

Encryption Guidelines Modified through Export Committee Efforts

Anyone who doubts the value of the ESD Alliance or its Export Committee won't after learning that the three-person group took on the U.S. Department of Commerce's Bureau of Industry and Security (BIS) and won.

Yes, consider the Export Committee formidable. Made up of representatives from Synopsys, Mentor and Cadence, it was able to persuade BIS to change a small but important piece of the Encryption and Export Administration Regulations. "In our EDA world, we



Jim Bruister

have one main exemption that my committee gained for the industry back in 2005 — decontrolling our usage of encryption in the design cycle," says Cadence's Group Director of Export Compliance and Government Relations Larry Disenhof, the chair of the Export Committee. "Only in the last year has the main body of encryption regulations caught up with our exemption fully decontrolling ancillary encryption used in products from DVD players and household appliances to protection of IP in electronic design," he added. "Without this exemption, we would have been filing license applications constantly for the last 10 years."

That insight well served SoC Solutions of Suwanee, GA., supplier of IP and services to build innovative "connected" products and a new member of the Alliance. While networking events and the SIP Working Group were CEO Jim Bruister's reasons for joining, his perspective changed once Disenhof answered his questions about cryptography export.

Specifically, Bruister wondered about the guidelines related to exporting advanced encryption standard (AES) cores to foreign countries. And as he did with Helic (see following page), Disenhof was able to help. He sent a link to the BIS website chock full of information on Encryption and Export Administration Regulations. "The encryption category has a wide range of carve-outs,

exceptions and licensing or reporting requirements that can be opaque," cautioned Disenhof. He further advised SoC Solutions to study the regulations carefully and perhaps consult with an export attorney.

Bruister was impressed with Disenhof's practical advice. "Larry pointed me to the Category 5 part 2 that speaks to encryption as part of a design. Because our project schedule is quite tight, we decided not to put our AES core in the design. The main reason is due to having to file a license to have AES in a chip that can be exported. When we get to that point, we will get an export lawyer to review and file."

The outcome for SoC Solutions may have been different without the ESD Alliance. "This guidance is quite valuable to a small company such as ours. We don't have lawyers on staff so it helps us evaluate before contacting a lawyer. It saves us money."

ESD Alliance Export Committee Hosts the National Defense University Eisenhower School



For more than 10 years, the ESD Alliance Export Committee has hosted the Electronics Industry Studies students from the Eisenhower School at the National Defense University during their annual visit to Silicon Valley. The goal of the students in this graduate level program, representing all branches of the military and key civilian agencies, is to better understand the complex issues surrounding the electronics system design industry. In April, the students heard presentations from several ESD Alliance members as well as other Silicon Valley companies, and had the opportunity to attend the ESD Alliance CEO Outlook.



After a long day of technical and business presentations, the students learned more about the history of Silicon Valley at an informal evening hosted by the Alliance and the Computer History Museum.

The ESD Alliance's Export Committee Comes to the Rescue

The level of detail of U.S. export rules and regulations can be confusing and easily misinterpreted, especially when regulations are specific to a country, an industry or an application. Even emerging companies or startups need to be aware of export rules and restrictions because the penalties for not following the rules can be harsh.



Yorgos Koutsoyannopoulos

No company wants to get it wrong, as Helic's Yorgos Koutsoyannopoulos is quick to attest.

Helic is a 17-year old company in Santa Clara, Calif., that provides cutting-edge software used throughout the semiconductor industry to analyze electromagnetics and provide cross-talk verification and signoff. These tools address the needs of high-performance, high-speed system-on-chip (SoC) designs destined for cloud infrastructure, IoT, RF and automotive applications. Large SoCs verified by Helic's tools — think multi-core CPUs, GPUs, giga-bit transceivers, FPGAs and high-speed memory blocks — reside in server farms used for cloud computing.

While 55-70% of Helic's business is in the U.S., its customer base is widely dispersed throughout the world in design centers in Europe, Israel, Japan, China, Korea and Taiwan.

Helic is a new member of the ESD Alliance and here's where the story gets interesting. Even with a growing customer base worldwide, it wanted to expand to other regions of the world. Over a couple of years, Helic began marketing its solution on a global basis and a few months ago had a business opportunity with a customer in a new territory. As the relationship got more serious and striking a deal imminent, Helic executives, not being experts in export laws, began to wonder about the U.S.'s export restrictions knowing that ignoring them could cause irreparable damage to the

company. They needed help interpreting the law, such as whether standard export control provisions allow for the export of software to this new territory or to any specific company or individual.

The ESD Alliance was able to assist. Koutsoyannopoulos, Helic's president and CEO, approached the Alliance's Executive Director Bob Smith. Smith, in turn, put him and Helic's Corporate Secretary Selini Valiakas in touch with Larry Disenhof, group director of Export Compliance and Government Relations at Cadence and long-time chair of the Alliance Export Committee. Disenhof was able to help and help he did. Within 24 hours, he responded with a long, well-organized and savvy answer explaining best practices in dealing with export rules and compliance.

"We wanted an opinion and were extremely pleased by the quality and amount of information in the form of precise, practical guidelines," says Koutsoyannopoulos. "A brief but precise

interpretation of the law and restrictions guided us through the negotiations." In the lengthy email, Disenhof included links to useful websites and other sources of information.

The result, notes Koutsoyannopoulos, meant that Helic could forgo hiring an expert attorney for legal advice, a saving of between \$10,000 and \$20,000 on lawyer's fees. "Easily," he added. "This is not something simple and it changes daily. Someone traces the changes every day and tracks the guidelines. It's as complex as taxes." As he points out, the level of detail of export rules and regulations is massive.

Koutsoyannopoulos today is pleased Helic joined the ESD Alliance. He is an enthusiastic supporter and finds its programs and initiatives valuable. "The obvious is that it's a club of companies promoting the industry. However, there are many volunteers in its committees who provide very valuable input. That's the biggest value of the ESD Alliance."

And yes, Helic successfully closed the business deal in this new territory without a hitch, thanks to Larry Disenhof and the ESD Alliance's Export Committee. Its tools have been implemented into the production flow and the first of many SoC designs is in development.



Helic's Yorgos Koutsoyannopoulos (L) and Anand Raman (R) with Ted Miracco (C), CEO of Alliance member SmartFlow Compliance Solutions at the recent CEO Outlook panel.