

Chairman's Letter

As we move into the spring of 2014, I'm happy to report that the ongoing effort to 'right size' the Trade Association is going well and with good results. We've changed our membership structure from a corporate based paid for membership to a non-paid for individual membership. As the article nearby explains, please take the time to register with us and start your new individual membership. A form is provided on the TA website. In order to remain on the membership list and retain your access to documents, you need to complete and return the membership form to tinal@1394ta.org. Doing so allows you to participate in all TA activities and programs. We welcome your continued support, but please sign up as soon as possible. If you have questions, please email Tina Lipscomb.

Also moving along well is our IEEE-1394-201x standards update, led by the able Les Baxter, a long time TA contributor. See the article in this quarter's newsletter for an update on all of his activities. Finally, as we mark the 20th year of the Trade Association's work, I'd like to thank all of you who have contributed throughout the years, as IEEE 1394 expanded and extended its footprint into so many innovative applications. We're smaller and leaner now than during the heyday of FireWire, but the Trade Association's history is rich, productive, and enduring. All of you made it so, and those of us who remain active and involved carry on the efforts that you began and sustained throughout the last two decades.

Please stay in touch, sign up as individual members, pass the membership form onto others in your respective companies, and help continue the TA's work.

Richard Mourn
Chairman

1394 Trade Association Marks 20th Year; New Board Set for 2014

The 1394 Trade Association enters its third decade this year, moving to the 20th year of its support for the IEEE1394 standard.

A new and compact board of directors was elected in February. It will be chaired by Richard Mourn of DapTechnology, Inc., one of the original members of the TA and a leading architect of 1394 in a wide range of systems. Dave Thompson of the LSI Corp. will serve as editor and secretary. Dick Davies is chief financial officer. Tina Lipscomb continues to manage the day-to-day affairs of the Trade Association. The new smaller board and new TA structure (see accompanying article) reflect what Mourn calls an effort to 'right-size and manage the association to best serve the markets in which FireWire continues to play a major role.'"

Trade Association Restructures with New Bylaws, New Membership Status

As the Trade Association enters its 20th year, the leadership has implemented a restructuring plan designed to meet the demands and requirements of markets using FireWire in their end products and solutions.

The 1394 Trade Association bylaws enable a new structure that includes no fees for membership, according to TA Chair Richard Mourn. Like the IEEE, SAE and other organizations, membership is now shifted from corporate to individual memberships. By simply registering with the 1394TA, any individual may become a member and will maintain access to many existing 1394TA documents, specifications, presentations, and other information. Members

continue to be able to participate in all 1394TA working groups and other 1394TA activities.

A new 1394TA website also has been unveiled at the www.1394ta.org URL. The new site is designed to better support the new 'no fee' individual membership structure while providing access to almost all existing 1394TA materials.

What this means for member participation is no invoicing for 2014 dues. Individuals now register for membership, apart from or as part of their company organizations. Questions: contact Tina at tinal@1394ta.org

New Akitio Thunder Dock™ Features 1394

Akitio Corp. in February introduced its new Thunder Dock, which links past, present and future technology to any computer with just one Thunderbolt™ cable. The Thunder Dock allows users to access data on both legacy and future storage drives by providing multiple host ports for FireWire 800, USB 3.0, and eSATA.



Features include a pair of Thunderbolt™ ports for lightning fast speeds up to 10Gb/s and the ability to daisy chain up to 6 Thunderbolt™ devices. There are two eSATA host ports (up to 6Gb/s) along with the single 7-watt bus-powered FireWire 800 host port. In addition, there are two bus-powered USB 3.0 host ports.

The FireWire interface can be used through the Akitio Thunder Dock. Users can simply hook up legacy FireWire drives (bus-powered and self-powered) to the dock and access all existing data without having to buy new hard drive enclosures. Details: <http://www.akitio.com/accessories/thunder-dock>

1394 Standard Update Continues its Progress

The Silicon Working Group has been compiling an update to the IEEE 1394-2008 specification for more than a year now, with corrections, clarifications, updates, and enhancements to the specification in place. The IEEE approved a PAR (Project Authorization Request) to revise the IEEE 1394-2008 standard and the TA document will be used as input to the IEEE revision process.

According to Les Baxter, a long time TA member who is leading the project, the TA Errata document has been approved by the BoD and is available for downloading on the TA web site. The document number is TS2013002. In addition, the SiWG is currently working on a FrameMaker version of the changes that will reflect how the new figures and tables will look in the next edition of the IEEE standard. After the FrameMaker version is finished, we will begin the IEEE editing and balloting process, according to Les. As of now it is likely that the new IEEE standard will be issued in 2015.

Chairman Mourn to Attend SAE Avionics Meeting April 14-17

TA Chair Rich Mourn will represent the Trade Association and DapTechnology at the SAE Aerospace Avionic Systems Group Committee Meetings April 14-17 in Santa Barbara. The technical sessions focus on systems integration, validation, and the use of 1394b in conjunction with other military and avionics standards for aerospace applications.

Richard Mourn Sets Presentation on AS5643 and 1394 for SAE

The AS-1 Aircraft Systems and Systems Integration Committee is updating AS5643 and related standards and recommendations to accommodate both new developments and lessons learned from programs such as the F-35 Joint Strike Fighter and X-47B UCAS.

TA Chair Richard Mourn has developed a presentation for the SAE conference later this year that provides insight into how programs like the F-35 utilizes AS5643/IEEE-1394 for a vehicle system network. The F-35 implements more than 60 AS5643/IEEE-1394 devices per plane. This unprecedented use of a high speed (491.52Mb/s) serial interface on an aircraft proves the capability of AS5643/1394, and opens the door for higher bandwidth communication between the Control Computer and LRUs. While I/O bandwidth is important, system level deterministic behavior is required for most vehicle system networks and AS5643 coupled with 1394 provides the required deterministic behavior.

In his presentation, Richard explains how 1394's asynchronous stream capability is used by AS5643 to create a programmable rate-based (time-sliced) protocol that meets the rigorous requirements of advanced aerospace and defense system design all while using COTS silicon. Next it examines why AS5643/1394 is an ideal solution for safety-critical, deterministic (hard real-time) distributed control by providing the guaranteed latency and jitter needed to ensure that the data required for distributed control functions are delivered in a timely and predictable manner.

According to Richard, the focus then shifts to how AS5643 takes advantage of a 1394-2008 beta feature - looped topologies. 1394-2008 beta supports point-to-point, daisy chain, treed and multiple loop topologies. AS5643 recommends using loops to create a first level of topology fault tolerance, then defines a second level using double or even triple redundant networks. In addition to fault tolerance through the network architecture, 1394-defined header and data cyclic

redundancy check (CRC) and AS5643-defined vertical parity check (VPC) provide bus level and application level error detection respectively.

Finally, the presentation discusses the AS5643/1394 infrastructure products available including development tools, test tools and equipment, software stacks, IP Cores and simulation environments that result in reduced risk, reduced cost, and a reliable, deterministic system with a high level of robustness.

The presentation will take place at the SAE 2014 Aerospace Systems and Technology Conference in Cincinnati September 23-25.

TC Electronics' New DICE III Supports FireWire 800

DICE III is the latest in the TC Electronics series of powerful CMOS based Audio Controllers with on-board ARM™ processor. DICE III supports all current and emerging interfaces for audio networking and computer recording including FireWire, USB and Ethernet AVB. It is designed for everything from simple AVB endpoints to complex recording interfaces or digital mixing consoles. All FireWire, USB and Ethernet channels can be routed to and from industry standard digital audio formats using DICE III's on-board ADAT and AES/SPDIF transceivers, and to and from various

DACs, ADCs and DSPs using its fully configurable INS/TDM interface.

With its high level of integration, patented JetPLL™ technology, and support of various interfaces, DICE III provides the versatility necessary for the professional and Music Industry (MI) audio markets. A complete SDK supports Hardware Abstraction Layer (HAL) libraries and protocol stacks for FireWire, USB and Ethernet (TCP/IP and AVB protocol suite).

For more detail visit

<http://www.tctechnologies.tc/>