

# Taxonomies for Users

by

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# About Heather Hedden

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- Taxonomy consultant
  - For intranets, enterprise content management, SharePoint, research databases, websites, ecommerce, etc.
  - Independent, through Hedden Information Management
  - Previously as an employed and contract consultant
- Former staff taxonomist
  - At various companies: Gale/Cengage Learning, Viziant, First Wind
- Instructor of online and onsite taxonomy courses
  - Independently through Hedden Information Management
  - Previously at Simmons University - Library & Information Science School
- Author of *The Accidental Taxonomist* (2010, 2016, Information Today, Inc.)

# Outline

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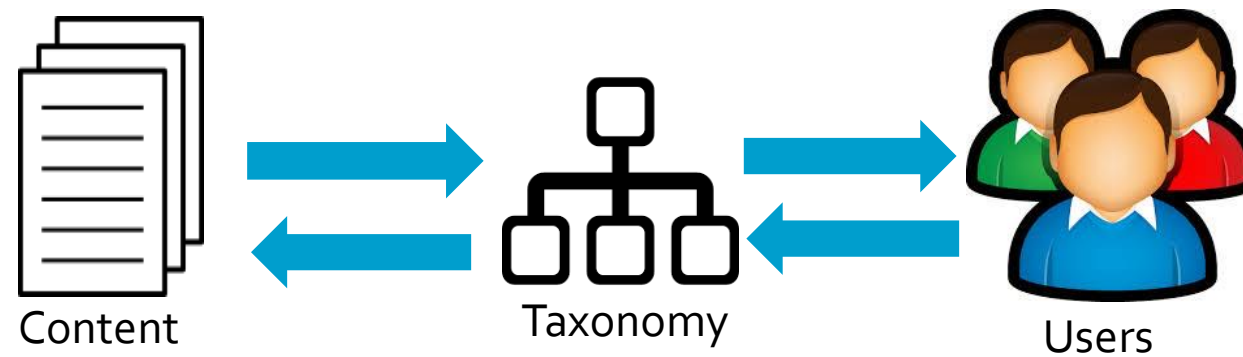
- Introduction to Taxonomies
  - Different approaches
  - Taxonomies vs. classification and navigation systems
- Categories and Tags
- Taxonomy Development
- Hierarchical Taxonomy Displays
- Faceted Taxonomy Displays

# Introduction to Taxonomies

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## What is a taxonomy for?

- Terms are used to tag/index/categorize pages or content to make them easier to be found and retrieved
  - supporting better findability than search (algorithms) alone
- The taxonomy is an intermediary that links the user to the desired content.
- The taxonomy should suit the content and the users.

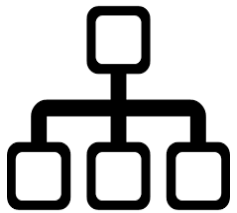


# Introduction to Taxonomies

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## Two major approaches to taxonomies

1. A hierarchy of terms/topics/categories arranged with narrower topics/subcategories displayed under their broader/parent categories.



- To guide users to find the desired topic (and its linked content of pages or documents)
- Similar to navigation and site maps, but more topical and not just based on page titles

2. A controlled vocabulary of metadata tags/labels to apply to pages, posts, or documents, so that they can be more precisely and comprehensively retrieved (than by search algorithms alone on keywords in text).



- Implemented as search suggestion terms, search refinement filters, or post-search suggested related topics and searches

## community

activities	lost+found
artists	missed
childcare	connections
classes	musicians
events	pets
general	politics
groups	rants & raves
local news	rideshare
	volunteers

## services

automotive	labor/move
beauty	legal
cell/mobile	lessons
computer	marine
creative	pet
cycle	real estate
event	skilled trade
farm+garden	sm biz ads
financial	travel/vac
household	write/ed/tran

## discussion forums

android	frugal	pets
apple	gaming	philos
arts	garden	photo

## housing

apts / housing  
housing swap  
housing wanted  
office / commercial  
parking / storage  
real estate for sale  
rooms / shared  
rooms wanted  
sublets / temporary  
vacation rentals

## for sale

antiques	farm+garden
appliances	free
arts+crafts	furniture
atv/utv/sno	garage sale
auto parts	general
aviation	heavy equip
baby+kid	household
barter	jewelry
beauty+hlth	materials
bike parts	motorcycle parts
bikes	motorcycles
boat parts	music instr
boats	photo+video
books	re+learn

## jobs

accounting+finance  
admin / office  
arch / engineering  
art / media / design  
biotech / science  
business / mgmt  
customer service  
education  
etc / misc  
food / bev / h  
general labor  
government  
human resources  
legal / paralegal  
manufacturing  
marketing / pr / ad  
medical / health  
nonprofit sector  
real estate  
retail / wholesale  
sales / biz dev  
salon / spa / fitness  
security  
skilled trade / craft  
software / qa / dba  
systems / network

Craigslist Boston

[boston.craigslist.org](https://boston.craigslist.org)

# Introduction to Taxonomies

**Office DEPOT**  
**OfficeMax**

Products ^ Services v Deals v

Search

Free next-day ship

Office Supplies >

Furniture >

Cleaning >

Breakroom >

Paper >

School Supplies >

Technology >

Ink & Toner >

Tax Return Solutions

Cold & Flu

**Pens, Pencils & Markers**

Pens

Markers & Highlighters

Pencils

Correction Fluid & Tape

**Basic Supplies**

Staplers & Staples

Paper & Binder Clips

Scissors

Paper Punches & Cutters

**Mailing & Shipping**

Envelopes

Shipping & Moving Boxes

Mailers

Packing Tape

Packing Materials

**Filing & Folders**

File Folders

Hanging File Folders

Expanding File Folders

Classification Folders

**Binders & Accessories**

Binders

Dividers & Tabs

Report Covers & Portfolios

Sheet Protectors

**Labels & Label Makers**

Standard Labels

Label Maker Tapes

Address Labels

Label Makers

Name Badges & Holders

**Desk Accessories**

Desk Organizers

Desk Trays

File Organizers

Drawer Organizers

**Calendars & Planners**

Calendars

Planners

Organizers

**More Ways to Shop**

Tax Return Solutions

Post-It & Sticky Notes

Tape & Adhesives

Storage Boxes & Bins

Presentation Boards

[www.officedepot.com](http://www.officedepot.com)

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# World Bank Open Data

Free and open access to global development data

- Population, male
- Population, total
- Population, female
- Rural population
- Urban population
- Population, male (% of total population)
- Population, female (% of total population)
- Population in largest city

World Bank

<https://data.worldbank.org>



## MEASURES

Measure Attributes (4906)

Measure Category (5602)

Measure Published By (5602)

## CHARACTERISTICS

Demographics - Characteristics of People (98)

Establishments/Businesses/Firms (1085)

Geography (5432)

Industry (5465)

Occupation (4474)

Unemployment and Labor Force Status (1)

Worker Characteristics (94)

## SURVEY

Employment, Hours, and Earnings from the Current Employment Statistics survey (National) (42)

Employer Costs for Employee Compensation (388)

Consumer Expenditure Survey (137)

Occupational injuries and illnesses industry data (696)

Sort By: Relevance ▾

Showing Results 1 - 20 of 5602

Show: 20 per page ▾

SEARCH: retirement X

- ☐ All employees, thousands, continuing care retirement communities, seasonally adjusted +
- ☐ Production and nonsupervisory employees, thousands, continuing care retirement communities, seasonally adjusted +
- ☐ Women employees, thousands, continuing care retirement communities, seasonally adjusted +
- ☐ All employees, thousands, continuing care retirement communities, not seasonally adjusted +
- ☐ Women employees, thousands, continuing care retirement communities, not seasonally adjusted +
- ☐ Social Security, private & government retirement by Highest Education: All Consumer Units +
- ☐ Social Security, private & government retirement by Hispanic Origin: All Consumer Units +
- ☐ Social Security, private & government retirement by Census Region: All Consumer Units +
- ☐ Social Security, private & government retirement by Income Deciles: Ninth 10 percent +
- ☐ Social Security, private & government retirement by Race: All Consumer Units +
- ☐ Social Security, private & government retirement by Age: All Consumer Units +
- ☐ Social Security, private & government retirement by Sex: All Consumer Units +
- ☐ Social Security, private & government retirement by Marital Status: All Consumer Units +
- ☐ Social Security, private & government retirement by Income Range: \$70,000 to \$99,999 +

Bureau of Labor Statistics

<https://beta.bls.gov/dataQuery/search>

## Explore Keywords

Enter a keyword:

Go

### Browse Interesting Keywords

action hero	kidnapping
alternate history	knight
ambiguous ending	kung fu
americana	macguffin
anime	medieval times
anti hero	mockumentary
avant-garde	monster
b movie	mother daughter relationship
bank heist	mother son relationship
based on book	multiple actors playing same role
based on play	multiple endings
based on comic	multiple perspectives
based on comic book	multiple storyline
based on novel	multiple time frames
based on novella	murder
based on short story	musical number
battle	neo noir
betrayal	neorealism
biker	ninja
black comedy	no background score
blockbuster	no music
bollywood	no opening credits

Internet Movie Database

[www.imdb.com/search/keyword/](http://www.imdb.com/search/keyword/)

# Introduction to Taxonomies

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## What is a taxonomy?

*Controlled and organized*

- A kind of controlled vocabulary or knowledge organization system, based on unambiguous concepts, not just words
- Terms are arranged in a structure of hierarchies, categories, or facets to organize the terms.

## Why called “taxonomy”?

- From ancient Greek "taxis," meaning **arrangement** + "nomia," meaning **method**.
- Originally meant the science and practice of naming and classifying.
- Aspect of "classification" is still relevant to the definition of taxonomies.

# Introduction to Taxonomies

## Taxonomy Examples

Leisure and culture

- . Arts and entertainment venues
  - . Museums and galleries
- . Children's activities
- . Culture and creativity
  - . Architecture
  - . Crafts
  - . Heritage
  - . Literature
  - . Music
  - . Performing arts
  - . Visual arts
- . Entertainment and events
- . Gambling and lotteries
- . Hobbies and interests
- . Parks and gardens
- . Sports and recreation
  - . Team sports
    - . Cricket
    - . Football
    - . Rugby
  - . Water sports
  - . Winter sports
- . Sports and recreation facilities
- . Tourism
  - . Passports and visas
- . Young people's activities

### Hierarchical Taxonomy Example

#### Career Level

- Student
- Entry Level
- Experienced
- Manager
- Director
- Executive

#### Function

- Customer Service & Support
  - Delivery
  - Engineering
  - Finance
  - General Management
  - Legal & Regulatory Affairs
  - Marketing & Advertising
- [\[more\]](#)

#### Industry

- Agriculture
  - Apparel & Fashion
  - Automotive
  - Aviation & Aerospace
  - Banking
  - Biotechnology
  - Broadcast Media
  - Chemicals
- [\[more\]](#)

### Faceted Taxonomy Example

## **000 Computer science, knowledge & systems**

010 Bibliographies  
020 Library & information sciences  
030 Encyclopedias & books of facts  
040 [Unassigned]  
050 Magazines, journals & serials  
060 Associations, organizations & museums  
070 News media, journalism & publishing  
080 Quotations  
090 Manuscripts & rare books

## **100 Philosophy**

110 Metaphysics  
120 Epistemology  
130 Parapsychology & occultism  
140 Philosophical schools of thought  
150 Psychology  
160 Logic  
170 Ethics  
180 Ancient, medieval & eastern philosophy  
190 Modern western philosophy

## **200 Religion**

210 Philosophy & theory of religion  
220 The Bible  
230 Christianity & Christian theology  
240 Christian practice & observance  
250 Christian pastoral practice & religious orders  
260 Christian organization, social work & worship  
270 History of Christianity  
280 Christian denominations  
290 Other religions

## **300 Social sciences, sociology & anthropology**

310 Statistics  
320 Political science  
330 Economics  
340 Law

## **Dewey Decimal Classification**

### **100s level**

**Is a classification  
system a  
taxonomy?**

350 Public administration & military science  
360 Social problems & social services  
370 Education  
380 Commerce, communications & transportation  
390 Customs, etiquette & folklore  
400 Language

## **400 Language**

410 Linguistics  
420 English & Old English languages  
430 German & related languages  
440 French & related languages  
450 Italian, Romanian & related languages  
460 Spanish & Portuguese languages  
470 Latin & Italic languages  
480 Classical & modern Greek languages  
490 Other languages

## **500 Science**

510 Mathematics  
520 Astronomy  
530 Physics  
540 Chemistry  
550 Earth sciences & geology  
560 Fossils & prehistoric life  
570 Life sciences; biology  
580 Plants (Botany)  
590 Animals (Zoology)

## **600 Technology**

610 Medicine & health  
620 Engineering  
630 Agriculture  
640 Home & family management  
650 Management & public relations  
660 Chemical engineering  
670 Manufacturing  
680 Manufacture for specific uses  
690 Building & construction

## **700 Arts**

710 Landscaping & area planning  
720 Architecture  
730 Sculpture, ceramics & metalwork  
740 Drawing & decorative arts  
750 Painting  
760 Graphic arts  
770 Photography & computer art  
780 Music  
790 Sports, games & entertainment

## **800 Literature, rhetoric & criticism**

810 American literature in English  
820 English & Old English literatures  
830 German & related literatures  
840 French & related literatures  
850 Italian, Romanian & related literatures  
860 Spanish & Portuguese literatures  
870 Latin & Italic literatures  
880 Classical & modern Greek literatures  
890 Other literatures

## **900 History**

910 Geography & travel  
920 Biography & genealogy  
930 History of ancient world (to ca. 499)  
940 History of Europe  
950 History of Asia  
960 History of Africa  
970 History of North America  
980 History of South America  
990 History of other areas

# Introduction to Taxonomies

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## Taxonomy vs. a Classification System

Classification systems: Dewey Decimal Classification, LC Classification, NAICS, etc.

### Classification Systems

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- Have numeric/alpha-numeric codes
- Rarely have synonyms (alternate labels)
- Comprehensive and balanced coverage of a domain
- Designed to be browsed hierarchically, top-down
- Built for a domain but independent of specific content
- Provide for limited expansion
- Has “not elsewhere classified” or “other”

### Taxonomies

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- Don't have codes
- Often have synonyms (alternate labels)
- Just the terms needed and may be hierarchically unbalanced
- Designed to be browsed, searched, or may not be fully displayed to end-users
- Custom-built to include the topics in the content to be tagged
- Can grow and adapt without limits
- Does not have terms for the miscellaneous

# Introduction to Taxonomies

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## Taxonomy vs. site (website or intranet) navigation hierarchy

### Navigation

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- Single-site use and implementation
- Reflect the site-map structure
- Labels based on page titles
- Designed to be browsed hierarchically, top-down
- 2-3 level hierarchy
- One-to-one label-to-page
- Limited size; does not cover all pages
- Biased to emphasize what is important
- Not so flexible for updating
- Paths and links, not metadata

### Taxonomies

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- May be re-used in multiple implementations
- Reflects organic relations of the topics
- Labels based on concepts/topics
- Designed to be browsed, searched, or may not be fully displayed to end-users
- Options for deeper hierarchy and/or facets
- One-to-many label to multiple pages
- Can be large; can cover all pages/content
- Neutral to topic importance
- Can grow and adapt without limits
- Often is metadata

# Introduction to Taxonomies

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## Varied uses of taxonomies

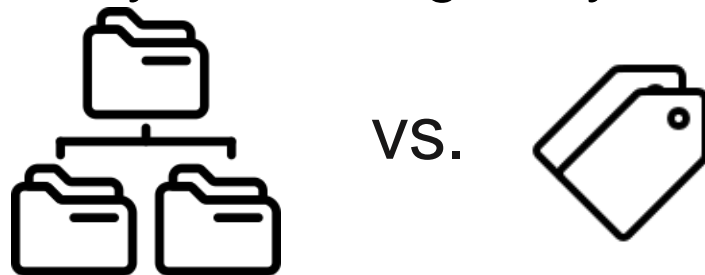
- Topic/category browsing and exploring
- Search (matching search strings to concepts)
- Discovery (related concept links or contents sharing the same concepts)
- Filtering results
- Sorting results
- Content management workflow (rights, audience, retention, etc.)
- Consistent metadata for identification, comparison, analysis
- Consistent tagging



# Categories and Tags

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- A single taxonomy may include both approaches/features of (1) organized guiding classification structure (2) controlled vocabulary search terms.
  - Sometime two different taxonomies exist at the same time, as supported by many content management systems, one for supporting hierarchical classification (as categories) one for supporting search (as tags).
- Categories or tags both are familiar to users
  - Categories are often virtual folders to “contain” or group content
  - Tags are searchable metadata associated with content
  - The same content may be managed by both categories and tags.



# Categories and Tags

► Documents

► Library

▼ Categories

Category Root

Format Type

Information Type

Languages

Marketing Materials

Product Segment Type

Regions

Software Document Classification

Supporting Materials Type

Tags

► Tags

Blank canvas

Category

Print size

POPULAR TAGS

YouTube cover

Facebook

Graduation

8.5 x 11 in

Instagram

Spring

Pinterest

Curved text

Summer

Wedding

Graphic

Color palette

Announcement

Brand board

Birthday

[Show more](#)

General

Summary

Statistics

Contents

Custom

Title:

Subject:

Author:

Manager:

Company:

Category:

Keywords:

Comments:

Hyperlink  
base:

Template: Business sales strategy proposal presentation

☐ Save preview picture

# Categories and Tags

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## Categories vs. Tags


### Using Linked and Other Open Vocabularies

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 September 24, 2018  Heathers Admin

Taxonomy terms assigned to content items makes the content easier to find, whether in an internal system, on the web, or both. To make content easier to find or discover on the web, the use of taxonomy terms or tags is part of the broader application of search engine optimization(SEO). A lot...

[Read more](#)

 Taxonomy terms  Blog post taxonomies, Linked data, Linked open vocabularies, Tagging, Tags

# Categories and Tags

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## When to create categories instead of topical tags

- If a dominant means of categorizing (e.g. [Content Type](#), [Discipline](#), [Brand](#)) is identified through conversations with users.
- If the same set of users usually work in the same category, accessing their “go-to” folder.
- If the files always stay in this repository rather than “travel” downstream to other applications (so don’t need taxonomy as attached metadata).
- If the taxonomy is relatively small (and there is no need for synonyms).
- If there is the desirability for a hierarchical taxonomy but the CMS metadata fields don’t support it.
- If there are problems with user compliance in tagging.
- If users clearly prefer category folders (based on use cases).

# Categories and Tags

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## Categories and Tags comparison



### Categories

- What “buckets” the content goes into
- Like a table of contents
- Relatively broad
- Limited in number
- Mutually exclusive
- Sometimes hierarchical
- More controlled
- Pre-planned
- Supports browsing



### Tags

- What topics the content contains
- Like an index
- More specific
- More numerous
- Overlapping
- Often unstructured
- Less controlled
- Ad hoc
- Supports searching

# Categories and Tags

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## Issues in Taxonomy Approach

- **Inconsistent user experience / view of the taxonomies**  
If creating completely separate taxonomies (e.g. categories and tags)...
  - User sees certain terms in a browsed hierarchy, but differently worded terms for same concept in search refinement topics
- **Risk of wrong design**  
If using the design approach of a traditional hierarchical taxonomy for the purpose of tagging and search support...
  - Creating a classification taxonomy won't be effective when what is needed are simply topics to limit results by.
- **Compromised taxonomy**  
If creating a single taxonomy for both/multiple purposes...
  - Might be too detailed for hierarchical categories and not detailed enough for search terms/tags

# Taxonomy Development

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For sources for terms (and their variants/synonyms)

## Consider

- Your content
- Your users
- If public facing, perhaps competitor websites

## Avoid

- External taxonomies for license
- Standard (library) classification, glossaries
- Suggestions from SMEs or stakeholders who do not know how the taxonomy will be used
- Roget's thesaurus

# Taxonomy Development

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## Taxonomy project steps

- Brainstorming workshop
- Stakeholder interviews (and use-case creation)
- Content analysis/audit
- Review of any existing vocabularies, search logs
- Taxonomy build
- Stakeholder review of taxonomy and feedback
- User testing
- Taxonomy governance documentation
  - Taxonomy maintenance policy & guidelines
  - Taxonomy use/tagging policy & guidelines



# Hierarchical Taxonomy Displays

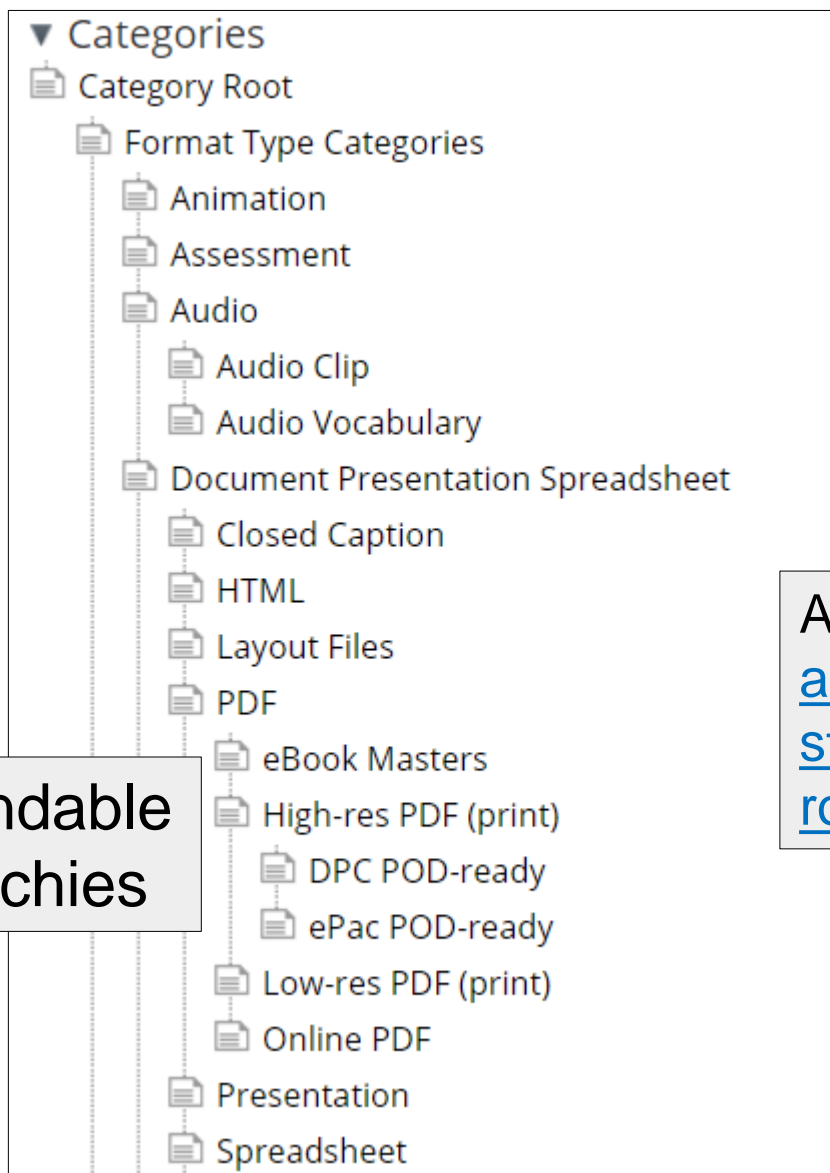
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## End-user hierarchical taxonomy browse display options

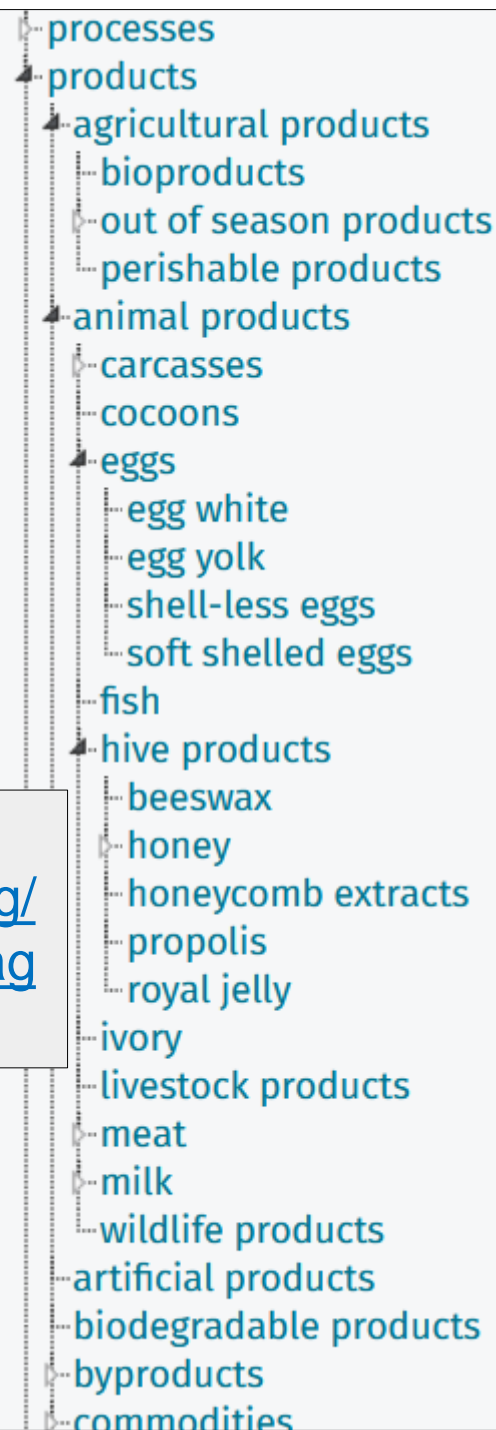
Hierarchy end-user displays may be implemented in different ways:

- **Expandable tree**
  - Plus signs/minus signs or carets/arrows to the side or down
- **One level per web page**
  - Separate web page for each hierarchical level
- **Fly-out subcategories**
  - Second and third levels displayed in pane/box to the right

# Hierarchical Taxonomy Displays



AGROVOC  
[aims.fao.org/standards/agrovoc](https://aims.fao.org/standards/agrovoc)



# Hierarchical Taxonomy Displays

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## Expandable tree

### Advantages:

- Allows the user to explore/expand multiple subcategories simultaneously
- Accommodates inconsistent numbers of terms per level
- Display takes up only part of screen
- Good for hierarchically deep taxonomies

### Disadvantages:

- Insufficient for displaying very large taxonomies or large numbers of terms at the same level
- More complex to develop and may take more time to load display. Not good for the web. Usually for internal systems.

## Books

- Arts & Photography
- Biographies & Memoirs
- Business & Money
- Calendars
- Children's Books
- Christian Books & Bibles
- Comics & Graphic Novels
- Computers & Technology
- Cookbooks, Food & Wine
- Crafts, Hobbies & Home
- Education & Teaching
- Engineering & Transportation
- Gay & Lesbian
- Health, Fitness & Dieting
- History
- Humor & Entertainment
- Law
- Literature & Fiction
- Medical Books
- Mystery, Thriller & Suspense
- Parenting & Relationships
- Politics & Social Sciences
- Reference**
- Religion & Spirituality
- Romance
- Science & Math
- Science Fiction & Fantasy
- Self-Help
- Sports & Outdoors
- Teen & Young Adult
- Test Preparation
- Travel

## Show results for

### New Releases

- Last 30 days
- Last 90 days
- Coming Soon

### < Books

#### Reference

- Almanacs & Yearbooks
- Atlases & Maps
- Careers
- Catalogs & Directories
- Consumer Guides
- Dictionaries & Thesauruses**
- Encyclopedias & Subject Guides
- English as a Second Language
- Etiquette
- Foreign Language Study & Reference
- Genealogy
- Quotations
- Survival & Emergency Preparedness
- Test Preparation
- Words, Language & Grammar
- Writing, Research & Publishing Guides

## Reference

### Show

## Show results for

### New Releases

- Last 30 days
- Last 90 days
- Coming Soon

### < Books

### < Reference

#### Dictionaries & Thesauruses

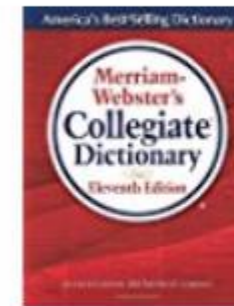
- Dictionaries
- English
- Foreign Language Dictionaries & Thesauruses
- Lexicography
- Slang & Idioms
- Synonyms & Antonyms
- Thesauruses

## Refine by

### Format

## Dictionaries & Thesauruses

### Shop by category



English Dictionaries...



Amazon.com:  
One level per web page

# Hierarchical Taxonomy Displays

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## One level per page

### Advantages:

- Large number of terms can display at each level
- Good for large volumes of content
- Gives space for additional content to display
- Works well with polyhierarchies
- Technically easy to implement

### Disadvantages:

- Users see only one level at a time
- Less appropriate for taxonomies with varied/inconsistent levels or levels containing just one or a few terms



- Fresh Food >
- Bakery >
- Food Cupboard >
- Frozen Food >
- Drinks >
- Baby >
- Health & Beauty >
- Pets >
- Household >
- Home & Ents >
- Inspiration & Events >

Quick and convenient shopping

Welcome to our new website

[Find out more about the changes](#)



Sign in to start shopping

Already a customer?

Sign in

New to Tesco?

Register

TESCO:  
Fly-out subcategories

[Fresh Food](#)[Bakery](#)[Food Cupboard](#)[Frozen Food](#)[Drinks](#)[Baby](#)[Health & Beauty](#)[Pets](#)[Household](#)[Home & Ents](#)[Inspiration & Events](#)[All Fresh Food](#)[Fresh Fruit](#)[Fresh Vegetables](#)[Fresh Salad & Dips](#)[Chilled Fruit Juice & Smoothies](#)[Milk, Butter & Eggs](#)[Cheese](#)[Yoghurts](#)[Chilled Desserts](#)[Fresh Meat & Poultry](#)[Chilled Fish & Seafood](#)[Cooked Meats, Sandwich Fillers & Deli](#)[Pies, Quiches & Party Food](#)



Search

Q

- Groceries ▾
- My Favourites
- Recipes
- Special Offers
- Halloween
- Delivery Saver

Fresh Food >

- Bakery >
- Food Cupboard >
- Frozen Food >
- Drinks >
- Baby >
- Health & Beauty >
- Pets >
- Household >
- Home & Ents >
- Inspiration & Events >

All Fresh Food

- Fresh Fruit >
- Fresh Vegetables >
- Fresh Salad & Dips >
- Chilled Fruit Juice & Smoothies >
- Milk, Butter & Eggs >
- Cheese >
- Yoghurts >
- Chilled Desserts >
- Fresh Meat & Poultry >
- Chilled Fish & Seafood >
- Cooked Meats, Sandwich Fillers & Deli >
- Pies, Quiches & Party Food >

All Cheese

- Cheddar Cheese
- Grated & Sliced Cheese
- Cottage Cheese & Soft Cheese
- Cheese Snacks & Spreads
- Feta & Goats Cheese
- Speciality & Continental Cheese
- Regional Cheese
- Cheeseboards & Selections
- Cheese For Entertaining
- Low Fat Cheese
- Dairy Free Cheese & Alternatives
- Counter Cheese



# Hierarchical Taxonomy Displays

[journals.plos.org/plosone](https://journals.plos.org/plosone)

The screenshot shows the PLOS ONE website's 'Browse Subject Areas' section. The header includes the PLOS ONE logo, navigation links for 'Publish', 'About', 'Browse', and 'Search', and a URL bar showing 'journals.plos.org/plosone'. The main content area is titled 'Browse Subject Areas' with a help icon. It features three columns of subject areas. The first column, 'All Subject Areas', lists 'Biology and life sciences', 'Computer and information sciences' (highlighted in blue), 'Earth sciences', and 'Ecology and environmental sciences'. The second column, 'Computer and information sciences', lists 'Artificial intelligence', 'Computer applications', 'Computer architecture' (highlighted in blue), and 'Computer modeling (112)'. The third column, 'Computer architecture', lists 'Computer hardware', 'Pipelines (computing)', and 'User interfaces'. Each column has a 'View All Articles' button at the top. Red circles highlight the scroll bars on the 'Computer and information sciences' and 'Computer architecture' columns, and the right arrow on the 'Computer architecture' column's scroll bar.

**PLOS ONE** | [Publish](#) | [About](#) | [Browse](#) | [Search](#)

**Browse Subject Areas** ?

All Subject Areas	Computer and information sciences	Computer architecture
<a href="#">View All Articles (166993)</a>	<a href="#">View All Articles (13168)</a>	<a href="#">View All Articles (276)</a>
Biology and life sciences	Artificial intelligence	Computer hardware
<b>Computer and information sciences</b>	Computer applications	Pipelines (computing)
Earth sciences	<b>Computer architecture</b>	User interfaces
Ecology and environmental sciences	Computer modeling (112)	

# Hierarchical Taxonomy Displays

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## Fly-out subcategories

### Advantages:

- Users can visualize the hierarchy (see both/multiple levels) at the same time
- Users can easily back up in the hierarchy

### Disadvantages:

- Not so suitable for large taxonomies
- Usually not suitable for more than 3 levels

# Faceted Taxonomy Displays

Examples of  
ecommerce  
facets

**Narrow Selection By:**

Size Range

Show All

(Reg, Plus, Slim, Big & Tall, etc.)

Specific Size

Show All

Color

Show All

Sleeve Length

Show All

Fabric

Show All

Style

Show All

All Others (56)

Tailored (11)

Buttondown (6)

Split Neck (3)

For clothes

**Format**

☐ Paperback (386,973)

☐ Hardcover (240,008)

☐ Kindle Edition (17,788)

☐ Audible Audio Edition (151)

☐ HTML (15,520)

☐ PDF (13,078)

☐ Audio CD (529)

☐ Board Book (296)

☐ Audio Cassette (413)

☐ Calendar (1,823)

☐ School Binding (481)

☐ MP3 CD (27)

**Author**

Any Author

David S. Moore (525)

Ron Larson (518)

Charles Darwin (464)

Margaret L. Lial (388)

David Halliday (295)

Deborah Hughes-Hallett (221)

E. John Hornsby (219)

> See more...

**Series**

Any Series

Unleashed (94)

Sams Teach Yourself (81)

Apogee Books Space (56)

Demystified (42)

> See more...

**Shipping Option** [\(What's this?\)](#)

Any Shipping Option

For books

**Format** see all

☐ CD

☐ DVD

☐ E-Mail

**Platform** see all

☐ Mac

☐ Universal

☐ Windows

**Language** see all

☐ Arabic

☐ English

☐ Multilingual

☐ Russian

☐ Spanish

**Brand** see all

☐ Adobe Systems

☐ Corel

☐ Intuit

☐ McAfee

☐ Microsoft

☐ Nero

☐ Unbranded

**Operating Systems** see all

☐ Microsoft Windows 10

☐ Microsoft Windows 7

For software

**Category**

▼

 Clear

Select category(s)

☐ Banquet Tables (4)

☐ Bistro Table (2)

☐ Bistro Tables (5)

☐ Counter-Height Table (1)

☐ Counter-Height Tables (6)

☐ Dining Table (10)

☐ Dining Tables (52)

☐ Folding Table (8)

☐ Folding Tables (12)

☐ Kitchen Table (1)

☐ Kitchen Tables (1)

☐ Nook Table (1)

☐ Nook Tables (1)

☐ Pub Table (7)

☐ Pub Tables (29)

**Material**

▼

 Clear

Select material(s)

☐ Hardwood (29)

☐ MDF Composite (1)

☐ Metal (28)

☐ Plastic (1)

☐ Wood (48)

☐ Wood Composite (35)

**Finish**

▼

 Clear

Select finish(s)

☐ Cherry (4)

☐ Dark Cherry (1)

☐ Ebony (1)

☐ Espresso (44)

☐ Oak (7)

☐ Painted (8)

☐ Unfinished (1)

☐ Walnut (8)

**Color**

▼

For furniture

# Faceted Taxonomy Displays

## Examples of internal content facets

Department

Research

Sales

Finance

Marketing

Exec Office

SHOW MORE

Job Title

Communications Director

Developer

Finacial Controller

Finance Assistant

Head of IT Services

SHOW MORE

Office Location

London

New York

Shanghai

For people

File Type

Word

Document Type

Feature Overview

Technical Specifications

Item Type

Project Document

Project

All

CRM Support

Sprint

Sprint 23

Sprint 22

For documents

Result type

Word

Author

User1

System Account

AATISH AGARWAL

SHOW MORE

Modified date



All

Community

☐ Technical

☐ Recreational

Other Value

Apply | Clear

Language

☐ English

☐ German

Content Manager

☐ Content Manager (2)

☐ Content Manager (1)

☐ Content Manager (1)

☐ Content Manager (1)

Other Value

Apply | Clear

Distribution Channel

☐ TechNet Library (7)

☐ OfficeOnlineVNext (2)

☐ MSDN Code Gallery (1)

☐ MSDN Library (1)

☐ MSN Video (1)

Other Value

Apply | Clear

Request status

☐ Published (12)

Other Value

Apply | Clear

Content Type

☐ HVC library content item (8)

☐ OCMS article (2)

☐ Code Gallery content (1)

☐ Video content (1)

Other Value

Apply | Clear

Internal Writer

# Faceted Taxonomy Displays

---

## Facet advantages

- Supports more complex search queries by users
- Allows users to control the search refinement, narrowing or broadening in any manner or order
- Familiar to novice users; suitable for expert users

## Facet disadvantages

- Only suitable for somewhat structured, unified type of content that all share the same multiple facets
- Not practical for extremely large topical taxonomies
- Requires investment of thorough indexing/tagging

# Faceted Taxonomy Displays

---

## Facet design tips

- Number of facets: 3-8, with 5-6 as ideal
- Facets listed in logical, not alphabetical order
- Number of terms per facet: 2-25
  - Ideally not much more than can be viewed in a scroll box
  - If the list is known (alphabetical list of countries), then more is OK.
  - Exception can be made for hierarchical “Topics” facet
- If <12 terms, then a logical display order  
If >12 terms, then alphabetical order
- A two-level hierarchy (indented) within a facet is possible

# Faceted Taxonomy Displays

## Number of facets

- SharePoint by default collapses facets to show the first 5 values/terms.
- This takes up vertical space so that only 4 refinements/facets can display in the screen height.

Example from the ILO SharePoint intranet with 9 refinements/facets

The screenshot displays a SharePoint search results page with a 'Refine results by' sidebar on the left and a main content area on the right. The sidebar contains five facet categories, each with a list of terms and a 'SHOW MORE' link. The main content area displays the same five facet categories with their respective terms and 'SHOW MORE' links. The 'Modified date' facet includes a bar chart and a date range selector.

**Refine results by**

**Content type**

- Announcement
- Document
- Documento
- IGDSDocument
- ILO FAQ
- SHOW MORE

**Document type**

- agreement
- brochure
- BUDGET
- dataset
- diagram
- SHOW MORE

**Result type**

- Excel
- PDF
- PowerPoint
- Web page
- Word
- Zip

**Language**

- English
- Spanish
- French
- Spanish
- French
- SHOW MORE

**Site**

PROGRAM

Partnerships and Field Support (PARDEV)

Contributor

Inside

IRIS User Centre (IUC)

SHOW MORE

**Regions countries**

AMERICAS

AMERICAS

Europe and Central Asia

France

Global

SHOW MORE

**Topics**

ILO

ILO Governing Body

ILO centenary

ILO partnerships

ILO press releases

SHOW MORE

**Modified date**

One Year Ago Today

All

**Size**

Less than 8 K

8 K - up to 195 K

195 K - up to 557.1 K

557.1 K or more

# Faceted Taxonomy Displays

---

## Facet design options and issues

- Facets as post-search filters, as initial browse, or both
- Display of partial/start of list of values within a facet
- Ability to select multiple values from within the same facet at once (with check boxes)
- Inclusion of other metadata (not “taxonomy”) in the same set of facets (date, author, price, etc.)
- Have all generic facets or also have subject category-specific facets



# Faceted Taxonomy Displays

[Homepage](#) > [Women](#) > [Sweaters](#)

**SWEATERS »**

[Cardigan »](#)

---

**NARROW SELECTION BY:**

Size Range  
 (Reg, Plus, Slim, Big & Tall, etc.)

Specific Size

Color

Sleeve Length

Fabric

Style

Featured Collection

## Sleepwear for G

PJ Pals  
Nightgowns  
Nightshirts  
Slippers  
Sleep Sets

---

**Refine By** [Clear All](#)

Price Range [Clear](#)

Characters [Clear](#)

Clothing Sizes [Clear](#)

Sleep Body Style [Clear](#)

Colors [Clear](#)

☐ ☐ ☐ ☐ ☐ ☐ ☐

**Format**

Paperback (275,392)  
Hardcover (74,742)  
Kindle Edition (35,617)  
Audible Audio Edition (426)  
Printed Access Code (987)  
Digital Access Code (241)  
Audio CD (2,653)  
Board Book (86)

**Author**

Future Press (10)  
Brent Schlender (1)  
Rick Tetzeli (1)  
Gayle Laakmann McDowell (4)  
David Hodgson (56)  
David S. J. Hodgson (54)  
Andrew Hodges (1)  
+ See more

**Book Series**

☐ (ISC)2 Press (20)  
☐ All-in-One (59)  
☐ Barron's Ap Computer Science (5)  
☐ Prima Official Game Guides (505)  
☐ Voices That Matter (111)  
☐ Learning Python (1)  
☐ Missing Manual (195)  
+ See more

**Language**

☐ English (324,730)  
☐ German (15,979)  
☐ French (3,430)

**Narrow Your Results**

Price

[\\$200 - \\$249.99](#) (2)  
[\\$250 - \\$499.99](#) (8)  
[\\$500 - \\$749.99](#) (19)  
[\\$750 - \\$999.99](#) (17)  
[\\$1000 - \\$1249](#) (2)  
[\\$1500 - \\$1999](#) (1)

Screen Size

[17" and Up](#) (1)  
[15" - 16"](#) (9)  
[14" and Under](#) (37)

Processor Brand

[AMD](#) (4)  
[Intel®](#) (45)

System Memory RAM [?](#)

[1GB](#) (1)  
[2GB](#) (4)  
[4GB](#) (31)  
[6GB](#) (8)  
[8GB](#) (4)  
[16GB](#) (1)

Laptop Features

[Touchscreen](#) (4)  
[Backlit Keyboard](#) (13)  
[Built-in Webcam](#) (50)  
[Blu-ray](#) (2)  
[HDMI Output](#) (44)  
[Wireless Capability](#) (5)

**narrow by:**

**category**

☐ Banquet Table (3)  
☐ Bistro Table (9)  
☐ Counter-height Table (7)  
☐ Dinette Table (2)  
☐ Dining Table (66)  
☐ Kitchen Table (4)  
☐ Nook Table (2)  
☐ Pub Table (31)

**shape**

☐ Novelty (1)  
☐ Oval (2)  
☐ Rectangle (47)  
☐ Round (53)  
☐ Square (21)

**finish**

☐ Chrome (10)  
☐ Distressed (7)  
☐ Ebony (6)  
☐ Espresso (20)

# Faceted Taxonomy Displays

## Combined hierarchies and facets

When facets are useful, but topics are best displayed in a hierarchy

1. Starting with facets, and then having hierarchies within facets
  2. Starting with hierarchical categories, then having further refinement with category-specific facets
- Hierarchy within facet example: Call Number facet  
North Carolina State University Libraries catalog  
<https://catalog.lib.ncsu.edu>



NC State University  
Libraries



TRLN libraries: NC State,  
Duke, NCCU, UNC  
(15,850,762)

Limit your search

☐ Available Online 1,533,470

Library Location >

Resource Type >

Call Number ▾

▼ A - General Works	7,828
▶ AC1 - AC999 Colle...	2,042
▼ AE1 - AE88 Encycl...	155
AE5 - AE88 By language	127
AG2 - AG600 Dictionaries and other general reference works	231
AI1 - AI21 Indexes	60
▶ AM1 - AM401 Mus...	718

# Faceted Taxonomy Displays

Hierarchies within facets example:

World Bank Documents & Reports - Advanced Search

<http://documents.worldbank.org/curated/en/docadvancesearch>

Topic: ?

You have selected :

☐ Agriculture

- ☐ Agribusiness
- ☐ Agricultural Economics
- ☐ Agricultural Extension
- ☐ Agricultural Irrigation and Drainage
- ☐ Agricultural Knowledge and Information Systems
- ☐ Agricultural Producer Organizations
- ☐ Agricultural Research
- ☐ Agricultural Trade
- ☐ Agriculture and Farming Systems

☐ Law and Development

- ☐ Administrative & Regulatory Law
- ☐ Arbitration
- ☐ Banking Law
- ☐ Child Labor Law
- ☐ Contract Law
- ☐ Corporate Law
- ☐ Corruption & Anticorruption Law
- ☐ Environmental & Natural Resources Law
- ☐ Financial Law

Language: ?

You have selected :

☐ Albanian

☐ Amharic

☐ Latvian

☐ Lingala

# Faceted Taxonomy Display

## 2. Starting the hierarchical categories, then limiting with facets

Amazon.com  
(shop by Department)

[www.amazon.com/gp/site-directory/ref=nav\\_shopall\\_btn](http://www.amazon.com/gp/site-directory/ref=nav_shopall_btn)

Books

Arts & Photography (1,431,273)

Biographies & Memoirs (524,534)

Business & Money (1,958,449)

Calendars (204,227)

Children's Books (1,323,066)

Christian Books & Bibles (709,029)

Comics & Graphic Novels (393,966)

Computers & Technology (433,843)

Cookbooks, Food & Wine (204,080)

Crafts, Hobbies & Home (441,381)

Education & Teaching (845,892)

Engineering & Transportation (748,729)

Gay & Lesbian (88,492)

Health, Fitness & Dieting (671,090)

History (3,585,297)

Humor & Entertainment (640,144)

Law (575,784)

Literature & Fiction (3,112,668)

Medical Books (790,683)

Mystery, Thriller & Suspense (308,974)

Parenting & Relationships (179,354)

Politics & Social Sciences (1,641,616)

Reference (4,150,593)

Religion & Spirituality (1,312,142)

Romance (588,702)

Science & Math (1,537,475)

Science Fiction & Fantasy (350,771)

Self-Help (345,201)

Sports & Outdoors (266,667)

Teen & Young Adult (220,550)

Travel (425,744)

Refine by

Format

Paperback (27,337,676)

Show results for

New Releases

Last 30 days (2,473)

Last 90 days (8,480)

Coming Soon (1,346)

Platform

Windows (39,776)

Macintosh (6,895)

Linux & Unix (6,853)

iPhone & iOS (2,337)

Android (1,107)

Audience

Beginners & Seniors (42,495)

Advanced & Power Users (17,023)

Kids & Teens (7,126)

< Books

Computers & Technology

Business Technology (40,281)

Certification (21,536)

Computer Science (75,085)

Databases & Big Data (27,137)

Digital Audio, Video & Photography (15,637)

Games & Strategy Guides (12,176)

Graphics & Design (50,931)

Hardware & DIY (34,427)

History & Culture (3,174)

Internet & Social Media (34,934)

Mobile Phones, Tablets & E-Readers (4,523)

Networking & Cloud Computing (71,137)

Operating Systems (23,482)

Programming (139,790)

Security & Encryption (12,932)

Software (82,119)

Web Development & Design (37,154)

Refine by

Format

Paperback (274,906)

Show results for

New Releases

Last 30 days (114)

Last 90 days (394)

Coming Soon (177)

Platform

Windows (3,778)

Linux & Unix (253)

Macintosh (242)

iPhone & iOS (20)

Android (13)

Audience

Beginners & Seniors (1,830)

Advanced & Power Users (2,456)

Kids & Teens (57)

< Books

< Computers & Technology

Databases & Big Data

Access (1,827)

Data Mining (3,223)

Data Modeling & Design (2,087)

Data Processing (7,673)

Data Warehousing (937)

MySQL (382)

Oracle (1,549)

Other Databases (1,930)

Relational Databases (960)

SQL (2,402)

Refine by

Format

Paperback (19,530)

Hardcover (4,914)

Kindle Edition (1,282)

Audible Audio Edition (3)

Printed Access Code (154)

Digital Access Code (35)

Audio CD (2)

Author

Steve Krug (1)

Show results for

New Releases

Last 30 days (26)

Last 90 days (84)

Coming Soon (60)

Platform

Windows (87)

Linux & Unix (6)

Macintosh (5)

iPhone & iOS (2)

Android (1)

Audience

Beginners & Seniors (81)

Advanced & Power Users (586)

Kids & Teens (4)

< Books

< Computers & Technology

< Databases & Big Data

Data Mining

Refine by

Format

Paperback (2,238)

Hardcover (764)

Kindle Edition (104)

Audible Audio Edition (2)

Printed Access Code (2)

Author

Foster Provost (1)

Tom Fawcett (1)

J. H. Friedman (2)

Robert Tibshirani (2)

Itzik Ben-Gan (4)

Jared P. Lander (1)

John W. Foreman (1)

+ See more

Book Series

☐ Addison-Wesley Data & Analytics Series (7)

☐ For Dummies (4)

# Final Tips

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## Be careful what you call things in the UI

### “Related terms”

- Do the terms actually have a relationship established between each other within the taxonomy, or are they rather shared, tagged to the same content?

### “Top terms”

- Are they top-level terms in the hierarchy, or the most popular terms?

### “Keywords”

- Are they controlled terms in the taxonomy, any search string, or folksonomy (uncontrolled entered terms that are saved and displayed for re-use?)

### “Navigation”

- Navigating within the taxonomy hierarchy, or navigating the site and content?

# Resources

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## Books

Abbas, June. (2010) *Structures for Organizing Knowledge*. New York: Neal Schuman Publishers.

Hedden, Heather. (2016) *The Accidental Taxonomist, 2<sup>nd</sup> edition*. Medford, NJ: Information Today Inc. [www.accidental-taxonomist.com](http://www.accidental-taxonomist.com)

Lambe, Patrick. (2007). *Organising Knowledge: Taxonomies, Knowledge and Organisational Effectiveness*. Oxford, England: Chandos Publishing

## Standards and guidelines

ANSI/NISO Z39.19-2005 (2010) *Guidelines for Construction, Format, and Management of Monolingual Controlled Vocabularies*. Bethesda, MD: NISO Press. [www.niso.org/publications/ansiniso-z3919-2005-r2010](http://www.niso.org/publications/ansiniso-z3919-2005-r2010)

# Resources

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## Websites

Accidental Taxonomy book websites

[www.hedden-information.com/Accidental-Taxonomist-Websites.htm](http://www.hedden-information.com/Accidental-Taxonomist-Websites.htm)

Taxonomy Warehouse

[www.taxonomywarehouse.com](http://www.taxonomywarehouse.com)

Construction of Controlled Vocabularies: A Primer

<http://marciazeng.slis.kent.edu/Z3919/index.htm>

The Accidental Taxonomist Blog

<http://accidental-taxonomist.blogspot.com>

Hedden Information Management past presentations

[www.hedden-information.com/presentations.htm](http://www.hedden-information.com/presentations.htm)

# Resources

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## Workshops and Conferences

“Taxonomies & Controlled Vocabularies” self-paced online course through Hedden Information Management

[www.hedden-information.com/taxonomy-course-online.htm](http://www.hedden-information.com/taxonomy-course-online.htm)

Taxonomy creation corporate onsite training through Hedden Information Management [www.hedden-information.com/courses-workshops](http://www.hedden-information.com/courses-workshops)

Pre-conference taxonomy workshop at Computers in Libraries, March 30, Arlington, VA <http://computersinlibraries.infotoday.com/2020/workshops.aspx#13751>

SLA Conference, June 6-9, Charlotte, North Carolina [connect.sla.org/ac2020](http://connect.sla.org/ac2020)

Taxonomy Boot Camp conference, November 16-17, 2020, Washington, DC [www.taxonomybootcamp.com](http://www.taxonomybootcamp.com)



# Questions/Contact

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[twitter.com/hhedden](https://twitter.com/hhedden)

[linkedin.com/in/hedden](https://linkedin.com/in/hedden)