

Board of Directors

James F. Culbertson President
David C. Scull Vice President
Walter N. Dean Secretary
Carl S. Andren Treasurer
John D. Illgen Past President
John M. Beukers Exec. Administrator
James O. Alexander
David H. Amos
Kjell O. Enerstad
Bruce E. Hensel
Robert W. Lilley
Henry E. Marx
Edward L. McGann
Mark P. Morgenthaler
Maurice J. Moroney
William L. Polhemus
James P. Van Etten

Wild Goose Association



*The International Loran
Radionavigation Forum*

AGENDA

96th Meeting of the Board of Directors
April 16, 1991, NavCom Systems, Inc., Manassas, VA

Date: Tuesday, 16 April 1991

Time: 9:00 am

Place: NavCom Systems, Inc., 7203 Gateway Court, Manassas, VA

1. Call to Order Culbertson
2. Attendance, proxies and statement of quorum Dean
3. Adoption of Minutes of 93rd Board Meeting Beukers
Adoption of Minutes of 95th Board Meeting Dean
4. Secretary's Report Dean
5. Treasurer's Report Andren
6. Executive Committee Report Culbertson
7. Standing Committee Reports
Constitution & By-Laws VanEtten
Nominations & Elections VanEtten
Conventions:
1990 Alexander
1991 Jackson
1992 Beukers
8. Special Committee Reports
9. Old Business:
Mid-Continent Loran-C Dedication Beukers
WGA Computer System - update Beukers
By-Laws Changes VanEtten
10. New Business:
Lilley Initiatives Lilley
Loran-C Bashing Culbertson
11. Demonstration of new WGA Computer System Beukers
12. Next Meeting Schedule Dean
13. Adjourn

Walter N. Dean
8060 Sacajawea Way
Wilsonville, OR 97070

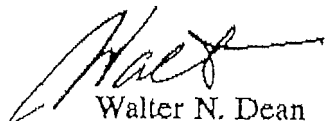
April 11, 1991

TO: James F. Culbertson, President

FROM: Walt Dean, Secretary

SUBJECT: Proxy

I will be unable to attend the WGA Borad of Directors meeting on April 16, 1991. I therefore assign to you my proxy for voting at that meeting.



Walter N. Dean

James F. Culbertson President
David C. Scull Vice President
Walter N. Dean Secretary
Carl S. Andren Treasurer
John D. Illgen Past President
John M. Beukers ..Exec. Administrator
James O. Alexander
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Minutes of the 96th Meeting of the Board of Directors April 16, 1991 - Manassas, Virginia

1. Call to Order.

The 96th meeting of the Board of Directors convened at NavCom Systems, Inc. in Manassas, Virginia. The meeting was brought to order by the President, Jim Culbertson, at 0905 hours.

The following board members were in attendance:

Jim Culbertson, President
Dave Scull, Vice President
Carl Andren, Treasurer
John Beukers, Acting Secretary/Executive Administrator
Henry Marx
Mike Moroney
Bruce Hensel
Mark Morgenthaler
Bob Lilley
Dave Amos
Jim VanEtten

Also in attendance were:

Elijah "Zeke" Jackson
Dave Olsen - IOA Liaison

A written proxy was received from the following:

Walt Dean, appointee Jim Culbertson

Before starting with business, Mr. Elijah "Zeke" Jackson, President of NAVCOM Systems, Inc. welcomed us to his facilities and discussed certain administrative matters. He suggested that WGA take a look at the voice-mail system at NAVCOM for possible application in conducting WGA business. (This has been completed - declined as system not adapted to casual caller).

2. Quorum.

The acting Secretary reported that the attendance by the Board Members and their proxy constituted a quorum in accordance with Article II, Section 2 of the By-Laws as well as a 2/3 majority for purposes of amending the By-Laws in accordance with Article VIII, Section 1.

3. Board Meeting Minutes.

Minutes of the 93rd Board meeting - acceptance moved by Beukers and seconded by Andren - approved.

Minutes of the 95th Board meeting - acceptance moved by Andren and seconded by Marx - approved.

4. Secretary's Report.

The Secretary's report outlined the results of the recent balloting by the Board (by mail) for the changes to Article VII, Membership Fees and Dues, of the By-Laws. Over two-thirds of the Directors voted to change the dues schedule as specified. Acceptance moved by Morgenthaler and seconded by Scull - approved.

5. Treasurer's Report.

The Treasurer's Report consisted of a set of computer print-outs which included a WGA Balance Sheet, Income and Expense Statement, and the General Journal. There was no sign of the convention balance for the 1990 Convention but the funds (estimated at about \$13,000) are reported by Jim Alexander to be available for transfer - Andren to follow up. The Board agreed that these were useful reports and should form the basis for future Treasurer's Reports. Also, a copy of the WGA 1989 Federal Income Tax Return was submitted for Fiscal Year ending September 30, 1990. Acceptance moved by Marx and seconded by Morgenthaler - approved.

At this point there was a break in the agenda to allow Dave Olsen to give a report on the FRP and forthcoming User Conferences on the East and West Coasts (announcement included with minutes). Discussed the need for a mid-continent user's conference particularly in view of the soon to be dedicated mid-continent Loran-C chains. Motion made by Moroney and seconded by Marx for WGA to recommend a Mid-Continent User's Conference as well as the two others scheduled - approved. (Note: Subject letter subsequently sent to DOT/RSPA).

Dave Olsen further reported that the next convention of the IOA would be in Vancouver 4-9 August 1991 and in Europe in 1992!

Additional information passed....CDR Gunther to replace CDR Wentzel this summer.....Mid-Continent Dedication invitation to go out April 12, 1991 - discusses potential attendees from top levels of USCG, FAA and DOT....Both NOCUS and SOCUS Loran-C chains to be up and operational by the dedication on May 14, 1991....GPSSelective Availability back on at zero amplitude.

Discussed letter from Captain Weseman (USCG-HQ G-NRN) regarding proposed closing of Central Pacific Loran-C chain and asking for comments. Board agreed that WGA should respond. Question is who to research and prepare letter. Marx will send copy to national magazines for publication/comments. Copy should go to

all Loran industries for comment. Will send to Admiral Manning and Bill Roland in Hawaii for their input. Scull and Culbertson will work on response to Coast Guard and solicit comments from the Board for inclusion in this letter.

6. Executive Committee Report.

This report covered a wide range of WGA business matters which had been deferred from previous Board meetings. Proposed Board action was recommended for each item.

Discusses item 5.b., WGA Awards Document. One of the Board members recommended we look at the ION Awards document (send copy to Culbertson). Agreed that Bob Frank probably has best handle on previous awards and should assemble the material. It was suggested that perhaps one of the Loran businesses would be interested in assisting with printing and publication of the final document.

Discussed item 5.c., Products and Applications Bulletin. Need to change address for ordering - Lilley to make sure put into Goose Gazette.

Most other recommended actions taken care of at this Board meeting. Acceptance moved by Lilley, seconded by Amos - approved.

7. Standing Committee Reports.

a. Constitution and By-Laws. All changes consolidated in report. Although it is thought that all reported By-Laws changes have been approved at various previous Board meetings, the Board reaffirmed approval of all changes in the report. The previously approved Constitutional Amendment (structure of Executive Committee) will be included with the ballots to be mailed after the April Board meeting. Acceptance moved by Andren, seconded by Mark - approved.

b. Nominations and Elections. Slate for President and Directors presented by VanEtten. Acceptance moved by Beukers and seconded by Morgenthaler - approved.

c. Conventions.

1990. No Report. Treasurer requested to have funds from the 1990 Convention put into treasury.

1991. Scull provided update on 20th Convention to be held in Williamsburg, Virginia, 1-3 October 1991.

1992. Verbal report by Beukers. Venue Europe. Looking for better accommodations than provided by University. Illgen and Dave Last are co-chairmen of technical sessions.

1993. Board was requested to be prepared to discuss possible sites for 1993 Convention. Mr. Denisov, Vice Chairman of the Soviet Interradiation Committee has suggested that Moscow be considered for 1992 or 1993. It is too late to consider Moscow for 1992 and most of the Board believe it would be difficult to hold two European conferences back-to-back by going to Moscow in 1993. This will be discussed further at next Board meeting.

d. Amos reported activities of the new Loran Technology and Applications Committee. He requested

more input from the membership. Committee report for January Board meeting may not have been circulated...copy included with these minutes. Acceptance moved by Marx and seconded by Andren - approved.

e. Lilley reported Goose Gazette activities. Acceptance moved by VanEtten, Seconded by Marx - approved.

8. Special Committee Reports.

a. Illgen reports verbally through Culbertson that he is on top of the FAN issues and is working with others to insure that Loran-C gets proper attention. He plans to attend the FANS meeting in April.

Illgen pointed out that the OCEANS Conference In Hawaii this year falls on the same days as the WGA Symposium - he had missed this when he agreed to be technical chairman for that conference.

b. Marx reported Loran Marine User committee activities and made some excellent suggestions for bringing more users into the WGA fold. Acceptance moved by Andren and seconded by Amos - approved.

c. Morgenthauer reported loran businesses activities now focused on the Mid-Continent Dedication and Forum. Discusses industry support - candidate contributors identified. Report approved.

9. Old Business.

Mid-Continent Dedication and Forum. Lilley and Beukers gave their reading of the current status with caution regarding finances and estimated attendance. WGA responsibilities coming into focus, many changes in policy. FAA program running slow. Question adequate publicity to attract large numbers of users. Acceptance moved by Marx, seconded by Andren - approved.

WGA computer system update. Beukers provided hand-outs on the system costs and layout and gave hands on type demonstration of hardware and software brought down and set up the day before at NAVCOM. Transition is physically complete with training and execution of tasks required to be undertaken by NAVCOM personnel. Beukers requested approval of additional \$1500 so WGA can purchase own software. Acceptance moved by Culbertson, seconded by Marx - approved.

10. New Business.

Briefly discussed a series of initiatives that Bob Lilley had suggested in a previous report. Most of these were taken up by the Executive Committee (see report).

Discussed subject of "Loran-C Bashing" as term reflecting the continuing efforts by over zealous GPS sales people telling prospective customers that Loran-C is dead and going off the air shortly (therefore buy GPS). Discussed the feasibility of some cooperative effort between Ohio University and the VNTSC in preparing a factual white paper about Loran-C that will help counter this negative advertising about Loran-C. Lilley and Moroney to discuss.

A sample copy of a new GPS Information Center hand prepared by the Coast Guard was shown.

Demonstration of the new WGA computer system was conducted by John and Marilyn Beukers.

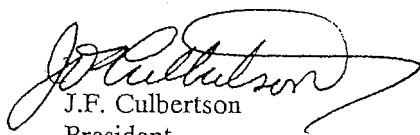
11. Next Board Meeting.

The next Board meeting is schedule for July 18, 1991. This meeting will be held in the Washington, DC vicinity or at NAVCOM Systems, Inc. Dave Scull will chair the meeting.

12. Adjournment

The Board meeting adjourned at 1448 hours.

Respectfully Submitted,



J.F. Culbertson
President

At 96th Bd mtg.

Jim, here are my notes. Sorry for the delay. I'm afraid they are rather scant, I must have had my mind on the transfer of the WGA administration function to NAVCOM. I believe that you have a complete set of the papers and since I cannot find the attendance list and have to assume that you have this also.

(Missed my Secretary !!) 

Notes from the 96th Board Meeting held at NAVCOM on April 16th, 1991.

1. Call to Order - 9.05
2. Proxies: Dave Scull for Walt Dean - have a quorum (and with Van Etten a 2/3rds majority of the Board for passing By-Law changes). Attendance list passed around and received back (you have?)
3. Minutes of the 93rd meeting acceptance moved by Beukers and seconded by Andren - accepted
Minutes of the 95th meeting acceptance moved by Andren and seconded by Marx - accepted.
4. Secretary's report. acceptance moved by Morgenthaler and seconded by Scull
5. Treasurer's report. Given by Andren, no sign of convention balance but is promised by Alexander. Report acceptance moved by Marx and seconded by Morgenthaler. Approved.

At this point there was a break in the agenda to allow Dave Olsen to give a report on the FRP. Discussion re User Conferences, WGA action to write letter recommending a mid continent User Conference. This was made into a motion by Moroney, seconded by Marx and approved.

IOA next Convention in Vancouver and 1992 Europe.

Gunther to replace Wentzel

Mid Continent invitations to go out April 12. Discussion re who will attend from the top of DOT, FAA and USCG.

Question of Loran-C bashing raised. USCG doing something about this by contacting editors of magazines requesting that checks are made re manufacturer's claims.

Closing of Hawaii stations, impact? Who to notify? Discussion re WGA role and possible actions.

Report on status of NOCUS and SOCUS. All will be up and operational by date of Dedication, May 14, 1991.

- 6 Executive Committee Report. Presented by Culbertson as a complete package with recommendations for passage without undue discussion. Move for acceptance by Lilley and seconded by Amos. Approved.

7. Standing Committee reports.

a. Constitution and By-Laws. Changes consolidated and Presented by Van Etten. Move for acceptance Andren second Marx.

b. Nominations and Elections. Slate for President and Directors presented by Van Etten for approval by the Board. Motion to approve made by Beukers and seconded by Morgenthaler.

c. Conventions:

1990 No report

1991 Scull provided update on the 20th Convention to be held in Williamsburg. Report accepted, motion by Andren seconded by Van Etten

1992 Venue Europe. Verbal report given by Beukers. Looking for better accommodation than that provided by University.

8 Special Committee reports.

a. Culbertson stated that FANS in hands of Illgen

b. Marine User report by Marx accepted by a motion by Andren seconded by Amos.

c. Loran Business, report by Morgenthaler to be included. Discussion re industry supporting Mid-Continent. Amos to ask Uttam for approval. Trimble and Foster will probably contribute.

9 Old Business

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WGA Computer System Update. Beukers to give hands on type demo of hardware and software brought down and set up day before at NAVCOM. Transition is physically complete - training and execution of tasks required to be undertaken by NAVCOM personnel. Requested approval for additional \$1500 to purchase software so that WGA has own copies. (Jim I know that this was passed but I don't have a mover or seconder)

By-Law changes already covered

10. New Business.

Jim, I don't have anything on the Lilley initiatives

Loran-C Bashing. Board positive in adopting a position and developing an informative paper. (I have an incoherent note that Lilley and Moroney are to do something with this)

Next mtg 18th July

WILD GOOSE ASSOCIATION

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 - Lilley Initiatives Lilley
 - Loran-C Bashing Culbertson
11. Demonstration of new WGA Computer System Beukers
12. Next Meeting Schedule Dean
12. Adjourn

✓ LORAN TECHNOLOGIES MARINE USERS
FAX LIAISON
✓ LORAN BUSINESS
✓ NEWSLETTER

Nominations and Elects - (cont)

MOVE BEVILERS AND MORROWNEY - SLATE FOR PRES/ & DIRECTORS

(C) 1990 Reports - none -

- 1991 Sull. - Summary report to be generated. ^{MOVE} ANDREN / ^{2ND} VAN KITTEN

1992 - ~~DE~~ LAST - Written report required. ^{MOVE} Lilly / ^{2ND} Marx. APPROVE

- Loran Technologies. - AMOS. MOVE MARK AND LILLEY APPROV.

NEWSLETTER

(Committee members)
overseas. -

⑧ SPECIAL COMMITTEE REPORT FANS JOHN ILLGEN

LORAN BUSINESS.

MARINE USER

MARX, ANDREN AMOS.

2nd RELEASE
CONVENTION

DEFER

⑨ Old Business

MID-CONTINENT BOB LILLEY - MARX - ANDREN

REGISTRATION DESK MATERIALS: -
WGA ACTION ITEMS.

DATE

*

LIST/QT 7.

LORAN BUSINESS COMMITTEE. - INCLUDE REPORT.

- 14th QUOTE FOR COPPER. - BOB LILLEY.

SYNETICS / TRIMBLE SPONSORS.

- LORAN - C BASTING - PAPER. - BOARD POSITIVE - LILLEY - MORONEY.

NEXT BD 18th JULY - \$1500

(COPY. CAPABILITY)

WILD GOOSE ASSOCIATION

DATE: April 10, 1991

TO: J. F. Culbertson, President

FROM: Walt Dean, Secretary

SUBJECT: Secretary's Report

The only notable accomplishment since the last Board of Directors meeting was the collection of ballots for the change in the By-Laws. The Secretary is pleased to report that 12 of the 17 Directors returned ballots approving the change, which is 70.6% of the Board, exceeding, slightly, the two-thirds required. By-Laws Article VII, "Membership Fees and Dues", is amended as follows:

Section 1a. Add:

(5) Overseas Corporate Class 1	\$ 435.00
(6) Overseas Corporate Class 2	\$ 220.00

Section 1b. Add:

(5) Overseas Corporate Class 1	\$ 400.00
(6) Overseas Corporate Class 2	\$ 200.00

Wild Goose Association
BALANCE SHEET Apr 15, 1991

ASSETS

CURRENT ASSETS

Operating Account	18,251.02	
Money Market	0.00	
Convention Temp Funds	0.00	
Bank C - Payroll	0.00	
Cash: Total		18,251.02
Accounts Receivable		0.00
Advances Receivable		0.00
Inventory		0.00
Office Equipment		1,478.70
TOTAL CURRENT ASSETS		19,729.72

TOTAL ASSETS

19,729.72

=====

LIABILITIES

CURRENT LIABILITIES

Accounts Payable	0.00
FIT Payable	0.00
SIT Payable	0.00
FICA Payable	0.00
FUTA Payable	0.00
SUTA Payable	0.00
SDI Payable	0.00
Local Tax Payable	0.00
Deduction A Payable	0.00
Deduction B Payable	0.00
Deduction C Payable	0.00
Sales Tax Payable	0.00
TOTAL CURRENT LIABILITIES	0.00

TOTAL LIABILITIES

0.00

EQUITY

EARNINGS

Retained Earnings	26,153.44
Current Earnings	6,423.72
TOTAL EARNINGS	19,729.72

TOTAL EQUITY

19,729.72

LIABILITIES AND EQUITY

19,729.72

=====

NOTE:

THIS IS ONLY
2 PAGES OF
PRINT OUTS
SUBMITTED AS
TREASURER'S
REPORT —

COPIES OF ENTIRE
SET AVAIL. FROM
ANDREW —

Wild Goose Association
INCOME Oct 1, 1990 TO Apr 15, 1991

REVENUE

REVENUE

Dues Renewal	8,333.00
Dues - New Members	2,380.00
Papers	30.00
Bibliographies	32.50
Proceedings	2,084.52
Video Sales	390.50
Convention 1989	0.00
Convention 1990	500.00
Convention 1991	0.00
Business Cards	0.00
Journal Sales	90.00
Newsletter Ads	212.50
Donations	0.00
Interest Earned	0.00
TOTAL REVENUE	<u>14,053.02</u>

TOTAL REVENUE

14,053.02

EXPENSE

ADMINISTRATION

Contract Services	0.00
President Expenses	381.75
V P Expenses	0.00
Secretary Expenses	6,637.91
Treasurer Expenses	0.00
Newsletter Expenses	1,655.72
Congressional Expense	0.00
Election Expense	0.00
Membership Expenses	0.00
Awards Expenses	336.88
I A L A Liaison	0.00
Convention Expense	0.00
Journal Expenses	0.00
Proceedings Expense	1,950.00
Freight Expense	0.00
Wages	0.00
FICA Expense	0.00
FUTA Expense	0.00
SUTA Expense	0.00
SDI Expense	0.00
Equipment Expenses	7,000.00
Proceedings Expenses	99.00
Convention Exp 1989	0.00
Convention Exp 1990	394.40
Convention Exp 1991	2,000.00
Misc	0.00
Postage/Delivery	14.00
Office Supplies	0.00
License/Permits	0.00
Accounting Expense	0.00
Bank Service Charges	7.08
Video Supplies	0.00
Document Expense	0.00
TOTAL ADMINISTRATION	<u>20,476.74</u>

TOTAL EXPENSE

20,476.74

INCOME

6,423.72-

=====

Return of Organization Exempt From Income Tax

Under section 501(c)-(except black lung benefit trust or private foundation)
of the Internal Revenue Code or section 4947(a)(1) trust

(See separate instructions.)

1989

Note: You may be required to use a copy of this return to satisfy state reporting requirements. See instruction E.

For the calendar year 1989, or fiscal year beginning October 1, 1989, and ending September 30, 1990

Use IRS label. Otherwise, please print or type.	Name of organization Wild Goose Association, Inc.	A Employer identification number (see instruction S) 04-2639055
	Address (number and street) or P.O. box number P. O. Box 556	B State registration number (see instruction E)
	City or town, state, and ZIP code Bedford, Massachusetts 01730	C If application for exemption is pending, check here <input type="checkbox"/>

D Check OR

F Is this: *THE FIRST PAGE*
If "Yes" Is this: *OF FEDERAL*

H Check received: *TAX RETURN*

Note: F 501(c)

Part

INTEREST IN SEEDS ENTIRE RETURN, CONTACT ANYONE

tion ☒ 501(c) (6) (insert number), section C7 and question 92.)

r affiliates? ☐ Yes ☒ No
n this return is filed ☐ Yes ☒ No

E Accounting method: ☒ Cash ☐ Accrual
☐ Other (specify) ☐

G If either answer in F is "Yes," enter four-digit group exemption number (GEN) ☐

ly not more than \$25,000 (see instruction B11). You do not have to file a completed return with IRS; but if you did file a return without financial data (see instruction A). Some states require a completed return.

with gross receipts less than \$100,000 and total assets less than \$250,000 at end of year.

trusts must also complete and attach Schedule A (Form 990). (See instructions.)

Revenues and Changes in Net Assets or Fund Balances

similar amounts received:

1a	20,000
1b	
1c	

attach schedule—see instructions)

Part VII, line 93)

Revenue

1 membership dues and assessments

4 Interest on savings and temporary cash investments

5 Dividends and interest from securities

6a Gross rents

b Less: rental expenses

c Net rental income (loss)

7 Other investment income (describe ☐)

8a Gross amount from sale of assets other than inventory

b Less: cost or other basis and sales expenses

c Gain (loss) (attach schedule)

9 Special fundraising events and activities (attach schedule—see instructions):

a Gross revenue (not including \$ of contributions reported on line 1a)

b Less: direct expenses

c Net income (line 9a less line 9b)

10a Gross sales less returns and allowances

b Less: cost of goods sold

c Gross profit (loss) (attach schedule)

11 Other revenue (from Part VII, line 103)

12 Total revenue (add lines 1d, 2, 3, 4, 5, 6c, 7, 8d, 9c, 10c, and 11)

Expenses

13 Program services (from line 44, column (B)) (see instructions)

14 Management and general (from line 44, column (C)) (see instructions)

15 Fundraising (from line 44, column (D)) (see instructions)

16 Payments to affiliates (attach schedule—see instructions)

17 Total expenses (add lines 16 and 44, column (A))

Net Assets

18 Excess (deficit) for the year (subtract line 17 from line 12)

19 Net assets or fund balances at beginning of year (from line 74, column (A))

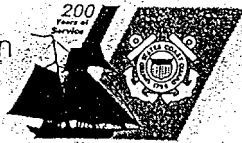
20 Other changes in net assets or fund balances (attach explanation)

21 Net assets or fund balances at end of year (add lines 18, 19, and 20)

1d	20,000	
2	54,482	
3	13,221	
4	407	
5		
6a		
6b		
6c		
7		
8a		
8b		
8c		
8d		
9a		
9b		
9c		
10a		
10b		
10c		
11		
12	88,110	
13	70,148	
14		
15		
16		
17	70,148	
18	17,962	
19	8,485	
20		
21	26,447	

U.S. Department
of Transportation

United States
Coast Guard



Commandant
United States Coast Guard

Washington, D.C. 20593-0001
Staff Symbol: G-NRN
Phone: (202) 267-0283

16560
Ser: 91/10161

MAR 20 1991

Captain J. F. Culbertson, USCG (Ret)
President
Wild Goose Association, Inc.
P. O. Box 556
Bedford, MA 01730


Dear Captain Culbertson:

We have done a lot of groundwork in assessing the continued need for the Central Pacific Loran-C chain. The Coast Guard operates this chain in response to a Department of Defense (DOD) requirement that expires not later than December 31, 1994. The feasibility of closing the chain at the end of calendar year 1992 is very real. This issue has high level interest within the Coast Guard because of the substantial savings that may be realized by early closure.

We have already started to assess the various user communities, i.e., DOD, civil maritime and civil aviation. I have requested DOD to reassess their needs for the Central Pacific chain through 1994. Our District Office in Honolulu is canvassing the civil maritime users in Hawaii. I have also asked the Federal Aviation Administration Program Manager to assess the needs of the FAA and civil aviation community. I will be soliciting comments via a Federal Register Article. Congressional interests will also be made aware of this issue.

I would like to solicit your comments, as the major Loran-C civil organization, to assist in our decision making process. Your comments will be a valued input. I might suggest that the issue be discussed at the upcoming 96th Meeting of your Board of Directors on April 16.

Your earliest response will be greatly appreciated. Should you have any questions on this matter, please contact me at (202) 267-0283, or CDR Armstrong at (202) 267-0990.


J. F. WESEMAN
Captain, U.S. Coast Guard
Chief, Radionavigation Division
By direction

AIR, MARINE, AND LAND RADIONAVIGATION SYSTEMS USERS

1990 FEDERAL RADIONAVIGATION PLAN

1991 CONFERENCES

* * * * * *PRELIMINARY ANNOUNCEMENT* * * * * *

The U.S. Department of Transportation is conducting open meetings for all users of U.S. Government-provided radionavigation systems. The purpose of the meetings is to obtain user perspectives on Federal policies and future plans for these services. Federal radionavigation policies and plans are outlined in the 1990 DOD/DOT Federal Radionavigation Plan, single copies of which are available from the Volpe National Transportation Systems Center. Users are encouraged to attend the meetings to provide inputs for the 1992 plan.

LORAN-C	VOR/DME
OMEGA	MLS/ILS
TRANSIT	GPS
RADIOBEACONS	

SPONSORS:

Research and Special Programs Administration
Federal Aviation Administration
U.S. Coast Guard

DATES/LOCATIONS:

November 19-20, 1991: Embassy Suites Hotel, Alexandria, Virginia
December 5, 1991: Sheraton Hotel and Towers, Seattle, Washington

INFORMATION:

Federal Radionavigation Plan:

Elisabeth J. Carpenter
Volpe National Transportation Systems Center (VNTSC)
Center for Navigation (DTS-52)
55 Kendall Square
Cambridge, MA 02142-1093
(617)-494-2126

Conferences:

VNTSC
Conference Office (DTS-930)
Attn: Radionavigation Users Conference
55 Kendall Square
Cambridge, MA 02142-1093
(617)-494-2307

Board of Directors

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James P. Van Etten

Wild Goose Association



*The International Loran
Radionavigation Forum*

Executive Committee Report April 16, 1991

Due to the limited time we had to conduct business at the January 1991 Board meeting in Phoenix, most committee reports were simply accepted for consideration and not approved. The Executive Committee was directed to review the committee reports, prepare recommendations for action and report these in summary form to the Board for the April meeting. Copies of these Committee Reports have been furnished to the Board. The Executive Committee met by mail and FAX during the month of March 1991.

The following are comments and suggested Board action on the committee reports received shortly before or at the January 1991 Board meeting:

1. Executive Administrator's Report (Beukers). An information report with no particular Board action except for Item 8, Telephone Contacts. John Beukers has in fact established a WGA phone contact capability which did not previously exist and which probably cannot be imported as is to NavCom. Dave Scull has been asked to consider NavCom's capability to provide a WGA telephone response capability, perhaps through unique telephone technology, and recommend how we could proceed to fulfill this urgent need. Board action - **Approve.**
2. 1992 WGA Convention Report (Beukers). No comment. Board action - **Approve.**
3. Journal Report (Beukers). No comment. Board action - **Approve.**
4. Mid-Continent Celebration Report (Beukers). There has been a lot of activity during March with a Planning Meeting being held in Fort Worth, TX on the 28th. Dale Johnson is WGA representative. Dedication itself is being planned as strict FAA/Coast Guard affair. Industry dynamic displays and static exhibits will proceed independent of dedication planning. Otherwise, no comment. Board action - **Approve.**

5. Suggested Agenda Items for Board meeting (Lilley). Lilley has several good suggestions:

a. User Benefits;

RTCA. Walt Dean reports that cost for WGA to join RTCA is \$600 minimum. To make this worthwhile, we should have qualified member in Washington, D.C. who can attend meetings and participate without incurring large travel expenses. Committee does not believe it is in our best interest to have membership in RTCA at this time and suggests we continue with having an appointed representative (currently Dean). Recommended Board action, WGA should not join RTCA.

RTCM. Membership in this organization also is not cheap and Committee is not sure what RTCM and WGA could do for each other. RTCM seem to be more involved with radio communications matters. Certain practices of RTCM, such as publishing article in their newsletter on IALA, RTCA and other organizations activities, is encouraged for the WGA Goose Gazette. WGA members who belong to RTCM and other radio-technical organizations should send copies of the newsletters they receive to both the Goose Gazette Editor and to the WGA Secretary or Administrator. Recommended Board action, WGA should not join RTCM.

IALA. WGA is a member of IALA and the Secretary should be receiving reports and other transactions. These need to be reviewed and pertinent information distributed to the Board and to the Editor of the Goose Gazette. Recommended Board action, continue IALA membership and have Secretary distribute information as recommended.

b. WGA Awards Document;

Committee thinks this is a good idea but problem is to get it done and to budget the costs into our operating budget. Bob Frank (our current Awards Chairman) certainly has the background material but probably not the capability or the resources to produce the document. We recommend to the Board that the Awards Chairman assemble the information and have NavCom provide estimate of costs to produce document.

c. Product and Application Bulletin.

John Beukers already has this prepared and Committee sees no problem publishing the information in the Gazette. NavCom be handling all WGA products and publications in the future and the Committee recommends that these be restricted to publications and maybe pins and decals. T-shirts, hats and the like should be sold only at the Conventions.

6. Newsletter Committee (Lilley). Based upon information available to the Committee, it is uncertain how much of the mid-continent registration fee will be available to WGA for its own use. Distribution of the Special Issue would provide good visibility for WGA particularly with respect to encouraging Forum attendees to join WGA. If Board concurs with this action, special allocation of funds should be considered. Board sees no problems with the committee membership as all the contributors to Gazette can be considered to be members of the committee. No other Board action indicated.

7. Treasurer's Report (Andren). Accepted by January Board - Recommended Board action - Approve.

Note: Andren's report was accompanied by a letter from CPA firm, discussing their estimated fee of \$500 to do our tax work. The Executive Committee questions the cost considering the small size of our operation and the funds involved. A cost of more like \$200 would seem reasonable for doing this work for an organization the size of WGA. Recommended Board action - have Treasurer determine what another firm might charge for the services before contracting with Linton, Shafer & Company.

8. Executive Committee Report (Culbertson). Action already has been taken as specified in the report. Board action - Approve.

9. Secretary's Report. Board action - Approve.

10. Minutes of 93rd Board Meeting. Board action - Approve.

11. Loran-C Policy Group (Enerstad). Board action - Approve.

12. WGA User Liaison Report and Letter of 1/4/91 (Hensel). Committee believes this Special Committee is off to a good start. Recommended Board action - Approve.

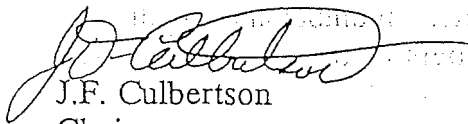
13. IOA Liaison Committee and RSPA Report (Olsen). Recommended Board action - Approve.

14. Nomination and Elections Committee (VanEtten). Board action - Approve.

15. Constitution and By-Laws Committee (VanEtten). Board action - Approve.

16 Loran-C Technologies and Applications Committee (Amos). Board action - Approve.

Respectfully Submitted,



J.F. Culbertson

Chairman

Board of Directors

James F. Culbertson President
David C. Scull Vice President
Walter N. Dean Secretary
Carl S. Andren Treasurer
John D. Illgen Past President
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James P. Van Etten

Wild Goose Association



*The International Loran
Radionavigation Forum*

Please address response to:

James P. Van Etten
230 Rutgers Place
Nutley, NJ 07110

April 8, 1991

To: Secretary, Wild Goose Association

From: *Jim* Jim Van Etten

Subject: Status Report, Constitution and Bylaws Committee

The Constitution amendments approved by the Board of Directors will be presented to the membership by official ballot, along with the ballot for 1991 election of Directors. The Constitution ballot will be presented to the Board of Directors for approval at the April Board meeting.

Attached is a summary of the Bylaws changes ratified by the Board since last Bylaws publication.

Enclosure

cc: Jim Culbertson, President
Committee members

WILD GOOSE ASSOCIATION
APPROVED CHANGES TO BYLAWS

8 April, 1991

ARTICLE II Board of Directors and Executive Committee

Section 3. Executive Committee Meetings. --- add sentence at end reading:
A written report of actions taken shall be provided to the
Secretary for distribution to the Board of Directors.

(approved at 94th Board meeting)

ARTICLE III Standing Committees

Section 1. Authorized Committees. --- add to the listing of committees in
its proper alphabetical order the following:

Loran Technology and Applications Committee

(approved at 94th Board meeting)

ARTICLE VII Membership Fees and Dues

Section 1. Fees and Dues. --- revise as follows:

a. (2) Associate --- change \$50.00 to \$105.00

add: (5) Overseas Corporate Class 1 \$435.00

add: (6) Overseas Corporate Class 2 \$220.00

b. (2) Associate --- change \$42.00 to \$100.00

add: (5) Overseas Corporate Class 1 \$400.00

add: (6) Overseas Corporate Class 2 \$200.00

e. Change to read: An annual fee of \$10.00 shall be assessed against
each regular and associate member located overseas
to defray the incremental cost of international mail
service.

add:

g. An initiation fee paid after the eighth month of the calendar year
shall also cover dues for the next calendar year.

(approved at 94th, and by mail
ballot subsequent to 95th)

WILD GOOSE ASSOCIATION
APPROVED CHANGES TO BYLAWS

ARTICLE XI Awards, Section 1.

Paper Award: change heading to read --- Best Paper Award

Following the Best Paper Award section, add a new award as follows:

Student Paper Award:

To be awarded to a student(s) for the best paper published on any aspect of loran.

(approved at 94th Board meeting)

ARTICLE XVI Finances

Section. Fiscal Year. --- revise to read as follows:

The fiscal year of the Association shall start on the first (1) of October.

(approved at 91st Board meeting)

Add: ARTICLE XIX Loran Technology and Applications Committee

Section 1. Chairman. The chairman shall be a member of the Association.
Section 2. Membership. The chairman shall appoint not less than two (2) nor more than six (6) members of the Association to serve on the Committee.

Section 3. Duties. The Loran Technology and Applications Committee shall be responsible for providing technical oversight of loran technology and applications. The Committee shall take cognizance of loran technical issues and report them to the Board for action and direction. The work of this Committee should be directed toward preserving the integrity of loran, identifying future improvements, and facilitating the passing of loran experience and technical knowledge to the next generation.

(approved at 94th Board meeting)

Board of Directors

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Maurice J. Moroney
William L. Polhemus
James P. Van Etten

Wild Goose Association

Please address response to:

James P. Van Etten
230 Rutgers Place
Nutley, NJ 07110



*The International Loran
Radionavigation Forum*

April 8, 1991

To: Secretary, Wild Goose Association

From: *Jim* Jim Van Etten

Subject: Status Report, Nominations and Election Committee

The committee has developed a slate for President and for Directors; presentation to the President for Board of Director's action is planned at the April Board meeting.

After revision or approval by the Board, the ballot mailing will be initiated; mailing is targeted to be complete by 15 May; ballots will be tallied shortly after June 30th.

cc: ✓ Jim Culbertson, President
Committee members

WGA ELECTION BALLOT -- 1991

FOR PRESIDENT: Vote for one.

- () David H. Amos
() Robert W. Lilley
() _____

FOR DIRECTOR: Vote for four.

- | | |
|--------------------|----------------------|
| () David H. Amos | () Bruce E. Hensel |
| () Frank Cassidy | () Henry E. Marx |
| () Laura Charron | () Robert H. Miller |
| () Walter N. Dean | () David C. Scull |
| () _____ | () _____ |
| () _____ | () _____ |

RETURN BALLOT IN ENCLOSED ENVELOPE TO ARRIVE BEFORE
JUNE 30, 1991 TO:

James P. Van Etten
WILD GOOSE ASSOCIATION
230 Rutgers Place
Nutley, N.J. 07110

CERTIFICATION:

I certify that the WGA Board of Directors approved the above
slate of candidates at the meeting of the Board held in
Mannassas, VA on April 16, 1991.

James F. Culbertson
President



Wild Goose Association

April 17, 1991

From the 1991 Convention Chairman

REPORT

1991 CONVENTION - WILLIAMSBURG, VIRGINIA

The Call for Papers went out in early March and so far only two abstracts have been received. Session Chairmen have been asked to begin aggressive efforts to line up potential authors by May 1st. In response to suggestions made by the Directors, we will solicit papers that may give insight to the use of Loran-C in the Gulf War. We are also looking for a student paper. As usual, we expect significant international participation, particularly from the Soviets.

Zeke Jackson, Convention Chairman has written to James Busey, FAA Administrator and has asked him to be our banquet speaker. BOAT/US has been contacted to provide one of the luncheon speakers. We will be looking for potential speakers from the Coast Guard and the land or marine community.

The registration fee has not been determined as of yet, but consideration will be given to a lower advanced registration fee. Approximately \$1500 has been spent so far on the preparation of the Call for Papers, consultant fees, mail service and postage.

The Convention Committee will visit Williamsburg in June, during the ION Annual Meeting to check out the Fort Macgruder Inn and tourist facilities. Any suggestions on how to make this convention a successful and memorable one will be appreciated.

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James P. Van Etten



*The International Loran
Radionavigation Forum*

Wild Goose Association

REPORT

LORAN TECHNOLOGY AND APPLICATIONS COMMITTEE

11 April 1991

Activity by the Loran Technology and Applications Committee over the past three months involved submissions of issues by Bob Lilley and Leo Fehlner. This leads me to believe that we need to advertise the committee's existence to encourage wider participation. My first suggestion is to include an article in the "Goose Gazette" to the effect that the committee's mailbox is open for business and please start filling it.

ACTION ITEM: Dave Amos prepare an article on the Loran Technology and Applications Committee charter, along with a "call for issues", for the next issue of the Goose Gazette

Bob Lilley and N. Kent Brookes prepared a white paper for Dick Arnold (FAA) entitled "Requirements and Methods for Loran-C Pulse Quality Measurement". A copy of the paper is in the committee's hands. Resolution of this issue is currently being addressed by the FAA, so no further WGA action is required other than tracking the progress.

ACTION ITEM: Dave Amos track and report progress on Loran-C pulse quality measurement activity by the FAA.

Leo Fehlner has submitted copies of correspondence he generated in the 1985-88 time frame addressing several issues:

- Observations of out-of-tolerance conditions in the SEUS chain
- UTC control of all loran transmitting stations
- Pulse frequency modulation
- Charting and coordinate conversion standards
- Pulse shape standards.

None of these are small issues, and several are related. These require some review by committee members to determine current status and related activity.

ACTION ITEM: Dave Amos select appropriate committee members to review these issues and prepare white papers for presentation to the WGA Board of Directors

Wild Goose Association, Inc.
P.O. Box 556, Bedford, MA 01730, USA



The International Loran
Radionavigation Forum

Wild Goose Association

REPORT

LORAN TECHNOLOGIES AND APPLICATIONS COMMITTEE

January 25, 1991

The Loran-C Technology and Applications Committee has been constituted. The current membership is as follows:

Dave Amos	-	Chairman
Vincent Vencivenga	-	FAA Program Office for Loran and MLS
LCDR Doug Taggart	-	USCG
Laura Charon	-	USNO
Bob Lilley	-	Ohio University
Nick Ward	-	Trinity House, U.K.
Jimmie Toms	-	Loran-C business
Leo Fehlner	-	Professor emeritus
Bill Polhemus	-	navigation concepts

I expect the committee membership to be augmented periodically because of the way I want to do business. As issues surface, I will be asking one of the current committee members, or another WGA member who has particular expertise and interest, to research the issue enough to prepare a white paper. The white paper will be distributed to the standing committee, and maybe to some other WGA member for comment. I will then have the white paper put in final form for submission to the Board of Directors. I intend to present a paper at the 1991 Technical Symposium which briefly addresses all outstanding technical issues carried by the committee. This should possibly be an annual presentation.

Bob Lilley has prepared the first white paper for the committee's consideration, "Requirements and Methods for Loran-C Pulse Quality Measurements." I have inputs on several issues from Leo Fehlner which need to be transposed into white paper format.

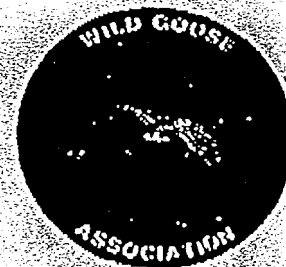
Respectfully submitted,

David H. Amos

Board of Directors

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 Walter N. Dean Secretary
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 Mark P. Morgenthau
 Maurice J. Moroney
 William L. Polhemus
 James P. Van Eiten

Wild Goose Association



The International Loran
 Radionavigation Forum

Mr. Walter N. Dean
 Secretary, WGA
 8060 Sacajawea Way
 Wilsonville, OR 97070

To: WGA Secretary, xc. J. Baukars

From: Robert W. Lilley, Chairman, Newsletter Committee

Date: March 16, 1991

Subj: Committee Report for 96th BOD meeting,
 Massachussetts, VA, April 16, 1991

1. Winter Issue, Goose Gazette

This issue goes to the printer on March 19, 1991. Note that our main advertiser (EDI) has renewed, and we have received a classified ad, which appears in this issue.

2. Special Issue for Loran-C Midcontinent Dedication and User Forum

We printed a special Fall, 1990 issue to provide wide distribution of the FAA Loran-C Implementation Plan. It has been our plan to include a copy of this issue in the materials distributed to attendees at the Dedication and Forum.

The FAA Program Office informed me that there will be no update to the plan between now and May 15, so we can go with a reprint. EDI asked for an advertisement in this issue, and FAA had no problems with the ad, so we will redo the last page to include the EDI ad, and reprint the rest of the special issue.

Costs for this printing should be recovered out of registration fees. By the time of the Board Meeting, I will have a cost quotation from the printer.



LANDFALL
NAVIGATION

203/661-3176

354 West Putnam Avenue
Greenwich, Conn. 06830

To: Mr. John Beukers

From: Capt. Henry E. Marx

15 March 1991

Subject: W.G.A. Directors Report

Your Marine Users' Director has been relatively inactive on W.G.A. matters - being tied up with the Winter Boat Shows.

However, I do have a matter for the Board to consider and more specifically the Convention Managers and Membership Chairman:

Inspite of Jim Alexander's best efforts, we attracted 1 User to the Long Beach Symposium last fall! If my Session and Mr. Longman's Sessions at the upcoming Conference are to be meaningful, we are going to need some Users in the audience. Also, I believe that the future growth and possible survival of the Organization is dependant upon attracting more Users of the Loran C System to the W.G.A.

Therefore, what can we do to attract Users to this year's Technical Symposium? Can anyone reach those poeple who count at the A.O.P.A., U. S. Coast Guard Auxiliary, and the U. S. Power Squadron? Can we get some publicity - preferably free, but if necessary, can we pay for some advertisements - in Soundings, Ocean Navigator, The Ensign, The A.O.P.A. Magazine? What about the Maritime (State) Acadamies, Organizations like Flight Safety in Florida, The Boats U.S. Safety Foundation, and some of the Flight Related Colleges? Is there an Organization of Civilian Flight Instructors?

Maybe a combination of the Membership and Convention Chairmen will want to coordinate an effort to attract new members using the Williamsburg Symposium as bait?

Regards,

Capt. Henry E. Marx

April 11, 1991

TO Secretary, Wild Goose Association
FROM: Mark Morgenthaler
SUBJECT: Status Report, Loran Business Special Committee

An information packet for the Mid-continent Loran Dedication has been sent to the following Loran manufacturers; most of whom are expected to attend because of previous conversations and correspondence.

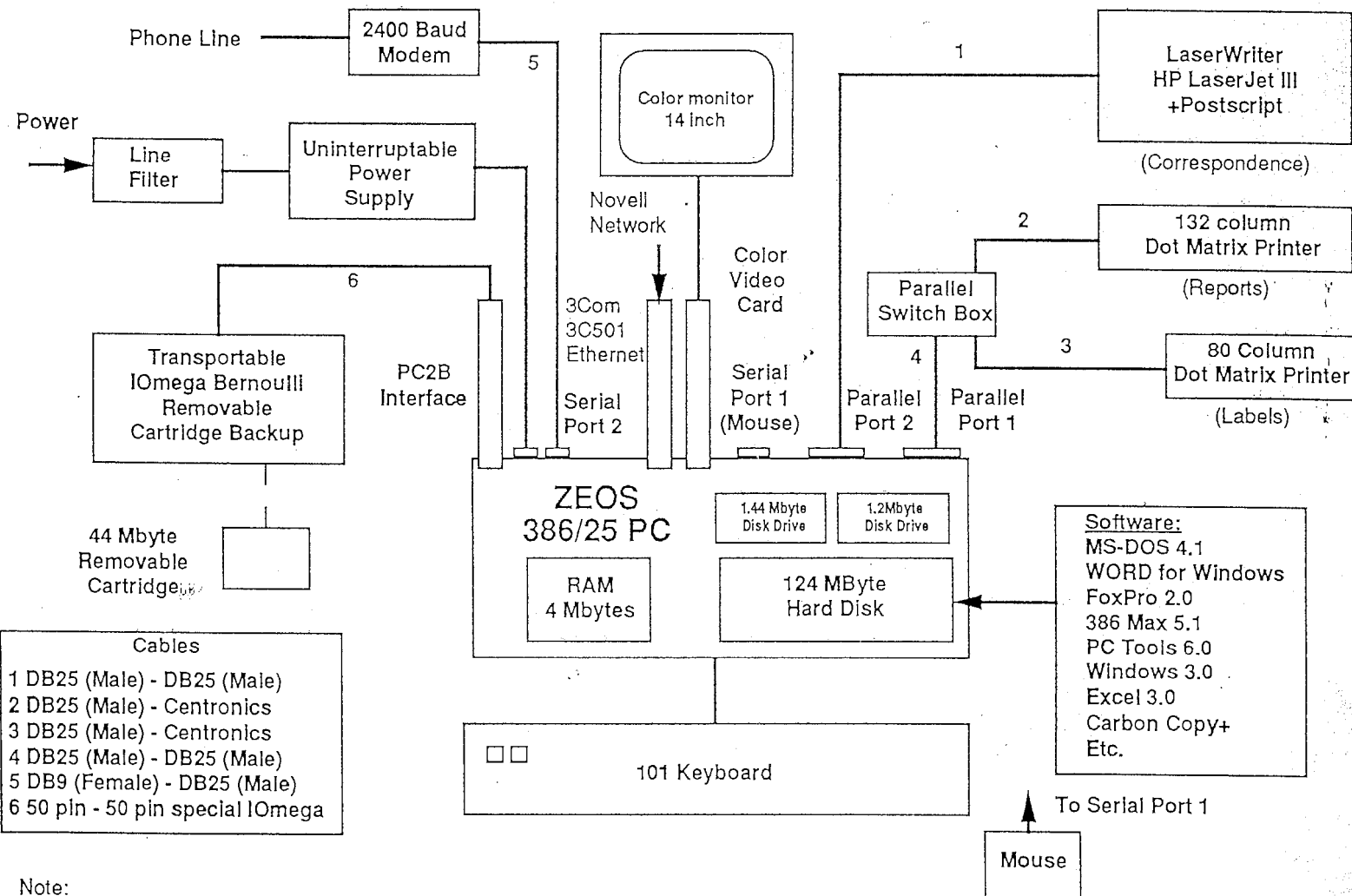
Dave Amos	Synetics Corporation
Alan Botsford	Northstar Avionics
Cheryl Chenauesky	El Paso Aero
Cal Culver	Micrologic
Duane Finstad	Global-Wulfsburg
Ed Fraughton	Terrastar
Doug Henkel	Bendix-King, Inc.
Bruce Hensel	Jet Electronics
Dale Johnson	II Morrow, Inc.
Robert Lilley	Ohio University
Ed McGann	Megapulse
Jeanne Meade	Eventide
Pat Millard	Narco
Dave Scull	Navcom Systems, Inc.
Anna Serna	Flight Digital
Larry Simpson	Ross Engineering
Mike Smyser	Foster
Kenneth Southard	Modern Technologies Corp.
Frank Williams	ARNAV Systems, Inc.

The packet includes the following:

- Invitation and information letter
- Exhibit registration form
- Exhibit hall floor plan
- Hotel reservation form

The information letter is summarized as follows:

- * Display days are May 14th, 12:00 - 5:00 p.m. and May 15th, 9:00 a.m. - 5:00 p.m.
- * Displays will be set up in the evening on May 13th.
- * Tear-down of displays will be in the evening of May 15th.
- * Six (10' x 10') booths will be situated in the Acacia and Poplar rooms.
- * Ten additional booths will be situated around the lobby area.
- * Final assignments of exhibit space will be posted at the registration desk on May 13th.
- * The fee for each booth space will be \$25.00.
- * Bill Polhemus will be contacted for live demonstration capabilities.
- * Hotel reservation requests will be submitted to Michelle Ingram.
- * Sponsorship of coffee and tea for the dedication ceremony was solicited.

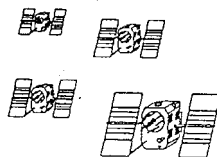


WGA Computer System Hardware & Software

Hardware		Options	Lowest Cost	Vendor	Custom Computer	Cust Comp & Others
Computer System consisting of	386/25 Computer		3192	Zeos 386/25		3192
	1.44 Mbyte Drive					
	1.2 Mbyte Drive					
	124 Mbyte Hard Disk					
	4 Mbytes RAM					
	Color Video Card					
	VGA Color Monitor					
	Extra Parallel Port		29			29
	101 Keyboard					
	Mouse					
	Additional \$ Mbytes RAM	400				
	Freight		40			40
	Total Computer		3261			3261
HP Laserjet III Printer with Toner			1589	PC Connection	1675	1675
Postscript Cartridge				Need to find		
Parallel Cable			13	PC Connection	25	25
132 Column Dot Matrix Printer, Epson FX1050			399			399
Freight on printer			15			15
Parallel to Centronics Cable			25	From Beukers Technologies		0
80 Column Dot Matrix Printer, Epson FX 850			0	Use old WGA printer		0
Parallel to Centronics Cable			25	From Beukers Technologies		0
Parallel Switch Box			75	From Beukers Technologies		0
IOmega 44 Mbyte Backup, Transportable single drive			997	PC Connection	1100	1100
Removable Cartridges, package of 3			249	PC Connection	300	249
PC2B Controller			225	Custom Computer	225	225
Uninterruptable Power Supply			249	From Beukers Technologies		0
Line Filter			65	From Beukers Technologies		0
1200 Baud Modem			225	From Beukers Technologies		0
Total Hardware Cost			6858			6949
Software						
MS-DOS 4.1 (Operating System)			0	Included with computer		
WORD 5.0 (Word Processor)			245			
FoxPro 1.02 (Database)			459			
386Max 5.1 (Memory Manager)			75			
Desqview 2.3 (386 Memory Manager)			125			
Windows 3.0 (Graphical Interface)			0	Included with computer		
Carbon Copy+ (Communications)			129	From Beukers Technologies		
Excel, 3.0 (Spread Sheet)			329			
Diskettes			0	From Beukers Technologies		
Total Software Cost			1362			
Total System Cost			8220			

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of Transportation
**United States
Coast Guard**



PRECISE WORLDWIDE POSITION, VELOCITY, AND TIME

The U.S. Department of Defense (DoD) is currently in the process of introducing a new, high-technology radio navigation system, Navstar Global Positioning System (GPS). Although not yet fully operational, the system is providing several hours of highly accurate data daily. When fully operational GPS will enable land, sea, and airborne users to determine their three-dimensional position, velocity, and time anywhere in the world with unprecedented accuracy. Satellite-based, GPS is the most precise radio navigation system available today or in the foreseeable future.

GPS consists of three segments: space, control, and user. The space segment will ultimately contain 21 operational satellites about 10,900 nautical miles above the earth. The satellites complete an orbit cycle every 12 hours and provide direct line-of-sight radio frequency signals to users worldwide. A ground control network tracks the satellites, determines orbits precisely, and transmits orbit definition data to each satellite. Navigation and position fixing using GPS is accomplished by passive trilateration. Users measure range to and compute the position of four satellites and process the measurements to determine three-dimensional position and time.

Although GPS was originally designed to enhance the warfighting capability of U.S. and allied military forces, the unprecedented accuracies already available from the system have given rise to a wide variety of civil GPS applications. As the GPS reaches full maturity, applications are anticipated to continue to emerge, and worldwide civil land, sea, and airborne users are expected to outnumber military users by a sizable margin.

CIVIL GPS INFORMATION CENTER

In order to accommodate the needs of the large worldwide civil GPS user

community, the U.S. Government has established a GPS Information Center (GPSIC). Operated and maintained by the United States Coast Guard for the Department of Transportation, the primary functions of the GPSIC are to provide information to and serve as the point of contact for civil GPS users.

INFORMATION AVAILABLE

Information available from the GPSIC includes the Operational Advisory Broadcast which contains the following general categories of GPS performance data:

- Current constellation status (satellite health data)
- Future status (planned outages of satellites)
- Almanac data (suitable for making GPS coverage and satellite visibility predictions)

INFORMATION MEDIA

GPS Operational Advisory Broadcast information is available from the GPSIC in the following forms:

- Computer bulletin boards
- Voice tape recording
- Voice broadcasts
- Facsimile broadcast

All GPSIC services are provided free charge. Registration for the GPSIC bulletin board is done online at the first session.

COMMS PARAMETERS

- Asynchronous - 8 Data Bits
- 1 Start Bit, 1 Stop Bit
- No Parity
- Full Duplex
- XOn / XOff
- Both Bell and CCITT Protocols

The GPSIC computer bulletin board may be accessed by dialing (703) 866-3890 for modem speeds of 300 - 2400 bps or (703) 866 - 3894 for modem speeds up to 9600 bps.

The telephone number for the voice tape recording is (703) 866 - 3826.

INFORMATION REQUESTS

In addition to the prerecorded Operational Advisory Broadcast information available, the GPSIC is prepared to respond to individual user inquiries, comments, or concerns regarding civil access to and use of the GPS. The GPSIC will accept calls of this nature from civil users Monday through Friday from 8:00 a.m. to 4:00 p.m. Eastern Time. The number is (703) 866 - 3806.

Written comments, questions, or concerns on the GPS or operation of the GPSIC may be addressed to:

Commanding Officer
U.S. Coast Guard, ONSCEN
7323 Telegraph Road
Alexandria, Va 22310-3998

OTHER INFORMATION SOURCES

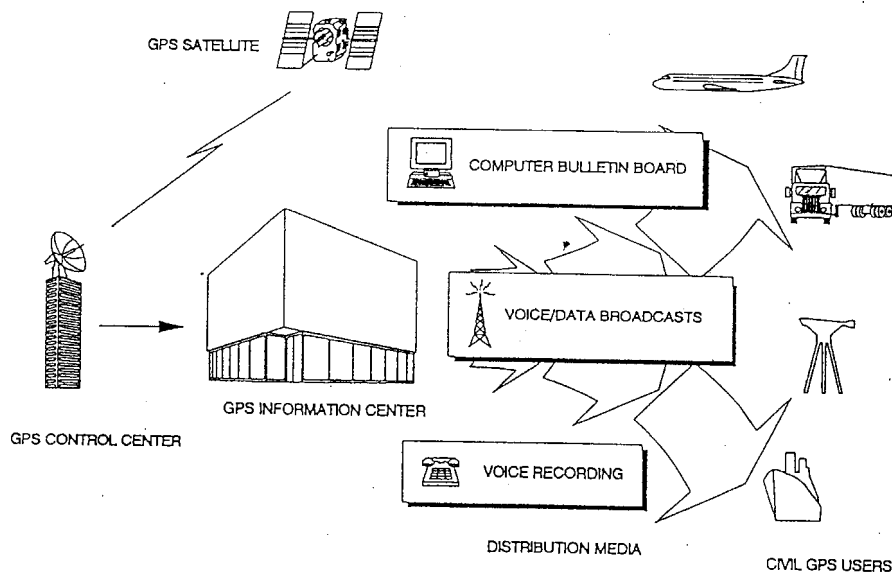
GPS status information may also be obtained from the following sources:

- WWV/WWVH HF radio broadcasts
WWV minutes 14 & 15; WWVH minutes 43 & 44
- (5, 10, 15, 20 MHz)
- Defense Mapping Agency (DMA) weekly Notices to Mariners
- DMA broadcast warnings (NAVAREA, HYDROLANT, and HYDROPAC)
- DMA NavInfoNet, ANMS
- (301) 227 - 3351 (300 Baud)
- (301) 227 - 5925 (1200 Baud)
- (301) 227 - 4360 (2400 Baud)

- USCG Broadcast Notices to Mariners
- NAVTEX Data Broadcast - (518 KHz)

Users must register offline before accessing the DMA NavInfoNet. A user ID and information booklet is available by writing the DMA Hydrographic/Topographic Center (ATTN: MCN/NAV-INFONET) Washington, DC 20315-0030 or calling (301) 227 - 3296.

CIVIL GPS USER ACCESS TO GPS INFORMATION CENTER



GPS INFORMATION CENTER USERS' MANUAL

Detailed information on the GPSIC services and how the services may be obtained is available in a GPS Information Center Users' Manual. The Users' Manual may be obtained by calling (703) 866 - 3806 or writing the Information Center.

NOTE

Satellite visibility window predictions are not offered by the GPSIC. This information is available from commercial sources or from commercially available software.

CIVIL GPS SERVICE STEERING COMMITTEE

In addition to the services provided by the GPSIC, the U.S. Government has established a Civil GPS Service Steering Committee (CGSSC). The purpose of the CGSSC is to address issues and problems that relate to the civil use of the GPS and to provide a forum for discussions between civil GPS users and the DoD.

The CGSSC consists of an Executive Council, General Committee, and five Subcommittees:

- Precise Positioning and Surveying
- Timing
- Reference Station
- International
- Carrier Phase Tracking

The CGSSC is jointly chaired by the U.S. Department of Transportation and the U.S. Coast Guard. Points of contact are:

U.S. Department of Transportation
Research and Special Programs
Administration
400 7th Street, S.W., Room 9402
Washington, DC 20590-0001
Phone: (202) 366 - 4355
Fax: (202) 366 - 3272

Commandant (G-NRN)
U.S. Coast Guard
2100 Second Street, S.W.
Washington, DC 20593-0001
Phone: (202) 267 - 0283
Fax: (202) 267 - 4427

The CGSSC meets about every three months, and the General Committee meetings are open to all interested parties.