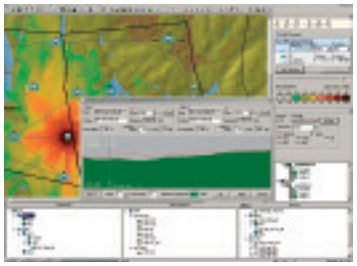
frida™

Frequency Management System & Communication Planning Tool

The Teleplan Frequency Management System & Communication Planning Tool (**FRIDA**) is designed for Commanding Officers at all sites and levels for the planning and management of operational communication services. **FRIDA** is based upon Teleplan's MARIA™ map application.

FRIDA is an exceptionally reliable system for radio network planning and the allocation of frequencies for radio and radio link systems in the HF, VHF, UHF and SHF frequency bands, using the spectrum from 2 MHz to 40 GHz. The system solution supports the organization and planning of military operations.

Communications Officers at different sites and levels may, simultaneously and in a coordinated way, plan and get a picture of the current situation, and make alternative plans for an entire operation, with different configurations and positions for all communications units and equipment.



Configuration of Units, Radio Equipment and Networks

The FRIDA has tools to:

- Create and maintain a hierarchical organization structure according to an Order Of Battle / TASKORG
- Allocate radio equipment to all units and networks
- Create and maintain logical and physical networks
- Support the topology of different radio and radio link networks

Radio Coverage and Interference

FRIDA takes into consideration:

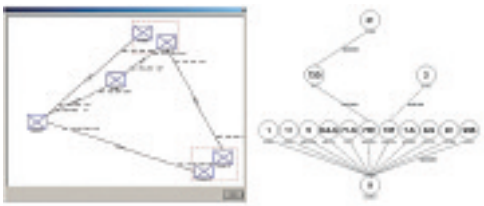
- The technical characteristics of the radio and radio link systems, such as waveform, propagation, radiation pattern, communication range, output power, antenna height, minimum frequency separation in multi channel radios, bandwidth for frequency hopping and spread spectrum radios.
- Topographic conditions and the exact position of the transmitter/receiver, including altitude above sea level, distance between transmitters and receivers and angular relations between transmitters/receivers that may affect the performance of the units.
- Other conditions that may affect the radio receiver, such as harmonics, intermodulation products and the distance to the nearest transmitter/receiver (co-location).

Frequency Allocation and Assignment

Frequency allocation and assignment is done so as to utilize the available frequency spectrum effectively, and at the same time optimize the communication conditions with respect to coverage and interference.

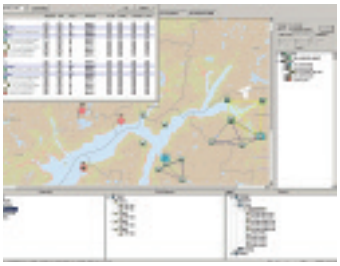
CEOI Generation

FRIDA data, e.g. frequency assignments, network information, address and map grid codes, code words, authentication tables, radio diagrams and radio link diagrams, etc. are presented in the format given in the Communication and Electronic Operating Instructions found in a tactical CCIS.



Scenario and Situation Management

During an operation, the tactical situation may change quite rapidly, and the communications planner will need to prepare alternative node and network deployment plans consistent with the supported unit's current plans and orders.



FRIDA allows such plans to be prepared simply by defining operational snapshots, called "situations". Each situation contains all the necessary data for interference, coverage analysis and frequency management calculations.
An operator can maintain several situations, typically the current situation and several alternative snapshots according to the operational plans.
For flexibility, each situation may be divided into several sub-situations. E.g. one way of updating intelligence information is to create a separate sub-situation for Hostile Forces.
All actual, planned and past snapshots may collectively be defined as a "scenario". Several scenarios may coexist – this facilitates planning and debriefing of several operations.
Several situations may be displayed simultaneously in the map area. Planned data may be easily distinguished from current data, and different map filtering may be applied for each situation.

Configurable Mapping System

The background maps can be extensively customised to fit any operational or training requirements. A large range of map formats and display options are possible including simple 2D maps, contour maps, 3D maps and orthophoto.

The symbology is fully configurable by the user, and libraries for Naval and Air symbols according to STANAG 4420/NTIDS, and most of the Army symbols according to APP-6A are "ready to use".

Architecture and Scalability

FRIDA can be configured for use in international operations by NATO and UN Forces.
The FRIDA is designed to utilize information from other systems as regards Order of Battle and Common Operational Picture (COP), and supports the exchange of information regarding frequencies, emitter parameters and network parameters.

The FRIDA architecture is designed to operate both in a stand-alone mode or as networked workstations each responsible for a designated segment of the communication planning mission. It is also designed to operate on portable computers to support field use. FRIDA is currently available on Intel based PC's running Microsoft Windows NT / 2000 / XP.

WHY TELEPLAN?

Teleplan has a unique combination of experience:

- **40 years of experience delivering solutions to armed forces worldwide.**
- **Highly skilled staff with experience in both military operations and in state-of-the-art software development.**
- **Efficient organization dedicated to Military Command and Control, Electronic Warfare, Training Simulators and Communications Planning activities.**
- **Proven solutions in daily operational use.**

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