i3Forum@PTC'25

international traceback –what will it take?

workshop and open discussion

PTC'25, Honolulu, HI
January 22nd, 2025

Where can we improve things together?
some suggestions for voice (not comprehensive)

Trusted Trunks: on the same interconnection, **separating** known/trusted/verified traffic from the rest of the traffic

- Improved (mandated?) domestic **KYC/KYT**
- enhanced legal/regulatory framework for **Spoofing**

A number:
Alice's phone number (origin, aka **CLI** : Calling Line Identification)
Improving **accurate knowledge of the global numbering plan**

Know your customer / Know your Traffic
(KYC/KYT)
Real-time knowledge of **global numbering plan**
Enhanced **CLI verification** (legitimate CLI ?)
- **Traffic pattern analysis**
Blocking suspicious / illegitimate A number ranges
Blocking suspicious calls **(safe harbour)**
CLI spoofing prevention/detection

domestic traceback
or mandated KYC/KYT

Managing **National CLIs (A number)** on **International trunks** : international inbound call with a calling party number from the destination country.
- Identify and **allow legitimate use cases** (Roaming, Calls Centers…)
- Identify and **block illegitimate** use of National CLI on International trunks

Alice : calling party, A number

Bob : called party, B number

Fixed or Cellular phone

Domestic operator (fixed, mobile)

Domestic (inter)connection

Domestic switch

Harmonized national legal & regulatory frameworks

reporting, including harmonized Police Report

B number:
Bob's phone number (destination).

International Wholesale, aka Carrier Business
i3Forum / Restore Trust initiative perimeter (Voice)
— International interconnection
← International traceback information flow
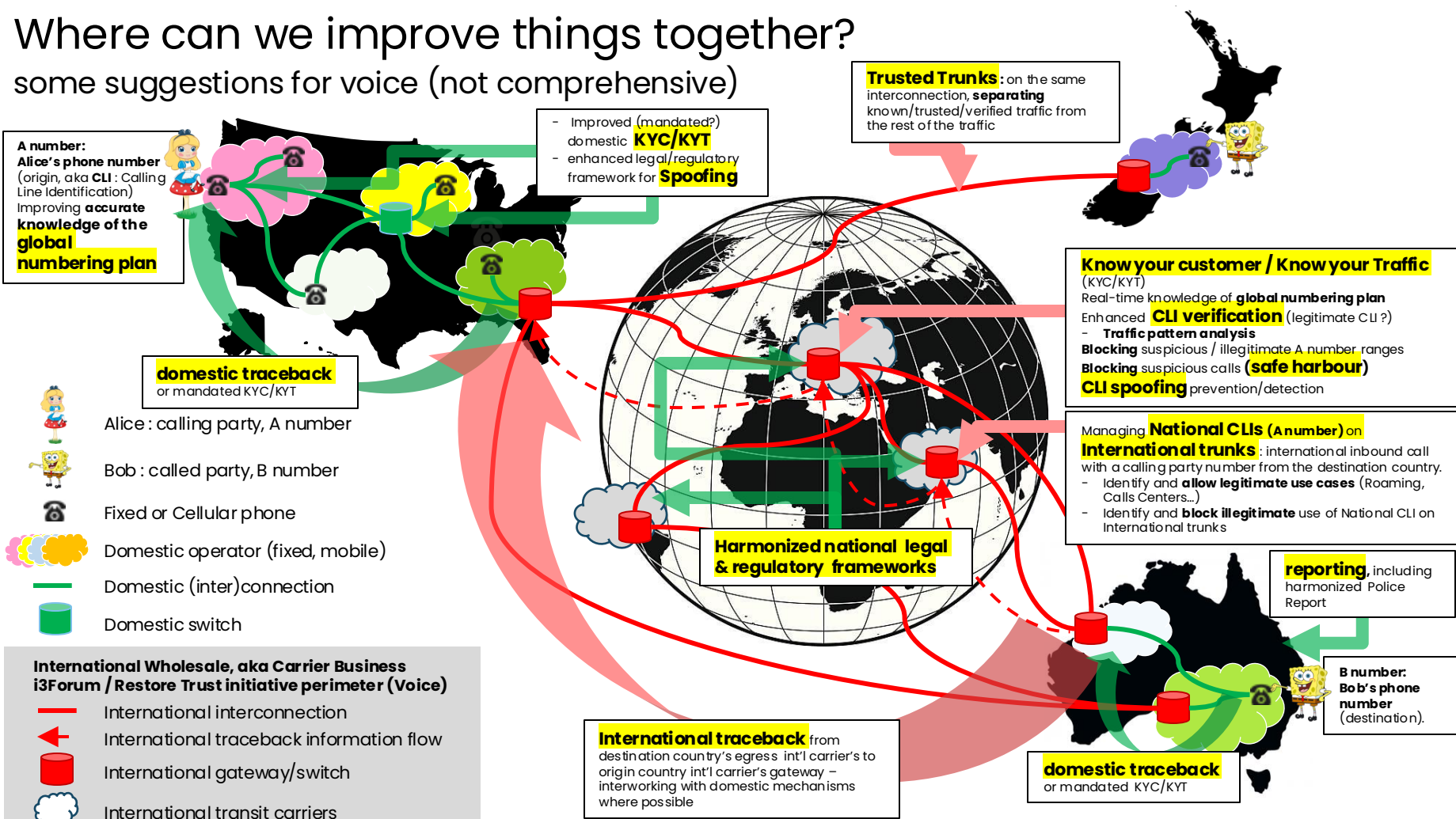International gateway/switch
International transit carriers

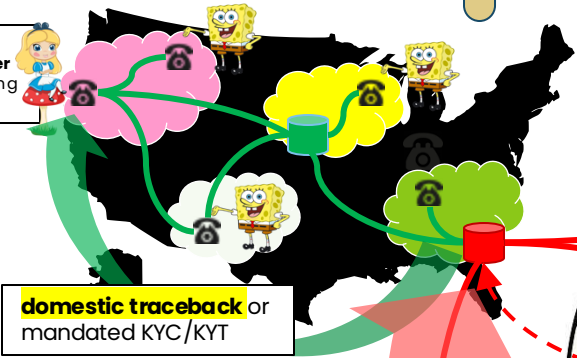**International traceback** from destination country's egress int'l carrier's to origin country int'l carrier's gateway – interworking with domestic mechanisms where possible

domestic traceback
or mandated KYC/KYT

International Traceback – why do we need it to fight spams / scams?

- **catching the fraudsters** :
  - regulators, law enforcement and domestic service providers become more efficient fighting spams and scams in a given country,
  - fraudsters move abroad and use the international networks to contact their targets

- **why is it complicated to identify the true origin of a call** ?
  - the A-number cannot be trusted as it can be spoofed
  - spoofing (A-number manipulation) is not illegal, there are multiple legitimate business and technical use cases
  - In addition, numbers are leased/sub-leased multiple times – who really owns a number at any given time ?
  - the relevant legal/regulatory framework do not always define very clearly what is legitimate or not, and what obligations the operators have to verify the A-number
  - spoofing is easy to use to support fraud

- **retracing call path, hop-by-hop from destination to origin, is the only way**
  - cooperation between operators and between countries
  - adequate legal & regulatory framework (information sharing, legitimate requests…)
  - central management/coordination
  - financing

why do we even need traceback ?

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Who is really calling Bob ?

A number:
Alice's phone number
(origin, aka CLI : Calling Line Identification)

domestic traceback or mandated KYC/KYT

Alice : calling party, A number

Bob : called party, B number

Fixed or Cellular phone

Domestic operator (fixed, mobile)

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International Wholesale, aka Carrier Business
i3Forum / Restore Trust initiative perimeter (Voice)

International interconnection

International traceback information flow

International gateway/switch

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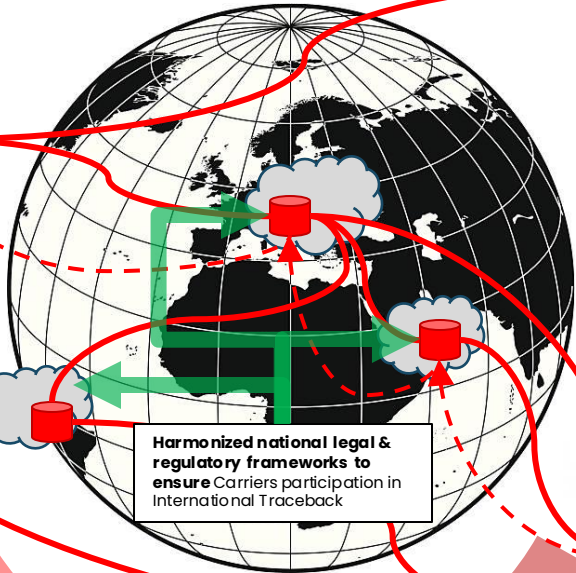
Harmonized national legal & regulatory frameworks to ensure Carriers participation in International Traceback
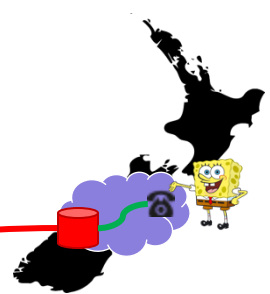
International traceback from destination country's egress int'l carrier's to origin country int'l carrier's gateway – interworking with domestic mechanisms where possible

domestic traceback or mandated KYC/KYT

B number:
Bob's phone number
(destination).

International Traceback – what is it ?

"full traceback" : ideally "end to end" , spanning two different countries and the international ecosystem in between – involving multiple stakeholders in multiple jurisdictions, globally.
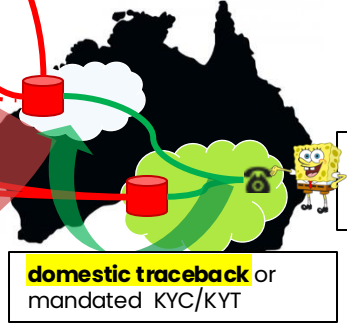
full traceback consists of three segments :

- **destination country** domestic leg: from destination number & operator back to the inbound international gateway
- **International leg** : tracing the call for the international segment, i.e.
  - from the inbound int'l gateway in the destination country,
  - back to the outbound int'l gateway in the origin country
- **origin country** domestic leg, from the international outbound gateway to the origin number & operator in the origin country

the domestic legs are under the jurisdiction of their respective Regulators and Authorities.

the international leg, in the absence of a global Authority, is the responsibility of our ecosystem: international carriers and regulators working together, globally

note : information about the individual or organization that originated the call (identity, location...) can only be provided by the origin operator. The national legal framework and judiciary process in the origin country determines if and how this information can be obtained and communicated, and by whom.

a simple goal

a complex environment

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International Traceback – a few interesting questions for you …

some non-trivial questions 1/2

- what is a legitimate international traceback request – who defines that ?

- who is authorized (by whom ?) to make an international traceback request ? - and how do they justify their request ?
  - international Industry ("participating" Carrier) ?
  - "Participating" National Authorities : authorized agencies, from "participating" countries, e.g. NRAs, Law Enforcement… ?
  - authorized non governmental organizations : consumer protection orgs, domestic traceback organization, domestic operators… ?

- what information about the call received is required to make a request ?

- what information is provided back to the requestor ? and how ?

- how will countries (domestic segments authorities) cooperate with the international segment, and between themselves ?

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International Traceback – a few interesting questions for you …

some non-trivial questions 2/2

- how to secure cooperation/participation from int'l transit carriers ?
  - incentives/penalties from industry peers ?
  - incentives/mandates from NRAs where International carriers are located/registered to participate in Int'l Traceback

- how do we harmonize the legal/regulatory framework to share internationally traceback information
  - this may require evolving the national legal/regulatory framework in multiple countries, while taking into account legitimate privacy and security concerns

- what happens if we can't build this, or not fast enough ?

- and then of course : design, implement, drive adoption, fund, operate...

- One Consortium and GIRAF have started working on this

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now, please share your thoughts
and questions!

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mahalo !

safe travels and let's stay in touch

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