

# INDUSTRY INNOVATIONS & ADVANCEMENTS IN FIGHTING INTERNATIONAL TELECOM FRAUD

April 8, 2021 | Virtual Session

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## ON THE AGENDA

14:00 – 14:05 **Welcome & Introduction**

**Patrick George**

EVP Product & Business Development, iBASIS

14:05 – 14:15 **International Telecom Fraud Trends**

**Malick Aissi**

SVP Business Assurance & Risk Management

14:15 – 14:25 **Innovations & Advancements**

**Arnd Baranowski**

CEO & Founder, Oculeus

14:25 – 14:40 **Real World Experiences**

**Arnd Baranowski/ Malick Aissi**

14:40 – 14:50 **Q&A**

**Patrick George**

14:50 – 14:55 **Conclusions & Wrap-up**

**Patrick George**

# INTERNATIONAL TELECOM FRAUD TRENDS

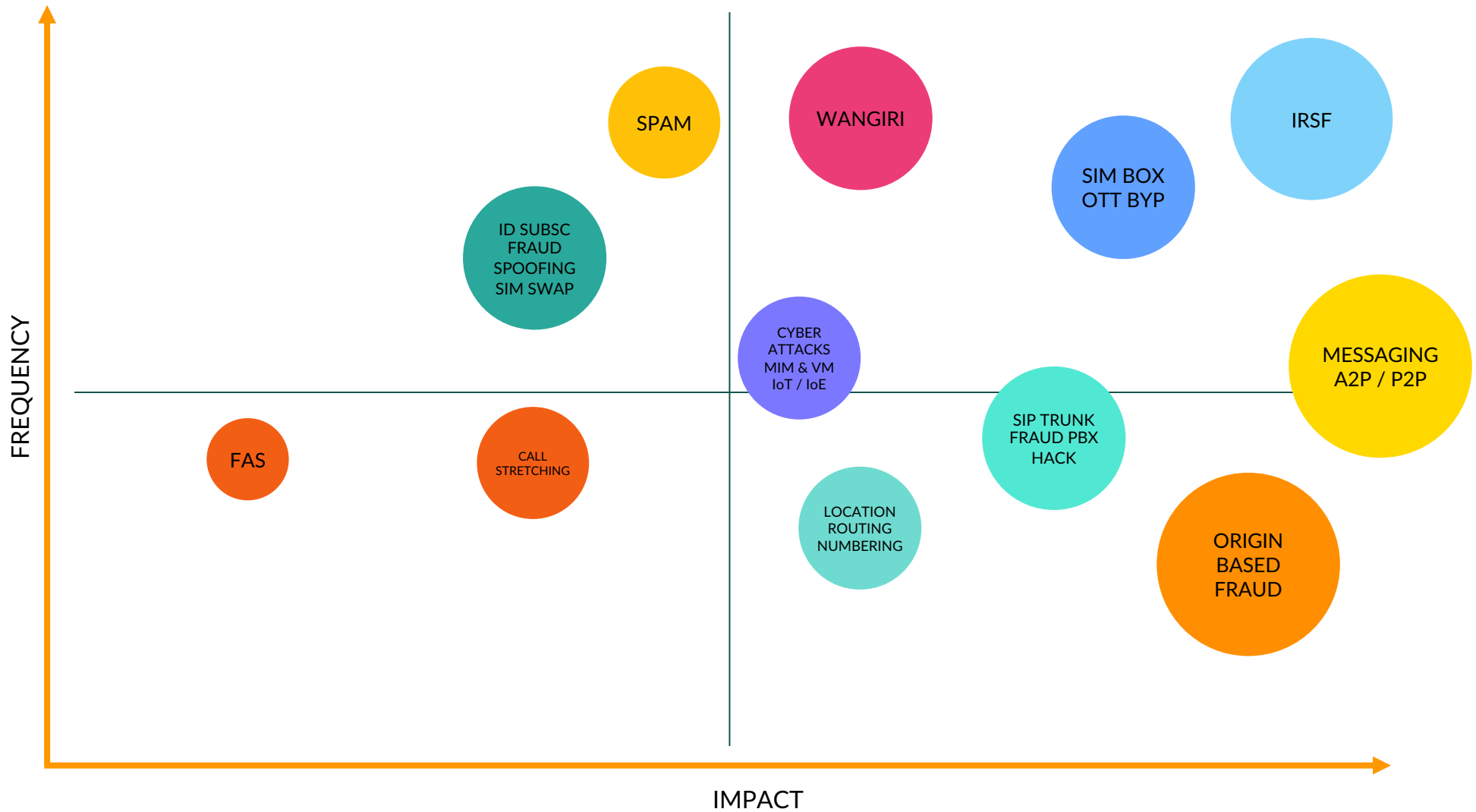
Malick Aissi

SVP Business Assurance & Risk Management,  
iBASIS

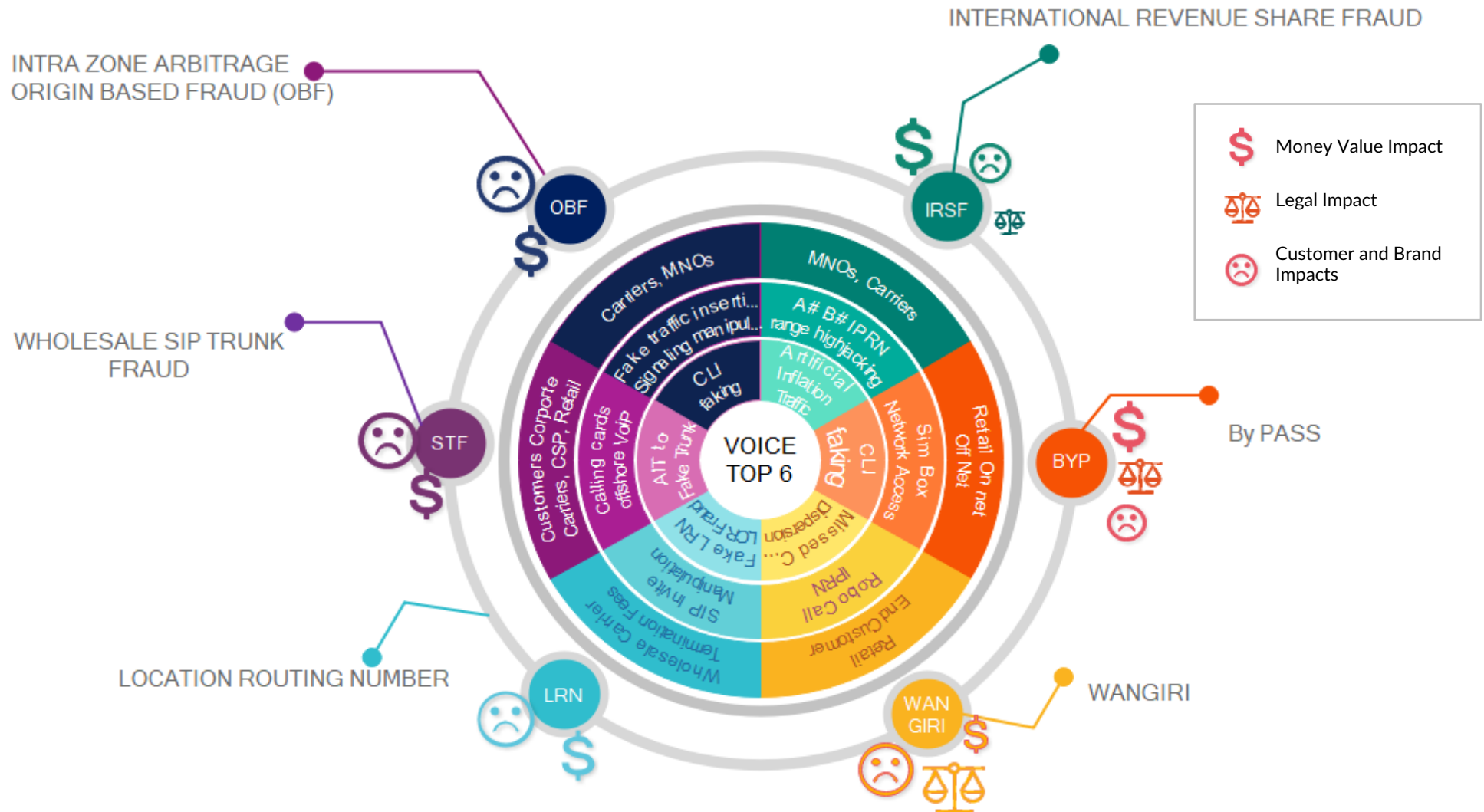


- **IRSF** and **Wangiri** are seeing the highest volumes: 73% and 63% respectively of carriers reporting 'moderate' or higher instances.
- At the financial impact of fraud cases, **IRSF and PBX hacking** with 50% and 42% respectively scoring as 'very high' or 'somewhat high'.
- The financial impact of **Wangiri** dropped from 19% to 9% of 'very high' between 2019 & 2020
- A new trend identified: **artificially generated traffic** moving from higher value to lower value destinations
- **IoT, 5G**, and edge computing have opened potential opportunities for new fraud types such as **Virtual machines/ emulators** (49%), **bots** (26%), **man-in-the-middle attacks**, and **DDOS hacks** (13%)
- An additional use-case that emerged frequently in 2020 is **A2P SMS fraud (Application to Person Messaging Fraud)**

## CURRENT TRENDS FRAUD TYPES AUDIENCE QUADRANT



# FRAUD USES CASES TOP 6: THE PLAGUES OF VOICE



## POLL

Which types of fraud  
impacted your organization  
most during 2020?

## QUICKPOLL

## Which types of fraud impacted your organization most during 2020?

### Poll Results:

International Revenue Share Fraud (IRSF)	38%
By pass Sim box	28%
Origin Based Fraud Bypass (surcharge avoidance with OBR)	23%
Wangiri / Missed calls campaigns	52%
PBX Hacking	17%



# INNOVATIONS & ADVANCEMENTS

Arnd Barnowski

CEO & Founder, Oculeus



## SIP Call Evaluation with the target to identify fraud

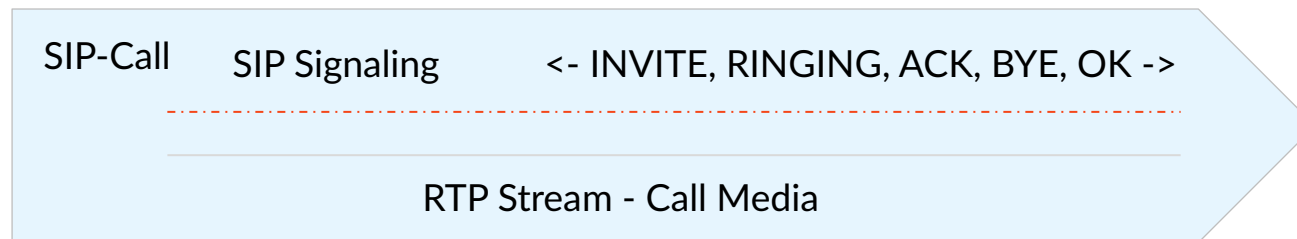
**SIP based calls** have two elements

- 1. Signaling**

is used to manage the Calls and run all Information and Commands  
to setup and end Calls

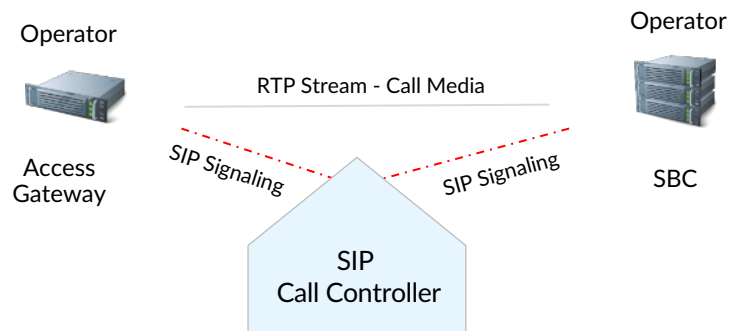
- 2. RTP Stream**

Handles the Calls



## SIP Call Evaluation targeted towards Fraud Detection

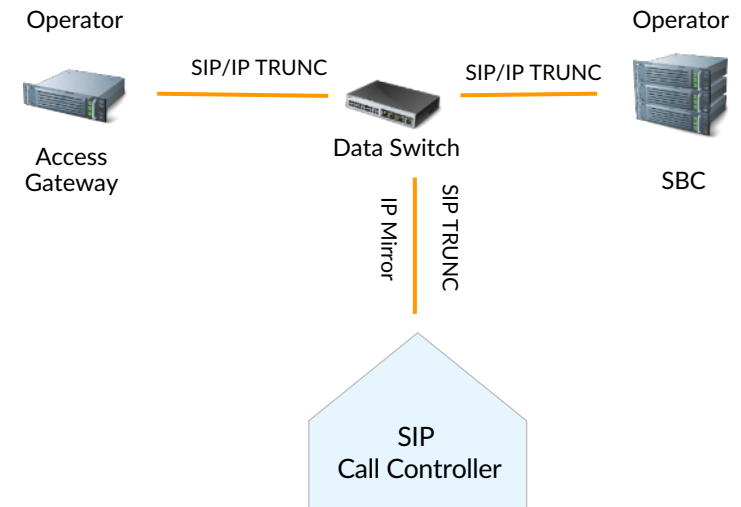
### Active Mode



#### Allows to

- Understand Call Target, Call Start, Call End
- Actively Drop Calls

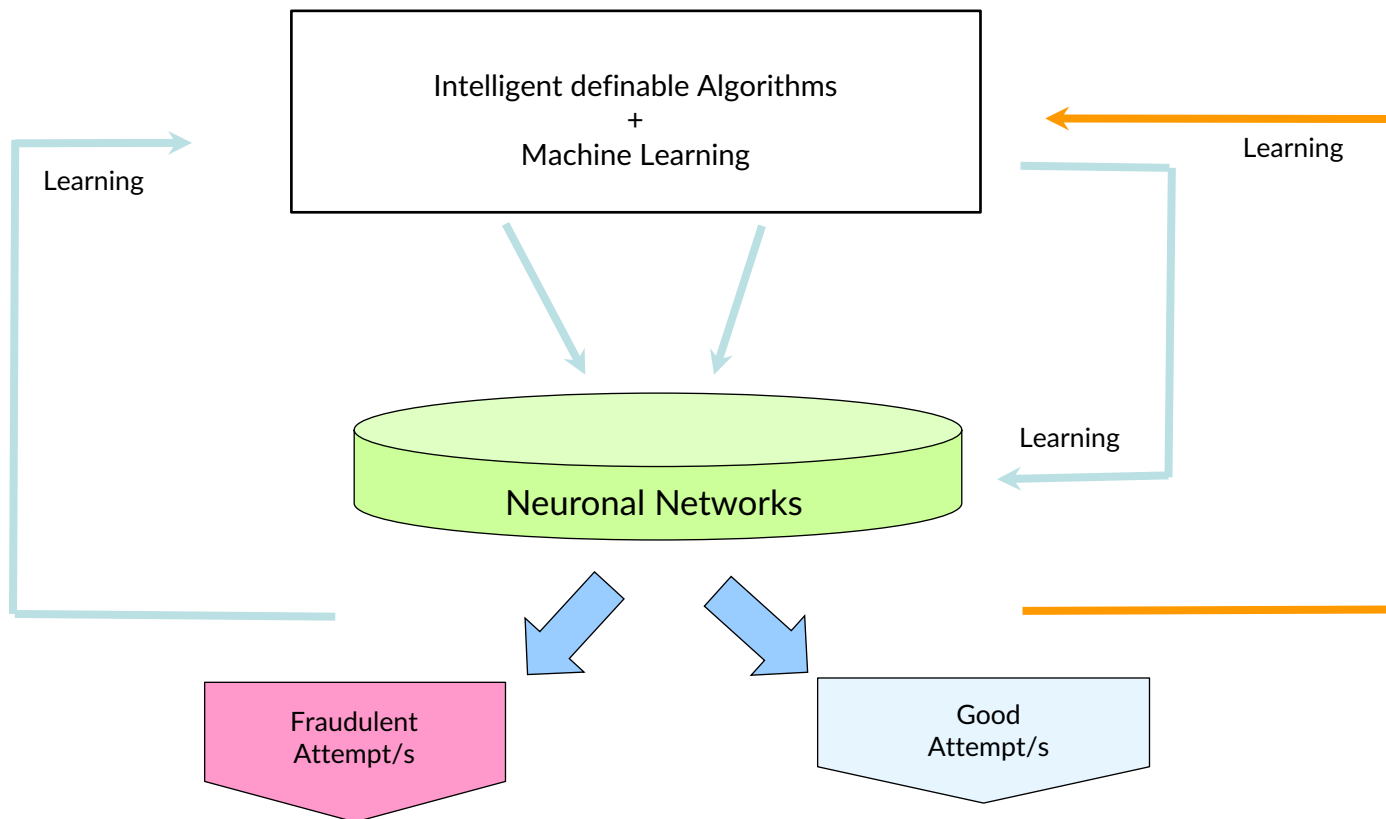
### Passive/Probe Mode



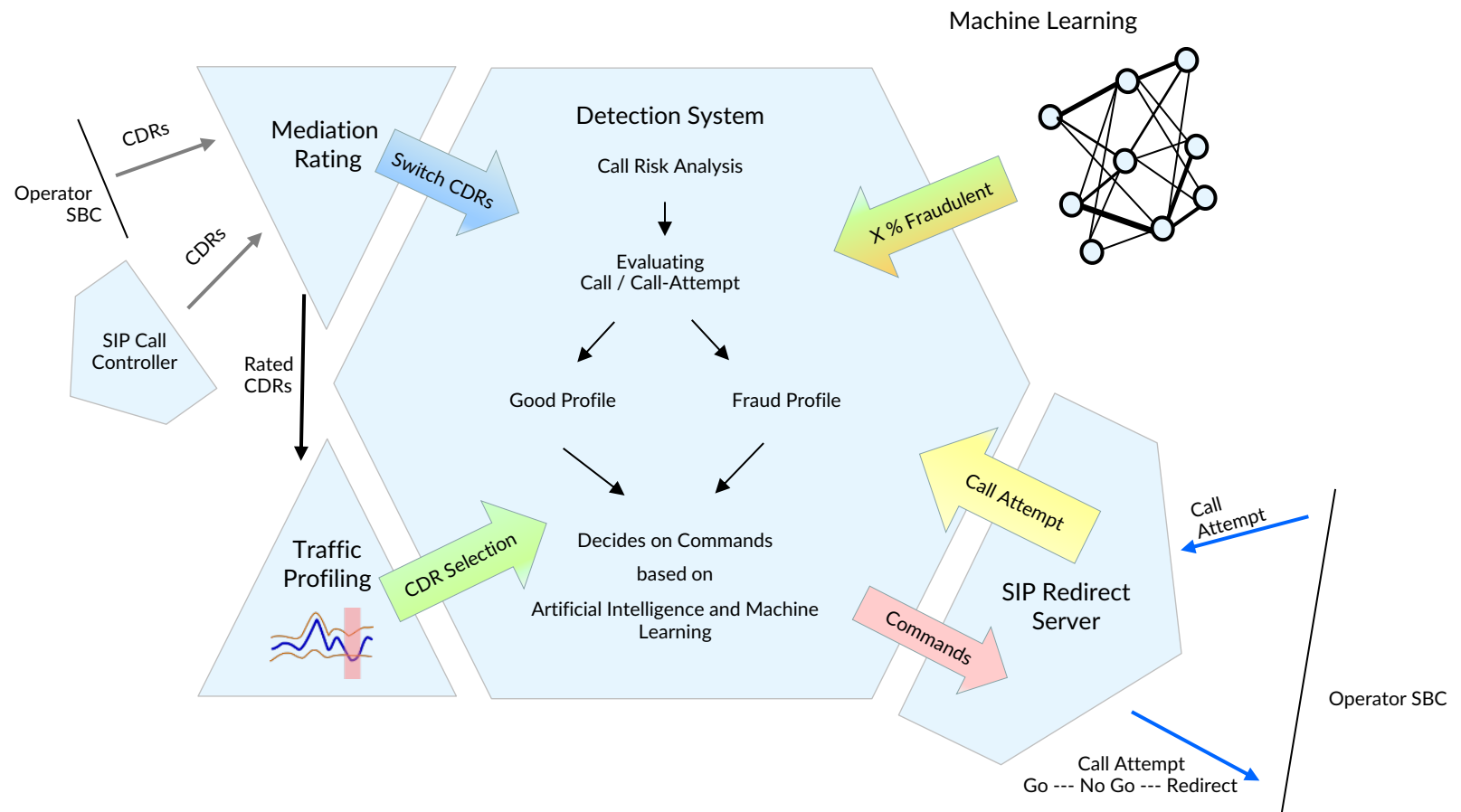
#### Allows to

- Understand Call Target, Call Start, Call End

Artificial Intelligence supervised, fully scalable  
combined with Traditional Approaches



Successful Protection requires full Integration as automated as possible



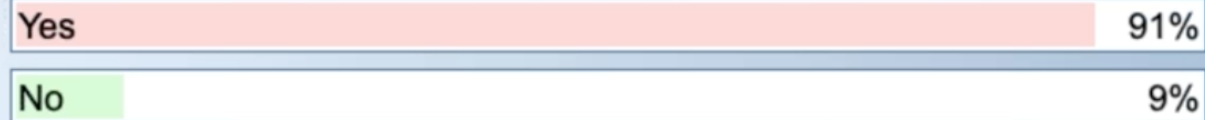
## POLL

Do you think fraud issues  
will increase during 2021?

## QUICKPOLL

**Do you think fraud issues will increase during 2021?**

**Poll Results:**



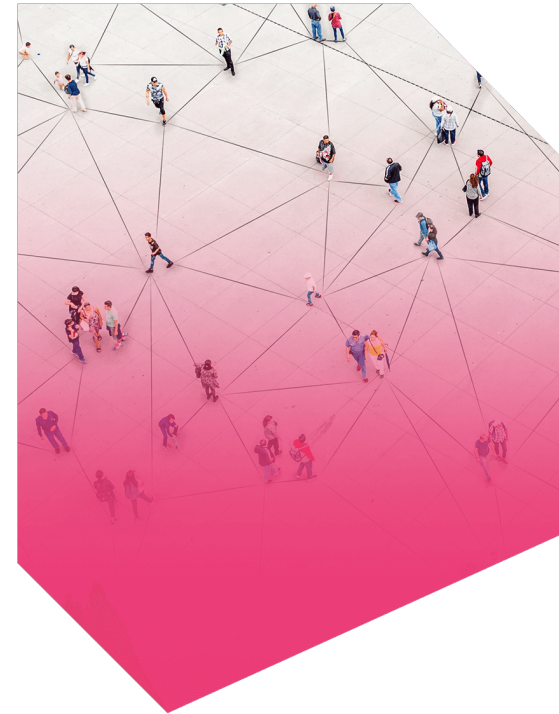
# REAL WORLD EXPERIENCES ORIGIN BASED FRAUD CASE

**Malick Aissi**

SVP Business Assurance & Risk Management,  
iBASIS

**Arnd Barnowski**

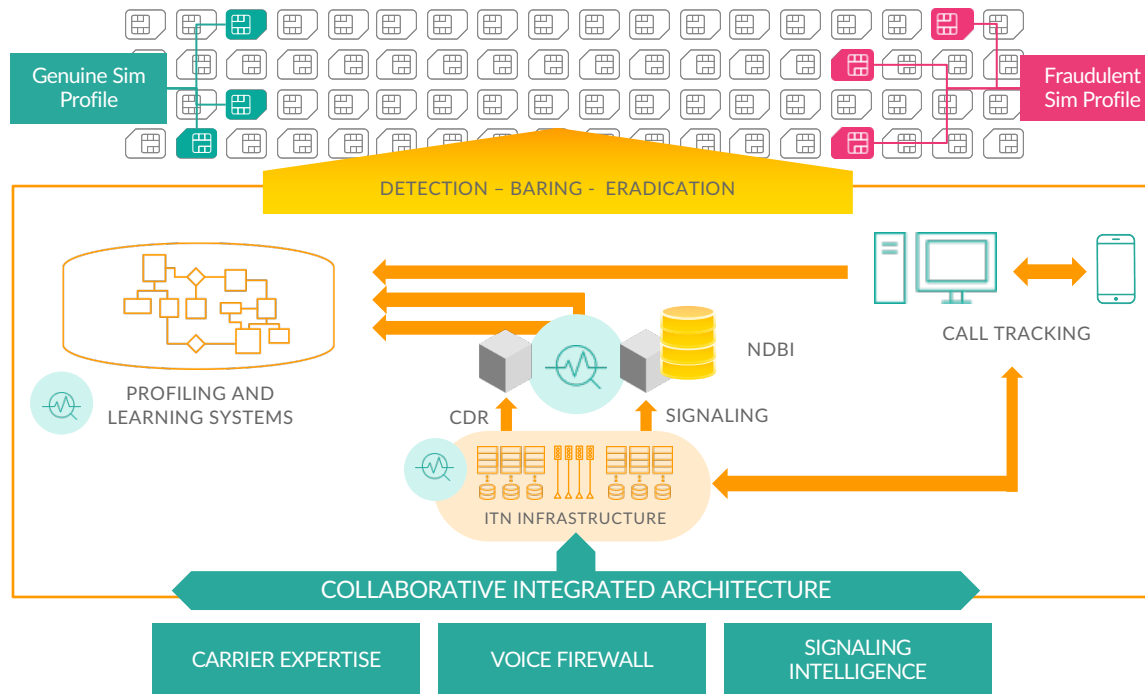
CEO & Founder, Oculeus





# HOW TO USE A COLLABORATIVE INTEGRATED ARCHITECTURE TO TACKLE ORIGIN BASED FRAUD (OBF)

## MODULARITY, FLEXIBILITY, PERFORMANCE



### 1 YOUR NETWORK

generates all the detailed records and the signaling to be loaded into our systems

### 2 COC : CDR Origin Collectors

The switches will generate the CDRs after the call being terminated with supposedly all the necessary information. Our system FMS is able to load and process these CDR whatever their format might be at the speed they are generated

### 3 SOC : Signaling Origin Collectors

To be faster in detecting the fraud patterns even before they happen, our systems are designed to process usage data at signaling level and decrypted the customer the SIP packets

### 4 CTS : Call Tracking System and Probes

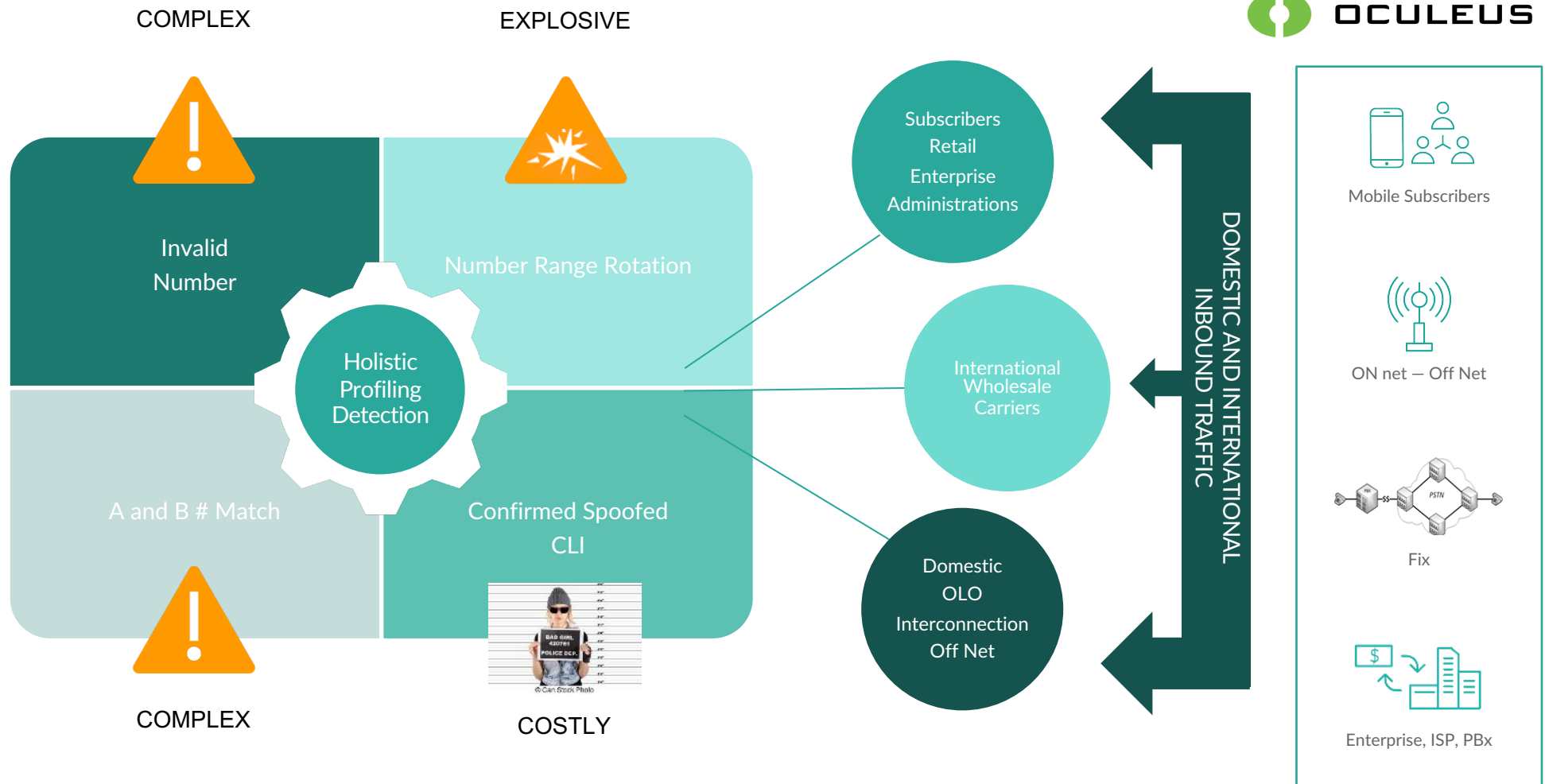
With our extended network of ready for service probes (600 + networks) coupled with our double expertise in carrier business and anti fraud, we will design and execute the best call campaigns to identify fraudulent CLI

### 5 MLA : Machine Learning Algorithms

We design auto learning algorithms we iteratively train by combining the all the data coming from COC / SOC

6 One of the most important outcomes of our policy driven technology mix is to spot and kill true positives sim box or CLI spoofing, reduce the Time to Detect and Kill

## HOW TO TACKLE OBF – REAL USE CASE



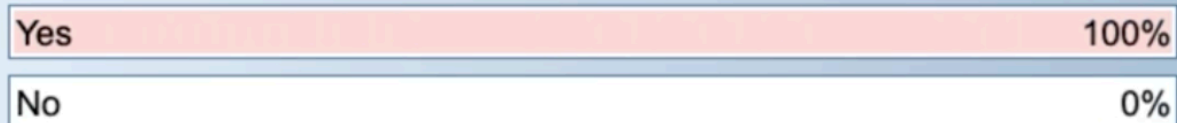
## POLL

Do you consider collaboration between telco industry members to be very important to reduce fraud impacts?

## QUICKPOLL

**Do you consider collaboration between telco industry members to be very important to reduce fraud impacts?**

**Poll Results:**



# Q&A DISCUSSION



# WRAP UP

Conclusions

Key Takeaways



**THANK YOU**

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