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## CHDS research basis for personnel rescue project at Nellis

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# CHDS research basis for personnel rescue project at Nellis

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At first glance, fighting wildfires in California and rescuing soldiers in hostile combat areas may not appear to have much in common.

Center for Homeland Defense and Security alumnus Lt. Col. Mathew Wenthe is bringing those seemingly disparate types of

events together with a testing project labeled Joint Personnel Recovery Information Digital Exchange (J-PRIDE). Wenthe is leading a year-long Quick Reaction test funded by the Office of the Secretary of Defense (OSD) and to be conducted at Nellis Air Force Base in Nevada with the Air Force Joint Test Program Office leading the effort as the Operational Test Agency.

The goal is to establish Tactics, Techniques and Procedures (TTP) that will allow each of the armed forces to better share real-time information during personnel rescues. The test stems from a course paper Wenthe wrote while a student at the Center and it also follows on previous CHDS research on interoperability by CHDS alumnus Jeffrey Magram of the California Air National Guard (ANG).

For Wenthe, the problem is that each arm of the military uses different systems that in rescue situations are not compatible for information sharing; the systems cannot talk to one another.



Lt. Col. Mathew Wenthe

“Historically, the amount of data available in an analog environment is fairly manageable,” said Wenthe, who is currently Branch Chief, Personnel Recovery and Special Missions, with the Air National Guard at Andrews Air Force Base. “What we find now is, because of all the tech and different networks in place, there are all these disparate pieces of information that are being sourced through different networks. It’s hard to verify which information is correct. Pulling all the data together is, ironically, harder than it was before we had the technology.”

The project has an indelible CHDS footprint. Wenthe wrote on the issue as part of CHDS instructor Rodrigo Nieto-Gomez’s course, Strategic Planning and Budgeting for Homeland Security.

Wenthe based his work on previous CHDS research conducted by alumnus Jeffrey Magram of the California Air National Guard, a 2011 graduate who wrote course papers on a technology developed at the Naval Postgraduate School known as Global Information Network Architecture (GINA). GINA allows users of various computer-based devices to access strands of information from enterprise systems and networks to gain precise situational awareness, rather than accessing huge chunks of intelligence and manually analyzing it. Moreover, the architecture can allow for interoperable communications when commercial networks are down following a disastrous event.

Magram researched how this could help his agency meet its civil assistance mission. Wenthe, who was with the California ANG while a CHDS student, continued to explore the technology and applied it to personnel rescues, known in the military as “PR.” For the warfighter, timely and accurate information can make the difference between life and death.

“You want to recover a person as fast as possible. It is critical for mission and for risk mitigation to gather data as quickly as possible, have it correlated and have it delivered to command and control,” said Wenthe, who spent 20 years as a helicopter pilot doing search and rescue missions. “You start with zero information and there is no pre-planning in that you don’t know when and where this event is going to happen.”

While applying for the test project, Wenthe modified his proposal to fit the call for a non-technical, non-material solution under the OSD grant requirements.

“This started with GINA,” Wenthe said. “I applied a lot of the lessons from NPS to scope it and get the funding.”

For the purposes of the testing program, Wenthe de-emphasized the technical aspect GINA necessitates in order to provide a solution based on TTP, and that would meet the cost and timing constraints of the funding program that calls for projects within the \$1 million range that can be tested in one year or less. That leaves the option of pursuing a more technological, GINA-style solution in the future.

The TTPs will be tested in the Air Force’s upcoming annual Red Flag exercise and will be tested in a multiple-service operation later this year at Fort Irwin, said Major David Gottlieb.

Coursework amply prepared him well as he competed with about a dozen or so other applicants. First, the concept of rebranding an idea was critical as he modified and reshaped his plan to address voiced concerns. Also, he was able to build a community of interest around the concept for support. And, he utilized a Naval Postgraduate School red team, which wasn’t affiliated with CHDS, to critique his work while also convening a working group in which he ultimately made three presentations. That led to the re-branding and renaming of the concept and pursuing a policy based solution rather than the original technology-based approach.

“It’s part of what we learned at CHDS – understanding what you have to give up in some cases to gain your objective later on,” he said. “Before CHDS I would have kind of really stuck to my guns and said no, we need to apply this to technology. I wouldn’t have been able to see forest from the trees.”

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