Fixed telephony service
Evolution over the last 40 years

?? (on behalf of many colleagues over the last 25 years)

01.11.2023
Agenda

- Where we are
- Where are we going now
- SWOT (not SWAT) analysis
- Bright future – where are we planning to be
Agenda

- There was a time before Alcatel (and CS)
- A Ferrari in the 90s
- That needed some tuning over time
- To leave place to his replacement
- And start its retirement
There was a time before Alcatel (and CS)

- Some may remember, many were not even born.
- Postal Telegraph and Telephone (PTT) assured telephony in the 50s.
- PTT installed a first Swiss Hasler HS 31 electromechanical telephone exchange in 1961.
- The Hasler was upgraded in 1968 and owned by CERN.
- The Hasler was replaced in 1987 by a Norwegian STK (Standard Telefon OG Kabelfabrik) digital exchange.
- Alcatel arrived in 1994 and introduced the current numbering plan.
A Ferrari in the 90s

• Alcatel commissioning
• Features
• Cabling
That needed some tuning over time

- Least cost routing for outgoing calls
- Integration with the mobile service
- Switchboard evolution – Service Desk since 2017
- Infrastructure to IP (2003) and appliance servers (2006)
- First call center for IT HelpDesk (2006)
- Web-based audioconference service (2007)
- IP phones (2009) – end of analogue lines installation
- Fax over IP (2010) – end of analogue faxes
And a long path to find the right softphone

- Alcatel softphone solution trial - 2005
- Nortel softphone solution trial - 2006
- Skype integration & Asterisk assessment - 2007
- Microsoft Office Communications Server assessment and integration – 2008
- Voicemail to Exchange as a service - 2010
- Lync as a service - 2012
- WebRTC assessment - 2013
- BRAINS (Boîte pour Reduire l'Alcatel et Introduire des Nouveaux Services) - 2014
- TONE (Telephony Open-source Network Evolution) - 2015
And start its retirement (roughly 8 years)

- Backend: TONE
  - Has replaced the Alcatel functionalities since 2016
  - Has replaced the call centers in 2023
- Frontend and clients:
  - DIAL (frontend solution developed by IT-CDA)
  - Skype for Business (default client solution until Malt)
  - CERNphone (frontend and client solution since 2020)
Just a word about TONE & CERNphone

• Modern infrastructure based on open-source and standard IT components
• Service based on open standards and protocols
• Focused on software-based solutions
• Capacity to easily develop and customize new services
• Low TCO and operational costs
• Future proof
Questions?

Evolution of Phone