seekda as IT Multiplier: The Web Services Portal
About seekda

• Founded in 2007
• Management and Development Web services for e-commerce
• e-Tourism is the main focus
• Main Products:
  • Channel Connect
  • Dynamic Shop
  • Conference Management System
  • Web Services Portal
About seekda

- Research:
  - Insemtives
  - Service Bundler
  - Service Detective
  - Smart Reality
  - COIN
• Enrich COIN's base services
• Investigate Web API detection techniques
• API to access the services
• Towards community building
Enriching COIN's base services

Two main domains:
- Enterprise Collaboration
- Enterprise Interoperability

~100 concepts
~230 keywords filtered
>350 unique WSDL services extracted
Enriching COIN's base services

- Two main domains:
  - Enterprise Collaboration
  - Enterprise Interoperability
- ~100 concepts
- ~230 keywords filtered
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Web API Detection

- Hard problem in general
- Relies on web page analysis
- Techniques
  - Automatic Classification
    - Supervised
    - Unsupervised
  - Term Frequency
- Tests are work-in-progress
### Web Services Portal API

[https://webservices.seekda.com/ssl/search_api?](https://webservices.seekda.com/ssl/search_api?)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>q</strong></td>
<td>Identifies the query whose values can be either keywords (connected with a '+') or qualified tag-value pairs as those below</td>
<td>q=enterprise+sms&lt;br&gt;q=tag:enterprise</td>
</tr>
<tr>
<td><strong>country (q-tag)</strong></td>
<td>Returns services that pertain to the particular country code</td>
<td>q=country:de</td>
</tr>
<tr>
<td><strong>sort (q-tag)</strong></td>
<td>Sorts the results using the specified criterion. This criterion can be documentation, availabilitylastweek, availabilitylastyear, provider, country and age.</td>
<td>q=enterprise+sort:country</td>
</tr>
<tr>
<td><strong>tag (q-tag)</strong></td>
<td>Matches services that match the given tag</td>
<td>q=tag:sms</td>
</tr>
<tr>
<td><strong>provider (q-tag)</strong></td>
<td>Matches services from a given provider</td>
<td>q=enterprise+provider:<a href="http://mappoint.net">http://mappoint.net</a></td>
</tr>
<tr>
<td><strong>p</strong></td>
<td>Indicates the page number of results to display (implicitly enables pagination)</td>
<td>q=enterprise&amp;p=2</td>
</tr>
<tr>
<td><strong>resultsPerPage</strong></td>
<td>Determines the number of results per page if pagination is used.</td>
<td>q=enterprise&amp;p=2&amp;resultsPerPage=10</td>
</tr>
</tbody>
</table>
seekda's Web Services portal provides a direct access to a robust technology platform enabling search for public WSDL Services and Web APIs.

With Web Services technologies you enable, convert and enhance your applications to truly Web-based solutions. By using Web Services, you can plug-in and immediately use new components as easily as you already use software libraries today. The only difference in comparison to the traditional programming model is the ability to access functions and exchange messages not only within your local system, but with computer systems from all around the world. Web Services overcome problems of integration, as they were specifically developed to address problems of interoperability between applications.

The seekda Web Services Search Engine helps you to find Web Services based on a catalogue of more than 28,000 service descriptions. Services listed at seekda cover a wide range of functionality. For example, we have identified services that can send messages via fax or sms, validate addresses or allow you to translate some text. To find Web Services just type the keyword or the whole phrase into seekda Web Services Search Engine or alternatively browse Web Services and Service Mashups by several other criteria defined by us.
Challenges

• Annotation Crowdsourcing
• Mashups Challenge
• Long Term Competition
Annotation Crowdsourcing

- Amazon Mechanical Turk
- Specify tasks
  - Web API yes/no
  - Provide and/or confirm tags
  - Provide and/or confirm category
  - Provide and/or improve description
  - Fill-in a short survey
- Optionally specify a qualification test
- Set Reward
- Get Results and approve
If possible, please provide a short (one sentence), but meaningful description of this Web API, such that other users can quickly get an overview of its functionality. You may just copy a text snippet from the document to the right, if a good description is provided there.

Jungle search provides a way to do shopping online.

The following category has been **extracted automatically**. Please check if it is appropriate, and if possible provide a more detailed category by selecting it below.

- Shopping
Annotation Crowdsourcing

• Three round performed
• 320 tasks in total
• Pretty good quality (80% acceptance)
• Fine tuned at every iteration
• Very good bootstrap
Mashup Challenge

- Create and add mashups
- Annotate in the process
- Steps:
  - Announcement
  - Registration
  - Brainstorming
  - Implementation
  - Finalisation
  - Addition of services and APIs (if required)
  - Annotation
  - Submission
Mashup Challenge

- Lasts 6 weeks
- Evaluation by seekda engineers and external experts:
  - User voting
  - Overall quality
  - Originality and usefulness
  - Technical details/implementation
  - Annotations of used services/APIs
- Presentation of top 3 submissions
- Winner gets a smartphone
Long Term Competition

- Provide annotations; become a top contributor
- Collect points by:
  - Changing and/or improving annotations
  - Providing new annotations
- Weight points based on annotation type
- Rank contributors
- Reputation is main award
Conclusion

- Web API detection is a cornerstone
- Annotations are needed to provide good results
- Insentivise to obtain annotations