

Commercial INTEGRATOR

Modern Atomics' Michael Braithwaite: AV Living Legends #45

Modern Atomics' Michael Braithwaite is the latest industry veteran to join the Commercial Integrator #AVLivingLegends series.

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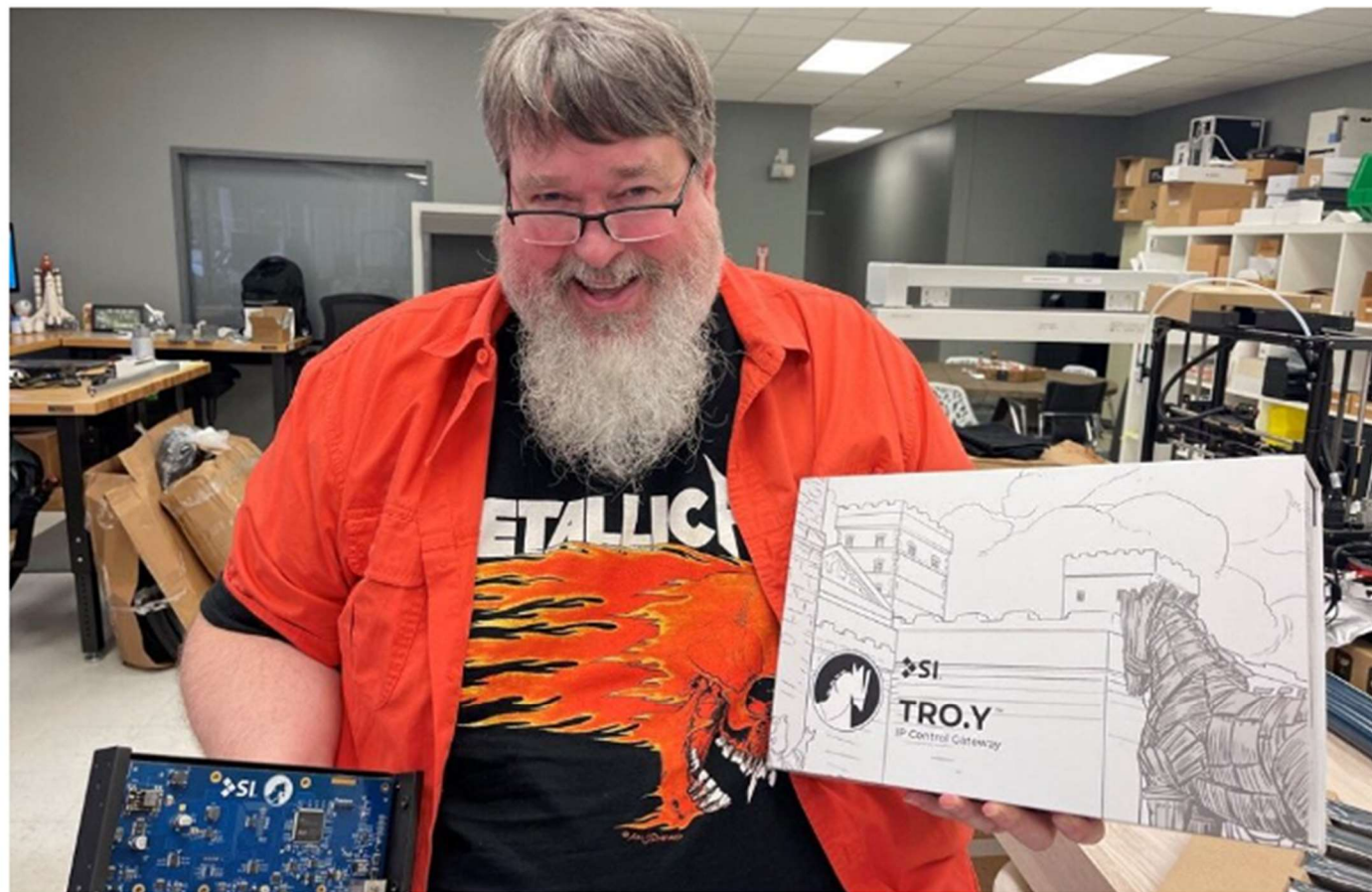


Photo credit: Ryan Gustafson.

Modern Atomics' Michael Braithwaite joins the *Commercial Integrator* #AVLivingLegends family this week as our latest inductee. The *Commercial Integrator* #AVLivingLegends initiative is meant to celebrate and honor our industry's foremost contributors. With this series, we thus hope to spotlight the difference-makers and world-changers who move among us.

Currently co-founder and chairman of the board of Modern Atomics, Braithwaite has held prominent roles at major companies such as Screen Innovations, ClearOne, NetStreams and Crestron. He thus boasts extensive experience in intellectual property, AV-over-IP and other technological advancements.

Additionally, Braithwaite has authored several U.S. and international patents. As a result, he has gained recognition for a stellar career as an innovator in the commercial AV industry. There's no doubt: Braithwaite deserves to be recognized as an AV Living Legend!

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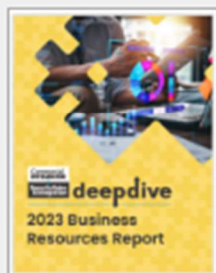
Organizations are seeing a boon when implementing AV over IP technology, and integrators are finding happy customers when installing AV over IP. In this

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In this interview, Braithwaite reflects on his early days in the AV industry and the impact of mentorship from seasoned veterans. He also imparts wisdom on how intellectual property should not hinder but, rather, drive innovation in the industry.

Enjoy the in-depth conversation with Modern Atomics' Michael Braithwaite, the latest AV Living Legends inductee!

And if you'd like to read even more coverage relating to our #AVLivingLegends, like Modern Atomics' Michael Braithwaite, check out our hub page. It includes direct links to every living legend!



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Commercial Integrator: What motivated you to join the commercial AV industry?

Michael Braithwaite: My journey into the commercial AV industry is a blend of music, technology and passion. I loved music but realized that I wouldn't be pursuing the path of a professional musician. As a major computer nerd, I found my way into programming, which then led me to control system programming for AV. My interests in journalism and humor led me to write a monthly column called "Video Expert" during my junior-high-school days. This focused on computers, hardware and software reviews.

After getting my driver's license, I delved into low-voltage sound systems. I enjoyed building complex audio systems, and even entered and won many sound competitions. It was at some of these events where I first met two mentors, Dick Diamond and Dick Allen, who were partners from the high-end audio and integration company Audio Design. Diamond, a classical audiophile introduced me to commercial AV and encouraged me to transition from low-voltage audio system to working on large-scale commercial and high-end residential AV systems across the globe. I embraced this opportunity, combining my computer skills with my passion for music and audio.

I started my programming with AMX, and later switched to Crestron after meeting USIS's Bill Baretz, product manager for Crestron at the time. Bill would visit our offices from time to time with Robert Gardner and encouraged us to switch to Crestron. This connection eventually led me to come and work at Crestron.

My commercial AV journey continued from the late 1990s into Y2K and was filled with innovations, product and project awards, and trade press coverage. I was an active participant in industry events, both hosting boot camps and sitting on many InfoComm and CEDIA panels and technical working groups. I was invited to participate at Crestron Think Tanks in New Jersey, showing some of my modified touchpanels and network amplifiers. Technically, I reported to Robert Klein on the organizational chart, but most of the new product disruption occurred when working with Feldstein. The whole CNAMP and PAD8 products would not have happened the way they did without the work we did together on them.

IP.

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TH *Commercial Integrator:* What has kept you motivated and engaged in the decades that followed?

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Michael Braithwaite: At Crestron, I played a very pivotal role in developing groundbreaking commercial AV products — most notably, the world's first 16-channel network amplifier, an 8-zone professional audio distribution processor and a high-resolution analog video matrix.

My interactions with fellow industry professionals, including many on this #AVLivingLegends list had enriched my life. Sadly, some of the people I worked with are no longer with us, but their impact lives on in me and in my AV products.

In 2001, I embarked on a new venture focused on distributing AV over Internet Protocol (AV-over-IP/AVoIP). While co-founding NetStreams in Austin, Texas, I surrounded myself with some of the top engineers, marketers and sales teams, and created a whole new category in AVoIP.

We pioneered fully uncompressed multichannel audio and 4:4:4 high-definition video encoding and decoding over IP which laid the groundwork for future advancements such as Dante and AES67 and many others. Our company was acquired in 2009 by ClearOne due to these efforts, and in no small part, the vast patent portfolio we had built up.

Commercial Integrator: Reflect on your role as both a mentee early in your career and as a mentor later in your career. Who helped shape the trajectory of your professional life? How have you tried to help shape others' careers?

Michael Braithwaite: Early on, my eagerness to learn from Mr. Allen at Audio Design laid the foundation for building proper audio systems. Gathering needs assessments, creating solid block diagrams, rack elevations and comprehensive system documentation became critical for successful large-scale commercial AV deployments.

As my career progressed, Mr. Feldstein's mentorship became a driving force. His unwavering commitment — being the first in the office and the last to leave — infused a strong work ethic environment with my disruptive energy. The exhilaration of creating new products and concepts made time fly, and you eagerly anticipated returning to the office.

Comments from Klein, though initially not compliments, became a badge of honor for me. My passion for inventing things led to unorthodox development methods, inspired by mentors and fellow engineers from Audio Design, Crestron and NetStreams. I really have stood on the shoulders of giants in this industry.

The impact of my work extends beyond my own journey. The young engineers I work with and collaborate with continue to pay forward these innovative approaches, shaping the future of commercial AV.

Commercial Integrator: What's the most memorable story/anecdote of your career in commercial AV?

Michael Braithwaite: Memorable stories are abundant when you have been blessed to be around AV as long as I have but when reading a couple of quotes from former co-worker and AV Living Legend #42, Lainie Mataras, they struck a chord with me. She had written this: "My hesitancy was partly due to the lack of women in those roles back then, and I couldn't see how my success would translate pioneering into sales without more women surrounding me. Although those numbers have increased, we still have a long way to go. Even after 30-plus years in the industry, I am often still one of the only women at project meetings."

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I think she is absolutely right! Back then, the lack of women in AV roles was palpable. I remember I wanted to take some action by nominating my CEO for the InfoComm 2012 Women in AV award. By nominating her, I aimed to celebrate her achievements and inspire others. It was a proud moment when she received the award at the InfoComm 100 gathering that year. But beyond that, it sparked conversations and encouraged more women to step forward.

Fast forward to 2024 where things are changing. In my new startup, women dominate many key roles including software engineering, and production operation where they account for 100% of the teams. And in sales and marketing, it is a whopping 82% women led. The tide has turned, and it is incredibly encouraging. At events like SXSW in Austin, you'll notice that men are now in the minority in the engineering and leadership roles in most AV and tech startups. It is a refreshing change, one that promises a more inclusive and diverse commercial AV future.

***Commercial Integrator:* What has been your greatest professional accomplishment to date?**

Michael Braithwaite: I think the 81 granted and pending patents are a true testament to my innovative spirit. It's incredible how they've become such reference points in commercial AV and how they have shaped the whole AVoIP landscape. Personally, I think of the long-running series of amplifier designs — starting with the CNAMP16X60 and extending to the first NetStreams SpeakerLinX and ClearOne high-powered streaming amplifiers, as well as the Naim audiophile-grade streaming amplifiers, and the amplifiers located inside the world's first IP streaming speakers from Polk Audio. Finally, the ceiling tile beamforming microphone arrays have redefined microphone placement in commercial conference rooms everywhere.

But I'm not done yet. Ask me this again in one year as the startup Modern Atomics will change the way you power your AV and window treatment systems with game-changing embedded AI technology to reduce power consumption by up to 95%.

***Commercial Integrator:* What has been your biggest professional regret to date?**

Michael Braithwaite: Intellectual Property Challenges. It's disheartening when your own innovations inadvertently become tools for litigation. The impact on the AV industry — both in terms of financial losses and project delays — is significant. The wasted resources could have been better utilized for further advancements. Specifically, the court orders and warrants affecting commercial AV projects related to beamforming microphone arrays highlight the complexities of intellectual property disputes. These legal battles can hinder progress and collaboration.

As a named inventor of some of these patents, it's essential to clarify that the decisions to litigate other commercial AV companies lie solely with the patent assignor, namely the company that owns the patent. The intention of these patents was to foster innovation, not hinder it.

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Commercial Integrator: What is the best advice or pearl of wisdom you either received during your career or came to realize on your own?

Michael Braithwaite: I have very unorthodox development methods that resonates deeply with the essence of creating exceptional commercial AV products. I would like to emphasize that love for the product is essential. It's not merely about ticking boxes for market requirements or product specs. Instead, it's about wholeheartedly embracing the AV product, and living and breathing it. This passion fuels innovation and ensures that the final product is infused with authenticity.

Commercial AV integrators and project designers can sense this love during development. It manifests in subtle yet impactful ways such as:

- **Silkscreen Details:** The attention to detail in silkscreen markings on metal or plastic components reflects care and precision.
- **Installation Intuitiveness:** When an AV product is designed with love, it becomes intuitive to install or mount. It's as if the product itself guides the installer's hand.
- **Thoughtful Packaging:** The packaging communicates the product's story. Thoughtful packaging shows that someone cared about the end user's experience from the moment they unbox it.
- **User-Friendly GUI:** A well-designed graphical user interface (GUI) reflects empathy for the user. It's not just about functionality; it's about making the user's journey delightful.
- **Robust Control Drivers and APIs:** Love extends to the invisible layers — the control drivers and APIs. They ensure seamless integration and flexibility.
- **Resilience and Agility:** An AV product that can withstand abuse and adapt to real-world scenarios carries the mark of dedication.

Finally, it is a team commitment, which is critical for the AV development team. It's not a solo endeavor; it's a collective effort. When everyone shares that love for the product, its potential soars.

Would you like to nominate a peer or colleague — or perhaps yourself! — to be featured in this #AVLivingLegends series, just like Michael Braithwaite of Modern Atomics was? If so, just email Dan Ferrisi, group editor, commercial and security, Emerald, at dan.ferrisi@emerald.com.

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About the Author

DAN FERRISI

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Dan Ferrisi is the Group Editor for the Commercial and Security Division of Emerald. He has been covering the commercial AV industry as an editor, reporter and writer since 2004. He is the former editor of Sound & Communications. He joined Commercial Integrator as editor-in-chief in November 2021.