3rd Annual i3Forum Conference

The Future is All IP

May 17, 2012
Chicago

Fraud control & Management

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Agenda

1. Context
2. Compliance charter
3. Update on work stream scope of activities
4. Highlight on delivery:

   Fraud Classification and recommendation on dispute handling
5. Conclusion

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Context

- Severe increase on fraud cases hitting the wholesale carriers

→ Impact on revenue assurance
  - AIT
  - IRSF
  - Number hijacking
  - Operators' fraud escalated to carriers
  - FAS
  - Etc.

- Goal: show industry i3f recognizes this and shows the way to a fraud-less IP eco-system

- Merged with Fight FAS Forum and 1st F2F meeting: Brussels September 2011

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Compliance charter

- Work under a compliance charter for information sharing
  - Tool: Message board

- Extract (preambule)
  - As communications carriers, the members of the i3 forum have the right and responsibility to protect themselves, their services and their customers against abuse and other illegal activities.
  - This Charter outlines the standards of conduct that members of the i3 forum Fraud WS agreed to adopt in order to promote ethical conduct and to work in compliance with antitrust legislations and compliance in all activities connected to the Forum.

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Scope of activities

- Focus on the specifics of international wholesale and IP

- Collaboration with Technical WS for network security aspects

- FAS
    - Collaboration on FAS detection tools

- Universal Numbering Plan Management

- Collaboration with several industry bodies:
    - GSMA FF
    - FIINA
    - CFCA

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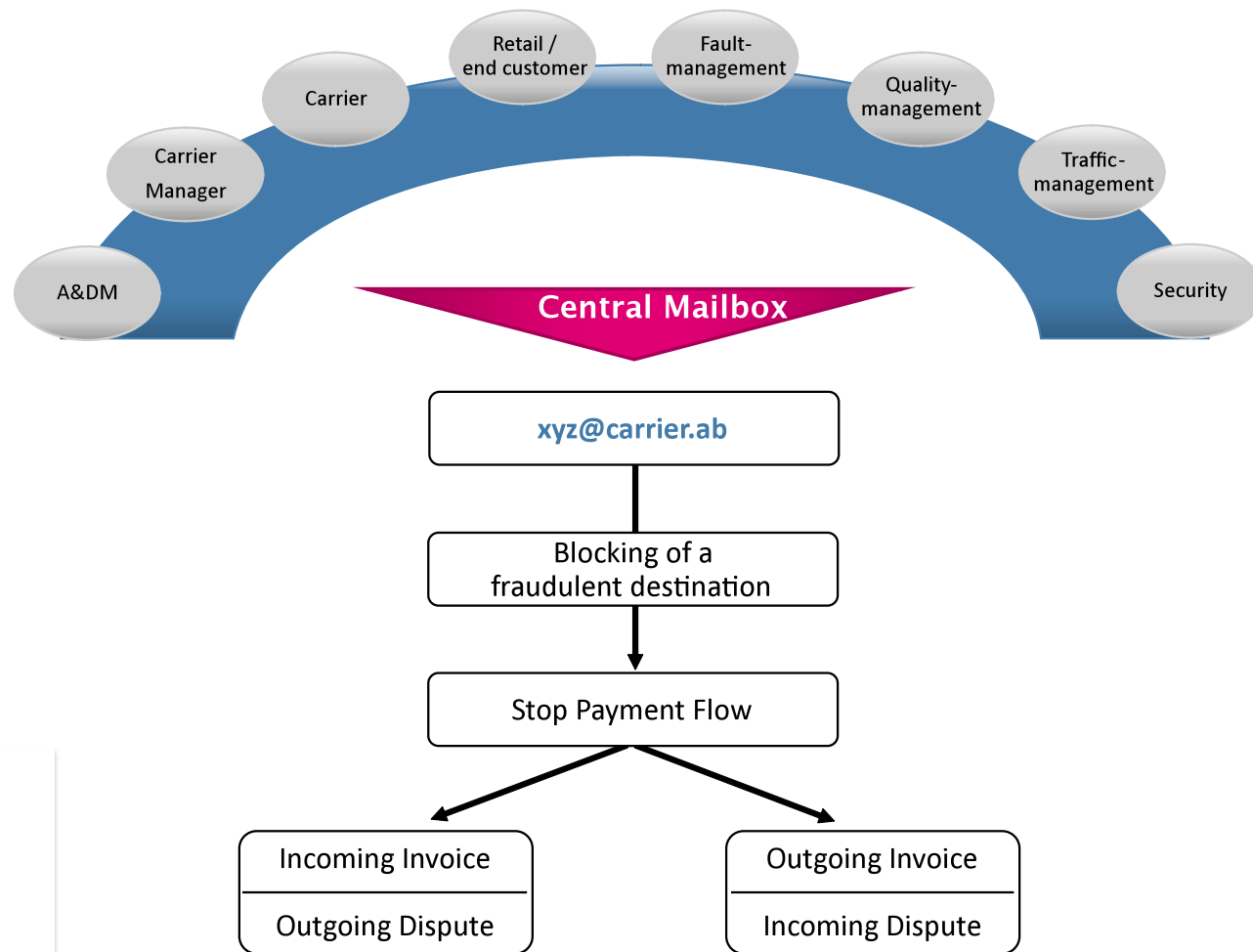
2012 Delivery
Fraud Classification and recommendation on dispute handling

- Major delivery of the group for 2012
  - fraud types,
  - methods for identification,
  - dispute handling

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Best practices for wholesale carriers

- Creation of central mailbox

- Analyse traffic flows on suspicious ranges

- Counter-active measures
  - Traffic blocking
  - Dispute fraudulent traffic

- Inform upstream and downstream
  - Timeframe
  - Selling destination
  - Volume (minutes) at that time

- Customer remains liable of traffic sent

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Best practices for wholesale carriers

A&DM

Carrier Manager

Carrier

Retail / end customer

Fault-management

Quality-management

Traffic-management

Security

Central Mailbox

xyz@carrier.ab

Blocking of a fraudulent destination

Stop Payment Flow

Incoming Invoice
Outgoing Dispute

Outgoing Invoice
Incoming Dispute

Disputes

- Increased number of fraud disputes reach the wholesale carriers
  - Disputes are not always justified
  - i3F recognizes that disputing and withholding payments can positively impact the industry

- Willingness of the carrier industry to join forces in fighting fraud

- Traffic is considered disputable when withholding payments will prevent that fraudsters would be paid down the chain

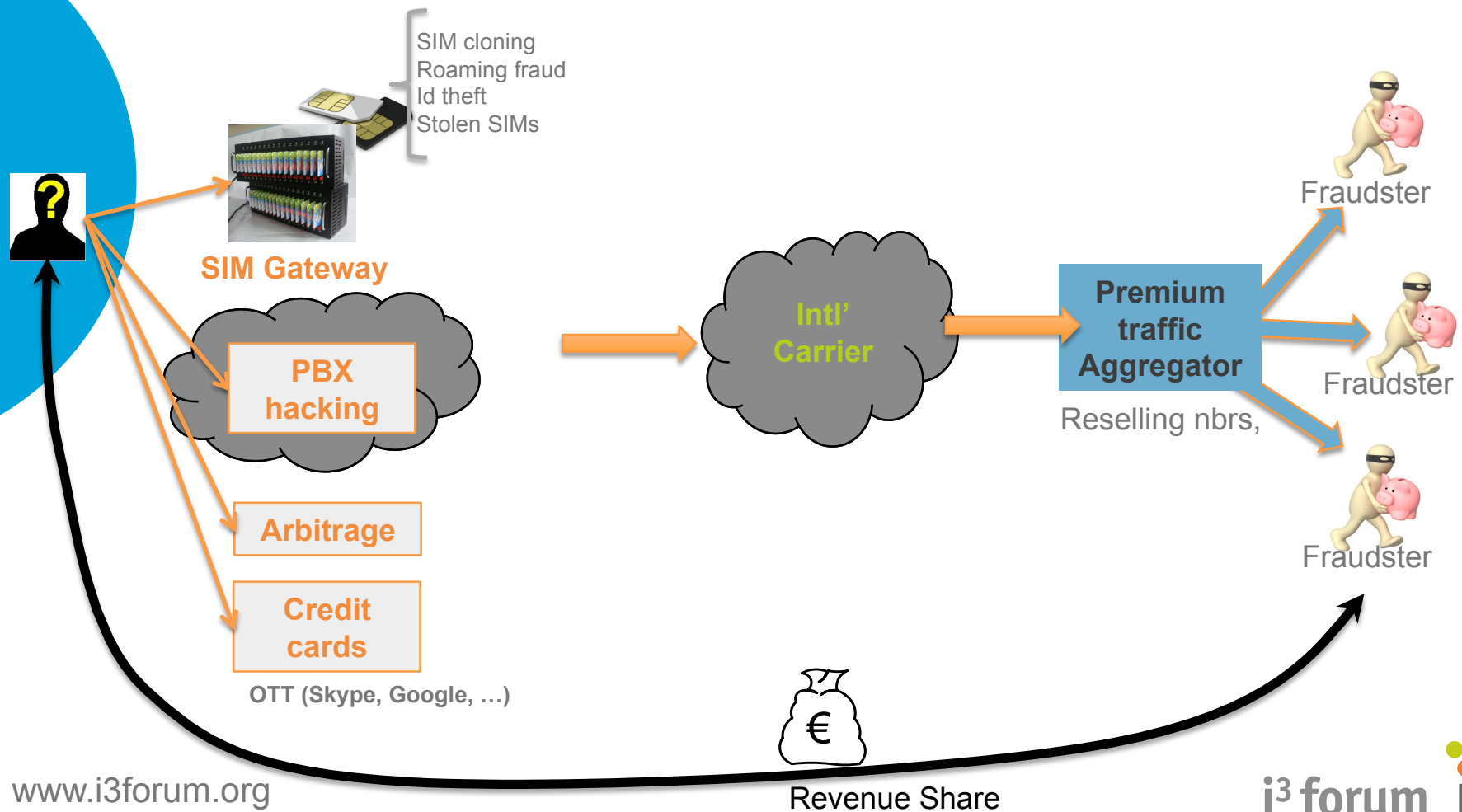- In case carrier is not able to withhold payments, liability remains with retail operator

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Elements outlining fraud

- CDR analysis

- Fraud description based on CDR analysis

- Official fraud letter from the operator

- Official document, issued in the name of the customer company by one of the customer Chief Officers, stating that the operator has not been paid or has had a loss (quantified) for the specific portion of traffic that is disputed

- Police or other law enforcement authority report

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Fraud and Fraud-like scenarios

- Fraud

  – Call Hijacking

  – False Answer Supervision

  – Hacking of a customer Telephone System / Software Manipulation

  – IRSF (International Revenue Share Fraud)

  – Calls to manipulated b-numbers (to +CC 0 xyz)

- Fraud-like

  – Arbitrage (retail flat rates)

  – Insolvency of a service provider and or of another operator

  – Call Selling (traffic brokering)

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Example: IRSF
(International Revenue Share Fraud)

SIM cloning
Roaming fraud
Id theft
Stolen SIMs

SIM Gateway

PBX hacking

Intl' Carrier

Premium traffic Aggregator

Reselling nbrs,

Fraudster

Fraudster

Fraudster

Arbitrage

Credit cards

OTT (Skype, Google, …)

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Revenue Share
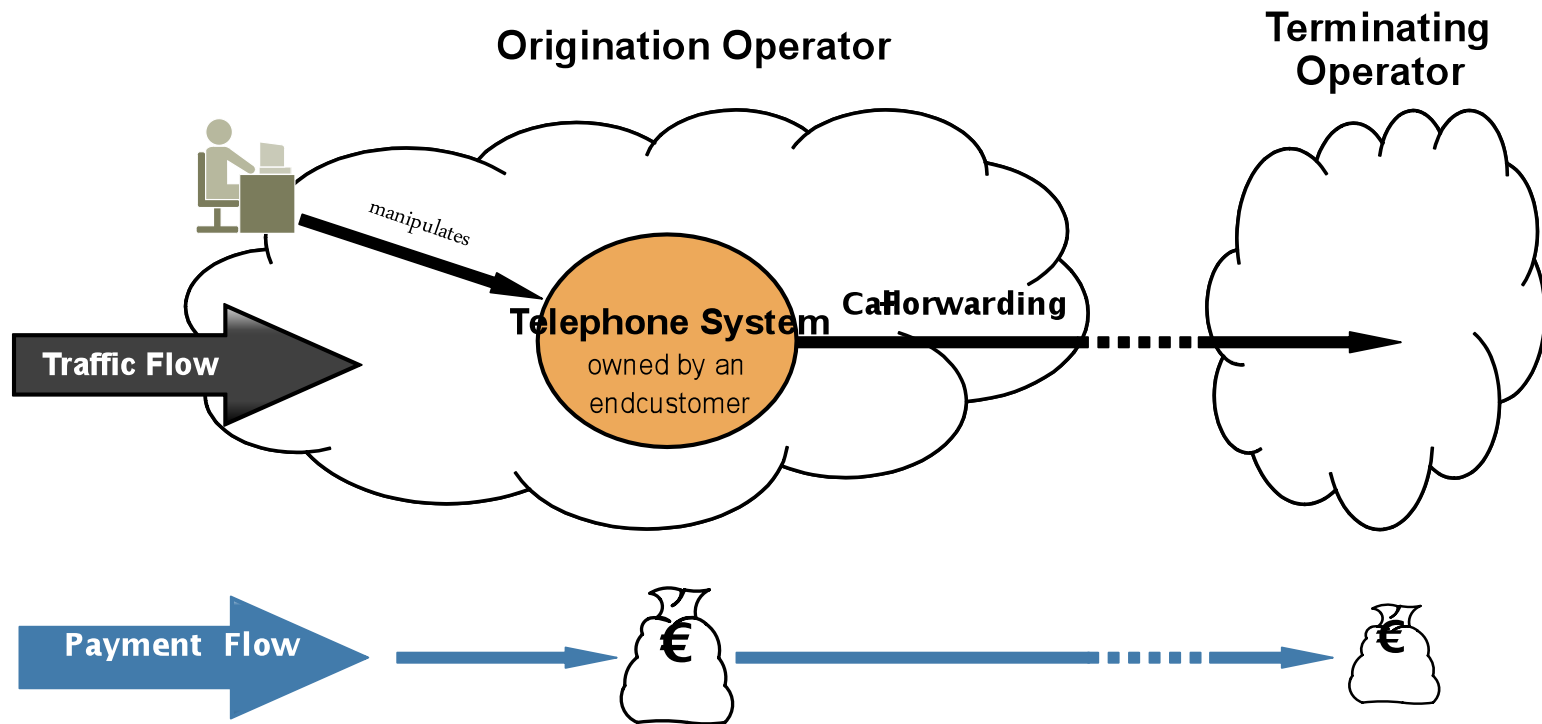
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Example: IRSF
(International Revenue Share Fraud)

- Description
  - Target: high revenue and IPRS destinations
  - Failing to provide the service
  - Mostly linked to artificially inflated traffic at the source

- Approaches to detect
  - Close traffic monitoring for abnormal traffic patterns

- Approaches to avoid
  - Detailed numbering plan identifying PRS ranges
  - Close monitoring
  - Strict company policy when opening PRS ranges in numbering plan

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Example: IRSF
(International Revenue Share Fraud)

- **Information of dispute handling**
  - Elements outlining fraud to be provided respecting the timing agreements
  - Disputes justified
  - Disputes to be cascaded
  - Payments withholding down the chain
  - Other actions to be taken by retail operator
    - Tight SLA's with PBX customers
    - Legal actions against local fraudsters
    - .....

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Example2: Hacking of a customer Telephone System / Software Manipulation

Origination Operator

Terminating Operator

manipulates

Telephone System
owned by an endcustomer

Traffic Flow

Call forwarding

Payment Flow

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Example2: Hacking of a customer Telephone System / Software Manipulation

- Approaches to detect
  - Analyse retail CDR's
  - Analyse wholesale CDR's: carrier could inform service provider

- Approaches to avoid
  - Increased security
  - Access controls
  - Software updates

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Example2: Hacking of a customer Telephone System / Software Manipulation

- Information of dispute handling
  - Pure pabx hacking scenario (no IRSF)
  - Operator's network security is questioned
  - Wholesale carrier shouldn't accept a dispute

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Conclusion

- i3F is determined to collaborate in fighting fraud with a focus on the wholesale perspective and not limiting to IP

- Activity is based on
  - Exchange of best practices
  - Exchange of information in the frame of a compliance charter
  - Draft of recommendation to the wholesale carriers on fraud classification and dispute handling

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