



Volume 1, Issue 2

March 2005

# Streamliners

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## Designing for Product Safety Compliance

Many manufacturers find product safety certification to be an intimidating and overwhelming experience. For those who have been through the process of getting a product safety certified, you know how time-consuming and costly it can be. For those who have yet to experience the certification process, you may be reluctant to submit your product for certification not knowing what to expect. Whether you're an old-timer or a first-timer, you may be asking, "Why do we even need to have our product safety certified?"



*Safety and Compliance*

There are many reasons to have a product safety certified, and they are all based on the product's target market. Many local or federal government agencies impose regulatory or jurisdictional requirements in the marketplace. For example, if you're selling a product within the U.S., then the Code of Federal Regulations (Title 29, Part 1910) requires that a product used in the workplace have UL or NRTL Listing. If you're selling a product into Europe, then you are legally required to CE mark the product to indicate that the product complies with all of the applicable directives.

Having a product safety certified does not have to be a daunting experience. Designing a product with the applicable safety requirements in mind will help alleviate problems during the certification process. It will also help prevent costly project delays due to design changes and/or test failures. *(Continued on page 2)*

**Special points of interest:**

- Alleviating problems during the certification process
- Relocating to new facility in mid April
- Looking at CST culture: values and passion take it to the next level
- Getting a quality translation-what to look for

## On the move with Core Source

We will be moving into our new, larger facility in mid April. Still keeping our roots in the Germantown, Maryland area, the new facility will enable us to expand our lab/prototyping/cable-assembly capabilities to better meet the growing needs of our customers.

At Core Source, we have always maintained a flexible work environment to meet customer needs, and the new facility will enhance our ability to customize our engineering and lab environments to meet specific customer requirements—truly taking our services to a higher level. Additionally, our large lab areas will be able to accommodate dedicated, secured space for specific projects. Having over 10,000 square feet, this area will comprise both lab and office space for our engineers, designers, technicians, and support staff. *(Continued on page 3)*



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## Designing for compliance (cont.)



You need to remember that the later in the project cycle you wait to address the safety-related issues, the more problems you will face come testing time.

To avoid potential problems, begin by identifying the markets in which the product will be sold at the onset of the project. This will determine the requirements to which the product will be designed, as well as determining the testing time and cost. Next, make sure that safety compliance is incorporated into all phases of the product's development, including the design phase. Last, ensure the project schedule accommodates all compliance-related requirements.

The following are a few examples of what to consider when designing a product for safety compliance:

1 **Material selection** – For devices or units with plastic housing, verify that the material has the appropriate UL flame rating. For example, if a product falls within the

scope of UL60950-1 (Information Technology Equipment) and is rack mounted, then the plastic housing needs to have a minimum flammability class of 5VB.

2 **Component selection** – For critical components, such as fuses, opto-isolators, printed circuit boards, and across the line capacitors, verify that they have the appropriate UL and/or IEC Certification and are rated for the application.

3 **Manuals** – For each device or unit, include instructions for use and installation as well as applicable safety information.

4 **Symbols** – Depending on the standard used and the construction of the product, the following are examples of symbols that may need to be marked on the product:

⚡ (IEC 60417-1, No. 5031)  
If the product is connected to DC mains, then this symbol needs to be marked adjacent to the voltage rating to indicate a DC input, for example, 48 V ⚡.

⏚ (IEC 60417-1, No. 5019)  
If the product has a protective earthing terminal, then this symbol needs to be marked adjacent to the terminal.

⚠ (ISO 3864, No. 5036)  
If the user needs to be cautioned about an electric shock hazard, then this symbol needs to be marked near the area of the hazard.

The process of getting your product safety certified can be dramatically simplified if you incorporate the applicable safety requirements into your design at every stage of your product's development. This, in turn, can reduce the cost of redesign and accelerate your time to market.

“the later in the project cycle you wait to address the safety-related issues, the more problems you will face come testing time”



CST to Relocate in April 2005

## On the move (cont.)

Core Source will continue to co-locate with business partner Mantaro Networks, a premiere hardware and software development firm. Mantaro has been a perfect compliment to Core Source services, providing customers

with full turn-key or partial solutions. The new facility will continue to provide the ability to transfer data and knowledge information with ease, “it’s as simple as a walk across the hall,” states Rod Bullard, President of Core

Source Technologies.

We should be in our new facility in mid April 2005. Our new address will be 20410 Century Boulevard, Germantown, Maryland 20874.

## From the President's Desk: It's about the people

Let's face it: we've all heard the president or CEO of a company state that the success of a company is solely accomplished by the hard work of the people within. My guess is that a large percentage of people who have heard this statement allowed it to travel swiftly through one ear and out the other with very little thought. I can honestly say that I have. I've also wondered if the president or CEO even knew who I was and what value I brought to the company.

So, how does the president of a company effectively convey a level of appreciation to a group of people that really do make or break the financial success and growth of a company? Maybe one way is to elaborate in a column called "From the President's Desk" in the company newsletter.

To begin, I would like to say that small companies starting out in the competitive world face many obstacles. However, they do have a distinct advantage in some areas: staffing the ultimate team may be one of them. Building the perfect core team is a difficult task, but once it has been accomplished, the team seems to take on a common vision with a common goal in

relative short order.

This common idealism tends to perpetuate as time goes on and the passion for the job and the company becomes, in many cases, an overwhelming feeling. This is hard to explain unless you have had the opportunity to experience the roller coaster ride of emotions. I am convinced that most CEOs and presidents try to maintain this connection with all of their employees. Unfortunately, as companies grow and new people join the team, it becomes more difficult to maintain, unless the original core team continues to pass on those original passions and values. So, in my mind, the core team is key to a small company's growth, values and future. It is one of the areas where owners of small businesses put the most energy. I certainly have.

At CST, we have been able to develop a core team that embodies all of the above values, along with that passion. This equates to a distinct advantage for our customers: service by a team that loves what they do, and injects a level of passion and experience that results in best-in-class performance.

As mentioned before, the process of developing that quality team takes time. For

most of the last two years, CST has focused on building a core team that will take the company to the next level, and what is the next level? For CST, it is establishing a repeat client-base—clients that keep returning for high quality products, performance, and services that meet or exceed all expectations, and a core team that continues to love what they do for a living.

In each service CST offers, the core individual has the technical experience and understanding of what superior customer service really is. This drives the desire to make every project a successful one no matter what size it is. Whether it's in mechanical engineering, PCB development, regulatory compliance, technical publications, supply chain management or prototyping, each core individual gives the best to produce the best.

CST is on its way to make our vision a reality, and it's based on proven engineering procedures, tools, experience and the customer's needs. At CST the people really do make or break the company, and I can assure you that the president of this company can see the individual value that each person brings to the table of our success.



*From the President's Desk*

*"This equates to a distinct advantage for our customers: performance and services by a team that loves what they do and, like a personal hobby, they inject a level of passion and experience that in most cases is best in class."*

## Lost in Translation, Part I

Having a translated manual to ship with a product on schedule may be an accomplishment, but it does not always indicate success. For example, the Mars Orbiter had a successful launch, but

when it was suddenly lost, it was explained by NASA as an error in conversion of metric units—essentially the spacecraft was lost in translation.

Perhaps a better indicator

of success is in the timely delivery of a quality translation where quality is defined as the clear and accurate communication of the intended message. (Continued on page 4)

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## Lost in Translation (continued)

This sounds easy enough, but how often have we all seen botched translations?

While having a solid, quality product is assumed to accompany the manual, if you cannot effectively communicate the product's technology and its utility, you're most likely heading down the road to failure.

The best way to ensure success is using a tactical approach. When looking for a translator, whether it's for a user interface or a manual, make sure translators and the translation company have the

following capabilities and attributes:

- Native fluency in target language
- Familiarity with terminology in technical field
- Access to appropriate tools, including translation memory tools such as TRADOS
- Extensive education, including an understanding of grammar and punctuation
- Member of LISA, Localization Industry Standards Association

Additionally, you'll want to make sure that all translated materials are localized. Localization goes beyond translation. It's that quality quotient: making sure that a translation communicates the intended message to the target market. It takes into account cultural nuances and other requirements that help ensure your product's success. This may even include your product name in order to avoid unfortunate associations in the target market.

In Part II of our next issue, we'll discuss what you can do to help control translation costs.

“...if you cannot effectively communicate the product's technology and its utility, you're most likely heading down the road to failure.”