eLoran from Theory to Practice

Opening Statement for Panel Discussion

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Tokyo, Japan, 27 October 2004

It is a cliché to say on these occasions that we stand at a turning point. But it could not be more true than of Loran-C. The forthcoming decision by the US administration will determine whether this remarkably resilient system starts a new phase of life, or dies. If the US decision is negative, this may well be the last Annual Symposium of the ILA.

The studies conducted in the US over the last two years have been of a remarkably high standard. They have taught us two lessons. First, that Loran is not capable of serving as a backup for GNSS. Second, that if the stations are modified and a new generation of receivers developed, it then could do so. Those messages are clear. Unfortunately, they have so far proved insufficiently compelling to cause the US administration to announce the continuation of the US Loran system.

If they do so, then the US will apparently undertake the development of enhanced Loran. But let us be clear: all eLoran consists of at present is a proof of concept, and some upgraded stations. We have no receivers for the market. I accept that cheap and attractive receivers *could* be produced, stand-alone or combined with GPS, if the demand were substantial. But – as Erik Johannessen has pointed out - we have barely started on the process of creating that demand. Are aviators and mariners and road users

seeking a backup for GPS? Many of them have never heard of Loran, let alone enhanced Loran. Who out there is waiting to buy our products?

And that is in just one country, the US, where conditions are the most favourable. As we in the International Loran Association focus our attentions on the minutiae of the US decision-making process, in the *rest* of the world, Loran is dying. At this meeting there are just 6 Europeans, researchers or manufacturers. Not a single representative of any administration or operating organisation or user. Oh, the Helios Report and the efforts of Jacques Manchard in France, offer rays of hope. We have succeeded in convincing many navigation professionals and some politicians of GNSS vulnerability. But to develop eLoran throughout Europe and convince users who have never heard of Loran, and know nothing of vulnerability, to spend money on it will be a mighty task.

Here in the Far East, Loran is unreconstructed: hyperbolic operation with aging equipment, no modern receivers comparable with GPS receivers, falling numbers of users. As we have shown, this Loran cannot serve as a backup to GNSS. Japan, Korea, Russia and China will have to pay to modernise their stations. The administrations will have to be convinced of the need and so will the users. I see no sign of that process of transition to eLoran having even begun.

So, let us recognise that eLoran is a successful technical proof of concept. The engineers have worked wonders. But the process of turning it into reality will be long, and it has barely started.