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Touch Panel

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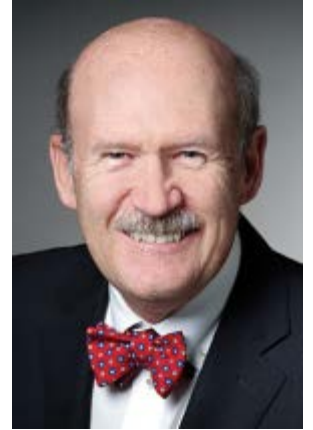
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Interview with David Martin from Nureva

David Martin is the co-founder, chairman and chief technology officer of Nureva Inc. In 1987 he co-founded SMART Technologies Inc., a company that changed the use of technology in classrooms around the world. He is a recognized technology pioneer and the named inventor on many patents. Martin has received many awards and levels of recognition because of his efforts, including an Officer of the Order of the British Empire (OBE) in 2013 for “contributions to education.” Martin has received numerous awards recognizing his work in collaboration technologies. He holds a BSc in applied mathematics from Concordia University in Montreal and received an honorary doctorate in 2017 from Concordia’s Faculty of Engineering and Computer Science. Martin is married to Nancy Knowlton, his business partner and co-founder of their companies.



Please give us some background information about Nureva. Nureva develops flexible solutions to transform teamwork in dynamic workspaces and active learning environments, whether those spaces are physical or virtual. Our products support the acceleration of a wide range of collaborative activities, including core business processes such as lean, agile and design thinking. We enable dispersed teams to work together more effectively and efficiently while delivering breakthrough results.

Is there any special significance behind the name “Nureva”? Somewhat. “Nu” is a play on “New,” “rev” is derived from the French word for “to dream” and “va” is the French word for “go.” So, when you put them together they signify innovation put into action.

Does Nureva collaborate with SMART, or are they now more of a competitor? **DM:** Nureva has developed a cloud-based solution that works on any interactive display, including those of SMART Technologies. In the future you will see a published API to allow other developers, including corporate developers, the ability to read and write to the Span Workspace database.

Your development efforts are focused on enabling enhanced collaborative techniques, primarily targeted at businesses and classrooms. Which market (commercial or education) is most attractive for your technologies? In starting Nureva, Nancy Knowlton and I realized that a lot of the products that were shipped when we were at SMART ended up in primary and secondary schools. Why weren’t more of the SMART Board interactive whiteboards in use within corporations? Why weren’t the millions of students who had graduated from schools where interactive whiteboards were a staple, not asking for them in their entirety of employment? In forming Nureva, that was the problem we wanted to solve. Nureva’s customers include enterprise and higher education institutions that are looking to us for new ways to help their teams work together more effectively and creatively.

Do you consider remote learning to be a big target market? We have seen our visual collaboration solution and advanced audio offerings to be really useful in remote teaching environments, both in corporations like VolkerWessels in the Netherlands and universities like the University of North Carolina. We will continue to develop enhancements for this class of customers.

Are the education and conference room markets largely similar, or does the classroom require different tools than the workspace? No. We have extended administration features of our solutions so that they can be used in both. Our customers and users of the products, whether in business or higher education, appreciate the digital workspace that the Nureva visual collaboration solution offers, and the reliable audio pickup of the HDL300 audio conferencing system.

It would seem that schools are more likely to have budget concerns than businesses; are the price-points different in the two markets? Yes. We offer special pricing for higher education customers.

One of your technology focus areas is to improve audio in conferencing environments. Tell us about what you're doing. In the audio space, we have tackled the issue of placing a microphone closer to speakers by inventing a new way of installing a microphone and speaker system that allows simultaneous processing of between 8,000 and 16,000 virtual microphones in a space. Nureva's proprietary Microphone Mist technology allows for a better speech pickup no matter where the individuals are located in the room. This means remote participants can hear everyone speaking in the meeting and can stay engaged in the call and contribute more effectively.

Do you regard Nureva as primarily a hardware company or a software company? Nureva is focused on providing solutions, whether they are hardware, software, services or a combination of all three. Our solutions work with other products – but we expect that customers will experience the best result when they combine Nureva hardware, software and services.

Do you see AR/VR as a meaningful collaboration tool? Is Nureva supporting any AR/VR solutions? Although our research activities have experimented with augmented reality (AR) solutions, we don't believe that, in the next few years, our customers will see significant value in acquiring and using these solutions. From our time spent in the research community, significant problems still need to be solved for AR in group work.

On the hardware side, do you have any technology preferences (direct view, rear projection, front projection)? No. We build our solutions independent of the display technology but with a focus on realizing that our customers will be demanding solutions that have the greatest number of pixels for an optimum cost.

Do you support displays in both vertical and horizontal formats (on the wall and desktop)? Yes. Nureva Span Workspace is optimized for the Nureva Wall and is also designed to be used with any interactive flat-panel display, along with tablets, laptops and smartphones.

For your dual Nureva Wall solution – how does that work with remote users viewing from a desktop? When using Span Workspace from a desktop, remote users can zoom in and out of the canvas in a way that is independent of the view that is showing on the Nureva Wall system.

The dual Nureva Wall requires two projectors – can you support even wider work spaces with 3 or more projectors? How about in the corner of a room? Yes, the Nureva Wall can be configured using up to 8 projectors, providing from 7.5 to 60 feet of interactive wall space to collaborate on. Configurations can be on one wall, in a corner or wrap a room.



Nureva Wall configurations can be as small as 7' 6" (2.30 m) wide or as large as 60' (18.29 m) wide. They can span the length of a wall, be placed in a corner or wrap around an entire room for immersive visual collaboration.

Tell us about how you assure that images are aligned/stitched together across multiple walls. We have invented a way of stitching images across display boundaries that has very low latency. This approach is scalable for multiple displays.

Is the primary input method for your systems based on fingers or pens? Can your solutions recognize gestures? The primary input method is finger or keyboard. Objects can be resized using a pinch gesture.

How many touches can you recognize? And can each touch be identified to a specific individual? The Nureva Wall can recognize 20 simultaneous touches per system. Individual touches are not linked to specific individuals.

Can your installations be completed as a simple add-on to an existing room, or is it better to incorporate with new construction projects? Installations can be a simple add-on to an existing room or incorporated into new construction projects. Nureva has customers in both scenarios.



Users can work together to generate ideas on the Nureva Wall, others use devices to add example images to a canvas. When a group joins remotely (using the HDL300 system), there's screen sharing in the Span Workspace that brings clarity and gets everyone on the same page.

Can users access your walls from multiple computers/phones, or does there need to be a primary source? Users can access Span Workspace from the Nureva Wall and from multiple devices simultaneously.

In terms of your implementation strategy, can you tell us what you'd consider to be a "home run"? The fun part of introducing new products is to watch them being used by the early adopters – and then being called some time later because the company has found enough additional users that they want to understand who we are and how the company can purchase a larger number of products and user licenses. This is very fulfilling.





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