



## **1394 Trade Association Plans Oct. 1 Closure, Ends More than 20 Years of Leadership in Connectivity**

Dear Members, Former Members, and Friends of the 1394 Trade Association

After more than two decades as one of the electronics industry's most vibrant and energetic trade associations, the 1394 TA will officially cease operations on Oct 1, 2015. Our work on standardization and proliferation of the FireWire specification has reached a logical conclusion. With the official submission of the final version of the specification to the IEEE – which is in progress – all of you who contributed so much so long to the success of FireWire can be assured of the value of your efforts.

In an effort to make the 1394 TA developed specifications and other information free to the public, the former 1394 TA website will remain operational in a limited manner, under the direction of TjL Consulting, for the next five years. We, Tina and the board of directors, have taken all of the legal, financial and administrative steps required to cease operations within the TA's chartered responsibilities, and accounts have been settled in order to meet our Oct. 1 deadline.

FireWire continues to be a strong and effective standard in a wide range of applications including computing, audio, video and aerospace/avionics.

We thank all of you who took part in the development and expansion of FireWire, for your vision, your faith and your hard work over more than 20 years, since the TA foundation in 1994. There were exciting and ground breaking milestones all along the way, and the popularity of the standard, though challenged by competition, was met by our constant efforts to improve and enhance FireWire's performance.

For more details about the TA closure plans or to ask questions, please contact Tina at [tinal@1394ta.org](mailto:tinal@1394ta.org).

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## **IIDC-2 Version 1.1 Approved by Board of Directors Following JIAA Review and Approval**

The board of directors approved the proposed digital camera control specification developed and submitted by the Working Group of the Japan Industrial Imaging Association. The project has been ongoing for several years, led by Sadafumi Torii Hamamatsu Photonics K.K., who has served as chairman of the working group. The spec editor has been Junji Kishi Toshiba-Teli Co., Ltd.

“Led by Torii-san, the JIAA group has developed a strong specification for imaging device and host makers who want a digital interface,” said Dave Thompson, long time secretary for the board of director of the 1394 TA. “It’s an excellent document and we thank the JIAA for their effort.”

The purpose of the document is to act as a design guide for imaging device/host makers that wish to use a digital interface as the device-to-host interconnect. Adherence to the design specifications does not guarantee interoperability, but will promote interoperability for this class of device. The device registers, fields within those registers, video formats, modes of operation and controls for each are specified. Area has been left for growth. To make application for additional specification, contact the Japan Industrial Imaging Association IIDC2 Working Group or the 1394 Trade Association Industrial and Instrumentation Working Group. IIDC2 is designed for many kinds of digital interfaces.

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## **IEEE 1394 Final Specification: Work Continues with Plans to Submit to IEEE in 2016**

Work on the final version of IEEE 1394, which is being led by long time TA member Les Baxter, continues apace, with an eye on submission to the IEEE in 2016. Les is now in the process of verifying that all the technical changes are correct, after which he will ‘clean up’ the document with reformatting headers and footers, correcting any unresolved cross references, and other editing. A full PDF of the final spec should be available to anyone who would like to have it by the end of September.

Once the draft is completed, Les will begin working with the IEEE on its own editorial review, followed by a working group ballot process, and finally, the sponsor ballot. He has reported to the board that he expects the entire process to take one more year – IEEE is notoriously slow to move these specifications along – and the objective is to issue the final document by the end of next year. For specific questions, please contact Les Baxter at [les@baxter-enterprises.com](mailto:les@baxter-enterprises.com)

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## **FireWire Continues its Pre-eminent Role in Avionics Systems**

For years, IEEE-1394b-2002 has been a successful standard in aerospace and avionics designs, because it specifies key features that couple with SAE Standard AS5643 to create a deterministic, robust, and redundant system architecture. The combination of the two specifications meets jitter, data latency and data coherency requirements for a hard real-time network such as those needed in an aerospace vehicle management, avionics, mission or associated display systems. AS5643 has been written and developed without much context given as to how these system types have evolved, matured and have been qualified for their various applications, and the evolutionary paths taken by these systems differed from 1394's path. But when they converged, the combination has benefited the vehicles themselves, along with enabling new approaches to test equipment design and vehicle maintenance.

For years, industry studies were conducted in the F-35 program that attempted to balance a number of considerations to determine an optimal solution for serial data networks within a vehicle management system. The key idea was for a federated system in which the controlling electronics are placed as close to the application as possible. This desire is especially appealing for "more electric" technologies, which tend to require high bandwidths and computational iteration rates. The net effect is better control efficiency and more affordable upgrade paths for electrohydrostatic actuation, high voltage dc power generation and control, environmental systems control and engine or propulsion control.

Another desired effect of federation is minimizing wire weight and reducing overall wire volume. Therefore, the topology supported by 1394b and formalized for a redundant safety critical system in AS5643 typically consists of two types of nodes; a Control Computer node, located at the choice of the system designer and Remote Nodes, which can refer to any desired subsystem that implements the architecture. Control Computer and Remote Nodes may be connected to optimize the subsystem's location and implementation requirements for weight, volume and redundancy. 1394b allows the system architect to optimize for both weight and redundancy by supporting a mixture of daisy chaining, tree, loop and star topology configurations without the need for centralized switching. 1394's flexible cable topology support allows the system implementer to optimize cable routing to meet weight/volume and robustness requirements and, unlike star or switched technologies homerun cabling is not required.

The benefits of FireWire combined with AS5643 for deterministic systems have been recognized by the entire avionics industry, and development of advanced systems combining the two standards is moving ahead. For specific information or answers to questions about this effort, please contact Richard Mourn at [rmourn.lugeo@gmail.com](mailto:rmourn.lugeo@gmail.com)

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## **Akitio Updates Thunder Dock with FireWire 800**

Akitio, a leader in connectivity products, has added a new version of Thunder Dock to its product lineup, featuring FireWire 800 and many other interfaces. The new peripheral includes a Thunderbolt 2 dock with a smaller form factor and focus than prior versions. Roughly as thin as a MacBook Pro and made from a nearly matching aluminum, Thunder2 Dock includes seven high-speed data ports even though it's roughly the size of a portable hard drive. Since it requires wall power, it's not fully portable, but it is very compact. Thunder2 Dock measures roughly 6.2" by 3.8" by 0.65", not much bigger than a typical portable hard drive enclosure, and similar in footprint to an iPhone 6 Plus. Only one of its four edges lacks ports; another contains one power port, a FireWire 800 port, and two USB 3.0 ports; the third has two 6GB eSATA ports; and the last has two Thunderbolt 2 ports. Four black rubber feet on the bottom provide stabilization on a flat surface.

Priced at \$279 each. Available on <http://www.akitio.com/press-releases/2013/akitio-thunder-dock-available-for-purchase>

For a review, visit <http://9to5mac.com/2015/06/27/review-akitios-thunder2-dock/>

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## **Audinate Connects Everything at InfoComm 2015, Wins Top Award with its FireWire-enabled Dante Via**

Audinate, creator of the industry's leading audio-over-IP networking solution Dante™, assumed a high profile at the InfoComm 2015 show in Orlando this past June. The company's Dante Via™ a revolutionary new software application that extends audio networking to include FireWire and Thunderbolt-enabled audio devices, software won a prestigious award as Sound and Video Contractor, Pro Sound News and Mix Magazine's Best of Show Award.

Dante Via also include USB and any audio application. The software transforms computer audio interfaces and soundcards into networked devices that can connect with each other and with over 400 Dante-enabled products. In its demonstration, Dante Via bridged multiple audio devices and applications directly to an audio network and to one another. See more at: <https://www.audinate.com/about/news-activity/press/audinates-dante-via-wins-best-of-show-infocomm15#sthash.JOJdeNjT.dpuf>

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