

SeaNet was conceived in 1990 by Andy Maffei of WHOI and Bob Heinmiller also of ~WHOI and later OMNET. The SeaNet concept is essentially the implementation of Internet at sea and has operated experimentally on the Joides Resolution and the R/N THOMPSON for the past 18 months. Although, by this time, most of the UNOLS vessels are offering E-mail and some are able to offer access to the net on a real time basis, the major limitations at the present time are cost and the lack of a common implementation. The cost issue remains unsolved because the funding agencies have chosen not to fund e-mail services for the science parties through the ship support grants and scientists have resisted having these services charged to them directly. Costs vary widely, those ships requiring an INMARSAT Std A connection pay in the neighborhood of \$6.50 per minute of 4,800 Baud connect time. Cellular connect and services such as Sky-Cell are cheaper but suffer from limited geographic availability. A proposal authored by Ellen Kappel, Andy Maffei, et al has been funded by the Navy through NOPP which addresses the implementation problem. In the words of the proposal abstract "[to develop] the common underlying infrastructure necessary to integrate the Oceanographic Research ships and [to] implement some production units optimized for intermittent Internet connection [at sea]". The proposal was funded for approximately \$1.5M. A contract has been negotiated with the Omnet organization to coordinate the operational aspects of the system during the experimental period. To this end OMNET will operate a SeaNet operations center and undertake the billing for services provided. During the experimental period no actual charges will be assessed to users, however, billings will be made on a memo basis in order to inform the user community of what charges they would have been responsible for in an unsubsidized situation. According to Susan Kubany of OMNET, the system will use an extensive caching scheme to minimize time actually on the circuit. The stated goal is to improve shipboard e-mail service and provide some subset of Internet service at sea. The present implementation will use INMARSAT Std ~B data service which is less expensive and much faster than INMARSAT Std A. Andy Maffei of WHOI will be responsible for development of the shipboard communications node, Rex Budenberg of Naval Postgraduate School, Monterey is in charge of Technology planning and shipboard implementation, Dale Chayes, LDEO is responsible for Procurement and installation of the Inmarsat B hardware The shoreside connection to the internet and communication firewall will be provided by MCI while the satellite connection will be the responsibility of COMSAT corporation. The hardware is under development and will be provided by Magnaphon.

Ellen also voiced her intention of an advisory panel with representatives from UNOLS, NavOceano, ONR, NSF and NOAA to deal with these issues.

---

## *Appendix XVIII*

### UNOLS COUNCIL NOMINATING INSTRUCTIONS

#### UNOLS COUNCIL MEMBERSHIP CHANGES:

Terms Expiring:

Member	Position	Term Length	Status
Dennis Hayes	Operator Representative	3-years	Ineligible for Re-election
Robert Knox	At-large Representative	3-years	Eligible for Re-election
Cindy Lee	Non-Operator Representative	3-years	Eligible for Re-election

#### NOMINATING COMMITTEE:

The UNOLS Chair will appoint and announce the Nominating Committee. The committee will consist of three members, two from operator institutions and one from an institution other than an operator.

#### NOMINATING COMMITTEE DUTIES:

The Nominating Committee will issue a call for nominations enumerating the positions to be filled and summarizing the qualifications required for each position. Nominations for the slate may be submitted by anyone affiliated with a UNOLS institution, in writing, to the UNOLS Office or the Nominating Committee. In forming the slate, the Nominating Committee shall give due consideration to the qualifications required for each position as well as for maintaining appropriate balance among institutions from different regions having different facilities. Individuals should be chosen to achieve a balance among scientific user disciplines. Nominations of additional candidates may also be made from the floor during the meetings. Such nominations may be made only by designated representatives of UNOLS institutions, and must be accompanied by the nominee's concurrence and qualifications.

A slate of candidates will be prepared for distribution at least 30 days in advance of elections consisting of at least two candidates for each position being considered.

### UNOLS DIRECTORY

---

## *Appendix XIX*