



Products used in this case
MT Canvus®, MT Canvus Connect & MultiTaction









The Challenge

The way healthcare education is currently delivered has remained largely unchanged for over a century. Most health care facilities around the U.S. still take a predominantly didactic approach with students learning in traditional classroom settings. This involves listening to lectures, taking notes, and studying for the exam. This is not how the millennials generation prefers to learn and there is growing realization that the traditional approach does not sufficiently prepare students to function at a high level in busy and stressful healthcare environments immediately upon graduation.

With the average length of stay in hospital now decreased to between two to four days, and very sick patients who are transitioning through multiple levels of care, the clinical care settings are no longer the ideal place to practice or learn new techniques and procedures. For both learners and patients, the stakes are now higher, and the risks and cost of failure considerable.

This leads academic training centers to seek the right tools and technologies to help provide safe training environments for students to learn without fear of harming a



Professionals that work in healthcare education are very aware that they need to ensure students are trained in the best possible way to avoid medical errors and provide the safest and highest quality care not only upon graduation, but throughout a life-time of practice.

AVI-SPL specializes in designing health care education environments where learners acquire knowledge, and experience hands-on training in a wide range of realistic but simulated healthcare environments.

Under this paradigm, students practise using a wide range of simulation technologies until they become proficient in procedural and professional skills before encountering real-life patient care situations.

We spoke with Bill Schmidt, AVI-SPL Sales Director and Visualization Advocate.





The MultiTaction iWall Helps Improve Outcomes

In the world of health care education, AVI-SPL is a leader in installing emerging simulation technologies from advanced human patient simulators and task trainers, to augmented, virtual and immersive reality, as well as the MultiTaction iWall.

The MultiTaction iWall is very intuitive and a great first introduction to visualization and interacting with images, according to Schmidt, "It literally gets students out of their seats and working together on projects."

The iWall is used to create a very realistic, hands-on, interactive, scenarios for students to learn and practise. It offers more than learning the "how-to" of a procedure. Up at the iWall, students learn how to relate and think through problems, and practise the critical thinking skills they will need under fire

MultiTaction is an important step in the journey into adopting visualization and virtual reality.

While it is certainly important to understand theory, the iWall allows learners to put the theory into practice.

"Now we are in a position where virtually anything that can happen to a patient in the healthcare system can be realistically and accurately simulated." Schmidt reports. Healthcare providers do not feel comfortable working for the first time on a real patient. They want to feel competent as well as develop confidence by using simulation before working in the real world of medicine.

To illustrate, the iWall can be used for interactive team exercises that involve transferring patients through a traumatic medical event. This kind of practice is important because a hospitalized patient can transition through four or more levels of care involving multiple teams of healthcare providers before eventually being discharged.

The iWall helps students practise scenarios such as the transfer of care. "This is where a significant number of medical errors occur, and these should be completely preventable," said Schmidt.



The iWall is a Powerful Tool for Remote Learning

AVI-SPL and MultiTaction recently worked at the University of Nebraska Medical Center, (UNMC), iEXCEL center. Within the state of Nebraska, there are many rural and underserved communities, and iEXCEL desires to serve these remote communities and offer the same standard of training and technology across the state.

UNMC satellite campuses cannot count on a lot of bandwidth being available on demand, because the ISP providers in some areas of Nebraska are not always robust. This meant that AVI-SPL had to find a low bandwidth solution for collaborating across distance.

"The MultiTaction iWall is the ideal solution when bandwidth is a concern," says Schmidt.

The first remote learning project is complete with the installation of an iWall 450 miles West of Omaha, in Scottsbluff. Nurses and Dental Hygienists at the Scottsbluff satellite campus can now connect in real time with Omaha via the iWall collaboration software, MT Canvus and Connect.

The MultiTaction solution has low bandwidth requirements with ultra-low latency, even replicating high resolution video in perfect synchronisation with no loss of image quality.

At the beginning of the design phase, AVI-SPL made a list of requirements for an interactive wall, "There were eight or nine goals the wall needed to accomplish," says Schmidt, "It needed to be a large surface, touch interactive, and it had to be curved."

A curved wall is beneficial for a number of reasons. Beyond giving an immersive in-room experience, it is very engaging to the rest of the audience, and it lessens the amount of real estate required to fit such a large screen because it can be incorporated into a corner.

The way MultiTaction embeds touch into its displays allows for a curved design and this is a key differentiator. Once AVI-SPL settled on specifying a curved wall, MultiTaction became the clear choice.

MultiTaction is the only touch technology that can offer a curved solution





Relationships are a top priority

Technology does not accomplish anything unless it understands the user community it is trying to serve, and this is one of AVI-SPL's greatest strengths. Part of the vision of AVI-SPL is they are do not just sell technology, rather they are highly collaborative in terms of partnering to advance adoption.

MultiTaction is very good at listening to what its customers want the software to do and helping to make that happen. The ongoing dialogue between MultiTaction and its customers, has affected future developments of Canvus and Connect.

It is very desirable that MultiTaction is interested in continuously improving its software to enhance the learning experience. The connectivity capabilities of the Canvus and Connect software are ideal for universities that have a network of satellite campuses, or want the ability for students to collaborate with remote locations.

The MultiTaction Canvus and Connect software licensing is a one-time, life-time cost included with the equipment. From a business standpoint, this is a key differentiator for MultiTaction. Many other software platforms have annual licensing and renewal fees, which is a real challenge in higher education because of how funding is allocated.

Schmidt explains that in higher education, it is typical for there to be little room in the budget for annual licensing fees, and "Once they buy a piece of technology there is frequently no more funding for upkeep."

Schmidt believes the MultiTaction business approach is very compelling to the higher education market. "All universities share similar concerns about the ongoing, as well as the initial costs of purchasing technology and software. As the systems integrator, we have to take this into consideration."

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Conclusion

AVI-SPL's mission to accelerate the adoption of modeling and simulation technology will reshape the way in which medical education is delivered.

MultiTaction solutions enable higher education institutions to change the paradigm of how they teach. The iWall creates an interactive classroom experience that better suits the way that learners of today absorb information. For health care education, the iWall provides a safe environment where students can learn without fear of harming a patient, and practise until they are ready to take excellent care of a patient.

MultiTaction excels at listening to what their customers want the software to do and helping to make that happen. The unique relationship between MultiTaction and AVI-SPL will transform health care education, as the iWall's advanced visualization enhances outcomes and lowers costs.

The MultiTaction solution has low bandwidth requirements with ultra-low latency, even replicating high resolution video in perfect synchronisation with no loss of image quality. This makes the iWall a powerful tool for collaboration and remote learning.

About MultiTaction

MultiTaction designs advanced visualization and collaboration solutions to improve the way the world works. Its award winning 3D optical recognition multi-touch displays, and innovative software suite are used by some of the world's largest corporations, museums, educational institutions and entertainment companies. With solutions deployed in over 50 countries and offices across the United States, Asia and Europe, MultiTaction is a global business celebrating 10 years of growth and success in 2017.

For more information visit: www.multitaction.com

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