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BY ROBERT BELL AND KERRI PITTS

Visionary Dave Higgins designed products to fill a market need

Dave was a proponent of interoperability between different manufacturer's proprietary products, open lighting control protocols, robust mechanical/electrical equipment designs, and ease of use.

DAVID HIGGINS is the founder and past president of Pathway Connectivity. He developed his company with core values which have made Pathway the reputable company it is today, with innovative products that continue to help lead the entertainment lighting industry.

Dave's career in this industry began around 45 years ago, in Calgary, Alberta, where he found work as a panel wiring technician at the Electro Controls factory. Within six years, he had moved up from factory floor to systems design, then heading up service and installation, and eventually sales for Canada. In 1981, Dave was recruited by Dilor Industries to lead their sales effort, moving to Squamish, British Columbia. Dave held that position for two years before returning to Calgary where he began working for Interalia, a leading data communications company. Here Dave expanded his knowledge of electronics and microprocessors, but never left the theatrical industry, as he maintained a field service and technical support business on the side. In this capacity, he designed and built several products, including a moving sidewalk controller for a touring production of *Joseph and the Amazing Technicolor Dreamcoat*, an AMX192 splitter network for the 1988 Winter Olympics, and an analog to AMX192 splitter network for touring

control desks.

In early 1987, Strand Lighting contracted Dave to be the factory representative for Southern Alberta. As he began to sell projects, Dave saw the continuing and growing need for lighting control protocol converters and developed a product that enabled customers to break down



Dave Higgins

the barriers imposed by proprietary control protocols. Why shouldn't a Strand console control a Kliegl dimmer rack or Colortran control Electro Controls? Dave took this opportunity to start his own business and together with his wife, Mary Lou, they formed Gray Interfaces to commercialize this enabling technology. Early products include

an AMX192/DMX512 to analog interface (1990) and the "Protocol Converter," an AMX192 to DMX512 interface (1991). This was the beginning of various protocol converters which were all building blocks to the **Ultimate Converter**, the all in one DMX protocol converter.



The Protocol Converter

The 1990s was a decade of transition for the lighting controls industry and the market for interfaces began to explode. Dave was guided by the philosophy that a manufacturer should first be willing to listen and then willing to produce. As a result, Gray Interfaces introduced OEM DMX512 controllers for Douglas and GE relay panels (1992 to 1993), the first generation DMX512 opto-splitters (1993), and the OEM DMX512 controllers for Lutron "3-wire" dimmable fluorescent ballasts (1994). This was the start of the company's long line up of DMX opto-splitters, eventually branded as **DMX Repeaters**.

“ Dave was guided by the philosophy that a manufacturer should first be willing to listen and then willing to produce. ”

It soon became apparent that DMX512 could be—and would be—used for far more than controlling dimmer intensities and ON/OFF relays. DMX512 routing and patching requirements could no longer be supported adequately with patch panels. This led Dave to introduce the **DMX Pathfinder** in 1995. The Pathfinder is an electronic patch matrix programmed by a PC. Early adopters were Canadian Broadcasting Corporation (CBC), Cirque du Soleil, and Royal Caribbean Cruise Lines. 1998 saw the introduction of the **Pathfinder LR** and **MR**. Many **Pathfinder** systems are still in operation today.



The Pathfinder MR



The Pathfinder LR

Leading up to the year 2000, it became clear to Dave that the industry would be moving away from hardware-based distribution of DMX512 and toward Ethernet technology. At that time, very few tools for coding Ethernet stacks, if any, were available to small developers. Those that were available were supplied with proprietary chip sets which were prohibitively expensive. It was time to decide whether or not to gamble on a new product line and on new technology. Dave decided to take the risk, and started developing a bespoke Ethernet stack from the ground up paving the way to launch the **Pathport** DMX-over-Ethernet gateways.

Pathport won the ESTA Software Product of the Year award at LDI in 2000. The Pathport gateways were unique at the time because they allowed slot-by-slot patching rather than entire universe patching and could also arbitrate between multiple sources. It is worth noting that these



The Pathport C-Series

gateways were the first ever non-telephonic product to utilize 802.3af Power-over-Ethernet, (POE). The leap of faith was well worth it, as the launch of Pathport initiated a turning point for Dave and Mary Lou's company. In the year 2000, Gray Interfaces was rebranded to Pathway Connectivity.

Beginning in 2004, Dave focused Pathway Connectivity on developing additional Pathport devices as well as a modular interface product line. Pathway's DIN-rail form factor modules, branded eDIN, changed everything in the way DMX512 interface products were utilized in the installation market. This versatile collection of devices offered protocol conversion, DMX/RDM splitters, and LED dimmers. The traditional use of dip switches for setting DMX addresses and selecting the modes-of-operation was replaced with simplified on-board user interfaces and compatibility with *E1.20 RDM*.



An eDIN modular interface

Dave was a staunch supporter of the ESTA Technical Standard Program and particularly committed to ensuring his employees participated at the Control

Protocols Working Group. Consistently two, three, or four of his engineers attended quarterly meetings and worked tirelessly in various task groups. Pathway's name appears on most of the standards published by the group including *E1.11*, *E1.17*, *E1.20*, and *E1.31*.

Taking on building an Ethernet stack to launch a product line for such a small industry is a task feared by most companies. But in that same vein, building a Gigabit Ethernet Switch specifically tailored for the entertainment industry is a challenge that Dave knew would pay off. The Via line of switches has become the standard for most Broadway productions and the North American touring market, not to mention being the backbone of many of the largest TV spectacles like the Super Bowl Half-time show and many Olympic Ceremonies.



Via LC Ethernet Switch

At last, the industry now had a complete control system backbone designed, manufactured, and supported by a single manufacturer. Dave's original vision had been realized. Dave and Mary Lou Higgins sold the Pathway Connectivity business to Acuity Brands in 2011 but continued to run the division for four years during the transition to new management direction based in Atlanta, GA. During that time, Pathway released the Cognito console and Choreo Archtainment controller. Now retired from their roles at Pathway, Dave and Mary Lou continue to live in Calgary. Together they are taking full advantage of their well-earned retirement and fill their days with family, hiking, skiing, and travelling. They continue to be active volunteers with their church and local theatres.

Pathway's reputation is built on many things, including high-quality, reliable products, and superior support. Dave certainly made sure the products he

History Project | Dave Higgins

developed were top of the line. Like many leaders, it is the people with whom you surround yourself, that help make a company great. Dave's constant focus on the people in this industry, whether it was his employees, his clients or competitors, was unwavering.

David Higgins was awarded the Wally Russell Lifetime Achievement Award at USITT 2018 in Fort Lauderdale, FL. The Wally Russell Foundation is a living memorial to the inspiration of one man's dedication to creativity and technology in the field of entertainment. This prestigious award is presented on an annual basis to an individual who has, during their career, made an outstanding contribution to the entertainment industry. Dave is the 24th recipient of this award. Past recipients include Gordon Pearlman, Jules Fisher, Rusty Brutsche, Dave Cunningham, Richard Pilbrow, and Fred Foster. The full list is shown on wallyrussellfund.org.

The 2017 Wally award is well deserved as Dave Higgins has brought a great deal of innovation and class to our industry.

Thank you Dave. ■



The Wally Russell Foundation's mission is to provide a continuing contribution to the industry in which Wally Russell spent his career. wallyrussellfund.org



Pathway Connectivity is the leading data communications and control company in the entertainment lighting industry. Pathway's proven record for innovation and reliability has helped the industry to create ever more spectacular visual experiences for live audiences worldwide. From Calgary, Canada, Pathway designs, manufactures, and supports an innovative family of products that enables the operation of sophisticated stage and architectural lighting systems. www.pathwayconnect.com



While working at the CBC in the early 1990s, **Robert Bell** met Dave Higgins during the setup of the Juno Awards, the Canadian equivalent of the Grammys. Robert is currently the Director of Product Innovation for Pathway Connectivity. He is the author of the book *Let There Be Light*. He was awarded with the first-ever Wally Russell Foundation New Comer award and now sits as a board member on the Foundation.



Kerri Pitts is one of the original members of Dave and Mary Lou Higgins' team from when Gray Interfaces was starting out. She has had various sales and marketing roles within the company and today Kerri continues to proudly represent Pathway Connectivity in the role of Marketing Manager.

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