Ionian University
Laboratory of Digital Libraries and Electronic Publishing
Department of Archives and Library Science

Geographic collections development policies and GIS services: a research in US academic libraries' websites

Ifigenia Vardakosta
ifigenia@ionio.gr
Sarantos Kapidakis
sarantos@ionio.gr
Laboratory of Digital Libraries and Electronic Publishing
Department of Archives and Library Science

1st Workshop on Digital Information Management
March 30-31, 2011

Session Overview

- Literature Review
- Previous Researches: implementation surveys
- Methodology
- Objectives of the Study
- Results
- Some other characteristics
- Conclusions
- Future work

Literature Review

Collection Development Policy

- “Current and planned GIS activities in an institution will strongly influence collection development” (Longstreth, 1995)
- “Policy questions need to be placed within the context of the move towards large-and small-scale spatial data infrastructures that do, in the end, affect the developments of geolibraries” (Boxall, 2004)
- “Regularly assessing and revising policies helps academic libraries adapt GIS services to strike a balance between ever-changing needs of users and finite library staff, equipment and budgetary resources” (Sorice, 2006)
- «In creating a collection development policy for GIS services, librarians can incorporate elements of a need assessment into their workflow to help organize the various types of information elements they collect” (Abresch e.a, 2008, p.213)

Literature Review (2/2)

GIS Services in Academic Libraries

- "GIS are needed to manage the extremely large quantities of digital data that are increasingly available for use by research, business and industry" (Lutz, 1995)
- "The emergence and widespread application of GIS challenged librarians to analyze a nontraditional set of user needs and assemble services that incorporated computer hardware, software, data and training opportunities in new ways" (Argentati, 1997)
- "Since TIGER files were given to depository libraries, GIS has moved from being a tool used mostly by map or document libraries, to being a tool that can be used by reference librarians to meet the needs of any number of disciplines" (Todd, 2008)
- "Libraries at the doctoral/research universities offer GIS services almost 90% already, but they need to have a good data collection plan in order to increase users" (Good, 2009)

Implementation Surveys (1)

- 121 ARL members libraries (1999)
  - 72/121 (60%) returned
  - 64/121 (89%) provide GIS services
  - 94/121 (78%) use ArcView of ESRI,
  - 38/121 (31%) assist their patrons in using the service

(ARL, 1999)

- 138 smaller academic libraries (2001)
  - 22/138 (13%): some degree of GIS services
  - 27/138 (16%): intention to offer GIS
  - 89/138 (64%): no GIS plans

(Kinikin & Hench, 2005)

Implementation Surveys (2)

- 21 libraries re-surveyed (2004)

11/21 respond (52% return rate)

9/11 continued GIS services (82%)

2/11 discontinued offering GIS services

(Kinikin & Hench, 2005a)

- 103 academic libraries in Oregon (2006):
  - 31/103 (30%): some degree of GIS services
  - 15/103 (15%): actively considering GIS
  - 57/103 (55%): no GIS plans

(Gabaldon & Reppling, 2006)

Methodology

- 133 US Academic Libraries' websites examined

WHY?

- academic libraries supports a wide range of community
- more reliance on new technologies
- quantity of US academic libraries
- history in the implementation of GIS service's

The Objectives of the study are to determine:

1)How many libraries provides GIS services?

2)How many libraries provides collection development policy for their geospatial collections to their patrons?

3)What kind of information do they offer?

4)What kind of infrastructure provide to the public?

5)What services do they offer? (user education, assistance, remote access, guidelines for hardware/software)

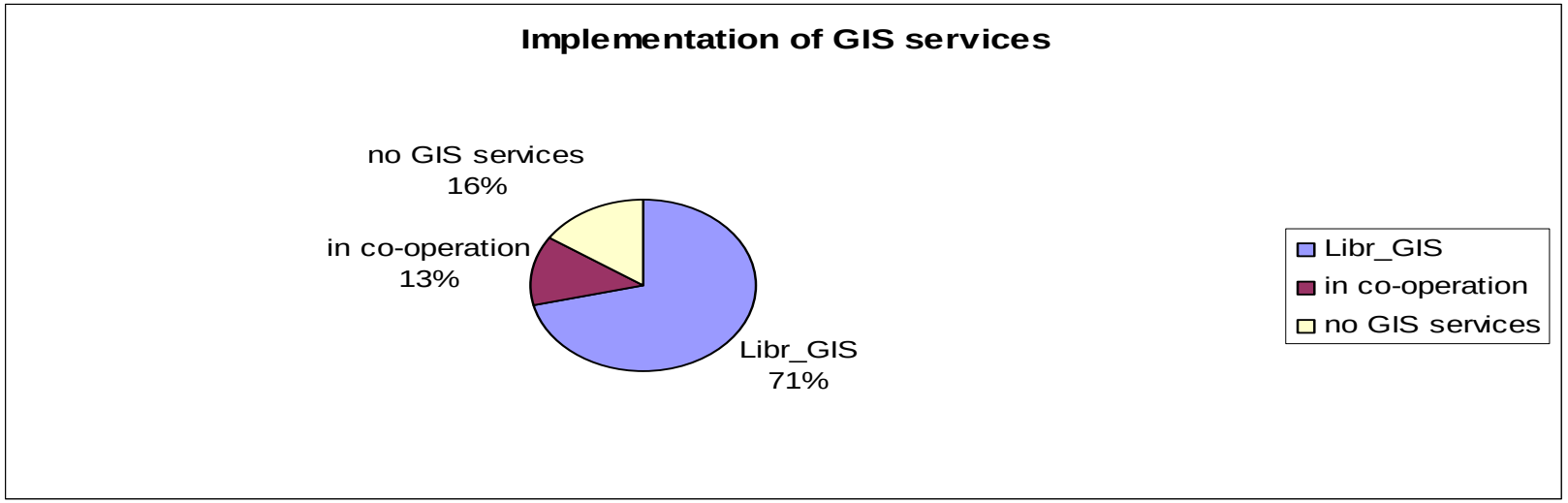
Results (1/5)

1)How many libraries provide GIS services?

95/133 (72%) provides GIS services to their patrons

17/133 (13%) « « co-operatively or as independent Center or Lab

20/133 (15%) do not provide any GIS service

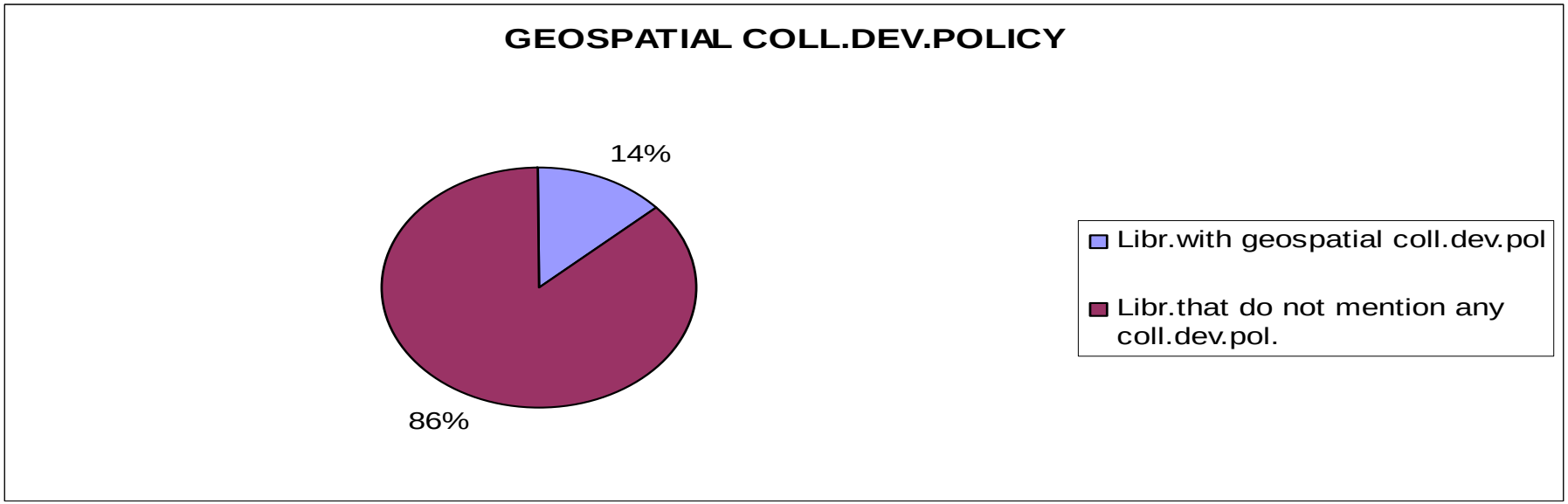


Results (2/5)

2) How many libraries provide collection development policy for their geospatial collections?

13 /95 had a geospatial collection development policy

82 /95 did not have any geospatial collection development policy in their webpage for their users



Results (3/5)

3)What kind of information do they offer? (1/2)

- ESRI data
- Digital chart of the world
- Gazetteers
- Aerial phptographs
- Orthophotos
- Satellite imagery
- Census-related data (population, age, income, etc.),
- National and international datasets
- Statistical and Geographic datasets
- Data from federal agencies
- Local Base Data
- Thematic Data
- Shape files

Results (3/5)

3)What kind of information do they offer? (2/2)

- Hydrologic, hypsographic, transportation, power, city and county outlines
- Digital numeric and spatial data sets, especially social science data sets
- Indexes
- Labor statistics,
- Political behavior,
- Education statistics,
- Nautical Charts,
- Business trends
- Universities web sites
- State & regional web sites
- National & world gis sites
- Government GIS-related sites
- General gis websites

Results (4/5)

4)What kind of infrastructure provide to their patrons?

Hardware

46/95 (48%) Libraries provide information about the infrastructure that can be used in the library:

- Workstations
- Printers
- Scanners
- Plotters
- GPS

Results (4/5)

4)What kind of infrastructure provide to their patrons?

Software

55/95 (58%) use ArcGIS (ESRI)

39/95 (41%) don't have any info about software

1/95 names different software

Other software packages

GoogleEarth, GoogleEarthPro, DIVA, GRASS, AutoCAD, MapWindow, QuantumGIS, Idrisi/Erdas, SPSS

Results (5/5)

5)What kind of services offer to their patrons?

- Training programmes: **48/95 (51%)**
- Information about software/hardware that can be used in the library : **42/95 (44%)**
- Guidelines for data/software use : **16/95 (17%)**
- Assistance to users (Ask a Librarian): **73/95 (77%)**
- Data for Local access : **64/95 (67%)**

Some other characteristics

Among 95 Libraries with GIS services:

- **9/95 (9.5%)** didn't serve familiar departments
- **11/95 (12%)** refer "GIS Librarian"
- **55 (58%)** were ARL paprticipants
- **44 (46%)** were members of University Consortium of GIS (UCGIS)
- **33 (35%)** presidents, provosts, and chancellors of these institutions support Federal Research Public Access Act (FRPAA)

Conclusions (1/2)

- 95 US Academic Libraries established GIS services & they offer a variety of local, national and international geospatial data
- 13 provide a geospatial collection development policy
- 46 inform their patrons for the existence infrastructure (in-door or in the field e.g.GPS)
- 55 use ArcGIS as the main desktop GIS and mapping software package (without excluding the use of open source software for educational purposes or for specific applications)
- 48 incorporate training programmes
- 73 sustain an assistance through the website

Conclusions (2/2)

- 64 provide local access to data
- 9 implement GIS services without serving familiar departments in their university
- 11 mention “GIS Librarian”

Researches comparison

Research	Percentage of GIS implementation in libraries
ARL (1999)	64/72 (89%)
Kinikin & Hench (2005)	22/138 (20%)
Kinikin & Hench (2005a)	9/11 (82%)
Gabaldon & Repplinger (2006)	31/103 (31%)
Good (2009)	~90% in academic libraries
Our research (2011)	95/133 (72%)

Limitations of the study

- Determinate library type (academic)
- Specific geographic region (USA)
- They were not chosen by any scientific mean
- The author was the sole researcher

In spite the previous difficulties the survey raises certain questions:

- What are the main characteristics of the existing geospatial collection development policies?
- Is there any homogeneity of collection development policies for geospatial data around the world?
- Is it finally true that a well established collection development policy defines the provided services?
- What about collection development policies for geospatial repositories?
- What is the existing situation in Greece?

Future Work

- Expand the research:
  - in other types of libraries (public, college) and
  - in other regions (Europe, Australia, Greece)
  - in geospatial repositories
- Define a proper methodology
- Construct a questionnaire

BIBLIOGRAPHY

- Abresch, J.e.a (2008) Integrating GIS into Library Services: a guide for academic libraries. Hershey: Information Publishing Company
- Boxall, J.C. (2006) “Advances and Trends in geospatial information accessibility-Part II: policy dimensions” in *Journal of Map and Geography Libraries*, 3(1),pp37-78
- Argentati, C.D. (1997) ”Expanding horizons for GIS sservices in Academic Libraries” in *The Journal of Academic Librarianship*, November, 463-468
- ARL (1999) “The ARL GIS Literacy Project. Spec Kit 238. [http://www.eric.ed.gov/PDFS/ED429609.pdf]
- Gabaldon, C. and Repplinger, J. (2006) “GIS and the academic library: a survey of libraries offering GIS services in two consortia” in *Issues in Science & Technology Librarianship*, 48, Fall,[http://www.istl.org/06-fall/refereed.html]

BIBLIOGRAPHY

- Good, H. N. (2009) "Trend of GIS services in US academic libraries: from comparison of past surveys and current situation of the University of Pittsburgh"in *Information Science & Technology Association*, 59(11) pp.539-544
- Kinikin, J.N. and Hench, K. (2005) "Survey of GIS implementation and use within smaller academic libraries" in *Issues in Science and Technology Librarianship*,
- Kinikin, J.N. and Hench, K. (2005a) "Follow-up survey of GIS at smaller academic libraries"in *Issues in Science and Technology Librarianship*, Summer
- Longstreth, K. (1995) "GIS collection development, staffing and training" in *The Journal of Academic Librarianship*, July, 267-274
- Sorice, M. (2006) "An analysis of GIS services websites in academic libraries",Master Thesis,[http://etd.ils.unc.edu/dspace/handle/1901/303]

Thank you!!