

Press release – April 9, 2013

Easy-to-use simultaneous multiport matching in Optenni Lab 2.0

Optenni Ltd announces a new version of the Optenni Lab matching circuit optimization and antenna analysis software featuring a unique easy-to-use simultaneous multiport matching capability for antennas and other RF applications.

The work of an antenna engineer is becoming increasingly complex due to the growing number of radio systems, frequency bands and antennas. Especially the introduction of diversity and MIMO technologies increases the complexity of antenna design in mobile devices. At the same time, the mobile companies are striving to reduce the design times of mobile devices and to reduce the total antenna space.

Matching circuits are more and more being used to reduce the design times and to increase the efficiency of antennas in mobile devices. With matching circuits, the impedance match and efficiency of antennas can be improved significantly faster than redesigning the physical antenna geometry. Moreover, with matching circuits last-minute design changes can be easily incorporated to the devices.

However, the use of matching circuits must be done in a careful way. First, it is important to maximize the efficiency of the power transfer between the amplifier and the load instead of the impedance match as such. Second, the effects of real component models and their tolerance variations need to be taken into account. Both these factors are taken care in the easy-to-use Optenni Lab matching circuit software, an innovation leader in the field of matching circuit design.

With Optenni Lab 2.0 simultaneous multiport matching becomes significantly easier and faster than before. The multiport matching is available in two operation modes: for antenna applications the efficiency of each antenna port is maximized, taken into account the losses in the matching components and the coupling between the antenna ports; for other RF applications, such as filters or amplifiers, suitable S parameters, such as S₂₁, are maximized over given frequency ranges. In both operation modes, minimum isolation and stop band requirements can be easily integrated into the design process. The multiport optimization works with any number of ports and supports the easy-to-use component library and tolerance analysis of Optenni Lab.

“The multiport capabilities in Optenni Lab 2.0 are a significant step forward in helping our customers to solve their complex antenna design problems”, said Dr. Jussi Rahola, founder and Managing Director of Optenni Ltd. “We have received very positive and delighted feedback from our customers about the simultaneous multiport optimization.”

In addition to the simultaneous multiport matching, Optenni Lab 2.0 includes many additional improvements, such as parallel optimization methods and microstrip transmission line models.

Availability

Optenni Lab 2.0 will be available for customer delivery before the end of April.

About Optenni Ltd

Optenni Ltd develops and markets the easy-to-use Optenni Lab matching circuit generation and antenna analysis software. Optenni Lab features e.g. fast fully automatic matching circuit generation and optimization and antenna bandwidth estimation routines. Optenni Lab includes many unique innovative features such as bandwidth potential and electromagnetic isolation calculations that are not found in any other software. Optenni Lab speeds up the antenna design process and helps to design antennas with optimal total performance. Optenni Lab is sold worldwide through the CST and FEKO distribution networks.

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