

**International Loran Association
Minutes, 136 Board of Directors Meeting
Salon Historique
Pavillon Henry IV
St Germain-en-Laye, France**

1. Call to Order: October 7, 2001, 15:15

2. Quorum: A quorum was determined to be present.

Present: Langhorne Bond, Jim Doherty, Christian Forst, William Roland, Linn Roth, Erik Johannessen, John Beukers, Robert Lilley, Charles Schue.

Proxy: John Beukers holds Martin Poppe's proxy.

Observer: Abbas Mohammed

3. Approval of the Agenda: The agenda was approved by voice vote.

4. Approval of minutes of the 135th Board Meeting: Mr. Roland moved, Dr. Roth seconded; minutes were APPROVED by voice vote.

5. Secretary's Report: Minutes were prepared and distributed for the 134th and 135th meetings of the Board of Directors. General assistance was provided to the President on request, and assistance was given to the Operations Center relating to ballot and newsletter distribution, renewals and preparations for ILA-30.

6. Treasurer's Report: President John Beukers delivered the report in the absence of Treasurer Martin Poppe, and used round numbers to illustrate the ILA's financial condition. For the year 2000, revenues equal approximately \$64,000.

Expenses included Operations Center \$11,000; Bank fees \$1,000; Year 2000 conference \$30,000; deposit on Year 2001 conference \$7,000; Awards \$1,600; Mailing and printing \$10,000; for a total of \$64,000

Year 2000 was essentially even.

Part of the revenue for 2000 was interest income of \$673. ILA assets were placed in interest-bearing accounts during 2000. Mr. Beukers characterized the association as in good shape. The Year 2001 conference may make a small amount of money over expenses. Bank balance is \$26000 + 7000 credit for Year 2001 convention.

It was moved by Mr. Johannessen and seconded by Mr. Doherty to approve the Treasurer's report. The report was APPROVED by voice vote

7. Committee Reports

a. Dr. Roth reported for the **Congressional Liaison Committee**.

The Committee has been working with Larry Barnett on language for the US GFY 2002 appropriations bills.

Mr. Johannessen: The President's budget asked for \$13M; the House bill reflects this. The Senate asked for \$21M. The bill now goes to conference committee. For 2003, DOT went back to Congress for Loran program support, to ask for more than OMB expected to ask for in the President's budget. Could the total be in the \$40s?

b. Mr. Doherty reported for the **Nominations and Elections Committee**.

Mr. Beukers was re-elected President. The Board members elected are:

Langhorne Bond **(elected 3 years)**
James Doherty **(elected 3 years)**
Martin Poppe **(elected 3 years)**
Capt. Tom Rice **(elected 3 years)**
Charles Schue **(elected for a one-year term, filling Beukers' slot)**

Dr. Roth remains on the board as Past President. Mr. Beukers indicated Margot Brown will be appointed a director so we retain our connection with the National Boating Federation.

Mr. Roland moved, Dr. Roth seconded, and the report was APPROVED by voice vote.

c. William Roland reported for the **Awards Committee**

Durk van Willigen and William Roland made up this committee:

Awards to be given at the ILA-30 meeting:

Wolfgang Lechner - Medal of Merit

President's awards - VNTSC (vulnerability study) with specific names to appear
LSU Wildwood for work on recapitalization program
Mitch Narins for FAA work on Loran-C program.

Best Paper from ILA 29 - David Last and Paul Williams (Bangor), Ken Dykstra (LSU)

Polhemus Student Paper award \$200 - Sherman Loh - Loran-C Modulation

Service Awards - Key members operating Convention 2000.

Mr. Roland will send final awards copy to the Secretary .

Mr. Doherty moved and Mr. Bond seconded. The report was APPROVED by voice vote.

8. John Beukers reported on the 2001 Convention and Technical Symposium

He has designed the program for flexibility, with program changes as required. The only time-keeping necessary will be for breaks and meals. Otherwise the Session Chairs are expected to manage their session times.

Assistance is required (volunteers were sought and received): Audio visual (Mr. Roland/Mr. Schue); photography (E. Roland); speaker-phone for Jim Carroll and arrangements for his audio presentation (Audio-Visual group). Air conditioning (achieved using window keys -- Mr. Forst).

Jim Carroll is not at the meeting - Volpe wanted him here. The DOT /RSPA would not let him travel. No general ban, just Jim. - He is a valuable asset and not allowed to travel now.

9. Linn Roth reported on the 2000 Convention and Technical Symposium

The 2000 convention was successful. The Washington venue made it easy for FAA, Coast Guard and Congressional representatives and staffers to attend. The convention was financially successful as well, contributing significantly to the bank balance indicated in the Treasurer's report, above.

10. President Beukers initiated discussion of the 2002 Convention and Technical Symposium Venue

The meeting was originally proposed for Beijing, China based on contacts between NELS and FERNs. That contact is no longer possible, due to changes in NELS and other factors. Mr. Beukers suggested Washington as the 2002 venue.

Mr. Bond agreed with Washington as a venue. With receiver data and flight results now available and the Coast Guard recapitalization investment well under way, Washington DC is the place to raise the discussion to the next level.

President Beukers solicited the European view from Mr. Forst, who also recommended Washington. He indicated that his view is not too optimistic on Loran-C's future in Europe. A strong US statement of support for the system could help, but we must remember that NELS is "gone," affecting the political access and support in Europe

Mr. Roland: The Helios report concludes that if FAA does not do something that indicates Loran-C will be a part of the US air navigation services, and specifically including a communications channel within that service, there's unlikely to be any EUROCONTROL interest at all in Loran-C.

The convention committee:

Dr. Lilley: The Operations Center will support as always.

Mr. Roland offered to be Technical Chairman

Mr. Beukers will ask Jim Nagle to take the leadership role. (He needs to become a member.) Messrs. Doherty and Schue offered to help. Mr. Bond will advise the group and assist with Washington-area advice and contacts.

Mr. Bond moved, Mr. Doherty seconded. The committee report was PASSED by voice vote.

11. Issues

a. Volpe Vulnerability Report:

Mr. Bond had this report copied, bound and delivered to the convention, A copy is also on the Coast Guard website. He reported on his participation in the October 5 Public Outreach meeting related to the report. He described "fear in the eyes of many there" -- manufacturers and government types, etc.

Volpe author Jim Carroll was there -- his good work was cited. The FAA second-floor conference room was full -- 100 people or so.

Mr. Bond characterized current DOT secretary Norm Mineta as "good for the Loran-C cause." Everybody signed off on the Volpe report - concurred, including Sec'y Mineta. FAA did concur.

Norm made the comment that the departments need to comply. Mike Shaw denied that was the correct interpretation. A lot.

Departments were given 60 days to respond, but that will likely slip because of fallout from the September 11 terrorist attacks. There will be a second public meeting to discuss the modal administrations' take on the report. The meeting is likely to occur after January.

Mr. Bond urges that we keep pushing the notion that the debate is OVER. Operational techniques are NOT a good mitigation for risk. Controllers will not sign off on this. Safety in ATC should be on our agenda for next year. How is a loss of navigation handled?

b. UK MOT Meeting:

Messrs. Beukers and Last had a meeting with higher-ups at the UK Ministry of Transport (MOT) on October 5, 2001. Mr. Beukers' letter to NELS Steering Committee Chairman Ulrich Klinge had raised UK alarm, as had the Volpe Vulnerability report. MOT is described as very bureaucratic, and unable to act since the EC in Brussels has much decision authority. The result of the meeting is that the UK MOT will go to Brussels and ask the question, "What are you going to do when you lose GPS?"

Europe is ten years behind the US on this. e.g. ships in English Channel -- pilots say they have backups (buoys, DR, etc.). But pilots do not remember how to use the backups. All using GPS and believing it. The Royal Majesty accident was discussed.

Mr. Forst: The EC feels Galileo will cover all its needs. Never mind GPS, it will be sole-means Galileo. It will not be vulnerable, according to the EC. Sound familiar?

Mr. Johannessen: The Volpe report emphasized timing and synchronization. Secretary Mineta (who came from the Dept. of Commerce, by the way) understands that. U.S. may be realizing that Loran *must* be afforded. Europe can't seem to talk about Loran now because the argument is about Galileo.

Mr. Bond: We still need a general statement on long-term operation of Loran-C. Even if all the facts are not yet in. Stumbling block is that we need proof that LNAV can be supported. (This is certainly one of the objectives of the FAA program.)

Dr. Lilley: FAA demonstrated non-precision approaches a decade ago, with a few restrictions on receiver design and on system monitoring. The new technology will be able to repeat those results without the restrictions. But we have not yet *shown* it.

Mr. Johannessen: The Coast Guard may now have some cover for arguing for Loran-C as a backup system..

c. NELS:

President Beukers pointed out that the Chairman of NELS steering committee feels a public-private partnership (PPP) emphasizing Loran-C land use is necessary for the future of NELS. Some see it as a conflict of interest. Mr. Beukers wrote a letter to Mr. Klinge on behalf of ILA to try to influence him that Loran-C is a strategic infrastructure asset and not for land use only. The letter received more attention in the US than in Europe. Dr. Klinge subsequently called Mr. Beukers -- he's determined that NELS should become PPP and land-centric. Mr. Beukers suggested that NATO might be a better institutional cover. No resolution yet.

Mr. Forst: All NELS members have agreed that there is no continuing need for public-funded Loran-C in Europe. There is encouragement to keep looking toward purely private operation, for all modes. Talks are underway. The outcome is very hard to predict.

Mr. Bond: Maybe the NELS discussion is an opportunity to surface other important issues.

Mr. Beukers: Time is short - a couple years is the "window", and money must keep flowing in the meantime.

Mr. bond: ICAO may be the answer here.

d. GAUSS and ITU-R Modifications:

Mr. Beukers: Eurofix is on four transmitters in Europe, plus one in Korea. It is approximately a 57-bits/sec channel. The US has a higher-rate (250-bits/sec) channel being explored by FAA. GAUSS did good work to get the Eurofix system approved by the International Telecommunications Union (ITU). This is an emotional issue between Eurofix and US-system proponents. Can we defuse this at ILA-30, using the ITU-R document as the basis? Perhaps we should propose that the US write a specification for the channel that can be inserted into the ITU document (there is a placeholder for it). Then technical people can sort out the potential for problems in operation. Continued confrontation is not productive.

Mr. Doherty: Can both Eurofix and US-style modulation be simultaneously operated on the same transmitter?

e. Helios Study:

President Beukers wrote to EUROCONTROL's Alex Hendriks, to ask that someone from Helios come to report on their work. Hendriks declined, and responded that the Galileo, GNSS, DME/DME solution was decided a decade ago.

ILA received the Helios report anyway, and Mr. Roland scanned it quickly. He summarizes: "Capability and Cost Study of Loran-C." The report seems to be aimed more at comparing the use of Loran-C in ATC with DME, when combined with SatNav. The report did not talk to the economic benefits of a Loran-C data link.

Questionnaires were sent to key players, to gather information. Questions were rather narrowly drawn and may have affected the answers received.

The current capability of Loran (mostly NELS Loran) - 1/4 nm at 600 nm range; relatively simple application. Only a loose discussion of integrity/availability, but generally seems correct.

Assessment of future capability: Auto blink and communications available, and we can improve timing stability.

Conclusion: No matter what Loran-C costs, if you do not have a decision that says you want it for communications rather than navigation, don't do it.

There is the implication is that Loran-C cost much higher than DME. This is not a life-cycle cost, and is heavily weighted by up-front equipage costs.

The study assumed an STC would be required for every single GA airplane to install Loran-C. Cost estimate was \$8.7K for a GA installation, \$87K for commercial airliner. This determines the bulk of the total cost reported.

Summary: There is lots of useful info, but some specifically very strong negatives to Loran appear to be based on incorrect information. The report does say that the cost for the PROVIDER is less for Loran-C than for DME/DME.

Mr. Bond: Vic Strachan (Litton/Grumman) was confused by the October 5 meeting -- but sees that a scenario could be drawn in which Loran-C slowly overcomes the dependence on DME, and offers certain installation benefits (combined GPS/Loran antennas, etc.).

f. US FRP:

We definitely need the DOT policy statement.

Dr. Lilley provided a summary of telephone calls with Heywood Shirer and others re: the forthcoming 2001 FRP. No content change from 1999; form will change to two volumes (policy and systems). Any Loran-C language change will be driven by outcome of FAA.CG program and on agency assessment of the Volpe Vulnerability Study.

We need Norm Mineta's statement. The new FRP process can likely handle early inclusion, without the need to wait two years.

Doherty: Once the Coast Guard recapitalization program is complete, the cost will plummet, to a value way below the first-year cost of shutting it down. Practically, this helps a lot due to the budget process emphasizing near-term cost over life-cycle costs.

Bond: I don't see the significance of the FRP in the light of a Secretary's statement.

Roth: A Mineta announcement would be helpful, but we need law (FRP), in order to get investment.

g. DGON March meeting:

This is the German Institute of Navigation. Wolfgang Lechner and others we know are leaders. The word is that the March meeting may be cancelled. The ILA will continue to follow this development.

12. ILA-30 Membership Meeting

This meeting consists of committee reports, and an opportunity for members to ask questions of their Board. Members should attend.

13. Resolution

A draft was distributed by Mr. Beukers. He proposed to post this at the beginning of the meeting, and then have it updated during the final convention session.

Mr. Roland: Do we want to include a specific item on resolving the data channel format issues?
Bill will mark up for Mr. Beukers' revision.

It was the sense of the board that we post and review; affirm later in the final session.

14. Any other Business

No other business was brought forward.

15. Adjourn

Mr. Roland moved, Mr. Bond seconded. Approved. Meeting adjourned 17:36.