ISITEP
INTER SYSTEM INTEROPERABILITY FOR TETRA-TETRAPOL NETWORKS

SEVENTH FRAMEWORK PROGRAMME

WP 7.5 Demo “VIP protection service during a European Summit”

Etienne Lezaack BFP

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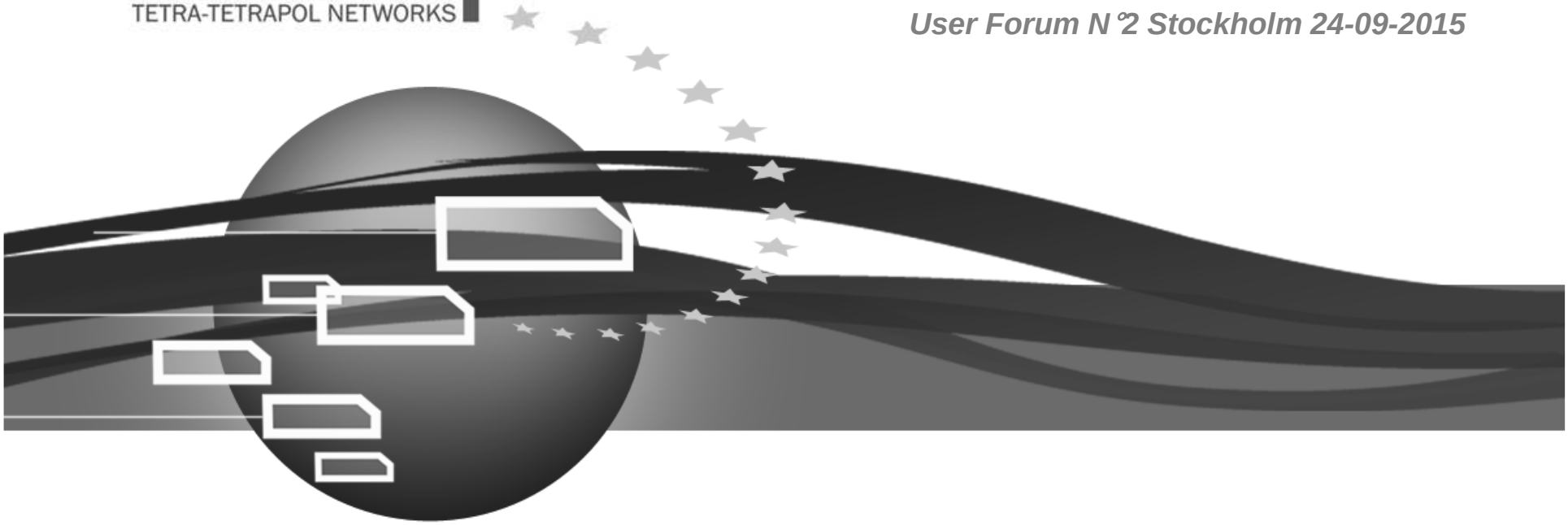

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Demonstrator objectives – Functional objectives

- **WP 7.5 aims to demonstrate the benefits of using the ISITEP mission oriented framework to manage the police aspects of a European summit in Brussels in an as realistic as possible environment**

- In such a police operation, a visited country has to manage foreign delegations to a venue. Most of them come by air towards the Brussels national airport and then, by road to the Brussels European area
- This is a typical **case of "international visit mission"** (no cross-border transfer, but coming in via a border entrance point and mission area limited to 1 country)

Demonstrator objectives – Functional objectives

- The WP 7.5 will therefore demonstrate the benefit to have radio communication between the visiting countries and the host country (at coordination level and at field level) before the delegations comings and at the delegations arrivals

- Today phones and mobiles (point to point links) are used

Demonstrator objectives – Functional objectives

- The WP 7.5 will therefore also demonstrate the benefits to build up radio communication between the delegations VIP's close protection services and the forces of the hosting country

- Today, this link
  - is ensured by appointing an extra Belgian officer accompanying the VIP's protection services in a delegation car
  - is ensured by using mobile phones
  - is not ensured (case of escorts composed by motorbikes only)

Demonstrator objectives – Functional objectives

- Moreover, some delegations coming from neighbouring countries also come by road (Nl and Lu) and by train (Fr)

- Therefore WP 7.5 will also demonstrate the benefit and the efficiency of the radio procedures in **case of planned cross-border operation between two countries** (here Belgium + a bordering country)

- Today, when crossing the border, you use mobile phones

Demonstrator objectives – Functional objectives

- Remark: WP 7.5 will not demonstrate:
  - The **case of a unexpected cross-border intervention**, namely, following the IFPOC, the usage of international Alert Groups “AG-P XxYyZz”
    ➔ This case is handled by WP 7.2 in a 3-Country configuration

  - **Cases of multi-agencies cross-border routine interventions or crisis management**, namely, following the IFPOC, the usage of international Multi-Purpose “blue light” cooperation groups “MP-ALL XxYy i“ groups
    ➔ These cases are handled by WP 7.1 and WP 7.3

  - A **case of “full international mission”**, i.e. an operation which covers a large area of two countries of more, namely the usage of multi-national MP groups
    ➔ This case is not handled as such by an ISITEP demo.
    The topic is however referred to in WP 7.5 via the incident in a train transporting football supporters from Amsterdam to Paris which will impact the French delegation route to the Brussels European summit

- **Next to the main functional objectives described above, some technical innovative solutions will be demonstrated**
  - An **ISI** between two existing test TETRA-Airbus networks situated in Brussels
    Test network of the Belgian operator A.S.T.R.I.D. named “TAS”
    Test network of the Belgian manufacturer Airbus.be named “CTB”
  - An **ISI** between a lab TETRA-Airbus network in Finland and the TAS
  - An **ISI** between a lab TETRA-Motorola network in Denmark and the TAS
    This ISI will use a integrated version of the **ISITEP E1-IP gateway**
  - The **ISITEP Enhanced Terminal** (IET) as the solution to simulate roaming between a TETRA and a TETRAPOL network, in this case the Belgian operative network “Astrid” and the French operative network “Acropol”
  - The **ISITEP deployable TETRA-TETRAPOL gateway** to interconnect TETRA and TETRAPOL terminals working in direct mode (DMO)
  - *Subject to a technical validation of the ISI between the TAS and the CTB (Dec 2015) and of a future agreement between Belgium and Germany*, an **ISI** between the Belgian operative network Astrid in Brussels and the operative German operative network BOSNET in Berlin (both from Airbus)

- In order to make the functional demonstration as realistic as possible, it will be played, when possible (i.e. when some interim interconnection solutions are already effective), with the existing operative networks and on the real spots, based on a scenario developed by the same people who manage European summits in the real live
- In its *maximal* version, the demonstrator will involve 8 networks depicting Belgium and delegations coming from 6 European countries: Denmark, Finland, France (real actors), Germany (real actors?), Luxemburg and the Netherlands (real actors)
- **Some of these networks will be operative, some test or Lab networks**
- **For security reasons (reliability, confidentiality and integrity) the demonstrator's operational setup and test setup will be technically independent**
  Therefore, Brussels (i.e. the area between the airport and the venue) will be covered by both Astrid operative and test networks

Demonstrator concept

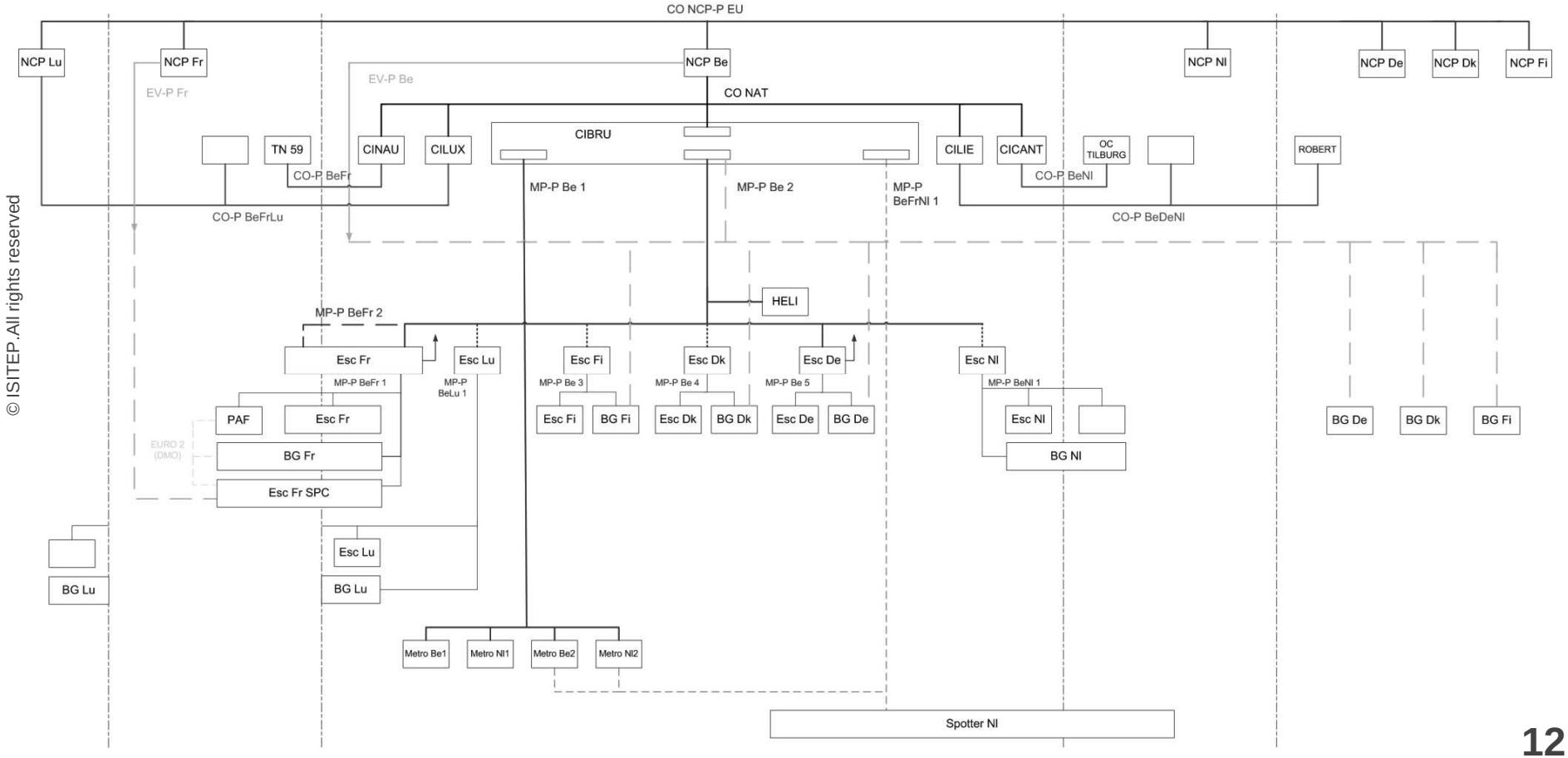
- The following operative networks will be used
  - Belgium (Astrid)
  - France (Acropol)
  - the Netherlands (C2000)
  - Germany (BOSNET) *(optional)*
- The following test or Lab networks will be used
  - TAS duplicating Astrid in a part of Brussels
  - CTB duplicating the network of Luxemburg in a part of Brussels
  - Lab Motorola duplicating the Danish network in Copenhagen
  - Lab Airbus duplicating the Finnish network in Helsinki

Demonstrator concept

- Both test and operational setups are divided in a core/base part and an extension part
- Both extensions depend on the technical validation of the core test setup

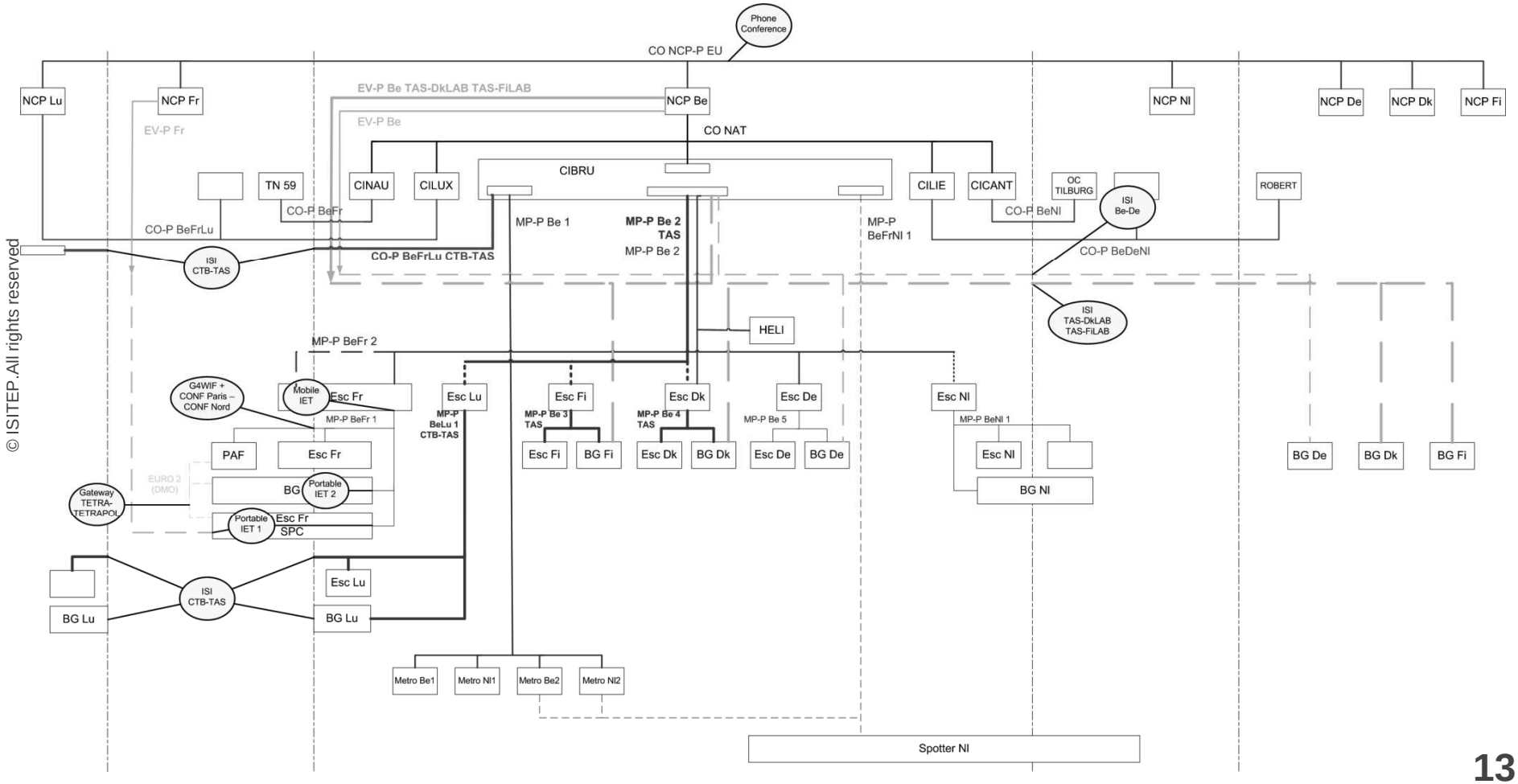
ISITEP mission oriented framework Functional demonstration: international radio scheme and related procedures Relies on two independent technical setups	
Test setup	**Operational setup**
Core ISI E1 between **TAS** (Astrid test system) and **CTB** (Airbus.be test system)	Base • B2B and dual provisioning **Astrid-C2000** • B2B Astrid-**Acropol** • ISITEP Enhanced Terminal (IET) • ISITEP TETRA-TETRAPOL deployable gateway for **DMO** terminals
Extension • ISITEP ISI E1/IP between TAS and **Lab Motorola** • ISI E1 between TAS and **Lab Airbus.fi**	Extension (optional) ISI E1 between DXT Astrid Bru and DXT **BOSNET** Berlin

- Remark: the WP 7.5 radio scheme sustains a simplified police European summit operation (only six depicted delegations etc.)



Technical radio scheme

- Remark: some radio groups are technically constituted by an operative and a test radio group



1. Efficiency of the functional radio procedures disregarding the technical limitations
   - Limitation of the terminal / work station manipulations (first responders on the field and in the control rooms)
   - Easiness of the necessary terminal / work station manipulations (idem)
   - Easy control on the people on the field by the dispatchers
     Delicate transitions are
     - When a unit has to select another radio group
     - When a unit passes under the control of another control room
   - Correct radio procedures execution by the first responders
   - Limitation of messages repetitions by the first responders
   - Identified and easy to apply procedures in case of unexpected incident



2. Effectiveness of the supporting technology (terminal/network)
   - The effectiveness of the technology will be checked by each execution step of the scenario (“Major Event List” playing)
3. Technical-operational end-user requirements (terminal/network)
   - See reference table in annex of D2.3.2.
   - Some requirements will be tested during the scenario execution (e.g. ISI group speech call)
   - The other requirements supported by the proposed setup will be tested afterwards (e.g. emergency calls)
   - Some requirements will not be demonstrated because, although the technology is ready, the necessary modules have not been integrated in the setup in order to limit the ISITEP demo costs (budgets and delay)
     On the other hand, lot of requirements will not be demonstrated because the technology is not ready yet or the developments has not been started/done yet
     ➔ It is therefore important to note in remark in the technical-operational reference table why a requirement has not been demonstrated

Definition of key performance indicators

- Extract of the technical-operational reference table for the WP 7.5 core setup assessment

ISITEP TECHNICAL-OPERATIONAL END-USER REQUIREMENTS				Technical solutions demonstrated during demos									
ID	TITLE	PRIORITY		TETRA / TETRA						TETRAPOL / TETRAPOL	TETRA / TETRAPOL		
		1	2	Airbus T / Airbus T	Motorola / Motorola	Selex / Selex	Airbus T / Motorola	Motorola / Selex	Selex / Airbus T	Airbus TP / Airbus TP	Airbus T / Airbus TP	Motorola / Airbus TP	Selex / Airbus TP
1	ISI channels optimisation												
I-EUR-FUN-1	ISI channel trunking	○											
2	Subscriber Migration and security												
I-EUR-FUN-2.a	Registration in another network than its home network	○											
I-EUR-FUN-3.a	Migration permission in the home network		○										
I-EUR-FUN-4.a	Migration permission in the visited network		○										
I-EUR-FUN-5.a	Migrating subscriber profile in the visited network.	○											
I-EUR-FUN-5.b	Several Migrating subscriber profiles in the visited network.	○											
I-EUR-CNF-1.a	Provisioning of range of visiting users. i.e. No technical obligation to pre-provision each subscriber number likely to visit at visited network level		○										
I-EUR-CNF-2.a	Mass provisioning of visiting users.		●										
I-EUR-FUN-6.a	Manual Migration		○										
I-EUR-FUN-7.a	Manual Network Selection		○										
I-EUR-FUN-8.a	Automatic Migration		○										
I-EUR-CNF-3.a	Configuration of Automatic / Manual Migration		○										
I-EUR-FUN-9.a	Automatic Migration High Performance		○										
I-EUR-FUN-10.a	Automatic Migration Performance	○											
I-EUR-CNF-4.a	Terminal - permitted network	○											
I-EUR-FUN-11	Subscriber authentication		○										
I-EUR-FUN-12	Air Interface Encryption	○											
I-EUR-FUN-13	End to End Encryption transparency	●											

4. Technical performances of the general key features

- The technical performances of both the following key features are so important that next to their effectiveness, their efficiency has to be verified too
  - Roaming of the terminals
  - Capacity of the terminals to communicate with other terminals beyond the borders
- Therefore the following technical measurements will be performed
  1. Period of time needed to switch manually to another network
  2. Degree of difficulty to execute the related manipulation
  3. Period of time needed to switch automatically to another network
  4. Call interruption time when automatically migrating all receiving a group call
  5. Period of time needed for a static user before being able to speak beyond the ISI/gateway
  6. Voice quality beyond the ISI/gateway
  7. Delay between the sent speech item and its reception beyond the ISI/gateway
  8. Reliability of the ISI/gateway when transmitting a loaded group with many call requests coming at the same time from several terminals