

# THE AGE OF LORAN

The Keynote Address To The  
International LORAN Association  
17 October 2005  
Santa Barbara, Ca  
By  
Langhorne Bond, President  
ILA

## I. RECENT EVENTS

This has been a fruitful year for the worldwide LORAN movement. The achievements keep rolling in.

Consider-

- All 18 LORAN stations in the Continental United States (CONUS) have now been upgraded to modern, state-of-the-art specs. Of the six older stations in Alaska, two are under contract.
- Both the LORAN control stations-Petatumna and Alexandria, VA-have also been upgraded.
- France, our ally from our revolution, has come out strongly in favor of LORAN. The French maritime navigation agency, under the leadership of our colleague Jacques Marchand, held a conference on LORAN in Paris on July 1. Decision makers from all over Europe were present. The response was extremely positive.
- The British and Irish maritime departments have come out publicly in support of continuing LORAN and will propose to IMO that carriage of LORAN as a GNSS backup be made mandatory.
- The Brits have installed their first LORAN transmitter at Rugby. It's on the air 24/7. Its controlled from Brest, France.
- In the Middle East, the Saudis have added Eurofix to their LORAN transmitters.
- At FAA this year there are, for the first time, signs of real interest. FAA has made a decision to move to ADS-B based surveillance, and our warnings about GPS sole means dependence have been heeded. ADS-B currently only uses GPS and is therefore at risk if secondary radar is turned off-which is the whole idea. So LORAN is the best, and in fact the only, back up. Also, we expect the upcoming FAA Navigation plan to point out that the VORs, DMEs, and NDBs might also be replaced by LORAN.
- The Congressional committees have once again allocated funds for the modernization of the LORAN system.
- Finally, I cannot overstate the importance of the draft of the proposed new European Radionavigation Plan (ERNP). This three volume, comprehensive document lists and assesses every single existing and proposed radionavigation system. A true tour of the horizon, as our French cousins would say. And the ERNP lists LORAN as a CORE TECHNOLOGY for Europe. And LORAN was placed at the very top of the cost/benefit chart.

Well, this is just a short summary of the positive things that have happened lately to LORAN. During this meeting you will hear about these events, and much more, in greater detail.

## **II. THE WAY FORWARD**

Our path for the last 10 years-ever since the Coast Guard announced its decision to turn off LORAN on 31 Dec 2000-has had two elements.

First, we have relied on the vision and consciousness of national security of the Congress to keep LORAN on track. And America, and the free world, owes the Congress a debt of gratitude. The cut off date of 2000 was extended to at least 2008, and the Appropriations Committees started a steady, comparatively small series of monies for capital modernization and for answers to the legitimate questions about the performance of LORAN based on obsolete transmitter and receiver technologies.

Last January the results of the exhaustive technical work were published. LORAN passed every test with flying colors. The ability of LORAN to perform can no longer be doubted.

During this analysis and modernization phase of LORAN the discussion-has largely been out of the public eye. We knew we had to answer the questions.

Now the LORAN story begins another chapter. We must now answer this question: what good does it do? What are the applications of LORAN, and how is LORAN better than some other PNT solution?

As a matter of fact, a good deal of work has been done already. The marine uses of LORAN are hardly a secret, and, thanks to Mitch Narins, the aviation uses are underactive, and increasingly positive, discussion.

The timing applications are another matter. We know, of course, that our modern, high tech infrastructure is now heavily dependent on precise Stratum I time from GPS. But we do not know exactly how many users of precise time are out there, what sort of short term backups they have, and how vulnerable they are to loss of GNSS signal. This area is different from the aviation and marine domains in that there is no Federal or other safety oversight of the users of precise time so we don't know who out there is at risk.

The Department of Homeland Security has underway a study of this issue. The study is due to be completed in December of 2005, just two months from now. But I am very concerned about the process of this study. To begin with, the folks at DHS have chosen to ignore all of the experts in DOT, FAA, manufacturers of timing gear, and the ILA itself, who have previously worked on this issue. Since LORAN is the only primary source of precise time, other than satellites, this we-know- best policy is a mistake. Secondly, the DHS plans to hide the study from the stakeholders and the public when it is completed.

This is an even bigger mistake. The rationale for this is that the telecommunications companies were promised confidentiality in return for providing proprietary information. This does not hold up to scrutiny. The government receives, and protects, proprietary data all the time. This does not stop a government agency from de-identifying the data and publishing the conclusions. DHS must reverse this position: there is too much at risk to America. Secretary Chestoff should read the sign on his wall "SHARE INFORMATION".

For the LORAN community, one more document is needed: a summary paper of the contributions of LORAN to the security of nations. There is a large library of studies and reports on LORAN, and they all touch on this subject. But nowhere is there a comprehensive report that pulls all the security issues together in one place.

This will be done by ILA in the very near future and will, with the publication of the DHS timing study, provide a basis for a series of long term approvals for LORAN worldwide.

### **III. IN THE US**

The decision process in the US is important to the whole world because of the size of our need and the 24 fully functioning LORAN stations in the CONUS and in Alaska. At the risk of seeming US-centric, let me briefly summarize the decision process in the US.

As everyone knows, Secretary Mineta read the Volpe Center report and set in motion a series of steps leading to a decision on LORAN.

Along the way, and as a result of the terrorist attack on 9/11, the Secretary's schedule was disrupted. The Department of Homeland Security was formed, the Coast Guard was shifted into DHS, and a whole new, and evolving bureaucracy was formed. This has delayed things for about two years.

But a new schedule has been set. The completion of the timing study in December is the last US step. A decision to green light LORAN for the long run will come in 2006. There is no reason it cannot be done before the first robin of spring.