and the value your company derives from the data in the product.

Special Licenses

Under certain conditions, TRA will consider special licensing arrangements designed for companies with special needs. Due to the unique nature of each client's need, these Special Licenses are customized to meet your company's specific situation. TRA will work with you to design a license to help you reach your goals and at the same time protect our product content from unauthorized use. Please contact our TRA Customer Care Center to discuss how TRA can best meet your company's needs.

Restrictions on Using TRA Data

TRA strictly prohibits the use or provision of data from its products outside of the company defined under a given Enterprise License. However, special licenses may be arranged on a case by case basis as previously described. Please contact our TRA Customer Care Center to inquire about a special license.

Extended Product Support Services

TRA can provide customers with services that go beyond answering routine questions and similar basic product support. Such can include, but is not limited to:

- Extracting detailed report information, file data, etc., from specific products should the customer not have the time, expertise, etc., to do so.
- Developing software to automatically retrieve or to utilize a TRA product at the user-end.
- Correlating, assessing, etc., user supplied data in relation to TRA product data.

TRA reviews each request for extended product support services on an individual case basis. After the review, if determined TRA can provide such service, an approximate amount of time and a price to complete the requested work will be quoted. Such services may be cost beneficial if you are trying to obtain specific information and are not familiar with the data and/or concerned with your ability, costs, etc., to process the data.

For additional information, contact TRA Customer Care Center at 866-NPA-NXXs (866-672-6997) or 732-699-6700.

Payment Information

Payment and Billing Terms

Product subscriptions are billed on an annual basis (monthly and quarterly billing options are available upon request; however, a 3% service charge applies). Payment is due within thirty (30) days of the date of the invoice. Overdue payments are subject to late charges and interest in accordance with the TRA Product License Terms and Conditions. All payments must be made in U.S. dollars and drawn on a U.S. bank.

Taxes

Customers are responsible for remitting appropriate taxes relative to the product or service purchased. Taxes are based on several factors including the type of product or service involved and any jurisdictional taxes (e.g. sales, state, local, provincial) that may apply. Tax requirements are based on the "primary user/ship-to" address provided by the customer on the order form regardless of the distribution format used to obtain the product.

Subscription Term

TRA product licenses are considered evergreen in nature, meaning the intent is to continue to distribute the product unless specifically terminated by either party. This ensures that you are afforded uninterrupted receipt of a product that may be directly tied to internal processes run by your company. To ensure your awareness of when the billing term of your license is nearing conclusion (usually an annual period), you will be notified of upcoming billing for a new term to permit for continued receipt of the product.

Cancellation Policy

If payment is not received within 45 days of the billing date, your order is cancelled without notice and subsequent products are not sent. If you wish to renew distribution, payment of past due amounts and late payment charges must be made and a new order must be submitted, billed and payment received for the first year prior to any product distribution. . After the year has transpired, you may choose monthly billing as long as payment is received in a timely manner. Notify TRA in writing, 30 days in advance, to cancel product delivery.

Refund Policy

There are no refunds for products. If you are uncertain as to what a particular product contains or how/if you will be able to use it, please call the TRA Customer Care Center at 866-NPA-NXXs (866- 672-6997) or 732-699-6700 to discuss your needs and/or, download and assess a sample copy of the product from www.trainfo.com before submitting an order. Also, please describe your planned use of the product on our order form as clearly as

possible so that this can serve as another flag the TRA Customer Care Center can review prior to activating your order.