Geophysical Research Abstracts
Vol. 16, EGU2014-4392, 2014
EGU General Assembly 2014

BCube: Building a Geoscience Brokering Framework

Siri Jodha Khalsa (1), Stefano Nativi (2), Ruth Duerr (1), and Jay Pearlman (3)
(1) Univ. Colorado, CIRES, Boulder, United States, (2) CNR, Florence, Italy, (3) J&F Enterprise, Seattle, WA, United States

BCube is addressing the need for effective and efficient multi-disciplinary collaboration and interoperability through the advancement of brokering technologies. As a prototype "building block" for NSF's EarthCube cyberinfrastructure initiative, BCube is demonstrating how a broker can serve as an intermediary between information systems that implement well-defined interfaces, thereby providing a bridge between communities that employ different specifications.

Building on the GEOSS Discover and Access Broker (DAB), BCube will develop new modules and services including:
• Expanded semantic brokering capabilities
• Business Model support for work flows
• Automated metadata generation
• Automated linking to services discovered via web crawling
• Credential passing for seamless access to data
• Ranking of search results from brokered catalogs

Because facilitating cross-discipline research involves cultural and well as technical challenges, BCube is also addressing the sociological and educational components of infrastructure development. We are working, initially, with four geoscience disciplines: hydrology, oceans, polar and weather, with an emphasis on connecting existing domain infrastructure elements to facilitate cross-domain communications.