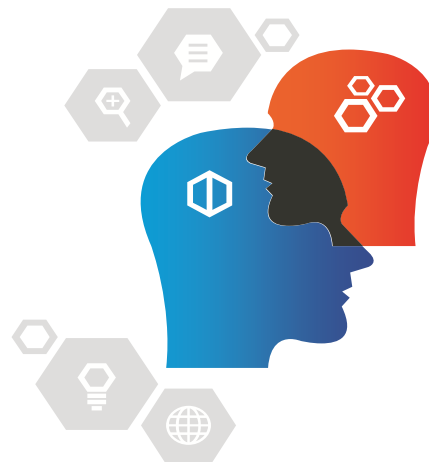


# Gamma Analytics

## Enrichment Plug-ins

Communication Service Provider's (CSPs) have to deal with multiple data formats routinely and pervasively. This introduces complexity and bottle necks as data needs to be continuously deserialized, mediated, and parsed and even then information is often incomplete and data have to be selectively enriched for processing. ASN.1 or Binary to ASCII conversion is a good example. B number details, inbound roamers, subscriber type, readable date, currency format conversion, call duration format change are commonly enriched fields



Gamma Analytics offers an advanced intelligent Enrichment plug-in that natively handles raw data through built-in deserializers. In addition it can also apply enrichment rules dynamically on data based on the file and source type. This is a result of extensive telecom knowledge and experience that has been incorporated into Gamma's Enrichment plug-ins  
 Typical data feeds include MSC CDRs, IN Prepay CDR-s, Mediation CDR-s, Mediation Rules, HLR data, CRM, Rated CDR-s from Billing as well as data warehouse, MSC logs and GSN CDR-s



### FUNCTIONALITY

- Identification of Bnumber  
Country(E164)/Circle/Operator(E212)/PRS Call/Toll  
Free/Offnet-Onnet indicator  
Bnumber normalized to Client specific format,  
Example 1. CC-NDC-SN --> 919831403444  
Example 2. 00CC-NDC-SN --> 00919831403444  
Example 3. +CC-NDC-SN --> +919831403444
- From IMSI get in bound Roamers HPLMN details
- Analyze RSN in MSC and report missing RSN file wise
- Correlate multiple CDRs to a single CDR identified by Gamma generated Record Type
- Identifies PRS calls through dialled digit analysis and display provider information of dialled number



### TYPE OF ENRICHMENTS

- Dialed-digit Analysis
- IMSI Analysis
- Subscriber Analyzer
- Date Converter
- Currency Converter
- RSN Analyzer
- CDR Assembly
- Usage converter
- PR call Analyzer



### BENEFITS

- Change in Number length will not be affected
- No hard coding of Number length for Operator Subscribers.
- Identify Roamers from Partner HPLMN based on System specific logic.
- Any source format including Unix date can be changed to user specific format
- SDR value converted to local currency for analysis
- Record Sequence Number checked and missing Numbers reported
- Split CDRs along with assembled CDR for comparing with other Sources like CS or Billing
- Report generated on revenue based on Provider -- useful in Partner Management , Margin Assurance

DOMAIN SPECIFIC

DATA ACCESS

DATA ANALYSIS

DATA SCIENCE

ANALYSES AS SERVICE

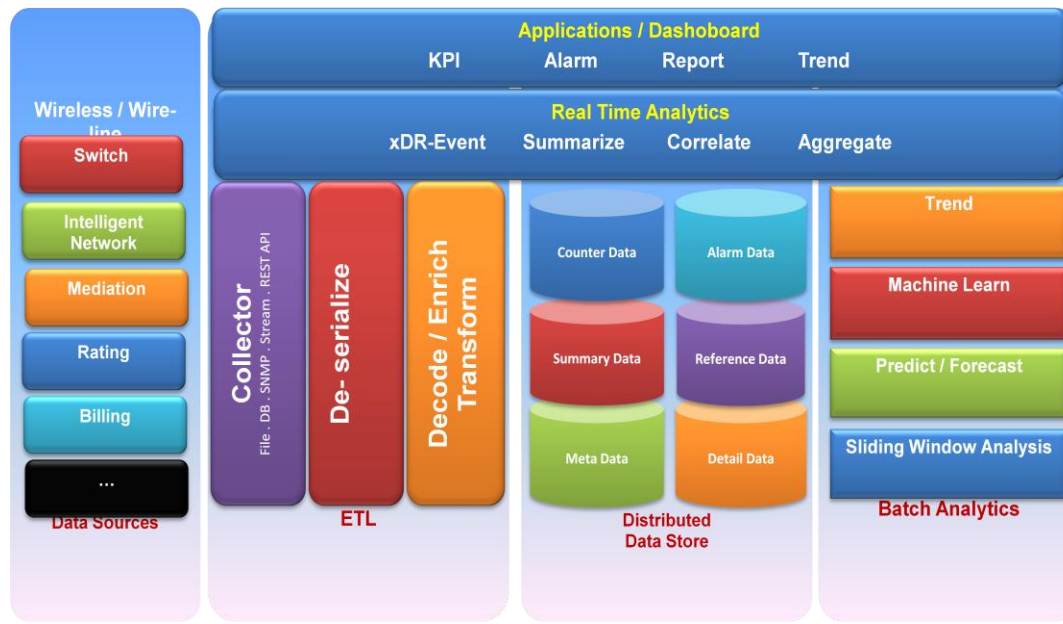
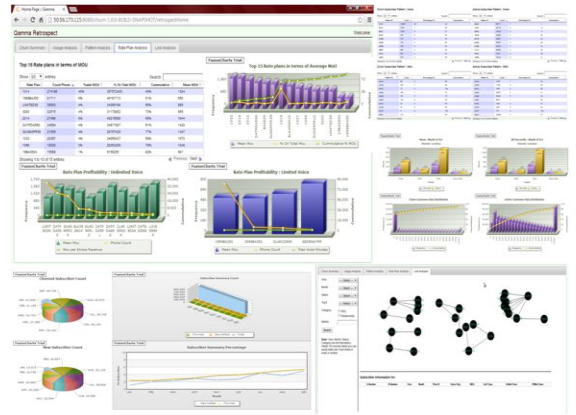
**GAMMA**

WWW.GAMMANALYTICS.COM

# About – Gamma Analytics

THE FIRST BIG DATA ANALYTICAL PROVIDER THAT INCLUDES DOMAIN INTELLIGENCE TO ENABLE, STREAMLINE AND MANAGE TELECOM DATA PROCESSING, DATA SCIENCE AND ANALYSIS

- Designed and optimized for communications providers
- Solution includes pre defined analytics for telecom operators
- System set up and go-live in days
- Product as a service model to eliminate HW / SW expenses and minimize HR
- Currently deployed in the Americas and processing terabytes of data daily
- Advanced technology to support real time analyses
- Advanced visualization and dashboard that can also be viewed from Android and iOS
- First and only telecom solution to fully incorporate Data Science Services
- Cost model to allow immediate ROI



## PRODUCT OFFERINGS

- ETL Connector
- De-serializer
- Enrichment Plugin
- Loader
- Data Warehouse Builder
- Data Analyzer
- Dashboard
- Predesigned reports for IT operations
- Standard reports for telecom operations
- Churn Management
- Mobile Money

## WHY GAMMA ANALYTICS

Typically CSP look to the provider for technology expertise and the provider looks to the CSP for domain expertise. This often results in expectations and results mismatch.

Gamma Analytics bundles Data Science services as a component which means the apps have pre-defined functionality that includes Data Science elements as well as Data Scientist consultants and consulting as part of the solution set

This becomes an important differentiator as a standard analytical set includes

- Structured and Unstructured data
- Streaming and batch records
- Internal and external sources
- Private and public systems

Full branding and localization support processes to reduce costly errors and potential revenue loss.



ADVANCED TECHNOLOGY SUPPORT

ANALYTICS

DATA SCIENCE AS A SERVICE

**GAMMA**

TELECOM BIG DATA ANALYTICS

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