THE NEW WORLD OF CUSTOMER EXPERIENCE™

EXCITING / INTELLIGENT / DYNAMIC QoE / ACCELERATE BUSINESS VALUE

Fraud Management

Oi – August 2016

True Peace of Mind

By preventing revenue loss

Product Presentation and Demo

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cVidya/Revenue Guard World Map

Over 160 customers in 64 countries

cVidya

About cVidya:

- Founded in 2001, acquired Jan-2016
- Recognized market leader in RA, Fraud & Revenue Analytics
- Focus on Telecom Service Providers
- Over **160** customers in **64** countries
- Broad Tier-1 presence:
  Telefonica, AT&T, Sprint, Bell, Rogers, BT, DT, Vodafone, Orange, Globe,…

Industry Thought Leadership

- cVidya leads & participates in industry forums including the TM Forum, ETNO, TUFF, CFCA, MEF, GSMA and FIINA.
- cVidya has proven leadership and has gained market recognition, winning multiple prestigious awards and leading the Revenue Assurance modeling committee in the TMF.

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Revenue Guard: Combining expertise with top-notch technology

EXPERTS

- Global Revenue Optimization (GRO) center
- Leading the expert forums in TMF, CFCA and others
- OSS/BSS Experts

METHODOLOGY

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REVENUE GUARD

- [illegible]on
- S[illegible]
- Proc[illegible]
- Business [illegible]perational insights
- Predefined business KPI's
- Full cycle accountability

INNOVATIVE TOOLS

- Innovative service platform
- Award winning solutions
  - MoneyMap, FraudView and others
- BI Analytics
- Big Data platform
- Automated correction

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Methodology:

From analysis to ongoing operational improvements

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Revenue Guard Added Value

High % revenue recovery

Single vendor Ownership and Accountability closing the loop

Short TTM

Pre-launch readiness

Best Quality Solution Delivery

Over 95% success rate in implementation of transformation projects.

Consultancy & Best Practices

Amdocs excellence center with over 30 years of expertise in telecom + cVidya TMF leadership

On-Going Business Analysis

Over 400 experts in the fields of RA, Fraud prevention and business assurance

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Introducing FraudView

Fraud, Risk and Service Abuse Management System

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FraudView

- Based on Amdocs' domain expertise
- Detects & prevents all current and emerging fraud threats
- Covers management & operational needs
- Enhanced visualization, usability and workflow for better, accurate and efficient performance
- HTML5-based, accessible from any device
- Modular & scalable solution
- Able to process and analyze huge data volumes (*Hadoop-based solution*)

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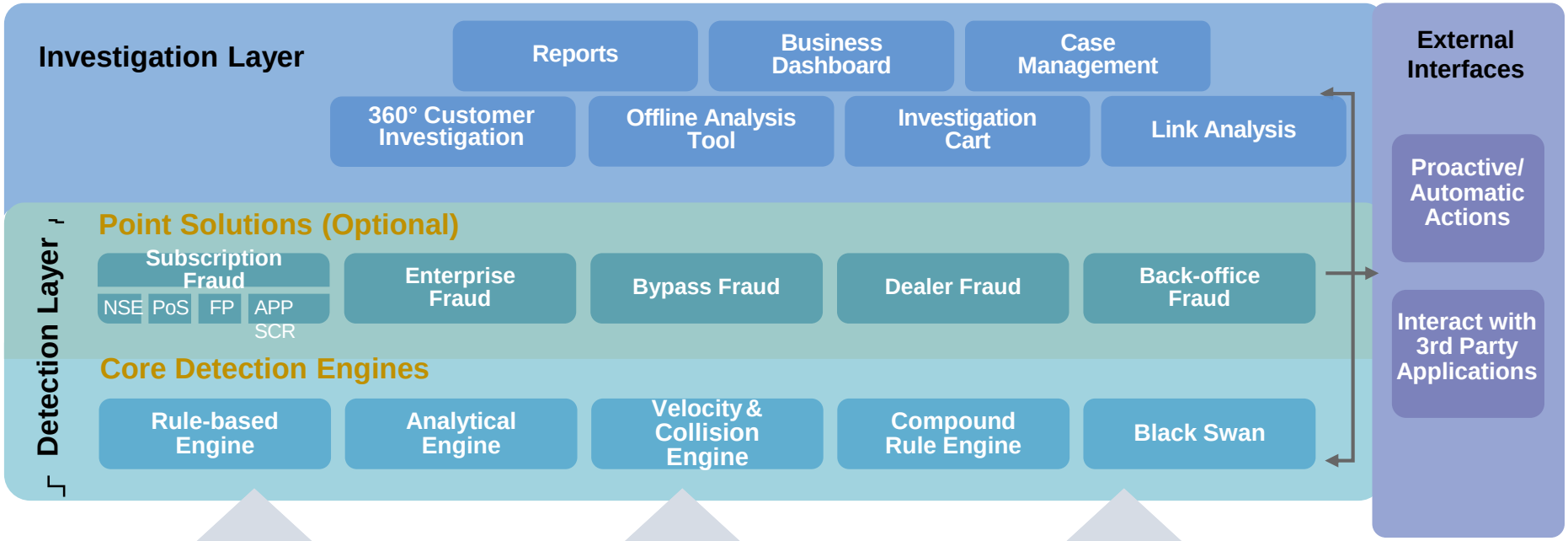
FraudView - Functional Diagram



External Fraud Sources
Real Time SS7/VoIP Usage
xDRs & transactions
Service Orders
Subscriber Details
DPI Information

Internal Fraud Sources
CRM Events
Log Files
Ajustments
Refunds

Partner Fraud Sources
Dealer Activities
Commissions
Partners' Activities
ERP logs/events
CRM events

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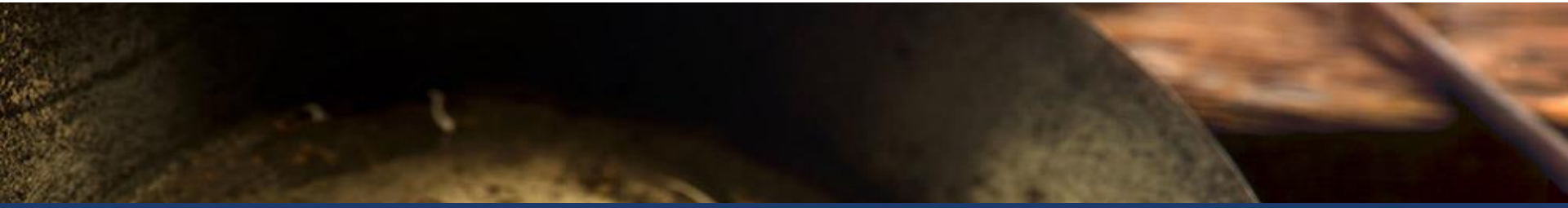

• Core Detection Capabilities

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Rule-based Engine

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- Full flexibility to compose or update any rule for selection and definition of monitored elements, logical conditions and parameter settings
- Interfaces to any source of information (both traditional and emerging, such as Mobile Money transactions, Machine to Machine and information extracted from DPI probes to be able to detect mobile data fraud issues)
- A market leader in Real Time detection of fraud
  - SS7 Traffic can be monitored using cVidya's I-Probe
  - Unbiased information, directly from the switch
  - In-band information, including DTMF
  - True Real Time, including partial xDRs
  - Proactive blocking actions
- Also supports real-time fraud detection in IP-based networks (OEM with leading IP-Probes vendors)

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Analytical Detection Engine

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- Robust infrastructure uses multiple algorithms to perform various types of analysis, including:
  - Peer group comparison & outlier detection
  - Statistical & Behavior Analysis
  - Long term aggregations
- Graphic alerts display
- Drill down to xDR level capabilities
- Supports alerting to any change in the entities' behavior
- Based on MS OLAP cube technology

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Velocity & Collision Engine

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- Designed to detect “Time & Space” violations in various services
- Indicates irregularities in web transactions (Internet accounts, IP addresses etc.), for example:
  - A web transaction for an internet account originated from an IP Address in Thailand on 2.3.14 at 14:22:00
  - The same account had an additional web transaction from an IP Address in Belgium on the same day at 14:35:00

** Historically detected SIM cloning fraud (almost irrelevant these days)

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Compound Rule Engine

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- Supports detection of complex fraud scenarios and reduces false alarms
- Includes the following capabilities:
  - **Compound rules** – Ability to aggregate several rules together and generate alerts only if all its sub-rules have alerted in order to reduce false alarms, e.g., no incoming calls & SMSs in the last 24 hours AND excessive outgoing calls to risky destinations in the last 5 hours AND sudden change in total duration of calls)
  - **Fields comparison** – Builds complex criteria in which one xDR field is compared to another (including arithmetic operations), e.g., call price > 120% customer balance

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Black Swan – Suspicious Combinations Detection

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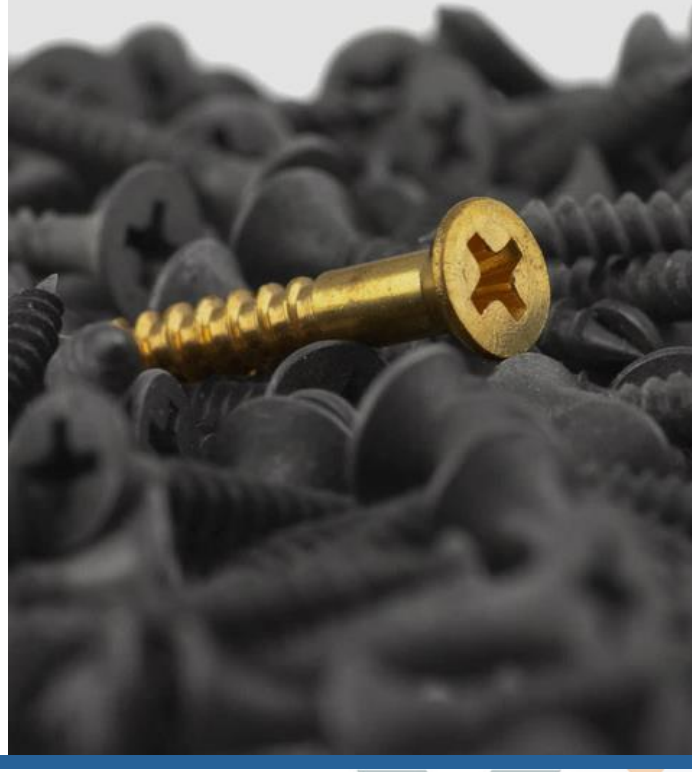
A unique detection engine that detects "suspicious" combinations in various entities that appear in the customer details fields, e.g.,

- ID # 123456789
- SS# 1111111111
- Driver's license # 11221122
- Bank account # 22334455



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• Core Investigation Capabilities

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