

LIS Support for GIS 2008-09 Year-end Report

Summary

Statistics (excerpted from below):

1. Faculty/Staff assistance
Approximate number of consultations: 30
 - *[Number of consultations in 2007/2008: 94]*
2. Student assistance
Approximate number of consultations/drop-ins: 40
 - *[Number of consultations in 2007/2008: 95]*
3. Workshops
Number of workshops provided: 9
 - *[Number of workshops in 2007/2008: 15]*

Conclusion and Future Plans (excerpted from below):

1. We met some but not all of the geospatial technology needs of users across campus. Full-time GIS interns were more accessible than part-time student media tutors, but hiring full-time GIS support within LIS is not practical for the foreseeable future. So, we will continue to offer geospatial support in the media lab.
2. We will reduce the scope of our support. During the school year, we will no longer do in-depth GIS projects. We only will be able to help people use the tools that will allow them to do the projects. This is consistent with general media lab practices. GIS analysis requires not only considerable skill but also significant blocks of time over an indefinite period of weeks or even months. Student workers do not have this kind of availability during the school year.

Goal for 2008-09

This year, our goal was to determine whether LIS could meet the geospatial technology needs of users across campus with student tutors in the Wilson Media Lab.

We recruited a student with GIS skills to work as a Digital Media Tutor (Jack), and we tapped another Digital Media Tutor who was interested in GIS (Jue) to join our newly formed "GIS Team." Joe Antonioli, the supervisor of the Digital Media Tutors, worked with Carrie Macfarlane, the supervisor of the GIS Interns, to oversee the team's progress. We wanted to supplement the services provided by the Geography Department, which already serves its own faculty and students as well as the College community.

Outcome

This was a difficult transition. In each of the two years prior, LIS had hired a full-time GIS Intern. Our GIS Interns had been available for nearly forty hours per week, but each of our media tutors was available for fewer than nine hours per week. Fortunately, our tutors were skillful, diligent and realistic. We completed all of the tasks we undertook. We worked with faculty, students and staff from a variety of departments. We provided curricular support, support for independent research, and answers to quick questions. We publicized our services and developed internal procedures for communication and documentation. We investigated new technologies and made plans for future support.

Although we are proud to have completed all of the tasks we undertook, we must admit that we were able to maintain this track record only by turning away some requests for assistance. We carefully evaluated all requests and regretfully declined any that would have required more time than was available. Here are a few examples of the projects we weren't able to undertake: create a map and virtual tour of the ingredient sources of a meal being prepared for the College trustees; perform GIS analysis and create maps for several large metropolitan areas; obtain socioeconomic data not available in the US Census for several large metropolitan areas.

Some requests for assistance that in the past would have been directed to a GIS Intern were fulfilled by Carrie Macfarlane instead. For example, Carrie fielded questions about software and hardware installation and use from students, faculty and members of the Middlebury community.

Conclusion

We met some but not all of the geospatial technology needs of users across campus. Full-time GIS interns were more accessible than part-time student media tutors, but hiring full-time GIS support within LIS is not practical for the foreseeable future. So, we will continue to offer geospatial support in the media lab.

Geospatial support logically fits in the media lab for several reasons. First, user-friendly geospatial technologies are beginning to merge with other media applications, and many of those media applications are already supported in the media lab. Second, as geospatial applications become more accessible, it becomes more important for students to gain fluency in their uses and limitations. Because peer-to-peer training has been successful in other areas, it is a model worth employing here.

Details

1. Faculty/Staff assistance

For each project, one tutor took the lead. For projects requiring GIS expertise, Jack was the lead tutor, and Jue trained with him. This is a training model that we plan to use in the future.

During the school year, Digital Media Tutors normally do not do project-work for faculty. After some experimentation, we decided that GIS DMTs could do project-work during the school year if the work could be completed during a three-hour shift. (Experience has shown that interrupting project-work between lab shifts is counterproductive and can lead to poor results.) A few of the projects that we accepted before we established this guideline took far longer than three hours to complete.

- a) Approximate number of consultations: 30
 - *[Number of consultations in 2007/2008: 94]*
- b) Number of faculty/staff: 10
 - *[Number of faculty/staff in 2006/2007: 34]*
- c) Which academic/administrative departments: Biology, Economics, Environmental Studies, Geography, Geology, History, LIS
- d) Sample projects:
 - Biology – Analysis and presentation of environmental biology data, additional analysis, follow-up work
 - Economics – Analysis of economic data with ArcGIS, in-class presentation, additional analysis, creation of screen shots for poster presentation.
 - Economics – Map of South America
 - Environmental Studies – Hydrology data acquisition and analysis
 - Geography – In-class presentations on how to use Illustrator to make simple maps and how to use ArcGIS
 - Geography – Digital media support
 - Geology – Videos in Google Earth Pro.
 - History - Scanning and enhancement of the quality of maps and illustrations of China
 - LIS – Map of “Geographic Middlebury” (for trustees meeting)

2. Student assistance

GIS Team members worked 1-2 Media Lab shifts each week. They fielded questions on digital media including geospatial applications.

- a) Approximate number of consultations/drop-ins: 40
 - *[Number of consultations in 2007/2008: 95]*
- b) Approximate number of students assisted: 40
 - *[Number of students in 2006/2007: 30]*
- c) Sample topics:
 - How to create maps for theses
 - How to create maps for posters
 - How to use Google Earth to document the lives of residents of third-world islands in the Pacific Ocean
 - How to extract high-quality imagery from Google Earth

3. Workshops

We provided workshops in a variety of venues. Some were offered to the campus through the LIS Technology Workshops schedule, some were offered to LIS staff (Digital Media Tutor training, and the LISterine Series), and some were course-related.

- a) Number of workshops provided: 9
 - *[Number of workshops in 2007/2008: 15]*
 - *[Number of workshops in 2006/2007: 20]*
- b) Attendees: Faculty, Staff, students
- c) Sample topics:
 - Google Earth Pro: The Basics and Beyond
 - Creating videos in Google Earth Pro (for FYSE 1244: Geology of National Parks)
 - Handheld GPS for Beginners
 - Create a Simple Map for Your Presentation
 - Entering the World of Mashups (see workshop [description](#) and [video](#))
 - Using Adobe Illustrator to create maps (for Geography 100: Place and Society)
 - Intro to GIS (for Economics 1008: Deconstructing Discrimination)
 - Intro to ArcGIS (for Geography 100: Place and Society)

1. Other tasks:

- a) Developed procedures
 - How should the team communicate and track progress?
 - What types of projects can we assist with?
 - How should we respond to project requests?
- b) Created documentation
 - [Tips for Making Simple Maps](#)
 - Handheld GPS Basics
 - GIS Team internal procedures
- c) Publicity
 - Posters
 - Targeted email messages
 - [LIS eNewsletter](#)
 - Communication through liaisons
- d) Software support (research, advice on installation, testing)
 - Google Earth Pro
 - DNR Garmin
 - ArcGIS
 - GeoCommons
 - iPhone apps

What We Learned

1. Faculty assistance: Faculty from several disciplines, including Geography, continue to seek assistance with geospatial applications. Some of the projects we worked on were quite labor-intensive, and conversations with experienced GIS faculty indicate that this is common. This is problematic for our new service model, since student workers usually are available for fewer than 9 hours per week. Expectations must be carefully set. Communication must be frequent and must move in all directions (i.e., supervisor to tutor, tutor to supervisor, faculty to student and supervisor).
2. Student assistance: Students want help with creating maps for theses, posters and other research projects. Our Google Earth and Simple Maps workshops cover most of what students need to know to create maps, but not many students attend these workshops. In addition, if students encounter any difficulty when they are creating a map, they are likely to abandon the project. As students grow more interested in displaying the geographic context of their research, we will need to find new ways to engage them.
3. Staff assistance: Our workshops for staff were well-received. Media tutors found the workshop on creating simple maps helpful. LIS staff were interested in learning about mashups. Staff training seems like a worthwhile goal because it builds awareness, and therefore referrals, within LIS.
4. Workshops: Planning for workshops requires time for preparation, practice and feedback, and time is a scarce commodity among student workers. Course-related workshops were effective. Workshops offered through the LIS Technology Workshop series received a mixed response (the GPS workshop was overbooked and the simple maps workshop was underbooked). Few students enrolled in the workshops offered through the LIS Technology Workshop series, even those that were marketed to spring symposium participants. Workshops on GPS units require substantial planning; if student media tutors will run GPS workshops then planning should begin very early. Offering workshops for a general audience through the LIS Technology Workshop series should be re-evaluated.

Plans for Next Year

1. Staffing
 - a) Jack graduated in spring 2009
 - b) Jue will continue to be a member of the GIS Team. She has enviable skills in many digital media applications including Adobe Illustrator. She has trained with Jack this year, but she hasn't taken the Geography Department's GIS course yet.
 - c) We recruited Yuki, a senior Psychology and Environmental Studies major who has taken the GIS course.

- d) Jue and Yuki should work closely next year, with Jue sharing her expertise and Yuki sharing hers. This is a model we hope to perpetuate: at least one tutor with GIS expertise will team up with another tutor who might not yet have substantial GIS expertise.
2. Services
- a) We will reduce the scope of our support. During the school year, we will no longer do GIS analysis. We only will be able to help people use the tools that will allow them to do the analysis. This is consistent with general media lab practices. GIS analysis requires not only considerable skill but also significant blocks of time over an indefinite period of weeks or even months. Student workers do not have this kind of availability during the school year.
 - b) During the summer, we will be able to take on more labor-intensive projects, including GIS analysis, if we have summer tutors with GIS skills.
 - c) We will focus our training and assistance on map-making and visualization. For example, we will help users learn how to add maps to research papers, posters or PowerPoint presentations, and how to use Google Earth and other web-based mapping applications. Students ask for this type of assistance, and it is somewhat less complicated to provide than assistance with GIS. Our workshop for Geography 100 on how to use Adobe Illustrator to create maps was well-received.
 - d) We will try new instruction methods including “feeder workshops.” For example, a workshop on Illustrator could include techniques for simple map-making; a workshop on iMovie could include advice on how to insert a digital map into a movie; a workshop on PowerPoint could show how to zoom in on a map and animate a route or pattern on the map.
 - e) We will try to find creative ways to market geospatial technology. For example, we will try to show faculty how Google Earth can be used to enhance class lectures. This could result in more dynamic lectures and more use of maps among students.
 - f) We will consider creating more online documentation, perhaps even a web site with news and updates from inside and outside Middlebury
 - g) We will maintain awareness of the growing importance of mobile technology and the trend toward “geo-everything” recognized in the [2009 EDUCAUSE Horizon Report](#).