Libraries Faculty and Staff Presentations | Purdue Libraries

2013

Libraries as Advocates of Citizen Science Awareness on Emerging Open Geoscience Platforms in Finnish Society - International Collaboration for Promoting Open Geoscience Content in Finnish University Libraries

Antti M. Rousi
Aalto University, antti.m.rousi@aalto.fi

Benjamin D. Branch
Purdue University, bdbranch@gmail.com

Nicole Kong
Purdue University, kongn@purdue.edu

Michael Fosmire
Purdue University, fosmire@purdue.edu

Follow this and additional works at: http://docs.lib.purdue.edu/lib_fspres

Part of the Educational Assessment, Evaluation, and Research Commons, and the Library and Information Science Commons

Recommended Citation

ED51A-0585. Libraries as advocates of citizen science awareness on emerging open geoscience platforms in Finnish society - International collaboration for promoting open geoscience content in Finnish university libraries

Authors: Antti M. Rousi; Benjamin D. Branch; Nicole Kong; Michael Fosmire

American Geophysical Union, Fall Meeting December 9-13, 2013 San Francisco, California

In the Finnish National Spatial Strategy 2010-2015 [1], the Finland's Ministry of Agriculture and Forestry delineated that spatial data skills should support citizens everyday activities and facilitate decision-making and participation of citizens. The emerging of new open data infrastructures, a trend further driven by European Union's policies, calls out for an institution to link to the new possibilities of these resources with the myriad of their possible user groups. The following framework examines open geoscience platforms and open data trends affecting Finnish libraries, and discusses the possible role of Finnish university libraries as advocates of citizen science awareness of these emerging resources. The framework also examines the benefits derived from an international collaboration on data advocacy between Aalto University Libraries and Purdue University Libraries.

Research questions
1 What are the open geoscience platforms, data repositories and open data trends affecting Finnish libraries?
2 How could Finnish libraries promote these emerging platforms and repositories to citizen science audiences?
3 How international library collaborations enhance national level data advocacy?

Antti M. Rousi, Visiting Scholar @ Purdue, Information Specialist, Aalto University Library, Otaniemi Campus Library, Finland, antti.m.rousi@aalto.fi
Benjamin Branch CLIR/DLF GIS and Data Curation Fellow bbranch@purdue.edu
Nicole Kong, GIS Specialist and Assistant Professor, Purdue University Library
Michael Fosmire, HEAD PSET, Associate Professor, Purdue University Library

What are the open geoscience platforms, data repositories and open data trends affecting Finnish libraries?

Paikkatietoikkuna (Spatial Data Window)
Finnish Forest Research Institute, Finnish Environment Institute, Geological Survey of Finland, Geodetic Institute of Finland and National Survey of Finland provide open data access through interfaces such as National Survey of Finland's Paikkatietoikkuna [2] service (translates into spatial data window http://www.paikkatietoikkuna.fi). Paikkatietoikkuna interface also provides spatial data from numerous other organizations, such as municipalities and provinces and other organizations. The service also grants its users the possibility of creating maps constructed by integrating data from many of its data providers.

Open Knowledge Project
The open platform development is very recent, as most of the latter institutions have opened significant data during just the last two years. Several government lead development projects, such Ministry of Finance's Open Knowledge Project [3] strives to sustain this development of opening the public sector data. Finnish Meteorological Institute is also expected to publish its data shortly. The project also aims to create unified metadata architecture for the released data [4].

CSC's IDA
Outside open geoscience data, national data infrastructures are also emerging. IT Center for Science (CSC) is developing IDA service to provide a national data management solution and KATA data catalog to ease the discovery of open scientific data. Thus besides resources of open geoscience data, there is a myriad of other data products and interfaces, one being the Finnish Social Science Data Archive, emerging in Finland's context

INSPIRE (EU)
INSPIRE (Infrastructure for Spatial Information in the European Community) directive came into force on 2007 and aims to create a spatial data infrastructure for the European Union. INSPIRE Geoportal [5] provides access to spatial data sets within the framework of INSPIRE directive. The Inspire Geoportal also provides means to edit and validate the metadata of the datasets uploaded. National Survey of Finland arranges INSPIRE related training to different interest groups.

Horizon 2020's Open Data Pilot (EU)
As similar trends in other genres data, the forthcoming Horizon 2020 will be the European Commission's flagship financial initiative in advocating research and innovation [6]. Horizon 2020 also sets forth the Open Data Pilot which aims to promote data-sharing culture and facilitate both re-use of data and data-driven science within funded projects..

OpenAIRE, LIBER and COAR's joint statement (EU)
According to OpenAIRE, LIBER and COAR's joint statement [7], research libraries should be mobilized to support scientific communities with data management, promote established data centers and to gain a deeper understanding concerning their role with data. This will require identification and acquiring expertise and skills necessary.

NSDI (US)
In United States, The National Spatial Data Infrastructure (NSDI) started in 1994. It is defined as the technologies, policies, and people necessary to promote sharing of geospatial data throughout all levels of government, the private and non-profit sectors, and the academic community. The U.S. Federal Geospatial Data Committee (FGDC) coordinated development of the NSDI Clearinghouse Network. The GeoPlatform portal (https://www.geoplatform.gov/) is operated in support of the Geospatial Platform Initiative to provide "one-stop" access to all registered geographic information and related online access services within the United States. Geographic data, imagery, applications, documents, web sites and other resources have been catalogued for discovery in this portal. Other federal government agencies, as well as state and local government agencies have also established geodata portals for spatial data sharing. To facilitate better geospatial data sharing, discovery, and reuse, standards have been established and recommended. These standards include FGDC content and metadata standards, ISO geospatial metadata standard, and a series of Open Geospatial Consortium (OGC) standards. These standards ensure data from different providers to be shared and discovered on a common platform.

How could Finnish libraries promote these emerging platforms and repositories to citizen science audiences?

For the emerging open platforms, there is a myriad of possible user groups, ranging from scientists to private companies to citizen science representatives. This diversity is also one of the movement's greatest assets, as there is a great potential in new ways of combining different types of data (see e.g. [4]).

The continuous emerging of new data products and infrastructures that is further driven by global open data policies call out for a link between this movement and all its possible utilizers. The unique location of the Finnish university libraries in the hearts of the academic communities in addition to their tradition of citizen science advocacy makes them a very suitable for connecting the myriad user groups with various open platforms and data repositories. Deriving from their tradition of creating learning opportunities outside formal academic training, Finnish libraries could promote collaborative learning, co-creation and combining open data resources in new innovative ways.

As to concrete means of providing discovery services and enhancing the learning of different patrons groups, new technologies offer possibilities. Mobile devices allow the design of location specific customized portals, see [8], that provide customized collection of different geo- and open data portals, such as the Paikkatietoikkuna interface, and thus increase the visibility of these resources within the library's patron community. The content management system used in the portals at Aalto University Library also allows open participation in content creation, and thus enables patrons to contribute to the knowledge base of the library and to share open data related information.

How international library collaborations enhance national level data advocacy?
Despite the differences in contexts, Purdue University Libraries offer many data services that Aalto University Library can benchmark. Among the possible services are discovery and organizing services, such as DataBib, GIS consulting services, data management plan consultation services and data repository services, such as PURR. These service types can be used to curate and promote the discovery and re-use of geoscience data.

The collaboration between Aalto University Library and Purdue University is an asset to both organizations. Even though the contexts of the organizations differ through e.g. different national policies and data infrastructures, there is much to be gained from exchanging best practices and information about the open data movements of different continents. As the benefits of international collaborations could be described as follows, we encourage university libraries to pursue them.
- The synergy of monitoring different trends in different continents
- The synergy of exchanging information about open science platforms and data repositories
- The synergy of exchanging information about learning environment development
- Purdue has utilized Data Curation Profiles (DCP) with Jake Carlson as means of data collection which can be applied at Aalto University data needs assessments.
  www.datacurationprofiles.org

References

[1] Ministry of Agriculture and Forestry. 2010. Location: the Unifying Factor – Finnish National Spatial Data Strategy 2010-2015. Publications of the Ministry of Agriculture and Forestry 3b/2010. Helsinki: Ministry of Agriculture and Forestry. Available: http://www.paikkatietoikkuna.fi/web/en/sdi-in-finland. [checked 18.10.2013].

[2] National Survey of Finland. 2013. Paikkatietoikkuna (trans. Spatial Data Window). [Online service]. Available: http://www.paikkatietoikkuna.fi/web/en/co-operation-partners [checked 3.10.2013].

[3] Ministry of Finance. 2013. Avoimen tiedon ohjelma (trans. Open Knowledge Project). [Online document]. Available: http://www.vm.fi/vm/fi/05_hankkeet/02381_avoin_tieto/index.jsp (only in Finnish). [Checked 17.10.2013].

[4] Vakkari, M. 2013. Free from the birth – The Open Knowledge Program (in Finnish). Presentation at the Open Knowledge Road Show Tampere 27.9.2013. [Online document]. Available: https://speakerdeck.com/opendatatre/suomen-avoimen-hallinnon-toimintaohjelma-ok-roadshow-2013-tampere [checked 17.10.2013].

[5] Infrastructure for Spatial Information in the European Community (INSPIRE). 2013. INSPIRE Geoportal. [Online service]. Available: http://inspire-geoportal.ec.europa.eu [checked 18.10.2013].

[6] European Commission (EC). 2013. Executive summary of the impact assessment: Accompanying the Communication from the Commission 'Horizon 2020 - The Framework Programme for Research and Innovation'. Commission staff working paper. [Online document]. Available: http://ec.europa.eu/research/horizon2020/pdf/proposals/horizon_2020_impact_assessment_report_executive_summary.pdf#view=fit&pagemode=none. [checked 18.10.2013].

[7] Open Access Infrastructure for Research in Europe (OpenAIRE), Association of European Research Libraries (LIBER) & Confederation of Open Access Repositories (COAR). 2013. Horizon 2020 – Outline of a pilot for open research data. Joint statement by OpenAIRE, LIBER and COAR. [Online document]. Available: http://www.coar-repositories.org/files/Horizon_2020_Open_Data_Pilot_20130703_final.pdf. [Checked 18.10.2013].

[8] Branch, B. & Kong, N. Fosmire, M. & Rousi AM. 2013. GIS and Data Curation Librarianship: Mobile dissemination of GIS resources. DataONE User Group Meeting 2013, July 7-9, Chapel Hill, NC.