RegServ

Registration Service for Scientific Primay Data

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Scientific work

- in scientific work, so called *primary data* is collected in experiments.

- from this primary data the scientists extract their scientific *papers*, *thesis*, ...

- then the primary data is not needed any more and
  - has therefore bad or *no documentation*
  - is only accessible to a small group of scientists

Scientific work (2)

- it is desirable for the scientific community, to share all kind of the great variety of scientific primary data

- todays scientist are willing to publish their primary data, but the extra amount of work ist not recognized (*citation index*)

CODATA

- thanks to the initiative of the *Commitee on Data for Science and Technology (CODATA)* the *German Research Foundation (DFG)* started a project called:

  Publication and Citation of Scientific Primary Data

- the Goal is to increase the accessiblity of primary data

CODATA (2)
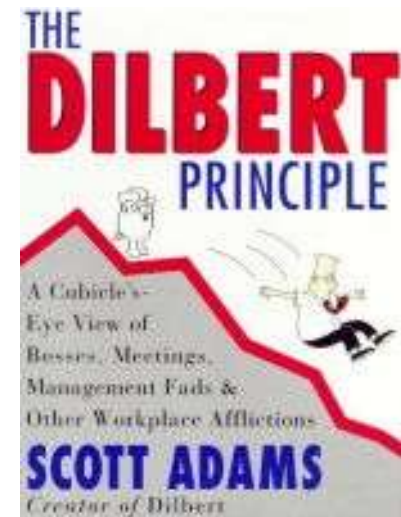
- Idea:
  - give primary data an identity so it becomes citable and will
  - increase the individual motivation of scientists to publish their primary data
- Solution:
  - attach a *persistent identifier* to a set of primary data
  - the primary data can then be cited by referencing to this persistent identifier
- What is this *persistent identifier* ?

DOI

- Digital Object Identifier (DOI)
  - *"The Digital Object Identifier (DOI) is a system for identifying content objects in the digital environment."* [http://www.doi.org/]

- DOIs: (e.g.: 10.1594/ifis/kbs/ba_jh)
  - are persistent identifiers
  - are like ISBN[1] for books
  - map to an URL
  - can be resolved

ISBN: 0752224700

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[1] International Standard Book Number

DOI (2)

- DOIs are registered at the IDF[2]
  - through the registration service RegServ
- DOIs can be resolved through DOI-resolvers
    - http://dx.doi.org/10.1594/ifis/kbs/ba_jh
    - http://doi.tib-hannover.de/10.1594/ifis/kbs/ba_jh
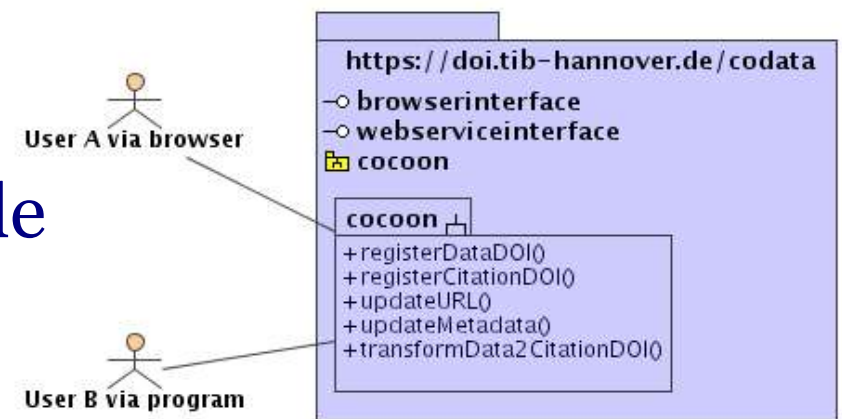   - doi://10.1594/ifis/kbs/ba_jh (browser plugin)

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[2] International DOI Foundation http://doi.org

RegServ

research ➜ primary data ➜ URL + DOI ➜ RegServ

- The *Registration Service for Scientific Primary Data (RegServ)* provides an easy to use interface for the registration and maintenance of scientific primary data

- It has a *browser interface*
  - zero install, highly accessible

- a *web service interface*
  - SOAP, automation

RegServ (2)

- the interfaces provide the following methods
    - registerDataDOI (DOI, URL)
    - registerCitationDOI (DOI, URL, XML)
    - updateURL(DOI, newURL)
    - updateMetadata(newXML)

Example

- consider the following
  - a PhD student of physics Mr. Mastermind *collect*s *primary data* on nuclear fisson
  - based on his data he *write*s his *paper*, in which he references to his primary data using the DOI
  - the *primary data* is *published* with the DOI 10.1594/phy/nucl_fis_0436
  - the *paper is published* in the *Totally Important Journal of Physics (tiJOP)*

Example (2)

- Prof. Muddlehead, a continued *reader of* the *tiJOP*, searches for new results in nuclear fission

- in the paper from Mr Mastermind he *finds the reference to the primary data* and is overwelmed by the new results

- he *resolves the DOI* and gains access to the data

- he *evaluates the primary data under different aspects* and wins the nobelprice in physics

Further Reading

- http://l3s.de/english/projects/codata.html
- http://doi.org
- http://tib-hannover.de
- http://dx.doi.org/

Outline

- Scientific work – primary data
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- Registration Service – RegServ
- Example – Success story

– Thank you –