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DLS News & Views

To help keep you better informed

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REGULATORY requirements update

EMC and Radio

The latest EMC Directive 2004/108/EC became effective July 20, 2007. All products placed on the market in Europe after July 2007 must meet these new requirements. With the New Directive, D.L.S.'s status as a European Notified Body became effective. Call us to discuss how this will affect you. For more information go to www.dlsemc.com/1007.

Telecommunication Port Emissions

Equipment tested to the new EMC Directive (2004/108/EC) must have the telecommunication ports tested for conducted emissions per EN 55022. Call us at 847-537-6400 to discuss how this will affect you. For further information go to www.dlsemc.com/newsletter and click on Telecommunication Port Emissions.

Industry Canada Radio Standards

Specifications – RSS-210, RSS-310, RSS-GEN, RSS-111 and RSS-119 were all updated and released June 2007. There are a total of 15 changes made to RSS-210, 16 changes to RSS-310, and 16 changes made to RSS-GEN. All Industry Canada Radio Standards Specifications (RSS) are used in conjunction with RSS-GEN. Also, RSS-130 and RSS-212 have been rescinded. RSS-130 was rescinded because the 944-952 MHz band is no longer designated for cordless phone use. And RSS-212 was rescinded since its contents have been incorporated into RSS-GEN. For more information go to www.dlsemc.com/newsletter and click on Industry Canada Radio Standards.

Modular Transmitter Devices

FCC has amended its rules to provide for more efficient equipment authorization of both existing modular transmitter devices and emerging partitioned (or "split") modular transmitter devices. The requirements for Modular Approvals are now divided into two categories, single modular transmitters and split modular transmitters. Split transmitters consist of two basic components; the "radio front end" or radio elements and the "firmware" or hardware on which the software that controls the radio

operation resides. For further information go to www.dlsemc.com/newsletter and click on Modular Transmitter Devices.

FCC Update – Cell Phones on Aircraft

In early April 2007, the FCC issued a Memorandum Opinion and Order indicating that there

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Safety

Information Technology Equipment

A significant new edition of EN 60950-1:2006 was recently published and is scheduled to become mandatory on December 1, 2010. It can be currently implemented and contains new construction/performance requirements including power output limitations of data ports. Call us for more information.

Medical Equipment EN 60601-1:2006

A significant new edition of this safety standard was recently published and can be currently implemented. For additional information on various effective dates for the Part 1 and Part 2 standards, go to www.dlsemc.com/newsletter and click on Medical Equipment EN 60601-1:2006. To minimize delays, have your products evaluated now.

New Low Voltage Directive (LVD)

The European Union's new version of the Low Voltage Directive, dated December 12, 2006, was published in the Official Journal of the European Communities on December 27, 2006. It became effective on January 16, 2007. This document replaces the previous LVD (73/23/EEC.)

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RoHS

Beginning March 1, 2007 China implemented RoHS legislation for all electronic information products, which directly affects the entire IT industry. Korea and Japan require EU RoHS or similar legislation. For a summary comparing various countries' RoHS requirements, please go to www.dlsemc.com/1003.

RTCA & Military

NBAA Conference

D.L.S. will be exhibiting at the National Business Aircraft Association annual conference in Atlanta, GA, September 25-27. Check out Booth 526 for the latest in avionics and aviation related EMC and Environmental testing services, including lightning and HIRE. Attendees can enter a contest to win an iPod Nano. Stop by and enter.

Navy deploys SSN-74 Virginia



The Virginia Class Submarine will provide the U.S. Navy the capabilities required to maintain the nation's under-sea supremacy well into the 21st century. It will have improved stealthiness, sophisticated surveillance capabilities, and special warfare enhancements to meet the Navy's multi-mission requirements. D.L.S. Electronic Systems, Inc. is a testing and consulting service provider to the U.S. Navy and is proud of their participation on the Virginia Program

DLS Safety Group completes ISO 17025 Audit

Recently, D.L.S. Conformity Assessment (DLSCA), one of the first companies to achieve certification under the CSA Agent Program, successfully completed their ISO 17025 audit as part of their continuing commitment to quality and to meeting customers' needs. DLSCA is the product safety arm of parent company, D.L.S. Electronic Systems, and offers full safety testing for North American, Europe and other global markets. For further information go to www.dlsca.com.

keeping you **INFORMED**

D.L.S. - paving the way for you to sell in China

by Donald L. Sweeney

On June 24th 2007, a team from D.L.S. left Chicago and flew to China to determine how we could better refine the process of getting the CCC mark for our customers, which is required in order to sell products in China. We were also giving our first EMC class outside the U.S.

We met with our Chinese agent at his Shanghai office. Later we flew to Shenzhen, adjacent to Hong Kong, which is where our cooperating Chinese government test lab is located. A key feature of our visit was to meet with representatives of the Chinese government's organization SET. They are one of the top government labs working with the CQC and CEMC for CCC certification in China.

We gave a presentation to the SET staff and explored ways to further streamline the compliance path to China. We had a very successful meeting and learned about additional services, such as RoHS Compliance, SFDA Registration, and Network Access License Application, that we can offer our U.S. customers.

We then went to Suzhou where we taught EMC Design Techniques to our Chinese customer's 22 design engineers: 10 from Taiwan and 12 from the People's Republic of China. Our seminar was well received.

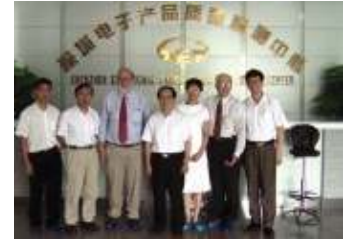
Some observations on China

There is a huge market in China. Chinese people are buying everything from cell phones to cars. China also seems to be working on its pollution problems and energy concerns, other possible markets for the U.S.

China is a real economic challenge to the U.S. and the rest of the world today. The cost of labor is about 1/10th ours. The people I saw worked hard. They also worked very long days. The question which we Americans must answer is - how will we compete? We must answer this question and we must answer it very soon or we will be left in China's dust! We can't set up trade barriers and we can't ignore what is happening, as it is very real!

An article in the Shanghai newspaper indicated China plans to increase its imports by 200 billion dollars by 2010. Are you ready to market in China?

D.L.S. has developed and refined the process to meet the CCC regulatory requirements in China and will work with you in getting your product ready to sell there. You can also take advantage of our Design Class to make your lab visits smoother. Give us a call at 847-537-6400, for all of your EMC and Safety needs. We can make it happen.



Chancellor of SET and his associates with the D.L.S. team in Shenzhen, China



SET joint venture with CQC Test Lab



Roger teaching D.L.S.'s EMC Design Class in Suzhou, China



Modern Shanghai

FCC Update Cell Phones On Aircraft

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was still insufficient data to prove that cell phone use on aircraft was safe and would not cause harmful interference. This terminated current proceedings that might have led to widespread cell phone use on aircraft.

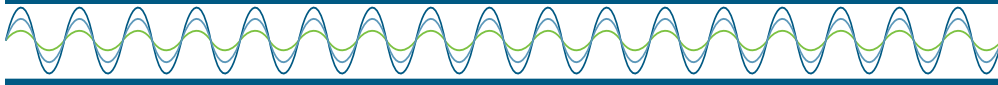
The Commission also noted that since the airline and cell phone industries are still researching this, along with similar questions involving other personal electronic devices, it was still too early to make any final conclusions. In addition, they indicated that it was not worthwhile to continue these proceedings at this time. If additional technical data becomes available, the FCC might reconsider the issue again in the future. Stay tuned for further updates as they become available.

New Low Voltage Directive (LVD)

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The new directive, numbered 2006/95/EC, is a consolidated interim version and includes editorialized updates from parts of the general CE-Marking Directive (93/68/EEC). A significant revision of the LVD is still planned, but is not likely to happen for several years.

Please note that there are no technical changes from the previous LVD. In addition, the same harmonized standards should still be used to determine product compliance. Starting now, all LVD references should be changed to the new designation (2006/95/EC). D.L.S. offers full Low Voltage and other directive testing for the EU.



conducted EMI problems **ENDING?**

A team of Massachusetts Institute of Technology (MIT) researchers was able to demonstrate lighting a 60 watt light bulb from an unconnected source approximately seven feet away. The breakthrough, named "WiTricity", has been published in the June 7, 2007 issue of Science Express. In the future we could potentially charge cell phones and other gadgets without having to plug them in.

The concept is not new and for most of us it has been dismissed as inefficient because electromagnetic energy generated by the charging device radiates in all directions! The breakthrough came when Professor Marin Soljacic of MIT focused on resonance.¹ The key is to get the recharging unit and the device needing the power to resonate at the same frequency, allowing them to exchange energy efficiently.

The phenomenon involves two coils, each a self-resonant system. One is connected to the power source and is the transmitter. It transmits magnetic fields in the 10 MHz range, and the other coil resonates with this field and receives the transmission. According to Robert Moffatt, an MIT undergraduate,

"most of the power not picked up by the receiving coil remains bound to the vicinity of the sending unit." The MIT system is 40 - 45% efficient, meaning that most of the energy still doesn't make it to the light bulb.

Some of us might be tempted to equate this to magnetic induction, but the difference is that nonresonant magnetic induction drops off extremely fast and is about a "million times less efficient"² than resonant magnetic coupling such as the one demonstrated by MIT.

The bottom line is that conducted emission testing is a current necessity. The coils for the MIT development are about 24 inches in diameter and are pretty inefficient. The goal over the next few years is to miniaturize the setup for commercial use. Of course the NEW challenge will be how to keep the radiated emissions under the FCC limits.

References

1. Wireless electricity could power consumer, industrial electronics. MIT News (2006-11-14).
2. Wireless power pulls plug on cables. The Australian (2007-06-07).

EMC By Your Design

A new Approach to Learning
EMC Design Techniques

An EMC Practical Applications
Seminar/Workshop
with take-home computer programs
and 32 Professional Development Hours

October 25, 26, 29 and 30, 2007
Hilton Hotel, Northbrook, IL



D.L.S. is offering a four-day seminar/workshop that applies EMC design fundamentals to real-life situations. It teaches how to design your product to pass compliance testing, thereby eliminating costly last-minute changes. Donald L. Sweeney and Roger Swanberg, with over 75 combined years of experience in the field of EMC, now bring these EMC design fundamentals to students through hands-on, practical application to real life products. Participants will receive a free copy of the proprietary computer program designed by the instructors to solve the most complex EMC issues. Participants may bring a product of their choice for a free 45-minute individual consultation, during which they will have the opportunity to apply the concepts learned in the seminar.

To register call Carol at
847-537-6400 or email at
cgorowski@dlsemc.com.
For more information visit
www.dlsemc.com/1001.

\$300 discount
if you register
by Sept 25th

(If you cannot attend this class, the
next one will be April 2008)

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- Regulatory Requirements Updates
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- New market in China
- And much more

For a PDF copy of this newsletter, go to www.dlsemc.com/newsletter

New 3-Meter Chamber

D.L.S. recently added a new state-of-the-art, automated, 3-meter semi-anechoic chamber that allows measurements up to 1 GHz. We are seeing more products with clock/cystal frequencies up to 1GHz, and the FCC requires these frequencies to be tested beyond the former 1 GHz limit. The new chamber is already filled with the FCC, as are all of our other open area test sites.



EMI SOLUTION specialists



Some of D.L.S.'s experienced NARTE Certified EMI Solution Specialists shown in our new state-of-the-art, highly automated chamber. They will solve your EMC/EMI problems quickly and effectively during testing, with manufacturable solutions.