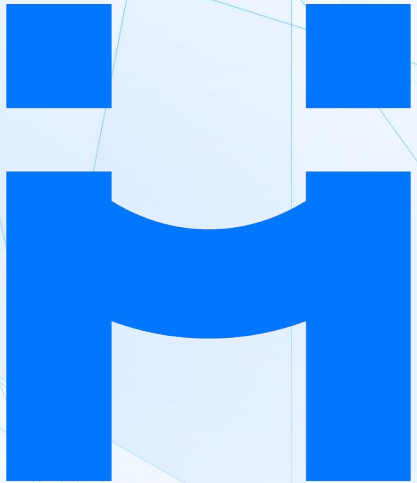
DEFEAT FRAUD
THROUGH VALIDATION

AB HANDSHAKE GLOBAL SOLUTION FOR CALL VALIDATION



EXECUTIVE SUMMARY

Can we validate voice calls, and make common abuses impossible? That is the question the telecom industry is urgently asking itself as fraudsters take advantage of the widespread manipulation of SIP headers and make more scam voice calls than ever before. Telcos face increasing pressure from upset customers, governments and regulators. They are losing billions of dollars annually due to fraud. They fear customers will stop answering their phones, either because they use increasingly popular call-blocking apps or by permanently shifting to over-the-top providers like WhatsApp and Skype.

The AB Handshake is a solution that is ready now and affordable for all telcos

AB Handshake restores trust by ensuring that any voice call is validated by both the originating and terminating telcos, making it impossible to commit frauds that rely upon the manipulation of traffic by intermediaries. Being processed simultaneously with to the call set-up, the 'handshake' gives both the A and B parties either confirmation that the call is connected as intended, or the choice to stop invalid calls automatically or get an alert if stopping the call is undesirable. Using the straightforward technology to integrate the handshake with existing signaling and accounting systems, the handshake **works for all kinds of telcos across all kinds of networks, offering a truly universal cost-effective solution.**

AB Handshake was shortlisted by GSMA VINES and FASG groups and i3Forum as a powerful global call validation solution.

WHY DOES THE TELECOMMUNICATIONS INDUSTRY NEED AB HANDSHAKE?

To understand why telecommunications providers need a new way of tackling fraud, we need to first look at the root problem which is leading to so many fraudulent calls. Telcos currently have to rely upon the information given to them whenever 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, including:

- **Imposter fraud**
- **Nuisance calls**
- **CLI spoofing**
- **Wangiri and Wangiri 2.0**
- **Refiling fraud**

The scale of the problem is enormous. According to the Communications Fraud Control Association (CFCA), the following issues cost telecommunications networks and carriers the total of **$18.2 billion every year**.

- International revenue share fraud (IRSF): **$5 billion**
- Call stretching and short-stopping: **$4 billion**
- PBX hacking: **$3.6 billion**
- Interconnect bypass: **$2.7 billion**
- Calling line identity (CLI) spoofing: **$2 billion**
- Robocalls: **$0.9 billion**

The Federal Communications Commission (FCC), the US regulator, argues that the total cost to Americans of the time they spend answering robocalls is a staggering $3 billion a year, and that figure excludes the amount they lose to fraud. Call-blocking business Hiya estimates 85 billion robocalls are connected globally every year. These figures would be a lot worse except for the fact that an increasing number of calls are blocked, whether by telcos or their customers.

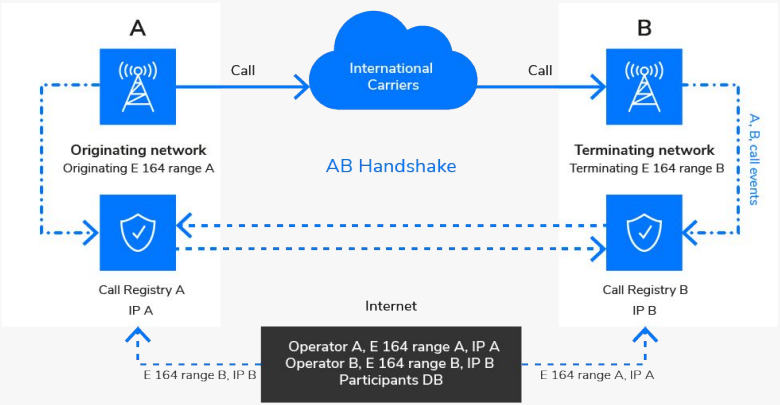
1 https://cfca.org/sites/default/files/Fraud%20Loss%20Survey_2019_Press%20Release.pdf
2 https://www.fcc.gov/news-events/blog/2019/06/05/beating-back-unwanted-robocalls
3 https://blog.hiya.com/robocalls-skyrocket-globally-growing-325-85-billion-worldwide-2018

A BRIEF EXPLANATION OF AB HANDSHAKE

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.

Essentially, the handshake is a communication using HTTPS with TLS encryption to check for alignment between active call registries maintained by each member of the community. When a new call is initiated it will prompt the update of the originating network’s active calls data registry with a record of the A and B-numbers and the start time 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.

This also allows participants the option to cease calls that do not meet their stipulations. On the other hand, telcos can also choose to connect calls even if the validation fails, for example because of a suspected outage with another telco’s call registry. It is up to members of the community to decide if a call that fails the handshake validation should be blocked in real-time, or if they only wish to receive an alert whilst letting the call proceed.



A BRIEF EXPLANATION OF AB HANDSHAKE

Whilst the idea of executing a handshake is new, the technology is built on robust technological foundation that leverages existing and **proven protocols** for information exchange, **encryption** and database management.

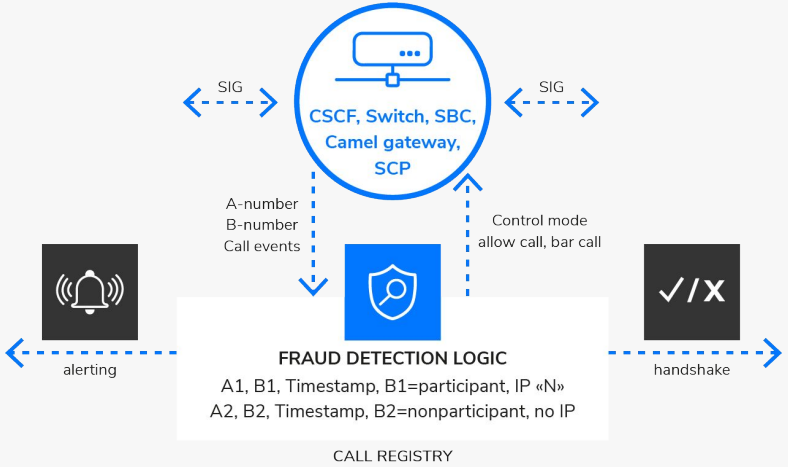
The call registry can be easily integrated with RADIUS, Diameter, HTTP API and SIP and can be implemented within one week.

The servers for the number registries **are the only hardware cost** for AB Handshake, and there would be no changes to the way other telco systems function.

Participants will be able to effectively manage all disputes. When a call is blocked it will be obvious to both parties why that has happened from the data in their call registries. If the call is connected but an alarm is raised, then the registry data can also be fed into the telco's trouble ticketing system. The result is that changes in routing and resolution of disputes can occur more rapidly as each telco will have reliable documented proof for handling the dispute.

The communication and matching process occurs within a few milliseconds of the call set-up, so there are no delays for customers. Each call can still be connected if there is an outage to the validation system because the terminating telco has the choice for how to handle validation failures and because the B-number has not been altered.

AB Handshake is built upon protocols with a long history of use, ensuring they are robust and thoroughly tested on real international voice traffic and are compatible with all national portability and lawful intercept requirements.



OUT-OF-BAND APPROACH

Simplicity is the key to our approach. The out-of-band approach adopted by AB Handshake creates a circle of trust that is easier to implement than relying on in-band technologies to change the protocols for SIP signaling.

The solution requires that all participating operators submit the E.164 number ranges and the IP addresses of their local call registry to the industry trusted coordinating organization. This information is then made available by the coordinating organization to all networks participating in the AB Handshake system to facilitate routing between registries and prevent any attempted 'hijacks' despite the existence of the handshake.
Participants pay for the AB Handshake service through a software subscription where charges are proportional to the a mount of validated traffic. At the first stages the early adopters are benefiting from a period of free service and other advantages afterwards.
Though the full functionality of AB Handshake for any client depends on the coverage of its interconnect partners by the solution and will be reached over time, we provide instant value for each new participant of the AB Handshake community starting from day one. We already have sufficient volumes of live natural traffic towards any destination to detect attempts of illegal call routing towards the networks of our existing participants and any new client. This covers several fraud scenarios, including SIM box fraud and termination with a spoofed CLIs to countries with OBR. While you will be enjoying the benefits of our Early Adopters program - a free installation and 6 months of free trial - we will be reducing your revenue leakage right from the start.

EARLY ADOPTERS' FEEDBACK

A EUROPEAN OPERATOR

has implemented AB Handshake and has reported an increase in detection of incoming traffic with spoofed CLIs. This is achieved by using natural traffic for the detection of illegal termination.

AN OVER-THE-TOP COMMUNICATIONS PROVIDER

says their app-based communications are benefiting from AB Handshake's protection against International Revenue Share Fraud and short-stopping. They believe it will make it impossible for fraudsters to use stolen cards, leading to significant reductions in the cost of acquiring new customers.

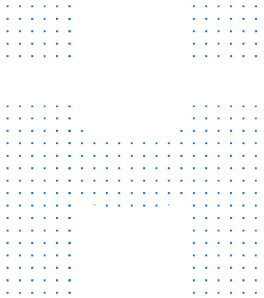
A WEST AFRICAN OPERATOR

was suffering from an acute problem with SIM Box fraud. With the implementation of AB Handshake such calls are blocked before they reach the handset of the B-party.

WHO ARE WE?

The AB Handshake Corporation was founded by a team of telecommunication industry professionals with advanced engineering degrees and decades of experience in establishing and successfully growing innovative high-tech businesses. This team's background made it possible to take an idea for preventing voice fraud by call validation and turn it into a truly universal solution working for all types of networks.

After creating the AB Handshake technology, testing it on an intercontinental network with countless simulated fraud scenarios, and honing the details of the service, the Corporation was founded in order to provide the technology to clients on a global scale. To facilitate the adoption of AB Handshake, we are establishing a trusted community of telecom service providers, that share the common goal of eliminating fraud by call validation. Inside this community all voice traffic exchange will be free from major types of voice fraud, resulting in radical improvement of customer experience and boosting profitability of members.



AB HANDSHAKE

SUMMARY

The AB Handshake is a game-changer for the telecommunications industry because every telco that joins the community will benefit from a degree of call validation that previously seemed impossible. We have eliminated every obstacle to its widespread adoption:

- Proven to work, fully tested, and ready to implement
- Fraud prevention that covers both IP and TDM networks
- Can be adapted to suit each telco's operational support systems without affecting the way authentication works between partners
- Quick to implement
- Only requires a modest investment in hardware

Refiling, wangiri, imposter fraud, caller ID spoofing and other abuses of phone networks represent a growing threat to the revenues and reputations of telcos. If we act decisively, we will turn them into words that will only be found in the footnotes of technical history books.

Get in touch today, and join the growing number of telcos that have also decided to adopt the AB Handshake.

CONTACT US:
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