

AV on the Cloud

XTEN-AV: The New Age Technology Platform for AV

By Ram Bhavanashi

Two Young AV Techies Build Start-Up Promising 10x Performance Efficiency

Entrepreneurism in Indian audio-visual industry is taking a new growth trajectory, or so it appears. While there have been about half-a-dozen professionals who have charted entrepreneurial strides over the last couple years, the latest of the ilk is sort of fascinating in that it seeks to revolutionize the very way audio-visual spaces are designed and deployed with AV systems. Surprising though it is, the technology exploit seeks to bring more than one superlative things to place for manifold benefits.

As this new age technology platform prepares to connect with its target audiences from the show floor of InfoComm 2019 in Orlando, SIA presents a peep into in what might be perfect demonstration of AV-IT/ICT amalgamation.

The Setting

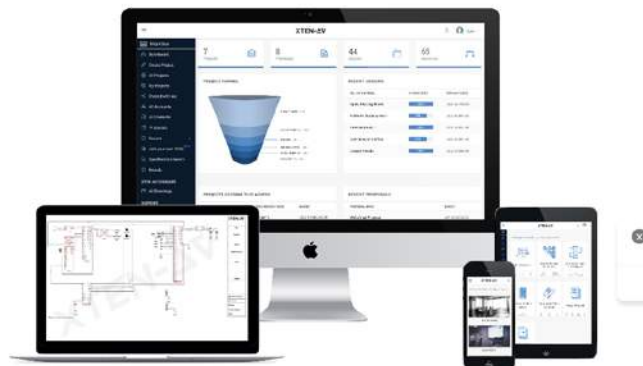
What is the most common and consistent challenge that many Indian AV companies – or foreign companies like those in the Middle East, for that matter – have been living with? For many years, without an effective solution per se?

The most likely answer (at least for this journo) is ‘dearth of certified/experienced AV talent.’ Which had been, apparently, resulting in under-staffed work environments causing either inadequate or dragged-on project design/preparations for the client!

The other most likely possibility is groping in the mesh of information exodus and losing track of what is best suitable spec for a designated space, given the fancies or preferences for a brand or two. Either way, one common, important casualty here is the ‘standards

Unlike anything you've ever experienced

XTEN-AV is a cloud based software platform with artificial intelligence and machine learning to develop AV system designs based on AVIXA published standards and design guidelines



of AV design or integration,' besides the site-specific factors. Efforts of industry associations and some academia – though commendable thus far – haven't been enough.

Given this backdrop, imagine a scenario where an AV designer or consultant – however efficient and well-staffed with duties delegated to respective professionals – is able to access a technology platform that can practically

- Perform complex math and physics calculations to derive the required specifications of individual AV components based on AVIXA standards and design guidelines
- Generate automated block schematics, rack layouts, ceiling and wall speakers layouts, signal flow diagrams, cable schedules and scope of work documents
- Edit auto-generated drawings and convert to other formats such as Auto-Cad and Visio
- Generate highly professional and customized Customer Proposals as per the input
- Generate drawing sheets and related documents based on preferred BOM
- Provide specifications for any product across the portfolio spectrum of any brand- from bank of over 150,000 products from as many as 2,300 brands
- Track the organization's projects, accounts and contacts under a single platform; share them among different users, and also play an Administrator's role to track the progress on team members' projects

All this, done through just a few finger touches on one's keyboard and mouse! Might sound incredible with a bit of amusement, but that's what it promises to do!

More, that the technology platform performs these functions with at fractional times that modern computers are known to work at – powered by Artificial Intelligence, executed by Machine Learning, and hovering on Cloud – it is like one professional working with an efficiency of many people and producing a work done by many!



"It's 10X," comes the assertion from Vibhav Singh, CTS, and Co-Founder of XTEN-AV, the supposedly new-age technology platform. "That means ten-fold increase in productivity."

Not just productivity, but through that companies can stand to increase their project turnarounds, revenues, profits, and customer satisfaction quotient too in that proportion, Vibhav Singh further asserts.

The Seeding...

Meet the young audio professional-turned-entrepreneur from Delhi

who seeded the fancied ideation. An Electronics Engineer and a CTS, besides being a habitual audiophile that he is, Vibhav always had strong vibes for exploits in software. While his professional accomplishments took him through a good 10+ years of high-profile career with leading manufacturers such as Harman, Biamp and Music Tribe, his witnessing minimal role for software in the hardware-dominated industry, sort of invoked the vibes he had been nourishing so strongly- why not create a software platform that would reduce manual effort and exponentially increase productivity by utilizing latest technology formats such as Cloud Computing, Artificial Intelligence (AI) and Machine Learning (ML)!

"I have always fancied doing something big in software; exploring the technology frontiers, and possibly expand its reach," recalls Vibhav. "The exploit is not just for the passion of it," he asserts, "it must be for a practical benefit for people, to ease out the manual labour, and make the machines do the *'talking n working.'*"

Saving the manual labour and intelligence thus can be invested in other areas of necessity though it is just a by-product of this process.

There happened the seeding – roughly two years ago – for what was then a little loosely, if not vaguely, woven ideation. Quite naturally, Vibhav looked around first for a theoretical endorsement of his ideation, then probable wherewithal support to root the seeding.

Gladly for him, Vibhav made a perfect choice when he shared the idea with his college mate Sahil Dhingra who migrated to the USA soon after education, and grew from software developer to business analyst- having spent almost equally 10+ years with technology giants in Silicon Valley such as Apple, HP, and Cisco. Those companies being also strong players of Convergence, Sahil gained significant exposure and expertise in *SaaS (Software as a Service)*-based products for AV professionals while also implementing latest technologies such as AI, ML, VR and Blockchain.

"SaaS, as a concept is nothing new, but its applications are immense. That is one important point of the thought process," chips in Sahil. "Software technology has been the biggest enabler for most industries in our times and there was a clear opportunity for us to be the first mover in this domain."



It was thus a coming together of two friends with matching mindset, and they decided to take forward the ideation into a visible initiative. That the two like-minded techno-preneurs saw manifold increase in the outputs of diverse nature with their model, they hit upon the idea of calling their dream venture XTEN-AV- apparently meaning 10X increase in the user's productivity and associated benefits.

"In any business, turnaround time is a critical component of success," say the techie-duo. "That our Cloud-based solution

ensures exponentially fast project design, and then to execution, it is practically doing more output in less input, thereby multiplying the associated benefits.”

Thus came into being the XTEN-AV – with its headquarter at the Bay Area of San Francisco housing thought leaders and product development ranks, and a small support team based in India.

The Unfolding of XTEN Working...

XTEN-ΔV Product Flow



1. Bill of Material

Our algorithms perform the complex Math and Physics calculations to derive the required specifications of individual AV components and then match the best products from our database of 165,000 products



2. XTEN-AV Designer

Generate automated block schematics, rack layout, ceiling speakers layout, signal flow diagrams and cable lists. Edit auto-generated drawings and convert to other formats such as AutoCad and Visio



3. Proposal Tool

Impress your clients with highly professional end customer proposals which can be customized as per your requirements



4. Add Your Own BOM

If a user just needs drawings and documents they can use our 'Add your own BOM' feature to quickly generate automated drawings & documents



5. Specification Search

If a user does not know which specifications are for which brands and products? Then use our 'specification search tool' to find any specification across any brand and product lines



6. Project Collaboration & Tracking

Track your organisation's projects, accounts and contacts under a single platform, share between different users and as Administrator track the progress on your team members projects

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The tech-duo of Vibhav and Sahil maintain that XTEN-AV uses latest software technology formats of Cloud computing, AI and ML. “We have a database of approximately 165,000 products from as many as 2,300 brands, and we save the entire tech-specs of each product,” explains Vibhav. “We created the user Interface to easily navigate and work on technologies such as Bootstrap and CSS (Cascading Style Sheets).”

According to him, the flow of the working model is very simple as the algorithms developed by their tech teams ascertain the needs from the users – post their online registration and placement of their requirements – and calculate the specification of each product required in a design based on the industry-published AVIXA standards and guidelines.

The cue is then picked up by another algorithm that explores the stored database of brands and products towards generating the matching product details from the brands that the user had preferred. “This saves a lot of time for the user as they do not have to do any manual calculations and search for products at different manufacturer websites,” explains Vibhav.

At this stage, after the completion of specifications, the system – working on the backbone of AI and ML – automatically generates as many as seven types of drawings and documents:

- Line Schematics
- Signal Flow Diagrams
- Rack Layouts

- Cable Schedules
- Ceiling Speaker Layouts
- Scope of Work Documents, and
- End-Customer Proposals

Interestingly, all these drawings and documents are editable as per the User's convenience and choice, informs Vibhav. “This is where the user can be as creative and inventive as their mindscape,” he says, adding “same space can be visualized in different angles, depending upon one's creativity.”

That's not all. According to the XTEN-AV Founder-duo, the platform allows the users to create their own BOM, besides product collaboration and specification search. “Using the “Add Your Own BOM feature, the user can create their choicest combination of products and collaboration, and the system will generate drawings and documents as per the chosen product combination,” they assert.

The set of CRM features further expand the user's ingenuity providing for multiplied experiences.

Further, the ‘last mile’ feature, the ‘Edit-Drawing tool’ enables users to edit elements to the AV drawings after auto-generation which puts ultimate control of the design in their hands.

“The platform is designed in such a way that even if two individuals are making a design for the same space, they have the creative freedom to create a unique design while adhering to the standards and project requirements,” say the XTEN-AV chiefs.

The work behind...

The technology and working model of XTEN-AV – though a fancied one – did not happen overnight. It involved almost two years of assiduous work and research since its ideation time. “We effectively started working from December 2017, so it took us roughly 18 months to arrive at where we are today,” Vibhav clarified.

“It's not an ambitious outing, without basics, either,” he vouches. According to him, they built technical teams of diverse expertise from Pro AV, even as they researched and explored various probable working models for over a year.

“We have been perfecting our product for the past few months; we released a Minimum Viable Product in September last year to a closed group in the US, India and Singapore,” he explained further. “The reviews were indeed rave, and gave us requisite energy and conviction.”

Further value adding the cause of their conviction, the techie-duo brought onboard a Chief AV Consultant to advise on the design and AVIXA Standard matters. TS Gopalakrishnan, CTS-D and CTS-I, who has been a regular AVIXA instructor, besides being a professional of over two decades, is taken to play the critical role of developing

algorithms to generate designs as per AVIXA's published standards and guidelines.



"My task is both simple and prestigious," says Gopal. "It's about advising the technical teams on the algorithm development in such a way that they generate designs as per AVIXA's published industry standards. In a way, we all are contributing to wider adoption of AVIXA Standards towards a global norm."

Counters Negated XTEN Way...

For one, negating skeptic, it appears XTEN-AV is attempting a few things upfront, which can be counter-productive!:

- It is bringing AVIXA Standards to the centre of its design specs evolution, with a commercial tag to its service offering
- It is offering a cloud-based service which is universal by nature, giving access to anyone- with or without proper knowledge of AV
- That the system dishes out designs and drawings based on AI and ML, it doesn't quite require the user to be ingenious, let alone "certified" like a CTS or other type- so, anyone with little knowledge can pose as a designer and come out with a tag of 'AV Designer'- thanks to the system-generated design
- That its 10X quotient contributes to one's productivity by even terms, it may also mean the 'elimination' of those support staff and thereby effectively mean minimising the human talent pool which has been the bane of the industry since inception
- This is tantamount to minimising the job opportunities or discouraging the aspiring professionals

Vibhav Singh sounds thrilled to field the counters. "Glad to take this, this is further strengthening the cause we believed in," he asserts explaining how.

According to him, AVIXA Standards are non-proprietary, open-source set of regulations and guidelines for designing AV spaces. They are user-agnostic, meant for adoption by everyone in the ProAV industry. The wider and stronger the adoption, the better would be the intended AV experience. So, XTEN-AV is only contributing to furthering the cause.

"More, its offerings are made in SaaS mode. So, we do not see any counter-effect here," he asserts. As for the price-tag, the Co-Founder further maintains that most services are offered free, only the premium services are minimally priced. "Currently, we have a standard Freemium model where all users have access to basic features for free, and can upgrade to a more comprehensive service on monthly subscription," he explains. "Thus we are very confident about the pricing model."

As for the accessibility to anyone universally, even to those with little or no knowledge, XTEN-AV's Founding duo say AV is something

that not everyone can do. Even if they make some headway initially, it does require technical inputs which only an AV-exposed, if not an AV-certified, person can provide. It is very much a PRO-Tool and needs moderate to high AV technical knowledge to optimally use our platform, they explain.

There is a PCB (printed circuit board) design tool already running in the industry, and doing fine, without any reported issues, they reason, as a precedent for success of the model.

"XTEN-AV is focussed on empowering System Integrators and Designers and not the End Customers. Having said that, we believe technology should never be restrictive. Anyone can use our software to learn and improve their design skills."

As for the counter on affecting the job/career opportunities of aspirants – as a result of 10X proposition, the XTEN-AV Founders say the very purpose of the initiative is to bring about manifold increase in the productivity and profitability efficiency of AV design/integration community and generate multiplied and faster turnarounds for the industry as a whole.

That the system helps dramatically increase the productivity quotient resulting in increased success, it will encourage wider adoption of the tool and thereby create more jobs for the aspirants.

"We hope it generates positive interest among the target audience and contributes to genuine growth of Pro AV industry, besides bringing 10Xperience to users"

The Founders of XTEN-AV have chosen InfoComm 2019 (Orlando) show floor as their launchpad before they initiate their go-to-market programme.

www.xtenav.com