

A Conversation with an Ocean Observing System

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Many ongoing system development efforts target an overarching architecture for interoperable ocean observing systems. IOOS and OOI, in particular, are both working on conceptual architectures for their respective cyberinfrastructures. Environmental observatories in other science fields are likewise developing architectures.

Meanwhile, dozens (if not hundreds) of marine science projects are developing actual software that can be adapted for, or adopted in, the yet-to-be-architected systems. And projects and software developers are creating prototypes of service oriented solutions that can meet the anticipated needs of such interoperable systems.

Where and how will these design and implementation efforts come together? Informed by our participation in both architectural and implementation activities, we project some specific scenarios in which people, computers, and the cyberinfrastructure interact to achieve desired outcomes. We will outline these scenarios at multiple levels: architectural concepts, concrete examples of scientific interactions, and (in a few cases) software examples. The applicability of these scenarios to different observing systems, such as OOI and IOOS, will be discussed.