
Atos Network Design Tool

Link 16 networks can be difficult to set up:
Time Division Multiple Access communication
(TDMA) architecture, multiple networks, Network
Participant Groups (NPG), frequency constraints, etc.

ANDESIT (Atos Network Design Tool) helps Link 16
designers deploy networks effectively.



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First used by the French Navy's "L16 Design Cell" to initialize their Multi-Functional Information Distribution System (MIDS), ANDESIT has become their Joint Network Design Tool. ANDESIT makes it possible to initialize operations, mixing many types of platforms (Army, Air Force, Navy) within a mission.

Furthermore, ANDESIT is interoperable with allied platforms, allowing designers to import or export networks supporting the NATO standardized format (NETMAN T / 1 Rev5).

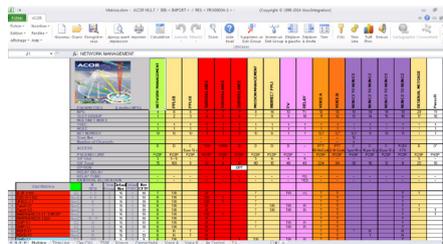
Solution

ANDESIT is a decision-making tool that provides the following features:

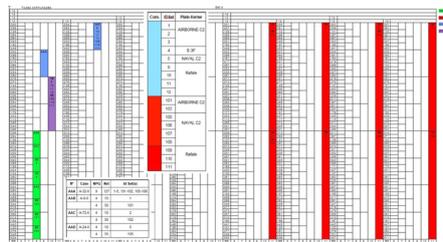
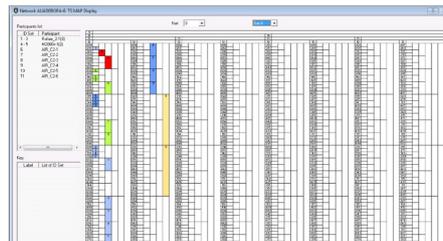
- Link 16 network design (Scenario, Connectivity matrix, Time-Slot Allocation algorithm, TSMAP, etc.)
- Network Exchange XML Schema for design exchange with ANDESIT data base, separate ANDESIT modules
- Load file generation for all Maritime, Air and Ground platforms equipped with Link16 (CVN Charles de Gaulle, Frigates, Early Warning E-2C Hawkeye, AWACS, Rafale, GBADs etc..)
- TAPE: adaptable parameters editing for MIDs and JTIDS load files
- DOCGEN: network documentation generation (stand-alone ACOR module);
- DECONFLICTION: coordination of air activities and compliance with the OAT / defense MIDS agreement (standalone module)
- XML-LMS MT interfacing with the ACOR database
- Generation of network data in the joint national XML pivot exchange format
- Exchange of network files in NETMAN T/1 Rev5 NATO format: import / export of files, re-building of the connectivity matrix whatever the system generator used by allied network design services (US in particular).

Benefits

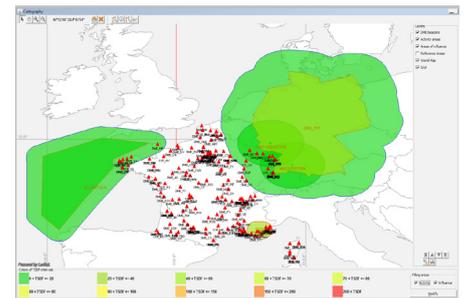
ANDESIT makes it possible to design various scenarios that involve participating platforms according to the context and planned mission. In each scenario, Link 16 communication requirements are expressed in a connectivity matrix and allow the allocation of time slots (allocated time for data exchange) taking into account the requirements of the operator and the environmental constraints. The multi-community mode is also available to overlay TSBs on different nets for different opposite sides (blue, red, ...) during exercises for instance.



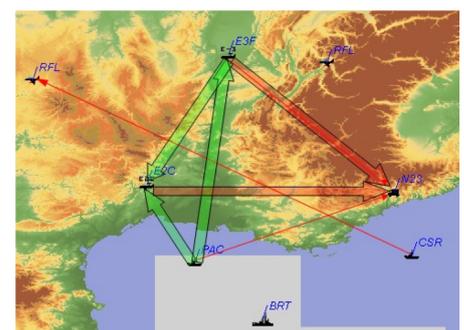
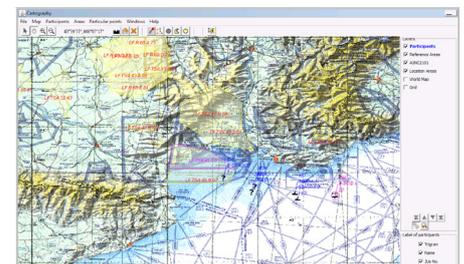
After an allocation proposal is checked on TS Map into ANDESIT or DOCGEN, operators can generate the files required to initialize various equipment used to support communication exchanges.



Various file formats allow information exchanges between ANDESIT and other equipment (network design tool, mission preparation tool, MIDS / JTIDS terminal).

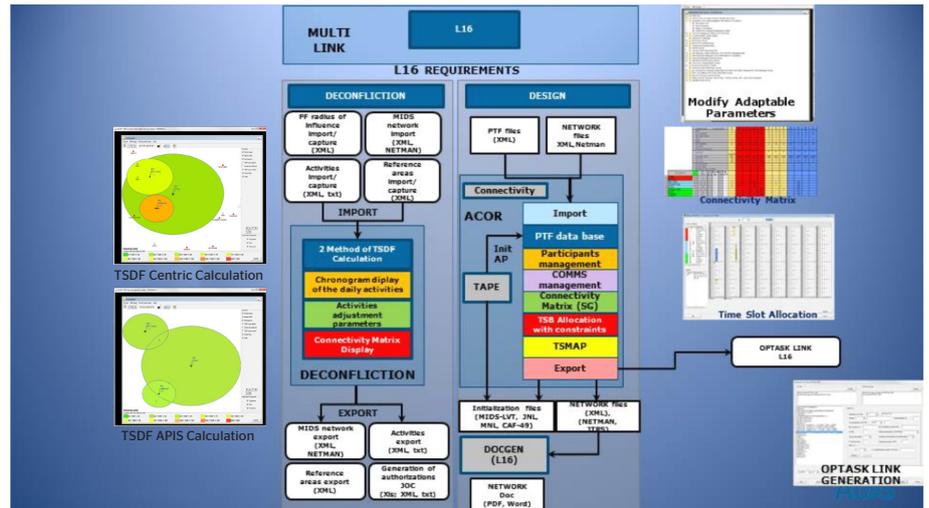
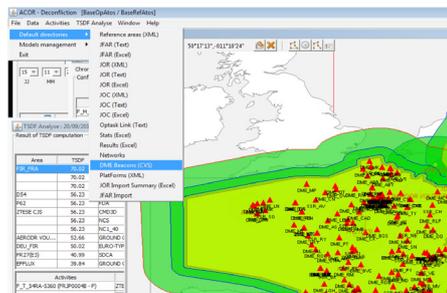


ANDESIT designers can use geographic map information to express their requirements and desired capabilities taking into account the existing connectivity between them.



ANDESIT includes a coordination and deconfliction module for air activities, which enables the French JICO to coordinate national and allied air activities all over the French Airspace (request for activity, TSDF analysis result display, and providing authorizations and / or restrictions).

ANDESIT can also export and import network-related data in XML format, especially for the purpose of exchanges between ANDESIT modules.



Technical environment Facts and figures

A solution based on:

- Common IT standards such as Microsoft Windows, Office, Visual Basic, Visual C++, Java
- Specific applications: the Luciad MAP mapping tool.
- Tool used by the French Armies, among their different network design cells, operational since November 1997 especially during international missions
- Tool used by German Navy for Frigate 123
- A team of engineers for development and support since 1997
- Now in Version 6.1.7, delivered to the French Armies in December 2017.

About Atos

Atos is a global leader in digital transformation with approximately 100,000 employees in 73 countries and annual revenue of around € 13 billion. European number one in Big Data, Cybersecurity, High Performance Computing and Digital Workplace, the Group provides Cloud services, Infrastructure & Data Management, Business & Platform solutions, as well as transactional services through Worldline, the European leader in the payment industry. With its cutting-edge technologies, digital expertise and industry knowledge, Atos supports the digital transformation of its clients across various business sectors: Defense, Financial Services, Health, Manufacturing, Media, Energy & Utilities, Public sector, Retail, Telecommunications and Transportation. The Group is the Worldwide Information Technology Partner for the Olympic & Paralympic Games and operates under the brands Atos, Atos Consulting, Atos Worldgrid, Bull, Canopy, Unify and Worldline. Atos SE (Societas Europaea) is listed on the CAC40 Paris stock index.

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