



**Philadelphia Area Consortium of Special Collections Libraries**

c/o The Historical Society of Pennsylvania  
1300 Locust Street, Philadelphia PA 19107  
215-985-1445 voice, 215-985-1446 fax  
<http://www.pacscl.org/>

**Greater Philadelphia GeoHistory Network**

**Report to the Andrew W. Mellon Foundation  
Planning Grant  
January-December, 2005**

**Introduction**

We are pleased to present this final report on PACSCL's project to plan the development of the Greater Philadelphia GeoHistory Network (GPGN), carried out from January 1, 2005-January 31, 2006 with funding from the Andrew W. Mellon Foundation, and ongoing with contributed staff time from participating member libraries.

Our planning project, like many, has evolved through the discovery process that planning entails. We originally sought to do three things:

1. Determine what it would take to build a collaborative GIS platform related to a large, historically rich metropolitan area;
2. See how we could at once enable diverse scholarly projects and include data from such projects on an ongoing basis;
3. Identify a range of interests and needs to be addressed and appropriate funding sources.

We have accomplished this and more, although as a result of our discovery process we have moved from consideration of a centralized model to a distributed network, which is changing the nature of some of this project's deliverables. Some of the benefits that range beyond our original expectations include engaging the attention of a much broader array of scholars and professional organizations; locating potential contributors from unexpected sectors such as government agencies whose data can inform a variety of scholarly work; and developing a sense of a Philadelphia-area GIS community that can find common purposes among rich but fragmented GIS resources.

Over the course of the funding period, our environmental scan and web research, our discussions with advisory committee members and area GIS professionals, and our conversations with participants at the December 2005 symposium have provided a clear picture of scholarly needs and desires. Rather than wanting a ready-made system with data plugged in, they want raw data and the tools to make them both accessible and flexible for use in space and time.

As we now conceive them, the scholarly dimensions of our goals for GPGN are:

1. To facilitate research;
2. To make this research, and the depth of data behind it, better accessible to various publics.

More specifically, the tasks for GPGN become:

- Finding ways to encourage scholars from many fields to use the Network and contribute data to it;
- Locating relevant datasets and distributing responsibility for maintaining them;
- Making sure that data and datasets include compatible metadata to allow searching and navigation across them;
- Encouraging archives, collections, and other holders, generators, or gatherers of data to catalog and index their data for use by geographically based systems;
- Fostering development among scholarly and other audiences of the skills and intellectual orientation requisite to the geographical analysis and deployments of data. This development will require both training in the mechanics of GIS systems and “evangelism” directed at helping scholars in many fields (re)conceive their projects in terms of the possibilities that the geo-spatial display and analysis of data afford.

In carrying out this work, we have shifted resources from surveying into planning. The work we have carried out, and the rationale behind some of the changes we have instituted, are detailed in our overview of the planning grant outcomes and our section on “Next Steps.”

## **Planning Grant Outcomes**

### **1. Examination and analysis of similar projects**

The planning team reviewed a number of existing GIS projects and related resources. These were sourced from web research; recommendations from advisory committee members, symposium speakers, and other colleagues; and printed sources such as Anne Kelly Knowles’ *Past Times, Past Place* (ESRI Press, 2002). We particularly looked at resources in three important areas: historical GIS, collaborative resource discovery, and evangelism/training. Because we devoted more time to planning than anticipated, we also spent more time identifying potential partners, collaborators, and communities of interest.

Many of the lessons learned from this examination and analysis have been incorporated into the “Next Steps: Technology and Infrastructure” document, attached. More important to us, though, is that our research and consultation have demonstrated that our project is of larger scope and ambition than others in both the range of participants involved and its ambitions to promote

scholarship. We will therefore have to take guidance from, and elements of, many different projects and incorporate them in the development of a new, expansive model for GIS work. For this reason, among others, the demonstration project we had proposed will come more clearly into focus as we digest the findings of the planning grant and work further with partners on its several aspects.

Beyond the matter of building more mapping and other forms of content for GPGN, our planning process was thus most successful in discovering and building initial ties with key development partners, among them the following:

- The University of Pennsylvania Cartographic Modeling Laboratory
- The Pennsylvania Spatial Data Access Project (PASDA)
- NITLE for models of training and "evangelism"
- CLIR, Annual Sponsors Symposium, April 7, 2006, for outreach and potential collaboration with the wider academic library community.

Coincidentally with our planning grant, developments among information consortia in Pennsylvania have laid the groundwork for potentially fruitful alliances for GPGN in the area of digital library development. Discussions convened by PALINET (a collaborative of more than 600 libraries in the mid-Atlantic region) have created a vision for a statewide digital library of Pennsylvania materials among representatives from PACSCL, the State Library and State Archives, local historical societies, and academic libraries with substantial experience with creating access to digital collections. As this project evolves, PACSCL and its offspring, GPGN, will be able to call on expertise and infrastructure available among these consortia and to urge creation of geographic metadata that will serve the interests of scholars using the library.

## **2. Development of a set of best practices for the implementation of the GPGN**

The synthesis of "best practices" from the projects that we have evaluated and from the experiences of the advisory committee members is most visible in our "Next Steps" document. Beyond the standards that prevail for digitizing and storing digital data, it is difficult to provide discrete statements of best practices for an ambitiously inclusive regional GIS because the field is developing so rapidly, but here is a brief summary of the parameters in which we have to establish standards and practices in the next phase of planning:

- **Develop Clear, Usable, Web-Searchable, Interoperable Metadata Standards** – This will require building on the work of such standards as Dublin Core and the Open Archives Initiative. While the project needs standards, it will have to accommodate the multiplicity of data structures and metadata thesauri used in the several communities that hold data appropriate for inclusion in the GPGN. Our standards need to be clear and usable; standards that are difficult to implement are often never implemented, and are beyond the expertise of the contributors and users we are seeking to attract. At the same time, there must be agreed-upon minimal levels of data documentation that are usable in a multi-standard environment.

- **Establish Naming Authority** – This is essential in any collaborative project, particularly so when metadata creation and cross-repository searching is involved. In terms of a “geohistory” project, this involves establishing authorities for place names and street names for a city whose neighborhood boundaries are fluid, whose street names change, and whose street numbering system was revised in the 19th Century; it also means deciding methods for representing “dates” and which dates to include. The work of Merrick Lex Berman at Harvard offers important guidance in this area of lexicon development.
- **Focus on Base Services and Discrete Applications** – One difficulty in any project is the desire to attempt to do everything for everyone, a clear recipe for disaster. The project must identify specific needs and specific solutions, and focus on developing tools in modular form that can be built upon in the future.
- **Build Towards Open Access and Re-use** – The technical infrastructure that is built, and the data that are digitized and prepared for the project, should be created with several ends in view: interoperability with existing systems, as well as open interfaces and documented standards. This approach permits re-purposing and re-use of the services and content of the GPGN, in effect creating a “public utility grid” that can be used by scholars for ever-emerging technology and research.
- **Defined Institutional Relationships and Regular Communication** – During the initial stages of a collaborative project, key relationships need to be clearly defined and responsibilities delineated. Project management and oversight need to be clearly established to support a healthy implementation process and accountability to stakeholders. This will be an exciting challenge, given the number of initiations and interests that come into play.
- **Examine Long-Term Sustainability and Development** -- The preservation of infrastructure and important datasets over the long-term is an issue of concern to all participants and will include a combination of resource recovery models, ongoing operational support by participating members, and the identification of new funding streams to add new functionality and new data. For this reason, the digital collections coalition emerging under the leadership of PALINET; the ongoing discussions among the State Library, PALINET, PACSCL, and the academic libraries in the Pennsylvania Academic Library Consortium, Inc. (PALCI) about how best to provide services to their overlapping memberships; and the interest that PASDA has shown in GPGN are vital to our sense of the development of the Network.

### 3. Report and proceedings of geohistory symposium

As work proceeded on the pilot project, and especially on the organization of the symposium, it became apparent that the number of potential users and contributors was greater, and the kinds of uses and contributions richer and more complex, than had been envisioned at the outset. As a result, the team decided to hold the symposium in December rather than in September, to expand the range of speakers, and to hold a two-day event rather than a one-day event.

The symposium, *Future Foundations, Mapping the Past: Building the Greater Philadelphia GeoHistory Network*, was held December 2-3, 2005 at the Chemical Heritage Foundation in Philadelphia, a PACSCL member library site. The symposium attracted more than 100 participants from the scholarly, library and archival, governmental, and commercial sectors. Presentations by fifteen invited speakers in addition to project team members were accompanied by facilitated topical and sectoral group discussions. Friday's discussions focused on content: the kinds of data that could be contributed and the kinds of users who might make use of them. Saturday's discussions explored ways in which the use of such a system can be encouraged. The structure of the symposium provided opportunities for attendees to mingle with each other and with speakers.

As a result of the lively discussions at the gathering, participants quickly realized that the greater Philadelphia area could build an unusually rich set of geographically-organized resources by developing working relationships across the relevant sectors. These resources could inform and enrich data analysis, study, and decision-making in academic, public policy, and commercial environments. As suggested above, the symposium helped us to identify additional key potential collaborators and contributors who in their various ways could serve as trainers, data repositories, and sources of data in a distributed mode, including other City departments; additional GIS initiatives such as the University of Pennsylvania's Cartographic Modeling Laboratory; the tourism community; the regional Bureau of the Census; the National Park Service; and GIS projects and data repositories throughout the region. Several participants have volunteered to join the advisory committee for future conversations, and additional core partners have been identified.

Most gratifying to us was the participation by scholars from the University of Pennsylvania and from liberal arts colleges involved in NITLE-sponsored GIS implementations. Their participation helps us to anchor our eventual project in one of its most important potential audiences. Based on the academic fields represented by symposium participants, it became clear that urban planners, historians, sociologists, geographers, anthropologists, demographers, geologists, archaeologists, and other scholars could all find ways to contribute data to and use data in such an expanded network, that they could and would want to develop in it research projects for themselves and assignments for today's technically engaged and visually oriented students.

We were also very pleased to note the enthusiasm expressed by the majority of participants for future information exchange opportunities such as this symposium. Many talked with us about the desirability of a national meeting, perhaps under the auspices of CLIR or a consortium of scholarly societies or professional groups. Given the dispersal of the interests of our own project and the dispersal of knowledge domains and professional interests in GIS, the excitement of our symposium participants at interacting across sectors prompts us as we go forward with GPGN to think about creating such an opportunity again.

The symposium program, roster of participants, and proceedings, in the form of transcripts of discussion summaries and Power Point presentations by speakers, have been placed online at <http://www.philageohistory.org/> and are also included in a symposium folder accompanying this report. (The Power Point presentations are provided on a CD-ROM.)

#### **4) Scanning and geo-referencing 200 atlas plates of Philadelphia**

At the symposium, Anne Kelly Knowles, Diana Sinton, Lloyd Benson, and other scholars affirmed the importance of georectified historical maps in their research. Since such digitized maps have additional impact on such diverse areas of inquiry as urban planning, development, and K-12 education, we are happy to report that we exceeded our proposed work in this area.

The grant proposed that the Regional Digital Imaging Center (RDIC) at the Athenaeum of Philadelphia would scan 200 atlas plates from Free Library of Philadelphia and Athenaeum Collections. As it turns out, the project staff was able to scan a total of 455 historical atlas plates. These maps have been scanned at high resolution (300+ dpi), compressed with ECW software, and made available on the Greater Philadelphia GeoHistory Network website. In addition, an image access system has been developed permitting easy on-screen navigation from one atlas plate to another. The Hexamer & Locher and Land Use maps have been geo-referenced to the city's current street centerline map. The geo-rectified files are not yet available on-line but have been made available to organizations doing historical research, including Kise Straw & Kolodner, who are currently working on a Civil War GIS for Philadelphia County, and Amy Hillier of the University of Pennsylvania for her research on W.E.B Dubois' *Philadelphia Negro* project.

During the planning grant, but funded separately, more than 2,500 plates from the Hexamer General Surveys at the Free Library were scanned by the RDIC staff. These plates include maps and colorful perspective renderings for industrial and commercial sites in Philadelphia and beyond from 1865 through 1899. The Free Library has given permission to post these surveys on the GPGN site, and the incorporation of this set should be a top priority in any implementation project for the GeoHistory Network. The full listing of maps and plates is shown on the accompanying budget spreadsheet.

Some funds from the survey portion of the grant have been shifted, as noted in our letter of December 29, 2005, to accommodate processing of these plates and creation of an image access system for easy on-line navigation of these historic maps.

#### **5) Demonstration/prototype website**

Because the focus of the project has shifted from a central to a distributed system, the project outcomes do not include the construction of a prototype website as originally envisioned. Instead, we have moved to the creation of a website that allows us to share resources and build communication across the Network community.

In spring 2005, a GPGN website was established at [www.philageohistory.org](http://www.philageohistory.org). This site initially provided a clearinghouse for posting information on various GeoHistory projects, as well as made possible rapid communication among members of our advisory committee through on-line forums. As the scanning and ancillary projects were completed, these "pilot resources" were posted as well. The posting of the promotion and registration for the *Future Foundations* symposium was made possible through the site, and the proceedings from same are now

available there as well. The site also has been used to survey PACSCL and other institutions concerning their geographic holdings and datasets and continues to provide a home-base for communication for our growing community.

As an example of the kinds of resources to be brought under the GPGN umbrella, a complementary project, funded by the Abraham Lincoln Foundation of the Union League of Philadelphia, supported the scanning of Philadelphia City Directories from the years 1856, 1857, 1861 and 1866. These directories are now available at the GPGN site. The time span selected covers not only the Civil War years but also the address numbering change that occurred in 1857. More than 4,000 directory pages were scanned and run through an OCR program in order to create a searchable database by name, occupation, and street name. As might be expected, the scanning and OCR processing was fast, but the sorting, parsing, and checking of the resulting files, as well as the correction of OCR files that did not recognize nineteenth-century scripts and syntax, is a tedious and labor intensive project. The images of the entire 1861 McIlroy's City Directory are available on the GPGN website and a searchable database for that year is partially completed.

Additional resources from PACSCL collections to be brought under the PACSCL research umbrella are being sought through a pilot survey for a geographically-limited area, more fully described in "Next Steps." Beyond this pilot survey, two systematic approaches to identification of these resources arose from a conversation at the symposium during which there was general agreement that a few geospatial fields could be added to the existing data structures for library and archival cataloging; doing so would prepare these records for inclusion in or searching by GPGN. We are now proposing to add these fields to the FileMaker database for the PACSCL Consortial Survey Initiative, funded by Mellon, in order to gather geospatial data on the unprocessed or underprocessed collections in PACSCL member libraries. When team members suggested a similar approach as a possibility for other institutions at organizational meetings for the statewide digital access project described on page 2, the response was encouraging enough that we are planning additional follow-up.

## **6. A detailed proposal for grant funding for the GPGN project**

From the early success of our scanning efforts and from the symposium discussions, we can envision a way in which a more broadly-conceived project could draw on a wide range of resources to inform and enrich the work of all potential partners. That GPGN has already attracted complementary funding to support contributions of data that enhance our understanding of Civil War-era Philadelphia is an early vote of confidence in GPGN's value to an expanded set of audiences even in its early stages. Based on the workflows in the scanning project, and taking into account the kinds of data and partners identified by symposium participants, important considerations in the full proposal that we will develop include:

- provision for coordination of data of different types contributed along multiple pathways, residing in multiple locations, and adhering to multiple standards;
- funding and in-kind contributions of resources that come from multiple sectors;
- a network designed from the outset to be compatible with other emerging networks.

In carrying out this work, we plan to build on established forms of consultation to have as much impact as possible and to develop a resource to complement the independent work of major partners, allowing, for example, the Cartographic Modeling Laboratory at the University of Pennsylvania to concentrate on the present and the recent past while the GPGN team focuses on developing the historical resources to set their work in context. As noted at Pt. 3 above, we also foresee pursuing GPGN's interests within the developing digital library picture in Pennsylvania.

Additional considerations that will inform the creation of a prospectus and proposal are outlined in the "Next Steps" document attached. We are grateful for the planning opportunity afforded us by Mellon and especially for the inspiration provided to our planning process and to the shaping of our project by the partnerships we developed along the way. We look forward to continuing conversations with the Foundation about the further development of the Greater Philadelphia GeoHistory Network.

#### Attachments

Transmitted electronically with report:

- "Next Steps" document
- Budget spreadsheet
- Advisory Committee list

Sent via U.S. Mail:

- Symposium program, attendance roster and other handouts
- Copies of selected transcripts
- CD-ROM containing Power Point presentations