

Taxonomy Development Process Case Studies

Joseph A Busch

Founder and Principal

Overview

- ❖ Any taxonomy development process needs to engage key stakeholders such as:
 - End users
 - Content managers
- ❖ Engaging busy professionals and bureaucrats so that they have the maximum impact with the minimum effort is a tricky business.
- ❖ This talk will discuss two public sector taxonomy development process projects:
 - Singapore Government-wide Metadata Standard (SGMS)
 - U.S. Environmental Protection Agency (EPA) Web Taxonomy

Singapore Government-wide Metadata Standard (SGMS)

Case Study

SGMS project objectives

- ❖ Enable effective and efficient searches that meet the 30% improvement in search performance target.
- ❖ Provide taxonomy to ease searching and retrieving content.
- ❖ Establish government-wide taxonomy and metadata standard.
 - Singapore Government-wide Metadata Standard (SGMS)
- ❖ Facilitate automated meta-tagging of content for agencies.

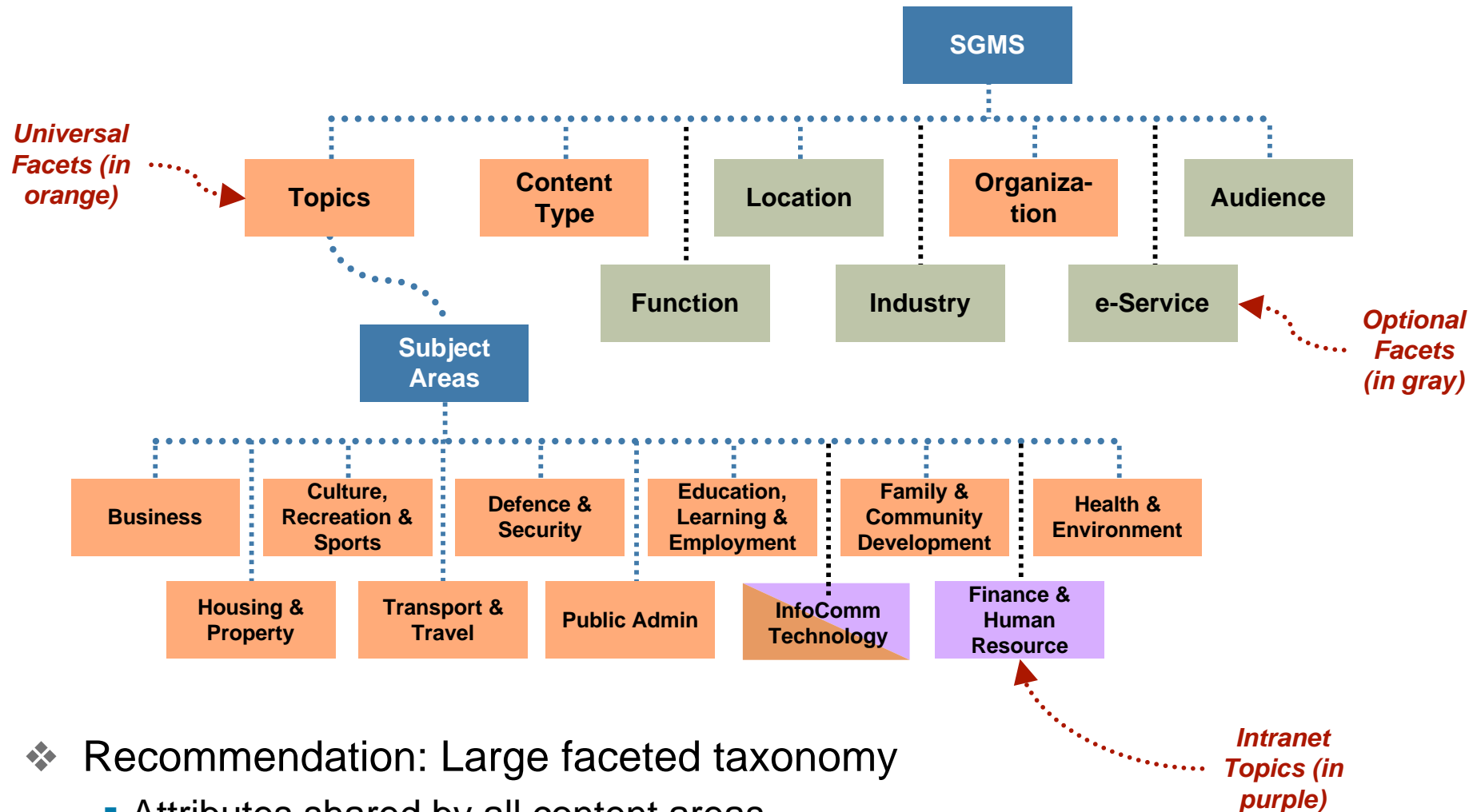
Domain and Subject Owner participation

Stage	Domain Owners	Subject Owners	Dates
1. Content Analysis			
a) Content analysis			Jun-July 04
b) Mass briefing	✓	✓	05 Aug 04
c) Pre-Alpha Taxonomy workshops	✓	✓	06 Aug 04 – 17 Aug 04
2. Taxonomy Build			
a) Alpha Taxonomy workshops	✓	✓	28 Sep 04 – 08 Oct 04
b) Beta Taxonomy workshops	✓	✓	17 Nov 04 – 26 Nov 04
c) Taxonomy Release 1.0 (Final)	✓	✓	20 Dec 04 – 10 Jan 05
3. Taxonomy & Methodology Use			
a) Review Standard & Methodology	✓		17 Nov 04 – 10 Jan 05
b) Domain Owners Training	✓		11 Jan 05 – 24 Jan 05
c) Subject Owners Training		✓	07 Jan 05 – 17 Jan 05

Pre-Alpha SGMS Taxonomy

- ❖ Taxonomy development requires multiple stages
- ❖ The Pre-Alpha is a first cut taxonomy used as a discussion basis with the Domain teams
- ❖ The inputs to the pre-alpha are:
 - Crawled content from existing Singapore Government websites.
 - Review of existing ecitizen.gov.sg & eTowns content.
 - Review of US Govt & Commonwealth countries' taxonomies (UK, Canada, NZ, Australia)
 - Best practices, background & experiences of the taxonomists.

Proposed high-level faceted SGMS Taxonomy



- ❖ Recommendation: Large faceted taxonomy
 - Attributes shared by all content areas.
 - Some universal facets, some optional facets.
 - One facet, Topics, is a subject taxonomy with sub-facets for various Subject Areas (Domains)

Pre-Alpha SGMS Taxonomy workshop objectives

- ❖ **Goal: To identify broad and narrow Subject Areas in each Domain.**
 - **List of Subject Areas will become more detailed later in project. At this stage we want to identify the broadest and most important Subject Areas.**
- ❖ To discuss Subject Area and e-Services definitions, identify core content and information services.
- ❖ To review and discuss the Pre-alpha version of the Taxonomy, and each domain's Subject Area hierarchy.
- ❖ To gather feedback on how things should be changed for the Alpha version
 - Identify additional Subject Areas and synonyms.
 - Determine additional Subject Owners, if applicable.
 - Identify additional sources for existing vocabularies.
 - Discuss Subject Areas that may overlap across Domains.

Taxonomy Workshops Schedule

Date and Time	Domain
06-Aug-2004, 9:30am - 12:00pm	Transport & Travel
11-Aug-2004, 9:30am - 12:00pm	Family & Community Development
11-Aug-2004, 9:30am - 12:00pm	Defence & Security
11-Aug-2004, 2:30pm - 5:00pm	Health & Environment
12-Aug-2004, 9:30am - 12:00pm	Business (Workshop #1)
12-Aug-2004, 2:30pm - 5:00pm	Education, Learning & Employment
13-Aug-2004, 2:30am - 5:00pm	Housing & Property
16-Aug-2004, 9:30am - 12:00pm	Infocomm Technology
16-Aug-2004, 2:30pm - 5:00pm	Culture, Recreation & Sports
17-Aug-2004, 9:30am - 12:00pm	Finance & Human Resource
17-Aug-2004 2:30pm - 5:00pm	Business (Workshop #2)
18-Aug-2004, 9:30am - 12:00pm	Public Administration

Sample Worksheet: Transport and Travel Subject Area

Key Subject areas	Broad Subject Area (e.g. "Tourism")	Narrow Subject Area (e.g. "taxi fare")	Location (e.g. "CBD")	Organization (e.g. "CAAS")	Content Type (e.g. "Map")	Audience (e.g. "Passengers")	Industry (e.g. "Shipbuilding")	e-Service (e.g. "Check scheduler")	Synonyms, Related subject areas, and Notes
Transport	X								Transportation
Aviation		X							Aeronautics, Airlines
Airports			X						Aerodromes, "Changi Airport" is specific location, "CAAS" is related organization.
Flight schedules		X			X				"Check schedules online" is a particular service
Car Parks		X	X						Parking Lots
Dockyards		X	X						
Freight									Cargo, Transport of Goods
Public Transport	X								
Buses									
Railways									Trains, Light Rail
Taxis		X							

Next 3 Months Activities...

- ❖ Additional feedback by email after the workshops.
- ❖ Follow-up meetings to gather more detailed comments.
- ❖ Taxonomy Strategies continues refining the taxonomy from the bottom-up and the top-down, based on feedback from workshops and follow-up meetings.
- ❖ Alpha Taxonomy will:
 - Finalize top-level of facets and top-level of Subject Areas.
 - Provide draft of next levels of facets and Subject Areas.
- ❖ Alpha Taxonomy circulated.
- ❖ Another round of workshops to review the Alpha version and work on next levels of facets and Subject Areas.

Singapore Government Online Search

<http://mysearch.internet.gov.sg/>

Typical type & go full text
relevance ranked search

Singapore Government
Online Search

Search

Contact Info | Feedback
Advanced Search | Help

Singapore Government
Integrity • Service • Excellence

New to this search?
This is a brand new search engine which allows you to search effectively for information especially those pertaining to Singapore. You may choose to do a general search above or select the relevant category below to start.

Topics Organisation Audience Industry Location Content Type

⊕ Business ⊕ Culture, Recreation & Sports ⊕ Defence & Security ⊕ Education, Learning & Employment
⊕ Family & Community Development ⊕ Health & Environment ⊕ Housing ⊕ Public Administration
⊕ Science & Technology ⊕ Transport & Travel

Privacy Statement | Terms of Use
Copyright © 2006 Government of Singapore. All rights reserved.

Facetted taxonomy navigation

Broaden search by un-checking boxes

Search

Go

Advanced Search | Help

Search results sorted by date

Your search contains:

- Industry :
Manufacturing
- Topics : Science & Engineering
- Topics : Electrical & Electronic Engineering
- Topics : Robotics

Remove All

Search within results

Go

Browse Results By

- Topics
- Organisation
- Audience
- Industry
- Location
- Content Type

Topics

- Science & Technology
 - Science & Engineering
 - Electrical & Electronic Engineering
 - Robotics

Filter search results by another facet

Search results

Filter & sort results. Click to see options.

Display Only: Date Description

Results 1-9 of about 9

A*STAR Corporate Site - About A*STAR - News - Press Release Details

These include four new awards, such as the 'Best New Comer' Award, which aims to recognise the fighting spirit of new participants, the 'Best Mascot Award', 'Most Creative Journal Award' and the 'Best Cheer Team Award'. In view of the overwhelming response to the 'Dancing Robot' and 'Sumobot' side-show

www.a-star.edu.sg/astar/about/action/pressreleas.....etails.do?id=2925937c56Ac... - 47k

More from this site | Similar Pages

05 Mar 2006

Nanyang Polytechnic - School Of Engineering

Singapore Robotic Games Singapore Robotic Games 2005 Singapore Robotic Games 2004 Singapore Robotic Games 2003 Singapore Robotic Games 2002 :: back to top . Singapore Robotic Games 2002 Singapore Robotic Games is an annual event organized jointly by the Institutions of Higher Learning, Robotic

www.nyp.edu.sg/SEG/seg_achievements_roboticsgames02.htm - 17k

More from this site | Similar Pages

06 Jan 2006

Engineering Week 2004

During the workshop, participants will experiment and find the best way for the robot to hit the golf ball cleanly off the tee and finish with a good follow-through. 2. Fun with Design and Modeling Participants will be exposed to simple 3D software modeling techniques used in engineering design

www.tp.edu.sg/events/press/2004/nov0104_ENGwk.htm - 19k

More from this site | Similar Pages

05 Oct 2005

Team Champion-BOON LAY PRIMARY SCHOOL

ROBOCHAMPION credits Thanks to: We would like to thank the following people for their guidance that leads to our success. We have little knowledge about robots but we are ready to face the challenges in the future for further studies about robot. The Principal of Boon Lay Primary School, Mr

www.boonlaypri.moe.edu.sg/blps/ADD/robotics/Robochampion/credits.html - 5k

More from this site | Similar Pages

01 Sep 2005

EPA Web Taxonomy

Case Study

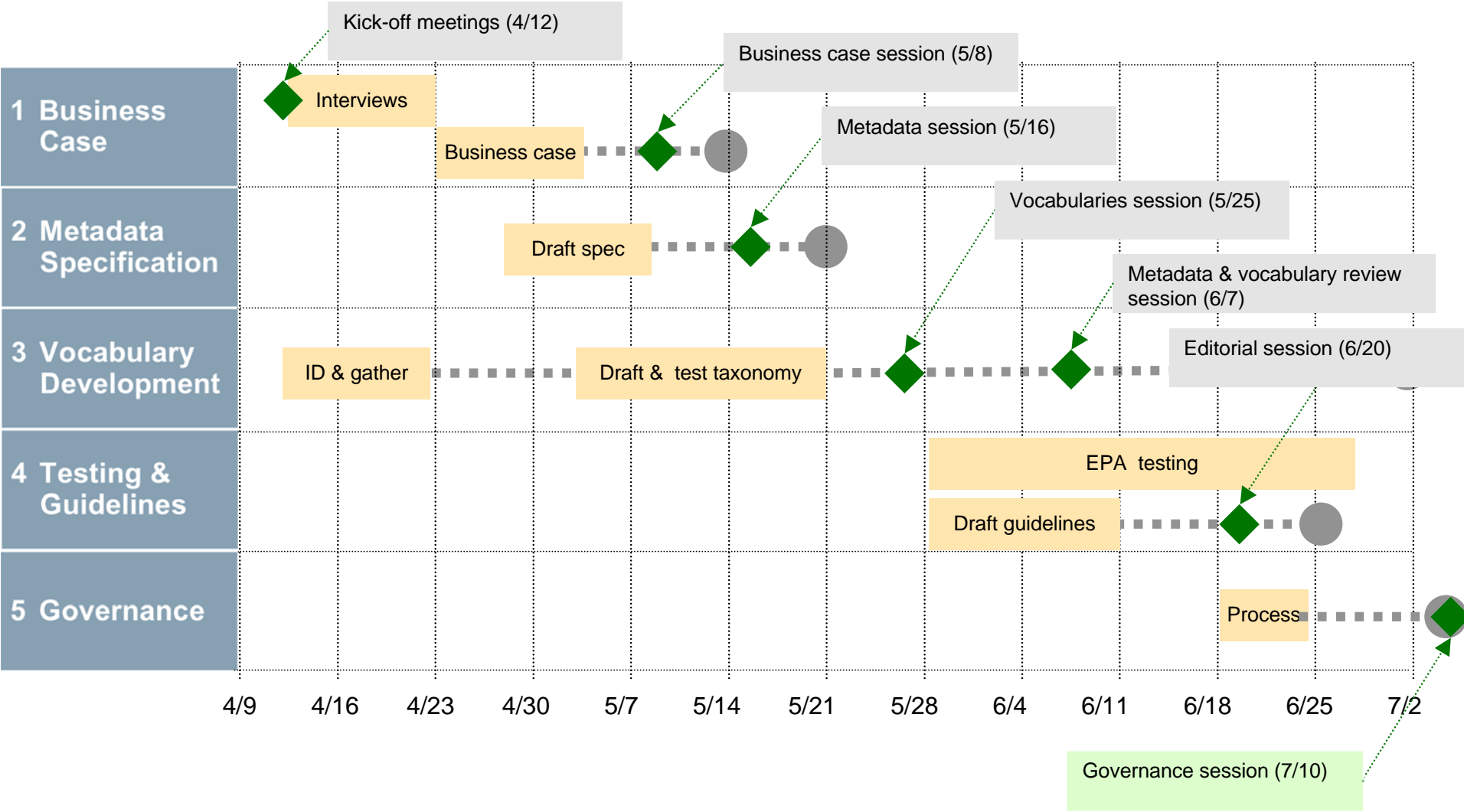
Overall project objectives

- ❖ Define the value of taxonomy to EPA and its constituencies.
- ❖ Factor out the discrete facets (people, places, organizations, and things) from existing vocabularies.
- ❖ Specify how to maintain them as separate controlled vocabularies.
- ❖ Tag some content using the facets in combination.
- ❖ Develop editorial & governance guidelines.

Project approach

- ❖ Taxonomy working group will review project deliverables and participate in five working sessions.
- ❖ Deliverables will be posted to project wiki a few days before working sessions.
- ❖ Working sessions will review deliverables.
- ❖ More feedback will be welcome after working sessions, but the project schedule requires a quick turnaround of deliverables after each working session.
- ❖ The project will move quickly.

Taxonomy project plan



How to define taxonomy value

- ❖ Interview staff involved in managing content.
- ❖ Review interview notes to identify themes & issues.
- ❖ Review internal & external resources mentioned in interviews.
- ❖ Review existing agency websites.
- ❖ Prepare cost benefit analysis.
- ❖ Facilitate business case working session.

Web Taxonomy objectives

- ❖ Provide a single methodology for categorizing information across EPA offices, programs, and regions.
 - Provide incentives for quality user-contributed metadata (search results, more links)
 - Provide almost instantaneous feedback using that metadata.
- ❖ Reduce the time it takes to successfully target and find cross-Program/Region information
 - Enable and enforce content linking across the agency
- ❖ Build common agency-wide terminology resources
 - Eliminate multiple, ambiguous taxonomies
 - Eliminate multiple glossaries, abbreviations and acronyms
- ❖ Group things differently depending on the context
 - e.g., ground water with drinking water, or ground water with water quality
- ❖ Make it easy to change website organization without having to re-index or re-code pages.

EPA Web Taxonomy

Functions	Industries	Laws & Regs	Organizations	Substances	Topics
Services for Citizens Community & Social Services Disaster Mgmt Economic Dev Education Energy Environmental Mgmt General Science & Innovation Homeland Security Intl Affairs & Commerce Law Enforcement Natural Resources Mode of Delivery ... Support Delivery of Services ... Mgmt of Resources Admin Mgmt ...	Agriculture Automobile Repair Banking Chemical Construction Dry Cleaning Electronics & Computer Energy Environmental Extractive Fishing Food Processing Forest Garment & Textile Care Leather Tanning & Finishing Metal Finishing Metal Processing Pesticides Petroleum Pharmaceutical Printing Pulp & Paper Real Estate Transportation	CFR Laws & Legislation Treaties & Agreements USC	EPA Federal Govt Interagency Programs Local Government Military Multi-State Workgroups Non-Government Organization Partner/Network Publication & Information Source State Government Tribal Government	Agricultural Chemical Air Pollutant Allergen Biological Contaminant Chemical Explosive Extremely Hazardous Substance Liquid Waste Microorganism Multimedia Pollutant Mutagen Ozone	Economics & Policy Emergencies & Cleanup Environmental Media Human Health Industrial Research, Prevention & Control Sub-Facets
		Audiences	Geography	Info Types	
		Consumers Contractors & Grantees Government Health Care Providers International Researchers & Scientists Teachers & Kids Technical & Regulated Community	Country & Region United States State Region Regulated Facilities Superfund Sites Watersheds & Wetlands	Basic Facts & Information Community Information Concerned Citizens Resources Curriculum Resources Emergency Preparedness & Response Information Environmental Laws & Regulations News & News Releases Program Resources Resources for Non Profit Organizations Technical Information Test Methods & Models	

EPA Web Taxonomy tagging example



Title: Roles of Federal Agencies	
URL: http://www.epa.gov/radiation/yucca/rolesof.htm	
Facets	Values
Info Types	Basic Information & Facts
Functions	Manage Radiation; Provide Public Information, Education & Outreach
Industries	n/a
Laws & Regs	Energy Policy Act
Organizations	Office of Air and Radiation; Department of Energy; Nuclear Regulatory Commission; Department of Transportation; Mine Safety and Health Administration
Substances	Spent Fuels, High-Level Waste
Topics	Waste Disposal, Radioactive Waste, Radiation Protection
Audiences	All
Geography	Yucca Mountain

EPA Public Access Folder Search

<http://nlquery.epa.gov/epasearch/searchutils/folders.html>

U.S. Environmental Protection Agency



Public access folder search

[Contact Us](#)

You are here: [EPA Home](#) » Search

Search:

Help...

Using folder search

- Enter your search terms as you normally would.
- For most queries, a box containing up to 13 folders will appear to the right of the search results. These are what the search engine has rated as the best folders for organizing your results.
- Click on any of the folders that interest you. This will display the subset of the results that has been assigned to that folder. In most cases, subfolders will display under the open folders.
- Continue drilling down through subfolders until you find the document you are looking for. Folders will go to a maximum of 3 deep.
- Tip: to return to this page, click "Advanced search" from any results page.

Comments and questions

Please email your questions and observations to [the folders group](#). Thank you.

[EPA Home](#) | [Privacy and Security Notice](#) | [Contact Us](#)

Last updated on Friday, June 22nd, 2007
URL: <http://nlquery.epa.gov/epasearch/searchutils/folders.html>

Questions?

Joseph A. Busch
+1-415-377-7912

jbusch@taxonomystrategies.com

www.taxonomystrategies.com