

Narrator

The San Diego Advanced Defense Technology Cluster, funded by the Small Business Administration, has as its goal the increase in jobs in the high tech sector and the transition of their technologies into Department of Defense applications. As a part of these goals, the San Diego Advanced Defense Technology Cluster displayed five of their most advanced technologies at the Coalition Warrior Interoperability Demonstration, known as CWID.

Captain Keith Archbold

Right now, as I'm talking, we're linked in to over 22 coalition partners at multiple locations globally. We've got the Army at Fort Hood, we've got Northcom at Peterson Air Force Base, Hanscom Air Force Base, we've got the Air Force, joint forces command at Suffolk, Virginia. And at Bydgoszcz, Poland, we've got 22 coalition partners linked in right now running simulated missions.

Narrator

SPAWAR Systems Center Pacific was one of the partnering locations participating in CWID, and highlighted both classified and unclassified exhibits. The five mature technologies of the San Diego Advanced Defense Technology Cluster were showcased among complimentary products for top Coalition personnel and Department of Defense management to analyze and evaluate.

Captain Keith Archbold

We're taking the best of breed, from academia, industry and the government, and one of the efforts that we're partnered with is the San Diego Advanced Defense Technology Cluster initiative, which finds those innovative technologies, in small to medium companies, and link them up so we can package them up and get them out to the war-fighters as quick as possible.

Narrator

This video was created during the June 13 through June 16, 2011 segment of CWID.

The five companies that were featured by the San Diego Advanced Defense Technology Cluster include:

Geodetics. Geodetics provides individual instrumentation to accurately track location, position and movement on lightweight mobile trackers. With centimeter level accuracy, low power, and light enough to be carried, Geodetics products are of value to war-fighters, firefighters, law enforcement or others where knowledge of location and movement is essential.

Ken Masterson

On the lower right hand corner, it's a soldier mounted device. On the lower left hand corner we have playback from a roller coaster which is instrumented with our device. And what we have done, we wanted to confirm we are able to track at a certain resolution repeatedly, and the nice thing about the roller coaster is that follows exactly the same track every time. So once we confirmed that we were getting 2 to 3 centimeter accuracy, we able to actually to fly it on the F15, which is the window right above that on the top left. And both the top left window and the top right window are from the, were recorded at the same time. On the right window was a tailing aircraft that was following the F15. The F15, we were able to confirm that it was getting 2 to 3 centimeter accuracy at around mach 1.

Narrator

Pixon. Pixon Imaging develops software and hardware products for real-time video image processing, including de-blurring and de-noising images, contrast enhancement, de-hazing, and noise reduction.

Richard Puetter

Our company's goal is to try and solve all the problems that you have with images that you can't solve by getting a better lens or a better camera. So we take the picture in and mathematically transform the picture back to the way it was before you had the haze, or the blur. The board that's in here actually is small enough that they can be built

into binoculars, gun sights, small, unmanned aerial vehicles. This works very well underwater, in murky water, so if you have divers or underwater robots or submarines. Just a huge number of applications.

Narrator

Airsys Portvision. Airsys Port Vision collects and stores maritime vessel and port activity by monitoring all AIS signal receptions and mapping them to geographical areas of interest.

Dean Rosenberg

We have with Portvision is a platform for enhancing maritime domain awareness that we're actually processing about 50 million vessel location reports every day. We maintain a data warehouse of over 15 billion vessel arrivals, vessel departures, and individual vessel movements dating back over five years. And we use that data to help our customers both on the government side DOD, as well as the commercial side, enhance maritime domain awareness and make better decisions. Portvision also supports extensive historical analytics, historical reporting, and even animated playback. So I have the ability to go back to any specific minute of any day in the last five years and actually recreate an animation of what happened around a specific vessel, or a specific terminal or point of interest anywhere in the world where we provide Portvision coverage.

Narrator

SeaCoast Science. SeaCoast Science's handheld chemical detection unit is ideal for a variety of markets including leak detection, military, homeland security, air quality monitoring, and emission gas detection.

Louis Haerle

What we're demonstrating here today at the CWID is a, gas chromatography or chemical separation using heat. So what we're doing is we're taking a gas, we're absorbing it into the system, and then after we absorb it over a period of time, to concentrate the gas sample, then we release it to our sensor, through a chromatography column. What that does is it takes all the chemicals in that mix and it will separate them over heat and time so that you get each individual component out at a certain time. And that's how you start to do identification. It can be used as a portable device, where a first responder or a war-fighter could carry if they're in an area that they suspect chemical exposure. They can actually do sampling in real time or it could be in a fixed location where they can mount it to a wall and then it can sample automatically over time and send out data periodically or when it sees an alarm condition.

Narrator

Harbor Wing. Harbor Wing's high-tech Autonomous Unmanned Surface Vehicle provides situational awareness for critical situations such as reconnaissance and surveillance, Drug Interdiction, Search and Rescue and much more.

Ken Childress

Harbor Wing Technologies is developing the world's first wind powered, autonomous, unmanned surface vessel. The production vessel that we're working on now, and we'll deliver the first one later this summer, is a 50 foot trimaran, with a 65 foot wing sail, capable of staying in the open ocean for three and half months, and providing payload capacity of 1500 pounds. It can be used for any number of intelligence, surveillance and reconnaissance missions, and maritime domain awareness. And the platform is actually also a hybrid platform, that it has electrical engines that can take over if we have a wind power problem, and also can be used to regenerate the lithium ion battery system so that we can maintain constant power delivery. The exceptional difference between this and other unmanned surface vessels again, is its persistence, the ability to stay out there months at a time as opposed to days at a time without having to be tended or refueled.

Narrator

Many national and international, top level decision makers, along with various media outlets, visited CWID and examined the technology on display. It was a successful venture in showcasing mature technologies and bringing greater awareness to some of San Diego smaller high-tech companies.

Captain Keith Archbold

We've had a couple examples of that here today where we had some companies from the San Diego ADT link up with other companies that previously were unaware of these other products, so they can link together their resources, their expertise, their partnerships, which is good for everybody. Again, it gets back to the end goal, how do we save lives, how do we make the mission better, more effective, faster over in Afghanistan, Iraq or wherever we may be fighting.