APPENDIX V

End - to - End Data Management

Planning a Cruise

SHIP ROUTE	Enter and plot the planned LLT positions

Make the cruise

SEAS	Use GPS for actual LLT positions Encode a SHIP report of weather obs Digitize an XBT cast in BATHY code Transmit the reports to shore GOES, INMARSAT A and C
SEASPLOT	Plot the observations

Generate real-time products

NMC, FNMOC, ECMWF, etc.

Send products back to observers

NODDS	Download and display products 80 users receive 50,000 product by modem. On all NOAA RVs and RV Alpha Helix.

Standard Oceanographic Software

IODE software for oceanographic laboratories

BILKO	Display and analyze satellite images
OCEAN-PC	Enter. process, and display oceanographic data

IGOSS software for ships of opportunity

SHIPROUTE	FNMOC Ship Routing Program
SEAS	NOS Shipboard Environmental data Acquisition system
NODDS	Navy/NOAA Oceanographic Data Distribution System

INTERNATIONAL OCEAN DATA EXCHANGE PROGRAMS

IGOSS	Integrated Global Ocean Service System	BATHY, TESAC, BUFR, etc.
IODE	International Ocean Date Exchange	ROSCOP, CSR, GF-3, ICES, ad infinitum

IGOSS and IODE will merge and adopt common formats:

BUFR	Binary Universal Format for Observations
GRIB	GRIdded Binary for gridded fields

GLOBAL ENVIRONMENTAL OBSERVATION PROGRAMS

WWW	World Wide Web
GCOS	Global Climate Observing System
GOOS	Global Ocean Observing System
GTOS	Global Terrestrial Observing System

- Objective: Monitoring the global environment in real-time to support interdisiplinary studies and simulations.
- The four programs must adopt common data management so that data can be shared globally between programs in real-time.
- GOOS will integrate data from research vessels, ships of opportunity, satellites, and buoys in real-time to generate products for millions of users.

United States VOS/Met Summary

	1991	1992	1993	1994	1995 est.
No. of Ships	131	130	148	160	155
No. of Obs.	60.6K	66.3K	79.7K	78.1 K	70.3 K
No. Obs/Ship/Yr.	463	510	538	488	454

United States VOS/XBT Summary

	1990	1991	1992	1993	1994	1995 est.
No. of Ships	79	80	76	71	78	70
No. of Routes	27	26	29	28	24	24
No. of XBT's	10.9K	19.3K	15.6K	15.0K	16.3K	15.0K
% R-T Global	34%	58%	42%	44%	41%	?

UPPER TABLE SUMMARIZES THE PRODUCTION OF THE SEAS VOS PROGRAM SINCE 1991 REGARDING THE NUMBER OF SEA SURFACE METEOROLOGICAL OBSERVATIONS TRANSMITTED IN REAL TIME.

LOWER TABLE SUMMARIZES THE PRODUCTION OF THE SEAS VOS PROGRAM SINCE 1990 REGARDING THE NUMBER OF SUB SURFACE XBT OBSERVATIONS TRANSMITTED IN REAL TIME AND THE NUMBER OF ROUTES SUPPORTED.

This appendix includes a NOAA chart of the Gulf Stream North Wall. This chart is available from the UNOLS Office.