

The Use of Integrated Communications Methods and Mediums in the Operation of the NOAA's National Ocean Services PORTS®

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Abstract: The growth and maturity of the Internet and the availability of state-of-the art communication devices has made it possible for real-time oceanographic observation systems like PORTS® to grow and mature. PORTS® combines the advantages of the Internet in its acquisition of data and dissemination of its products with conventional means of communication such as land line and radio. To accomplish the task of acquiring, processing, quality controlling and dissemination data and information from hundreds of sensors nation-wide, PORTS® orchestrates the use of internet

communications, servers, routers, IP modems, radio, land line modems and voice response systems. In addition, these communication methods and mediums will be used to establish redundant systems at remote sites for seamless dissemination of data as a part of NOAA's homeland security operations.

This paper describes how the topology was conceived and designed and what some of the challenges were in accomplishing the successful operation of a real time observing system using a mix of communications.