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## **Overview of IRSF and Number Misappropriation in the Pacific**

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# **NUMBERING MISAPPROPRIATION ISSUES: PACIFIC ISLANDS**

## **Overview of IRSF and Number Misappropriation in the Pacific**

### **Information Paper**

# NUMBERING MISAPPROPRIATION ISSUES: PACIFIC ISLANDS

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# NUMBERING MISAPPROPRIATION ISSUES: PACIFIC ISLANDS

## The history of number misappropriation in the Pacific

- Many Pacific Islands were the destination of choice for terminating Revenue Share Services from early 2000's
- As Pacific Operators extracted themselves from IRS contracts around 2005/06, the number misappropriation problem increased
- Following this period, the Pacific became known as a high fraud risk region with total country code blocking becoming common
- Over the past 4-5 years, there has been considerable work by Pacific Islands through PITA and supporting organisations to increase confidence in the regions numbers
- This confidence has resulted in a more discriminate approach to blocking numbers and better collaboration to avoid total country code blocking, reducing the impact on genuine services and the customer

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## What has changed, and current situation

- While efforts to develop a solution to hijacking are being considered globally, resulting in a number of resolutions for recommended actions; the issue continues (ITU resolutions and recommendations)
- Indisputable evidence of the increase in this problem globally is available from studying records of country numbers being advertised on IPRN Reseller websites without authority since 2012
- Number misappropriation is still an issue of concern for the Pacific and it's members, although reported incidents have been decreasing over the past 6 months (based on GSMA Fraud Reports)
- However it is recognised that fraud reporting through the GSMA and other Forums has decreased, with operators admitting that their focus now is to disrupt fraud and move on – fraud reporting is not a priority.

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## IRSF Update

- Remains the largest fraud issue facing the industry (8 years old)
- We still monitor IPRN Providers websites and new numbers are being added at a rate of 6,000 to 10,000 per month
- Total IPR Test Numbers in database now exceed 100,000
- There is a noticeable shift in IRSF attacks towards smaller operators and MVNO's – particularly in Europe
- However bigger operators still getting hit – one recent incident - \$4.5 million to Gambia – 800 simultaneous calls via hacked PBX
- Fraudsters generated 10,000 outgoing minutes in a 15 minute period
- Smaller operators and MVNO's are suffering losses because of poor detection and prevention strategy

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## Overview of the impact of Number Misappropriation

- IRSF has a wide footprint affecting operators and consumers at the originating and destination countries through financial loss
- IRSF also contributes to lost opportunities such as tourism, exports etc in the called country
- This has a direct impact on the fragile Island economies who rely on tourism for income
- Other Consumer issues in the originating country include their calls being hijacked and short-stopped to unwanted content such as pornography or IVR's
- Image and reputation of the country where call should have terminated suffers
- Island residents travelling abroad are often unable to call home
- Family/friends living outside some islands unable to call that location
- Travellers not coming to the Islands for holidays/conferences because they could not roam
- The growing risk on stability and trust for interconnections, with lost opportunities of connectivity and roaming
- A reluctance by some operators to negotiate roaming agreements with Island operators
- Unilateral actions to block numbers \*contradiction to ITU recommendations #

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## Industry organisations/groups introducing actions to help

- I3 Forum – Have been working with PITA to identify safe routes in to the Pacific and recommending these to their members
- GSMA – Introduction of NRTRDE and recommending the removal of country code blocks as Pacific Islands and PITA actively seek to remove their numbers from IPRN Websites
- PITA Fraud Forum
  - Providing awareness amongst members, and making recommendations when PITA member operators are approached to resell numbers
  - Engagement of a Fraud advisor to monitor and alert members for immediate actions, and implementing regular information exchange and reporting
- Other actions implemented by organisations such as BEREC, ITU and others include ongoing studies on the number hijacking problem.



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## Ongoing efforts to to help reduce impact

- Country administrations and national regulators to consider carefully any decision to resell number ranges
- Engaged personnel to monitor for incidents, trends and provide alerts: (In the Pacific, a Fraud Advisor is engaged (via PITA) to do this and alert members where their number ranges have been misused (for fraud) and or advertised on a IPRN reseller website)
- Efforts and support on disrupting the fraud model at the Supply, Demand and Transportation that make the fraud possible
- Disrupting the Supply case study:
  - The PITA Fraud Advisor reports the growing number of IPRN reseller websites advertising numbering ranges for use in possible fraud
  - Most of the numbers advertised in these IPRN reseller websites are without the authority or knowledge of the number range owner

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## Ongoing efforts to help reduce impact - IPRN

- PITA Fraud Advisor has been actively identifying member country numbers being advertised on IPRN Reseller websites
- This is completed on a monthly basis on over 140 IPRN websites
- Where Pacific Island country numbers are being advertised without authority of the number range owner, the only way the IPRN Reseller can generate revenue from using them is to hijack and 'short-stop' calls
- Without a relationship with the number range owner, there is no means of receiving payment if the calls are terminated correctly
- The focus now is to convince the IPRN Reseller to remove Pacific Island numbers they are advertising without the range owners authority

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## Impact this action has had on regions problems

- Many IPRN Resellers contacted were obtaining Pacific Island numbers from other resellers, assuming they had authority to do so
- Some resellers would remove all Pacific Island numbers obtained from these
- Countries assisted to remove numbers from Resellers during 2014;
  - Telecom Cook Islands, over 365 numbers removed from 53 websites
  - Solomon Island Telecom – 240 numbers removed from 32 websites
  - Telecom Niue – Over 160 numbers removed from 27 websites
  - Bluesky Samoa – 54 numbers removed from 21 websites
- During 2014 only 2 fraudulent calls reported in to these destinations and both were 1 minute test calls only
- The removal process is time consuming but has a positive result

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## Other number range owners in a similar situation

- Number misappropriation is not confined to the Pacific Islands and some other number range owners seeking advice from PITA include;
  - Sure Ascension Island, Falkland Island, Diego Garcia and St Helena
  - Telecom Monaco
  - Serbia Telecom
  - Dhiraagu, Maldives
- From monitoring IPRN Websites, there is a noticeable increase in numbers being advertised from some of these destinations, which corresponds with a decrease in some Pacific Island numbers advertised
- IPRN Resellers involved in number misappropriation do not stop, they simply change their hijacking targets. They do return to the Pacific.

# NUMBERING MISAPPROPRIATION ISSUES: PACIFIC ISLANDS

## Other considerations to reduce the impact

- Disrupting the Demand
  - Focus on disrupting the IPRN Providers business by taking action immediately unauthorised numbers are seen on their website (to remove them)
  - This helps with the Pacific Island problem, but as Pacific Island numbers reduce, there is a noticeable increase in numbers from other countries such as Ascension Island, Morocco, Serbia etc
- Disrupting transportation
  - Stopping the money flow: withhold payments for fraud incidents
    - Support the efforts for Fraud Classifications and recommendations on dispute handling within the wholesale telecom industry
    - Understand and support the role of national regulators and contract parties
    - The OFCOM example in the UK is an ideal example of how this works – a documented framework to follow where AIT is obvious, interested parties agree that payments for obvious fraud terminating on BT numbers will be withheld

# Recommended Short and Long Term strategies

## Short Term Strategies

- Arrange a Workshop with key stakeholders to agree a timely and achievable short and long term strategy to eliminate IRSF
- Identify short term strategies that can disrupt IRSF until a longer term strategy can be implemented . This may include;
  - More support by ITU for individual actions (Such as PITA initiatives)
  - Working with i3 and other Forums to introduce safe routes to high risk areas like the Pacific
  - Clearly identify and document the social and economic impacts of number hijacking on small Island communities

## Long term Strategies

- Pursue the recommendations from workshop which are likely to include;
- Changes to the ITR's to drive the legislation changes required to support the elimination of IRSF
- Solicit industry agreement to 'stop the money' flow
- Pursue a legal opinion regarding 'ownership' of a call record in transit, and the release of information relating to a call when it is being terminated fraudulently.
- Identify other agencies (Law Enforcement, Social, administrative) etc that may be willing to assist

# THANKYOU

## **CONTACTS:**

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