Panacea’s Cloud is a collaboration between MU researchers Prasad Calyam, assistant professor of computer science, and Sal Ahmad, assistant professor of surgery and medical director of the Trauma and Surgical Intensive Care Unit. Its purpose is to utilize Google Glass and Recon Jet smart eyewear to allow first responders to relay real-time information to medical directors to allow for informed, systematic care in disaster situations where communication systems may otherwise be compromised. *Photo courtesy of MU School of Medicine.*
January allowed a joint project between the MU College of Engineering and School of Medicine a chance to increase its exposure and the research team a chance to see ways to potentially improve it.

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“We set out to create a more efficient system that allows for better communication between first responders and medical directors, making it easier for them to keep up with what responders are doing and expedite the triage process,” Ahmad said in a School of Medicine release.

The duo was one of five teams to receive $100,000 from MU’s partnership with the Wallace H. Coulter Foundation, which takes aim at expediting the process of turning biomedical breakthroughs into products for market.

Calyam said much of the feedback he and the team received at CES was that Panacea’s Cloud has the potential to fill an unmet need in the medical community.

“We had people say, ‘Oh, this is cool; I have something complimentary. We should try and work with you,’” he said. “We got some leads from a business perspective. But there were also people who came who were experts in disaster tech. … They said, ‘You guys are doing stuff that’s not being done by these other big companies. You guys are really going the cloud way. The way you are putting the solution together is exactly down the right path.’”
One of the bigger takeaways from the show, Calyam said, were the ways in which the team can improve the infrastructure of the Panacea’s Cloud system — items including the packaging and ways to potentially improve the efficiency of the computing. Being surrounded by other technical innovations allowed the team to formulate ideas for future proposals and research that involve altering previously existing devices such as virtual beacons to improve the Panacea’s Cloud system.

“Overall, we found that what we’re doing is very unique, and we have a much more holistic application for things and have a solution in place that’s, in fact, built from the ground up,” Calyam said. “But it really has to be matured in the sense of use and some of the infrastructure issues — networking, computing, integrating available data on site and how we process that. It’s a new kind of research question.”

The next steps for Panacea’s Cloud include putting forth proposals for funding to research clinical applications through trials with paramedics and Missouri Task Force 1, as well as more market research and further research into the system’s mobile cloud infrastructure. Calyam said the Coulter Award has helped fund additional student help to look into market research and clinical research, and said CES helped further illustrate that these steps are the next logical research and technology development areas.

“The show was very good for that,” he said. “It gave us more data points on all of these things, and also gave exposure to the latest tech innovations and trends in consumer electronics to the Panacea Cloud project’s undergraduate students, John Gillis and Olivia Apperson.”
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