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THE INTERNATIONAL JOURNAL OF ELECTROMAGNETIC COMPATIBILITY

TOP 10 OF 2014

ITEM MEDIA

TOP 10 OF 2014: ARTICLES

Interested in the new EMC requirements for commercial avionics, or the RF emissions of compact fluorescent lights? Are you concerned about electromagnetic interference in your data center? All this and more is covered in this list of the 2014 most-read EMC articles on InterferenceTechnology.com!

The HF Current Probe Theory and Application

Kenneth Wyatt, Wyatt Technical Services

High frequency current probes, arguably one of the most important tools in the EMC engineer's "bag of tricks," are invaluable for measuring high-frequency common-mode currents flowing on wires or cables. Experience has proven that poorly terminated cables are the No. 1 cause for radiated emissions failures at a test facility. However, by measuring the common-mode currents on these cables it's possible to troubleshoot and apply fixes to a product right there in the development laboratory.

New EMC Requirements for Commercial Avionics: RTCA/DO-160G

Erik J. Borgstrom, Environ Laboratories LLC, Bloomington

The purpose of this article is to provide an overview of each of the sections that deal with EMC in DO-160G. Changes in each section since the release of DO-160F will also be summarized, and finally, we will look at the future direction of SC-135, and the timetable for future revisions to DO-160, and also the DO-160 Users Guide.

Designing Electronic Systems for EMC: Grounding for the Control of EMI

William G. Duff, Semtas Corporation

There are two primary reasons for grounding devices, cables, equipment and systems. The first reason is to prevent shock and fire hazards in the event that an equipment frame or housing develops a high voltage due to lightning or an accidental breakdown of wiring or components. The second reason is to reduce EMI effects resulting from electromagnetic fields, common impedance, or other forms of interference coupling. In order to avoid creating EMI problems, it is essential to recognize that an effective grounding system, like any other piece of equipment or system, must be carefully designed and implemented.

Electromagnetic Interference in the Data Center: To Shield or Not to Shield

Jordi Ferri, Advanced Shielding Technologies

Low and high frequency EMI caused by power equipment, cell phones, microwaves, TV and radio signals can produce harmful effects on IT equipment, thus reducing quality of service and availability. EMI is usually ignored when designing a data center; this article will discuss some reasons why EMI, though invisible, may produce serious visible effects and why protection measures need to be taken.

Electromagnetic Interference Sources and Their Most Significant Effects

Anthony A. DiBiase

As the density of the electromagnetic environment continues to increase, the concern about its effects from sources producing EMI also increases. Advances in technology and the number of products produced are having a significant effect on the efforts aimed at maintaining the required operation and interoperability of products and systems used in our society. These events had added challenges for those who are responsible for keeping pace with the effort needed to maintain the required level of electromagnetic compatibility (EMC) in these products and systems.

TOP 10 OF 2014: HEADLINES

INTRODUCTION

2014 encompassed a lot of news in the EMC world, including NATO denying involvement in aircraft radar jamming, continuing electromagnetic attacks, sunspots & man-made electromagnetic noise interfering with wild bird navigation. Here is our list of the most popular headlines from 2014.

1 **EMI Named as Cause in Ferry Crash Lawsuit** (January 2014)

2 **Sunspot Could Create Solar Flares and Superstorm** (December 2014)

3 **FAA Alters Regulations Regarding Use of Electronic Devices During Flights** (November 2014)

4 **Electromagnetic Attacks Continue to Create Chaos** (September 2014)

5 **Connection Re-established With NASA Spacecraft after 15 Years** (October 2014)

6 **FAA Orders Airlines to Replace Over 1,300 Expensive Display Units** (October 2014)

7 **Marijuana-Growing Lights Interfere with Amateur Radio** (June 2014)

8 **NATO Denies Involvement in Aircraft Radar Jamming** (June 2014)

9 **Man-Made Electromagnetic Noise Disrupts Bird Navigation** (May 2014)

10 **Dead Spacecraft Gives Insight into 'Bermuda Triangle of Space'** (May 2014)

ABOUT US

Published by ITEM Media, Interference Technology is dedicated to Electromagnetic Interference (EMI) and Electromagnetic Compatibility (EMC) with a unique focus on solving EMI problems in today's electronic equipment.

At Interference Technology, you will find in-depth information on the latest product development, standards, and news for the following technologies: amplifiers, antennas, cables and connectors, conductive coating, ferrites, filters, lightning and surge, shielding, software, test instrumentation, and testing.

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