

Workshop:

Government and the Internet: Participation, Expression and Control

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e-Government - Are Public Data really Open and Clear to Citizens?

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Government information (public data) and Open government

*For better realizing the cornerstones of **open government**, which are transparency, participation and collaboration, public departments and agencies are required to publish **government information** online, to improve the quality of government information, to create and institutionalize a culture of Open government and finally to create an enabling policy framework for Open Government.*

(US Open Government Directive, 8 December 2009)

Overview

Relevant concepts: public data and citizens

Tracking progress

“Availability” of public data

“Open” data (format)

“Clear” data (content)

Knowledge representation

Integration/global information

Search and discovery

Conclusions and prospects

Relevant concepts

Public Data: is the objective, factual, non-personal data on which public services run and are assessed, and on which policy decisions are based, or which is collected or generated in the course of public service delivery.

(The Public Sector Transparency Board – Working definition of public data)

Citizens: users of eGovernment services are all citizens conceived as particularly varied: every single occupant of a country, people with minimal computing skills, with all possible background at different level, people unable to speak the main language of the country, people with disability.

Tracking progress

Presumption of close data: Government data not publicly available - Available only on specific request under legislation on the right to access

ICTs "flywheel effect" - (e-Gov) - cultural change

Presumption of openness data: All Government information published

Transparency as an issue of the public debate (e.g., transparency in the EU agenda)

Right to access as pertaining to all citizens independently from a specific interest

Openness in the EU context: strengthening citizen rights

- ⇒ **Treaty on European Union (1992) - Declaration on the right of access to information:** Transparency of the decision-making process strengthens the democratic nature of the institutions and the public's confidence in the administration
- ⇒ **White Paper on European governance (2001):** Five principles underpin good governance and the changes proposed in this White Paper: openness (and participation, accountability, effectiveness and coherence.)
- ⇒ **Art. 1 TEU:** An ever closer union among the peoples of Europe, in which decisions are taken as openly as possible
- ⇒ **Art. 10 TEU:** Every citizen shall have the right to participate in the democratic life of the Union. Decisions shall be taken as openly and as closely as possible to the citizen
- ⇒ **Art. 15 TFEU (ex Article 255 TEC):** In order to promote good governance and ensure the participation of civil society, the Union's institutions, bodies, offices and agencies shall conduct their work as openly as possible. - Right of access to documents
- ⇒ **Regulation EC no 1049/2001:** "... to ensure the widest possible access to documents"

Public data and citizens: the issue at stake

Citizens need **knowledge** not only **data**

Example:

Citizens requesting in the legal domain needs

- to have not only an answer,

but also

-a reassurance that the answer is complete and correct, that no other relevant information has been missed out, and that information held implicitly in the information source has been rendered explicit*

Knowledge can derive from open and clear **data**

* Shadbolt, N., O'Hara, K., Salvadores, M. and Alani, H. (2011), eGovernment. In: *John Domingue, Dieter Fensel & James Hendler (eds.), Handbook of Semantic Web Technologies*, pp. 840-900, Springer-Verlag.

Disclosing information: availability as a first step

Availability of public data is a fundamental step towards the realization of open government (participation, accountability, collaboration)

BUT

it implies data available on the Web often characterized by :

- deriving from heterogeneous sources
- created by different actors
- represented in different formats
- vary in quality and completeness

Is this kind of data really Open and Clear to Citizens?

Open (format)

Open format is a format that is platform independent, machine readable, and made available to the public without restrictions that would impede the re-use of that information*

Essential principles of open data:

- Primary (*collected at the source – finest possible granularity*)
- Timely (*as quickly as necessary to preserve the value of data*)
- Machine-processable (*allowing automated process of data*)
- Non-discriminatory (*available to anyone without registration*)
- Non-proprietary – open standard
- License free (*no subject to any copyright*)

Openness of data encourages a developer community and third party organizations to use that data and build their own applications using it (re-use of open government data)

*US Open Government Directive, 8 December 2009

Example (1) data.gov.uk

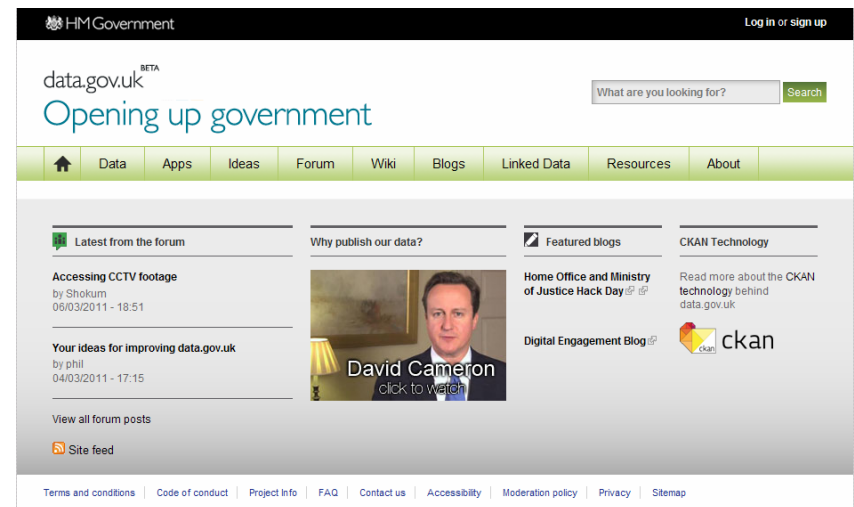
The Government is releasing public data to help people understand how government works and how policies are made. Some of this data is already available, but data.gov.uk brings it together in one searchable website.

Making this data easily available means it will be easier for people to make decisions and suggestions about government policies based on detailed information.

From data.gov.uk, raw data driving government forward can be accessed.

This can then be used by people to build useful services.

(<http://data.gov.uk/about>)



Example (2) data.gov (US)

The purpose of Data.gov is to increase public access to high value, machine readable datasets generated by the Executive Branch of the Federal Government.

As a priority Open Government Initiative Data.gov increases the ability of the public to easily find, download, and use datasets that are generated and held by the Federal Government.

Data.gov provides descriptions of the Federal datasets (metadata), information about how to access the datasets, and tools that leverage government datasets.

(<http://www.data.gov/about/>)



An Official Web Site of the United States Government

Monday, March 07, 2011 Text: A A A Share

DATA.GOV
FAKING IS A CRIME

HOME DATA TOOLS COMMUNITY METRICS OPEN DATA SITES GALLERY WHAT'S NEW

VISIT THE NEW HEALTH DATA COMMUNITY
Find and discuss health-related data from across the Federal Government.

Most Popular Datasets

- 1 US GAAP RSS Feed of XBRL Financials
- 2 Worldwide M1+ Earthquakes, Past 7 Days
- 3 Food and Drug Administration--Recalls
- 4 Personnel Trends by Gender/Race
- 5 1987 Toxics Release Inventory data for the...

SEARCH OUR CATALOGS
Search our catalogs... SEARCH

APPS

With so much government data to work with, developers are creating a wide variety of applications, mashups, and visualizations. From crime statistics by neighborhood to the latest trends in SUV's, it's easy to explain the environment!

COMMUNITY

Data.gov is leading the way in democratizing public sector data and driving innovation. The data is being surfaced from many locations making the Government data stores available to researchers to perform their own analysis. Developers are finding good uses for the datasets, providing interesting and useful applications that allow for new views and public analysis. This is a work in progress, but this movement is spreading to cities, states, and other countries. After just one year a community is born around open government data.

SEMANTIC WEB

As the Web of linked documents evolves to include the Web of linked data, we're working to maximize the potential of Semantic Web technologies to realize the promise of Linked Open Government Data.

Thanks to our collaboration with the Tetherless World Constellation at the Rensselaer Polytechnic Institute, Data.gov is now hosting one of the largest open

Just look at the numbers:

Example (3) data.gov.au

Data.gov.au provides an easy way to find, access and reuse public datasets from the Australian Government and state and territory governments.

It encourages all users to improve government information by using it to develop tools and applications which benefit all Australians.

(<http://data.gov.au/>)

The screenshot shows the data.gov.au website interface. At the top left is the Australian Government logo and the data.gov.au logo. A search bar is located at the top right with the text "Search our catalogue..." and a "SEARCH" button. Below the search bar is a navigation menu with links for Home, Data, Catalogues, Apps, About, and Suggest. The main content area is divided into two columns. The left column features a section titled "Median waiting times for elective surgery" with a sub-header "The median waiting time is the number of days within which half of all patients at this hospital received their surgery." Below this are two data points: "All eye surgery" (35 days compared to the national average of 69 days) and "Cataract extraction" (33 days compared to the national average of 86 days). Each data point includes a "See previous year's data" link and a gauge chart showing the current value relative to the national average. The right column is titled "Featured" and lists several items: "Contest: Libraryhack 2011", "App: Suburban Trends", "Data: My School", "Data: ABS Census Online", "App: Lobby Lens", "Data: MyHospitals", and "App: Know Where You Live". At the bottom of the page, there is a "Welcome" section with a brief description of the website's purpose and a "Suggest a dataset", "Submit a dataset", and "Submit an app" section with corresponding icons.

Open data sites

International data.gov websites

United States of America - <http://www.data.gov/statedatasites>

Australia - <http://data.australia.gov.au>

Canada -

Canadian Parliament: <http://openparliament.ca>

City of Edmonton: <http://data.edmonton.ca/>

City of Mississauga: <http://www.mississauga.ca/data>

City of Nanaimo: <http://www.nanaimo.ca/datafeeds>

City of Ottawa: http://www.ottawa.ca/online_services/opendata/index_en.html

City of Toronto: <http://www.toronto.ca/open>

City of Vancouver: <http://data.vancouver.ca/>

Denmark - <http://digitaliser.dk/resource/432461>

Estonia - <http://pub.stat.ee/px-web.2001/Dialog/statfile1.asp>

Finland - http://www.suomi.fi/suomifi/tyohuone/yhteiset_palvelut/avoin_data/

Germany - <http://www.portalu.de/ingrid-portal/portal/default-page.psm1>

Greece - <http://geodata.gov.gr/geodata/>

Ireland - <http://www.statcentral.ie/>

Italy - <http://www.dati.piemonte.it/>

New Zealand - <http://www.data.govt.nz>

Norway - <http://data.norge.no>

Spain -

Proyecto Aporta: http://www.aporta.es/web/guest/buscador_de_catalogos

Open Data Catalunya: <http://dadesobertes.gencat.cat/>

Open Data Euskadi: <http://opendata.euskadi.net/>

United Kingdom - <http://data.gov.uk>



Source: data.gov

Defining clearness

Adjective

- **S: (adj) clear** (readily apparent to the mind) "*a clear and present danger*"; "*a clear explanation*"; "*a clear case of murder*"; "*a clear indication that she was angry*"; "*gave us a clear idea of human nature*"
- **S: (adj) clear** (free from confusion or doubt) "*a complex problem requiring a clear head*"; "*not clear about what is expected of us*"
- **S: (adj) clear, open** (affording free passage or view) "*a clear view*"; "*a clear path to victory*"; "*open waters*"; "*the open countryside*"
- **S: (adj) clear** (allowing light to pass through) "*clear water*"; "*clear plastic bags*"; "*clear glass*"; "*the air is clear and clean*"
- **S: (adj) clear** (free from contact or proximity or connection) "*we were clear of the danger*"; "*the ship was clear of the reef*"
- **S: (adj) clear** (characterized by freedom from troubling thoughts (especially guilt)) "*a clear conscience*"; "*regarded her questioner with clear untroubled eyes*"
- **S: (adj) clean, clear, light, unclouded** (of sound or color) free from anything that dulls or dims) "*efforts to obtain a clean bass in orchestral recordings*"; "*clear laughter like a waterfall*"; "*clear reds and blues*"; "*a light lilting voice like a silver bell*"
- **S: (adj) clear, unmortgaged** ((especially of a title) free from any encumbrance or limitation that presents a question of fact or law) "*I have clear title to this property*"
- **S: (adj) clear, clean-cut, clear-cut** (clear and distinct to the senses; easily perceptible) "*as clear as a whistle*"; "*clear footprints in the snow*"; "*the letter brought back a clear image of his grandfather*"; "*a spire clean-cut against the sky*"; "*a clear-cut pattern*"
- **S: (adj) well-defined, clear** (accurately stated or described) "*a set of well-defined values*"
- **S: (adj) clear** (free from clouds or mist or haze) "*on a clear day*"
- **S: (adj) clean, clear** (free of restrictions or qualifications) "*a clean bill of health*"; "*a clear winner*"
- **S: (adj) clear** (free from flaw or blemish or impurity) "*a clear perfect diamond*"; "*the clear complexion of a healthy young woman*"
- **S: (adj) clear** (clear of charges or deductions) "*a clear profit*"
- **S: (adj) clear, decipherable, readable** (easily deciphered)
- **S: (adj) absolved, clear, cleared, exculpated, exonerated, vindicated** (freed from any question of guilt) "*is absolved from all blame*"; "*was now clear of the charge of cowardice*"; "*his official honor is vindicated*"
- **S: (adj) clear, percipient** (characterized by ease and quickness in perceiving) "*clear mind*"; "*a percipient author*"

Adverb

- **S: (adv) clear, all the way** (completely) "*read the book clear to the end*"; "*slept clear through the night*"; "*there were open fields clear to the horizon*"
- **S: (adv) clearly, clear** (in an easily perceptible manner) "*could be seen clearly under the microscope*"; "*She cried loud and clear*"

[WordNet home page](#)

Clear (content)

Clear relates to:

- Knowledge representation
- Integration/global information
- Search and discovery

Knowledge representation

Governments need to:

- Acquire information about themselves
- Describe themselves to citizens and stakeholders

Example:

Ontological representation based upon *life event*, an entity that links together administrative services, procedures and requirements.

See **Access-eGov** project adopting life events to model government process from the point of view of the users which can browse the site by using life events.

Integration/global information

The information resources in e-government contexts are a wide set, (including data, documents, files, services) coming from different sources

⇒ ***Need for semantic interoperability (which enables organisations to process information from external sources in a meaningful manner. It ensures that the precise meaning of exchanged information is understood and preserved throughout exchanges between parties*)***

Different level of specificity, different types of data to be exchanged and linked

⇒ **Need for semantic markup to allowing machine understanding of data**

Governments are complex entities; each entity has its own information and descriptive terminologies

⇒ **Need for integration operating with different terminologies**

* European Interoperability framework , 2010

Search and discovery

Data are stored in many databases in different departments and locations.

To realize the potential gains from this data it is necessary to bring it together from across government and elsewhere on the Web to achieve synergy and maximize value.

The **enhancement of advanced searching possibilities and facilities** implies the building up of specific semantic tools such as thesauri and ontologies allowing to structure contents and to retrieve them according to their implicit or explicit meaning. This means that the user can access the data starting a search from a significant word or concept without having a specific background.

Semantic resources

**The *file rouge* is the Semantic Web approach:
implementation of semantic resources (data+metadata)**

Controlled structured vocabularies (now called KOS: *knowledge organization systems*): hierarchies of *terms* for organizing knowledge in a given domain supported by a community of practice and a set of standards

Lexical or lightweight ontologies: nets of *concepts* structured according to lexical, taxonomic and conceptual relations

Formal ontologies: *classes* of entities described by formal (meta) properties and attributes, expressing a meaning agreed among the members of a community of interest

Conclusions

Whilst the realisation of the openness of data is almost realized, the clearness is not yet completed as further improvements are needed



Prospects

Upcoming Trends to be considered:

⇒ **Linked Data initiative** offers a vision in which data are published on the Web oriented to interoperability and reusability, allowing systems to incorporate and understand data.

Release data and then re-publish it in linked data form (*One of the Public Data Principles by Public Sector Transparency Board - UK*)

⇒ **The Linked Data implementation of the Semantic Web** concept represents a complement of the Governments interest to put data freely on-line, where qualified relationships between them are established and data can be better accessed and understood. This contributes to citizen awareness of government activities as well as to Government transparency and accountability.

⇒ Considering **semantics** as the cornerstone of future applications