ISITEP news #5

ISITEP
INTER SYSTEM INTEROPERABILITY FOR TETRA-TETRAPOL NETWORKS

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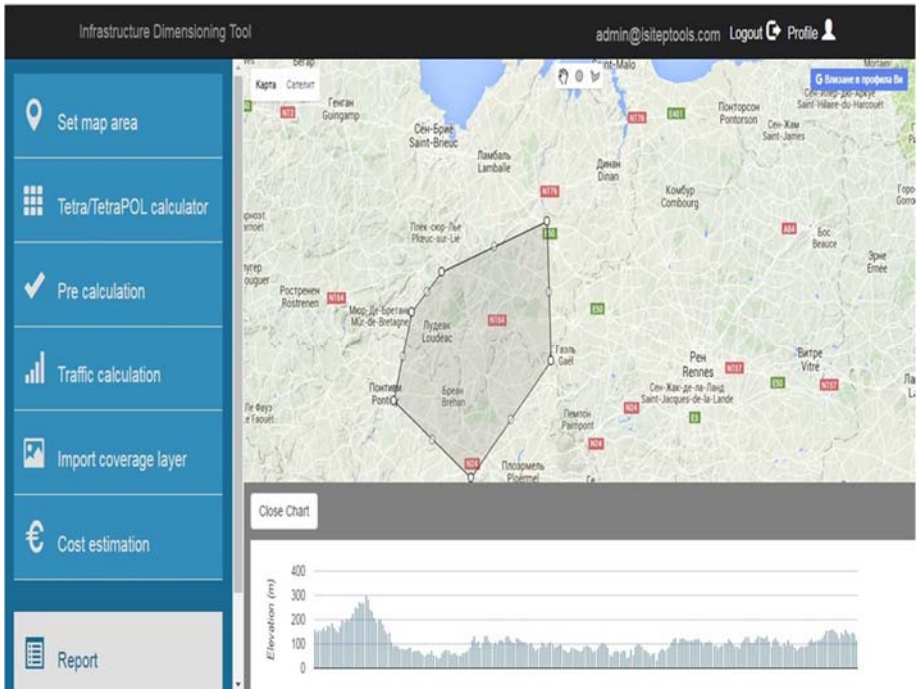
ISITEP Supporting Tools

ISTEP Supporting Tools, developed under the ISITEP project, will support the decision-makers for fast and reliable actions in case of emergency situations, disasters and proactive identifications of different PPDR scenarios due to crisis situations. The Supporting Tools are important part of the interoperability concept of ISITEP project. They combine different technologies (such as TETRA and TETRAPOL) in one common software platform to be used for supporting the technical network dimensioning, users' knowledge and experience with new terminals and procedures and estimation of total financial activities, which are needed when mutual cooperation of different forces and operations is mandatory. ISITEP Supporting Tools are the following:

* Infrastructure Dimensioning Tool.
* Terminal Training Tool.



▲ Infrastructure Dimensioning Tool

▲ Infrastructure Dimensioning Tool

* Operations Training Tool .
* Operations Cost Estimations Tool.
* European Business Model for roaming implementation.

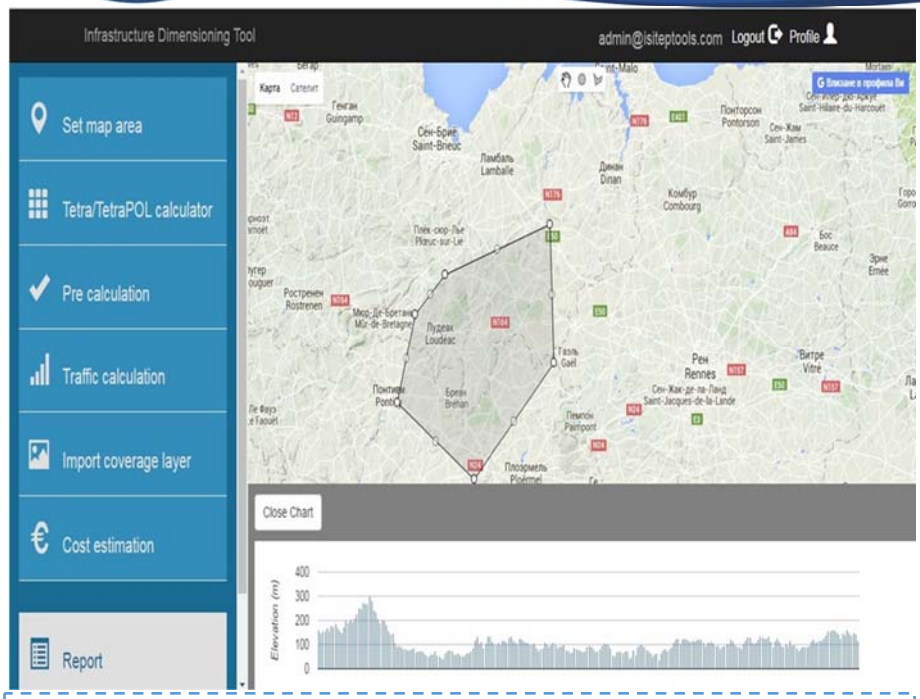
Infrastructure Dimensioning Tool (IDT)

The Infrastructure Dimensioning Tool integrates network

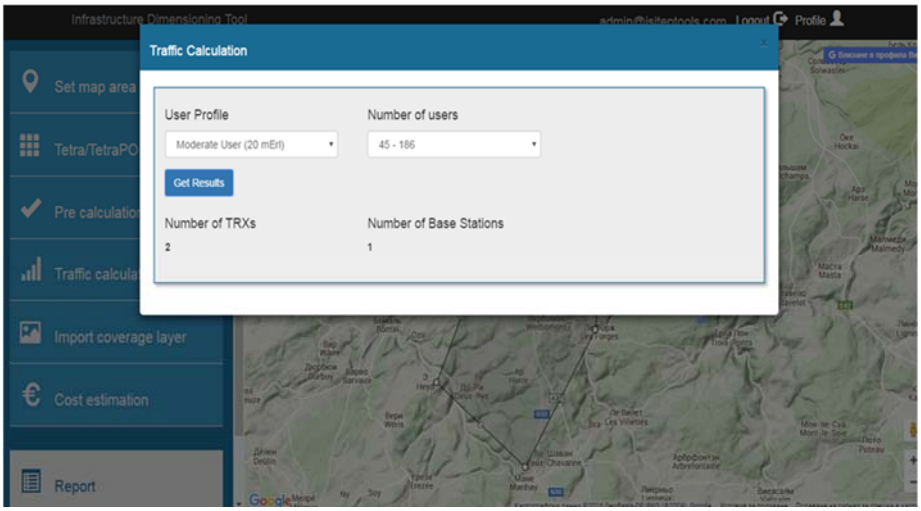
dimensioning sub-tools, which are designed to support the deployment of ISI solutions by assisting the stakeholders' decision makers through the provision of the network elements required for the realization of the anticipated interoperability functionalities. The IDT will receive input related to the "disaster" area (the area where common transnational operations take place), such as the number and the type of the first responder forces that are expected to operate in the area, as well as information related to the existing infrastructures (e.g. Base Stations, Switching nodes, etc.). In addition, information related to end user traffic load, available traffic resources, bandwidth requirements of the ISI connections will also be taken into account. The output of the tool will be an estimate of all the network elements required to fulfill the communication needs within each operational scenario.

The IDT may also act as a proactive tool to identify mainly the sufficiency of capacity and radio access resources prior to the realization of different PPDR scenarios.

The IDT is developed to provide reliable estimates of the number of network elements



▲ Infrastructure Dimensioning Tool



▲ Infrastructure Dimensioning Tool

requisite to fulfil both coverage and traffic requirements.

The IDT offers a set of functionalities as:

* EIRP Calculator: Equivalent isotropically radiated power (EIRP) calculations for both UpLink (UL) and DownLink (DL) directions.
* Path Loss Calculator: Calculations of Path Loss as a function of various parameters (e.g. Distance, Mobile Station height, Base Station height, area type etc).

* Link Balance Calculator: Quick and reliable link balance estimations and proper selection of equipment at both Base Station and Mobile Station sides.
* Cell Range Calculator: Calculations of BS cell range, taking into account numerous BS, MS and related technical parameters.
* Traffic Calculator: Different types of traffic calculations according to the selected technology.

▲ Terminal Training Tool

Terminal Training Tool

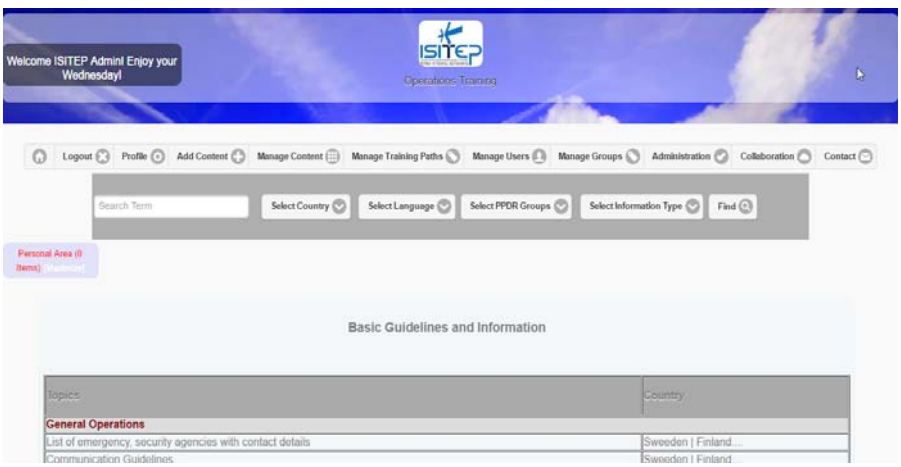
The Terminal Training Tool is developed to train TETRA/ TETRAPOL users to terminals different than those used in their own organizations, when operating in other countries. This is a web-based application that emulates the terminals used by all different security forces. Additionally, translation capabilities, which allow users to have their own language, are considered in order to improves transnational common operations.

Operations Training Tool

The operations training tool will help the preparation of the different users (first responders) and will contribute different PPDR first responder agencies from different countries. The tools provides advanced educational content delivery functionalities like users grouping, learning paths and even a live collaboration area.

Operations Cost Estimation Tool

The Cost Operations Tool focuses on estimating both the cost of operations as well as the general financial impact in several crisis situation cases. It considers the cost estimation of the performed operations of different PPDR forces across borders and benefits that the



▲ Operation Traning Tool

interoperability solutions will imply. Additionally, it offers Pros and Cons analysis of the combination and use of different communication standards (TETRA, TETRAPOL).

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Highlight: ISITEP at first 2016 PSCE Conference

First ISITEP workshop held on 18-19 May 2016 in Brussels, during 14th Public Safety Communication Europe (PSCE) Forum. Public safety stakeholders from 16 countries were present, consisting of public safety communication end users, ministries, network operators, technology developers and research organizations.

The key PSCE conference themes were:

- Future communication networks
- Pan European Information Space
- Handling emergency
- How Copernicus and Galileo services support crisis management?
- Ethical, Legal and Social Issues (ELSI)

ISITEP project has been brought to the attention of PSCE participants with the presentation “Global solution for interoperability between PPDR communications systems”, during the “Future communication networks” session.

Within the several aspects of the project, the audience has been particularly interested in the possibility offered by the proposed framework of allowing PPDR agencies to achieve a cross-national interoperability that in the short term leverages existing technologies, but in the long term is also open to the benefits offered by emerging technologies.