SeaNet Status Report - September 2000

Since 1998 SeaNet has supported relatively high speed Internet service for five UNOLS vessels (Atlantis, Ewing, Melville, Pelican, and Seward Johnson). A sixth ship, the Knorr, has recently been added to SeaNet (at WHOI's expense). The SeaNet system is used by scientific projects that need Internet access to/from research vessels. A table of usage during 1999 and 2000, by ship, is found at the end of this article.

Present examples of SeaNet use have included both ship-shore and ship-ship scientific collaboration between scientists, education and public outreach support via mirrored ship to shore websites, electronic mail support, satellite imagery delivery, delivery of video and other large files to/from ships/shore and provision of full Internet access for computers on shipboard LANs to/from shore.

Some operators have made SeaNet a normal part of their daily operations. Others offer it as a special service for scientists requiring it. SeaNet staff members have worked closely with some individual scientists and science liasions in planning the use of SeaNet in support of science.

The SeaNet project recently received an NSF award to cover operations expenses through August 2001. Goals for the coming year include adding at least three more vessels into the SeaNet network, improving and increasing communications with both the scientific users and the ship operators about what SeaNet is and how it can be used, providing an alternative email delivery system for those operators interested in using it, and helping UNOLS/NSF to determine the best direction for providing Internet access for research vessels beyond August 2001.

Plans for meeting these goals include identifying new operators interested in joining SeaNet and installing SeaNet systems on their vessels, publishing a short and regular newsletter about how SeaNet is being used in the community including tips for operators, providing an upgrade to the existing SeaNet software which includes a SeaNet-oriented email package for use by operators (if they wish) as an alternative in providing shipboard email, and providing a shore side website that can be used by operators to monitor SeaNet usage by their vessels.

There will be some changes for this next year of SeaNet service. In an effort to keep costs lower, three organizations (Omnet, Inc, the Naval Postgraduate School, and Joint Oceanographic Institutions) that were part of our original NOPP grant are no longer formally included as part of the SeaNet effort. WHOI and LDEO will continue providing Seanet development/operations support. Ellen Kappel, who once worked for JOI, continues to participate via Geo-Prose. There has been a subsequent shifts in responsibilities.

One change is that Omnet no longer bills for SeaNet services. Instead, operators are billed directly for INMARSAT costs by providers such as COMSAT and STATION-12. SeaNet's website has been enhanced to provide operators with a password-protected account that they can use to access real-time estimates of their SeaNet usage and tools to help bill back scientists for their use of SeaNet.

Another change will be a shift in some of the responsibilities and costs related to SeaNet installations and ongoing support. Under the original NOPP funding almost all installation, maintenance, and shore side support costs were covered by the SeaNet project.

Under the new funding arrangement interested operators are asked to pay for SeaNet-compatible SATCOM equipment and installation, SeaNet installation-related travel expenses, and any shipboard logistics support for SeaNet equipment installation. They are also asked to provide shipboard technical support during ongoing shipboard operations.

For its part, SeaNet will continue to provides participating SeaNet users with a knowledgeable staff running a shore side operations and support center from 8-5 (EDT) at WHOI with backup support and installation and hardware maintenance support by LDEO. Science liason, some project coordination

activities, and web-support services are provided by GeoProse.

SeaNet will also pay for the installation of equipment (notebook PC and router) and software (for the next three vessels), integration with the SATCOM system, system testing and a training session in an agreed upon port.

The SeaNet staff is available to work together with operator science liasons to support scientists to take advantage of SeaNet capabilities on their ships.

Our hopes are that in the long term a more traditional Internet Service Provider (ISP) (or perhaps INMARSAT service provider) might be found to meet specialized support and accounting needs of the oceanographic research fleet at a reasonable cost. In the meantime, the SeaNet project continues to offer these services and keep an eye on emerging wireless network technologies and services that can be used by our ships.

1999 SeaNet BHSD Usage Summary per Ship

SCN	Entries	Int	Batch	Elapsed	Bytes
ATL-SCN	223	7	216	08:38:16	81.4MB
EWI-SCN	202	43	159	17:25:03	125.4MB
MEL-SCN	20	4	16	00:34:40	6.0MB
PEL-SCN	202	34	168	07:54:44	61.6MB
SEW-SCN	326	9	317	07:13:48	22.2MB
Total: 973 Transmissions, 97 Interactive, 876 Batch, 296.6MB					

2000 YTD as of 05/30/2000 SeaNet BHSD Usage Summary per Ship

SCN	Entries	Int	Batch	Elapsed	Bytes
ATL-SCN	396	24	372	21:22:48	227.7MB
EWI-SCN	108	31	77	05:39:00	30.5MB
MEL-SCN	129	2	127	15:13:21	140.3MB
PEL-SCN	167	77	90	07:46:10	48.6MB
SEW-SCN	823	1	822	22:56:20	50.0MB
KNR-SCN	53	9	44	00:58:14	3.9MB
Total: 1676 Transmissions, 144 Interactive, 1532 Batch, 501.0MB					

Note: Bytes listed in the above tables are the actual compressed data bytes transferred over the Inmarsat BHSD communication link. The number of bytes of user-level data transferred (uncompressed) would be considerably higher.

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Andrew Maffei Ph: 508-289-2764

Woods Hole Oceanographic Institution Fax: 508-457-2174

Mail Stop #46, Woods Hole, MA. 02543 Email: amaffei@whoi.edu