

Innovative • Effective • Customizable

Marjorie M. K Hlava, 505-998-0800 Chief Scientist, Chairman, President, Founder Mhlava2accessinn.com

Eureka I Found It!! A Presentation On How Search Works With Taxonomies SLA Taxonomies 2021

# Description:

Have you ever wondered how search works while visiting an e-commerce site, internal website, or searching through other types of online resources? Look no further than this informative session on the ways that taxonomies help end-users navigate the internet! Hear from taxonomists and other information professionals who have first-hand experience creating and working with taxonomies that aid in navigation, search, and discovery across a range of disciplines.



## Who is speaking? Marjorie M.K. Hlava

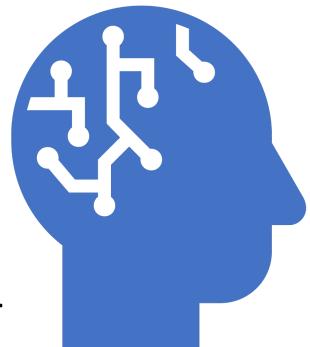
- I am a lifetime member 45 years of SLA, joining in 1974.
- I have spent my career searching, building databases, building taxonomies, First for NASA then for my own company.
- Over 2000 engagements and 600 custom taxonomies built by my team and me.
- Also active in the standards we use you will find my name in the Dublin core (Z39.84), Controlled vocabulary (Z39.19), Credit, DOI Syntax and other infrastructure standards for the information industry.
- I am the founding chair of the SLA taxonomy division
- I have written four books and the Taxobook series is a best seller on Amazon. I also have authored over 200 articles and any presentations





#### Content Without Access Is Nearly Worthless.

- Enterprise search is how an organization
  - ... helps people seek the information they need,
  - ... in any format,
    - databases,
    - document management systems
    - paper.
  - ... from anywhere inside their company.
  - We need to get the right information at the right time.





#### What's the problem with search?

- Returns do not match the query search question
- Need to know all the ways something can be labeled to find it, synonyms
- Colloquial use of terms to mean something else, homonyms
- Too many returns to look at easily
- Users only want to click 3 times to find an answer
- Too much time needed to set up good search system by IT
- Most orgs have 5 previous search systems on the shelf trying a new one
- The problem was probably the data not the system.



### Is All Search The Same?

- Key outcomes in a comprehensive knowledge management strategy.
- Discover "discoverability"
- Search
- Find "findability"



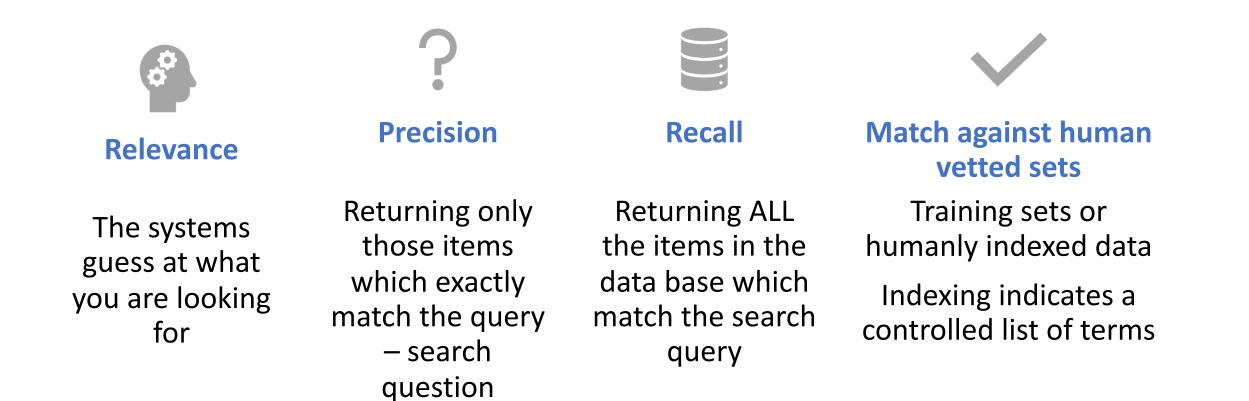


## Search Behavior Types

- Findability
  - The ease with which information can be found. Means users can easily find content or information present on a website or in a database.
- Discoverability
  - Making sure that new content or information can be found
  - ... even if the user doesn't know that it exists yet.
- Browse
  - Like in a library or bookstore allows serendipity in search
- Each type needs different support from the search system
- Taxonomies provide consistency in terms and categories to enable findability in content. This is true regardless of the subject.



#### How do we measure good search results?





# What Search Using a Taxonomy OUGHT To Do!!

Gives precedence to Taxonomy terms in search	Search by Navigation tree	Expand search by Related terms	Refine search via Narrower terms
Type ahead shows both terms and synonyms • Permuted list format	Suggests preferred term if synonym is entered in search box	Provide for recursive search (Search within a search set)	Give recommendations



### What are the Parts of Search?

#### Search software

- Inverted Index
- Search algorithms

#### Content layer

- Rich metadata
- Consistent format

#### Presentation layer (User Interface)

- Search box
- Auto-completion
- Related content
- Advanced search options

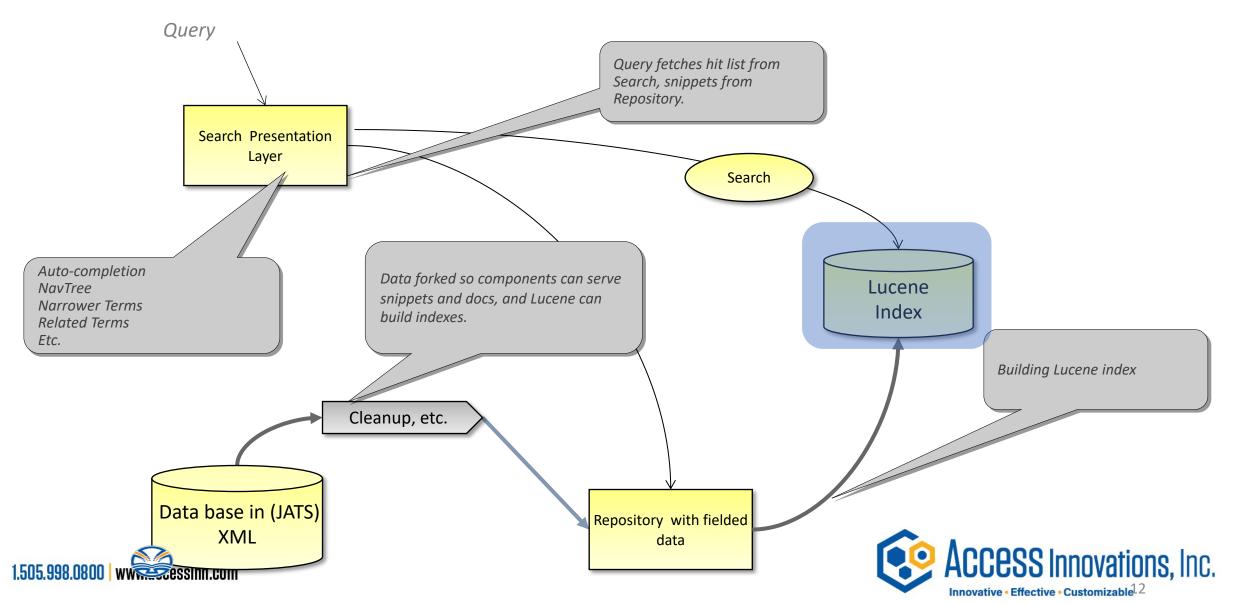




## Search Software Content Layer Adding the Taxonomy Presentation layer (User Interface)



#### Sample – Lucene Deployment



#### The inverted index

#### If its not in the inverted index.... It is not searchable.



1.505.998.0800 | www.accessinn.com

Creating an Inverted File Index

## Sample DOCUMENT

"Outline of Presentation"

- 1 Define key terminology
- 2 Thesaurus tools
  - Features
  - Functions
- 3 Costs
  - Thesaurus construction
  - Thesaurus tools
- 4 Why & when?



#### Simple Inverted File Index of the Terms from the "Outline"

&	key
1	•
2	of
	outline
3	presentation
4	•
construction	terminology
	thesaurus
costs	tools
define	when
features	
functions	why
IUIICUUIIS	





1.505.998.0800 | www.accessinn.com

#### Complex Inverted File Index: Placement, Location added

& - Stop 1 - Stop 2 - Stop 3 - Stop 4 - Stop construction - L7, P2, SH costs - L6, P1, H define - L2, P1, H features - L4, P1, SH functions - L5, P1, SH

```
key - L2, P2, H
of - Stop
outline - L1, P1, T
presentation - L1, P3, T
terminology - L2, P3, H
thesaurus - (1) - L3, P1, H
             (2) - L7, P1, SH
             (3) - L8, P1, SH
tools - (1) - L3, P2, H
       (2) - L8, P2, SH
when - L9, P3, H
why - L9, P1, H
```

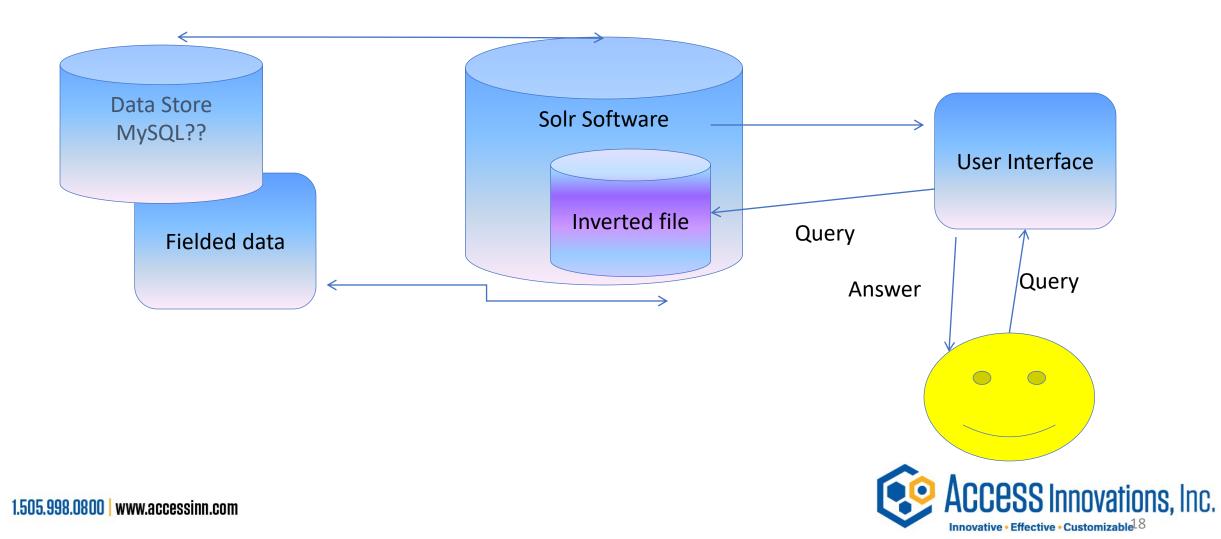


### Search for thesaurus tools

- Search = Thesaurus tools
- thesaurus (1) L3, P1, H
- (2) L7, P1, SH
- (3) L8, P1, SH
- tools (1) L3, P2, H
- (2) L8, P2, SH



#### Lucene - SOLR Search Flow



## Search Software Content Layer Adding the Taxonomy Presentation layer (User Interface)



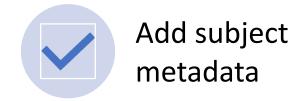
## So how do we get there?



Have to tag the records



Semantically enrich





Create a controlled vocabulary

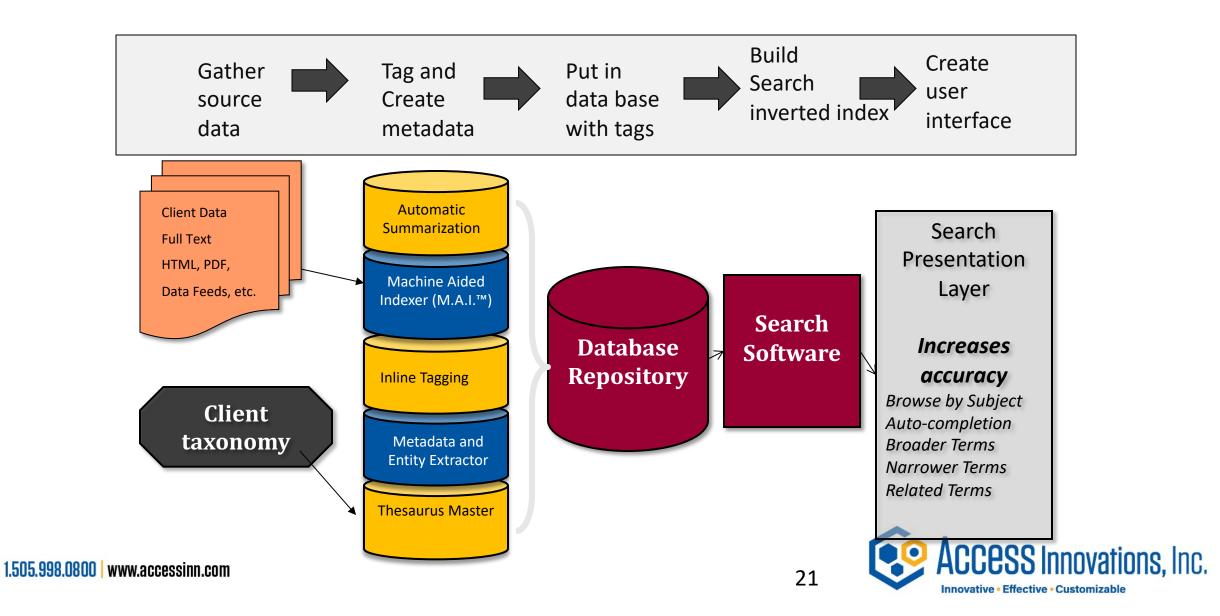


Use good metadata at the input and the search ends of the pipeline

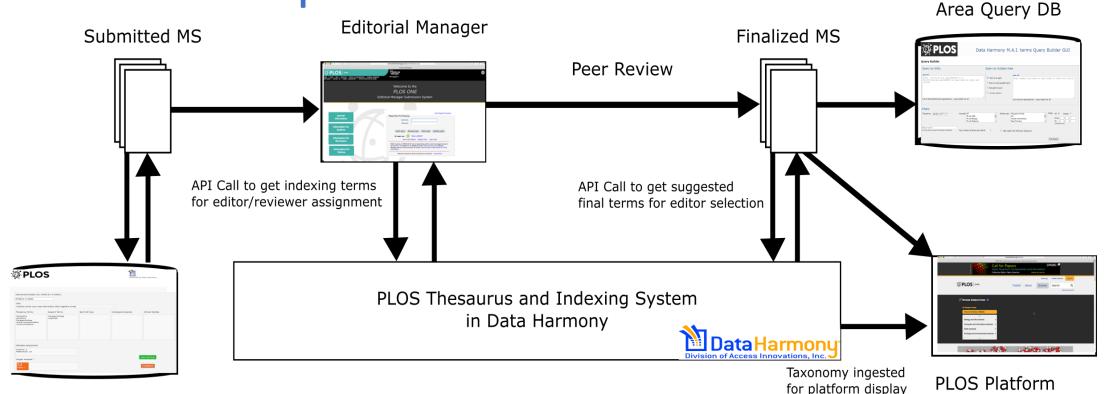




#### The Workflow



# Where does the taxonomy get added to the production workflow?



PLOS Pre-Publication Filters

-SciGen Detector

- -Bad Cell Lines
- -Endangered Species
- -Suspect Science
- -Paper Fate Predictor

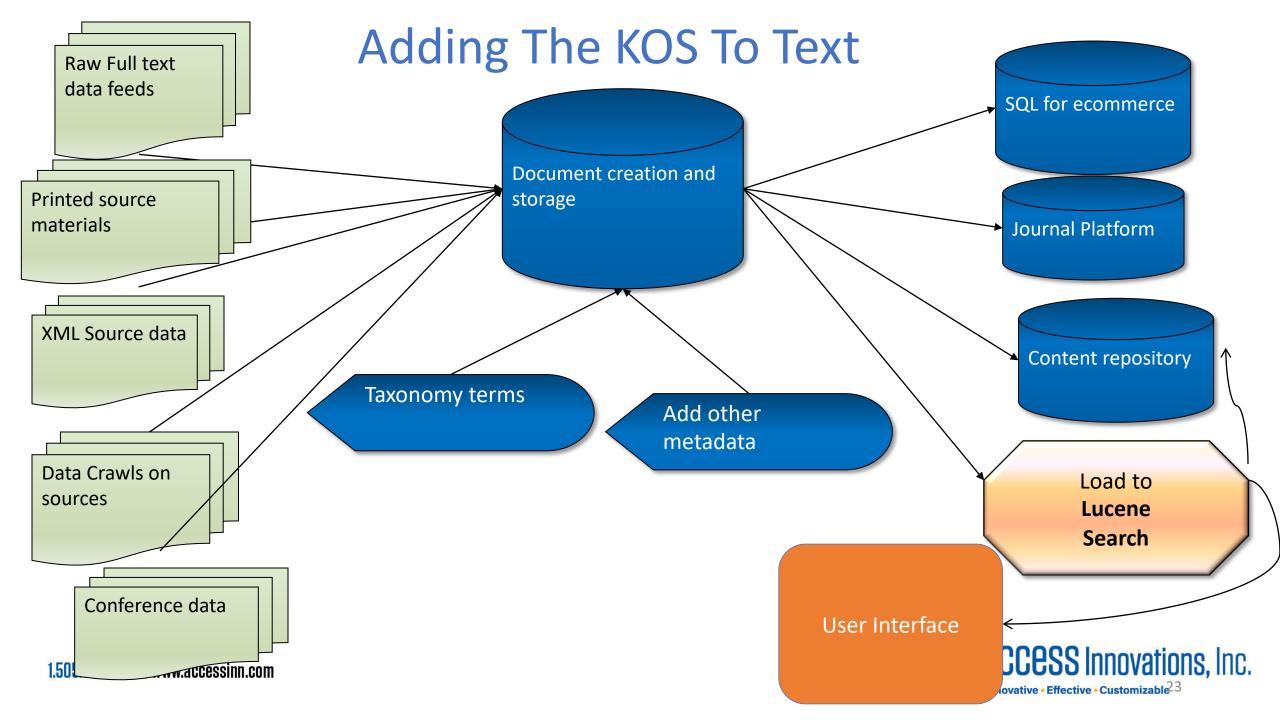


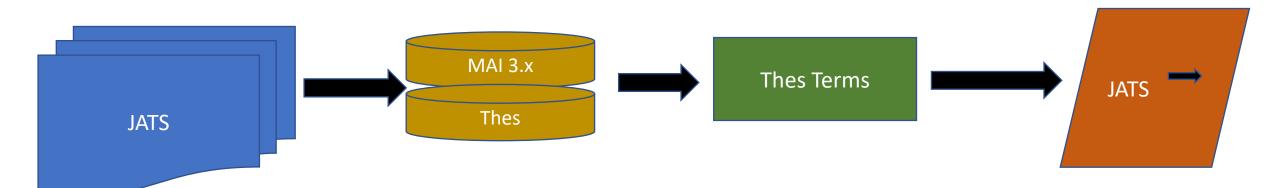
-Display taxonomy

-Browse hierarchy

-Search Terms

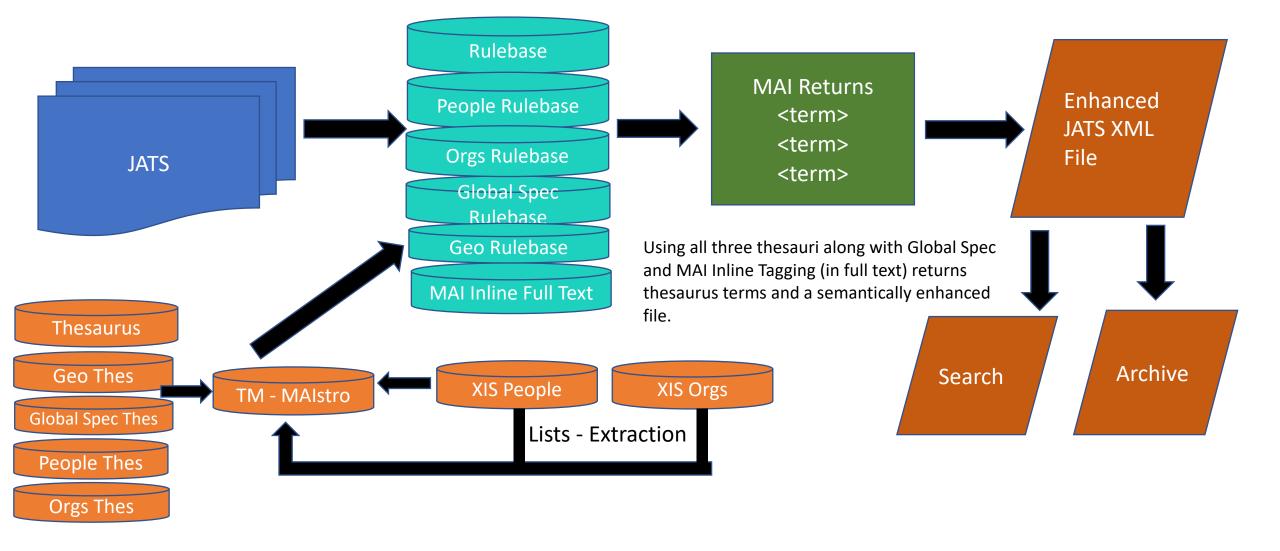
**PLOS Subject** 



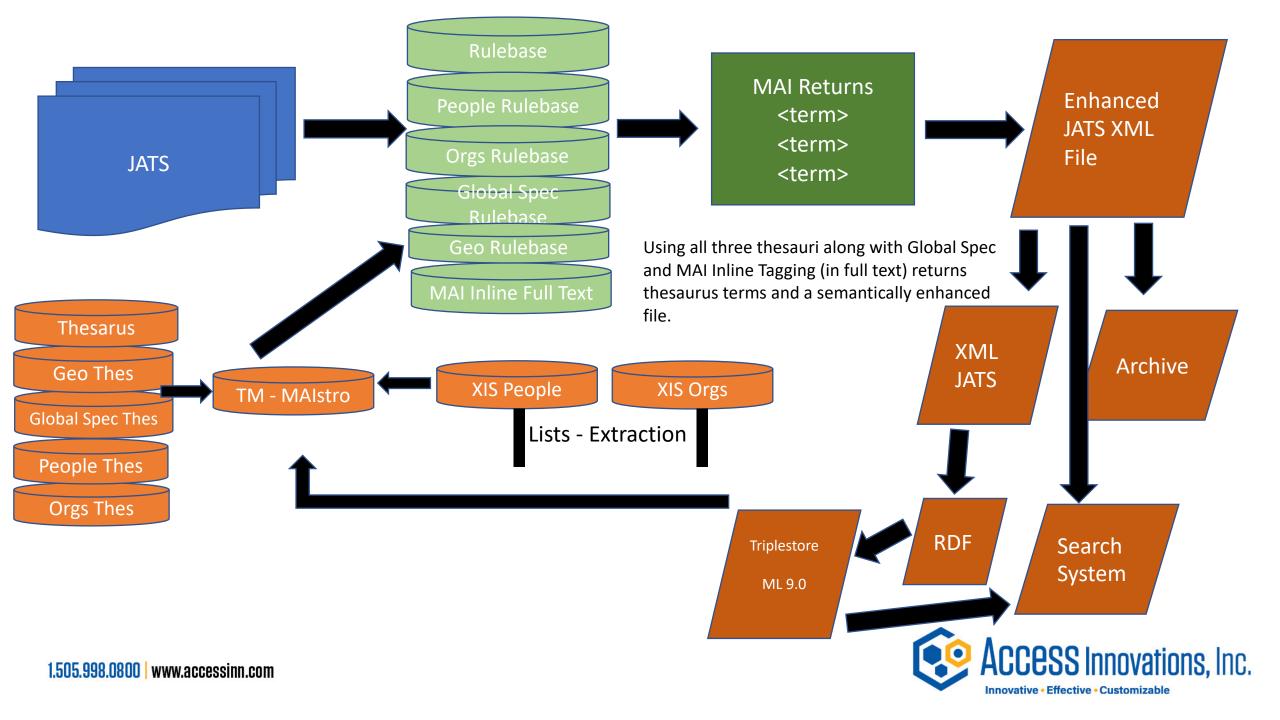


Indexing using the controlled vocabulary or thesaurus / taxonomy will return basic thesaurus terms to be converted into enriched data (like JATS XML for ingestion as the "Article of Record" storage).



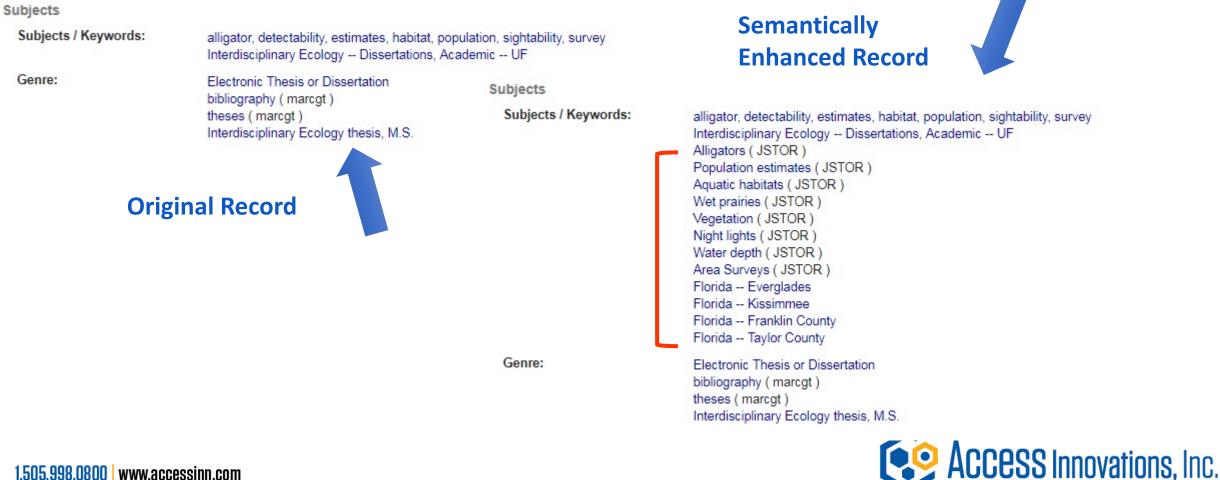






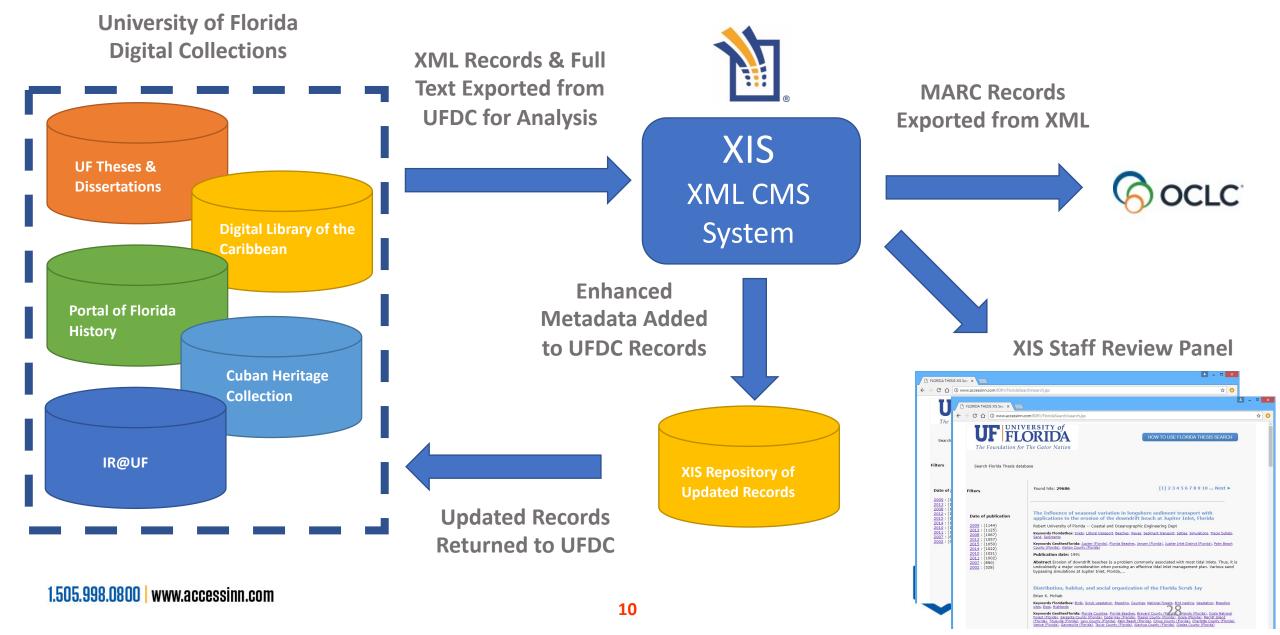
#### Florida Thesis Project

#### **Sample records from the pilot project** clearly demonstrate the enhanced metadata:

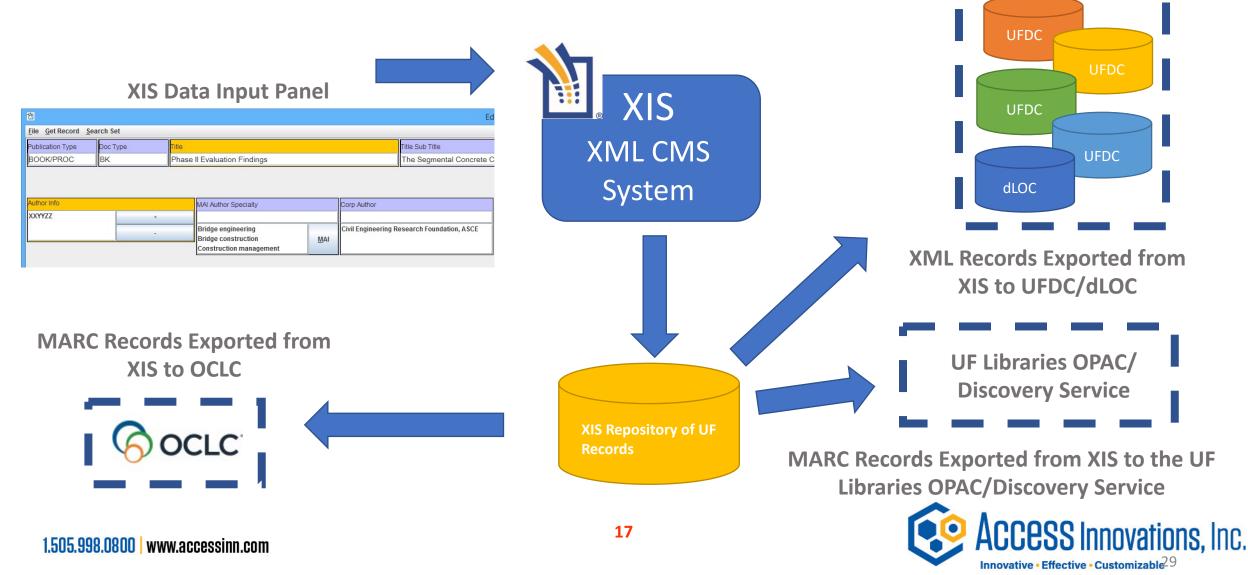


Innovative • Effective • Customizable

#### Florida Thesis Project

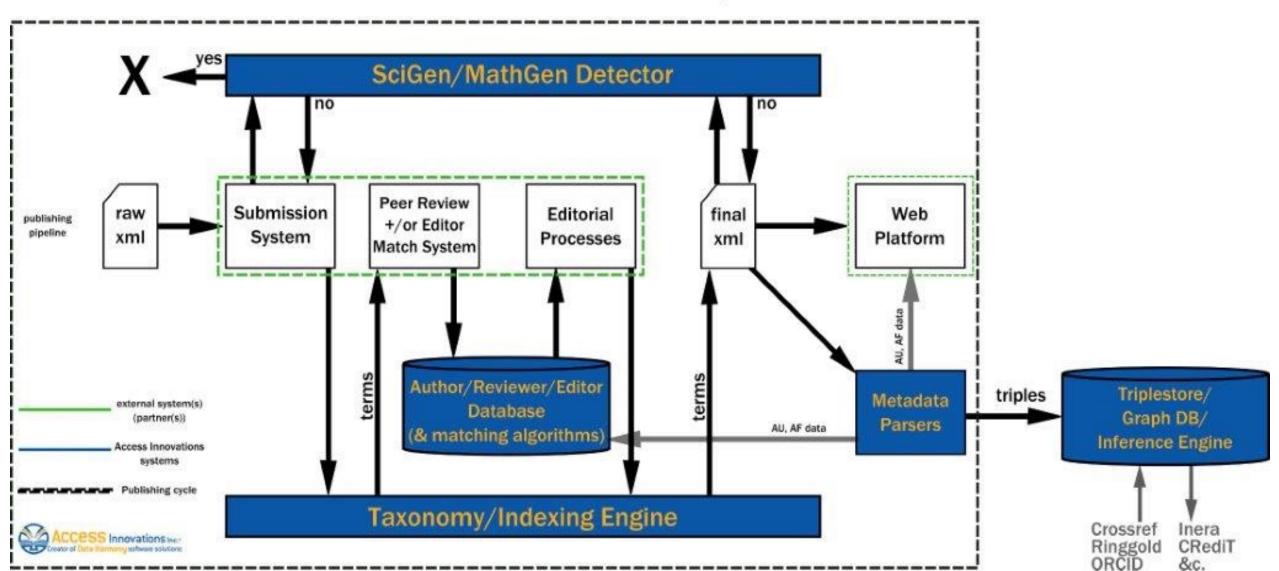


#### Planned Florida Record Creation All Records Created in XIS



#### Document submission uploads - Smart Submit

End-to-End Smart Submit: Proposed Workflow



Search Software Content Layer Adding the Taxonomy Presentation layer (User Interface)



## All the taxonomy

- Hierarchical relationships
  - The broader narrower
  - Browse and Discovery
- Equivalence relationships
  - Synonyms
  - Findability

- Associative terms
  - Related but not synonyms or hierarchical
  - Knowledge maps
  - Cross area searching
  - Ontologies
- Linking
- Alphabetic views for type ahead



### Non-intuitive Synonyms

- Invasive breast cancer
- Metastatic breast cancer
- Stage IV breast cancer

These all mean the same thing in MeSH, etc. (as well as in the ASCO thesaurus)



# "invasive breast cancer" Search returned 520 results for ""invasive breast cancer"

ASCO.org / GUIDELINES / April 7, 2014

#### Margins for Breast-Conserving Surgery in Stage I and II Invasive Breast Cancer

The Society of Surgical Oncology (SSO)/American Society for Radiation for breast-conserving surgery with whole-breast irradiation in stage endorsement.

ASCO.org / GUIDELINES / September 6, 2011

Adjuvant Ovarian Ablation in the Treatr Women with Early Stage Invasive Breas

## 520 hits

## Lack of Synonymy Breaks Search





#### "Metastatic breast cancer"

Search returned 1803 results for ""Metastatic breast cancer""

ASCO.org / GUIDELINES / October 16, 2017

#### Role of Bone-Modifying Agents in Meta

This guideline updates, in collaboration with Cancer Care Ontario ( of Clinical Oncology (ASCO) guideline on the role of bone-modifying focused update addressed the new data on intervals between dos

ASCO.org / GUIDELINES / May 23, 2016

Endocrine Therapy for Hormone Recep Cancer

This guideline provides recommendations about endocrine therap

## 1803 hits

Lack of Synonymy Breaks Search





#### "Stage IV Breast cancer"

Search returned 73 results for ""Stage IV Breast cancer""

Meeting Library / ABSTRACTS, PRESENTATIONS / June 1, 2009

#### Determinants of functional disability

2009 ASCO Annual Meeting Poster Session Determinants of functional d Author(s): Andrea L Cheville Associated Content: Abstract

Meeting Library / ABSTRACTS, PRESENTATIONS / June 1, 2012

The impact of primary surgery on sta

2012 ASCO Annual Meeting Poster Session The impact of primary surger Author(s): Ella Harris

Associated Content: Slides | Poster

# 73 hits

*I would want my medical team to see all 2,396 articles* 

#### Lack of Synonymy Breaks Search











# Achieving Synonymy

Find	Merge	Choose	Build
Find like concepts	Merge the terms	Choose a preferred form	Build term record • Hierarchy • Equivalence • Associative



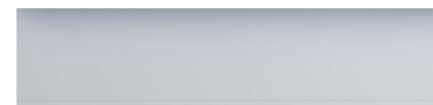
Q i → Search Admin Logout

## Integration into Search

- Mandatory input fields, Fixed-length, Display fields in the result, Searchable fields, Subfields
- Database indexing behavior
  - Allows for custom indexing behavior
- Search types
  - Word parse, phrase parse, and indexing terms
  - Boolean search types: Equals, Not, Or, Number, Exact matches, etc....
    - Can be mixed and matched based on the desired query
- Sortable fields
  - Sort fields in export or other views (already in-spec)
- Search implementation
  - Search against title, abstract, descriptors, organizations, people names, and geographic information
- Allows for map-integration
  - Utilize a GIS field for presenting the location meta-data of records

Search type		Search
Contains all words	~	Enter space separated words
County to ma		Search
Search type Exact phrase match	$\sim$	Enter phrase for exact match
Search type		Search
Any of these words	$\sim$	Enter space separated words
Search type		Search
		Search
None of these words	~	Enter space separated words
Search type		Search
Numbers range	~	Enter range (Ex: 1 to 10)





# Content Management – More Than Just Documents

- Content management is much more than acting as a document store
  - Ability to upload and store additional data-types
    - Videos
    - Images
    - Files
      - Excel
      - Word
      - Etc....
  - Ability to serve the content along-side the document
    - API's to access and deliver the objects
      - While AWS provides this, it is generally very complex
      - XIS simplifies this process via understanding the target audience
  - Challenges for libraries
    - Systems are often designed for naïve implementations
      - Storage of books and journals and the like
    - XIS solves this by giving a use-case specific implementation of CMS





# Search Software Content Layer Adding the Taxonomy Presentation layer (User Interface)





D



G Google

About Store





Q		

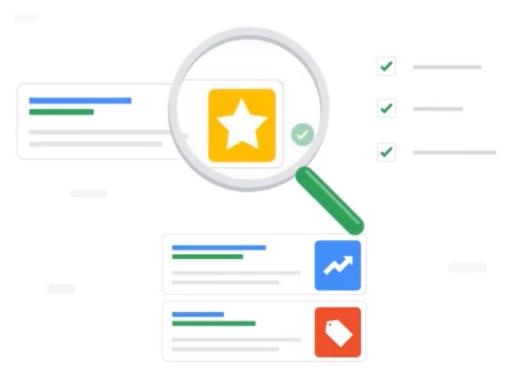
Google Search I'm Feeling Lucky

# Just give me Google!



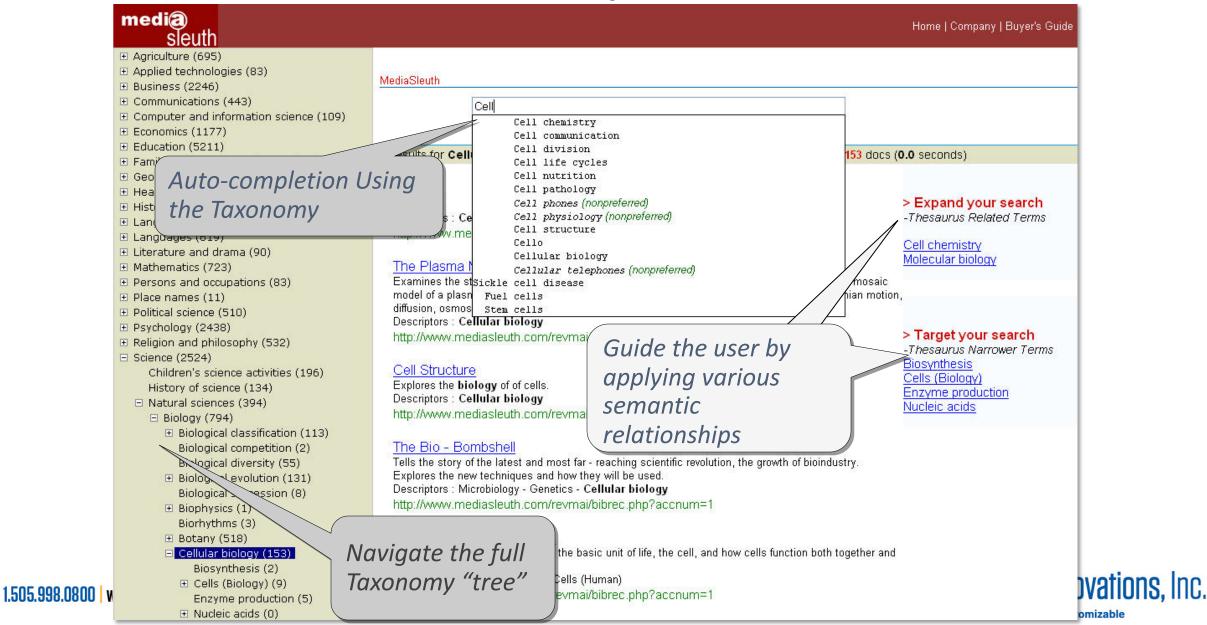
# Google

- Billions of pages
- Trillions of queries
  - 15% new topics each day
- User Contributed Content
- Ranking of pages
- Synonyms
- Interpretive meaning of query
  - understanding exactly what you mean and giving you back exactly what you want
- Doesn't work on small collections

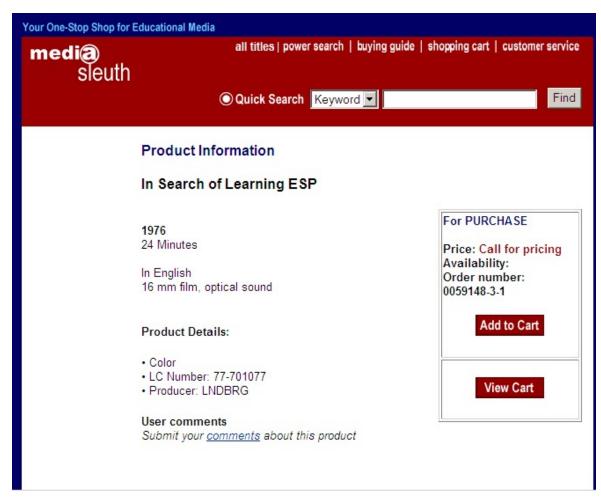




# Taxonomy Search



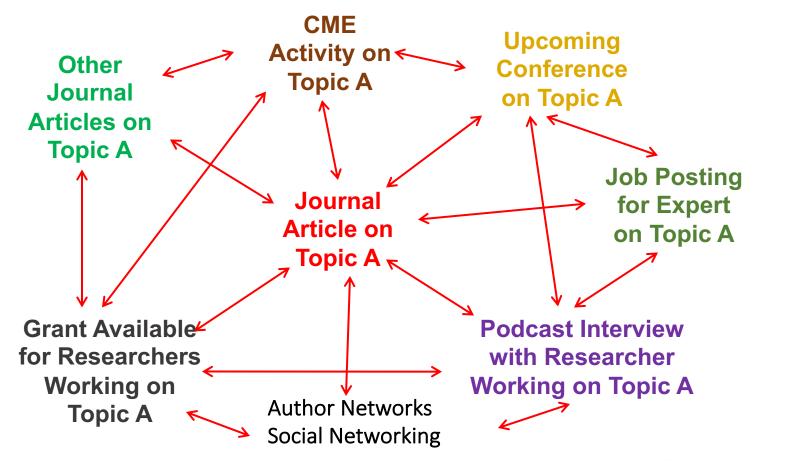
## Direct link to ecommerce to improve sales



Link search and taxonomy directly to the supply or documents or by redirecting to a shopping cart



# Link to Additional Resources





## Sample Linked Page

Cancer Epidemiology Biomarkers & Prevention Vol. 12, 161-164, February 2003 © 2003 <u>American Association for Cancer Research</u> Short Communications

Alcohol, Folate, Methionine, and Risk of Incident Breast Cancer in the American Cancer Society Cancer Prevention Study II Nutrition Cohort Heather Spencer Feigelson<sup>1</sup>, Carolyn R. Jonas, Andreas S. Robertson, Marjorie L. McCullough, Michael J. Thun and Eugenia E. Calle Department of Epidemiology and Surveillance Research, American Cancer Society, National Home Office, Atlanta, Georgia 30329-4251

Recent studies suggest that the increased risk of breast cancer associated with alcohol consumption may be reduced by adequate folate intake. We examined this question among 66,561 postmenopausal women in the American Cancer Society Cancer Prevention Study II Nutrition Cohort.

#### **Related Working Groups**

•<u>Finance</u> •<u>Charter</u> •<u>Molecular Epidemiology</u>

Webcasts Related Webcasts

## 1.505.998.0800 | www.accessinn.com

#### Think Tank Report Related Think Tank Report Content

## **Related Awards**

•AACR-GlaxoSmithKline Clinical Cancer Research Scholar Awards •ACS Award

### Weinstein Distinguished Lecture

#### **Related Press Releases**

 How What and How Much We Eat (And Drink) Affects Our Risk of Cancer
 Novel COX-2 Combination Treatment May Reduce Colon Cancer Risk Combination Regimen of COX-2 Inhibitor and Fish Oil Causes Cell Death
 COX-2 Levels Are Elevated in Smokers

## **Related AACR Workshops and Conferences**

Frontiers in Cancer Prevention Research Continuing Medical Education (CME) Molecular Targets and Cancer Therapeutics

## **Related Meeting Abstracts**

Association between dietary folate intake, alcohol intake, and methylenetetrahydrofolate reductase C677T and A1298C polymorphisms and subsequent breast Folate, folate cofactor, and alcohol intakes and risk for colorectal adenoma Dietary folate intake and risk of prostate cancer in a large prospective cohort study

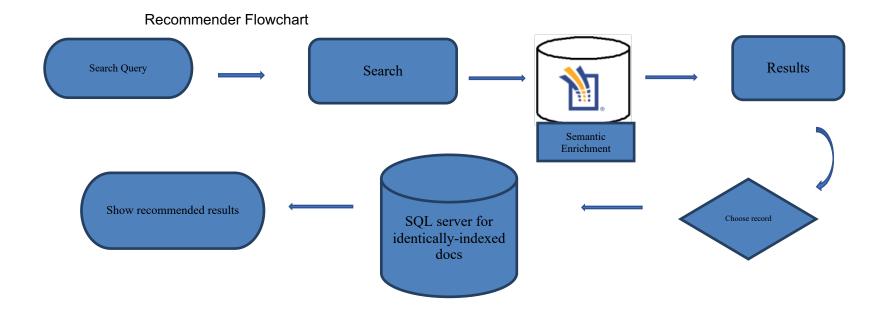
## **Related Education Book Content**

Oral Contraceptives, Postmenopausal Hormones, and Breast Cancer Physical Activity and Cancer Hormonal Interventions: From Adjuvant Therapy to Breast Cancer Prevention



# Recommender







## Recommender

National Information Center for Educational Media

Et al and the

Results for <b>Biochemistry</b> <u>click here for a <b>key word</b> search</u>	1 - 10 of 589 docs (0.01 second	les)
Eiochemistry Facilitates learning about biochemistry. Includes the topics of carbohydrates and lipids, proteins Descriptors : Biochemistry - Proteins - Carbohydrates - Lipids - Acids (Chemistry) http://www.mediasleuth.com/revmai/bibrec.php?accnum=494436 Introduction to Biochemistry Introduces the science of biochemistry. Descriptors : Biochemistry http://www.mediasleuth.com/revmai/bibrec.php?accnum=61697	Select an article from Search Results	<ul> <li>&gt; Expand your search</li> <li>- Thesaurus Related Terms</li> <li>Molecular biology</li> <li>&gt; Target your search</li> </ul>
Basic Biochemistry Covers the structure of the common cellular organic molecules. Explains the process of dehydration. Descriptors : Biochemistry http://www.mediasleuth.com/revmai/bibrec.php?accnum=204948	National Information Center for Educational Media	-Thesaurus Narrower Terms <u>Ce</u> <u>chemistry</u> Life processes chemistry

Biochemistry

Facilitates learning about biochemistry. Includes the topics of carbohydrates and lipids, proteins, nucleic acids, buffers, protein synthesis, and enzymes. Descriptors : Biochemistry - Proteins - Carbohydrates - Lipids - Acids (Chemistry)

#### More like this documents:

- The Chemistry of Life, the Chemistry of Carbohydrates and Lipids, the Chemistry of Proteins Facilitates learning about the biochemistry of carbohydrates... - Biochemistry - Pt 1 : students an understanding of cellular function. Examines.. Basic Biochemistry of Life : Presents basic concepts in biochemistry. Examines... - Fundamental Human Nutrition : , metabolic regulation, and energy sources. Defines... - Molecules of Life : Traces the chemical and molecular basis of human life... The Ph Concept : Discusses the chemical nature and measurement of ph.... Simple Nutrition : Presents an elementary introduction to nutrition. Discusses... Nuclear Acids : of protein synthesis. Breaking The Code Of Nucleic... <u>Thread of Life</u>: Shows how a virus can be reconstituted from nucleic... - Special Topics in Chemistry : Presents a four - part program on basic chemistry.

After an article is selected, a machine-to-machine call is made to your indexed corpus to retrieve articles vations, Inc. with identical Access Innovations, Inc. indexing parameters

nizable



## **Content Recommender**

#### National Information Center for Educational Media

music theory Search

Results for music theory click here for a key word search

Music Theory Fundamentals Includes ten study charts featuring music alphabet, sharps, flats, rhythm, time signatures, key Descriptors : Meter and rhythm - Music theory and composition http://www.mediasleuth.com/revmai/bibrec.php?accnum=82275

Music Theory Fundamentals

Includes ten study charts featuring **music** alphabet, sharps, flats, rhythm, time signatures, key Descriptors : Meter and rhythm - **Music theory** and composition http://www.mediasleuth.com/revmai/bibrec.php?accnum=179810

#### Practical Music Theory Series

Presents the complete three - part series on practical **music theory** created by Sandy Feldstein Descriptors : Musicology - Musical notation - **Music - Music theory** and composition - Meter and rhythm - Harmony http://www.mediasleuth.com/revmai/bibrec.php?accnum=404250

#### Essentials of Music Theory - Compact Disc 1

Introduces musical concepts through lessons followed by exercises. Covers note values, time signatures, triads, intervals, scales, and ear training. Includes rhythmic, melo performed by a number of different instruments including piano, flute, clarinet, and cello. Descriptors : **Music theory** and composition - **Music** appreciation http://www.mediasleuth.com/revmai/bibrec.php?accnum=473483

Essentials of Music Theory - Compact Disc 2

Introduces musical concepts through lessons followed by exercises. Covers note values, time signatures, triads, intervals, scales, and ear training. Includes rhythmic, melo performed by a number of different instruments including alto sax, trumpet, trombone, and violin. Descriptors : **Music theory** and composition - **Music** appreciation http://www.mediasleuth.com/revmai/bibrec.php?accnum=473485

ACCESS Innovations, Inc.

ACCESS Innovations Inc.\*

stomizable



## **Content Recommender**

# National Information Center for Educational Media Practical Music Theory Series Presents the complete three - part series on practical music theory created by Sandy Feldstein for Alfred's Publishing. Covers staff, clefs, measures, time signatures, notes, rests, ties and slurs, repeats and endings, flats, sharps and naturals, scales, key signatures, dynamics, tempos, chords, inversions and harmonizing. Apple version compatible with Commodore computers, IBM version available in 3.5 and 5.25 diskettes. Includes theory books. Descriptors : Musicology - Musical notation - Music - Music theory and composition - Meter and rhythm - Harmony

#### More like this documents:

Practical Music Theory - Volume 3 : and 5.25 diskettes. Part 3 of a three - part series...
Alfred Music Achievement Series : and rhythmic notation , music terminology and ties...
Practical Music Theory - Volume 2 : on practical music theory created by Sandy Feldstein...
Practical Music Theory - Volume 1 : series on practical music theory created by Sandy...
Basic Piano Theory Software - Levels 1a, 1b, 2 : Alfred's Basic Piano Theory - Levels 1 - 5 and adult.....
Basic Piano Theory Software - Levels 3, 4, 5 : Alfred's Basic Piano Theory - Levels 1 - 5 and adult....
Basic Piano Theory Software - Adult Level : Alfred's Basic Piano Theory - Levels 1 - 5 and adult....
Basic Piano Theory Software - Student Version - Level 1A : Offers student diskette only, Level 1A, from Alfred's...
Basic Piano Theory Software - Student Version - Level 1B : Offers student diskette only, Level 1B, from Alfred's...
Basic Piano Theory Software - Student Version - Level 2 : Offers student diskette only, Level 2, from Alfred's...

The more terms in common, the higher the recommendation of content as similar.

## Thesaurus terms

Similar content



1.505.998.0800 | www.accessinn.com

# Search Leverage

## Search Priority Using the Thesaurus terms

- Better precision and recall in search
- No false presentations
- Insures full coverage of publications
- Synonymy fully expanded to match the thesaurus
- Searches the thesaurus terms first on the tagged documents

## Triple store leverage

1.505.998.0800 www.accessinn.com

• Provide new connection options in search

• Expand the connections users can make

Knowledge graph presentations for an expanded user experience

Integration first with the current user interface

Expand the options for the users with the new technology behind the scenes

9

10

12

13

14

15

16

17

18

19

20

width="9"

index="yes"

required="yes"

makecaps="yes"

hitfield="yes"

verify="yes"

15

checkfile="metadoctypes"

<Field name="SDT" altname="Doctype CEKE"



<!-- MAI="nicrule" MAIDir="/data/nicrule" -->

</p

wledge graph presentations for an expanded user experience

# Word and Term Parsing In Search

<ul> <li>-ing, -ed, -es, -'s, -s', etc.</li> <li>Depluralization</li> </ul>		
runcation		
<ul> <li>Left and right</li> </ul>		
Vild cards		
<ul> <li>Organi*ation</li> </ul>		
/ariant Spellings		
• Centre, center		





# Search Taxonomy Terms First

Tag	Search	Add	Search
Tag the content with the taxonomy	Search the preferred form – taxonomy term first	BUT add all synonyms as equal to the term so they are all searched together	Then search body and abstract title • If desired • If no results on controlled terms

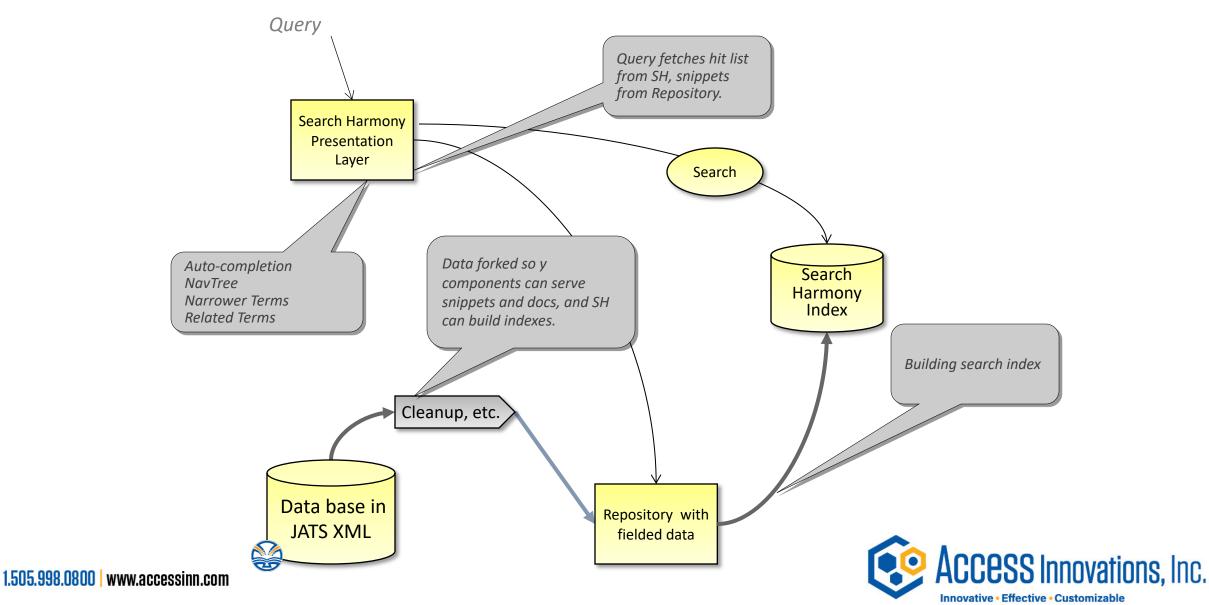


# Linked Data

Assert that the AIP Thesaurus term "Nonlinear optics" refers to the **same concept** as the dbpedia page "Nonlinear optics" by putting links in both places.

aipthes1.2		About: Monlineer	option	
<ul> <li>Acoustics</li> </ul>	Term: Nonlinear optics	About: Nonlinear		
<ul> <li>Astronomy and astrophysics</li> </ul>		An Entity of Type : PhysicalE	E <u>ntity100001930,</u> from Named Graph : <u>http://dbpedia.org</u> , within Data Space : <u>dbpedia.org</u>	
<ul> <li>Atomic and molecular physics</li> </ul>	Broader Term + - V			
<ul> <li>Biological physics</li> </ul>				
<ul> <li>Condensed matter physics</li> </ul>	Optics and optical physics		nch of optics that describes the behavior of light in nonlinear media, that is, media in which the dielectric polarization P responds nonlinearly to the electric ly 108 V/m) such as those provided by pulsed lasers.	4
<ul> <li>Energy</li> </ul>	Narrower Term + - V			
<ul> <li>General physics</li> </ul>		Property dbpedia-owl:abstract	Value <ul> <li>Nonlinear optics (NLO) is the branch of optics that describes the behavior of light in nonlinear media, that is, media in which the dielectric polarization</li> </ul>	e.
<ul> <li>Geophysics</li> </ul>	Cross phase modulation	upeua-ownapstract	(values of the electric field comparable to interatomic electric fields, typically 108 V/m) such as those provided by pulsed lasers. Above the Schwinge	r I
<ul> <li>Interdisciplinary physics</li> </ul>	Dynamic gratings		optics remained unexplored until the discovery of Second harmonic generation shortly after demonstration of the first laser. (Peter Franken et al. at U	â
<ul> <li>Materials science</li> </ul>	Kerr effects	dbpedia-owi:wikiPageExternalLin	<ul> <li>http://cns-alumni.bu.edu/~slehar/PhaseConjugate/PhaseConjugate.html</li> <li>http://simphotek.com/bckg/bckg.CONTENT.html</li> </ul>	
<ul> <li>Mathematical physics</li> </ul>	Multiphoton processes		<ul> <li>http://www.advr-inc.com/waveguide.html</li> </ul>	
<ul> <li>Nanotechnology</li> </ul>	Multiwave mixing		<ul> <li>http://www.amazon.com/Nonlinear-Fiber-Optics-Fourth-Photonics/dp/D123695163/ref=sr_1_1?s=books&amp;ie=UTF8&amp;qid=1313111745&amp;sr=1-1</li> <li>http://www.amazon.com/Nonlinear-Optics-Third-Robert-Boyd/dp/D123694701/ref=sr_1_1?is=UTF8&amp;qid=1313111421&amp;sr=8-1</li> </ul>	
👇 Nuclear physics 📃	Nonlinear optical devices		<ul> <li>http://www.amazon.com/Principles-Nonlinear-Optics-Classics-Library/dp/0471430803/ref=sr_1_1?ie=UTF8&amp;qid=1313111556&amp;sr=8-1</li> <li>http://www.as-photonics.com/SNLO.html</li> </ul>	
P Optics and optical physics	Nonlinear optical hyperpolarizability		thtp://www.rs-photonics.com/encyclopedia.html	
<ul> <li>Adaptive optics</li> </ul>	Nonlinear optical materials	dbpedia-owl:wikiPagelD	21723 (xsd:integer)	
<ul> <li>Astronomical optics</li> </ul>	Nonlinear optical susceptibility	dbpedia-owl:wikiPageRevisionID		
<ul> <li>Atmospheric optics</li> </ul>		dbpprop:hasPhotoCollection dcterms:subject	http://wifc5-03.informatik.uni-mannheim.de/flickrwrappr/photos/Nonlinear_optics     category:Nonlinear_optics	
<ul> <li>Biomedical optics</li> </ul>	Optical bistability	rdf.type	<ul> <li>category.roomea_optics</li> <li>yaqo:BodyPart105220461</li> </ul>	
🗢 Cardinal points	Optical chaos		<ul> <li>yago:Eye105311054</li> </ul>	
<ul> <li>Collimation</li> </ul>	Optical coherent transients		<ul> <li>yago:Organ105297523</li> <li>yago:Part109385911</li> </ul>	
<ul> <li>Doppler effect</li> </ul>	Optical frequency conversion		yago:SenseOrgan105299178     yago:Mene10000455	
<ul> <li>Fiber optics</li> </ul>	Optical hole burning		<ul> <li>yago:Thing100002452</li> <li>yago:NonlinearOptics</li> </ul>	
<ul> <li>Fourier optics</li> </ul>	Optical instabilities		<ul> <li>yago:PhysicalEntity100001930</li> </ul>	
<ul> <li>Geometrical optics</li> </ul>	Optical limiting	rdfs:comment	<ul> <li>Nonlinear optics (NLO) is the branch of optics that describes the behavior of light in nonlinear media, that is, media in which the dielectric polarization (values of the electric field comparable to interatomic electric fields, typically 108 V/m) such as those provided by pulsed lasers.</li> </ul>	F
<ul> <li>Gradient index optics</li> </ul>	Optical multistability	rdfs:label	Nonlinear optics	
<ul> <li>Holography</li> </ul>	Optical parametric amplifiers	owl:sameAs	fbase:Nonlinear optics	
<ul> <li>Infrared optics</li> </ul>	Optical parametric oscillators		http://fr.dbpedia.org/resource/Optique_non_linéaire     http://de.dbpedia.org/resource/Nichtlineare Optik	
<ul> <li>Integrated optics</li> </ul>	Optical phase matching		<ul> <li>http://wikidata.dbpedia.org/resource/Q756033</li> </ul>	
<ul> <li>Laser applications</li> </ul>	Optical pulse compression		<ul> <li>http://cs.dbpedia.org/resource/Nelineární_optika</li> <li>http://es.dbpedia.org/resource/No_linealidad_óptica</li> </ul>	
<ul> <li>Laser optical systems</li> </ul>			● http://it.dbpedia.org/resource/Ottica_non_lineare ● http://ja.dbpedia.org/resource/非線型光学	
► Lasers	Optical pulse generation		nup.//a.ubpedia.ubg/resource/年終金元子 http://a.ubpedia.org/resource/日/선정 원학	
<ul> <li>Light amplification</li> </ul>	Optical rotation		<ul> <li>http://nl.dbpedia.org/resource/Niet-lineaire_optica</li> <li>http://pl.dbpedia.org/resource/Optyka_nieliniowa</li> </ul>	
<ul> <li>Light diffraction</li> </ul>	Optical saturation		<ul> <li>http://pt.dbpedia.org/resource/Optica_não_linear</li> </ul>	
<ul> <li>Luminescence</li> </ul>	Optical solitons		<ul> <li>http://wikidata.org/entity/Q756033</li> <li>http://yago-knowledge.org/resource/Nonlinear optics</li> </ul>	
<ul> <li>Microoptics</li> </ul>	Optical switching		● http://ja.dbpedia.org/resource/非線形光学	
<ul> <li>Nano optics</li> </ul>	Parametric processes		<ul> <li>http://be.dbpedia.org/resource/Нелінейная_оптыка</li> <li>http://bg.dbpedia.org/resource/Нелинейна оптика</li> </ul>	
<ul> <li>Nonlinear optics</li> </ul>	Phase conjugation		<ul> <li>http://fa.dbpedia.org/resource/غیردطی/http://fa.dbpedia.org/resource/jeta/http://fa.dbpedia</li></ul>	1
<ul> <li>Ocean optics</li> </ul>	Scope Note		<ul> <li>http://he.dbpedia.org/resource/Nemlineáris optika</li> <li>http://hu.dbpedia.org/resource/Nemlineáris optika</li> </ul>	Ь
<ul> <li>Optical computing</li> </ul>			<ul> <li>http://tt.dbpedia.org/resource/Netiesiné_optika</li> </ul>	
			<ul> <li>http://mn.dbpedia.org/resource/Шугаман биш оптик</li> </ul>	

## Sample – Search Harmony Deployment





## The User Interface and Experience

Search type		Search	
Contains all words	~	Enter space separated words	-
Search type		Search	
Exact phrase match	~	Enter phrase for exact match	-
Search type		Search	
Any of these words	~	Enter space separated words	-
Search type		Search	
None of these words	~	Enter space separated words	-
Search type		Search	
Numbers range	~	Enter range (Ex: 1 to 10)	+

- The most critical component
- User-driven features for speeding the delivery of content
  - A UI/X driven experience
    - For configuring document structures
    - Creates and displays API calls to retrieve/store data
      - user may copy and paste into their application layer
    - Allow for on the fly changes to the document schema
      - Can be configured to automatically serve and update the API settings with no need for input from the programmers

Search Within Results Clear Close



File Edit View History Bookmarks Develop 🛋 Safari Window Heli 🖸 🥥 🧌 🜒 🕏 🚱 😧 🗢 🕚 Q 😭 🖏 Sun Jul 25 11:28 AM

a m + n a

## **ASCO** Meeting Library

## **ASCO** Meeting Library

## RELATED

Session: Breast Cancer-Local/Regional/Adjuvant

Cost-effectiveness of the Oncotype DX Breast Recurrence Score with node-positive early breast cancer based on the RxPONDER

A Search Results | ASCO

Search or enter website name

Add to Collection 🕂

Abstract

#### Authors:

Vladislav Berdunov, Steve Millen, Andrew Paramore, Sarah Reynia, Nina Fryer, Georges; PHMR Ltd, London, United Kingdom; Exact Sciences, London, United Associates, East Molesey, United Kingdom

#### Abstract Disclosures

**Research Funding:** 

Exact Sciences.

#### Background:

The Oncotype DX test is a predictive and prognostic multigene assay used to guide adjuvant chemotherapy in HR+/HER2- early breast cancer. The ability of the Oncotype DX test to predict the benefit of chemotherapy in node-positive early breast cancer was demonstrated in SWOG-8814. This evidence, in combination with findings from a bespoke analysis of the TransATAC study, informed an economic evaluation of the Oncotype DX test by the National Institute for Health and Care Excellence in the UK. This study examined the impact of new evidence from the RxPONDER trial on the costeffectiveness of the Oncotype DX test in postmenopausal women with node-positive early breast cancer

#### Methods:

The cost-effectiveness of the Oncotype DX test compared to clinical risk tools only in postmenopausal HR+/HER2- early breast cancer was estimated using a model in Microsoft Excel. The pre-RxPONDER analysis using the old cut points (RS 0-17, RS 18-30, RS 31-100) was informed by TransATAC and SWOG-8814. The model was updated with 5-year probability of distant recurrence as first site estimates based on new RS cut points (RS 0-25, RS 26-100) from RxPONDER. The impact on incremental lifetime costs and quality-adjusted life-years (QALYs) gained was examined based on the list price for the Oncotype DX test in the UK.

**Genitourinary Cancers Symposium** 

Cost-effectiveness analysis of neoadjuvant immune checkpoint inhibition (ICI) versus cisplatinbased chemotherapy (CBC) in muscle-invasive bladder cancer (MIBC).

SESSION Poster Session: Urothelial Carcinoma

AUTHOR(S) Ali Raza Khaki, Yong Shan, Richard Nelson, Sapna ... ABSTRACT

419



► ASCO.org

**Gastrointestinal Cancers** Symposium

Minimal residual disease (MRD) detection with circulating tumor DNA (ctDNA) from personalized assays in stage II-III colorectal cancer patients in a U.K. multicenter prospective study (TRACC).

SESSION Poster Session: Colorectal Cancer

AUTHOR(S) Gayathri Anandappa, Naureen Starling, Ruwaida ...

ABSTRACT 102

**Gastrointestinal Cancers** Symposium

Cost effectiveness of DPYD genotyping to screen for dihydropyrimidine dehydrogenase (DPD) deficiency prior to adjuvant chemotherapy for colon cancer.

SESSION Poster Session: Colorectal Cancer

AUTHOR(S) Gabriel A. Brooks, Stephanie Tapp, Allan T. Daly, J...

ABSTRACT 55

**Gastrointestinal Cancers** Symposium

Real-world outcomes ir recurrent versus de no metastatic pancreatic adenocarcinoma.  $(\mathbf{n})$ 

SESSION Poster Session: Pancreatic  $\square$ AUTHOR(S) Laura Miotke, Christopher ( + )

ABSTRACT

**Q** Search

387

► ASCO eLearning ► ASCO Journals Track: Breast Cancer-Local/Regional/Adj uvant Subtrack: **Adjuvant Therapy** 534 Abstract #: Citation: I Clin Oncol 39. 2021 (suppl 15; abstr 534) DOI: 10.1200/JCO.2021 39.15 suppl.534

Cost effectiveness

Prognostic tools

Recurrent disease

Adjuvant chemotherapy

#### sults for "breast cancer index"

#### CTS. MEETING VIDEOS

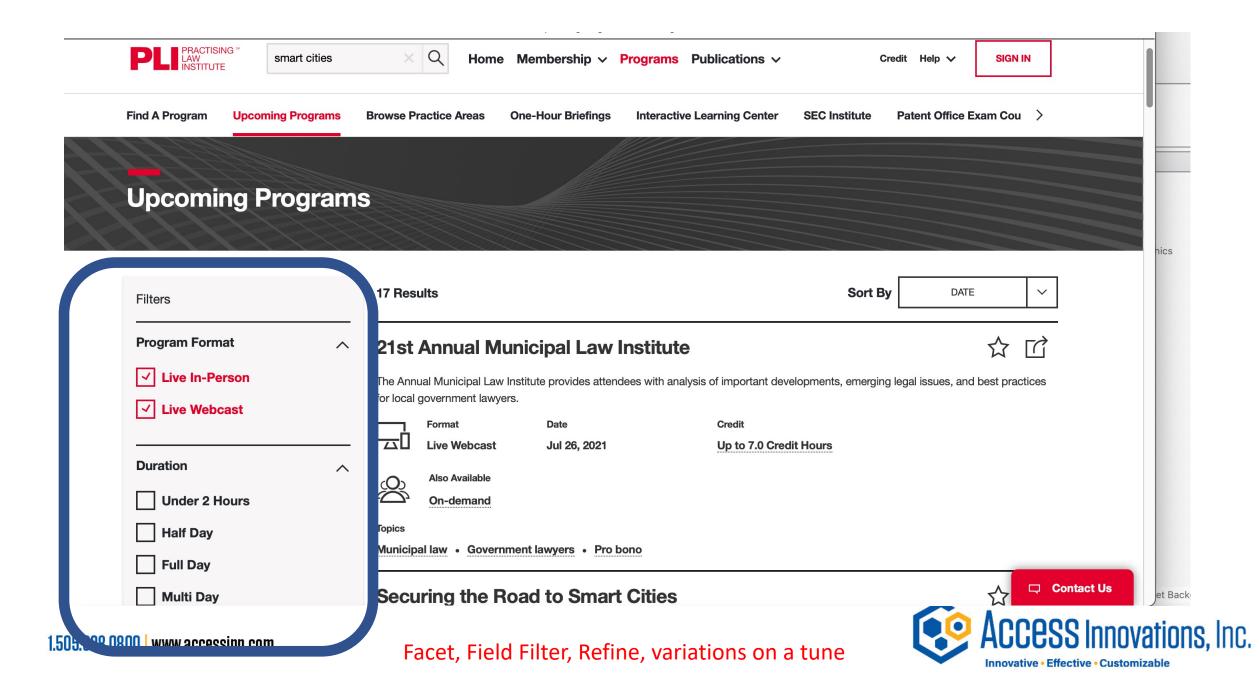
## less of the Oncotype DX Breast Recurrence bstmenopausal women with node-positive

DX test is a predictive and prognostic multigene assay used to guide adjuvant early breast cancer. The ability of the Oncotype DX test to predict the benefit of



## Sign In Q (?)

ASCO <sup>®</sup> AMERICAN SOCIETY OF CLINICAL ONCOLOGY	Membership Directory Store Press Center Other Sites Join Now Sign In 🗙
breast cancer	
breast cancer	
breast cancer <b>index</b>	
breast cancer <b>brain metastases</b>	<u> 1</u> 40 * 1898 の 今 ① Q 呈 の Sun Jul 25 10:50 / ② ① (十) (一) (一)
er positive breast cancer	Store Press Center Other Sites Join Now Sign In Q
er positive invasive breast cancer	r Meetings v Membership v About ASCO v
er+ breast cancer	
er-positive breast cancer	
er-positive invasive breast cancer	Q Search
her2 positive breast cancer	
her2-positive breast cancer	■ News (36) ■ DX Breast Recurrence ■ News (36) ■ DX Breast Recurrence ■ Score test in postmenopausar women with node-positive early Background The Operation DX test is a predictive and proposition provide adjugant.
1.505.998.0800   www.accessinn.com	Background: The Oncotype DX test is a predictive and prognostic multigene assay used to guide adjuvant chemotherapy in HR+/HER2- early breast cancer. The ability of the Oncotype DX test to predict the benefit of 50 51 52 53 54 55 50 25 20 25 20 25 20 20 20 20 20 20 20 20 20 20 20 20 20



		V PLOS ONE: Search Results	
		SEARCH	
Facets or fields to refine search	207,636 results for everything:health Journal PLOS ONE (174,793) PLOS Neglected Tropical Diseases (8,639)	Sort B       ✓ Relevance       SEARCH ALERT       Image: Constant of the second sec	
	<ul> <li>PLOS Pathogens (6,887)</li> <li>PLOS Genetics (5,380)</li> <li>PLOS Computational Biology (4,426)</li> <li>show more</li> </ul> Subject Area	https://doi.org/10.1371/journal.pone.0254230 Views: 105 • Citations: 0 • Saves: 0 • Shares: 0 <u>Mental health literacy at the public health level in low and middle income countries: An exploratory</u> <u>mixed methods study in Vietnam</u> Hoang-Minh Dang, Trung T. Lam, Anh Dao, Bahr Weiss Research Article I published 31 Dec 2020 PLOS ONE	
	<ul> <li>Biology and life sciences (193,392)</li> <li>Medicine and health sciences</li> </ul>	https://doi.org/10.1371/journal.pone.0244573 Views: 1074 · Citations: 1 · Saves: 17 · Shares: 5 Extent of Integration of Priority Interventions into General Health Systems: A Case Study of	
	<ul> <li>Neolectie and health sciences (180,508)</li> <li>Research and analysis methods (111,313)</li> <li>Biochemistry (78,610)</li> </ul>	Extent of integration of Phonty interventions into General Health Systems: A Case Study of         Neglected Tropical Diseases Programme in the Western Region of Ghana         Ernest O. Mensah, Moses K. Aikins, Margaret Gyapong, Francis Anto, Moses J. Bockarie, John O. Gyapong         Research Article I published 20 May 2016 PLOS Neglected Tropical Diseases         https://doi.org/10.1371/journal.pntd.0004725	
	Anatomy (71,037) show more	Views: 2281 · Citations: 6 · Saves: 86 · Shares: 1 <u>Taking stock of the social determinants of health: A scoping review</u>	
	Article Type  Research Article (200,760)  Correction (942)  Perspective (742)	Kelsey Lucyk, Lindsay McLaren Research Article I published 11 May 2017 PLOS ONE https://doi.org/10.1371/journal.pone.0177306 Views: 16118 • Citations: 33 • Saves: 219 • Shares: 4	
1.5		Priorities for Research on Equity and Health: Towards an Equity-Focused Health Research Agenda	,In



A Search Results | ASCE

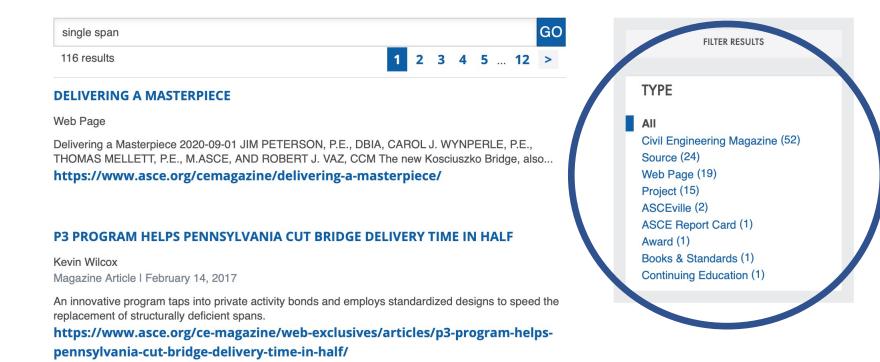
(①)

Ç

 $\left(+\right)$ 

(C) (6)

## SEARCH RESULTS



#### **TURN FOR THE BETTER**

Web Page

Turn for the Better 2019-05-01 Keith R. Griesing, P.E., M.ASCE, and Brian J. Mileo, P.E. The Johnson Street Bridge has served as a critical link to the city of Victoria, British Columbia, Canada, for many...



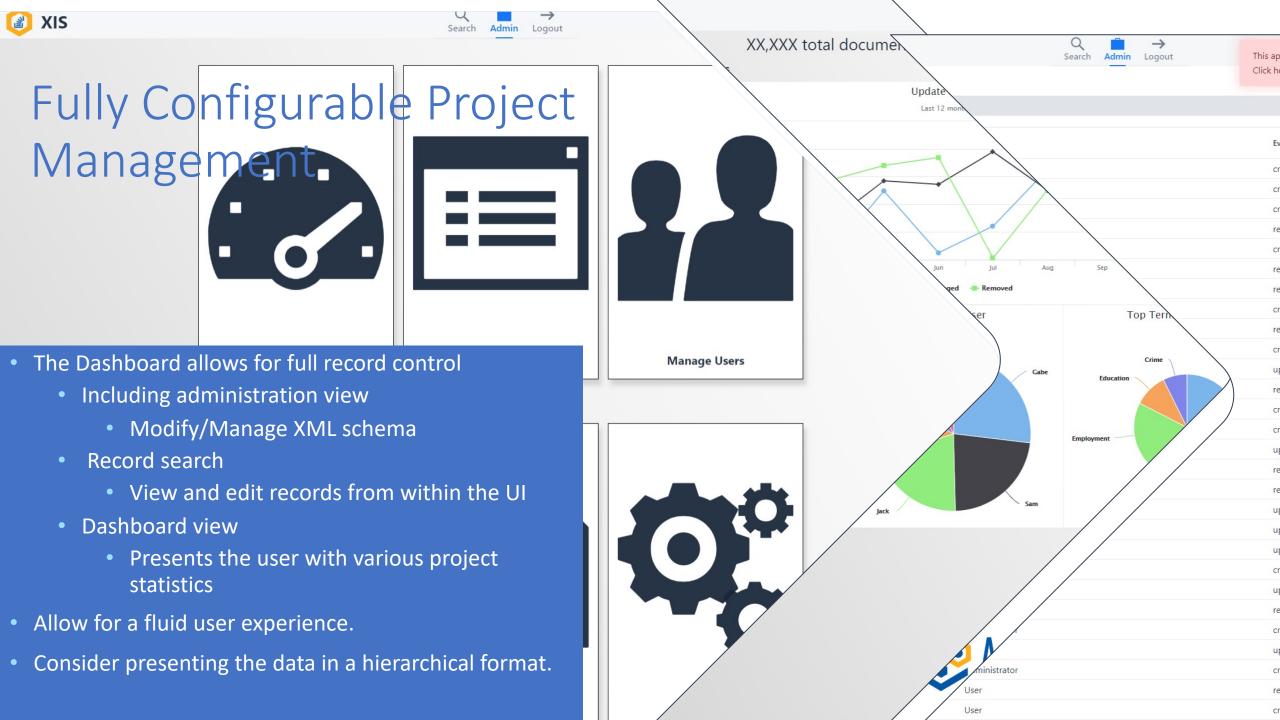


# User statistics and analytics

- Provide the end-user with a variety of analytics for how their data is accessed
  - Allow them to make enhancements/improvements to their schemas
    - Demonstrate the robustness and capability of the platform
      - Builds consumer trust







## **About Access Innovations**

Access Innovations are experts in content creation, enrichment, and conversion services. We provide services to semantically enrich and tag raw text into highly structured data. We deliver clean, well-formed, metadataenriched content so our clients can reuse, repurpose, store, and find their knowledge assets. We go beyond the standards to build taxonomies and other data control structures as a solid foundation for your information. Our services and software allow organizations to use and present their information to both internal and external constituents by leveraging search, presentation, and e-commerce. We change *search to found!* 

## Quick Facts

- Founded in 1978
- Headquartered in Albuquerque, NM
- Privately held
- Delivered more than 2000 engagements



# Our Software

- Data Harmony
  - XIS (XML Intranet System)®
  - M.A.I.<sup>®</sup> (Machine Aided Indexer)
  - Thesaurus Master ®











Extension Modules
 Search Harmony
 Smart Submit
 Semantic Fingerprinting





## 1.505.998.0800 | www.accessinn.com

6301 Indian School Road NW, Suite 400 Albuquerque, NM 87110

Marjorie Hlava, President 505-998-0800 x109

margie\_hlava@accessinn.com

# QUESTIONS??

This is an "On Demand" presentation so email to Margie Mhlava@accessinn.com

> Or call 505-998-0800 x 109

I would love to chat



