

Ocean Information Technology

Some new opportunities for marine data management

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Through the last twenty years, oceanography and the marine environmental sciences have drawn great benefit from advances in technology. This Symposium will hear of several of these, particularly those associated with non-physical observation. The management of data and products, though recognized as fundamental, has not enjoyed the benefits of technological advances to the same degree as other areas and is, to some extent, still working to the modes and methods established several decades ago. Many things have changed in that time, not the least being the revolution in information technology. Though we are now starting to see some impacts of this technology, this impact still falls well short of the potential and, more importantly, far short of the need. Among other things, the community needs (i) telecommunications that will permit all data from remote and autonomous platforms to be communicated to laboratories in real-time; (ii) data communication and exchange mechanisms that will allow data and associated products to be shared quickly and easily; (iii) adoption of protocols and formats that are open and widely used, greatly easing the difficulty of access; (iv) recognition of methods and practices that improve quality and add value, and a methodology for representing and retaining that value; (v) data and products servers that provide rapid and functional access for the specialists and, equally, for the itinerant or opportunistic users; (vi) generalised ocean customer and user interfaces that facilitate imaginative and novel use (ocean data 'wizards'); and (vii) a community approach that recognizes the value and advantage of ocean information technology and one that demands and values a close working relationship between the scientists and data managers. All of this is within reach *now*. Data managers and scientists within the ocean community have accepted that immediate action is required and have agreed to develop a joint Ocean Information Technology Pilot Project to ensure all of the above needs are fully satisfied before this decade ends. The initial sponsors mostly derive from the global ocean community, with a strong focus on operational activities. However it is also emphasized that the Project must embrace less conventional data derived from interdisciplinary observations and novel instruments. This paper will discuss the prospects for this Project and actions already underway to deliver the required enhancements.