



FRAUDINDEX IS A LINE OF MODERN FRAUD MANAGEMENT AND REVENUE ASSURANCE SOLUTIONS DESIGNED FOR CARRIERS

10+



Over 10 years of experience in developing FM&RA solutions for local markets

Own technologies, no thirdparty commercial components.



In-house R&D, competence, and operations center.

## KEY BENEFITS

EFFICIENTLY HELPS CLIENTS COMBAT FRAUD AND PREVENT REVENUE LOSSES



### Continuously monitors:

- International traffic bypass
- SMS violations
- National traffic routing



### Controls:

- Billing data loss
- Data integrity
- Suspicious traffic profiles



### Designed for national carriers and regulators

- Fixed-line carriers
- Mobile network carriers
- MVNO
- National regulators and monitoring authorities



GARDA TECHNOLOGIES IS A INFORMATION SECURITY AND FM&RA VENDOR.

Garda Technologies is part of ICS Holding.

## ICS HOLDING



23 COMPANIES

ecosystem of 23 companies providing digital transformation services to enterprises, carriers and national regulators as well as SMEs



6,000

highly qualified specialists



\$1.5 billion, 700% revenue

growth between 2017 and 2018



1,000 B2B CLIENTS

across over 20 countries worldwide

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# FRAUD INDEX

FRAUD MANAGEMENT AND REVENUE ASSURANCE SOLUTIONS FOR CARRIERS

## INTERNATIONAL TRAFFIC BYPASS DETECTION

Complete solution to combat international traffic bypass. Includes a full set of test calls generators, reporting and BI tools. Can be supplied as a solution or provided as a service. Designed for the following types of customers:



Fixed-line providers



Mobile network providers



National carrier



National regulators and monitoring authorities

### Identification of all common bypass fraud types:

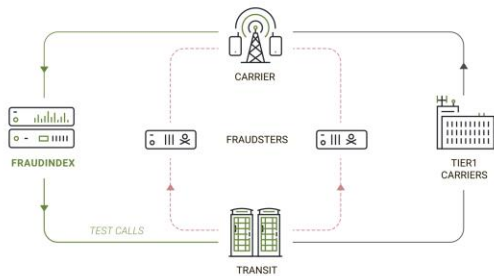
- On-net and offnet simboxes
- Interconnect fraud
- Bypass by enterprise customers
- National number spoofing

### One solution combines two ways to detect simboxes:

- Active testing performed from most fraudulent network types- VoIP retail, VoIP wholesale, OTT networks, retail networks
- Analytical search using modern BigData and Machine Learning approaches to find more fraudsters related to already found ones and new ones in clusters not found by active testing

### The following active calls scenarios are supported from the box:

- Calls to dedicated 8 numbers. An outdated but still reliable approach. Frequently, high qualified fraudsters can hide their infrastructure from such tests.
- Calls to subscribers via triggers (special way to land incoming call to IVR instead of subscriber at the moment of a test call). This is most modern and advanced way to combat fraudsters.
- Robo calls to subscribers (In most cases it can produce complementary results to the above approaches)



## NATIONAL TRAFFIC CONTROL

Complete solution to monitor national long-distance traffic and traffic exchange

Target audience:

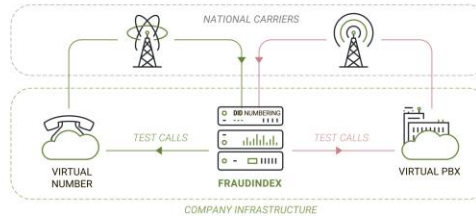


National carriers



National regulators

Designed for countries with strict voice traffic regulation. Controls national voice traffic exchange and outbound international traffic by making test call probes and performing full traffic profiling.

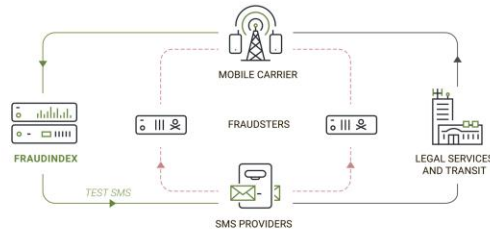


## A2P AND P2P SMS TRAFFIC CONTROL

The solution is intended to control SMS traffic, commercial and regulative violations. It includes a full set of SMS traffic generators, reporting and BI tools. Can be supplied as a solution or provided as a service

Detects the following major fraud cases:

- A2P traffic termination
- International SMS bypass by simboxes
- Ad- and Robo- P2P traffic
- Alphanumeric and number spoofing

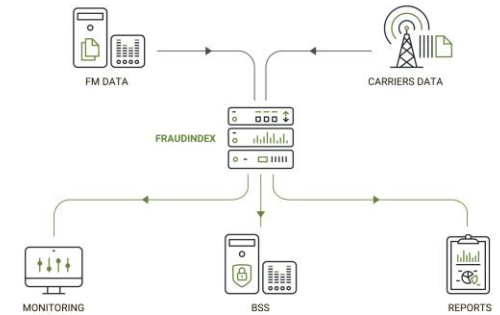


## REVENUE ASSURANCE SOLUTION

Highly-scalable and customizable BigData-powered Revenue Assurance solution

Typical use cases:

- Full CDRs comparison from 2+ sources
- Billing data consistency check
- Roaming traffic (including TAP files) control
- International/PR/IRS traffic control
- Other



## TRAFFIC FILTERING

Provides blacklist filter functionality for the carrier's inbound traffic

Supported traffic management means:

- Traffic redirection (via 4xx and 6xx codes)
- Traffic Proxying

Supported protocols: SIP, SIP-I, SIP-T

