

AB Handshake / Cubro: Stopping Voice Fraud and RoboCalls

The Challenge

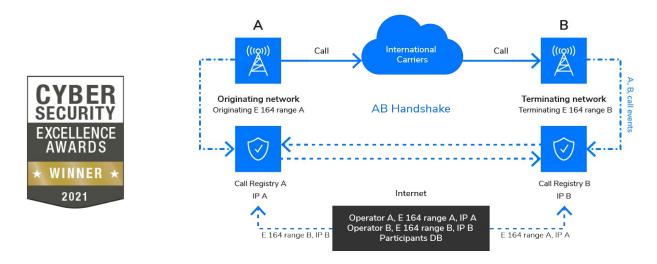
Telcos are losing billions of dollars annually due to fraud and face increasing pressure from upset customers, governments and regulators.

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

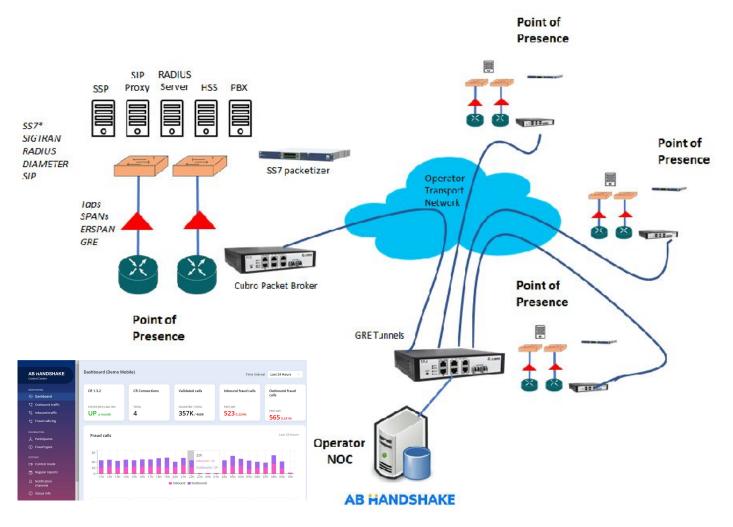
An overview of the solution is shown below.

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.



CUBRO AB HANDSHAKE

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.

All fraud types					🕹 Downloa	
		Applied rule V				
FRAUD TYPE	NEXT HOP CARRIER	A-NUMBER		B-NUMBER	TIME	1
CLI Spoofing	Carrier 3	79584966676 - Demo Mobile No match in remote network	\rightarrow	86132048473809 - China Mobile Wireless	Dec 14, 11:04:30	
Interconnect Bypass	Carrier 1	-	\rightarrow	1513301350540 - AT&T Wireless	Dec 14, 11:04:09	
		No match in remote network				
PAS / OTT bypass	Carrier 0	79586044678 - Demo Mobile	\rightarrow	1513527528673 - AT&T Wireless	Dec 14,	
	currero	No match in remote network			11:03:13	1
CLI Spoofing	Carrier 2	79586040376 - Demo Mobile		86155313196021 - China Unicom Wireless	Dec 14, 10:51:03	
		No match in remote network	<i>→</i>			
∠ Unconfirmed	Carrier 4	🔴 86138899165656 - China Mobile Wireless	\rightarrow	— 79014489279 - Demo Mobile	Dec 14,	
cails		No match in remote network			10:50:40	
	CLI Spoofing Interconnect Bypass FAS/OTT Poppass CLI Spoofing	PAULD TYPE CANTER Interconnect Carrier 3 Interconnect Carrier 1 FAS/OTT Carrier 0 Interconnect Carrier 2 Unconfirmed Carrier 4	FALLID TVVE CARREN ALLIDUERE ALLIDUERE CLI Spoofing Carrier 3 Prostantian PSSS7782841 - Demo Mobile Prostantian Carrier 1 PSSS7782841 - Demo Mobile Point Constantian Prostantian Cui Spoofing Carrier 0 PSSS7782841 - Demo Mobile Point Constantian Prostantian Cui Spoofing Carrier 2 PSSS6046378 - Demo Mobile No match in remote network Cui Spoofing Carrier 2 No match in remote network Vinconfirmed Carrier 3 PSSS50466378 - Demo Mobile No match in remote network	FALLID TVYE CARREN Interconnect Carrier 3 Interconnect Carrier 1 PS582782841 - Demo Mobile -> Interconnect Carrier 1 PS5827782841 - Demo Mobile -> Interconnect Carrier 1 PS5827782841 - Demo Mobile -> Interconnect Carrier 0 No match in remote network -> Interconnect Carrier 0 No match in remote network -> Interconfirmed Carrier 2 Vinconfirmed Carrier 2 No match in remote network ->	PAUD 1194 CLU Spoofing Carrier 3 - 79554596576-0. Dens Mobile - - Path 120045473509-0. Chra Mobile Wireless /* CLU Spoofing Carrier 3 - 79557322841- Dens Mobile - - - - /* Interconnect Carrier 1 - 79557322841- Dens Mobile - - - - /* Interconnect Carrier 1 - 79557322841- Dens Mobile - - - - /* R435 OT Carrier 0 No match in remote network. - - 1513527528673 - ATA1 Weekes /* CLU Spoofing Carrier 2 - 79556646376 - Dens Mobile - - - /* CLU Spoofing Carrier 2 - 79556646376 - Dens Mobile - - - /* CLU Spoofing Carrier 2 - 79556646376 - Dens Mobile - - - /* CLU Spoofing Carrier 4 - 86138399165656 - Chana Mobile Wireless - - -	FALLO TYPE CASERER Andotable Andotable Beach Table 7 CLI Spoofing Carrier 3 795545465676. Demo Mobile 916132064473809 - China Mobile Wireless Dac 14, 110430 7 RUS poofing Carrier 3 79555765676. Demo Mobile 1513201350540 - ATB1 Wireless Dac 14, 110430 7 Rypes Carrier 1 795567644078. Demo Mobile 151327526473 - ATB1 Wireless Dac 14, 110430 7 Rypes Carrier 0 No match in member network. 151327526473 - ATB1 Wireless Dac 14, 110430 7 CLI Spoofing Carrier 2 779556644078 - Demo Mobile 1103213 7 CLI Spoofing Carrier 2 779556644078 - Demo Mobile 1051333 7 CLI Spoofing Carrier 2 779556644078 - Demo Mobile 1051333 7 Unconfirmed Carrier 4 1051333 <

Cubro Visibility Components



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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