

Mediation: Overview

CDG's Mediation is a state-of-the-art solution for conquering the challenges associated with collecting unending streams of data from multiple sources using different formats, protocols, and time frames, and then processing and consolidating that data into files for invoicing, accounting, auditing, archiving, and reporting. Our Mediation system can help you filter, process, track, analyze, audit and distribute your data with confidence.

OVERVIEW

Mediation is a critical tool in billing wisely. Your goal is to consolidate and correlate an unending stream. CDG's Mediation ensures that usage information is collected effectively and prepared for downstream distribution, so tasks like billing can be initiated and completed in a timely manner, with dependable accuracy and clarity.

Mediation receives data from switches and other network systems and converts the information to manageable formats for billing, auditing and reporting purposes. Mediation filters out irrelevant data and correlates and organizes your call report data. Billing is easily reconciled and disputes are settled without delay. Mediation also generates reports that describe call volume, origin, types of service and other vital details to use for planning and allocation and provides custom usage search and easy-to-use query features for detailed tracking and analysis.

Billing wisely is a basic requirement for successful business practices. And at cdg, helping your telecom to bill wisely is what we do. Mediation is available for online or licensed delivery and can be fully integrated with CDG's CABS and MBS consumer billing products.

FEATURES

Flexible Business Rules Mediation allows for the customization of business rules used to filter, edit and rate call detail records.

Automated Input Validation System

- The input file scanner agent wakes at adjustable time intervals to scan for available inputs and schedules them to be processed.
- The anomaly file scanner agent wakes at adjustable time intervals to scan for files which have not been recognized as valid inputs by the input scanner. The agent then alerts the appropriate personnel to a possible issue.
- The file verification agent wakes at adjustable time intervals to verify that all inputs have been received and processed. If an expected input has not been received, the appropriate personnel are alerted.

Switch Compatibility

- Traditional switches, such as Northern, Lucent, Siemens and Mitel.
- Soft switches, such as Taqua, GENBAND, Metaswitch, REDCOM, Siemens and Centile.
- VOD Servers, such as Myrio, Motorola and Conklin.

Data Format Compatibility

- Automatic Message Accounting (AMA)
- Automatic Message Accounting Data Networking Systems (AMADNS)
- Exchange Message Interface (EMI)
- A variety of Call Detail Records (CDRs), including Toly Digital, Level 3 GTO, Powernet, XCast Labs, TNCl, Zone Telecom, Spirit Telecom, Telehop, Bell Canada, Diallog, and DMS-MTX.
- Transcend Daily Call Detail (Verizon)
- Standard Daily Extract (CenturyLink)
- Lucent Flexent/AUTOPLEX Executive Call Processor
- Comma-delimited (.csv) transaction files for VoIP
- Comma-delimited (.csv) transaction files for VOD

FEATURES (CONTINUED)

Event Notification Provide system-generated messages about job statuses, potential processing issues and general information to selected personnel.

File Tracking Audit IDs are assigned to every file for tracking records in the system (**Fig. 1**).

MBS - Merge Input Files - MPBILL - Mozilla Firefox

Selection Criteria

Processing Status: Released for Processing, Merged, Files in Error, Bypassed or Hold, Loaded, Files Being Processed

Date: All Dates, Last 7 Days, Last 30 Days, Between. From Date: 01-02-2013, Thru Date: 06-19-2013

Schedule ID: Any, Between. From: 0, To: 9999999

File Audit ID: Any, Between. From: 0, To: 9999999

File ID: File ID: -Any-

Dataset Name	Processing Status	File Type	Record Format	Usage Category	Merge Audit Key	File ID	File Format	Phase 1 Schedule ID	File Audit ID
MP.PROD.EMI.10559087.A000317070.CMRG	Ready	Bilables	Usage Master	EMI	130527235005000001GB	125	REMH-Rated EMI Home Usage- V1		318270
MP.PROD.EMI.10559087.A000317171.CMRG	Ready	Bilables	Usage Master	EMI	130527235005000002GB	125	REMH-Rated EMI Home Usage- V1		318271
MP.PROD.EMI.10559087.A000317272.CMRG	Ready	Bilables	Usage Master	EMI	130527235005000003GB	125	REMH-Rated EMI Home Usage- V1		318272
MP.PROD.EMI.10559087.A000316868.EMRG	Ready	Bilables	Usage Master	EMI	130527235005000004GB	125	REMH-Rated EMI Home Usage- V1		318268
MP.PROD.EMI.10559087.A000316969.EMRG	Ready	Bilables	Usage Master	EMI	130527235005000005GB	125	REMH-Rated EMI Home Usage- V1		318269
MP.PROD.EMI.10559087.A000317171.EMRG	Ready	Bilables	Usage Master	EMI	130527235005000006GB	125	REMH-Rated EMI Home Usage- V1		318271

MBS - Daily Rating Input Files - MPBILL - Mozilla Firefox

Selection Criteria

Processing Status: Released for Processing, Files Being Processed, Reformatted and Rated, Bypassed or Hold, Reformatted / Staged For Rating, Completed / Staged For Merge

Date: All Dates, Last 7 Days, Last 30 Days, Between. From Date: 09-02-2009, Thru Date: 06-19-2013

Schedule ID: Any, Between. From: 0, To: 9999999

File Audit ID: Any, Between. From: 0, To: 9999999

File ID: File ID: -Any-

Company ID	File ID	File Audit ID	Dataset Name	Processing Status	Usage Category	Audit Key	Schedule ID	Beginning Seq. No.	Ending Seq. No.	Usage From Time
222	74	318272	BAF_2013-05-25_05h39_04_UTC.pri	Completed / Staged for Merged	EMI	559087	559087	0	0	05-24-2013 20:46:43 05-
667	587	318270	AMA20130528000001.AMA	Completed / Staged for Merged	EMI	130527235005000001GB	559087	0	0	05-26-2013 23:57:33 05-
222	74	318271	BAF_2013-05-25_05h31_48_UTC.pri	Completed / Staged for Merged	EMI	559087	559087	0	0	05-25-2013 00:34:54 05-
882	536	318268	SM213525.cdr	Completed / Staged for Merged	EMI	559087	559087	990	990	05-23-2013 19:13:26 05-
882	536	318269	SM213526.cdr	Completed / Staged for Merged	EMI	559087	559087	991	991	05-24-2013 20:53:05 05-

Daily Rating Input File

File Information: File Audit ID: 318272, Beginning Seq No.: 0, Ending Seq No.: 0, Usage From Time: 05-24-2013 20:46:43, Usage Thru Time: 05-27-2013 00:39:04

Reformatting Stage: Records: Input: 12778, Dropped: 4827, Total Processed: 7951; CABS: Created: 892, Processed: 7056, Passed to Merge: 7948; End User: Created: 75, Processed: 895, Passed to Rating: 970

Rating Stage: Reformatting Input: 970, Recycled: 0, Dropped: 0, Passed to Merge: 970

Fig. 1: Audit IDs allow you to track your records through every step.

FEATURES (CONTINUED)

Process Scheduling Processing automation for each Mediation function ranges from full intervention mode (manually starting processes) to full automation mode (processes that start when thresholds or other specific criteria are met). The system scheduling manager provides easy access to all processing needs (Fig. 2).

Studies / Specialized Reporting

- Traditional industry study reports are available.
- Comma-delimited (.csv) files can be generated to be used internally or sent to consultants.

Reporting

- Trending reports highlight and identify anomalies.
- Audit reports verify that transactions are accountable.
- Warning reports identify any issues associated with the transaction being processed.
- Comma-delimited (.csv) files allow the user to import data into applications such as MS Excel to generate additional specialized reporting.

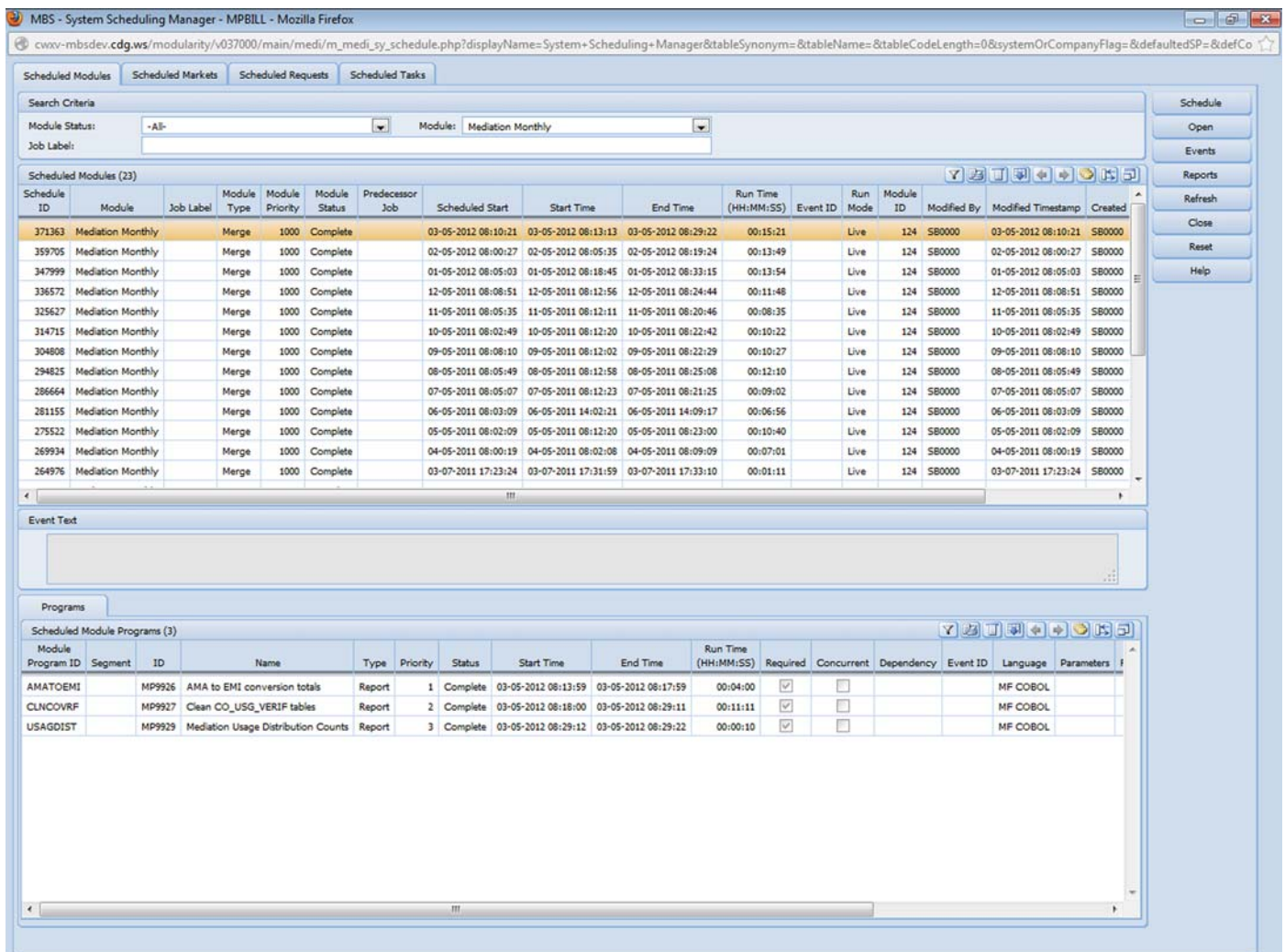


Fig.2: Mediation process scheduling ranges from full intervention to full automation.

ANALYSIS TOOLS

• AMA Search

- Filter based on a single criterion or combinations of preset AMA fields.
- Results presented on three optional report presentations.
- Details of individual records and overall totals.

• EMI Search

- Filter based on single or combinations of preset EMI fields.
- Filter based on positional parameter with user criteria.
- Results presented on three optional report presentations.
- Results placed in two EMI industry file formats or CDG internal formats.
- Details of individual records and overall totals.

• Usage Search

- Create custom profiles to search master or work files for messages and charge records (Fig. 3).

• Custom Queries and Dashboards

- Create custom queries and dashboards for reporting and auditing (Fig. 4).

DELIVERY METHODS

- License
- Online

HARDWARE

- IBM System i (AS400)
- IBM System p (RS6000)
- IBM System z (VSE Mainframe)
 - Archiving of reports and usage

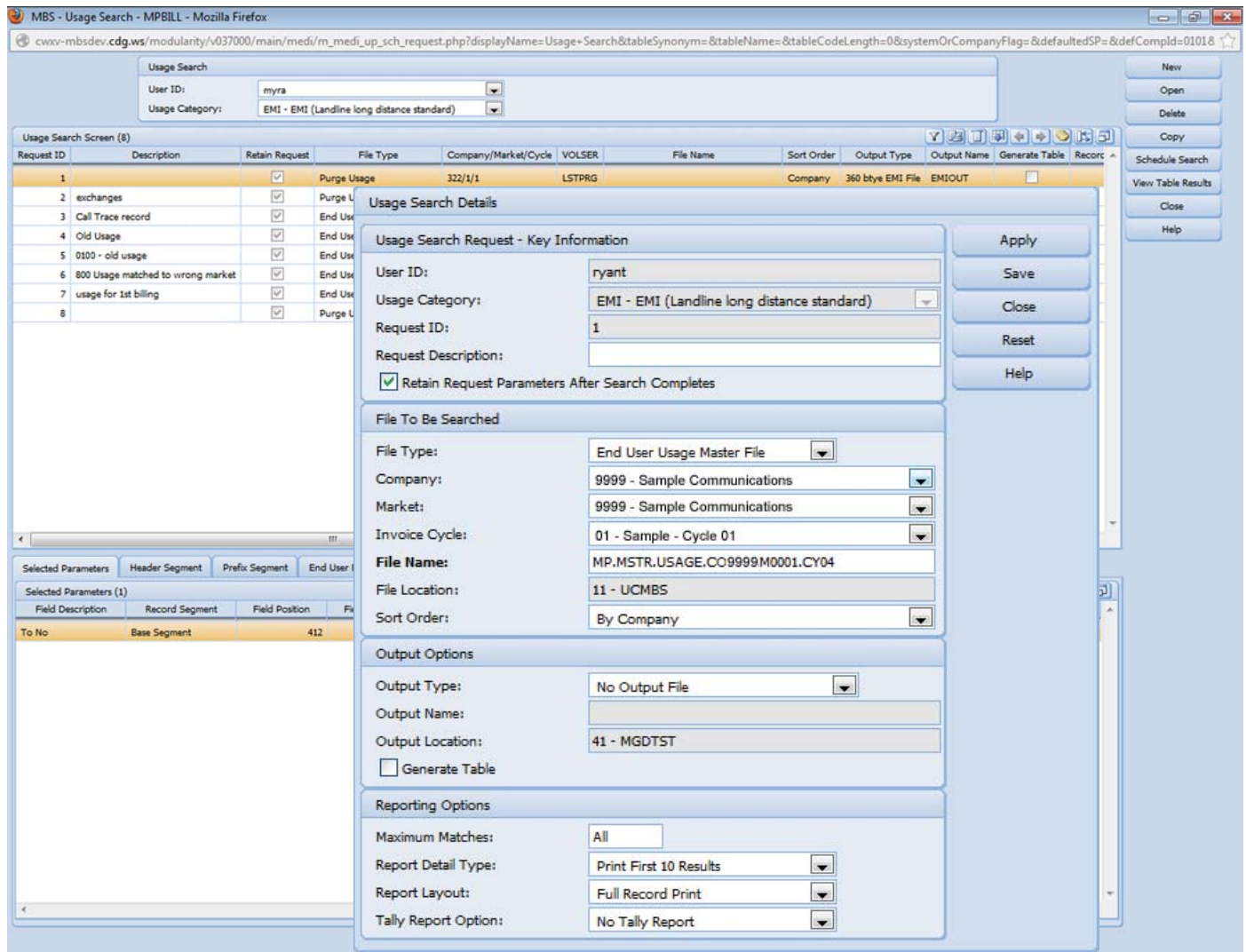


Fig. 3. CDG's usage search feature lets you define and store custom search profiles

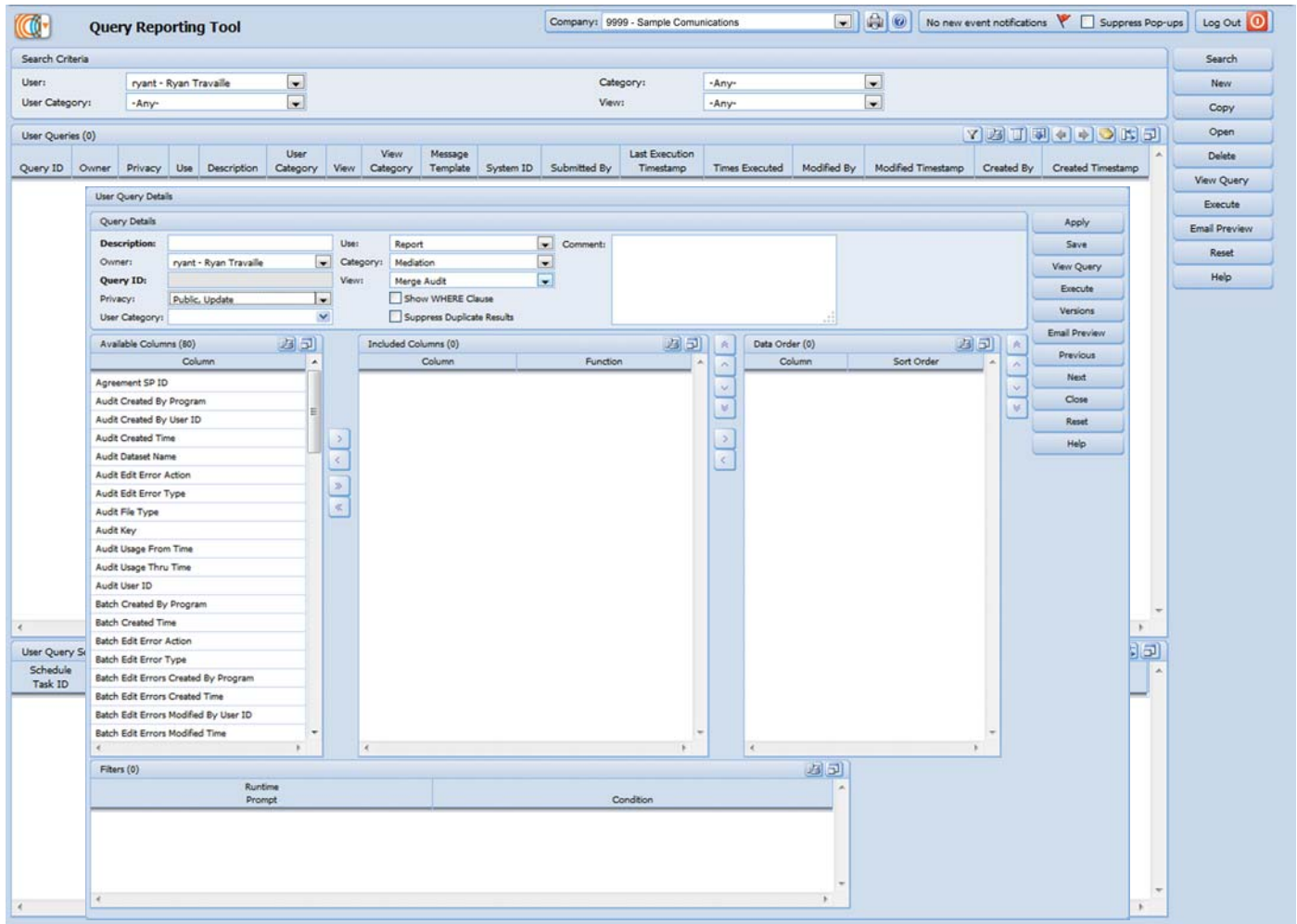


Fig. 4: Easily set up queries to create your own custom reports and dashboards for your individual analytic and auditing needs

RATE CALCULATIONS

Mediation provides integrated standard rating for non-tiered/non-bulk plans as a stand-alone product, or Mediation can be combined with our MBS consumer billing ID solution to provide advanced rating options.

The rating engine in our MBS system allows you to define advanced rating structures that can combine rate plan codes, allowance codes and discount and miscellaneous charge codes, making it possible for service providers to quickly activate and reliably bill new services without programming delays.

Rate Packages (control pricing of daily usage transactions)

- Pass through usage with predetermined price.
- Use alternate charge (modules, etc.).
- Utilize rate plan code to determine rate.

Rate Plans

- Based on location
- Based on specific dates
- Rate banding by distance, locations, etc.
- Rate period differentiation
- Holiday rating
- Units vs. transaction rating
- Initial and overtime rating units
- Application of surcharges

Processing Priority

The processing priority function ensures that appropriate rates are applied consistently and accurately when multiple rate packages, allowances, and discounts and miscellaneous charges are applicable.

RATE CALCULATIONS (CONTINUED)

Rate Packages (Available when integrated with MBS)

Utilize any combination of rate plan codes, allowance codes and discount and miscellaneous charge codes (Fig. 5).

Discounts and Miscellaneous Charges

- Can be based on selection criteria for usage (type, subtype, method, rules, etc.).
- Can be based on selection criteria for non-usage (type, item type, item sub-type, etc.).
- Selected items can be used as qualifying and/or eligible items, and can be limited to debits, credits or both.
- Step and volume tier structures are supported.
- Percentage rating, flat rating (charges only).

Allowances

- Can exclude pre-defined amounts of usage (minutes/transactions) from normal pricing.
- Can define an override rate applicable to usage within specific rate period(s).
- Can be based on usage selection criteria (type, sub-type, method, rules, etc.).
- Can be applied on a per transaction basis.
- Can be based on dynamic quantity (incrementing allowance based on specific transactions).
- Includes a pooling option (a sharing of allowance among services).
- Includes a pre-pooling option (a chronological application of the pooled allowance).
- Proration, charge quantity and inheritance functions.
- Qualifying items can be used to assess a minimum charge.

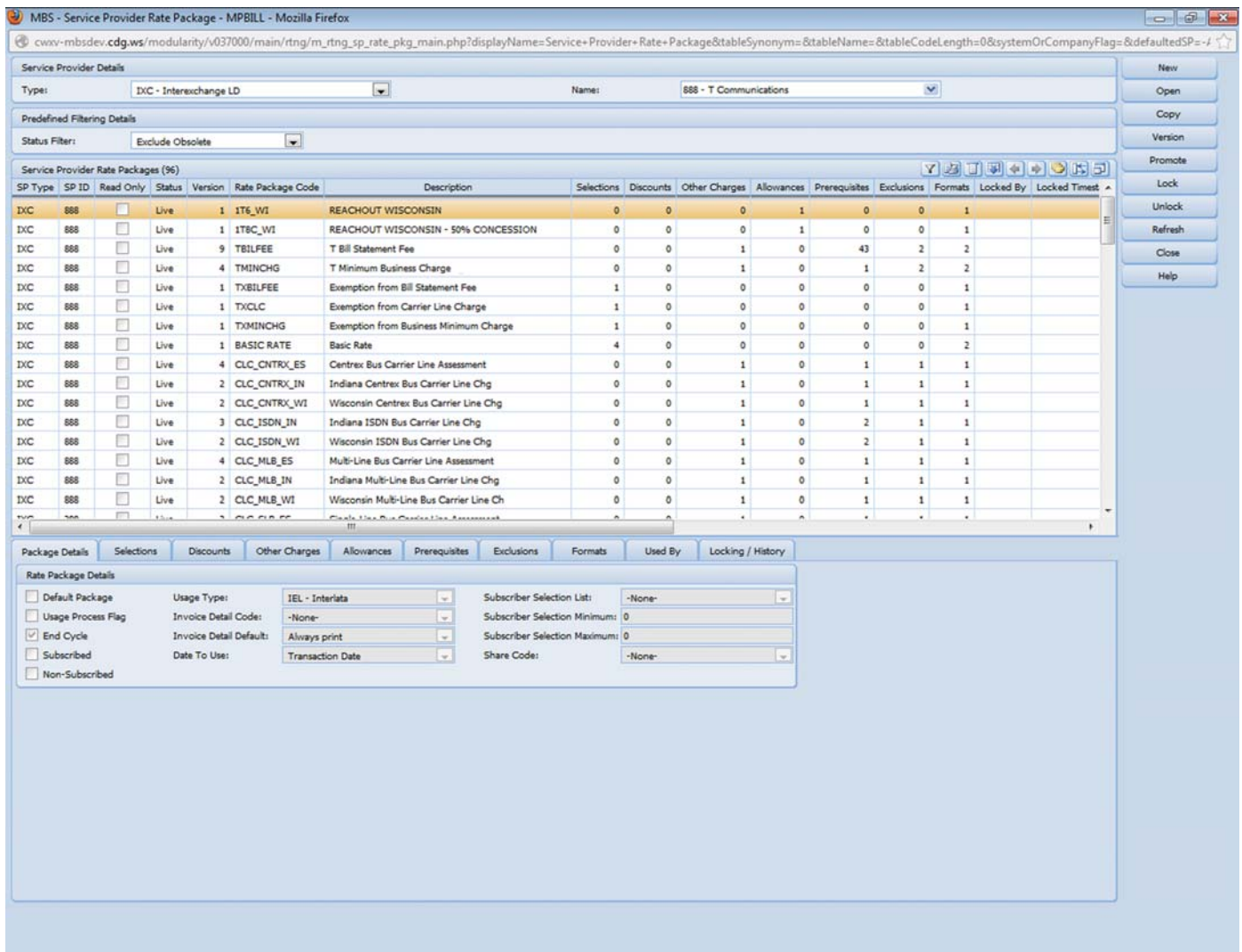


Fig. 5: CDG's versatile rate packages are the hub of all daily and end-of-month rating activity.