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Announcement

4th China International Import Expo

November 5 – 10, 2021
Shanghai, China

About

China International Import Expo is China's largest trade fair for bringing goods and services to the region.

The organizers of the exhibition are the Ministry of Commerce of China and the People's Government of Shanghai.

The fair involves several hundred related business events: seminars, conferences, B2B events, which provide participants with an additional opportunity to establish business contacts.

BSUIR will showcase high-tech developments

1. ADFTS is an automated dual-frequency testing system for measuring and simulating EMC parameters of radio receivers

Detection, identification (recognition) and measurement of the characteristics of all possible channels and the effects of a radio receiver hitting by interference at the antenna input.

Distinctive features and advantages:

- is the most informative, convenient and effective technology for EMC testing and measuring the characteristics of radio receivers;
- successfully used for the design of radio receivers and systems in the HF, VHF, UHF, UHF and EHF ranges, as well as components of RF systems for various services (radar, stationary and mobile communications, radio navigation, etc.), for civil and military aviation, satellite, ship and radar systems.

2. EMC-Analyzer is a specialized expert system for solving electromagnetic compatibility problems in airborne and local ground radioelectronic systems

EMC analysis and EMC support in local airborne and ground radioelectronic groups, generation of specifications for airborne and ground radioelectronic complexes, taking into account EMC requirements, modeling of radio reception in a complex electromagnetic environment.

Distinctive features and advantages:

- EMC-Analyzer significantly surpasses analogs in terms of the ability to simulate nonlinear effects in a radio receiver when operating in a complex electromagnetic environment;
- the possibility of simultaneous joint analysis of a huge number of spurious electromagnetic connections of various nature in the frequency band 0.1 MHz-40 GHz with a dynamic range of up to 300 dB;
- EMC analysis based on a system criterion that takes into account the combined effect of spurious electromagnetic connections of all types in the on-board group of radio equipment.

3. EMC VTA - technology and hardware and software complex for the analysis of electromagnetic compatibility in complex territorial groupings of radio systems of various services

Efficient and inexpensive EMC analysis for a variety of frequency assignments and radio site locations.

Use of augmented reality technology and half-sized modeling techniques.

Distinctive features and advantages: highly objective modeling of the electromagnetic environment by using modern geographic information systems and models of radio wave propagation recommended by the International Telecommunication Union.

4. DNA-EMC - technology and software for discrete nonlinear modeling of the behavior of radio receivers in a complex electromagnetic environment

DNA has ultra-high computational efficiency that does not depend on the complexity of the electromagnetic environment.

DNA takes into account the main types of non-linear effects (intermodulation, blocking, cross modulation, conversion of local oscillator noise, amplitude-phase conversion, receiving side channels).

Distinctive features and advantages:

- DNA supports wide bandwidth and high dynamic range modeling.
- DNA allows you to automatically identify sources of non-linear interference (for example, intermodulation interference).

5. EMC - a technique for analyzing electromagnetic ecology and electromagnetic safety of the population in the conditions of massive use of cellular communications

The technique allows one to assess the intensity of the electromagnetic background generated by radio equipment of mobile / fixed communications and other radio services.

Distinctive features and advantages: the technique is extremely important in the context of the intensive development of wireless services, technologies, systems and networks of 4G / 5G mobile communications.

6. GIS-RF - specialized geoinformation technology and software for system design and frequency-territorial planning of radio networks

GIS-RF is a specialized geoinformation technology for solving problems of managing the use of the radio frequency spectrum. It is intended for the development and design of radio frequencies.

Distinctive features and advantages:

- a time-tested set of technologies and tools for designing and frequency planning of radio networks, analysis and modeling of EMC radio systems;
- based on the use of widespread geoinformation tools and platforms (MapInfo, Panorama, ArcGIS, etc.);
- is the basis of the "EMC Virtual Polygon" (EMC VTA) augmented reality technology, designed to solve intersystem EMC problems in complex territorial groupings of radio systems of various services (fixed and mobile communications, radar, radio navigation, etc.) using half-sized modeling;
- designed to solve EMC problems in complex EMEs using standard Windows PCs.

7. Services for testing technical equipment for resistance to ultra-wideband electromagnetic pulses (hereinafter - UWB EMP)

Tests for resistance to high-power UWB EMP.

The main sources and causes of the impact of UWB EMP:

- electromagnetic radiation from high-power pulsed radars;
- hybrid attacks and electromagnetic terrorism.

The purpose of the tests: checking the stability of equipment by irradiation with high-power ultra-wideband and electromagnetic pulses of horizontal and vertical polarization in laboratory and field conditions.

Methodological support of the testing process:

- development of a test plan;
- preparation of test equipment, taking into account the type and characteristics of the equipment under test;
- scientific and methodological support of work (calculations, development of mathematical models, etc.).

More on technologies

Official website