Advantages and Utilities

EMC-Analyzer

takes into account all available spurious electromagnetic couplings of the different physical nature – this makes it possible to solve EMC problems at a system level ("as a whole")

EMC-Analyzer

is intended to analyze complex systems/areas (containing thousands of spurious couplings) in a reasonable time – usually up to several hours

EMC-Analyzer

involves "worst-case" models of electromagnetic spurious couplings – this makes it possible not to miss the interference

EMC-Analyzer

is able to calculate the adjustments in the equipments' spectra and/or susceptibility characteristics for solving the linear EMC problems

EMC-Analyzer

provides the detailed nonlinear behavior simulation of radio receivers' operation in a very complicated electromagnetic environment (such environment can be formed by thousands of modulated unwanted signals and noise). This simulation is implemented by the original technique called "Discrete Nonlinear Analysis" which has the unique accuracy and speed

EMC-Analyzer

can find the sources of the nonlinear interference in the receiver (e.g., to find several transmitters the signals of which generate the intermodulation in the radio-frequency amplifier of the receiver)

EMC-Analyzer

can be used efficiently at all stages of system/area life cycle (preliminary research, detailed designing of systems and subsystems, system's/area's operation, support, and modernization)

EMC-Analyzer

essentially simplify, accelerate, and reduce the price of detecting and solving EMC problems

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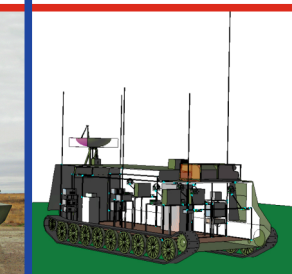
BSUIR
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EMC Analyzer

MULTIFUNCTIONAL
and POWERFUL SPECIALIZED EXPERT SYSTEM
for cost-effective electromagnetic compatibility analysis
and design in complex co-site systems
and/or in spatially-limited ground/water areas

*A new era
in EMC analysis
and prediction!*

The earlier you start to think about EMC/EMI problems, the more efficient and lower-priced solutions you will get!

Application Area

1 **Intrasystem EMC analysis, design, and maintenance in board systems (aircraft, helicopter, missile, satellite, ship, vehicle, etc.)** taking into consideration:
various on-board radio and electronic equipment (radio systems, computers and control systems, data-measuring systems, power supply equipment, etc.); different on-board spurious electromagnetic couplings ("antenna to antenna", "field to antenna", "antenna to wire", "wire to wire", "field to wire", "case to case", "field to case"); external electromagnetic environment

2 **Intrasystem EMC analysis, design, and maintenance in local ground-based systems (building, antenna tower)** taking into consideration:
various radio subsystems of different services (radio communication, radar, radio navigation, radio monitoring, etc.); spurious electromagnetic couplings of type "antenna to antenna"; external electromagnetic environment

3 **Intersystem EMC analysis, design, and maintenance in spatially-limited ground/water areas and aggregate systems (airport, seaport, military base, radio communication and control center, campus, etc.; several aircrafts, helicopters, ships, etc.)** which may contain:
several board systems;
several ground-based systems;
pieces of vegetation

4 **Analysis of electromagnetic ecology and electromagnetic safety of radio transmitters located in a spatially-limited ground/water area** by calculation of the total electromagnetic field intensity distribution over the area
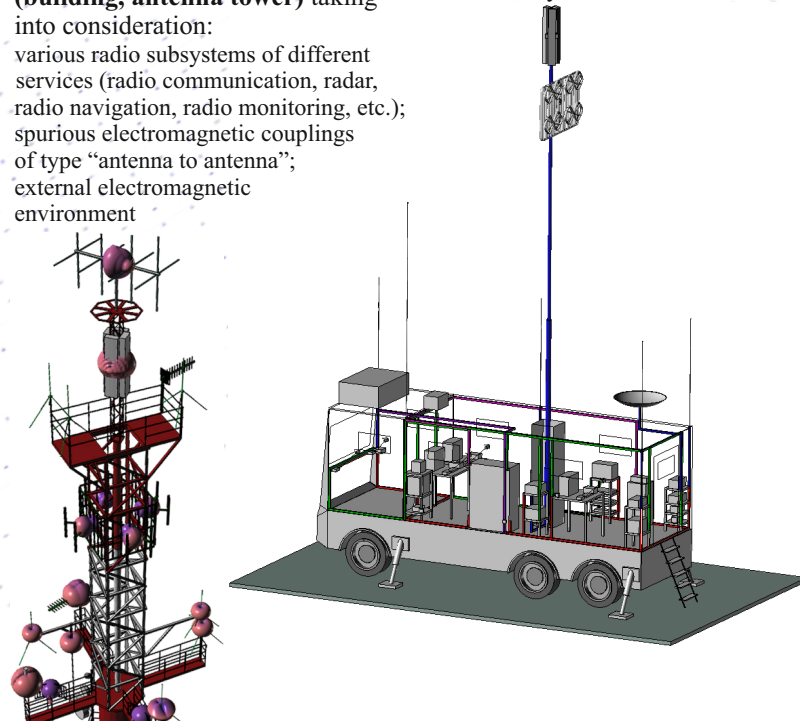
Functionality

1 **Linear analysis of intrasystem and intersystem EMC**
indicates the presence, sources, and propagation paths of the linear interference and calculates the interference intensity

2 **Linear adjustments (equipment specification generation)**
calculates changes in characteristics of equipments for eliminating the linear interference (i.e., for solving the linear EMC problem)

3 **Linear analysis of electromagnetic field intensity**
calculates the field distribution in the spatially-limited ground/water area

4 **Nonlinear EMC analysis**
indicates the presence of the nonlinear interference (intermodulation, desensitization, cross-modulation, reciprocal mixing, etc.) in the radio receivers and calculates the interference intensity

5 **Identification of the nonlinear interference sources**
finds the sources of the nonlinear interference in the radio receivers
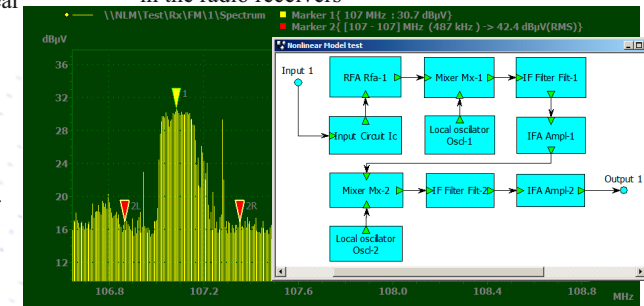
Examples of Application
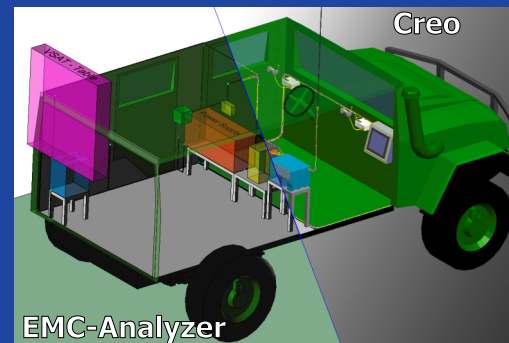
Development and modernization of board systems (aircraft, helicopter, missile, satellite, ship, vehicle, etc.), ground-based systems (building, antenna tower), spatially-limited ground/water areas (airport, seaport, military base, radio communication and control center, campus, etc.)

Allocation of a new equipment/subsystem in the existing system/area (without creating an interference to the existing equipment)

Analysis of the board (or ground-based) system's equipment operation in complicated electromagnetic environment

Analysis of the interference environment created by co-site equipment and by neighbor systems

Calculation of the protection zones in which impermissible (too high) levels of the total electromagnetic field intensity (produced by radio systems located in a spatially-limited ground/water area) are observed

"EMC-Analyzer" is already employed for success in over 10 countries!