

RFCND Module



RF cable network design

The RFCND module is intended for engineers, planners, operators and construction teams who design, maintain and operate RF cable networks.

The objective of this CAD (Computer-Aided Design) application is to provide high-performance tools for doing informed decision-making operations allowing to reach the optimal efficiency of the network at minimum cost. RFCND balances the network in a uniform manner while preserving the quality of the signal and assures the use of the full potential of it's components.

The RFCND module can be progressive and can be used by companies in constant evolution as well as those maintaining existing networks.

Characteristics of the module:

The functionalities of the module allow to:

- display all the components that make up an RF cable network in a Spatially Referenced Information System environment (SRIS);
- create a model of the network inventory, from the head of the line (or optical receptor) to the clients;
- locate each network component within it's environment on a continuous geographic map covering the entire territory without the limits associated with traditional ones;
- automatically georeference, on precise cartographic backgrounds, networks components;
- precisely locate any object of interest according to the topological (polygons and linear networks), vectorial (cartography and CAD) or matrix information;
- consult the complete historical background for each RF network object;
- consult instance (relevant to the component itself), catalogue (common to every modeled object class) and contextual (connectivity) information;
- use the integrated capture templates to view and update data;
- standardize the data capture for each section;
- guide the designer throughout his updates;
- evaluate in real-time the impact of the overall updates on the quality of the service signal.



CABLE NETWORK APPLICATIONS

Management

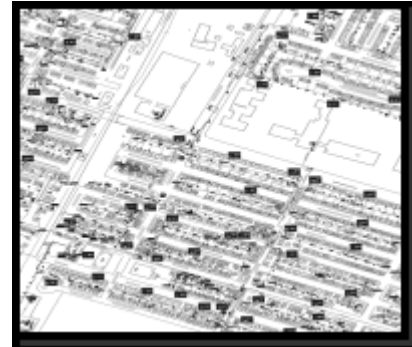
Groups of network components

- **Cables:**
primary and secondary lines, distribution lines, feeder lines, etc.
- **Equipements:**
Trunk line amplifiers, couplers, customer taps, power packs, power injectors, AC cuts, fusion boxes, etc.
- **Structures:**
poles (including the distance between them), access shafts, pipes, etc.
- **Geographic data:**
roads, road names, land register data, infrastructures, centroids, addresses associated to equipment, etc.

State and equipment list

The module manages network components by their status. Different design situations are considered.

- **Existing network**
- **Modernization of an existing network**
- **New network design**



Displays and reports

RF calculations

- Evaluates signal values at any point in the network.
- Recommends the kind of equipment and sub-components to use.
- Alerts automatically the user to problem areas in the network.
- Prints the design values in the graphic window.

AC calculations

- Evaluates the electrical power needs of active network components.
- Performs convergence analysis.
- Alerts automatically the user to problem areas in the network..
- Prints the design values in the graphic window.

General purpose features

- Include network navigators that help create information domains based on a network's structure.
- The software is able to create various plots formats for regular and irregular zones of interest.
- The open architecture of the application allow the removal of design values from a generic catalogue.
- The system can be configured by the designer / analyst. He can:
 - ⇒ create and modify additional objects (and templates);
 - ⇒ configure the data structure;
 - ⇒ modify insertion methods and standardization processes for inserting or updating information.