

## BOARD OF DIRECTORS

W. N. DEAN ..... President  
J. F. CULBERTSON . . . Vice President  
L. F. FEHLNER ..... Secretary  
D. A. CARTER ..... Treasurer  
J. ALEXANDER  
B. AMBROSENO  
C. S. ANDREN  
L. D. HIGGINBOTHAM  
J. D. ILLGEN  
V. L. JOHNSON  
A. W. MARCHAL  
E. L. MCGANN  
W. L. POLHEMUS  
W. SCHORR  
J. P. VAN ETEN



# WILD GOOSE ASSOCIATION

23 July 1986

## MINUTES OF THE 73rd MEETING OF THE BOARD OF DIRECTORS

The 73rd meeting of the Board of Directors was held as scheduled  
23 July 1986. See Exhibit 1

### Attendees:

#### Directors

W. N. Dean  
B. Ambroseno  
C. S. Andren  
D. A. Carter  
L. F. Fehlner  
V. L. Johnson (by proxy)  
A. W. Marchal  
E. L. McGann  
W. L. Polhemus  
W. Schorr

#### Members

D. C. Scull  
J. L. Toms

#### Item 1 - Call to Order

The meeting was called to order at 1312 23 July 1986. The minutes of the 72nd meeting were accepted as written.

#### Item 2 - Secretary's Report

a. The proxy received from Vern Johnson was presented for the record. (Exhibit 2)

b. Bonnie Dahl's book on Loran-C was discussed at length. Dean volunteered to review the book and prepare text for the next newsletter. See Exhibits 3 and 4.

c. Signatures were obtained for the annual report to the Commonwealth of Massachusetts. (Exhibit 5)

d. An updated list of names and addresses of members was provided to Directors who had expressed a need.

Item 3 - Treasurer's Report

Carter explained the report and noted that all accounts re the 1985 Convention had been closed out. (Exhibit 6 and 7). It was agreed that the 1985 Proceedings would be sold for \$15 a copy. Andren moved to accept the Treasurer's Report. Ambroseno seconded. Motion carried.

Item 4 - Standing Committee Reports

a. Constitution

- (1) European Section Status - no report
- (2) Old Business - no resolution of questions regarding the filling of vacancies on the Board, and the relationship of the calendar-year-term-of-office to the inauguration of new Directors and Officers at the fall Convention.

b. Conventions

- (1) 1984 - No report from Sartin
- (2) 1985 - Closed out with Illgen's final report
- (3) 1986 - Marchal reported planning on schedule. A mailing is planned for end of July. The need for a Friday luncheon speaker has not yet been filled. Donald Engen is expected to be a luncheon speaker on the 23 of October, but is not yet fully committed. See Exhibit 8 and 9.
- (4) 1987 - Toms reported plans to select a site by October '86.

c. Journal

Ambroseno reported a need for papers for the Journal. Sale of ads is going well.

d. Membership

Toms reported a backlog of mailings due to his efforts in moving from Rockville to Fredrick. He received 1984 Proceedings from Sartin.

e. Newsletter - no report. Dean suggested calling Miller to report news for publication. (Robert H. Miller (505) 242-0508)

f. Congressional

McGann reported that money is still in the Congress 1987 Budget for the mid-continent chains. Also, Canada is planning loran expansion, China is planning a second chain, and England may join in supporting loran expansion for Europe. Scull indicated that users of loran had expressed enthusiastic support of loran during the meetings held for discussion of the Federal Radionavigation Plan (FRP). Dean addressed the Washington area FRP meeting to express the views of the WGA as shown in Exhibit 10. Scull also reported that long-line telephone systems are using loran for time synchronization; also the meeting of the aviation community on the FRP sponsored by the FAA (Exhibit 11) is scheduled for 9 September 86.

g. Awards - no report from Frank. Dean requested Board ratification of the approval of the President's award to Donald Engen indicated by a previous poll of the Directors. Marchal moved for formal approval. Andren seconded. Motion carried.

h. Nominations and Elections

A written report was received from VanEtten. See Exhibit 12. Culbertson, Illgen, Andren and Toms were elected for 1987. Since Dean was reelected for President, Andren will continue as immediate past President on the Board thus creating a vacancy to be filled by Carter. Dean announced plans to appoint Alexander and Moroney as Directors for 1987.

Item 5 - New Business

Marchal described a problem with the scheduling of maintenance at Malone for 8 hours on Mondays, 1 August or 8 August, both of which are days when loran is essential to helicopter operations in the Gulf. Coast Guard's user accommodations appeared to conflict with policy expressed in Exhibit 13.

a. Sylt

Schorr reported that the Sylt experiment has been shut down -- maybe forever. It had not been intended to convert to operational status. It was just an experiment to stimulate European interest, and a 1992 operations change -- over<sup>to</sup> host countries. No action required of WGA.

b. Mid-Continent

No WGA action required at this time.

c. Coast Guard Survey

The Board consensus was that the survey should be restricted to questions regarding navigation systems being used so that the size of the user population could be determined per system. "What if" questions should be deleted. Dean agreed to respond to Coast Guard's request for WGA input. See Exhibit 14.

Item 6 - Next Meeting

The next meeting will be in New Orleans on 22 October 1986 at 0900. There will be a General Membership meeting at 1300.



Leo F. Fehlner  
Secretary

LFF:jp

Distribution:

President  
Directors  
J. L. Toms  
R. L. Frank  
R. H. Miller

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V. L. JOHNSON  
A. W. MARCHAL  
E. L. MCGANN  
W. L. POLHEMUS  
W. SCHORR  
J. P. Van ETEN

Exhibit 1



## WILD GOOSE ASSOCIATION

July 8, 1986

TO: WGA Directors and Committee Chairmen  
FROM: WGA President  
SUBJECT: 73rd Meeting of the Board of Directors

The next meeting of the Board of Directors will be held Wednesday, July 23, 1986, at 1:00 PM in conference Room 8440, Nassif Building, 400 Seventh Street, S.W. Washington, DC.

### AGENDA

1. Call to Order
2. Secretary's Report
3. Treasurer's Report
4. Standing Committee Reports
  - a. Constitution Johnson  
1. European Section status
  - b. Conventions  
1. 1984 Convention Report Sartin  
2. 1985 Convention Report Illgen  
3. 1986 Convention Report Marchal  
4. 1987 Convention Report Toms
  - c. Journal Ambroseno
  - d. Membership Toms
  - e. Newsletter Miller
  - f. Congressional McGann
  - g. Awards Frank

5. New Business

a. The Sylt experiment has been ended. Can and should the WGA press the Coast Guard to resume it?

b. The FAA and Coast Guard are planning the Mid-Continent Chains. Should the WGA offer to assist in the planning?

c. Other new business

6. Establish next Meeting date

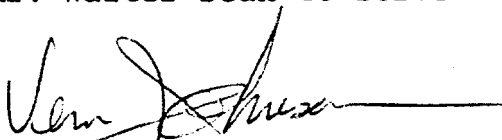
Exhibit 2

500 Washington Avenue  
Nutley, NJ 07110  
July 18, 1986

Secretary, Wild Goose Association

Subject: WGA Board of Directors Meeting  
7/23/86 Proxy Assignment

In accordance with Article II, Section 4 of the Bylaws and inasmuch as I will be unable to attend the subject WGA Board of Directors meeting in Washington, D.C. July 23, 1986, I designate Mr. Walter Dean to serve as my proxy.

  
Vernon L. Johnson  
Member Board of Directors

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Exhibit 3

15 March 86

Wild Goose Association  
Box 556  
Bedford, MA 01730

Dear Sir:

You may recall that approximately one year ago I wrote WGA for a suggestion of someone who could read my book on Loran-C for technical error. You suggested Hal Sherman who then proceeded to do an exceptionally nice job for us in identifying technical errors.

The book is now published and ready for distribution. It is called "The Loran-C Users Guide" and enclosed is a copy which I thought you would be interested seeing.

I am also sending the book because I have another favor to ask. Would it be possible to have someone do a book review and have it put in the WGA Radionavigation Journal? Since the Journal reaches so many who are interested in the Loran system of navigation, I think it would be the perfect publication to alert users and interested individuals that the book is now available. I'm not sure what your publication date for the Journal is, but if it isn't for a half year or so, possibly the review could be included in one of the quarterly newsletters. What ever you decide, I would appreciate anything WGA can do to help get the word out that "The Loran-C User's Guide" is now available.

I want to thank you very much for your time in looking over the book. If you have any questions about it or distribution please feel free to contact either me or my publisher.

Sincerely,

Bonnie Dahl

Bonnie Dahl  
Route 6, Box 250  
Rice Lake, WI



## Richardsons' Marine Publishing Inc.

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BOX 23, STREAMWOOD, ILLINOIS 60103  
312 - 830-4057

Exhibit 4

**The Loran-C Users Guide**  
by Bonnie Dahl  
Richardsons' Marine Publishing  
(312) 741-4239

WGA  
P.O. Box 556  
Bedford, MA  
01730

Dear Sir:

We are pleased to submit a copy of **The Loran-C Users Guide** by Bonnie Dahl for review by the WGA. We would like to thank you for your help in recommending Commander Hal Sherman as a technical reviewer. His review for technical accuracy was most helpful.

We hope that this book makes a real contribution to the understanding and use of Loran-C by the boating public.

Perhaps you might like to know a bit about the author. Bonnie Dahl has written numerous articles on various aspects of cruising with an emphasis on the various electronic navigation systems. Her articles have been published in most national boating magazines. Reader response to these articles has been exceptional. Bonnie's first major book, **The Superior Way**, is considered to be the premier cruising guide to Lake Superior.

As veteran cruisers, Bonnie and her husband Ron have received the Award of Merit from the Great Lakes Cruising Club.

Thank You

*Cyrus Richardson*

Cyrus Richardson  
President

Richardsons' Marine Publishing, Inc.



# The Commonwealth of Massachusetts

OFFICE OF THE MASSACHUSETTS SECRETARY OF STATE

MICHAEL JOSEPH CONNOLLY, Secretary

ONE ASHBURTON PLACE, BOSTON, MASS. 02108

Exhibit 5

FEDERAL IDENTIFICATION

NO. 04-263055

ANNUAL REPORT

For calendar year ending

19 86

in compliance with the requirements of Section twenty-six A (26A) of Chapter one hundred and eighty (180) of the General Laws:

1. NAME: Wild Goose Association
2. ADDRESS: P. O. Box 556  
(number) (street)  
CITY OR TOWN: Bedford, MA 01730
3. DATE OF LAST ANNUAL MEETING: October 1985  
(1986 Meeting scheduled for 23 October 1986)
4. The names and addresses of the officers indicated below, including all the directors of the corporation, and the date at which the term of office of each expires, are as follows: (TYPE OR PRINT)

NAME OF OFFICE	NAME	RESIDENCE ADDRESSES (City or Town) (Street and Number)	EXPIRATION OF TERM OF OFFICE
President	SEE ATTACHMENT		

WILD GOOSE ASSOCIATION

1195

PAY  
TO THE  
ORDER OF

Commonwealth of Massachusetts

July 23 1986

15-7/540  
Branch 21

\$10.00

Ten and 00/100

DOLLARS



The National  
BANK OF  
WASHINGTON WASHINGTON, D.C.

FOR

Corp filing fee

*[Signature]*

⑈001195⑈ ⑆054000072⑆ 3⑈614 12 3⑈

having the  
powers of  
Directors)


IMPORTANT!  
CHAPTER 180, SECTION 26A

(for signatures  
see other side)

In WITNESS WHEREOF, we have hereto signed our names under the penalties of perjury, this 23rd  
day of July in the year nineteen hundred and 1986  
(Date of signatures must be inserted)

President and Treasurer sign here: President: [Signature]  
Treasurer: [Signature]

If officers are also directors, they may also sign here: \* Leo G. Fehner, Secretary

Majority of directors sign here: \_\_\_\_\_

If majority of directors is more than five, at least five must sign.  
[Signature]  
[Signature]  
[Signature]  
[Signature]  
[Signature]

\* If officers also sign as directors, their signatures are counted toward the majority requirement.

This report must be filed on or before Nov. 1, with filing fee of \$10.00  
Make check payable to Commonwealth of Massachusetts.

IN WITNESS WHEREOF, we have hereto signed our names under the penalties of perjury, this 23rd  
day of July in the year nineteen hundred and 1986  
(Date of signatures must be inserted)

President and Treasurer sign here: President: [Signature]  
Treasurer: [Signature]

If officers are also directors, they may also  
sign here: \*

Leo F. Fehner, Secretary

.....

Majority of directors sign here:

If majority of directors is more than five, at  
least five must sign.

[Signature]  
[Signature]  
[Signature]  
[Signature]  
[Signature]

\* If officers also sign as directors, their signatures  
are counted toward the majority requirement.

This report must be filed on or before Nov. 1, with filing fee of \$10.00  
Make check payable to Commonwealth of Massachusetts.

## Attachment

## 1986 WSA Board of Directors

James O. Alexander  
3262 Tigertail Drive  
Los Alamitos CA 90720  
Term expires end of: 1986

Bernard Ambroseno  
212 Madison Street  
Dedham MA 02026  
Term expires end of: 1987

Carl S. Andren  
3160 Readsboro Court  
Fairfax VA 22030  
Term expires end of: 1986

David A. Carter, Treasurer  
15922 Paisley Lane  
Bowie MD 20716  
Term expires end of: 1986

James F. Culbertson  
15781 Exeter Street  
Westminster CA 92683  
Term expires end of: 1986

Walter N. Dean, President  
8060 Sacajawea Way  
Williamsville OR 97070  
Term expires end of: 1986

Leo F. Fehlner, Secretary  
118 Quaint Acres Drive  
Silver Spring MD 20904  
Term expires end of: 1987

Lloyd D. Higginbotham  
4 Townsend Road  
Acton MA 01720  
Term expires end of: 1986

John D. Illgen  
7819 Langlo Ranch Road  
Goleta CA 93017  
Term expires end of: 1986

Vernon L. Johnson  
17 Maple Drive  
No. Caldwell NJ 07006  
Term expires end of: 1987

A. W. Marchal  
279 Audubon Boulevard  
New Orleans LA 70125  
Term expires end of: 1987

Edward L. McGann  
18 Wolcott Avenue  
Andover MA 01810  
Term expires end of: 1988

William L. Polhemus  
P. O. Box 220  
Jeffersonville VT 05464  
Term expires end of: 1988

William Schorr  
4523 Arendale Square  
Alexandria VA 22309  
Term expires end of: 1988

James P. Van Etten  
230 Rutgers Place  
Nutley NJ 07110  
Term expires end of: 1988

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Exhibit 6



## WILD GOOSE ASSOCIATION

### TREASURER'S REPORT July, 23, 1986

Balance from April 16 1986 \$18,270.52

#### TRANSACTIONS

##### RECEIPTS

Dues	1367.00	
1985 Convention return	8348.02	
	<u>9715.02</u>	\$27,985.54

##### EXPENDITURES

1986 Convention Advance	2000.00	
Travel reimbursement	391.94	
1986 Election Expense	483.81	
Printing (Newsletter, cards, proceedings, and mailing	10,488.48	
Dues refunds	24.00	
Foreign check charge	5.37	
	<u>\$13,393.60</u>	\$14,591.94

WGA Account balance as of July 23, 1986 \$14,591.94

Submitted:

Approved: Date 7/23/86  
Board of Directors

David A. Carter, Treasurer

Walter N. Dean, President

# WILD GOOSE ASSOCIATION

## FOURTEENTH ANNUAL CONVENTION

P.O. DRAWER QQ  
SANTA BARBARA, CALIFORNIA 93102



Exhibit 7

5 June 1986

Mr. David A. Carter  
Treasurer, Wild Goose Association  
15922 Paisley Lane  
Bowie, MD 20716

Dear Dave:

The proceedings have finally been printed and we have concluded our audit of the financial records of the 14th Annual Convention. After all expenses have been paid, I am pleased to inform you that we ended with a surplus of \$3,624.23. This is shown in the attached (Enclosure 1) final budget status report. The surplus report is after our reconciliation of all expenses with national. Attached at Enclosure 2 is our accounting of this reconciliation which includes the advance of \$4,500 made by national to us last year. As shown, our reimbursement to you has been calculated as \$4,723.79. The sum of these two figures is \$8,348.02 which is the amount of the attached cashier's check. Dave Gledhill will be forwarding you, under separate cover, a set of our complete financial records for your retention and use as necessary. If you have any questions concerning our records, please feel free to contact him at 805-963-6487.

Sincerely,

A handwritten signature in dark ink, appearing to read "John D. Illgen". The signature is fluid and cursive, with a long, sweeping underline that extends to the left.

John D. Illgen  
Chairman, 14th Annual Convention

WILD GOOSE ASSOCIATION, 14TH ANNUAL CONVENTION  
FINAL BUDGET STATUS REPORT

As of 4 June 1986

	Budget	Actual	% Budget
<b>Receipts:</b>			
Contributions	\$5,000.00	\$5,700.00	114.0%
Registration Fees	\$15,650.00	\$17,485.00	111.7%
Tournament Fees	\$900.00	\$195.00	21.7%
Miscellaneous	\$0.00	\$436.56	
<b>Total:</b>	<b>\$21,550.00</b>	<b>\$23,816.56</b>	<b>110.5%</b>
<b>Expenses:</b>			
Technical Sessions	\$1,845.00	\$1,855.37	100.6%
Speakers	\$475.00	\$1,235.16	260.0%
Reception	\$1,115.00	\$1,214.40	108.9%
Exhibitions	\$2,050.00	\$1,791.50	87.4%
Hospitality	\$2,200.00	\$811.03	36.9%
Luncheons	\$3,300.00	\$3,251.14	98.5%
Banquet	\$3,800.00	\$3,659.99	96.3%
Administrative	\$6,065.00	\$5,786.37	95.4%
Tournaments	\$700.00	\$186.37	26.6%
Miscellaneous	\$0.00	\$401.00	
<b>Total:</b>	<b>\$21,550.00</b>	<b>\$20,192.33</b>	<b>93.7%</b>
<b>Surplus/Deficit:</b>		<b>\$3,624.23</b>	



14TH ANNUAL WGA CONVENTION

RECONCILIATION OF NATIONAL EXPENSES

Date	Description	Credit	Debit	Balance Due WGA
=====				
11/13/84	Advance Deposit for Sheraton	\$500.00		\$500.00
04/15/85	Advance Deposit for Sheraton	\$1,000.00		\$1,500.00
05/13/85	Advance to 14th Conv. Comm.	\$3,000.00		\$4,500.00
10/21/85	Purchase of Flags		\$386.58	\$4,113.42
10/25/85	Lapel Pins Sold (26@\$3.50)	\$91.00		\$4,204.42
10/25/85	Stickers Sold (9@\$1.00)	\$9.00		\$4,213.42
10/25/85	Publications Sold (37@\$10)	\$370.00		\$4,583.42
10/25/85	Membership Applications (11@\$15)	\$165.00		\$4,748.42
11/25/85	WGA UPS Charges (Publications)		\$57.63	\$4,690.79
11/26/85	Return of Flag Poles	\$33.00		\$4,723.79
06/04/86	Paid to WGA		\$4,723.79	\$0.00

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 E. L. McGANN  
 W. L. POLHEMUS  
 W. SCHORR  
 J. P. Van ETEN

Exhibit 8



**WILD GOOSE ASSOCIATION**

June 20, 1986

Honorable Donald D. Engen  
 Administrator, Federal Aviation Administration  
 800 Independence Ave.  
 Washington DC 20591

Dear Admiral Engen,

We of the Wild Goose Association have been especially appreciative of your outspoken support of Loran-C since becoming FAA Administrator. The progress the system has made, particularly in the aviation community, has been due in large part to the change in attitude of the FAA under your guidance.

The purpose of this letter is to invite you to our Convention in New Orleans, to be the speaker at our first luncheon on Thursday, October 23. This luncheon is a highlight of the technical program, and it is our custom to invite speakers outstanding in loran management. We would be deeply honored if you would address our group on this occasion.

I look forward to hearing from you.

Sincerely,

Walter N. Dean  
 President

8060 Sacajawea Way  
 Wilsonville, OR 97070

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W. L. POLHEMUS  
W. SCHORR  
J. P. Van ETTEN

Exhibit 9



**WILD GOOSE ASSOCIATION**

July 7, 1986

Honorable Donald D. Engen  
Administrator, FAA  
300 Independence Ave. S.W.  
Washington, DC 20591

Dear Admiral Engen,

This is not just a follow-up of my letter of June 20. The WGA Board of Directors has agreed that you should receive the Wild Goose Association's President's Award, in recognition of the unique service you have rendered in making the aviation community aware of the utility of the Loran-C system. This award is traditionally made at the annual banquet, which will be held on October 23. This is the evening of the day of the luncheon at which I had invited you to speak in my June 20th letter.

We would be greatly honored if your busy schedule allows you to be with us in New Orleans in October.

Sincerely,

Walter N. Dean  
President

8060 Sacajawea Way  
Wilsonville, OR 97070

Exhibit 10

"Federal Radionavigation Plan, 1984"  
Comments by the Wild Goose Association

INTRODUCTION

These comments have been prepared by the Board of Directors of the WILD GOOSE ASSOCIATION (WGA), an organization for individuals who have a common interest in loran and who wish to foster the art of loran. The WGA has over 500 members in the U.S. and overseas representing users, manufacturers and operators of loran and associated systems. The material to follow concerns itself with the Federal Radionavigation Plan (FRP), both generally and specifically, with regard to its treatment of all systems.

The Loran-C user community--that is, the number of Loran-C receivers in service worldwide--is estimated at 200,000 marine and 30,000 airborne units in 1986. The current rate of marine fittings is about 75,000 per year, and the current rate of airborne fittings is about 10,000 per year. New Loran-C systems have been installed by several foreign countries and further expansion of the U.S. coverage is budgeted.

Loran-C was initially developed, installed and operated in support of the U.S. Navy Polaris program. Work initiating this development started in 1957. Loran-C coverage, in support of the DOD, grew steadily throughout the next decade.

In 1974, the DOT selected Loran-C as the most cost-effective radio-navigation system for the coastal confluence region and established a plan to implement the required coverage and to phase out the predecessor radio-navigation system, Loran-A. (This decision and plan to establish Loran-C as the government-provided marine radio aid to navigation system for the coastal confluence zone was documented in the Annex to the DOT National Plan for Navigation, published in the Federal Register in July, 1974.)

Full Loran-C civilian radionavigation service for the coastal confluence zone was completed in 1980, some 23 years after its initial military application. In this time interval, receivers were reduced in cost from about \$50,000 to \$100,000 for the early receivers in 1960 to about \$500 and up today. In these 25 years of steady progress, receiver prices decreased by a factor of 100 and performance and reliability increased very, very significantly. These dramatic gains were made by taking advantage of breakthroughs in the fields of digital electronics and solid state technology and by continuous evolutionary development of improved products by the Loran-C engineering and manufacturing community.

The histories of many predecessor systems reveal that while military systems are on the leading edge of technology (and must be to achieve a military advantage), the civil user must field a system which has achieved low cost and high reliability advantages through system and equipment maturity. The cycle from leading edge to mature technology is generally 10 years or more. The WGA believes that a similar process will be required for cost-effective "civilization" of the GLOBAL POSITIONING SYSTEM (GPS).

"Federal Radionavigation Plan, 1984"  
Comments by the Wild Goose Association

GENERAL COMMENTS ON THE FRP PROCESS

It should be recognized that the FRP is the result of an intensive promotional and lobbying campaign, successfully carried out in 1977 and 1978 by proponents of GPS. This resulted in several reports from the General Accounting Office (GAO) decrying the "proliferation" of radionavigation systems and proposing that all be supplanted by GPS. Typical of the information in the 1978 GAO report on Navigation Planning is the opening statement on GPS, "The NAVSTAR system could be made to provide global, two-dimensional coverage by 1981".

The authors of the FRP should recognize that the FRP is becoming a model for similar documents in other nations. Therefore, it is imperative that the document very clearly define its purpose, contents and terms of reference in unambiguous terms. Since the FRP policy is said to be the reference as to what U.S. radionavigation policy is at any given time, then major policy decisions involving this policy must only become effective with the issuance of a new edition of the FRP. Decisions made between editions leave the national and international communities confused as to what the U.S. policy is at any given time. No government employee should represent U.S. policy as being anything except that which is in the current issue of the FRP.

The FRP must be explicit with regard to existing radionavigation systems in terms of the user requirements they meet, what national and/or international regulations or agreements are concerned, which U.S. agency is responsible for each system and when and how each system might be replaced.

Before a new system can become a candidate to replace another, it must have reached the stage of maturity where all its operational characteristics can be determined. This includes a realistic deployment schedule, firm technical performance characteristics and reliable development/production/deployment and logistics support costs of the system and related user equipments. National and international regulatory implications must also be considered.

After a system becomes a valid candidate to replace another, the points of comparison between the candidates must be defined according to prescribed criteria. If the candidate system is found to have the necessary characteristics to replace an existing one, then a firm decision should be made and a schedule established.

On the occasions of rulemaking by the Coast Guard or the FAA, the proposed rules are published in the Federal Register for public comment before taking effect. The FRP does not provide for this process, so that specific comments are possible only after the new edition of the Plan is published, to remain unchanged for two years.

"Federal Radionavigation Plan, 1984"  
Comments by the Wild Goose Association

GENERAL COMMENTS ON THE 1984 FRP

The 1984 FRP is still directed toward replacement of most radionavigation systems by GPS, despite, or perhaps because of, its great cost. No details are presented regarding the acceptability of GPS as a national or international civil aid to navigation. Nevertheless, it is presented as the probable or even certain, not just possible, replacement for all systems.

Even today there is little, if any, factual and creditable information regarding the issues related to the "civilization" of GPS. There are a number of specific points to be made.

- \* The FRP refers to the DOT Economic Planning Model as the means of determining the economic suitability of various systems. No details of the methodology or results are presented, so there is no opportunity for independent analysis. Indeed, there is no indication that DOT has actually derived any results from use of the model.
- \* Specific information on the acquisition and operating costs of the various systems is completely lacking. For example, it is impossible to evaluate the cost of GPS relative to the systems it is proposed to replace.
- \* Cost recovery is treated in circuitious ways in the FRP. If GPS is run by DOD rather than DOT, will there be no pressure to raise fees (license, landing, etc.) to help pay for GPS?
- \* Since widespread civil use of GPS is still speculative, it is proper also to speculate on what would happen to GPS if and when DOD should develop a successor to that system. How would the continuing cost of GPS be funded?
- \* The available accuracy from the operational GPS SPS signal has been variously specified as "60 meters, CEP" and "100 meters, 2 drms". Unfortunately, 60 meters, CEP is approximately 150 meters, 2 drms. Since this order of accuracy is critical to some prospective users, the authors of the FRP should determine from DOD which accuracy level is intended.
- \* The User Schedules for Loran-C, Omega and Transit (Tables I-4.4, I-4.5 and I-4.9), show no increases in civil users after 1980 on the basis that the expected 1987 National Decision makes their future uncertain. This gives an erroneous impression of the future use of these systems as they will be operational for many more years whatever the decision, and their use will continue to increase.

"Federal Radionavigation Plan, 1984"  
Comments by the Wild Goose Association

- \* The question of the effect on national security of providing a worldwide system with the accuracy of GPS is still pertinent. Also to be considered is possible liability for system malfunctions producing navigation mishaps.

The radionavigation user base is growing by leaps and bounds ... and the number of different applications are so diverse ... that annual debate as to what systems should be shut down, what new system will replace what proven system, etc. cannot be tolerated by the U.S. taxpayer. Society as a whole is becoming so dependent upon the availability of precise radiolocation information that we believe there should be a redundancy of signals provided such that no natural or politically motivated interference or act can wipe out all signals. Following is a partial listing of the many air, sea and land users of radionavigation services.

Air navigation	Vessel traffic systems
Airport/separation access	Law enforcement
Aircraft surveillance	Fish/wildlife management
Search and rescue	Environmental protection
Emergency medical services	Forest spraying/surveying
Disaster/crisis management	Fire detection/suppression
Harbor/harbor entrance	Custom/immigration/drug control
Canal/lock access	Agricultural applications
River hazard marking	Highway safety/resource mgmt.
Health services	Public utilities
Census records	Surveying
Military applications	Meteorological measurements
Fisheries/fishing industry	Land vehicle (trucking, railroad, hazardous cargo, autos, etc.)
National security services	
Rural area locations	

Considering the lack of information on the issues itemized above and the growing and diverse user community whose needs have not been adequately addressed, it is difficult to understand how GPS could have been proposed in 1984 as the radionavigation system to replace virtually all others in the civil community.

The recent shuttle tragedy illustrates that inadequate planning had been given to long-term support of the GPS system. Will the U.S. support the shuttle for 20-40 years? If not, what is the backup? (At present, Block II GPS satellites cannot be launched by any means other than the shuttle.) Does GPS have shuttle launch priority? How quickly can even the 18 satellite configuration be corrected for satellite failures by spare satellite movement and replenishment?

## RECOMMENDATIONS RE: THE FRP

1. Set the schedule of issuance of the FRP to coincide with U.S. national policy decisions.
2. Establish a mechanism whereby public comment on a draft is feasible, so that each issue receives the benefit of the latest public opinion as well as DOD and DOT inputs.
3. Provide realistic cost data so that the public can properly evaluate the choices being presented.
4. Let market forces and operational suitability determine whether one system is sufficiently superior to another that one need no longer be supported. The Loran-A to Loran-C conversion is an example.
5. Even when a system's signals are available for public use under DOD funding (such as may be the case for GPS), a decision on civilian use should be delayed until commercial forces, using the available signals, can factually show advantages to the government, to the taxpayer and to the user. In particular, these advantages should be demonstrated before deciding that such a system will be allowed to supplant existing systems.

## SUMMARY OF KEY ISSUES

We concur that GPS has potential as a precision worldwide radionavigation system to satisfy U.S. national defense requirements and many civilian navigation requirements. However, we believe that the effect on national security is still pertinent, particularly if the system is widely used for civil purposes.

It is not clear that the GPS system, as configured, will satisfy all civil users; neither is it clear that redundancy, through a mix of independent radionavigation systems, will not be a more cost-effective approach than reliance upon a single GPS system.

United States civil users are concentrated in the continental U.S. and in the coastal confluence zone. The requirements of these users are now economically satisfied with the existing Loran-C radionavigation system. Whether the many Loran-C users can be persuaded to discard a very satisfactory system and spend more money for an equivalent GPS receiver remains to be seen.

The timetable for making final national decisions regarding civil use of GPS, Loran-C, VOR/DME and Omega in 1987 as announced in the FRP is very premature. These decisions cannot be taken until the procedures outlined in FRP Section 4.5, Selecting Radionavigation Systems to be Used in the Future, are fully followed. In particular, realistic final determinations of combined user/government cost and system and product reliability cannot be made until GPS is fully operational and until civil user equipment is available for use and evaluation.

Historically, FRP timetables have been overly optimistic and unrealistic. The planning process needs to be much more realistic to properly and effectively support the policy decision process.



## Exhibit 11

23886

Federal Register / Vol. 51, No. 126 / Tuesday, July 1, 1986 / Notices

**Availability of the Federal  
Radionavigation Plan**

**AGENCY:** Department of Transportation (DOT), Research and Special Programs Administration (RSPA).

**ACTION:** Availability for Comment.

**SUMMARY:** A previous notice on this subject published in the *Federal Register*, Vol. 50, No. 123, June 26, 1985, 50 FR 26426, required that all comments be received by June 30, 1986. This date has been changed to September 30, 1986 to accommodate comments by the aviation community.

**DATE:** Comments must be received by September 30, 1986.

**ADDRESS:** Comments for consideration by the DOT Navigation Working Group should be forwarded to Dockets Branch, Materials Transportation Bureau, U.S. Department of Transportation, 20590. Comments should be submitted in two copies. The Dockets Branch is located in Room 8426 of the Nassif Building, 400 Seventh Street, SW., Washington, DC 20590. Office hours are 8:30 a.m. to 5:00 p.m., Monday through Friday. Telephone (202) 426-3148.

**FOR FURTHER INFORMATION CONTACT:** David Scull, Office of Program Management and Administration, Office of Budget and Programs, Research and Special Programs Administration, Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590 (202) 426-9520.

**SUPPLEMENTARY INFORMATION:** A copy of the Federal Radionavigation Plan is available for inspection in the Dockets Branch.

Additionally, copies are available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161, and only from that source. The stock number and prices are as follows:

The Federal Radionavigation Plan—  
ADA 151295

Paper Copy, \$17.50

Microfiche, \$4.50

Issued in Washington, DC, on June 23, 1986.

**M. Cynthia Douglass,**

*Administrator.*

[FR Doc. 86-14769 Filed 6-30-86; 8:45 am]

BILLING CODE 4910-60-M

BOARD OF DIRECTORS

W. N. DEAN ..... President  
J. F. CULBERTSON . Vice President  
L. F. FEHLNER ..... Secretary  
D. A. CARTER ..... Treasurer  
J. ALEXANDER  
B. AMBROSENO  
C. S. ANDREN  
L. D. HIGGINBOTHAM  
J. D. ILLGEN  
V. L. JOHNSON  
A. W. MARCHAL  
E. L. McGANN  
W. L. POLHEMUS  
W. SCHORR  
J. P. VAN ETEN

Exhibit 12

July 1, 1986



**WILD GOOSE ASSOCIATION**

MEMORANDUM TO: SECRETARY, WILD GOOSE ASSOCIATION  
FROM: NOMINATING AND ELECTIONS COMMITTEE  
SUBJECT: RESULTS OF ELECTION, 1986

WGA ballots for President and Directors were counted at ITT Avionics Division, 500 Washington Avenue, Nutley, New Jersey on June 30, 1986 in accordance with Article IV, Section 5 of the by-laws. Results are as follows:

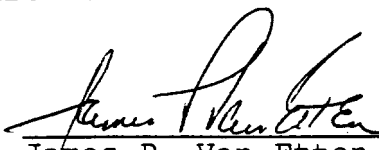
President:

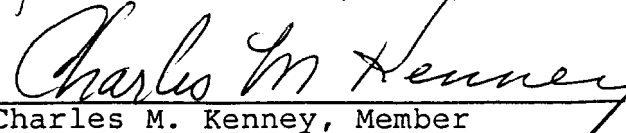
Walter N. Dean	112
John D. Illgen	82

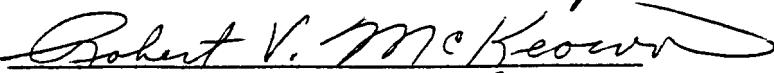
Director:

James F. Culbertson	105	James O. Alexander	85
John D. Illgen	94	James R. McCullough	62
Carl S. Andren	92	William F. O'Halloran	58
Jimmie L. Toms	91	W. Polhemus	2
David A. Carter	90	W. Dean	1
M.J. Moroney	89		

Ballots counted and certified by the following members of the Nominating and Elections Committee:

  
James P. Van Etten, Chairman

  
Charles M. Kenney, Member

  
Robert V. McKeown, Proxy for  
Edward L. McGann, Member

Enclosure: WGA Ballots, Proxy  
cc: Directors, Candidates, Nominating & Elections Committee

U.S. Department  
of Transportation

United States  
Coast Guard



Commandant  
United States Coast Guard

Washington, DC 20593  
Staff Symbol: G-NRN-1  
Phone: (202) 755-1515

Exhibit 13

16553

APR 24 1986

Mr. Walter N. Dean  
President, Wild Goose Association  
8060 Sacajawea Way  
Wilsonville, OR 97070

Dear Mr. Dean:

I share the concern you voiced in your February 14, 1986 letter for providing maximum system availability. Our goal has always been, and remains, to maximize availability at the least cost to the taxpayer.

Scheduled off-air maintenance is normally associated with antenna/coupler work which must be done in daylight. In other cases, contractors are involved and work must be performed during daylight hours to minimize costs. There are some risks associated with performing maintenance at night. For example, any unplanned additional support needed, whether technical advice or a simple piece of hardware, may be difficult to obtain at night, thereby extending the off-air time.

Under our current policy, Loran-C stations must request scheduled off-air periods. The Chain Manager then notifies users through various modes to solicit objections to the proposed off-air period. Any objections received are considered in the decision to grant or deny the off-air request.

My staff is working closely with the Federal Aviation Administration to improve our coordination in this area. This should result in improved service for Loran-C users with critical needs.

Sincerely,

A handwritten signature in dark ink, appearing to read "W. J. Brogdon, Jr.", written over a horizontal line.

W. J. BROGDON, Jr.  
Captain, U. S. Coast Guard  
Acting Chief, Office of Navigation  
By direction of the Commandant

U.S. Department  
of Transportation  
  
United States  
Coast Guard



Commandant  
United States Coast Guard

23  
Washington, DC 20593  
Staff Symbol: G-NRN  
Phone: (202) 755-1492

Exhibit 14

16552

**JUN 23 1986**

Mr. Walter Dean  
Wild Goose Association  
16100 S. W. 72nd Avenue  
P. O. Box 23939  
Portland, OR 97223

Dear Mr. Dean:

The United States Coast Guard plans to conduct a national survey of radionavigation users through a contract with the Department of Transportation's Transportation Systems Center. The designed intent of the survey is to obtain information on the federally-operated radionavigation systems being used, the benefits derived by the users, and the impact of system discontinuance on the users. The results of the survey will be one of the inputs used to formulate the Coast Guard's recommendation to the Department of Transportation on the future mix of radionavigation systems.

We are soliciting your input to determine the effectiveness of our questionnaire. We would like to know if you feel the questions we are asking are unbiased and will generate the information needed to accomplish our objectives. We also would like your comments on whether we have covered all the aspects of federally-operated radionavigation systems that are of interest to the public.

We request you evaluate the enclosed questionnaire and return it to the Transportation Systems Center in the enclosed postage-paid envelope, with your comments, by July 25. The Transportation Systems Center project officer is Dr. Alex Blumenstiel. He may be reached at (617) 494-2391 should you have any questions.

Sincerely,

A handwritten signature in dark ink, appearing to read "N. H. Keeler".

N. H. KEELER  
Captain, U. S. Coast Guard  
Chief, Radionavigation Division  
By direction of the Commandant

- Encl: (1) Draft letter with Radionavigation User Survey  
questionnaire  
(2) Self-addressed postage-paid envelope

## BOARD OF DIRECTORS

W. N. DEAN . . . . . President  
J. F. CULBERTSON . . Vice President  
L. F. FEHLNER . . . . . Secretary  
D. A. CARTER . . . . . Treasurer  
J. ALEXANDER  
B. AMBROSENO  
C. S. ANDREN  
L. D. HIGGINBOTHAM  
J. D. ILLGEN  
V. L. JOHNSON  
A. W. MARCHAL  
E. L. MCGANN  
W. L. POLHEMUS  
W. SCHORR  
J. P. VAN ETEN



# WILD GOOSE ASSOCIATION

16 April 1986

## MINUTES OF THE 72nd MEETING OF THE BOARD OF DIRECTORS

The 72nd meeting of the Board of Directors was held as scheduled Wednesday, 16 April 1986 in Conference Room 8440 Nassif Building, 400 Seventh Street, S.W., Washington, D.C.

### Attendees:

#### Directors

J. Alexander  
B. Ambroseno  
C. S. Andren  
D. A. Carter  
W. D. Dean  
L. F. Fehlner  
V. L. Johnson  
A. W. Marchal  
E. L. McGann  
W. Schorr  
J. P. VanEtten

#### Members

J. L. Toms

The number of Directors present satisfied the requirement for a quorum. The agenda is shown at Exhibit 1.

### Item 1 - Call to Order

The meeting was called to order at 0942 16 April 1986. There being no corrections to the minutes of the 70th and 71st meetings of the Board, both were accepted as written.

### Item 2 - Secretary's Report

a. Illgen called 15 April to report that the Proceedings are complete and will be mailed in late April. As soon as he receives billing for their printing, he will bill the Convention for cost of Proceedings to Convention attendees, and the WGA for the remainder. He will then do final accounting for the Convention and square accounts with the Treasurer.

b. On 1 April, labels for 1985 Proceedings were printed for all members in good standing i.e. 1985 or better.

Categories were	Organizations	17
	Overseas	57
	Canada	18
	U.S.	<u>433</u>
		525

On 1 April, dues notices were printed for all Regular Members still in arrears, not including those 3 years in arrears. All 3-year delinquents were purged. There were 167 U.S. and Canada and 22 Overseas. On 13 April, labels were printed for the first 1986 Convention mailing. This included all members 1984 or better and all emeritus members i.e. past Directors, Awardees, etc. who are no longer members and for whom we have deliverable addresses.

Categories were	Organization	18
	Overseas	59
	Canada	21
	U.S.	<u>459</u>
		557

c. The following items of correspondence were discussed:

(1) Boettcher's letter re ties and pins - In accordance with an offer made by J. H. Boettcher at the 1985 Convention, a letter was received from him which forwarded samples of ties with proposed WGA emblem designs, and the terms in Germany under which quantities can be procured for sale to members. It was generally agreed that the goal was attractive, but the costs involved in Boettcher's proposal were excessive. Marchal volunteered to explore the market for better design concepts and lower cost.

(2) Boettcher's letter re European convention - A letter was received from J. H. Boettcher (Exhibit 2) which proposes an ambitious, multi-nation loran convention to be held in Europe. It was noted that Boettcher continues to imply that his loran oriented activities are supported by the WGA. It was agreed that the WGA will not support the activity as proposed. It was also agreed that the WGA must take some strong action to cause Boettcher to cease and desist in the unauthorized use of letterheads and in the illegal use of the trademarked WGA logo. Legal action was suggested. Dean will draft a WGA letter to Boettcher for Board review. See also Agenda Item 4 below.

(3) WGA letter re WGA membership in China - During a meeting sponsored by Racal-Megapulse, Inc. with Wu Peigen, Zaho Shu Ge, and Wu Hua-jun of the Peoples Republic of China, and attended, among others, by E. L. McGann, L. F. Fehlner, C. S. Andren and D. C. Scull of the WGA, a request was made to provide Mr. Zaho with an explanation of

the ways in which individuals or organizations can become members of the WGA. The response to this request is shown at Exhibit 3.

(4) WGA letter re transmitter maintenance - Fehlner raised for discussion a WGA letter to Adm. Wojner shown at Exhibit 4 of the Minutes of the 71st Meeting of the Board of Directors. This letter suggests that users of loran would be better served if transmitter maintenance that causes off-air time was done at night. Fehlner suggested that from the user's safety standpoint, the availability of loran service at night is more critical than during daylight hours. After much discussion, it was agreed that time of day should not be a factor influencing the availability of loran signals. A suggestion was made that official WGA letters which are not purely administrative in nature should be coordinated more thoroughly with the Board.

### Item 3 - Treasurer's Report

Exhibit 4 is the Treasurer's report presented by Carter. This report stimulated much discussion regarding possible uses of available funds and regarding the WGA relationship to the IRS. No agreements were reached. Carter volunteered to check on the impact of IRS regulations on funds accumulated by non-profit organizations. Andren moved to accept the report. VanEtten seconded. Motion carried.

### Item 4 - Standing Committee Reports

#### a. Constitution and By-Laws

(1) Europe Chapter - Johnson reported that nothing had been heard from Boettcher regarding forming a chapter since 29 April 1985, the date of the WGA letter to him which forwarded Chapter forming information (Exhibit 5). Dean's letter of 24 March 86 was an effort to precipitate some response. (Exhibit 6). Dean will coordinate with the Board a letter to Boettcher warning him to cease and desist in the use of the WGA letterhead, logo etc. until authorized and to convey non-concurrence in his latest proposal, i.e. Exhibit 2.

(2) Action items from previous meetings - Johnson reported that recertification of the WGA trademark on the logo is proceeding on schedule.

Johnson pointed out that the WGA fiscal year is clearly defined. Resolution of the question regarding the definition of terms of office and the question regarding the term of office of a person who becomes a Director because of a vacancy occurring in an unexpired elected term were found to require more study. The first question is: Is the start of an elected or appointed term of office tied to a calendar day or is the term variable in length determined by the dates of successive inductions into office? The second question is: When a person is appointed as a Director to fill a vacancy, is the appointment for the entire remaining term, or is it for one year at a time? For resolving the second

question for the purpose of nominating Directors for the 1986 election, VanEtten moved that the candidate filling the unexpired term of a Director who is elected to be President shall fill the entire term. Marchal seconded. Motion carried.

b. Conventions

(1) 1984 - no report. McGann volunteered to acquire the supply of 1984 Proceedings believed to be held by Sartin.

(2) 1985 - See section 2 above for Illgen's report.

(3) 1986 - Marchal described plans for the convention. Planning appears to be well in hand. Convention will start Wednesday 22 Oct. at the Intercontinental Hotel. There will be an exhibit area. Speakers are yet to be identified. Marchal requested suggestions. The call for papers is shown at Exhibit 7.

(4) 1987 - Toms reported that preliminary planning is underway. A hotel is being sought convenient to METRO.

c. Journal - Dean declared there will be a 1985/86 Journal. Ambroseno agreed to chair the Journal Committee. Schorr and Fehlner agreed to be committee members.

d. Membership - Toms submitted a written report. See Exhibit 8.

e. Newsletter - No report. It was noted that the first 1986 newsletter had been mailed.

f. Nominations - VanEtten submitted a slate of candidates for the 1986 election. See Exhibit 9. VanEtten then explained that the FAA had made a decision that George Quinn's participation as a Director would present the appearance of conflict of interest. Quinn's name was therefore withdrawn. Carter moved to approve the slate with the deletion of George Quinn. Alexander seconded. Motion carried. VanEtten was then asked to find at least one more candidate to complete the slate for Directors from a list of names approved by the Board. The revised slate of nominees is shown at Exhibit 10.

g. Congressional - McGann quoted from the Federal document Major Policy Initiatives, FY 1987 as follows: "The Administration proposal will enable the FAA to: (among other things) Expand the nations Loran-C navigation system to provide a low-cost, coast-to-coast, independent navigation capability." This document is authorized by the Executive Office of the President, Office of Management and Budget. He also reported that loran is now firmly in place in the FAA Planning Document.



h. Awards - No report. It was noted that nominations were requested in the Newsletter. McGann proposed an award for Donald Engen.


i. Federal Radionavigation Plan - VanEtten presented a writted report of the Committee. See Exhibit 11. Alexander recommended that the WGA make written and oral presentations at the open meeting called to discuss the FRP on 22 May 86 at the Rosslyn Westpack Hotel. It was suggested that the Committee report be reorganized for a formal written submission without changing its principal thrust. An executive summary will also be presented orally. It was suggested that VanEtten should make the presentation.

Item 5 - New Business - none

Item 6 - Next Meeting Date - 23 July 1986 (tentative)

Item 7 - Adjournment - Marchal moved to adjourn 1344 16

April 1986.

  
Leo F. Fehlner  
Secretary

LFF:jp

Distribution:

President  
All Directors  
R. L. Frank  
R. H. Miller  
J. L. Toms