



NASA SBIR 2009 Phase I Solicitation

S6.02 Earth Science Applied Research and Decision Support

Lead Center: SSC

Participating Center(s): ARC, JPL

The NASA Applied Sciences Program (<http://nasascience.nasa.gov/earth-science/applied-sciences>) seeks innovative and unique approaches to increase the utilization and extend the benefit of Earth Science research data to better meet societal needs. One area of interest is new decision support tools and systems for a variety of ecological applications such as managing coastal environments, natural resources or natural disasters.

This subtopic seeks new, advanced information systems and decision environments that take full advantage of multiple data sources and platforms. Tailored distribution networks and timely products delivered to a broad range of users are needed to support applications in disaster management, resource management, energy and urban sustainability.

- Development of new integrated multiple user requirements knowledge data bases and archival library tools to support researchers and promote infusion of successful technologies into existing processes.
- Development of new decision support strategies and presentation methodologies for applied earth science applications to reduce risk, cost, and time.

This subtopic is also soliciting proposals for utilities, plug-ins or enhancements to open source geobrowsers that improve their utility for earth science research and decision support. Examples of geobrowsers include NASA World Wind, World Wind Java (http://worldwindcentral.com/wiki/Main_page) and COAST (<http://www.coastal.ssc.nasa.gov/coast/COAST.aspx>). Special consideration will be given to tools for COAST. Examples of specific interest are:

- Tools and utilities to support creation or simplify the import and integration of new datasets;
- Tools and utilities to discover and integrate existing web-enabled sensor data (e.g., webcams, meteorology

stations, beach monitors);

- Innovative output mechanisms for data layer sharing and collaboration;
- Enhancements to visualization of custom 3rd dimensional data;
- Enhancements to real time animation capabilities, or incorporation of existing animations into a geobrowser;
- Plug-ins that enable visualization of high resolution imagery in a COAST accessible data viewer;
- Utilities that enable regional estuarine or bay data compilations that are of interest to the major coastal ecosystem managers in those areas;
- Applications that subset, filter, merge, and reformat existing spatial data; provide links to attribute data; or visualize spatial or temporal analytic results in innovative value added fashion within the application.

Proposals should present a feasible plan to fully develop and apply the subject technology.