#### FraudView - Benefits





- A web-based GUI accessible from any internet enabled device
- Covers a wide range of products, services and technologies
- Superiority in detection and investigation of usage and non-usage-based fraud
- Robust analytical capabilities for actionable business insights
- Minimizes fraud losses with true real-time detection
- Big Data capabilities

Information Security Level 1 – Confidential

 Modular approach with unique and powerful point solutions to combat fraud in various domains

#### **Customer Testimonials**



"FraudView Cloud was up and running within an incredibly short period of time, stopping fraud already during the setup phase and with return of investment within 6 months of implementation, in addition to the positive effect on customer experience, which is priceless."

> "Our company wanted to unify the operation of two systems functioning in four geographical locations. After comparing the functionalities of two solutions, selecting the upgrade was a relatively easy decision. We can now prevent the fraud types that were plaguing our network, and the solution's flexibility enables us to add new rules for new profile types as they emerge."

"With the confidence gained in the product's performance, reliability and stability, KS has decided to upgrade to the latest release, FraudView Version 9, extending our fraud coverage & investigation efficiency as well as supporting very large volumes of data via Oracle's Exadata." KYIVSTAR

> "FraudView was instrumental in detecting a major type of fraud multiple calls to the same B number using divert to a foreign PRS number (£K's per hour)."





movistar

#### FraudView - Differentiators





- The 1<sup>st</sup> fraud management solution in the market to support big data based infrastructures
- BlackSwan suspicious pattern detector
- A dedicated solution for inter-carrier fraud

Information Security Level 1 – Confidential

- A comprehensive point solution to detect and prevent Sales Channel fraud
- Investigation cart for better knowledge management
- "FraudView as a Service" offering Fraud Detection Services as a service (including embedded community knowledge sharing facility)



#### Why Amdocs's Fraud Solutions?



- Over 15 years of telecom fraud experience
- E-learning courses for fraud professionals
- Installed base of over 100 CSPs worldwide
- Dedicated consultancy practice
- Leadership in fraud standards bodies (TMF, CFCA, GSMA)
- Vendor of choice for leading corporations (e.g., Telefonica, Telenor, Kyivstar, Globe, etc.)
- Sole provider with live fraud cloud deployments







## **Leading the Industry**







"We are very pleased with our decision to work with cVidya and their eLearning program which had a very positive impact among our RA teams. cVidya expertise keeps you ahead of the curve and I would definitely recommend the program for all telecom operators."

Gabriela Sobral Gil, Revenue Assurance Director for Latin America at Telefonica International.





#### **Sharing what we Know**

- Online Revenue Assurance and Fraud Management courses
- Fully interactive, easy to use eLearning platform
- Delivered by top industry experts
- Provides in-depth insights, including technical overviews, business aspects, work methodologies and best practices
- Learn in your own time and pace
- Available in English or Spanish

### **Business Requirements - Agility**

Category	Description	Response
Agility	Anticipate future gaps so the FMS can manage all the fraud threats that are detected by the business	FraudView with its core capabilities can cover all fraud scenarios in the Market, and Amdocs leading position in the Market keeps continuous investments for further developments based on the industry trends. We have references in all types of Operators around the world including Brazil.
Agility	Innovative solution that is flexible to the current and future needs of Oi	FraudView is developed based on the most advanced standards in the industry. Our GUI is based on HTML-5 and trained users can maintain and expand the system
Agility	FMS adaptability to protect against current and emerging threats	FraudView is currently under release 11, in use by operator for more than 16 years. Amdocs has continuous investments and maintain Always an updated roadmap, which is built based on the customers feedback and industry trends.
Agility	Flexibility in definitions of rules and alarms thresholds by users	All operations are supported in the GUI.



#### **Business Requirements – Response in real-time**

Category	Description	Response
Response in real-time	Automated actions in real time to reduce fraud exposure	Fully supported, once fraud is identified and action can be taken, for example via API to another system
Response in real-time	Traffic view in real time to identify fraudulent patterns	All data is processed immediately upon arrival to the FraudView platform. Traffic arriving in real-time will be processed in real-time.
Response in real-time	Collect and process EDRs (event data records) in real time	Collection of EDRs is supported in real-time. FraudView solution is compatible with probes as well with systems that are able to generate the traffic in real-time.
Response in real-time	Minimize delays in analysis in the FMS between the call conclusion and rating of the call	FraudView supports real time, and is able to process completed XDRs as well partial XDRs that can be fed into the system





## **Business Requirements - Complement**

Category	Description	Response
Assertiveness	Less false positives and better capacity of prioritization for the fraud controls not impacting in customer experience	New developments of FraudView and new engines were designed for reduce the false positives. For example via compound rules.
Assertiveness	In deep pattern investigation when there is fraud suspicious indication	Pattern investigation is a core feature of FraudView. Once cases are generated, several analytical tools are provided for investigation and drill down into the record level if necessary
Additional data	Includes customer and payment details in real time	Payments channels supported in FraudView
Additional data	Allow analysis of fraud information from a variety of sources both internal and external	Multiple combinations of sources are supported. To enrich the analysts FraudView makes possible a 360°. View where you can correlate info on cases from TV with Fixed and Mobile.
Additional data	Support several different sources of data, including a variety of formats and a variety of technologies (example, 3G, 4G, LTE, IP, etc.)	FraudView is multi-format, multi-vendor and multi-technology.
Digital Stacks	Identify customer behavior through its digital journey in Oi (mobile, web, online chat, mail, etc)	Customer behavior is a feature of FraudView. All events are registered in the platform so they can be used for future reference in suspicious activities.

### **Functional Requirements - Operations**

Category	Description	Response
Management of Operations	Continuous processing of information and data for the rules to detect the fraud threats, and as a consequence detect violations of those rules	FraudView is designed to work 24X7 and process input data immediately upon arrival and generate all related cases for investigation.
Management of Operations	Continuous activity to investigate, diagnose and implement controls for fraud prevention, minimizing the impact on the existing fraud	FraudView solution is designed in a way the analyst work does not impact in the processing of new information arriving and vice-versa. Same applies to the creation of new controls in the system, which does not impact the ongoing operations. System does not need to restart to implement a new control.
Management of Operations	Perform needed actions to manage a problem that will result in a fraud or non-fraud	All the analysis can be perform in the FraudView GUI in order to identify fraud and non fraud cases. Depending on the analysis needs, records could be enriched prior analysis
Management of Operations	Control what happens, in operations, after the Fraud (team detecting a fraudulent case and delivering it for the corrective action)	FraudView has inbuilt workflow capabilities and currently this is one of the keys areas for improvement I our roadmap. Nevertheless, we could integrate to the workflows and existing processes in Oi



### **Functional Requirements - Operations**

Category	Description	Response
Support to Operations	Identify and fight threats in a proactive and predictive mode aiming to minimize the risks for the business while anticipating a fraud	FraudView supports the fraud detection in proactive and predictive mode aiming anticipation of fraud. As one of the key trends in the market Amdocs is continuously investing in this area
Support to Operations	Management of System Configuration serving as a support process to maintain reference data and critical configuration for the Fraud Management	FraudView can serve as a repository for the fraud processes as well as a sources for other different business needs in Oi. Reference data and critical configuration info is always maintained up to data in order to assure the assertiveness of the fraud detection
Management of Policies	Establish and manage all policies related to the adoption, usage and maintenance of tools and/or platform that the solution would use to detect fraud	Amdocs can support all policies and provide all the services needed in order to establish and maintain the system. On top of the standard support services, Amdocs has a full portfolio of services to that purpose
Management of Policies	Serve as a repository of methods and procedures for Fraud Management	FraudView can be such repository as well Amdocs can provide a full portfolio of complementary services in order to identify methods and procedures



#### **Functional Requirements - Operations**

Category	Description	Response
Management of Policies	Serve as a repository to maintain the best practices in Fraud Management	FraudView can be such repository as well Amdocs can provide a full portfolio of complementary services in order to support that. With more than 160 customers around the global we have a knowledge base of the best practices
Management of Policies	Serve as a repository to maintain information of the interaction with internal and external operators	FraudView can be such repository of data related to the interaction wit internal and external operators. On top of that Amdocs can provide additional services if required
Management of Policies	Hold specific policies related to the behavior of internal staff, and describer what can be identified as a violation of a behavior and associated penalties	FraudView has an internal module for internal fraud, which is used for the ongoing operations. Amdocs can also provide additional services in order to support internal process in Oi that could go beyond the FMS tool.



#### **Functional Requirements - Architecture**

Category	Description	Response
Presentation	Show the capacity to interact with customer in a responsive mode to the interactions in the digital channels (Mobile, Web, Tablet)	FraudView fully support digital channel, the GUI is designed on HTML 5 which supports several devices
Presentation	Show the capacity to configure new screen and workflows of navigation using tools such as drag and drop	Drag and Drop is not supported, but all configuration is supported via GUI
Configuration	Show the capacity to configure new rules, logic, business flows using tools <i>drag and drop</i>	Drag and Drop is not supported, but all configuration is supported via GUI
Integration	Support messages oriented to API's (considering protocols SOAP and REST), including capacity to integrate with other interfaces using Oracle Soa Suite	Both protocols are supported (SOAP and REST) as well integration with Oracle Soa suíte
Integration	All services and integration in the solution should be able to be monitored, controlled and managed	All services and process in the tool are monitored by the system. Alarms are generated, audit trails are registered.



## **Functional Requirements - Architecture**

the performance of the database

i allottollal Rogaliolliolito 7110			to / ti officootai o
	Category	Description	Response
	Infrastructure	Show the capacity for versioning control in the solution	FraudView product is compatibility with previous versions. It can run in different environments such as Production, Homologation and Testing
	Infrastructure	Show the capacity to automate routines for tests	All processes are fully automated in the tool data is processed upon files arrival, cases generated automatically, and automated actions taken
	Infrastructure	Be compatible with Docker for automation of <i>deploy</i> , running on servers such as Apache and Nginx (with Weblogic and Jboss <i>application server support</i> )	Amdocs is currently certifying WebLogic to work under Docker deployment. NGINX is not currently under testing. Such requirement can be discussed with Oi in further details.
	Infrastructure	Be compatible with operational systems Linux and Red Hat	Server side can run on Linux and Red Hat Front end requires Html5 browser Analytical engine required Windows server to run OLAP cube engine
	Integration	Show the capacity to integrate to NDS (Novel Directory Services) for Single Sign On and user and profile management	Single Sign on is already used by several customers. Integration to NDS could be supported if required by Oi.
21	Data	Show capacity to work with structured and non -structured data (SQL and No-SQL) and allow external tools to monitor	FraudView is fully compatible with Big Data where structured data and non-structure data can be used.



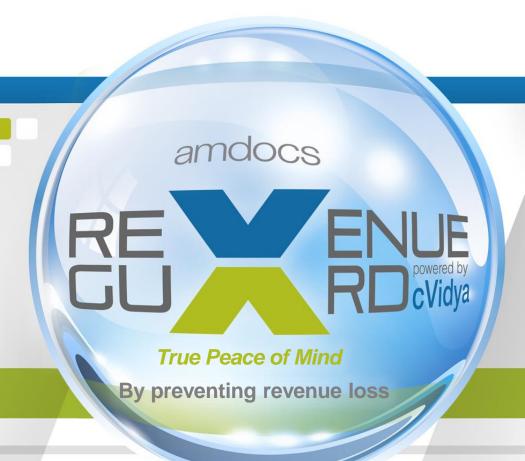




**Amdocs** 

## Revenue Guard

**Case Studies** 





# Case Study 1 - North American Tier 1 Quad Play Operator



	The Challenge		Financial Risk Detected
•	Carrier had an incumbent FMS installed in production High upgrade costs of FMS Not scaled for high volume and velocity data Multiple vendors for different fraud types Desiring single FMS	•	During 2014, detected wide scaled organized subscription fraud operation Several hours after activation, each MSISDN started to generate excessive usage to high risk destination numbers Events detected in real time and blocked service for fraudulent subscribers
	Eroudulopt Aroog Dotootod		Bottom line
	Fraudulent Areas Detected		Bollom line
•	Provided E2E fraud coverage for usage and non-usage based fraud including: IRSF, subscription, internal, mobile data	•	Overall Estimated annual averted loss savings of \$20M



## Case Study 2 - North American Tier 1 MSO



	The Challenge		Financial Risk Detected	
•	Operator have identified significant IRSF Fraud scenarios performed by internal employees Most detection done manually in a reactive mode 2 days Time to work fraud case once identified	•	Average minutes lost per day - 21k Average daily loss of \$10,725 Overall ILD monthly expense loss of \$926k	
	Fraudulent Areas Detected		Bottom line	
•	Manual monitoring of ILD calls (mostly executed as part of IRSF scenario)	•	Within 1 <sup>st</sup> month of deployment dropped Overall ILD monthly expense loss to \$195K (79%!!)	



# Case Study 3 - North American Tier 1 Quad Play Operator



The Challenge	Financial Risk Detected
<ul> <li>Nationwide dealer network</li> <li>Complicated dealer hierarchy and comp structure</li> <li>Ensuring that payments are made in accordance with terms and conditions</li> <li>Evaluating loopholes in current commission policy</li> </ul>	<ul> <li>Scanned 12M sales transactions</li> <li>Generating 60,000 fraud alerts (0.5 %)</li> <li>\$8M value for fraud alerts</li> <li>~\$900K in unjustified commissions and device price per month</li> <li>100% blocking once identified</li> </ul>
Fraudulent Areas Detected	Bottom line
<ul> <li>Highly subsidized prices of handsets exceeding retail price</li> <li>Account Re Activations</li> </ul>	<ul> <li>Fraudulent Commission Payout</li> <li>Savings of ~ \$10M annually</li> </ul>

Information Security Level 1 – Confidential

