Project Objectives:

1) Engage communities through a participatory approach to evolving cyberGIS software requirements
2) Integrate and sustain a core set of composable, interoperable, and reusable cyberGIS software elements
3) Empower high-performance and scalable cyberGIS by exploiting spatial characteristics of data and analytical operations
4) Enhance an online geospatial problem solving environment for the contribution, sharing, and learning of cyberGIS software
5) Deploy and test cyberGIS software by linking with national and international cyberinfrastructure (CI) for significantly improved scalability
6) Evaluate and improve the cyberGIS framework through domain science applications and vibrant partnerships

CyberGIS Framework

CyberGIS Software Ecosystem

- CyberGIS Gateway and Applications
- CyberGIS Toolkit
- GISolve Middleware

Integration Dimensions

Emerging Geospatial Software Ecosystem

Data-Intensive Farm Management

The Nexus of Food, Energy and Water Systems

Emergency Management and Water Resources

"Combination of detailed GIS representation of stream network and supercomputing to determine the flow is transformative – CyberGIS has delivered a major success for the nation!" – Dr. David Maidment

Publications, Presentations, and Tutorials

- 100+ publications, and numerous presentations and tutorials

Advanced Cyberinfrastructure Resources

- UIUC School of Earth Society and Environment (SESE) Keeling Cluster and Virtual ROGER
- NSF XSEDE
- NSF Blue Waters supercomputer

Integration of Education and Research

- CyberGIS Gateway has developed a global user community
- Graduated and trained more than 20 students and postdoctoral fellows
- 17 CyberGIS Fellows across 13 campuses in the USA have contributed to the development of cutting-edge cyberGIS education materials: http://cybergis.illinois.edu/about/fellows
- UCSC (http://www.ucsc.edu) Summer School focusing on Collaborative Problem Solving with CyberGIS and Geospatial Data Science took place during the week of May 15, 2017, with students and mentors working together to gain hands-on experience with cyberGIS problem solving

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