

DOT to begin new GPS III civilian requirements studies

As the Defense Department prepares to go forward with the next constellation of the Global Positioning System, GPS III, the Department of Transportation is looking ahead to some key budgetary and programmatic requirements for civilian users.

While DOT has long been involved in defining GPS III, the department is about to kick off a series of new studies on civilian requirements, according to a government official involved in the program. The studies, part of a new "interagency forum for operational requirements," or IFOR, is set to look at the budgets and costs for GPS III civilian requirements.

Scheduled for first launch in 2011, according to the Air Force, GPS III is to provide enhanced targeting capabilities and be considerably more difficult to jam than the current GPS II constellation. The Air Force recently completed the first phase of the GPS III program, in which Boeing, Lockheed Martin and Spectrum Astro provided architecture studies for the new system.

But with many of the requirements still in flux, DOT is spearheading the effort to work on addressing civilian user requirements. To date, the IFOR has agreed on requirements for position, velocity and timing for civilian users, the official said. The next step, he added, is "to make some decisions on [how to do] some of that through in-depth analysis."

Starting this year, DOT plans a number of studies looking at critical civilian requirements, with an eye to determining how much civilian users can get from GPS within fiscal and technical constraints, the official said.

Integrity a key issue

One key issue will be the integrity of the GPS signal, that is, knowing at any given time whether the user is getting a "good signal." GPS today doesn't provide independent integrity but that might change with GPS III.

"One of things that we're going to be looking at in some of the studies is whether GPS can meet that integrity requirement or not, or what part of it can it meet," the official said.

Integrity, a critical feature for aviation, currently is provided by the Wide Area Augmentation System (WAAS). In the future, GPS could be able to do the integrity, or it may be integrated with the enhanced position accuracy provided by WAAS, the official suggested.

"That's probably one of the bigger and newer things we're looking at," the official said.

Although DOT is involved in defining the civil requirements for GPS III, officials in the department acknowledge that in terms of medium-term radio-navigation plans, the new constellation doesn't fit it.

Full capability for GPS III won't be available until the end of the second decade, another DOT official told *The DAILY*.

New Federal Radio Navigation Plan expected

"We're looking at 2010 for our needs," the official said. The DOT is formulating a Federal Radio Navigation plan, looking at the appropriate mix of systems it will need to ensure reliability. The results of that study are due at the beginning of 2003.

That new plan is even more critical since the events of Sept. 11, the second official said. Before that, there was too much focus on "single mode" systems, the official said. DOT wants to have the appropriate "mix of systems," and has reduced the number of options it is considering from about 45 "mixes" of systems down to about four or five, the official said.

The new plan is designed to follow up the results of last year's Volpe Study on the vulnerability of the current GPS system for the national transportation infrastructure. That study found significant vulnerabilities in today's system and recommended independent backup systems and procedures.

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Air Force is on track with S&T spending, official says

A senior official in the Office of the Secretary of Defense said last week he is pleased with the general spending direction the Air Force is taking with its science and technology programs.

Robert Baker, the OSD deputy director for plans and programs, spoke to a committee reviewing the effectiveness of Air Force science and technology program changes, and said he reviewed the Air Force's proposed S&T funding plans for fiscal years 2003-2005.

"What [the Air Force] is doing is they're really kind of looking at some of the more revolutionary information-age type technology investments in terms of focusing the S&T," he said Aug. 22 at a meeting of the Air Force Science and Technology Board.

The funding proposals were evaluated against the DOD's six transformation goals as spelled out in the

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