



# voxbone

Quality in international phone numbers

## **ITU workshop on “Origin identification and alternative calling procedures”**

**Voxbone, the experience of an inbound IP telephony provider**

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# Agenda

1. Voxbone – brief presentation
2. IP telephony, one name for different realities
3. Alternative calling procedures, IP inbound telephony
4. Origin identification
5. Legislative actions against misuse
6. A way forward

# 1. Voxbone – brief presentation

## Company

- Founded in 2005
- Offices in Brussels (HQ), LA and Singapore
- Global IP backbone carrying 2 Gbps of voice traffic with 5 SuperPOPs

## Business and services

- Services in 50+ countries, **inbound exclusively**
  - **VoxDID** : Voice inbound services through local or national phone numbers in 50+ countries covered (4000+ area codes)
  - **Vox800**: Voice inbound services through toll free or free phone numbers in 25+ countries covered
- National regulatory compliance (notifications, licenses, concessions)
- 700 (mainly) wholesale customers across the world
- 2,8 billion minutes in 2011, growing exponentially

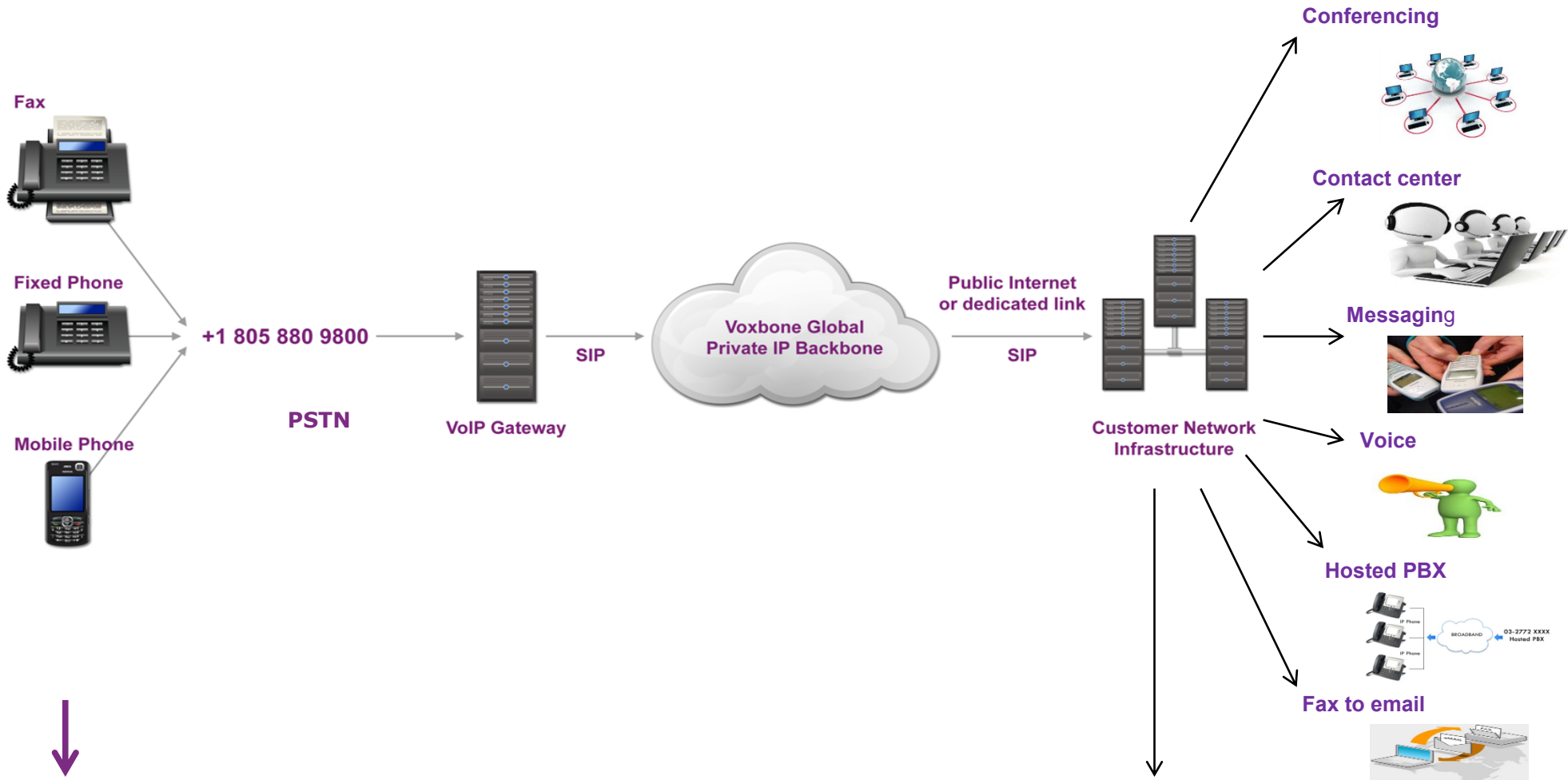
## 2. IP telephony, one name for different realities

**IP telephony** – a form of communication allowing making and/or receiving calls over a internet connection (VoB) or the public internet (VoIP or OTT service provider).

### **ERG Common position on « VoIP » – IP telephony (ERG 07\_56rev2, p.4):**

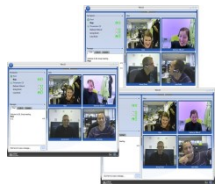
1. A service where **E.164 numbers** are not provided and from which there is **no access to or from PSTN**. This case, however, includes different implementations: from pure *peer-to-peer*, based simply on a VoIP software which uses users' computers as nodes of the connection to more centralized architectures based on call management servers, data bases and routers provided by the VoIP operator.
2. **Outbound voice.** A service where there is outgoing access to the PSTN only and E.164 numbers are not provided.
3. **Inbound voice.** A service where there is incoming access from the PSTN, mobile networks or via IP and E.164 numbers are provided. A Service belonging to this category does not provide outbound calls (whether to the PSTN, mobile or otherwise).
4. **Voice telephony.** A service where there is incoming and outgoing access to the PSTN, mobile network, and E.164 numbers are provided. (...)

# 3. Alternative calling procedure, IP inbound telephony



**All types of communication supported**

Screen sharing while conferencing



## Voxbone network

Fully redundant IP backbone carrying 2 Gbps of voice traffic with 5 SuperPOPs



# 4. Origin identification

- **Important question for outgoing IP telephony**
  - Use of a CLI, E164
- **Case of misuse: ID spoofing or CLI spoofing**
  - **Definition:** Caller ID spoofing is the fact that a caller masquerades its identity by falsifying the number that appears on the recipient's caller ID display.
  - Modification of the CLI at calling party's discretion (website offer)
- **Action taken by some providers**
  - Ex-ante validation of the CLI (e.g. business users): Prior first usage, SMS or call authentication; proof of use rights
  - Blocking CLI if not validated and authenticated

# 5. Legislative action against misuse

## Legislative actions are taken around the globe:

- **Legislative action e.g. in the US, Truth in Caller ID Act of 2010:**
  - Prohibits caller ID spoofing for the purposes of defrauding or otherwise causing harm, i.e. prohibits any person or entity for transmitting misleading or inaccurate caller ID information with the intent to defraud, cause harm, or wrongfully obtain anything of value.
  - Subject violators to a penalty of up to \$10,000 for each violation of the rules.
  - Exempt authorized activities by law enforcement agencies and situations where courts have authorized caller ID manipulation to occur.
- **EU law:**
  - Telephone number is considered as personal data, but no specific act referring to spoofing.
  - Equilibrium between data protection and fraud prevention.



## 6. A way forward

- Technological neutrality
- New technology, new challenges
- If new standards needed, innovation driven
- Prohibition of spoofing principle: ITRs reference?

Thank you!

Questions?

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