



# Center for Spatially Integrated Social Science

## Strategic Plan

CSISS, the Center for Spatially Integrated Social Science, is funded by the National Science Foundation under its program of support for infrastructure in the social and behavioural sciences. Its programs focus on the methods, tools, techniques, software, data access, and other services needed to promote and facilitate a novel and integrating approach to the social sciences.

### CSISS Mission Statement

CSISS is founded on the principle that analyzing social phenomena in space and time enhances our understanding of social processes. Hence, CSISS cultivates an integrated approach to social science research that recognizes the importance of location, space, spatiality, and place.

The **GOAL** of CSISS is to integrate spatial concepts into the theories and practices of the social sciences by providing infrastructure to facilitate: (1) the integration of existing spatial knowledge, making it more explicit, and (2) the generation of new spatial knowledge and understanding.

### OBJECTIVES

1. To encourage and expand applications of new geographic information technologies and newly available geographically referenced data in social science.
2. To introduce the next generation of scholars to this integrated approach to social science research.
3. To foster collaborative interdisciplinary networks that address core issues in the social sciences using this approach.
4. To develop a successful clearinghouse for the tools, case studies, educational opportunities, and other resources needed by this approach.

### CSISS PROGRAMS:

To fulfill its objectives, CSISS administers seven interrelated programs:

#### Specialist Meetings

CSISS organizes meetings on core issues in the social sciences that cut across traditional disciplinary boundaries to focus on gaps in knowledge that can be addressed through a spatial perspective. Typically, these meetings address traditional domains of social science inquiry (e.g., equity, cultural analysis, externalities, and globalization), as well as new areas of investigation where spatial perspectives and technologies might add value

(e.g., location-based services that exploit GPS and wireless technologies). These meetings identify scientific agendas and workshop needs for young scholars, propose learning resources essential to the diffusion of tools and concepts, suggest the creation of new spatial research tools, explore dissemination practices to reach potential users of spatial perspectives, foster collaborative networks among meeting participants, and develop best-practice publications of exemplary social science applications.

### **National Workshops**

CSISS sponsors intensive weeklong workshops and provides participant scholarships to introduce the latest and most authoritative approaches to the methods and tools of spatially integrated social science. The primary client group for workshops include PhD candidates, postdoctoral students, and untenured Assistant Professors. However, some senior scholars are included to provide a bridging across academic generations. Consistent with CSISS objectives, workshop invitees are selected from a broad mix of social science disciplines. Effort is made during the workshops to build collaborative networks among participants by stressing the commonality of the spatial perspective to problem identification and research approach.

### **Spatial Analytic Tools**

CSISS researchers at the University of Illinois at Urbana-Champaign seek to develop and disseminate a powerful and easy-to-use suite of software for spatial data analysis, to advance methods of statistical analysis to account for spatial effects, and to integrate these developments with GIS capabilities. Dissemination of these tools is promoted on the CSISS website ([www.CSISS.org](http://www.CSISS.org)), through Specialist Meetings, Workshops, Best Practice publications, and Learning Resources.

### **Learning Resources**

CSISS aims to develop learning resources covering core spatial concepts and exemplary research approaches. These include lecture outlines, exercises, interactive learning modules, and demonstrations, and are made available through the website [www.CSISS.org](http://www.CSISS.org). CSISS Learning Resources emphasize problems and approaches that will be of value to a wide range of social sciences. Workshop and Specialist Meeting participants are encouraged to recommend Learning Resources for development and are solicited for contributions. In addition, CSISS works to develop collaboration with other institutions engaged in the production and dissemination of learning resources on spatial approaches to the social sciences.

### **Best Examples**

CSISS seeks to identify outstanding uses of spatial analytic approaches that advance theoretical understanding and empirical testing in social science. Specialist Meetings are charged with recommending specific researchers whose publications qualify as best practices. Such exemplary research is featured in CSISS publications and workshops, and is targeted for the development and solicitation of learning resources.

### **Place-Based Search**

In collaboration with UCSB's Alexandria Digital Library and its ADEPT initiative (Alexandria Digital Earth Prototype), CSISS is developing services to enable search and delivery of geographically referenced information on the World Wide Web and in digital

libraries. A gazetteer interface with the CSISS Internet search engine will permit refined searches for spatial analytic applications by place and region.

### **Virtual Community**

CSISS is developing an open, virtual community to share spatial analytic software, foster discussion about spatial approaches in the social sciences, provide learning resources, and highlight information on workshops, conferences, and the latest innovations and applications of spatial analysis. The vehicle for these community-building and outreach efforts is <http://www.CSISS.org>. CSISS aims to position this website as the primary port-of-call for researchers and students of spatial analysis in the social sciences. To this end, it has developed a specialized Internet search engine to identify relevant resources on the World Wide Web and provides consolidated bibliographical resources derived from a broad range of on-line sources.

## **Fulfilling CSISS Objectives**

The strategic interests of CSISS are advanced through programs that meet its stated objectives. All CSISS activities, outcomes, and measures of success are seen as derivative from six interrelated **tactics**: to involve, to inform, to illustrate, to innovate, to infiltrate, and to integrate.

- **Inform** – tell others what CSISS is doing and encourage them to inform others. This requires excellent contact data resources, effective use of advertising in a variety of formats for targeted client groups, outreach through conference presentations and publications, and promotion of the centrality of resources at [www.csiss.org](http://www.csiss.org).
- **Involve** – engage others as active participants in, and organizers of, CSISS programs. These include broad interdisciplinary membership on the Board of Advisors and on steering committees of conferences and instructional teams for workshops. Strong disciplinary mix among authors for CSISS publications and online resources, and among satisfied repeat visitors to [www.csiss.org](http://www.csiss.org) is also important.
- **Illustrate** – provide clear examples and demonstrations that enable the mastery of spatial thinking and spatial analytic procedures. Learning-resource offerings, presentations, best practice demonstrations and *CSISS classics* of appropriate and effective use of spatial data and spatial analytic tools are needed to document the value added through spatial perspectives.
- **Innovate** – introduce improved methods and tools, and new uses, of spatial analysis; provide new means for spatially searching library holdings, and create new resources for learning about the uses of tools and spatial data. Place-based search tools for accessing spatial data and information about places, Windows-based SpaceStat, specialized search engines, and creation of metadata resources are among the innovations that CSISS promotes.
- **Infiltrate** – to engage CSISS participants (from workshops, Specialist Meetings) and CSISS personnel in active dissemination of spatial thinking and analytic resources within their departments, workplaces, institutions, publications, research specialties, and disciplines.

- *Integrate* – to draw on and to contribute to the intellectual achievements of diverse social science disciplines through spatial analysis, seeking common ground toward the development of a unifying perspective for spatial social science.

**CSISS tactics** are incorporated explicitly in the design, implementation, and assessment of CSISS programs. Short-term activities (1-year time frame) are aimed to fulfil CSISS objectives (by the end of year-5 NSF funding, in September 2004), and to provide a base for continuation or reconstitution of CSISS programs and services beyond the period of current funding.

### **The CSISS Future – Beyond Year 5**

The CSISS Executive Committee is exploring actively options to continue its development of infrastructure for spatial social science beyond year-5 NSF funding. Programs to develop Spatial Tools and Place-Based-Search infrastructure must be responsive to opportunities for new technological and conceptual innovation, so work in these areas will be required on a long-term sustained basis. Workshops and best-practice publications will remain essential to educating new generations of scholars; specialist meetings will be needed to bring critical expertise to bear on new research domains for applications of spatial analysis; and web-based delivery of learning resources, tools, and data will require continued upgrading to the latest standards. Correspondingly, CSISS is focusing on possible sources of funding to maintain and to expand its services to the social science community, including the following:

- CSISS publications and a CSISS-sponsored International Conference on Spatial Social Science in 2003 will highlight a permanent need for CSISS infrastructure resources.
- Discussions with major funding agencies were initiated in 2001, including the National Institutes of Health (NICHD). CSISS is keeping documentation on potential funding opportunities.
- New models of workshop delivery were experimented with in 2001, with a view towards an income generation format. A CISSS Distance Learning Credential program may be another potential source of revenue.
- A Retreat of the Executive Committee and Board of Advisors is currently under consideration for late 2002 – “CSISS Beyond Year 5”. Program Directors for NSF and NIH, and representatives of CSISS collaborating institutions will be invited to participate. This might be coordinated with a regular meeting of the Advisory Board.

## Annual Plan Implementation (October 2001 – September 2002)

The following tables outline the short-term activities, anticipated outcomes, and measures of success associated with each of the seven CSISS programs. On an annual basis (in October), a new short-term plan is formulated for implementation over the next twelve months and the expected long-term outcomes are reassessed and modified, as needed. Annual CSISS reports will document the outcomes and measures of outreach and infrastructure development associated with CSISS programs. The activities listed in the tables reflect initiatives for the period through 30 September 2002.

### Specialist Meetings

Short-term Activities ( - Sept 02)	Inputs / Outcomes	Measures
<p><b>Active Planning / Hosting of Future SMS</b></p> <ul style="list-style-type: none"> <li>- Location-Based Services 12/01 (with UCGIS, involving academia, government and industry)</li> <li>- Spatial Tools Development 5/02 (to integrate efforts of academic, government and industry programmers)</li> </ul> <p><b>Active SM Topic Assessment (e.g.)</b></p> <ul style="list-style-type: none"> <li>- Agent-Based Spatial Modeling of Land Cover Change</li> <li>- Small-Area Analysis</li> <li>- Remote sensing for social sciences</li> <li>- Management of large spatial data sets</li> <li>- Borderlands research</li> <li>- Neighborhoods &amp; social capital</li> </ul> <p><b>Long-term Activities</b> Moving from topic assessments to active planning and hosting of specialist meetings in 2003 and 2004, seeking external funding for sponsorship</p>	<p><b>Inputs</b> Breadth of advertising to target experts and potential users of spatial analysis</p> <ul style="list-style-type: none"> <li>- Web-based meeting management for applications, sharing information, and disseminating agenda and logistics</li> </ul> <p>Partnering with other organizations in co-sponsorship of meetings</p> <p>Move to model of self-funding for specialist meetings</p> <p><b>Outcomes</b> Participation</p> <ul style="list-style-type: none"> <li>- Approx. 20 – 30 specialists/meeting</li> <li>- Diversity of discipline representation</li> </ul> <p>Identification of Resources:</p> <ul style="list-style-type: none"> <li>- Websites</li> <li>- Literature references</li> <li>- Best-practice examples</li> <li>- Candidates for CSISS Classics</li> <li>- Data sources</li> </ul> <p>Identification of Needs</p> <ul style="list-style-type: none"> <li>- Tools development</li> <li>- Data resources</li> <li>- Workshop training</li> <li>- Collaborative opportunities</li> </ul> <p>Publications to Inform and Illustrate</p> <ul style="list-style-type: none"> <li>- Position statements</li> <li>- Final Report (web and hardcopy)</li> <li>- Possible journal special issues / edited books</li> </ul> <p>Seek Funding from Selected Participants for follow-up activities</p>	<p><b>Outreach</b> Magnitude &amp; Breadth of Exposure / Participation</p> <ul style="list-style-type: none"> <li>- Number of applicants to open calls</li> <li>- Participant distribution by discipline</li> <li>- Number of institutions represented</li> <li>- Web access to SM position statements</li> </ul> <p><b>Assessment of Success</b></p> <ul style="list-style-type: none"> <li>- Extent to which innovative resources are identified and integrated on CSISS.org</li> <li>- Extent to which CSISS tools development and workshop offerings are altered to reflect the needs identified from SMS</li> </ul> <p><b>Infrastructure Development</b> Response to follow-up surveys</p> <ul style="list-style-type: none"> <li>- Evidence of future collaboration among CSISS participants (no. of articles, proposals, grants)</li> <li>- Evidence of interdisciplinary co-operation (articles, grants, courses, programs)</li> </ul>

## Workshops

<b>Short-term Activities ( - Sept 02)</b>	<b>Inputs / Outcomes</b>	<b>Measures</b>
<p><b>Assess 2001 workshop results</b></p> <ul style="list-style-type: none"> <li>- Review of entry &amp; exit surveys</li> </ul> <p><b>Review candidates for CSISS workshops</b></p> <ul style="list-style-type: none"> <li>- Topics</li> <li>- Instructional teams</li> </ul> <p><b>Plan &amp; implement 2002 National workshop program</b></p> <p>Target workshops to:</p> <ul style="list-style-type: none"> <li>- Entry-level,</li> <li>- Routine Applications, and</li> <li>- High-level Exploratory Developments</li> </ul> <p><b>Consider alternative formats for workshops</b></p> <ul style="list-style-type: none"> <li>- CSISS organized sessions at meetings of academic societies (e.g., Social Science History Assoc, 10/01)</li> <li>- Half-day workshops at meetings (e.g., the Amer Sociological Assoc. Meeting (08/01), American Anthropological Association (11/02))</li> <li>- Two and three-day workshops (e.g., the ICPSR-CSISS workshop (05/01) and the Wharton-CSISS workshop (08/01))</li> </ul> <p><b>Encourage participation in ICPSR spatial analysis workshops</b></p> <p><b>Consider alternative delivery media</b></p> <ul style="list-style-type: none"> <li>- Filming workshops and creating video clips for web access (e.g., workshop on Map Making (7/01))</li> </ul> <p><b>Long-term Activities</b></p> <ul style="list-style-type: none"> <li>- Consider on-line workshops or discussions</li> </ul>	<p><b>Inputs</b></p> <ul style="list-style-type: none"> <li>- Breadth of advertising – targeting young scholars who are potential users of spatial analysis</li> <li>- Web-based meeting management for applications, sharing information, disseminating agenda and logistics</li> <li>- Planning for accommodations, instructional facilities and resources</li> <li>- Funding and administration of participant scholarships</li> <li>- Move towards a self-support funding model for workshops.</li> </ul> <p><b>Outcomes</b></p> <p>Participation</p> <ul style="list-style-type: none"> <li>- Approx. 20 per workshop</li> <li>- Diversity of discipline representation/integration</li> <li>- Breadth of institutional representation</li> </ul> <p>Instruction and practice in use of:</p> <ul style="list-style-type: none"> <li>- Spatial data</li> <li>- Spatial analytic software</li> <li>- Spatial methods and measures</li> </ul> <p><b>Long-term Outcomes ( - Sept 04)</b></p> <ul style="list-style-type: none"> <li>- To feature workshops on the full range of spatial analytic approaches for spatial social science</li> <li>- To seed expertise in spatial analysis in a broad range of social science disciplines and institutions</li> <li>- To foster interdisciplinary communications and networks for spatial analysis among social science scholars</li> </ul>	<p><b>Outreach</b></p> <p>Magnitude &amp; Breadth of Exposure / Participation:</p> <ul style="list-style-type: none"> <li>- Number of applicants to open calls</li> <li>- Participant distribution by discipline</li> <li>- Number of institutions represented</li> <li>- Web access measures to the workshop video clips</li> </ul> <p><b>Assessment of Success</b></p> <p>Review of entry &amp; exit surveys for:</p> <ul style="list-style-type: none"> <li>- Evidence of having learned from the experience</li> <li>- Strength of Recommendations to offer the workshop again</li> </ul> <p><b>Infrastructure Development</b></p> <p>Responses to follow-up surveys</p> <ul style="list-style-type: none"> <li>- Evidence of future collaboration among CSISS participants (articles, proposals, grants)</li> <li>- Evidence of interdisciplinary co-operation (articles, academic meetings, grants, courses, programs)</li> <li>- Participant expectation to include what they have learned in teaching and course design</li> </ul> <p>New tools and resources from High-level Exploratory Development workshops</p>

## Best Practices

Short-term Activities ( - Sept 02)	Inputs / Outcomes	Measures
<p><b>Editing and Publication of</b></p> <ul style="list-style-type: none"> <li>- <i>Spatially Integrated Social Science</i>, Oxford University Press 2002</li> <li>- <i>CSISS Classics</i> in Learning Resources at <a href="http://www.csiss.org">www.csiss.org</a></li> </ul> <p><b>Long-term Activities Under Consideration</b></p> <ul style="list-style-type: none"> <li>- Sponsor International Conference on <i>Spatial Social Science</i> -- 2003</li> <li>- Develop and host an on-line refereed publication on <i>Spatially Integrated Social Science</i> – 2004</li> <li>- Publications (book / articles) from international conference - 2004</li> <li>- Consider hardcopy publication of <i>CSISS Classics</i> – 2004</li> </ul>	<p><b>Inputs</b></p> <ul style="list-style-type: none"> <li>- Solicitation of manuscripts and contributions for the web site</li> <li>- Selected honoraria to encourage participation</li> <li>- Web-based management of publication development</li> <li>- International Conference self funding</li> <li>- Selectivity over keynote speakers and special programs for international conference.</li> </ul> <p><b>Outcomes</b></p> <p>Participation</p> <ul style="list-style-type: none"> <li>- Diversity of discipline representation</li> <li>- Breadth of institutional representation</li> </ul> <p>Exemplary research uses of</p> <ul style="list-style-type: none"> <li>- Spatial thinking</li> <li>- Spatial data</li> <li>- Spatial analytic software</li> <li>- Spatial measures</li> </ul> <p><b>Long-term Outcomes</b></p> <p>Expanded range and quantity, and improved quality of resources for teaching and research</p>	<p><b>Outreach</b></p> <p>Magnitude &amp; Breadth of Exposure / Participation</p> <ul style="list-style-type: none"> <li>- Participant distribution by discipline</li> <li>- Number of institutions represented in publications</li> </ul> <p><b>Assessment of Success</b></p> <ul style="list-style-type: none"> <li>- Measures of web access to <i>CSISS Classics</i></li> <li>- Sales and course usage of <i>Spatially Integrated Social Science</i></li> <li>- Numbers of applicants to participate in the international conference</li> <li>- Citations of CSISS publications and references to CSISS programs</li> </ul> <p><b>Infrastructure Development</b></p> <ul style="list-style-type: none"> <li>- CSISS publications as a basis for research generation and teaching</li> <li>- Increasing general production of spatial analytic teaching and research publications across the social science disciplines – monitored via literature surveys</li> </ul>

## Virtual Community [www.csiss.org](http://www.csiss.org)

<b>Short-term Activities ( - Sept 02)</b>	<b>Inputs / Outcomes</b>	<b>Measures</b>
<p><b>Website Look-and-Feel</b></p> <ul style="list-style-type: none"> <li>- Add drop-down menus, animations, and more images</li> <li>- Widen to 600x800 pixels</li> <li>- Accommodate unsupported or obsolete browsers.</li> </ul> <p><b>Web support for CSISS events</b></p> <ul style="list-style-type: none"> <li>- Host workshop / Specialist meetings</li> <li>- Supervise editing of video clips</li> <li>- Implement “streaming” capability for video clips.</li> </ul> <p><b>Learning Resources</b></p> <ul style="list-style-type: none"> <li>- Add keyword search interface to LR metadata</li> <li>- Add web infrastructure for Glossary input, and for public input to <i>CSISS Classics</i>.</li> <li>- Implement review process on content</li> </ul> <p><b>Infrastructure</b></p> <ul style="list-style-type: none"> <li>- Update news &amp; events</li> <li>- Implement Search Kiosk.</li> <li>- Integrate event and membership applications with CSISS contacts database.</li> </ul> <p><b>Spatial Tools Clearinghouse</b></p> <ul style="list-style-type: none"> <li>- Add fields / pages</li> <li>- Build sites and portals infrastructure.</li> <li>- Implement Peer / public review process.</li> </ul> <p><b>Long-term Activities</b></p> <ul style="list-style-type: none"> <li>- Accommodate code submissions and web-based analysis via spatial tools clearinghouse</li> <li>- Implement <b>CSISS Social Science Archive Search Tool (CSSAST)</b> – a clearinghouse of information on the spatial referencing of archival data</li> <li>- Implement <b>Place-Based CSSAST</b></li> <li>- Reconstruct L. Anselin’s workshop for website.</li> <li>- Add Best Practices page</li> <li>- Integrate site resources through common search interface.</li> </ul>	<p><b>Inputs</b></p> <ul style="list-style-type: none"> <li>- Equipment updates consistent with objectives</li> <li>- Keeping up with latest developments to enhance web delivery and ease of user navigation</li> <li>- Update site content to reflect developments of spatial analysis in the social sciences</li> <li>- Promote/Publicize <a href="http://www.CSISS.org">www.CSISS.org</a>.</li> <li>- User surveys to evaluate website use and content value</li> <li>- Consider focus-group review of CSISS web resources</li> </ul> <p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>- An expanding content-rich website</li> <li>- Visual appeal to presentation</li> <li>- Ease of use and accessibility for CSISS clients</li> </ul> <p><b>Long-term Outcome</b></p> <ul style="list-style-type: none"> <li>- <a href="http://www.CSISS.org">www.CSISS.org</a> seen as the primary port of call for anyone interested in spatial social science</li> </ul>	<p><b>Outreach</b></p> <ul style="list-style-type: none"> <li>- Success in attracting applicants to open calls for CSISS events</li> <li>- Expansion of CSISS membership</li> </ul> <p><b>Assessment of Success</b></p> <ul style="list-style-type: none"> <li>- Web Trends Site traffic analysis based on CSISS log files.</li> <li>- Incorporation of CSISS website content in university courses</li> <li>- From Workshop and Meeting databases – the numbers of applicants per event over time.</li> </ul> <p><b>Infrastructure Development</b></p> <ul style="list-style-type: none"> <li>- Document innovation / provision of services not previously available (or not as easily available) in social sciences and spatial analysis</li> </ul>



## Learning Resources [www.csiss.org](http://www.csiss.org)

<b>Short-term Activities ( - Sept 02)</b>	<b>Inputs / Outcomes</b>	<b>Measures</b>
<p><b>Expand Content from:</b></p> <ul style="list-style-type: none"> <li>- SAM</li> <li>- ARGUS</li> <li>- NCGIA, UCSB Geography, and other organizations (e.g., CASA)</li> </ul> <p><b>Add discipline Access:</b></p> <ul style="list-style-type: none"> <li>- Develop an archive of course syllabi on spatial analysis in different social science disciplines - to be gathered from leading scholars</li> <li>- Develop introductory modules related to spatial thinking and analytic approaches by discipline</li> </ul> <p><b>Implement a Search Engine to harvest existing learning resources from the World Wide Web</b></p> <p><b>Improve Presentation and User Search Capability for Content</b></p> <ul style="list-style-type: none"> <li>- Expand and refine metadata schema for learning resources</li> <li>- Catalog each learning resource to allow searching by author, format, keyword, discipline, and interest area.</li> <li>- Create a browse interface for retrieving all existing learning resources</li> <li>- Refine resource portal layout and presentation to make learning resources more accessible, and to highlight special resources, such as <i>CSISS Classics</i></li> <li>- Implement a review process for evaluating new materials for the Learning Resource collection</li> </ul> <p><b>Advertise Learning Resources</b> Design news releases, brochure</p> <ul style="list-style-type: none"> <li>- Announcing available resources to potential users</li> <li>- Soliciting contributions</li> </ul> <p><b>Long-term Activities</b></p> <ul style="list-style-type: none"> <li>- Implement metadata searching and learning resource object retrieval mechanisms with other collaborating organizations, such as DLESE, ADEPT, and ICPSR</li> </ul>	<p><b>Inputs</b></p> <ul style="list-style-type: none"> <li>- Selected Honoraria for authors of learning resources</li> <li>- Promotion / dissemination of information about CSISS Learning Resources</li> <li>- Solicitation and management of learning resource contributions by external authors and organizations</li> <li>- Extraction, preparation, and formatting of existing learning resources from local sources (NCGIA, UCSB Geography, etc.)</li> <li>- Web site organization and development of new interfaces for learning resource presentation</li> <li>- Surveys of users and potential users of CSISS Learning Resources</li> </ul> <p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>- Approximately 10 new large-scale learning resource contributions from external authors affiliated with SAM.</li> <li>- Improved Learning Resource web portal and subsequent community involvement</li> <li>- Use of CSISS Learning Resource Portal for class instruction and individual education</li> </ul> <p><b>Long-term Outcomes</b></p> <ul style="list-style-type: none"> <li>- Develop Model Curriculum for teaching "Spatially Integrated Social Science" based on CSISS Learning Resource Portal.</li> </ul>	<p><b>Outreach</b></p> <ul style="list-style-type: none"> <li>- Level of Involvement of external authors in Creating/contributing Learning Resources</li> <li>- Documentation on the size, institutional affiliations, and disciplinary origins of the user community for CSISS Learning Resources</li> <li>- Level of collaboration with other organizations in building learning resources</li> </ul> <p><b>Assessment of Success</b></p> <ul style="list-style-type: none"> <li>- Trends in the number of externally authored learning resource modules</li> <li>- Assessment of size of CSISS Learning Resource user community. Based on Web Trends measures and on surveys of educators.</li> </ul> <p><b>Infrastructure Development</b></p> <ul style="list-style-type: none"> <li>- Enhanced mechanisms for searching and retrieving learning materials from other similar and complementary archives, such as DLESE, ADEPT.</li> <li>- Learning Resources available at CSISS .org that are not found elsewhere.</li> <li>- Expanded CSISS Learning Resource Archive use by social science community.</li> <li>- Adoption of CSISS-based curriculum to aid in teaching topics addressed by the Learning Resource Portal</li> </ul>

## Spatial Analytic Tools

<b>Short-term Activities ( - Sept 02)</b>	<b>Inputs / Outcomes</b>	<b>Measures</b>
<ul style="list-style-type: none"> <li>- Implementation of CSISS <b>Spatial Tools Clearinghouse</b> and presentation at <a href="http://www.CSISS.org">www.CSISS.org</a></li> <li>- Preparation of database and cgi scripts for the clearinghouse</li> <li>- Establish management structure and process for maintaining and updating clearinghouse</li> <li>- Continued development of tools for spatial statistics within existing open source statistical software toolboxes (e.g., Xlispstat, Ox, R)</li> <li>- Complete documentation of <b>XlispStat</b> and <b>Ox</b> routines</li> <li>- Completion of tools for <b>Dynamic Exploratory Spatial Data Analysis (ESDA)</b> with GIS – beta release in fall 2001</li> <li>- Development of freestanding open-source <b>spatial econometric software</b> (the <b>OpenSpace</b> project) <ul style="list-style-type: none"> <li>- Interface design by Dec 2001</li> <li>- Prototype by Summer 2002</li> </ul> </li> <li>- Develop tutorials <ul style="list-style-type: none"> <li>- Dynamic ESDA</li> </ul> </li> <li>- <b>Specialist Meeting on Software Tools Development</b> (spring 2002)</li> </ul> <p><b>Long-term Activities</b></p> <ul style="list-style-type: none"> <li>- Implement strategy and infrastructure for Open Source Community Contributions to OpenSpace project</li> <li>- Continual updating and refinement of spatial tools clearinghouse</li> <li>- Expand tools clearinghouse to include demonstrations and tutorials</li> <li>- Consider expansion of clearinghouse to include areas such as mapping and visualization, remote sensing, geo-statistics, etc.</li> </ul>	<p><b>Inputs</b></p> <ul style="list-style-type: none"> <li>- Finding and hiring for programming expertise</li> <li>- Programming new software</li> <li>- Documenting attributes of existing spatial tools</li> <li>- User feedback</li> </ul> <p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>- Prototype clearinghouse on web by October 2001 with links to software sites (e.g., SpaceStat, CrimeStat), portal sites (e.g., ai-geostats), and to collections of code for specific statistical toolboxes (e.g. S-Plus, R)</li> <li>- Template for spatial econometrics in xxx published on web</li> <li>- Open source collection of routines available on web</li> <li>- Collection of modules for ESDA with GIS</li> </ul> <p><b>Long-term Outcomes</b></p> <ul style="list-style-type: none"> <li>- An easy-to-use open source suite of software for spatial data analysis</li> <li>- Advances in the use of spatial econometric methods in social sciences</li> <li>- Improved accessibility to information about spatial analytic tools</li> </ul>	<p><b>Outreach</b></p> <ul style="list-style-type: none"> <li>- Dissemination of tools via <a href="http://www.csiss.org">www.csiss.org</a>, specialist meetings, workshops, best practice publications, and Learning Resources</li> </ul> <p><b>Assessment of Success</b></p> <ul style="list-style-type: none"> <li>- Number of users of new software tools developed through CSISS</li> <li>- Adoption of CSISS software tools in teaching laboratories</li> <li>- Demonstrated use of CSISS tools and resources in literature</li> </ul> <p><b>Infrastructure Development</b></p> <ul style="list-style-type: none"> <li>- New tools for spatial analysis</li> <li>- Clearinghouse that provides users with information about state-of-the-art spatial analytic tools</li> <li>- Via specialist meeting, new networks among spatial tools developers will help foster standard protocols and coordination of tools development efforts</li> </ul>

## Place-Based Search [www.csiss.org](http://www.csiss.org)

<b>Short-term Activities ( - Sept 02)</b>	<b>Inputs / Outcomes</b>	<b>Measures</b>
<p>Develop services to <b>search and deliver geo-referenced information</b> via WWW and via digital libraries.</p> <ul style="list-style-type: none"> <li>- Inventory of on-line social science data archives               <ul style="list-style-type: none"> <li>- Document geographical coverage, spatial resolution, etc</li> <li>- Document / refine metadata standards</li> </ul> </li> </ul> <p><b>Allow place-name queries for geo-referenced information</b></p> <p><b>Explore role of gazetteers</b> for social science research and information retrieval:</p> <ul style="list-style-type: none"> <li>- Transformations among geo-referencing systems</li> <li>- Dealing with vague spatial structures, diverse languages, historical name changes, and non-Roman alphabets</li> <li>- Geoparsing of place names in text for representing information resources by geographical units</li> </ul> <p><b>Develop a gazetteer interface for the CSISS Search Engine</b> of websites that offer information of relevance to spatially integrated social science</p> <p><b>Long-term Activities</b> Continue activities listed above in later stages,</p> <ul style="list-style-type: none"> <li>- Demonstrate use of new resources</li> <li>- Enhance best practices in spatially integrated social science</li> <li>- Offer workshop(s), specialist meetings to illustrate practices and applications of tools for place-based search</li> <li>- Consider developing a clearinghouse of GIS shape files accessed through place-based search routines.</li> </ul>	<p><b>Inputs</b></p> <ul style="list-style-type: none"> <li>- Collaborate with UCSB's Alexandria Digital Library and its ADEPT (Alexandria Digital Earth Prototype) initiatives</li> <li>- Collaborate with ICPSR to enhance ICPSR's DDI metadata standards for geo-spatial applications</li> <li>- Promote the ICPSR DDI</li> <li>- Collaboration on the Electronic Cultural Atlas Initiative (Berkeley)</li> </ul> <p><b>Outcomes</b></p> <p>Enhanced Access to Resources:</p> <ul style="list-style-type: none"> <li>- Web linkages to place-based information</li> <li>- Web links to data sources</li> <li>- Allow for sharing data across archives</li> </ul> <p>Evaluation</p> <ul style="list-style-type: none"> <li>- Of spatial attributes of existing social science data</li> </ul> <p>Enhanced web display and analysis of existing data resources</p> <ul style="list-style-type: none"> <li>- Match data with spatial zones</li> <li>- Create maps</li> <li>- Rudimentary spatial analysis</li> </ul>	<p><b>Outreach</b></p> <p>Document extent of collaboration with organizations to improve the spatial information about data resources</p> <p><b>Assessment of Success</b></p> <p>Document the use of the CSISS website for accessing, mapping, and analysing information on spatially referenced social science data</p> <p><b>Infrastructure Development</b></p> <ul style="list-style-type: none"> <li>- Document expansion of spatial referencing of social science data sources</li> <li>- Expanded range of tools for exploring information by user-defined spatial units</li> </ul>