

Land-based backup to GPS wins reprieve in spending bill

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A terrestrial backup for the satellite-based Global Positioning System endorsed by a wide range of users from the aviation, marine transportation and telecommunications industries gained a new lease on life in the fiscal 2008 omnibus spending bill passed by the House Monday.

The Coast Guard had planned to terminate operation of its LORAN (for Long-Range Navigation) system, which could serve as the backbone of a GPS backup, in fiscal 2008. But language in the [Homeland Security Department portion](#) of the Consolidated Appropriations Act of 2008 denied that request.

The omnibus bill said that termination would be premature, partly due to the fact that an improved version of LORAN, known as enhanced Loran or eLORAN, has been recommended as a GPS backup by the multiagency National Space Based Positioning, Navigation and Timing Committee, whose membership includes top officials from the Defense, Homeland Security, Transportation, Commerce and State departments, along with NASA. That committee has not publicly released its eLORAN recommendation.

The Transportation Department's Volpe National Transportation Systems Center urged development of an alternative to GPS in a [2001 report](#) that concluded the satellite-based system could be knocked out by jamming its high-frequency low-power signals. The report suggested LORAN as a possible backup.

Since the Volpe report was issued, the Coast Guard -- at the direction of Congress -- has converted most of its LORAN stations, which had a location accuracy of from one quarter of a nautical mile to one nautical mile, to eLORAN stations, which have an accuracy of between eight and 65 feet.

GPS also provides precise timing signals for telecommunications companies worldwide, and they urged the Transportation and DHS to adopt eLORAN as a backup during a [public comment period](#) earlier this year.

Langhorne Bond, president of the International LORAN Association, who also served as head of the Federal Aviation Administration from 1977 to 1981, said the language in the House bill was a plus for eLORAN, which he believes has already received solid, if quiet, Bush administration backing.

"They're not going to shut down LORAN," Bond said. "The problem is trying to decide who will pay for it." LORAN operations -- which benefit a wide range of federal and civil users -- have been entirely funded by the Coast Guard, which would like to see other agencies share the load.

Coast Guard Capt. Curtis Dubay [told the National Position Navigation and Timing Advisory Board](#) in October that the Coast Guard operates 24 LORAN stations, of which 19 have been modernized to eLORAN. In order to provide full eLORAN coverage, he said the Coast Guard will upgrade the remaining five stations, build three new ones and add monitoring stations to check integrity and accuracy.

Dubay estimated costs would total \$400 million for modernization and another \$50 million for coverage expansion.