

Telcordia Routing Administration (TRA)

“REPORTING OF CARIBBEAN NANP DATA WITHIN TRA PROCESSES TO EFFECTIVELY REDUCE CALL BLOCKAGE AND BILLING ISSUES”

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Telcordia® Routing Administration (TRA) *NANP Caribbean Overview*

- Overall objective:

To ensure complete, timely, and accurate reporting of Caribbean Central Office (CO) Code assignments and related data elements

- Review:

- Telcordia® Routing Administration (TRA)
- Central Office Code Assignment Guidelines
- Central Office Code Reporting Data Needs
- Database Access and Data Management
- Caribbean Data Quality Issues and Timing; its potential impacts
- TRA Output (LERG/TPM)

TRA - NANP Caribbean Overview

TRA functions

- Serve as a focal point for intercompany exchange of pertinent **routing and rating data**
- Maintain a database and output products/processes to obtain data from “*data providers*” and distribute to “*data recipients*” in a timely and consistent manner
- Perform ongoing data analysis to address data integrity matters
- Assist in resolution of routing and rating data issues, use of data, etc., as may be provided through TRA products
- Participate in and support industry fora, as consultant and observer, to address and reflect industry changes and directions relative to routing/rating data, address data accuracy, address data consistency, etc.

TRA - NANP Caribbean Overview

Extent of TRA data coverage

- All North American Numbering Plan (NANP) assignments of CO Codes
 - NPA = Area Code
 - CO Code = “prefix”, “exchange”, NXX, etc.
 - US including US Territories, Canada, Bermuda and **17 Caribbean Countries**
- > 175,000 Central Office (CO) Codes (NXXs) and > 600,000 block records. Of the 175,000+ CO Codes, the approximate distribution is:
 - 155,000 United States and territories
 - 15,000 Canada
 - 5,000 Atlantic and Caribbean sovereign countries
 - 3,000 Other (e.g. NPA 5YY, 900)
- More than 45,000 supporting switching entities/POIs
- Data addresses existing configurations and future changes

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CO Code (NXX) Assignment Guidelines (COCAG)

National Management of CO Codes:

- United States (including US territories in NANP): www.nanpa.com
 - NXXs are assigned by NANPA
- Canada: www.cnac.ca
 - NXXs are assigned by the Canadian Numbering Authority (CNA)
 - Canada has a separate COCAG document (very similar to US)
- Caribbean:
 - Managed by each country
 - Processes vary by country

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CO Code (NXX) Assignment Guidelines (COCAG)

Data Requirements (U.S./ Canada):

- OCN (Operating Company Number)
- Exchange Area (Rate Center) within State/Province/Territory/Country
- Switching Entity / Point of Interface (POI)
- Tandem interconnection(s)
- Effective Date (various time frames apply)
- Additional data: terminating digits, time zone, business office, RAO, portability, pooling, switch homing, and more. (Most not applicable to Caribbean countries)
- “New” service providers must be authorized to provide service for the CO Code being requested
- Processes in place to support need for any additional codes

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OCN (Operating Company Number)

- Primarily based on Company Codes issued by the National Exchange Carrier Association (NECA) as agent for Company Codes defined in ANSI T1.251 www.neca.org
 - Format: NXXX (N=0-9, X=0-9 or A-Z)
 - Requested via NECA Company Code Request Form
- OCNs = NECA assigned Company Codes + TRA assigned OCNs
- One OCN per service “Category” (i.e. CLEC, WIRELESS, etc.)

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AOCNs

- Companies that enter data into the Business Integrated Routing & Rating Database System (BIRRDs)
 - May enter own company data only
 - May enter other companies data only (i.e. Third Party AOCNs - e.g. non-telco consulting companies)
 - May enter own company data plus others
- Third Party AOCNs may provide additional services to their clients besides just input into BIRRDs
- Serves as a primary means for data security (i.e. an AOCN can only update its own data)
- AOCNs established via contractual arrangements with TRA

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Fair Share Plan (FSP) – BIRRDs updating

- FSP is the Telcordia contractual arrangement with AOCNs
- FSP covers BIRRDs enhancements, support, and maintenance.
- Based on relative number of records (%) in database - everyone pays the same per record (per record cost vary annually)
- Billing adjustments made each year to account for monthly fluctuations in relative number of records
- Annual charge basis (i.e. not transaction based) - results in efficiencies and lower all-around costs for AOCNs and Telcordia

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Common Interest Group On Routing and Rating (CIGRR)

- User group of TRA database inputting companies
 - Regulators, industry organizations (NECA, COMMON LANGUAGE), etc. may attend if requested or upon request
 - SAIC Canada (CAN), and Pooling Administration regularly attend
- AOCN's - Inputting companies (into BIRRRDS)
- Discusses common data needs
 - Addition of fields/files
 - Removal of fields /files
 - Database edits
 - Develop/ modify field definitions
- Develop/Integrate TRA standalone and industry related procedures
- Provides direction to prioritization of TRA work

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Code Administration (CA) - BIRRDs Interaction (ACD)

- As part of assignment process (US / Canada), CA creates the Assigned Code Record (ACD) in BIRRDs
- ACD serves as a control to prevent “self assignment” of NXXs by service providers and establish values for OCN, Rate Center, and Effective Date
- ACD data:
 - NPA NXX
 - Effective Date (i.e. earliest it may have TNs assigned)
 - OCN
 - Switch (i.e. CLLI™) – SWCHccUNKNO (cc=“Country Code” unless actual CLLI exists)
 - Rate Center (areas in which TNs may be assigned for the NPA NXX)

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BIRRRDS Components:

- Business Integrated Routing & Rating Database System (BIRRRDS)
 - BIRRRDS is the database for output products that are used by non-Caribbean service providers to address Caribbean numbering
 - BIRRRDS output products used by Caribbean service providers to assess non-Caribbean NANP numbering (other sources also available, NANPA PLs, www.cnac.ca , www.nanpa.com, etc.)

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Telcordia® LERG™ Routing Guide

- LERG, as all TRA products, is essentially data (not an application!)
- Contains routing data from BIRRDs
- Issued monthly (quarterly subscription available)
 - LERG One-day Changes process is optional to monthly subscribers
 - Monthly LERG data is “cut” at close of business the last working day of each month (sometimes a day earlier in December)
 - LERG is “produced” the first workday of each month

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Telcordia® TPM™ Data Source

- Focuses more towards companies involved with rating and billing calls
- Less extensive data than LERG (e.g. no switch data)
- Some non LERG data (e.g. time zone by NPA NXX, RAOs)
- Contains routing data from BIRRDs
- Issued monthly (mid month) and quarterly similar to LERG

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Caribbean numbering assignment issues (varies by country)

- General data/information sources used by TRA:
 - NANPA Planning Letters – note: may be limited in regards to ongoing changes
 - Regulator data (website, emails, etc.)
 - Service Providers (emails, IR21s for mobile roaming, etc.)
- Numbering assignments not always complete and/or timely (new assignments, reclamations, changes in assigned service providers, etc.)
 - Calls into country may be blocked if the NPA NXX is not included in TRA data.
 - Driven by concerns about scams – augmented by U.S. subscribers unfamiliarity with Caribbean NPAs
 - Alternatively, calls may not be blocked but are costly to service providers if “billing” cannot confirm existence of NPA NXX (if a valid TN), or additional call processing costs are incurred (if not a valid TN)
- Regulatory support may be weak in some cases
 - No website, or no data / lack of up-to-date data at website
 - Alternative notification process not necessarily available or else delayed
 - Alternative reliance of service provider sites may be limited to assignments to a given provider(s), may be outdated in regards to reclamations and company changes, may be delayed (e.g. new assignments), have been known to include “self assignments”, etc.

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Caribbean numbering assignment considerations

- Lead time for new NXX assignments:
 - Data should be in BIRRDS approximately 45 days prior to effective date
 - New companies need OCN assignments
- Unique NANP NXX assignments / non-assignments:
May present issues with:
 - Inbound/outbound call completion
 - Billing
 - Compatibility of vendor specific software/hardware
 - N11: 211, 311 ... 911
 - 555
 - 976
- Mergers and Acquisitions



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Downstream Considerations:

- NPA Relief – Splits / Overlays
- Local Number Portability
- Pooling

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Contact Information

- **TRA Customer Care Center:**

866-672-6997 or 732-699-6700

- **TRA email:** tra@telcordia.com

- **TRA Web Access:** www.trainfo.com

- **Related information:**

www.atis.org

www.fcc.gov

www.neca.org

www.npac.com

www.commonlanguage.com

www.numberpooling.com

www.nanpa.com

www.cnac.ca

www.crtc.gc.ca

- **Also, websites of: service providers, regulators, vendors**

Telcordia Routing Administration (TRA) Follow-Up

- TRA is willing to work with OOCUR, individual regulators, or service providers to provide future presentations, more detailed workshops and/or specific training should there be interest in such.
- In addition, any regulator wishing to be added to the CIGRR meeting notice distribution list should send an email to Connie Hartman at chartman@telcordia.com.



... from TRA