# AB Handshake / Cubro: Stopping Voice Fraud and RoboCalls

## The Challenge

Telcos are losing billions of dollars annually due to fraud and face increasing pressure from upset customers, governments and regulators.

AB Handshake restores trust by ensuring that any voice call is validated by both the originating and terminating telcos, making it impossible to commit fraud that relies upon the manipulation of traffic by intermediaries. Processed simultaneously to the call set-up, the 'handshake' gives both the A and B parties confirmation that the call is connected as intended, the choice to stop invalid calls automatically, or if stopping the call is undesirable, get an alert.

The system uses straightforward technology to integrate the handshake with existing signaling and accounting systems, and it works for all kinds of telcos and across all kinds of networks, offering a truly universal cost-effective solution.

Telcos currently must rely upon the information sent to them as a call comes into their network. Scammers and corrupt carriers take advantage of this by rewriting the information in SIP headers, so it looks like those calls originated somewhere else. This has been a downside of the transition to IP networks and poses a serious threat because so many wholesale carriers appear to be unreliable. Rewriting the facts about the origin of a call leads to various kinds of abuse.

As its name suggests, AB Handshake works by creating an out-of-band 'handshake' between the telco that originates the call and the telco that terminates the call. This handshake works across all types of calls between all kinds of networks in every country.
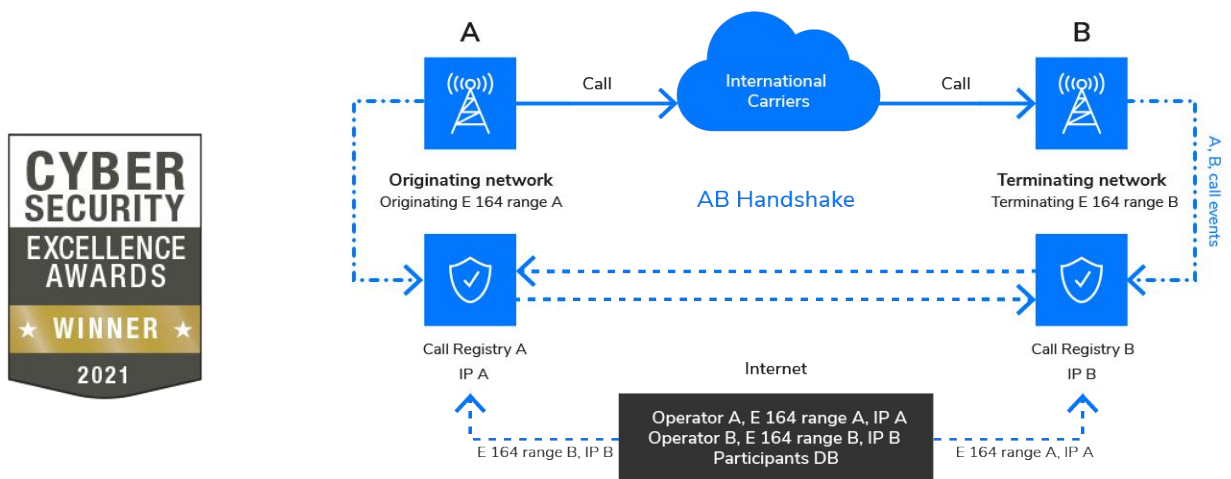


Cubro is a leading manufacturer and global supplier of IT network visibility products for Service Providers and Enterprise networks. Our product range includes Network TAPs, SS7 packetizers, and Advanced Network Packet Brokers that encapsulate the calling data and transport it over the operator backbone to ensure that the AB Handshake system receives the right packet data to detect the fraudulent activities.

## Integrated Solution

An overview of the solution is shown below.

The system can be installed for Mobile Network Operators (MNO), Mobile Virtual Network Operators (MVNOs), Fixed Line Operators, Virtual PBX Operators or Businesses and Apps using SIP agents.

The control plane dialog setting up the call, at both the calling and called parties, is passively captured with Network TAPs, router SPAN ports, or from GRE tunnels directly from the call servers.

These are aggregated by a Cubro packet broker, which tunnels the data to an AB Handshake server. The AB Handshake server updates the originating network's active calls data registry with a record of the A and B-numbers and the timestamp of the call.

This update will be securely and instantly communicated to the equivalent data registry maintained by the terminating network. Checking the call registries means both the originating and terminating telcos will know if there is any inconsistency in the information they have as it would occur if intermediaries are manipulating calls.
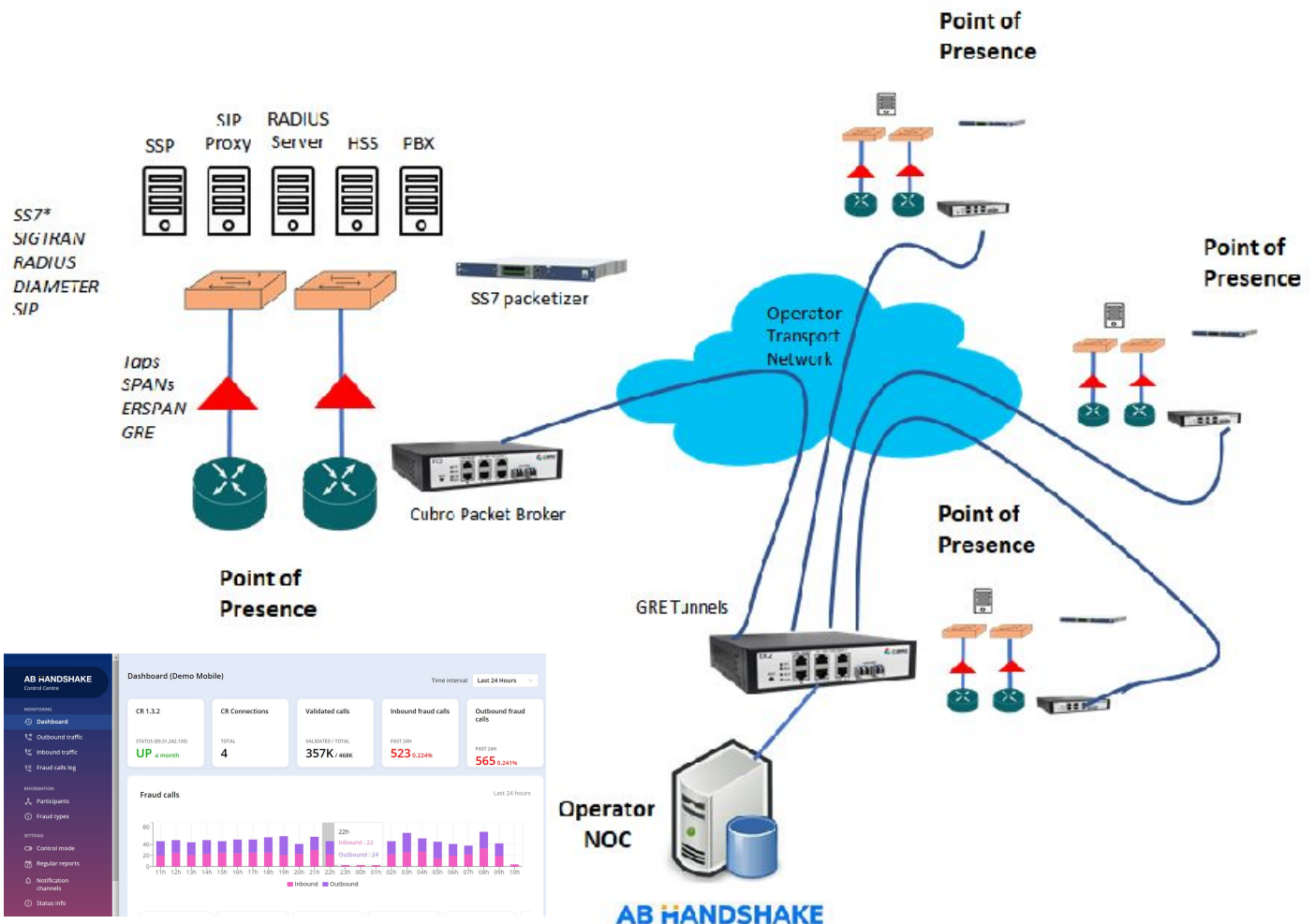
## Joint Solution Market

**AB Handshake solution is universal and works for:**

- MNOs
- MVNOs
- Fixed Line Operators
- Virtual PBX Operators
- Businesses and Apps using SIP agent

Prevents all types of fraud:

- Robocalls
- Interconnect bypass
- CLI spoofing
- PBXHACK
- Call stretching
- Short stopping
- FAS
- Wangiri,Wangiri2.0

## Joint Solution Benefits

- Works in Real Time on both IP and TDM networks

- Can be adapted to suit each telco's operational support systems without affecting the way authentication works between partners

- Attractive and affordable for all types of operators with modest hardware requirements

- Non-intrusive, with no need for network upgrades. Validation does not affect call flow

- Provides objective evidence of fraudulent call attempts to support dispute resolution and law enforcement

The AB Handshake server can observe, document, and report fraud attempts, and with the right control interfaces, (CAMEL, RADIUS, SIP) can optionally terminate fraudulent calls.

If the call is connected and an alarm is raised, then the registry data can also be fed into the telco's trouble ticketing system. Changes to routing or resolution of disputes can occur more rapidly as each telco will have reliable documented proof for handling the dispute.



## Cubro Visibility Components



**Fibre Optic TAPs**

**Electrical TAPs**

**SS7 Protocol Packetizer**

**Central Site**

**Branch office**

To access the call signaling traffic, Cubro has a complete line of Fibre Optic and Copper TAPs. Cubro TAPs are transparent to the network and can attach to any cabling type.

When necessary, Cubro can Interface with TDM E1/T1 links at physical level and perform signaling translation to IP protocol, forwarding the converted IP packets to local and/or remote IP monitoring tools, through 1/10 Gb/s output interfaces.

Cubro has a range of affordable and simply managed packet brokers that aggregate, and transport all types of signaling data back to the AB Handshake server in the network operations center.

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