



TELESHIELD™ CASE STUDY 3

International Premium Rate Number (IPRN) Database

Introduction

On the 4th of February, a European Network Provider discovered an IRSF attack being committed through one of their customers PBX. The Network Provider was using a rules-based Fraud Management System (FMS) configured to generate alerts when a call value exceeded a certain threshold. By the time this IRSF attack was discovered, 812 fraudulent calls had been completed to 9 different countries.

The victim Network Provider wanted to know if the IPRN database could have assisted in identifying this fraud earlier than their existing rules-based system. Our evaluation showed the following.

DETAILS OF THE FRAUD

This fraud incident occurred in February. Details of this fraud were:

- The fraud occurred overnight in early February.
- There were 812 calls made to 308 unique numbers in 9 Countries.
- The fraud was not discovered and stopped until after the 812 calls had been completed.

Could the IPRN database have prevented this fraud?

The first 83 calls in this fraud were to fully matching IPRNs in the database. If the database had been used, all 812 calls would have triggered fraud alerts—539 for exact matches and 273 for partial numbers. This IRSF incident could have been detected and halted early, preventing prolonged fraud.

INTERNATIONAL REVENUE SHARE FRAUD

- Analysing the numbers called during this IRSF attack identified 280 numbers with a 100% match to and another 28 partial matches to the last digit. This represents a 100% success rate, with 308 of the 308 unique numbers being identified in the analysis.
- Matching the identified numbers against the calls made found 539 of the calls made were to numbers that were a 100% match with IPRN numbers in the database while another 273 calls were a partial match to the last 1 or 2 digits. This represents a 100% success rate, with 812 of the 812 calls made identified using the IPRN database.

Individual country destinations called during this fraud included:

- Cuba, 152 numbers called with all 152 finding exact matches with an IPRN number in the database.
- Central African Republic, 67 numbers called with 65 producing exact matches with an IPRN number in the database, while the remaining 2 were partial matches.
- Solomon Islands, 12 numbers called with all 12 finding exact matches in the IPRN database.
- Cook Islands, 9 numbers called with all 9 finding exact matches in the IPRN database.
- Congo Republic, 6 numbers called with all 6 finding exact matches in the IPRN database.
- Madagascar – 21 numbers called with 14 finding exact matches in the IPRN database while

the remaining 7 numbers found partial matches:

- Diego Garcia, 23 numbers called with 15 finding exact matches in the IPRN data while the remaining 8 found partial matches.

CONCLUSION

This is a very good result with a 100% success rate in identifying IRSF calls, and certainly demonstrates the effectiveness of targeted fraud alerts such as those provided by using the database over simple rules-based systems which are clearly not as effective.