

Government Computer News

Army puts data center on wheels

BY PATRICIA DAUKANTAS | GCN STAFF

STORAGE

A IT storage system used to require a sizable data center to house it. The Army now fits that much storage on a four-wheeled vehicle.

The Digital Topographic Support System, designed for updating maps and analyzing battlefield terrain, no longer even needs a 5-ton truck, said Mark Hainsey, acting project director at the Army Topographic Engineering Center in Alexandria, Va.

Although the National Imagery and Mapping Agency is the Defense Department's primary mapmaker, DTSS users provide map updates and other topographic products in the field, Hainsey said.

A new version of the topographic system, called DTSS-Light, fits into the back of a Humvee. The Army has fielded 20 DTSS-Light units with 16 more to come this fall, Hainsey said.

By fiscal 2004, Army engineering teams will have 83 DTSS-Light units across the nation, Hainsey said. The remaining nine systems in 5-ton trucks will be retired.

Each DTSS-Light package stores field data on two ruggedized FlashDisk OpenRAID disk arrays from Winchester Systems Inc. of Burlington, Mass.

With eight 73G drives inside, each array can store a bit more than 0.5T at RAID Level 5, said Michael W. Roberts, vice

president of the company's government division.

Geospatial data sets and images are massive. "It seems no matter how much disk space you can provide, someone can provide a use for it," Hainsey said.

Winchester Systems will soon build in 180G hard drives to give each eight-drive FlashDisk OpenRAID array a capacity of more than 1T at RAID Level 5, company chief executive officer Joel Leider said.

The Army chose RAID units instead of tape libraries because data access speed is important in the field, Hainsey said.

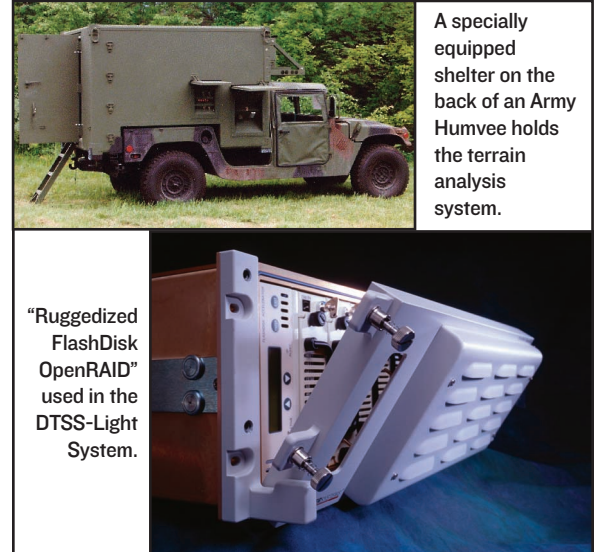
Besides the two disk arrays, each DTSS-Light system has a workstation and such peripherals as a Hewlett-Packard Co. 36-inch plotter, CD-ROM and DVD-ROM drives, tape drives and uninterruptible power supplies.

Accustomed to NT

The first 20 DTSS-Light packages came with Sun Microsystems' Common Hardware/Software II workstations, but future units will use PCs running Microsoft Windows NT as part of the Topographic Engineering Center's overall move from Unix to NT.

"From a user perspective, it's more intuitive," Hainsey said. "It's what people are used to."

The lightweight, multipurpose shelter



mounted on the rear of a Humvee gives some protection to electronic equipment, Hainsey said. But the RAID units still had to pass military specification tests for rain, dust, temperature extremes and even fungus.

The individual drives are the weakest link in the array because they can't handle the temperature extremes that the Army specifies, Roberts said. So the array frame has circuitry that turns off the two cooling fans and switches on small heaters when the temperature drops too low.

TASC Inc. of Chantilly, Va., prime contractor for DTSS, collaborated with the Army and Winchester Systems to modify the commercial FlashDisk OpenRAID array for ruggedness, said Bill Foshay, DTSS program manager at TASC.

The 610th Engineer Detachment of the Fourth Infantry Division, based at Fort Hood, Texas, recently completed a training rotation with three DTSS-Light units at Fort Irwin, Calif., Hainsey said. ■

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