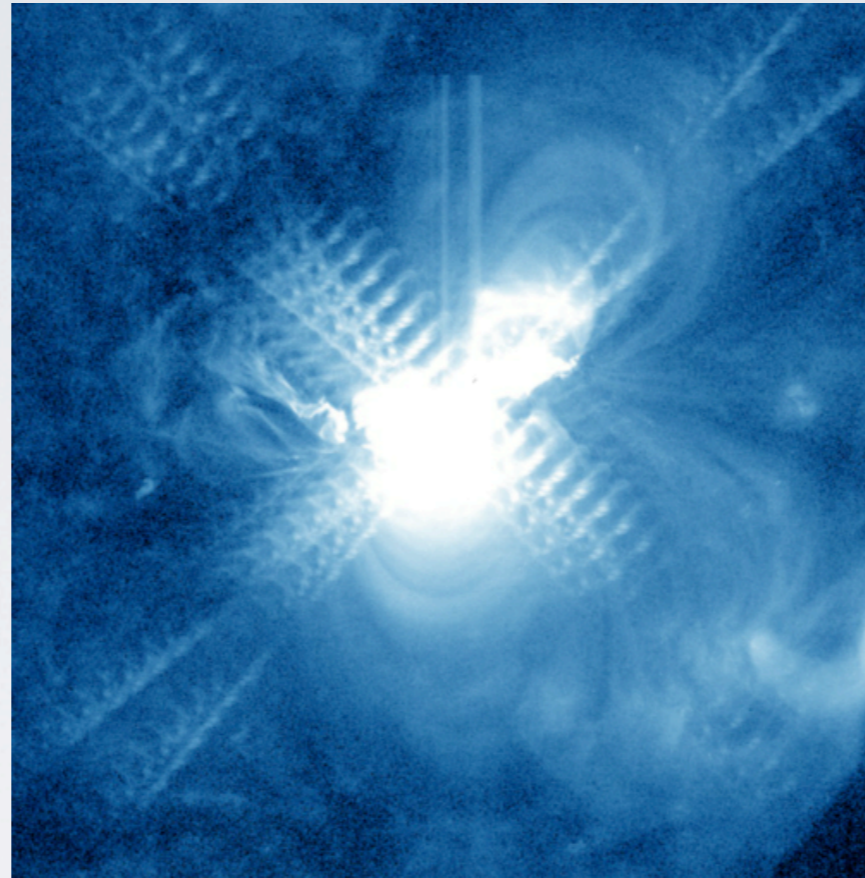


Solr Flair



erik . hatcher
@ lucidimagination.com



Abstract

Show off the power of **Apache Solr** with state of the art **user interfaces** and interactions. Solr Flair demonstrates live systems leveraging Ajax suggest, “instant” search and preview, did you mean?, spell checking, faceting, filtering, grouping, and clustering. We’ll see how to generate charts, maps, and timelines from Solr indexed data. Each example will be presented **with the complete code, configuration, and user interface elements.**

Tool Box

- **lucidworks**

- Solr inside
 - powered by Lucene
- Management REST API
- Much more

- **Prism**

- Ruby, Sinatra, Rack, solr.rb->RSolr

- **Rails /  blacklight**

- **VelocityResponseWriter**

- **jQuery, Simile Timeline, Google Charts**

Templating

- Gotta have it.
- `{:params => 'in',...}`
- `<html><body>OUT</body></html>`
 - or partial thereof. Ahem, Ajax

Templating choice

- I like Velocity, personally
- See also:
 - <http://today.java.net/pub/a/today/2003/12/16/velocity.html>

wt=velocity

- Solr "out of the box"
 - [http://localhost:8983/select?q=ipod
&**wt=velocity**&v.template=browse&v.layout=layout](http://localhost:8983/select?q=ipod&wt=velocity&v.template=browse&v.layout=layout)
 - or simply /browse

/browse



Examples: Simple [Spatial](#)

Find:

Submit Query

Reset

Boost by Price

Field Facets

cat

- [Electronics](#) (14)
- [Memory](#) (3)
- [Connector](#) (2)
- [Graphics Card](#) (2)
- [Hard Drive](#) (2)
- [Monitor](#) (2)
- [Search](#) (2)
- [Software](#) (2)
- [Camera](#) (1)
- [Copier](#) (1)
- [Multifunction Printer](#) (1)
- [Music](#) (1)
- [Printer](#) (1)
- [Scanner](#) (1)

manu_exact

- [Apache Software Foundation](#) (2)
- [Belkin](#) (2)
- [Canon Inc.](#) (2)

17 results found in 7 ms Page 1 of 2

Test with some GB18030 encoded characters [More Like This](#)

Price: **\$0.00**

Features: No accents here 这是一个功能 This is a feature (translated) 这份文件是很有光泽 This document is very shiny (translated)

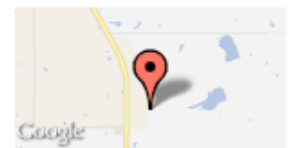
In Stock: true

Samsung SpinPoint P120 SP2514N - hard drive - 250 GB - ATA-133 [More Like This](#)

Price: **\$92.00**

Features: 7200RPM, 8MB cache, IDE Ultra ATA-133 NoiseGuard, SilentSeek technology, Fluid Dynamic Bearing (FDB) motor

In Stock: true



[Larger Map](#)

Maxtor DiamondMax 11 - hard drive - 500 GB - SATA-300 [More Like This](#)

Price: **\$350.00**

Features: SATA 3.0Gb/s, NCQ 8.5ms seek 16MB cache

In Stock: true



[Larger Map](#)

jQuery

- Ajax rulez!
 - see also:
<http://www.ibm.com/developerworks/web/library/wa-resc/>
- Clarification, Ajax used "properly", is a beautiful thing.
 - meaning, let HTML be HTML, don't build HTML inside JavaScript strings please for the love of ...; keep things simple.
 - /winner outputs "first last", literally. only.

suggest

Collection:

- <http://localhost:8888/solr/apachecon/autocomplete?q=luc>

instant search/preview

```
$('#q').keyup(function() {  
    $('#results').load(  
        '...?q=' + encodeURIComponent($('#q').val()));  
});
```


did you mean...? / spell checking

Collection:

[Create new alert](#) | [View all alerts for this collection](#)

Did you mean: [lucene?](#)



- <http://localhost:8888/solr/apachecon/lucid?q=lucerne>

faceting / filtering


Limit results by:

You searched for: [Keyword > lucene](#) x [Library > Alderman](#) x

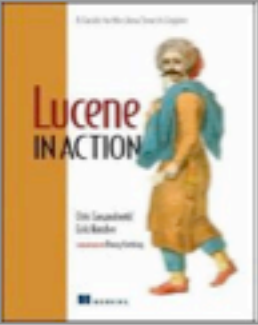
2 results

Sort by Show per page [★ Starred Items](#)  

[★ All](#)

1. [Lucene in action](#) 

Author	Gospodnetić, Otis
Format	Book
Publication Date	2005
Location	Alderman Scholars' Lab
Call Number	TK5105.884.G67 2005
Availability	check availability



clustering

Clusters

DDR

1. [TWINX2048-3200PRO](#)
2. [VS1GB400C3](#)
3. [VDBDB1A16](#)

Car Power Adapter

1. [F8V7067-APL-KIT](#)
2. [IW-02](#)

Hard Drive

1. [SP2514N](#)
2. [6H500F0](#)

Retail

1. [TWINX2048-3200PRO](#)
2. [VS1GB400C3](#)

TFT

1. [MA147LL/A](#)
2. [3007WFP](#)

USB 2.0

1. [IW-02](#)
2. [MA147LL/A](#)

Other Topics

1. [GB18030TEST](#)

Maps

Location Filter: Distance (KM):

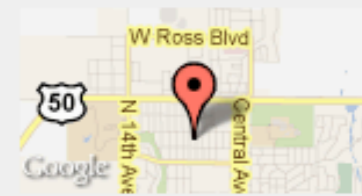
2 results found in 10 ms Page 1 of 1

Apple 60 GB iPod with Video Playback Black [More Like This](#)

Price: **\$399.00**

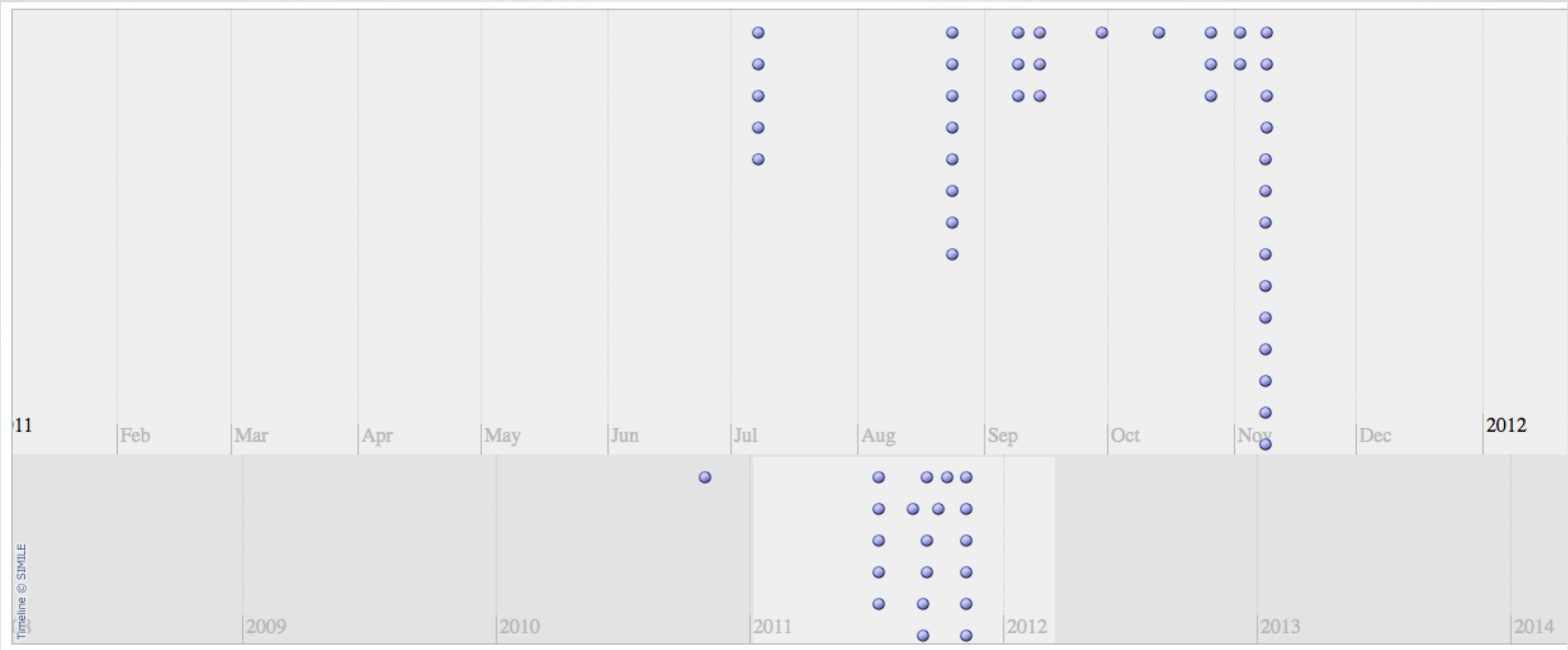
Features: iTunes, Podcasts, Audiobooks Stores up to 15,000 songs, 25,000 photos, or 150 hours of video 2.5-inch, 320x240 color TFT LCD display with LED backlight
Up to 20 hours of battery life Plays AAC, MP3, WAV, AIFF, Audible, Apple Lossless, H.264 video Notes, Calendar, Phone book, Hold button, Date display, Photo wallet,
Built-in games, JPEG photo playback, Upgradeable firmware, USB 2.0 compatibility, Playback speed control, Rechargeable capability, Battery level indication

In Stock: true



[Larger Map](#)

Timeline



11

Timeline © SIMILE

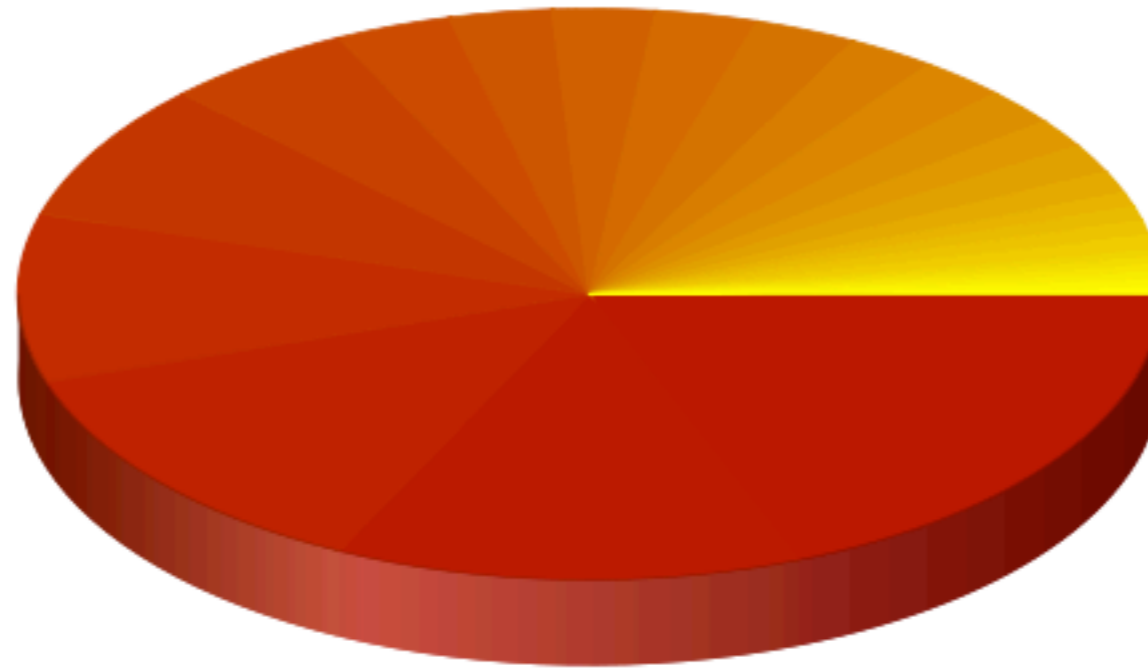
The Joy of Sets -or- Vennncouver

A: B: C:



- A: [ApacheCon](#) (2256)
- B: [Vancouver](#) (75)
- C: [Solr](#) (397)
- A&B: [\(ApacheCon\) AND \(Vancouver\)](#) (38)
- A&C: [\(ApacheCon\) AND \(Solr\)](#) (60)
- B&C: [\(Vancouver\) AND \(Solr\)](#) (12)
- A&B&C: [\(ApacheCon\) AND \(Vancouver\) AND \(Solr\)](#) (11)

Charts



Oman (5) Russia (1) Latvia (1) Cyprus (1) Brazil (1) Austria (1) Japan (2)
Ireland (2) India (4) Italy (7) Belgium (2) Spain (46) Poland (6)
Turkey (7) Denmark (4) Scotland (3) Sweden (7)
Norway (8) Slovenia (2) France (19) Bulgaria (1)
Switzerland (7) Germany (32) Netherlands (13)
Czech Republic (6) United States (23) United Kingdom (31)

Solr UI toolkits

- **Solritas** - <http://wiki.apache.org/solr/VelocityResponseWriter>
Solr's **/browse**, malleable built-in templating
- **Blacklight** - <http://projectblacklight.org>
Full featured Rails app infrastructure, flexible, active and growing community, many high profile deployments
- **VUFind** - <http://vufind.org>
- **TwigKit** - <http://twigkit.com/>
- **Ajax-Solr** - <https://github.com/evolvingweb/ajax-solr>
- **Prism**... one of these days
Simplification; Ruby + Velocity in standalone tier; less layers/magic
<https://github.com/lucidimagination/Prism>

Blacklight - UVa

UNIVERSITY OF VIRGINIA LIBRARY Sign In | Non-U.Va. User?



VIRGO Catalog Search Virgo Classic | Course Reserves | Libra

Search box: lucene Search [Catalog Advanced Search](#) [Article Advanced Search](#)

Switch to: [Catalog + Article Results](#) | [Article Results](#) | [Music Results](#) | [Video Results](#) [Start over](#)

Limit results by: You searched for: Keyword > lucene x

28 results 1 2 | Next »


Sort by Relevancy Show 20 per page [Starred Items](#)  

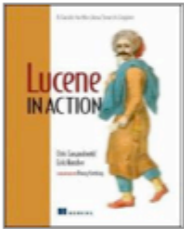
Library
Hathi Trust Digital Library (17)
Alderman (2)
Brown SEL (1)
[See More →](#)


Format
Book (26)
Online (23)
eBook (21)
[See More →](#)

Publication Era
More than 50 years ago (18)
Last 50 years (8)
Last 10 years (6)
[See More →](#)

Author
Colegio Imperial (Jesuitas), ant. pos (3)
Hatcher, Erik (2)

1. Lucene in action [electronic resource]
★
Author McCandless, Michael
Format Online; eBook; Book
Publication Date 2010
Online Versions Access online


2. Lucene in action
★
Author Gospodnetić, Otis
Format Book
Publication Date 2005
Location Alderman Scholars' Lab
Call Number TK5105.884.G67 2005
Availability check availability


3. Easy information retrieval: building a search tool based on lucene api
★
Author Andersen, Christopher
Format Thesis/Dissertation; Book


<http://search.lib.virginia.edu/catalog?portal=all&q=lucene>

Blacklight - Stanford

SU LAIR MY ACCOUNT FEEDBACK ASK US

Search Search SearchWorks

Advanced search

Start Over Your Search: lucene + in + action Limited to: (no limits selected) Selected items (none)

1 - 1 of 1 Select 1

Limit your results

Access

Online (1)

Format

Book (1)

Author

Gospodnetić, Otis (1)
Hatcher, Erik (1)
McCandless, Michael (1)

Publication Year

Last 10 years (1)
Last 3 years (1)
Last 50 years (1)
This year (1)

Topic


Computer networks (1)
Internet searching (1)
Java (Computer program language) (1)
Lucene (Electronic resource) (1)
Web search engines (1)

Call Number

Language

1. [Lucene in action \[electronic resource\]](#)

Author/Creator: McCandless, Michael.
Published: 2010
Online: proquest.safaribooksonline.com
Format: Book



powered by Blacklight

http://searchworks.stanford.edu/?q=lucene+in+action&search_field=search

Collex at NINES

The screenshot shows the NINES Collex search interface. At the top, there is a navigation bar with 'home', 'chossegros', and 'log out'. A search bar contains the word 'arthurian'. Below the search bar, there are tabs for 'my genres' and 'all genres'. The main search area is divided into 'YOUR CONSTRAINTS' and 'CONSTRAIN FURTHER'. The 'YOUR CONSTRAINTS' section shows a search for 'arthurian' with 21 matches. The 'CONSTRAIN FURTHER' section allows for further filtering by site, genre, year, and name. The results section shows three items, each with a 'collect' button. The interface is annotated with red boxes and numbers 1 through 8, highlighting various elements: 1. The search bar containing 'arthurian'; 2. The 'Primary Secondary Visual Art Criticism Bibliography Poetry' menu; 3. The 'YOUR CONSTRAINTS' section; 4. The 'collect' button; 5. The 'CONSTRAIN FURTHER' section; 6. The 'add' button; 7. The 'save these constraints' button; 8. The '21 matches' dropdown.

home • chossegros • log out
arthurian
my genres • all genres
sites names dates keywords genres peers
2 Primary Secondary Visual Art Criticism Bibliography Poetry
Paratext Periodical Letters Manuscript Fiction Nonfiction Collection Translation Photograph Review Artifacts Drama Ephemera Life Writing Religion Music Philosophy
sites names dates keywords genres peers
2 Mots-clés
3 Fenêtre centrale de recherche
4 Résultats
5 Pourcentages
6 Nombre d'objets correspondant à la requête
7 Paramètres de la Recherche
8 Nombre de Réponse dans le catalogue de Collex

NINES is a federation of peer-reviewed resources and innovative research tools, made freely available to students and scholars of 19th-century culture. :: learn more ::
about us how to...? join us
RESEARCH CONTRIBUTE
YOUR CONSTRAINTS 7
phrase: + arthurian remove clear all
save these constraints
21 matches
CONSTRAIN FURTHER
phrase: ? 6 add
sites: The Rossetti Archive + 13 items or
Victorian Studies Bibliography + 5 items or
show more sites
genres: Secondary + 12 items or
Criticism + 10 items or
show more genres
year: ? add
name: ? add
21 results: page 1 of 2 next page
select all collect selected
4
The Quest for the Grail: Arthurian Legend in British Art, 1840-1920 →
site: Victorian Studies Bibliography →
name: Poulson, Christine. (Author)
genre: Secondary 12 items
Bibliography 5 items
collect
The Quest for the Grail: Arthurian Legend in British Art, 1840-1920 →
site: Victorian Studies Bibliography →
name: Poulson, Christine (Author)
date: 1999
genre: Secondary 12 items
Bibliography 5 items
collect
The Dialogue of Arthurian Mythology by Tennyson, Arnold, Morris, Swinburne, and Hardy →
source: Dissertation Abstracts International, Section A
site: Victorian Studies Bibliography →
name: Smyth, Darla S. (Author)
genre: Secondary 12 items
Bibliography 5 items
collect

<http://www.observatoire-critique.org/IMG/Nines/Collex5.jpg>

/winner

```
get '/winner' do
  http_response = solr(
    'http://localhost:8888/solr/collection1', nil,
    :wt => :ruby,
    :q => '*:*',
    :rows => 1,
    :sort => "random_#{rand(500)} asc")
  solr_response = eval(http_response.body)

  winner = solr_response['response']['docs'][0]

  "#{winner['first']} #{winner['last']}"
end
```


solr.rb

```
require 'net/http'  
require 'net/https'  
require 'cgi'
```

```
def solr(url, handler, params={})
```

```
  url = URI.parse(url)
```

```
  connection = Net::HTTP.new(url.host, url.port)
```

```
  connection.use_ssl = true if url.scheme == "https"
```

```
  connection.get(url.path + '/select?' + hash_to_query_string(params.merge(:qt => handler)))  
end
```

```
def hash_to_query_string(hash)
```

```
  hash.delete_if{|k,v| v==nil}.collect {|key,value|
```

```
    if value.respond_to?(:each) && !value.is_a?(String)
```

```
      value.delete_if{|v| v==nil}.collect { |v| "#{key}=#{"CGI.escape(v.to_s)}"}.join('&')
```

```
    else
```

```
      "#{key}=#{"CGI.escape(value.to_s)}"
```

```
    end
```

```
  }.join('&')
```

```
end
```


layout.vel

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN">
<html>
  <head>
    <title>
      Solr Flair @ ApacheCon 2011
    </title>
    <script type="text/javascript" src="/jquery-1.4.3.min.js"></script>
  </head>
  <body>
    

    <div id="content">
      $content
    </div>
    <div id="footer">
    </div>
  </body>
</html>
```


/giveaway

```
get '/giveaway' do  
  # just render a static template  
  v :giveaway  
end
```

giveaway.vel

```
<input type="button"  
  value="Pick a Winner"  
  onClick="javascript:$('#winner').load('/winner');">
```

```
<h2>And the winner is...</h2>
```

```
<div id="winner">??</div>
```


/chart

```
get '/chart' do
  solr_params = params.merge(:wt => :ruby,
    :q => '*:*',
    'json.nl'=>'arrarr',
    :rows => 0,
    :facet => :on,
    'facet.field' => 'country',
    'facet.limit' => -1,
    'facet.sort' => 'count')
  http_response = solr(LW_URL,nil, solr_params)
  solr_response = eval(http_response.body)

  v :charts,
    'chart_labels' =>
      solr_response['facet_counts']['facet_fields']['country'].collect {|k,v| "#{k} (#{v})"}.join('|'),
    'chart_data' =>
      solr_response['facet_counts']['facet_fields']['country'].collect {|k,v| v}.join(',')
end
```


chart.vel

```

```


Grouping

```
<html>
  <head>
    <title>Solr Flair :: ApacheCon 2011 </title>
  </head>
  <body>
    $response.response.grouped.mimeType.matches found

    #foreach($group in $response.response.grouped.mimeType.groups)
      <div>
        <h2>$group.groupValue ($group.doclist.numFound)</h2>

        #foreach($doc in $group.doclist)
          <div>
            #parse("doc.vm")
          </div>
        #end

      </div>
    #end
  </body>
</html>
```


Dogfood

<http://www.lucidimagination.com/search/?q=flair>



PRODUCTS | SUPPORT & SERVICES | WHY LUCID? | BLOG | DEVZONE | DOWNLOADS | ABOUT US

Options

[Clear all facets](#)

PROJECT

[clear projects](#)

- Lucene (5)
- Solr (1)
- Nutch (0)
- Tika (0)
- Mahout (0)
- Droids (0)
- PyLucene (0)
- Lucene.Net (0)
- Lucy (0)
- Lucene4c (0)
- Lucid Imagination (2)

flair



BETA

[Start new search](#)

Search Results for flair

Found 8 results in 0.104 seconds. Displaying page 1 of 1, sorted by **relevancy**

[\[Lucid\] Lucid Imagination » EdUI Conference – Solr Flair: Search User Interfaces Powered by Apache Solr](#)

Lucid Imagination » EdUI Conference – Solr **Flair**: Search User Interfaces Powered by Apache Solr

<http://www.lucidimagination.com/blog/2009/08/20/edui-conference-solr-flair-search-user-interfaces-powered-by-apache-solr/>

[\[WIKI\] Lucene At Apache Con Us2009](#)

2011-02-22 20:52

Seeley / Lucid Imagination * ... and 9 others <----- (DRAFT) Gameplan for the MeetUp... -----> * Introduction and Icebreaker * Short Form Talks (15-20 minutes max) * Solr **Flair**: User interfaces powered by Apache Solr - Erik Hatcher * Intro to Droids - Thorsten * Numeric and/or Geo-spatial search

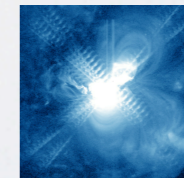
<http://wiki.apache.org/lucene-java/LuceneAtApacheConUs2009>

Summary

- Start with the UI

Title slide image credit:

<http://sdoisgo.blogspot.com/2011/02/enormous-flare-in-progress-in-ar-1158.html>



Thanks!



<http://www.lucidimagination.com/>