

A Geospatial Decision Support System Toolkit, Phase II Project

SBIR/STTR Programs | Space Technology Mission Directorate (STMD)



ABSTRACT

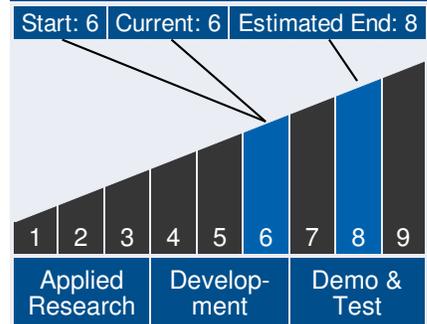
We propose to build and commercialize a working prototype Geospatial Decision Support Toolkit (GeoKit). GeoKit will enable scientists, agencies, and stakeholders to create and deploy their own web based applications containing maps, forms, algorithms, and a rich set of functionality related to visualization, analysis, reporting, querying, and publication of geospatial data and information. GeoKit is intended for customers who are experts in a particular area or problem; have in mind a set of users who will use their site to address a specific problem; have in mind a particular workflow that they want the users to perform and datasets they want to utilize; do not necessarily know or want to know about geospatial data types, formats, operations, and structure; and do not necessarily know or want to know how to construct a web-based application. The mission of GeoKit is to reduce and eventually remove technical barriers that limit direct stakeholder control over the creation and management of geospatially enabled web applications. AGS has worked on numerous geospatial web based applications and services, and continues to have active projects in this area. Our Phase II GeoKit proposal is to create the technological foundation for the distributed "open source DST development framework" that NASA envisions as described in the 2015 Subtopic S5.02 SBIR solicitation.



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Technology Maturity



ANTICIPATED BENEFITS

To NASA funded missions:

Potential NASA Commercial Applications: The proposed innovation (GeoKit) will be especially applicable in service of NASA needs and objectives. First, NASA scientists involved in building decision support tools on top of data dissemination activities would be primary potential customers. Second, future proposal applicants working in areas of research, or applications development could be encouraged to make their data and applications available using NASA's GeoKit application. Applied

Management Team

Program Executives:

- Joseph Grant
- Laguduva Kubendran

Program Manager:

- Carlos Torrez

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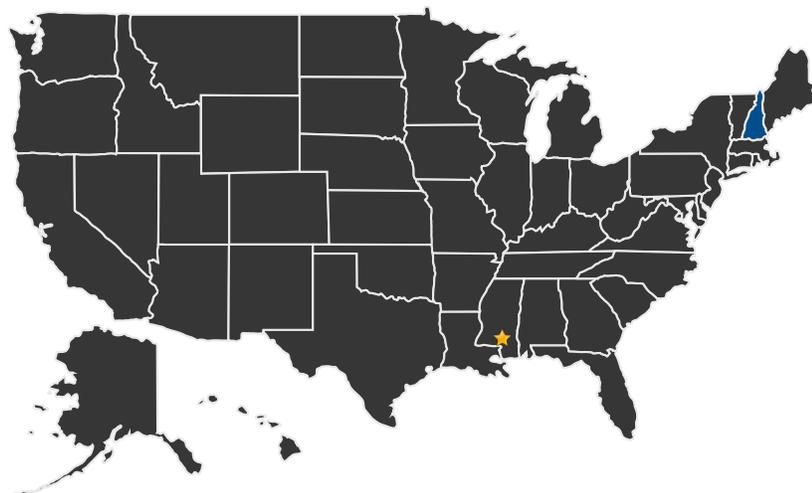


Geosolutions could partner with or be contracted to develop enhancements or interfaces to new data types, if needed.

To the commercial space industry:

Potential Non-NASA Commercial Applications: Non-NASA applications for GeoKit will reach broadly into a number of different stakeholder communities. In the area of environmental resource management, tools could be constructed that make the job of monitoring the state of the agro-ecosystems, forests, or aquatic habitats streamlined and tailored to the needs of the specific agency or regional office. Researchers in academia and in commercial R&D could have a greater access to NASA data combined with data from other sources, with custom rule-based algorithms and visualization tools.

U.S. WORK LOCATIONS AND KEY PARTNERS



■ U.S. States
With Work

★ Lead Center:
Stennis Space Center

Other Organizations Performing Work:

- Applied Geosolutions, LLC (Newmarket, NH)

Management Team (cont.)

Principal Investigators:

- Bobby Braswell
- Stephen Hagen

Technology Areas

Primary Technology Area:

Modeling, Simulation, Information Technology and Processing (TA 11)

- └ Information Processing (TA 11.4)
 - └ Collaborative Science and Engineering (TA 11.4.4)
 - └ Distributed Collaborative Engineering Frameworks (TA 11.4.4.2)

Additional Technology Areas:

Modeling, Simulation, Information Technology and Processing (TA 11)

- └ Information Processing (TA 11.4)
 - └ Collaborative Science and Engineering (TA 11.4.4)
 - └ Distributed Collaborative Science Data Analysis Frameworks (TA 11.4.4.3)

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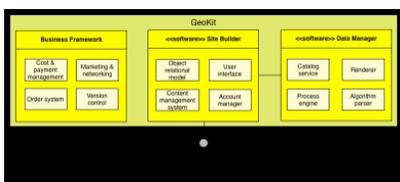


PROJECT LIBRARY

Presentations

- Briefing Chart
 - (<http://techport.nasa.gov:80/file/22764>)

IMAGE GALLERY



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DETAILS FOR TECHNOLOGY 1

Technology Title

A Geospatial Decision Support System Toolkit

Potential Applications

The proposed innovation (GeoKit) will be especially applicable in service of NASA needs and objectives. First, NASA scientists involved in building decision support tools on top of data dissemination activities would be primary potential customers. Second, future proposal applicants working in areas of research, or applications development could be encouraged to make their data and applications available using NASA's GeoKit application. Applied Geosolutions could partner with or be contracted to develop enhancements or interfaces to new data types, if needed.