# What Will Future Librarians Look Like?

Ali Shiri

Professor

School of Library and Information Studies

University of Alberta

Board Development Activity, Edmonton Public Library, March 15, 2014, Stanley A. Milner Library

ALBERTA LIBRARY
TRUSTEES' ASSOCIATION

CLA
Canadian Library Association
Association canadienne des bibliothèques

ABOUT CLA    CLA AT WORK    MEMBERSHIP    LIBRARY CAREERS    EVENTS    RESOURCES    CORPORATE OPPORTUNITIES

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CLTA Awards
Canadian Library Trustees Association

CLA at Work
Advocacy
Awards
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Networks

Home → CLA at Work → Division and Interest Group Archives → Divisions → CLTA → Awards → Achievement Literacy Award

### CLTA/Stan Heath Achievement in Literacy Award
### (Award discontinued in 2012)

PLA Public Library Association
A DIVISION OF THE AMERICAN LIBRARY ASSOCIATION

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You are at: ALA.org » PLA » PLA Awards and Grants

american libraries
For the ve profe

Inside »    About »    AL Direct    AL Live    #alamw14

You are at: americanlibrariesmagazine.org » The Best in Library Branding

## The Best in Library Branding

Posted Friday, May 27, 2011 - 08:00
Winners of the 2011 John Cotton Dana Library Public Relations Award wow judges and their communities
By Judith Gibbons

ALA American Library Association

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Committees »    Divisions »    Offices »    Round Tables »    Publications »    Related »    Cont

You are at: ALA.org » News » Four local libraries honored for offering cutting-edge services

ALA Press Releases
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ALAnews

## Four local libraries honored for offering cutting-edge services

URBAN LIBRARIES COUNCIL
INSPIRING LIBRARIES. TRANSFORMING COMMUNITIES.

### Edmonton Public Library Wins LAA Award of Excellence

Kathleen Pine, Manager
Children's Division, Stanley A. Milner Library

The Edmonton Public Library has won the Library Association of Alberta Award of Excellence for its teen services. This award recognizes EPL's commitment to bringing teens into the library by enhancing its activities, collections and services for young people.

Starting with its Year of the Teen, held in 2005, EPL has carried through with teen initiatives in several areas. Branches set up designated areas with "teen friendly" furniture to make them feel welcome. A special position was created so that a teen-services librarian could be hired to act as a system-

Kathleen Pine and Wendy Grønnestad-Damur accept the Award

Library Association of Alberta

me    About LAA    Advocacy    Continuing Education    News & Resources    Events    Career Cen

IFLA

About IFLA
Activities and Groups
News and Events
Membership
Partners
Publications
Annual Conference

You are here:
Home » Activities and Groups » Management and Marketing » News »
IFLA 9th Marketing Award Winners Announced!

Management and Marketing
About this group
News
Events
Publications

14 April 2011
Press Release

## IFLA 9th Marketing Award Winners Announced!

# Current and future trends

- Communities: User experience/ information search behaviour
- Data librarianship and data science
  - Linked data
  - Library data
  - User data
  - Research data
- Open digital libraries
- Technology: Current and emerging
- Social media analytics

"The mission of librarians is to improve society by facilitating knowledge creation in their communities"

Lankes, R. D. (2011). *The atlas of new librarianship*. Cambridge, MA: MIT Press.

![epl.ca EDMONTON PUBLIC LIBRARY — Spread the words.]

**What Community Librarians Do and What EPL's Community-Led Service Philosophy is About**



- Help determine community strengths and needs
- Explore ways to work together
- Make it easier for people to access library services
- Work with you to provide responsive and relevant services
- Extend library services beyond the library's walls

http://dysartjones.com/2012/03/epl-ca-engaging-public-library/



**EPL MAKERSPACE**

http://globalnews.ca/news/1145264/edmonton-public-library-launches-makerspace/

**me** join me . show me . free me **Libraries**

## Participating Libraries

The below libraries are currently all participating in the Me Card service. Check back

- Edmonton Public Library
- Fort Saskatchewan Public Library
- Parkland Regional Library
  - Alix Public Library
  - Alliance Public Library
  - Amisk Municipal Library
  - Bashaw Municipal Library
  - Bawlf - David Knipe Memorial Library
  - Bentley Municipal Library
  - Big Valley Municipal Library
  - Blackfalds Public Library
  - Bodo Public Library
  - Bowden Public Library
  - Brownfield Community Library
  - Cadogan Public Library
  - Camrose Public Library
  - Caroline Municipal Library
  - Carstairs Public Library
  - Castor Municipal Library
  - Clive Public Library
  - Coronation Memorial Library
  - Cremona Municipal Library
  - Czar Public Library
  - David Knipe Memorial Library (Bawlf)
  - Daysland Public Library
  - Delburne Municipal Library
  - Didsbury Municipal Library
  - Donalda Public Library
  - Eckville Municipal Library
  - Edberg Public Library
  - Elnora Public Library
  - Forestburg Public Library
  - Galahad Public Library
  - Hardisty Public Library
  - Hay Lakes Municipal Library
  - Heisler Municipal Library
  - Hughenden Public Library
  - Innisfail Public Library
  - Killam Public Library
  - Lacombe - Mary C. Moore Public Library
  - Lougheed Public Library
  - Mary C. Moore Public Library (Lacombe
  - Nordegg Public Library
  - Olds Municipal Library
  - Penhold and District Public Library
  - Ponoka Jubilee Library
  - Provost Municipal Library
  - Rimbey Municipal Library
  - Rocky Mountain House Public Library
  - Sedgewick & District Municipal Library
  - Spruce View Community Library
  - Stettler Public Library
  - Sundre Municipal Library
  - Sylvan Lake Municipal Library
  - Water Valley Public Library
- St. Albert Public Library
- Strathcona County Library

Tagcloud: Created from the EPL Program listing (February 26, 2014)

# Communities

- Start up business owners
- Library as a networking venue
- Users as content creators: Self-publishing
- Career planning using social networks (LinkedIn)
- Learning management system

# Creating online communities

# Online user communities

- Customization
- Personalization
- Localization
  - User context, profiles and Interests, behaviour
  - Example: Which topics/authors were searched where
- Recommendations
- Online education: Webinars, Massive Open Online Courses (MOOCs), virtual conferences

# Search volume for Margaret Atwood 2004 – 2014

(Google Trends)
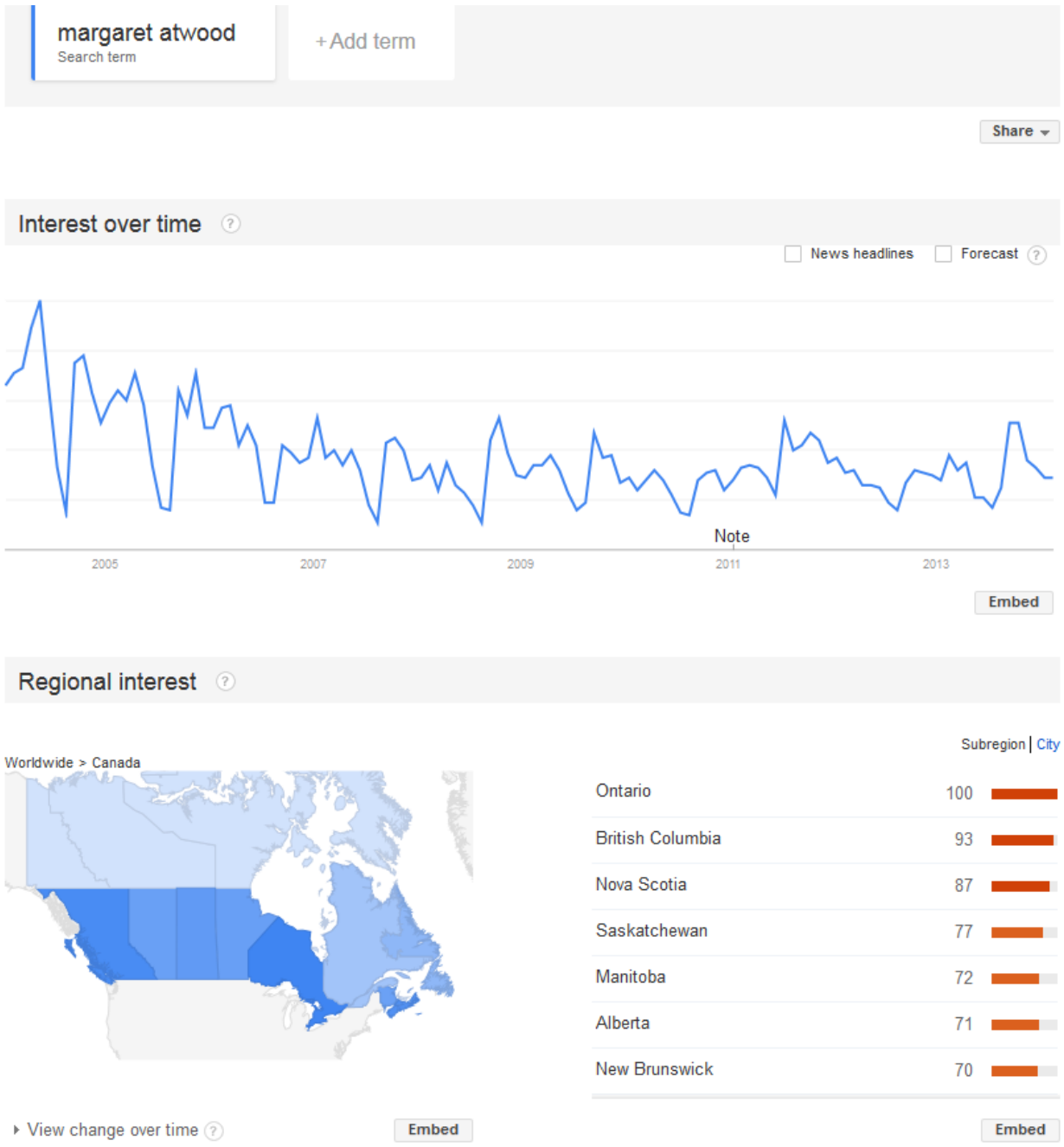
# Search volume for Margaret Atwood 2010 - 2014
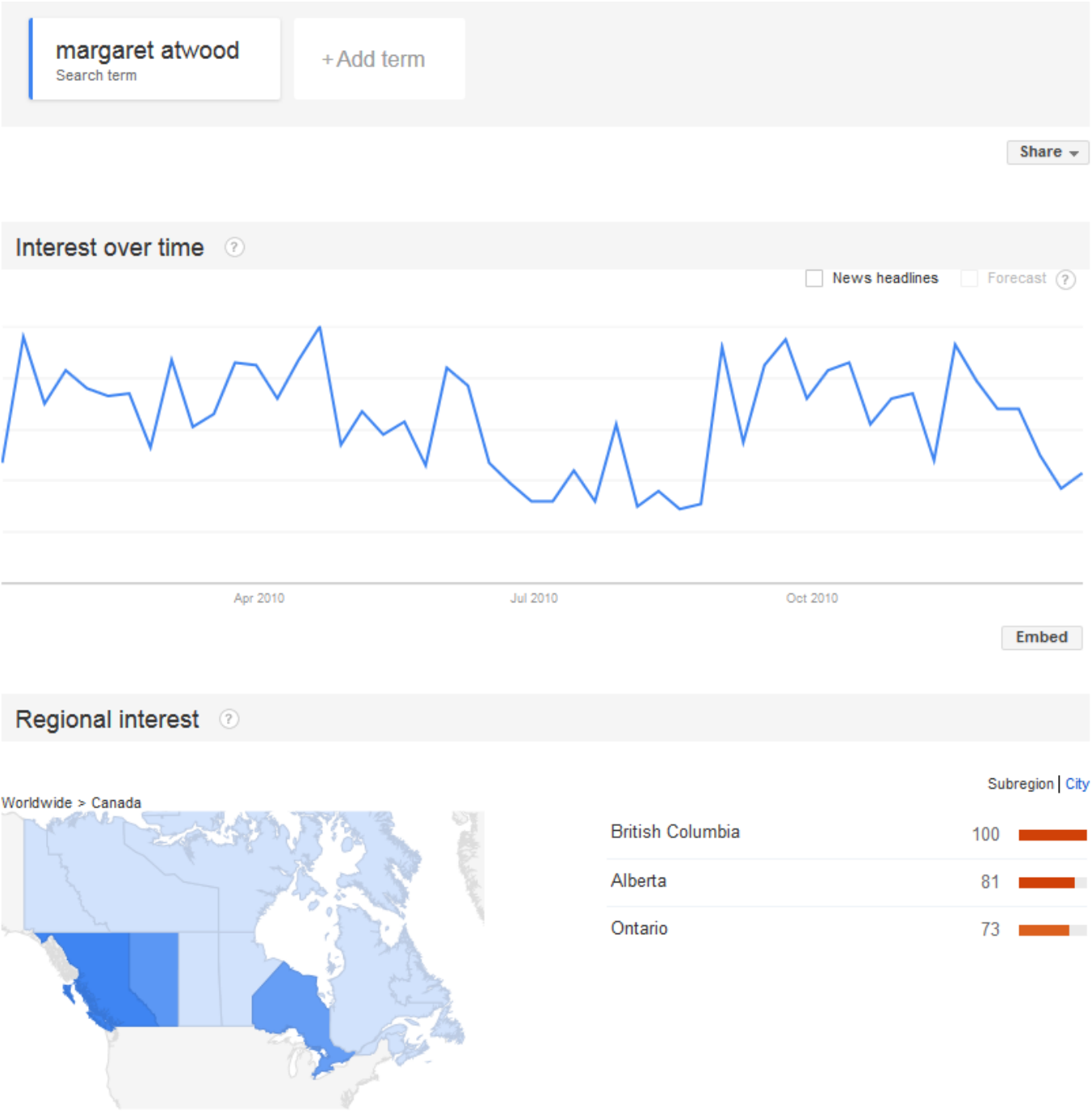
# U of A Library Catalogue: Health Query Analysis (Shiri, 2011)
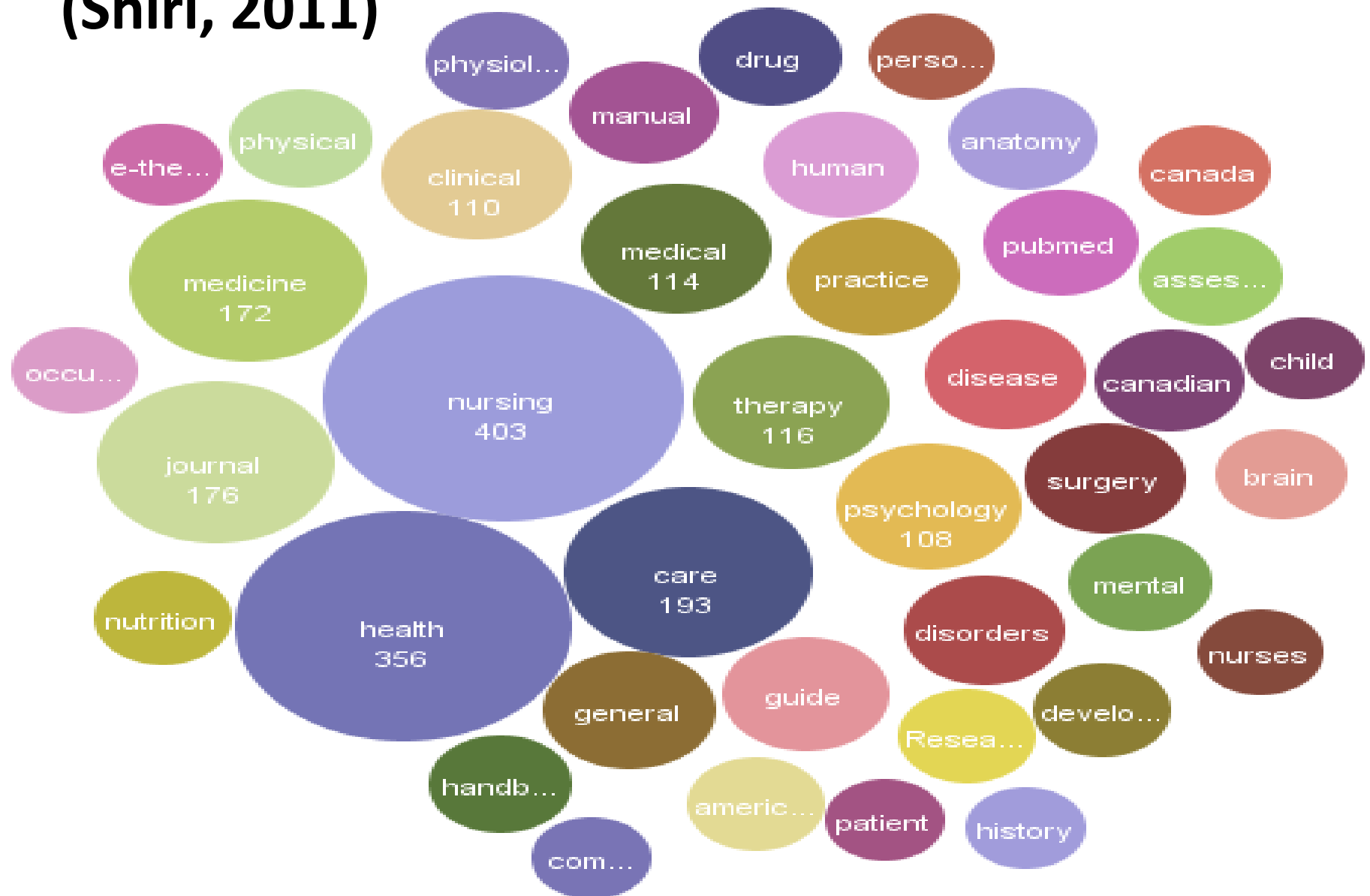
# Data librarianship

"Managing, organizing, visualizing and presenting large structured and unstructured data".

*Data Literacy*

- Big data
- Open data
- Linked data
- User data

BIG DATA

BIG DATA

BIG DATA

BIG DATA

BIG DATA

BIG DATA

**Walmart**

Walmart handles more than 1 million customer transactions every hour, the equivalent of 167 times the information contained in all the books in the US Library of Congress

**Google**

Google answers 100 billion searches per month

**Twitter**

More than 400 million tweets every day on Twitter

235 terabytes data collected by the Library of Congress

ITU: There were about 7 billion mobile phone subscriptions at the end of 2013.

**You Tube**

YouTube users upload 100 hours of new video every minute

**Facebook**

Facebook handles 240 billion photos from its user base. 30 billion pieces of content shared on Facebook every month

**WIKIPEDIA**

4,464,270 articles in Wikipedia Average increase per day: 821

Social Media Data

Linked Data

Government Open Data

Web Usage Data

Big Data Environment

Funded Research Data

Research Data Repositories

Libraries
Archives
Museums
Research institutes
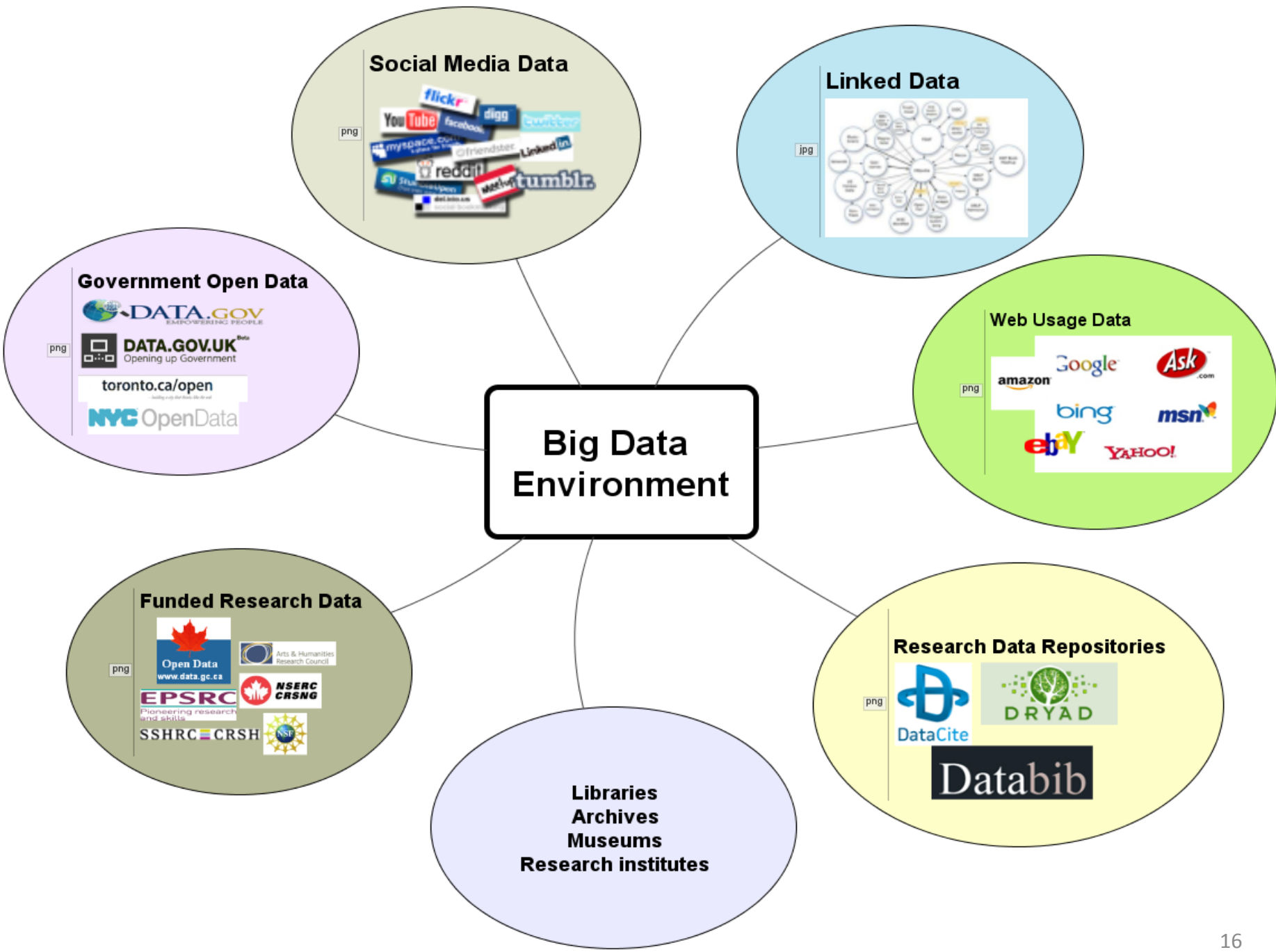
# Big data visualization examples

- [Wind Map](#)
- [Live Where?](#)
- [H1N1 Visualization](#)
- [U.S. election](#)

By 2018, the United States alone could face a shortage of 140,000 to 190,000 people with deep analytical skills as well as 1.5 million managers and analysts with the know-how to use the analysis of **big data** to make effective decisions.

McKinsey Report: http://www.mckinsey.com/features/big_data

# Open data and data literacy

Data should be available to everyone

Data should be free, public and open

- Open source software

- Open content

- Open educational resources

- Open access

*"Data literacy is the new skill"*

epl.ca EDMONTON PUBLIC LIBRARY

**Home**      **My EPL**      **Explore**      **Interests**      **Programs and Events**      **Digital Content**      S

Chatty    Ask Us

Type here to chat. Press
ENTER to send.
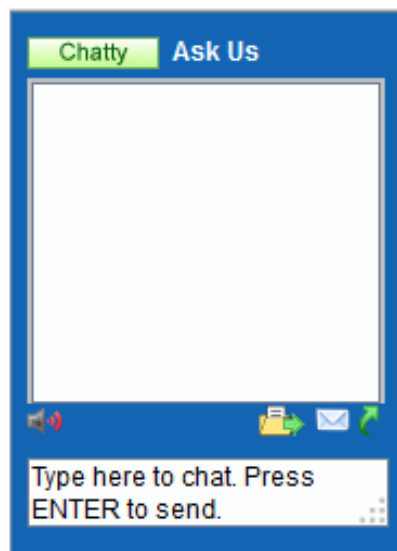
Contact Us
Text us: 780.800.4929

SHOP
epl

# Open Data

## City of Edmonton Open Data Links

- Mack D. Male's Primer on open data in Edmonton for ChangeCamp
- City of Edmonton Open Data Catalogue
- EPL Branches in the City of Edmonton's Open Data Catalogue

## Other Open Data Links

- Data To Go
- International Open Data Hackathon

## EPL Open Data -- Branches

- EPL Branches Form -- limit by branch and xml/csv format
- EPL Branches File -- all branches, xml format
- EPL Branches File -- all branches, csv format
- EPL Branches API -- Help

## EPL Open Data -- Events

- EPL Events Form -- limit by start date, end date, branch, and xml format
- EPL Events API -- Help

# City of Edmonton Open Data Twitter Feed

# THE CITY OF
# Edmonton
## Open Data Catalogue

Home > City Government > OpenGov > Open Data Catalogue

## Citizen Dashboard

City of Edmonton is pleased to announce the relaunch of the Citizen Dashboard, an online tool that shows performance results for some of the services the City provides. The Citizen Dashboard provides performance information about municipal services that support the City's Strategic Plan - The Way Ahead.
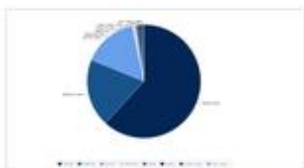
**2013 Edmonton Election - Results Summary - Mayor**

2013 Election Results - Distribution of Votes for Mayor's Race

**2013 Edmonton Election - Results Details (by Voting Station)**

2013 Election Results by Voting Stations.

**Really Grate Tree Project, Soil Analysis - 2010-2013 (Map View)**

Sidewalk trees

**WiFi Locations - Map View**

List of WiFi locations in Edmonton

# Alberta Open Data ■

## Welcome to the Alberta Open Data Portal

The portal makes data the provincial government collects on behalf of citizens publicly available in machine readable formats with an open licence. This means there are no technical or legal restrictions for using the data.

By sharing this data, the Alberta government is increasing the transparency of government business, promoting economic opportunity and increasing citizen involvement in government.

### Data Catalogue Search

☑ **All Subjects**

☑ **All Formats**

**Search the Data Catalogue**

Can't find the data you're looking for?

**Request New Data**

### ★ Popular Datasets ■

- Licensed businesses, charities, and fundraisers (150,843)
- Petroleum and Natural Gas Public Offerings and sales results (148,398)
- Frequency and Ranking of Baby Names by Year and Gender

### ✎ Latest Datasets ■

- Ischemic Heart Disease - Age-Standardized Prevalence 20 min ago
- "Ischemic Heart Disease - Age-Standardized Incidence Rate 2 days 16 hours ago
- Ischemic Heart Disease -

### ☐ Featured Sites ■

- Alberta BioDiversity Monitoring Institute ⊠
- Alberta Official Statistics
- Alberta Oil Sands Information Portal
- Canada-Alberta Oil Sands Environmental Monitoring

**You are here:** City of Toronto » Accessing City Hall » **Open Data**

## Accessing City Hall

Share  52

### Building a city that thinks like the web

# Open Data

Welcome to **Open Data** - **Toronto**.

**Open Data** leads to transparent government: **open**, **accessible** and **accountable**.

Be informed and engaged - **anyone can use the data**!

*n. Open-Data: o-pen da-ta /ˈōpən/ /ˈdatə/*

The idea that certain data should be freely available to everyone to use and republish as they wish, without restrictions from copyright, patents or other mechanisms of control.                    -- Wikipedia

---

The dataset catalogue was last updated February 20, 2014

**GET THE DATA**

### Contact Us

**Open Data Team**
opendata@toronto.ca

NYC OpenData

Sign Up Sig

# Using OpenData to help drivers navigate NYC

Track and analyze parking tickets and camera violations using data provided by the New York City Department of Finance (DOF), now available through NYC OpenData.

View    More Stories

Search

Business          City Government          Education          Environment          Health

# Linked data

- Linked Data is about using the Web to connect related data that wasn't previously linked.

- Linking different data sets:
  - Library catalogues
  - Open data sets
  - Other open digital libraries

Find books, music, movies, and more.

Keyword | popular baby names

○ **Catalogue** ○ **Website** ○ **Articles**

**Home**   **My EPL**   **Explore**   **Interests**   **Programs and Events**   **Digital Content**   **Services**   **Support E**

Keyword search results for... ❓ search

# popular baby names

Sort by | Relevance |

Save Search

**Available now...**
☐ available at any location  (15)
**More locations...**

Found **19** items   | 25 | per page

**Broaden your search »**

**Format** ▲
☑ **Books**
☑ **Movies & TV**
☑ **Music & Sound**

**The Baby Name Countdown**
140,000 Popular and Unusual Baby Names
By Schwegel, Janet
(**Book** - 2008 )
929.44097 SCH 2008
Available  in some locations
Average Rating:
⭐⭐⭐

📑 Place a Hold

➕ Add to My Shelves

**Date Acquired** ▼

**Titles I can...** ▼

# Welcome to the Alberta Open Data Portal

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By sharing this data, the Alberta government is increasing the transparency of government business, promoting economic opportunity and increasing citizen involvement in government.

## ★ Popular Datasets ■

- Licensed businesses, charities, and fundraisers (153,120)
- Petroleum and Natural G_ Public Offerings and sale results (150,653)
- Frequency and Ranking of Baby Names by Year and Gender (149,328)

## atest Datasets ■

- Inventory of Major Alberta Projects 1 week 19 hours ago
- Average Weekly Earnings 1 week 21 hours ago
- Apprenticeship and Provincial Labour Force Statistics 1 week 22 hours ago
- Graduates - Parchments

## 🖥 Featured Sites ■

- Alberta BioDiversity Monitoring Institute ⧉
- Alberta Official Statistics
- Alberta Oil Sands Information Portal
- Canada-Alberta Oil Sands Environmental Monitoring Information Portal ⧉

# Top 35 popular girl names In Alberta (2012)
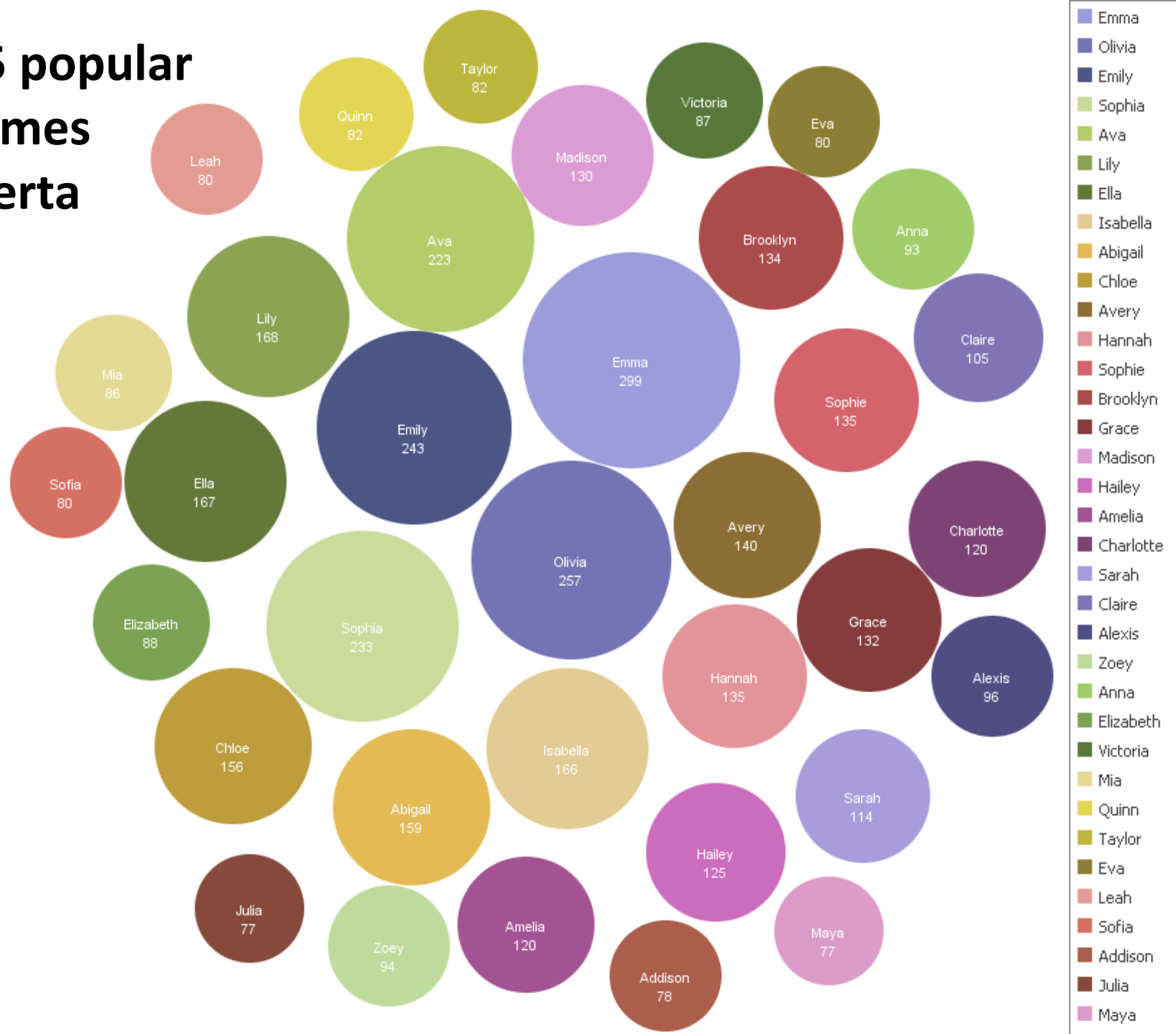
# Open digital libraries

Digital librarians aggregate, integrate, make accessible open digital libraries along with their own libraries.

- World digital library
- Europeana
- Digital Public Library of America
- Open Library
- HathiTrust
- Canadiana.ca
- Project Gutenberg

europeana
think culture

Search ⌄ | | 🔍 Search    Help

# Virtual Exhibitions

Explore 13 unique curated exhibitions highlighting some of
Europe's biggest cultural treasures.

Visit exhibitions

## Exhibitions

View all »

## Explore
### by Place

Clemson

Map »

## Explore
### by Date

Timeline »

1946   1947   1948   **1949**   1950   1951   1952

# A Wealth of Knowledge

explore 5,734,462 items from libraries, archives, and museums

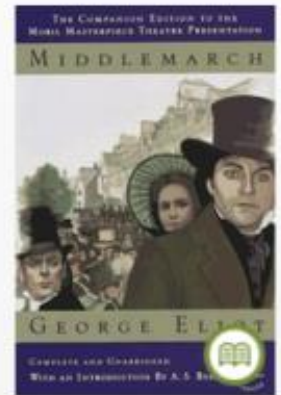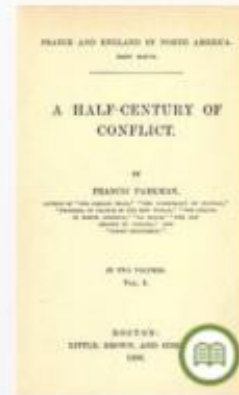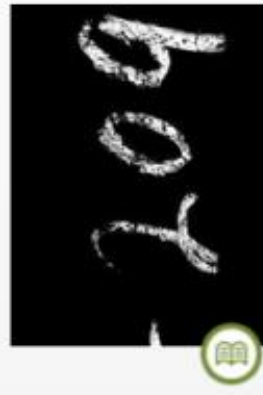Search the Library

# OPEN LIBRARY

One web page for every book.

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☐ Show only eBooks

More search options

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to borrow, read & connect.

**Books to Read** The World's classic literature at your fingertips. Over 1,000,000 free ebook titles available.

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LE PETIT CHOSE

ŒUVRES COMPLÈTES
VOLTAIRE

OLD MORTALITY
SIR WALTER SCOTT BART
ILLUSTRATED BY JOHN SCHONBERG

A HALF-CENTURY OF CONFLICT.

MIDDLEMARCH

GEORGE ELIOT

# HATHI TRUST
## Digital Library

## Search HathiTrust's digital library

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Search words about or within the items

**Search** 🔍

Advanced full-text search | Search tips

☑ Full view only

❓ *Should I search catalog or full-text?*

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**DOWNLOAD BOOKS* & CREATE COLLECTIONS**

*requires institutional login

# About Early Canadiana Online

**These collections contain over 80,000 rare books, magazines and government publications from the 1600s to the 1940s.**

This rare collection of documentary heritage will be of interest to scholars, genealogists, history buffs and anyone who enjoys reading about Canada's early days.

The Early Canadiana Online collection of rare books, magazines and government publications has over 80,000 titles (3,500,000 pages) and is growing. The collection includes material published from the time of the first European settlers to the first four decades of the 20th Century.

You will find books written in 21 languages including French, English, 10 First Nations languages and several European languages, Latin and Greek.

# Search

Search the collection

Search in

Everything

Collection

All

Date Range

YYYY to YYYY

Search    Help    Random Document

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- Search Catalog
- Book Categories

## search website

- Main Page
- Categories
- News
- Contact Info

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# Some of Our Latest Books

# Duncan A. MacRae (Class of 1913)

| | |
|---|---|
| **Created Date** | 1916-1918 |
| **Partner** | Digital Commonwealth |
| **Contributing Institution** | Springfield College |

View Object ⬏

## Description

This lantern slide shows a portrait of Major Duncan A. MacRae wearing his military uniform. He graduated in 1913 from the International YMCA College, now known as Springfield College. MacRae was born in Edmonton, Alberta, Canada. Prior to attending college, MacRae volunteered at the YMCA from 1903 to 1909. From 1911 to 1912, he directed the Winchester Association Boys' Club in Springfield. After completing his undergraduate degree, he stayed at Springfield College for graduate school. However, in January 1916 he traveled to France and served as a Major in the Canadian Army, Infantry Division, 51st Battalion. In October 1917, MacRae became a flying officer with the Royal Air Force. He returned to Springfield, where he completed his education in 1919. After the war, he served as physical director at a high school in Montreal. MacRae died in January 1962.. Processed. Text on border reads, "European War D. A. McRae 1913.

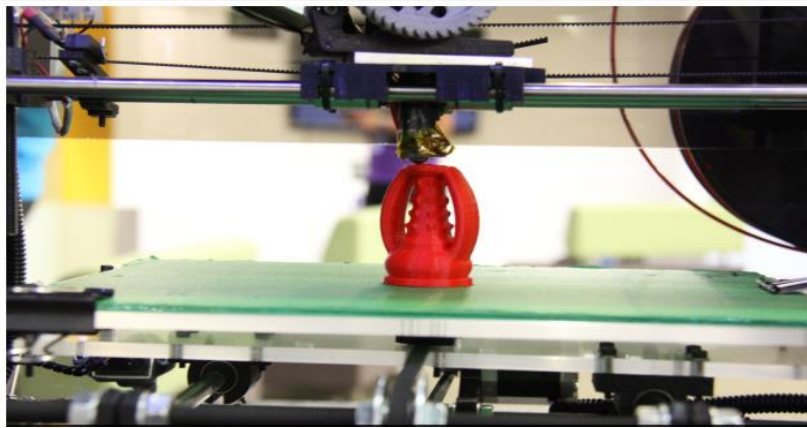# Springfield College Digital Collections

Search [                    ] Search Advanced Search

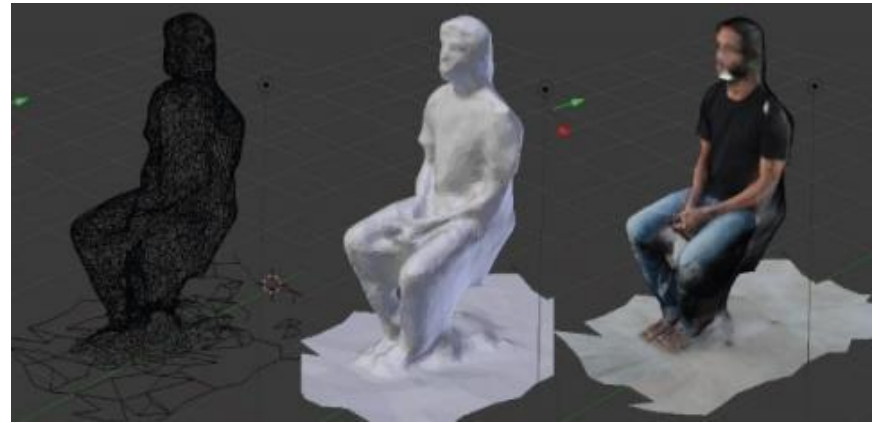⚲ Reference URL ➕ Share ✎ Add tags ☺ Comment Rate ★★★★★

## Duncan A. MacRae (Class of 1913)

View Description

# Current Technologies

3D Printer (Edmonton Public Library)



3D Scanner (DC Public Library)



Melville House (Publisher) NY



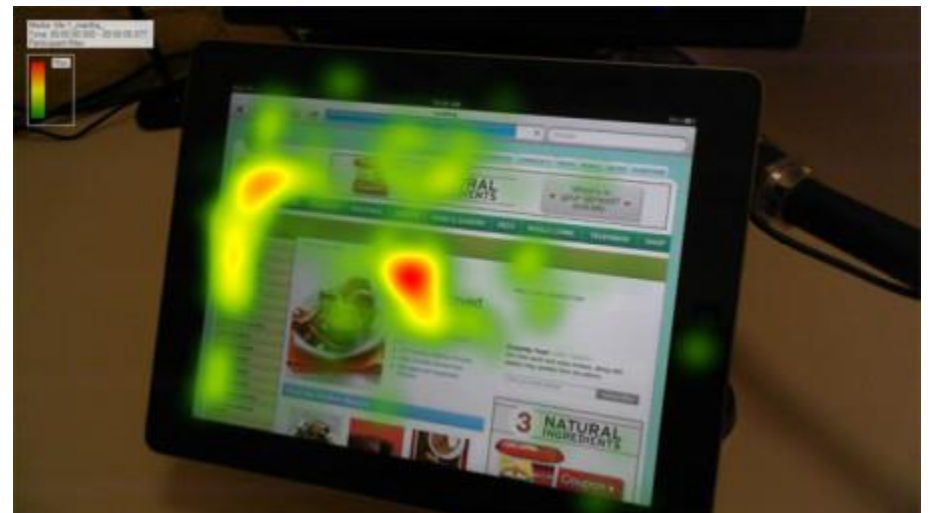Smart phones

# Emerging technologies

- Gesture-based computing
  - [Munich Digitization Center of the Bavarian State Library](#)
  - The Leap Motion Controller (Plugin for PC and Mac)
- [Double Robotics](#)
- Eye tracking
  - Usability study
  - User interaction

Tobii

**iPhone**

**iPad**

**Web**

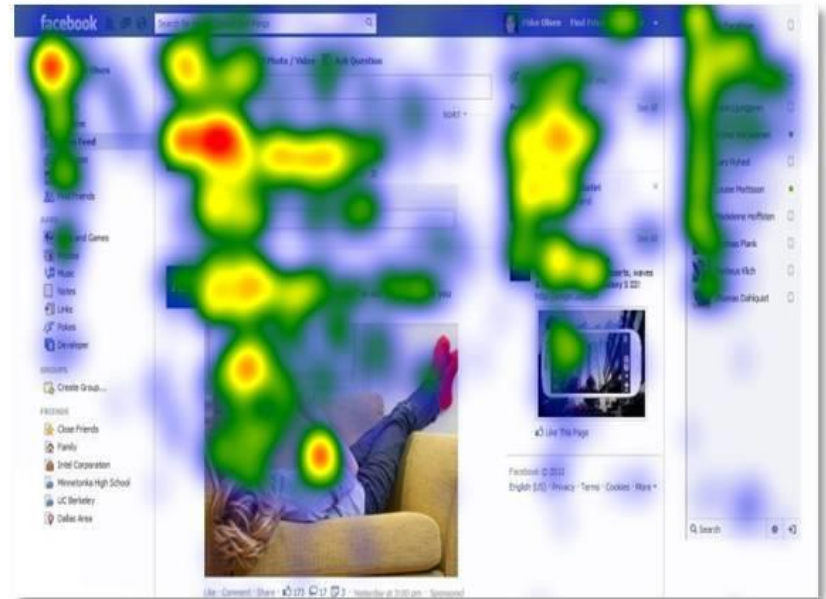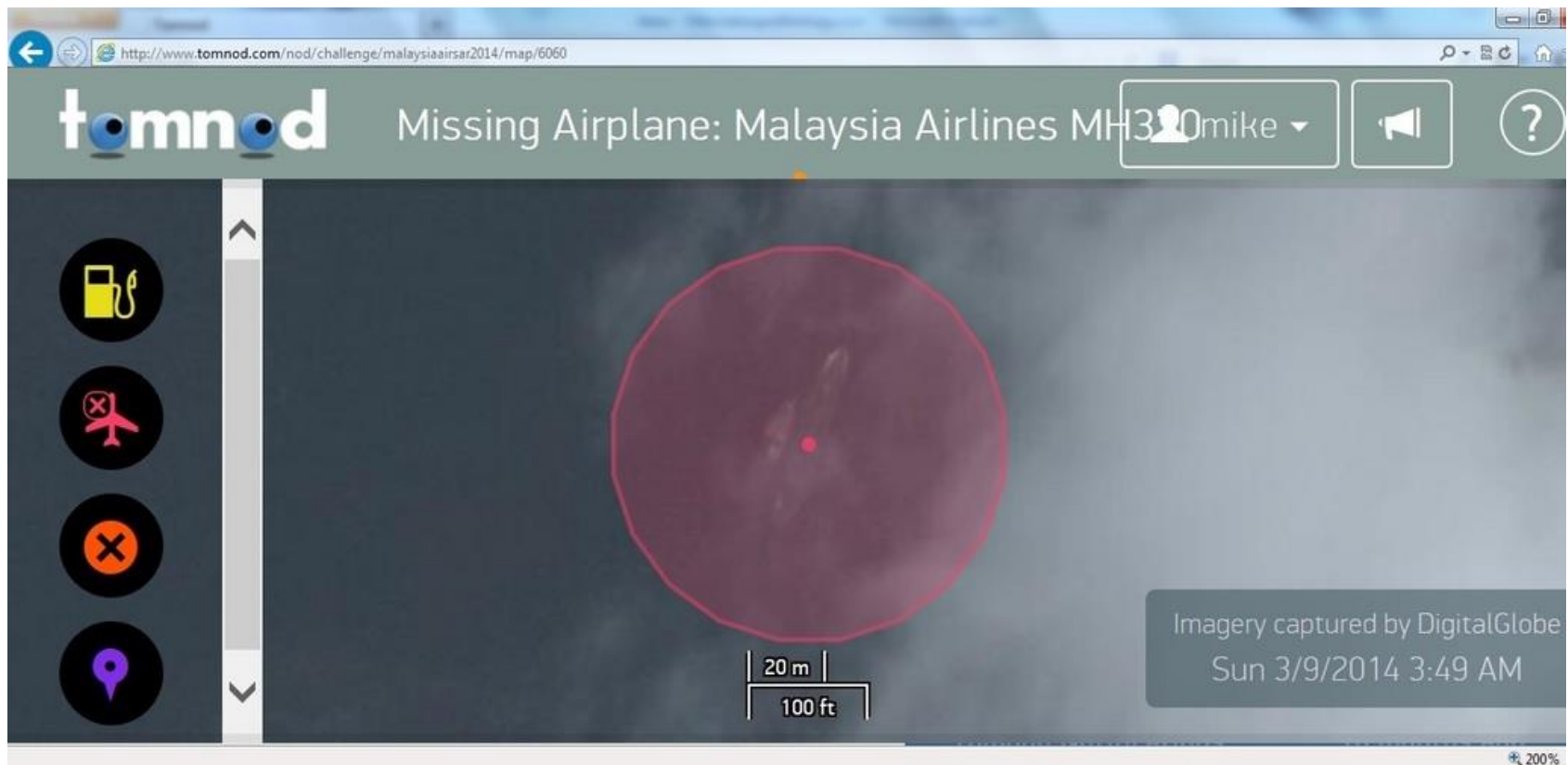http://www.mynewsdesk.com/us/sticky/images/facebook-s-web-ads-vs-its-iphone-and-ipad-ads-166340

# Social media analytics

- Libraries will increasingly benefit from user generated content and crowd-sourced data to provide customized and quality services and resources.
  - Tweets
  - Reviews
  - Ratings
  - Tags
  - Comments
  - Videos

MEDIA & CULTURE    INDUSTRY NEWS

# Malaysia Airlines Missing Plane: Can Crowdsourcing Help Locate Flight MH370? DigitalGlobe Hopes So



http://www.tomnod.com/nod/challenge/malaysiaairsar2014/map/6060

tomnod    Missing Airplane: Malaysia Airlines MH370    mike ▾    ◀    ?

20 m
100 ft

Imagery captured by DigitalGlobe
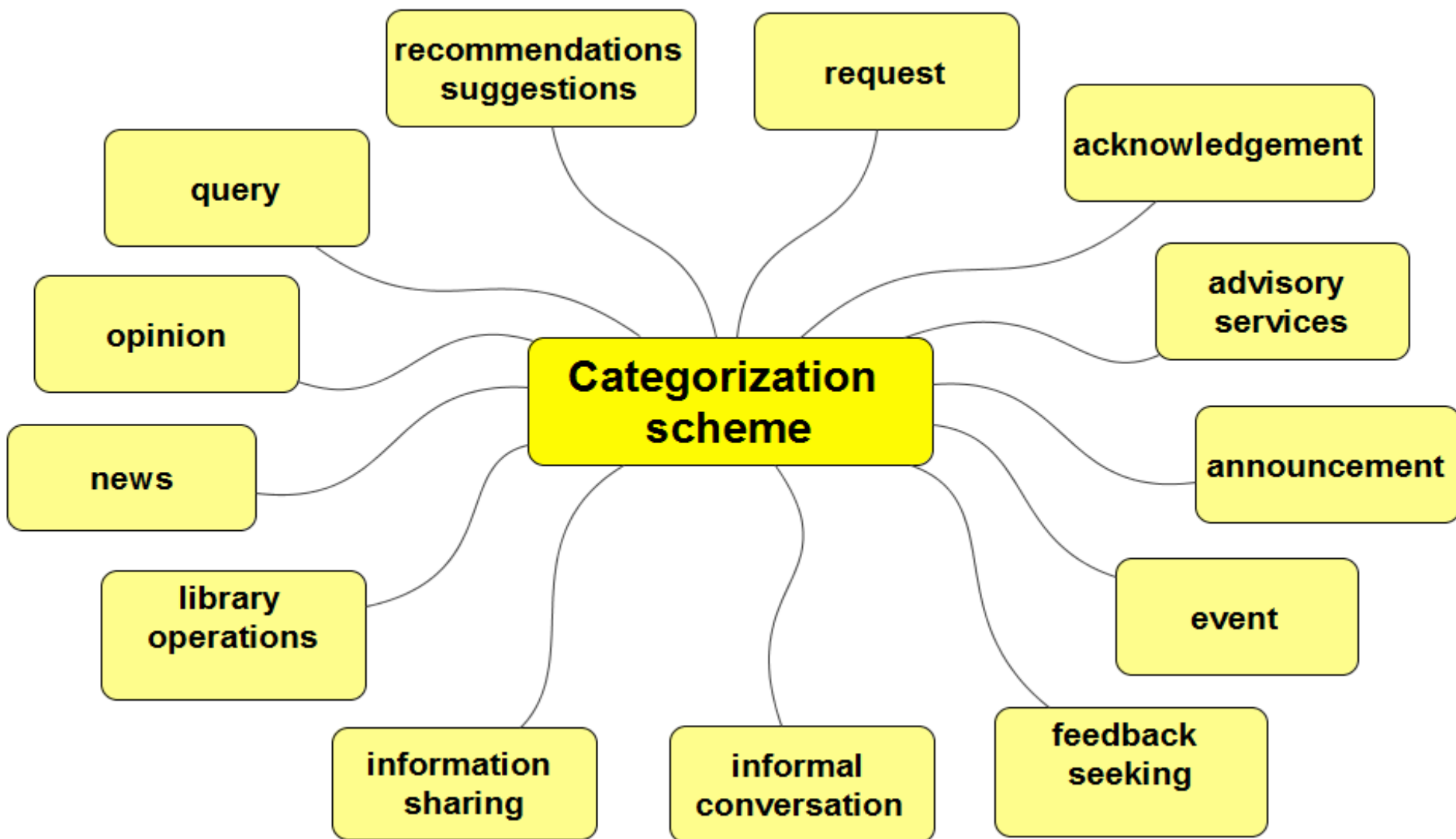Sun 3/9/2014 3:49 AM

200%

# Example 1: Twitter content categorization

- Use of Twitter at EPL
- Examine the nature and content of tweets
- A proposed tweet categorization scheme
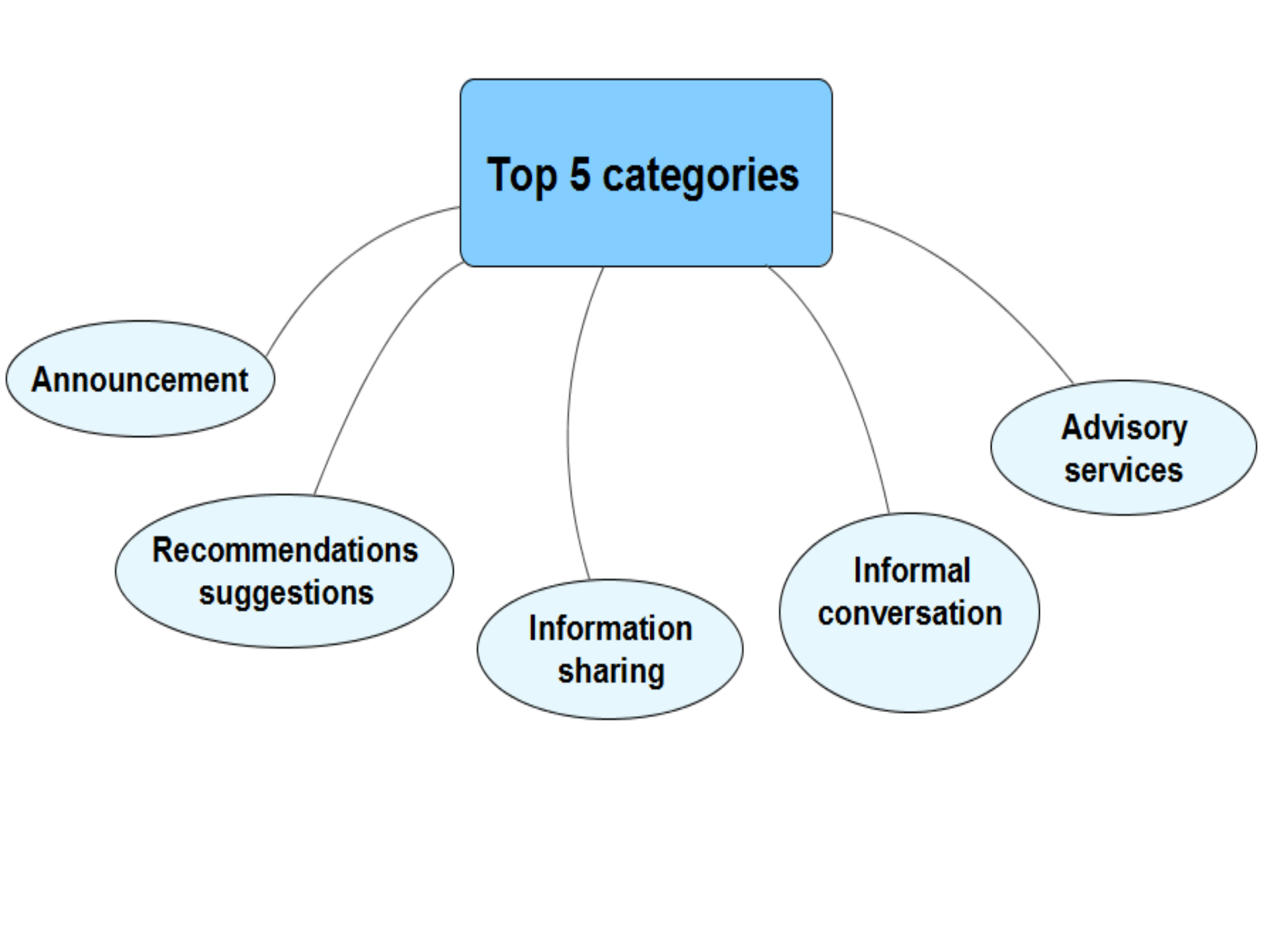
Shiri, A. & Rathi, D. (2013) Twitter Content Categorization: A Public Library Perspective. J*ournal of Information and Knowledge Management*. 12 (4).

**Categorization Scheme: 13 Main Categories**

Top 5 categories

- Announcement
- Recommendations suggestions
- Information sharing
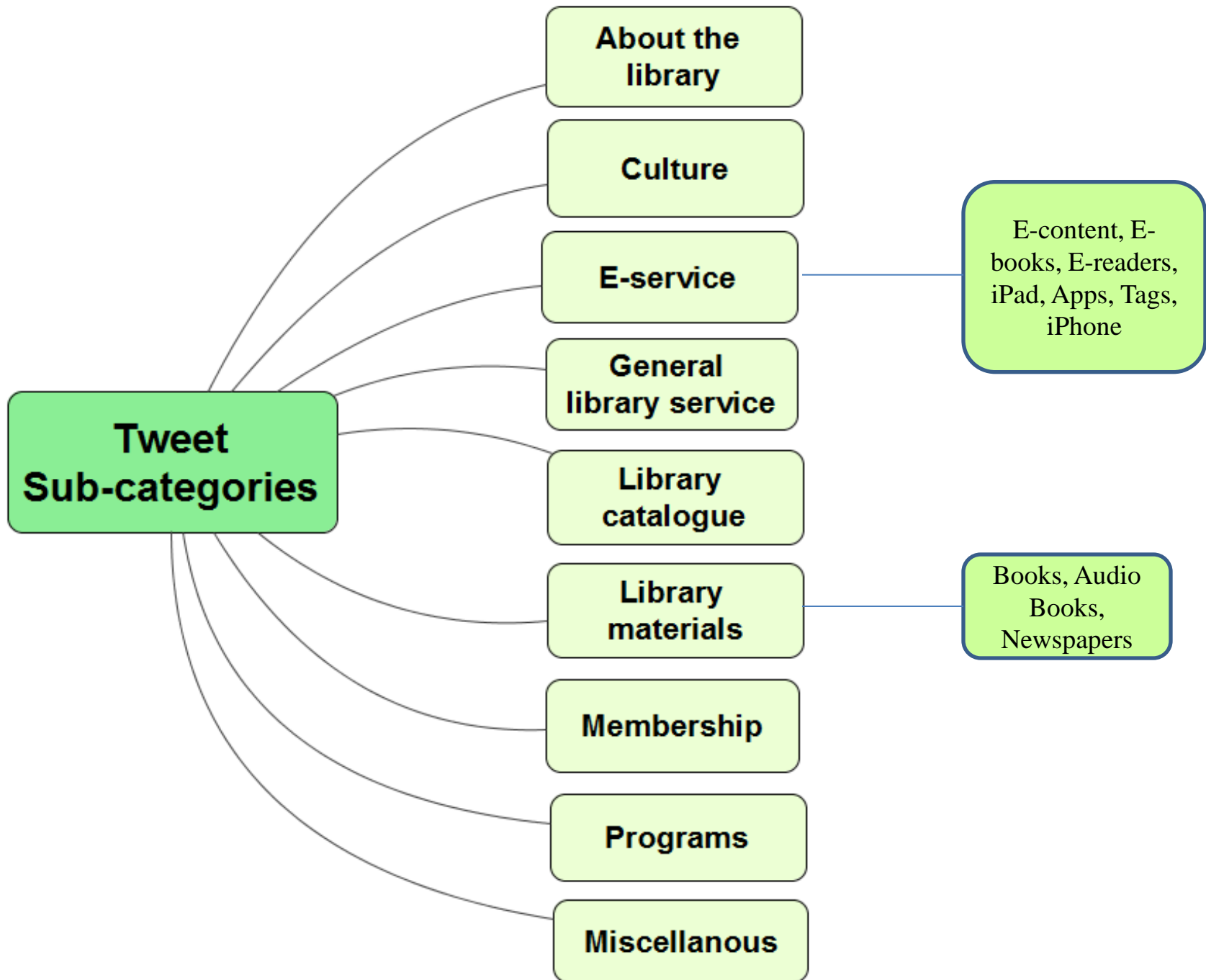- Informal conversation
- Advisory services

```
                        ┌──────────────────┐
                        │  About the       │
                        │    library       │
                        └──────────────────┘

                        ┌──────────────────┐
                        │    Culture       │
                        └──────────────────┘
                                                    ┌──────────────────────┐
                        ┌──────────────────┐        │  E-content, E-       │
                        │    E-service     │────────│  books, E-readers,   │
                        └──────────────────┘        │  iPad, Apps, Tags,   │
                                                    │      iPhone          │
                        ┌──────────────────┐        └──────────────────────┘
    ┌──────────────┐    │    General       │
    │    Tweet     │    │ library service  │
    │Sub-categories│    └──────────────────┘
    └──────────────┘
                        ┌──────────────────┐
                        │    Library       │
                        │    catalogue     │
                        └──────────────────┘
                                                    ┌──────────────────┐
                        ┌──────────────────┐        │  Books, Audio    │
                        │    Library       │────────│  Books,          │
                        │    materials     │        │  Newspapers      │
                        └──────────────────┘        └──────────────────┘

                        ┌──────────────────┐
                        │   Membership     │
                        └──────────────────┘

                        ┌──────────────────┐
                        │   Programs       │
                        └──────────────────┘

                        ┌──────────────────┐
                        │   Miscellanous   │
                        └──────────────────┘
```
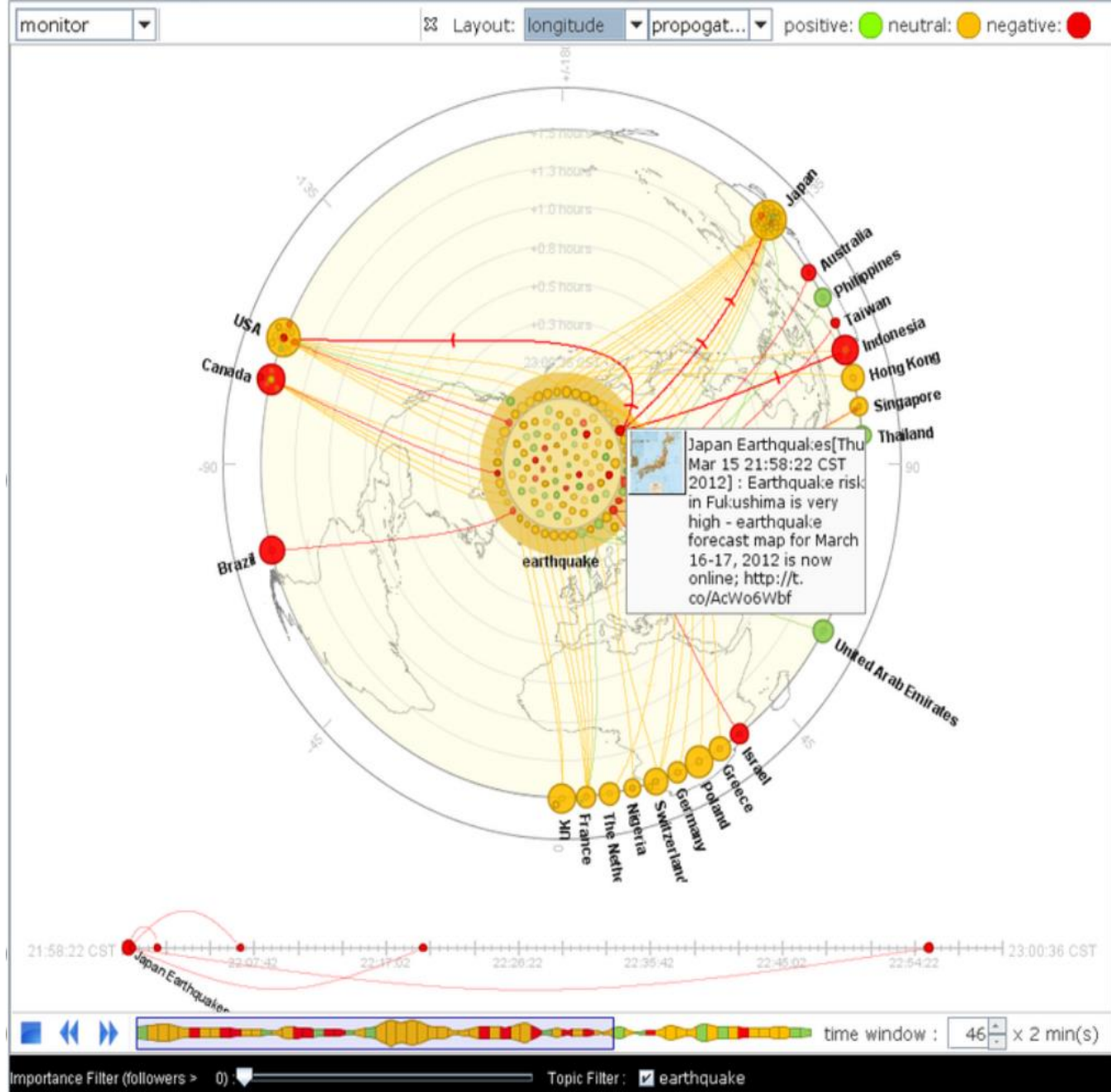
50

# Example 2: User generated comments in the EPL catalogue

- Analysis and visualization of user comments
- Example: Twilight
- There are 290 comments made by readers
- Analysis and visualization

# Sentiment analysis in social media:

- **tweets**
- **blogs**
- **services**
- **programs**

# Future librarians

- Data, information and knowledge managers
- Innovators
- Educators
- Evaluators
- Leaders
- Online community facilitators
- Partners
- User experience experts

# Thank you!

# [Double Robotics](http://www.doublerobotics.com/)

Teleconferencing

Potential for library services