Powder your data with trust

Protocol for Web Description Resources (POWDER) use cases

What is POWDER?

POWDER is a way to annotate web resources with rich meta data such that

- we can infer information about the resource without having to retrieve it
- we can describe whole web sites or sub-sections with a handful of documents
- descriptions of web resources can be verified independently and made publicly available as trustmarks
- we combine the features of RDF, OWL, FOAF, XML, DC and META to fully describe web resources
- we can increase the quality of content retrieval through more specific targeting
- we offer personal social networks the ability to share content of a more specific nature and higher quality

A short primer on POWDER

Some of the aspects of POWDER

- Metainformation about web resources is stored separately in publicly discoverable Description Resources (DR)
- DR are assertions that are made about the content by the author or provider
- DR possess attribution, delineating as much information about the web resource as is desired by the author or provider
- DR possess scope, clearly grouping the resources to which these assertions apply
- Operational semantics of POWDER are held in XML and easy to use
- Formal semantics of POWDER-S are obtained via GRDDL transform and held in RDF/XML
- Trustmarks are established through third party verification

A simple use case – search result enhancement on a local level

Migrating from regular meta information to DRs

- Move all meta data (i.e. keywords and child protection information) into DRs
- Add whichever information might be interesting to end users (descirptions, abtracts, advertisement labels, creation dates, etc.)
- Link from the web resources to the DRs
- Desribe the scope in the DRs

Modifying the internal search engine

- Harness the extra information via SPARQL or other appropriate queries issued by the local search engine
- Allow users to find precisely what they are looking for
- Offer pointers to other, relevant information

Widening the scope

- Other search engines can pick up the information and index it appropriately, thus increasing specific content discovery by end users

Other examples of use cases for POWDER

Profile matching

- Searching for music videos with a mobile device the search engine will
  - retrieve a device description from a repository
  - match the retrieved URIs to a assertions/trustmarks of mobileOK and the video metainformation to the available bandwidth
  - filter the results for only those URIs that fit the requesting profile

Trustmarks

- A web site specializes in content for children.
- A government institution monitors these sites regularly as condition for listing in a „white list“ of child safe sites.
- This list consists of a DR repository verifying the assertions made by the individual web sites

So what? - you may ask

What do I get out of it?

- Information retrieval on the web, due to the abundance of sources, has become cumbersome
- The quality of information is often questionable, the relevance is often low
- Personal social networks are springing up to act as filters, protecting its members from garbage through peer filtered information
- In short, there is a lot of information that we either don‘t want to see or see when and if we choose to

Wouldn‘t it be nice if we could simply find what we are looking for?

Backup

Examples of POWDER

- Operational semantics
- Formal semantics

Example of operational semantics in POWDER

Generic Example of a POWDER Document Containing a Single Description Resource [XML]

```
<?xml version="1.0"?>
<powder xmlns="http://www.w3.org/2007/05/powder#"
xmlns:ex="http://example.org/vocab#">
      <attribution>
          <maker>http://authority.example.org/foaf.rdf#me</maker>
          <issued>2007-12-14</issued>
      </attribution>
      <dr>
            <iriset>
                  <includehosts>example.com</includehosts>
            </iriset>
            <descriptorset>
             <ex:color>red</ex:color>
             <ex:shape>square</ex:shape>
             <displaytext>Everything on example.com is red and
square</displaytext>
             <displayicon>http://authority.example.org/icon.png</displayicon>
            </descriptorset>
       </dr>
</powder>
```