One process to rule them all? The role of a repository platform in the management of digitized cultural heritage at the National Library of Finland

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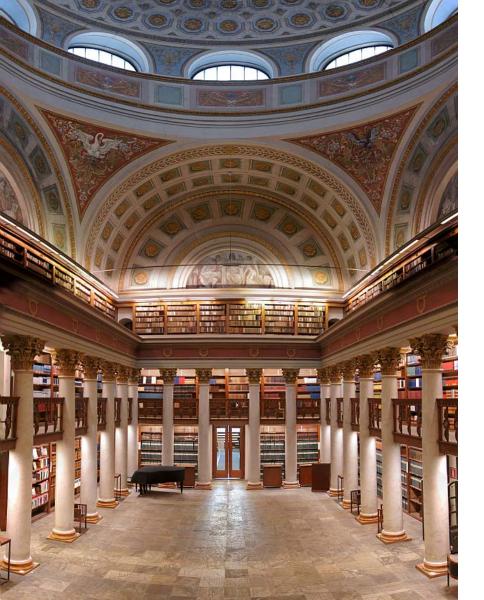
CANADA

MATTIE

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Cultural Heritage & Institutional Repositories

- The National Library of Finland provides repository services for nearly 40 Finnish organisations
- The National Library also has large collections of cultural heritage materials.
- DSpace is used for both.

Cultural heritage and current research: is there synergy or is there a conflict?



Digitized Cultural Heritage

- Newspapers
- Journals
- Books
- Maps
- Manuscripts
- Sound
- Ephemera

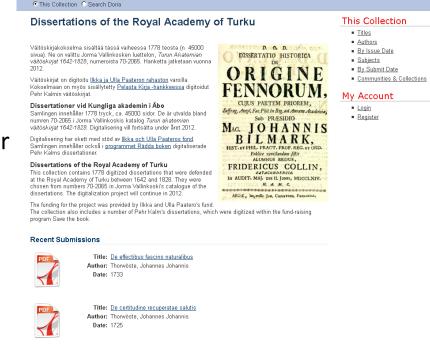






DSpace and cultural heritage materials

- DSpace replaced an unsuccessful proprietary software in 2006.
- DSpace is flexible enough to be used for many kinds of materials, including digitized cultural heritage
- There is another platform for newspapers and periodicals



Go Search instructions

Suomeksi Påsvenska In English



Title: De constitutione fyseos [kreikkaa] Author: Thorwöste, Johannes Johannis Date: 1728

Doria home > The National Library of Finland > Dissertations of the Royal Academy of Turku



Title: <u>De gradibus academicis</u> Author: Alander Christiemus Caroli



DSpace at the National Library

- National Library has 7 public DSpace instances,
 - 3 contain cultural heritage materials: <u>Doria</u>, <u>Fragmenta membranea</u>, <u>Fenno-Ugrica</u>
- Located in the same virtual server infrastructure
 - DSpace code is managed with SVN
- Some special development has been made, e.g.
 - HTML5-based viewer tool for METS files (not directly integrated with DSpace)
 - SimpleREST interface for DSpace
 - Simplestats statistics tool for DSpace

Monthly download statistics

Parent hierarchy: The entire DSpace / Kansalliskirjasto /

	1 / 2013	2 / 2013	3 / 2013	4 / 2013	5 / 2013	6 / 2013	Total
Pienpainatteet (5329 items, 83411 bitstreams, 128456 megabytes)	95150	24305	16357	13265	13913	13442	176432
Eläinsuojelu (383 items, 5279 bitstreams, 5768 megabytes)	6577	331	1912	886	804	1004	11514
Elâmisentaito (63 items, 1465 bitstreams, 1118 megabytes)	6152	1139	1671	1862	308	2007	13139
Kansanhuolto (892 items, 7196 bitstreams, 14197 megabytes)	9621	1002	737	1483	2166	1088	16097
Kyläjärjestykset (31 items, 527 bitstreams, 746 megabytes)	1027	444	108	110	422	40	2151
Matkailumainokset (760 items, 17820 bitstreams, 22029 megabytes)	14675	5449	2149	2815	3111	2396	30595
Moottoriajoneuvojen esitteet ja hinnastot (1914 items, 37035 bitstreams, 67792 megabytes)	34473	12116	4695	3293	2952	2336	59865
Naisasia (341 items, 4547 bitstreams, 4955 megabytes)	6779	360	2632	668	489	602	11530
Olympialaiset (72 items, 1291 bitstreams, 1774 megabytes)	2736	742	136	398	589	194	4795
Pyöräily (208 items, 3639 bitstreams, 4405 megabytes)	5179	2032	722	721	1451	2220	12325
Ratsastus (135 items, 2166 bitstreams, 2852 megabytes)	2195	168	417	217	508	409	3914
Rauhanasia (140 items, 954 bitstreams, 1147 megabytes)	1740	119	739	124	602	375	3699
Ruokalistoja ja ohjelmalehtisiä (320 items, 277 bitstreams, 575 megabytes)	1370	286	340	328	288	456	3068
Soutu (70 items, 1215 bitstreams, 1093 megabytes)	2626	117	99	360	223	315	3740

Top 10 downloads for this community (Pienpainatteet)

	1 / 2013	2 / 2013	3 / 2013	4 / 2013	5 / 2013	6 / 2013	Total
Kuinka hyvä aviomies voi kesyttää pahan vaimonsa?	1085	626	308	1407	164	1803	5393



A generic system vs. a specialicized one?

- The funding for digitization projects comes in bits and pieces and usually ends at some point.
 - A new dedicated platform for each new project is not feasible
 - Both initial adoption costs and long-term management costs
- Minimizing the number of platforms, using them for many purposes
 - Cultural heritage materials and related processes are heterogeneous – one must be prepared to make adjustments



One process vs. many processes?

- Would it be possible to develop one common process for the handling of all of the digitized materials?
 - The National Library has been developing processes that would produce standardized METS files suitable for long-term preservation
 - There are other parts of the process that have been (or could be) standardized and automated as well
- However, there are many kinds of different materials that require special solutions at some points of the process



Fragmenta membranea (http://fragmenta.kansalliskirjasto.fi)

- A collection of medieval parchment fragments digitized by the National Library
- Contains most of what survives of the medieval literature circulated in Finland before the Reformation
- After the Reformation the parchment leaves confiscated by the Crown were reused as covers for bailiff's account books

Homepage > Collection List

The Fragmenta membranea collection at the National library of Finland contains the vast majority of the remains of books written and used in the eastern parts of medieval Sweden, the Diocese of Turku. The Fragmenta membranea database contains 9,319 digitized parchment leaves meaning 18,638 pages which come from approximately 1,500 different medieval manuscripts.

The leaves in the collection come from books that were confiscated by the Crown in the sixteenth and seventeenth centuries. These were then unbound and the loose leaves were reused by the central administration as covers for bailifis' account books. Because of this most of the leaves have not only medieval content but also notes made by the bailifis and the administration in the sixteenth and seventeenth centuries. The parchment covers were removed from the account books in the 19th century. The account books themselves are currently preserved in the National Archives whereas the covers constitute the Fragmenta membranea collection.

>> Introductory article

Browse Collection

- Fragmenta membranea [1569]
 - F.m.I (Missalia) [369]
 - F.m.lla (Gradualia) [129]
 - F.m. Ilb (Lectionaria) [7]
 - F.m.III (Breviaria) [190]
 - F.m.IV (Antiphonaria) [203]
 - o F.m. IVb [3]
 - F.m.Va (Biblia Sacra) [53]
 - F.m.Vb (Theologiae Auctores) [129]
 - F.m.Vc (Varia) [27]
 - F.m.VII (Varia liturgica & hagiographica) [137]
 - DIG (Luetteloimaton aineisto) [318]

o Catalog [4]

doria-oa@helsinki.fi

+ more options

browse by

shelfmark author date contents origin collection hierarchy

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Working with scholars

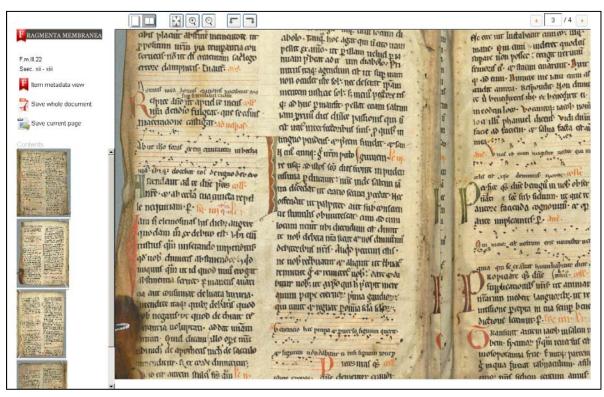
- The metadata was created by a group of scholars specializing on the identification of medieval manuscripts
- Due to special characteristics of the material and the metadata, the user interface of Fragmenta has been heavily modified

RAGMENTA MEMBRANEA Suomeksi In English Homepage > Fragmenta membranea > F.m.Vb > View Item Show full item record Scope Fragmenta membr -F.m.V.TH.AA.33 (Postilla litteralis super Vetus Testamentum) Shelfmark address: http://urn.fi/URN:NBN:fi-fd2011-fra0940 Shelfmark: F.m.V.TH.AA.33 Contents Postilla litteralis super Vetus Testamentum Contents: Genre: Theology Genre Theology • Language: Latin Origin: Language Latin Author: Nicolaus de Lyra Liturgical use: Date: Saec, xiv med Origin Catalog: Additional information Author OTHER NOTES: From same codex: Uppsala, Universitetsbibliotek Nr. 83.??? Not found in MPO; see F.m. V.TH.AA.25 Liturgical use Show full item record Date Whole fragment П F m V TH AA 33.pdf 3 147Mb Download Results • relevance -Order: ascending Individual pages Search Help less options F m V TH AA 33-0001.tif ° m ∨ TH AA 33-0002.tif 61.92Mb 62.78Mb Download Download Subcollection by shelfmark author date F_m_V_TH_AA_33-0004.tif 54.41Mb m V TH AA 33-0003.tif 55.03Mb contents Download Download origin collection hierarchy



Making the parchments browsable

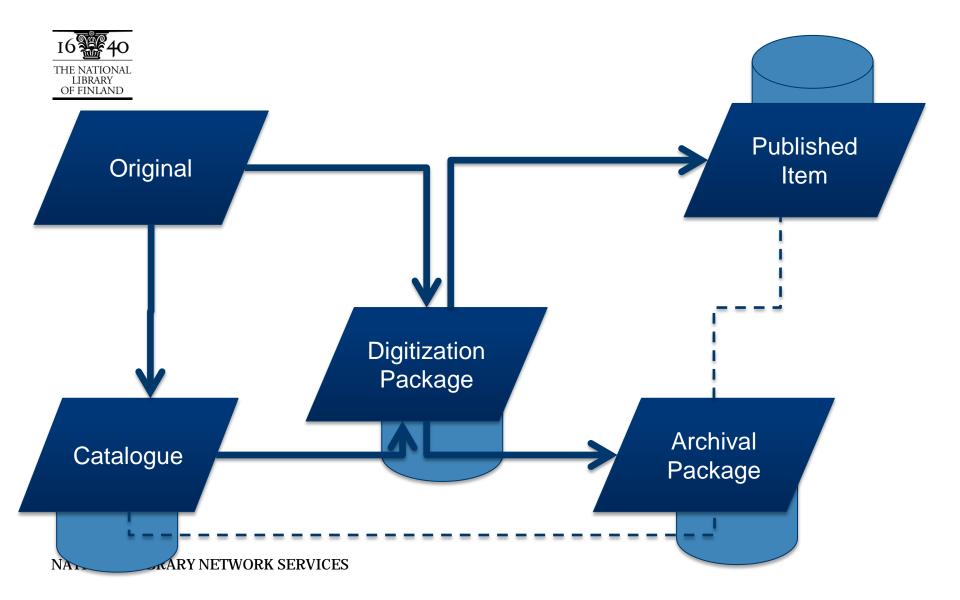
- Digitized parchments contain a lot of detailed information (=big file size necessary)
- To make it easier to browse the documents at various levels of magnification, a special HTML5-based viewing tool was added to the user interface





DSpace is not a standalone system

- Metadata for cultural heritage materials mostly comes from library databases
 - Aleph and/or Voyager, metadata in MARC21
- We use DocWorks in the digitization and production METS files.
- METS files contain both the metadata (as MARCXML) and full-text files
- METS contents converted into the ingest format used by Dspace.
- METS files are stored separately for preservation





DSpace and other systems

- Processes should be modular
 - DSpace does not need to do everything
 - Some things *can* be done within DSpace, but are better done elsewhere
- System managers would generally like to do things in their "own" system
 - But you need to look at the larger picture



Where is the master data and how is it updated?

 <u>Fennica</u>, the Finnish national bibliography, contains the master data on Finnish books

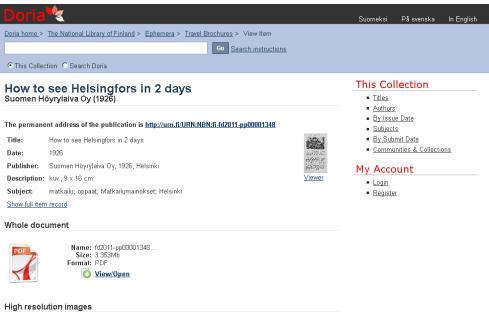


- Can handle only metadata, no full-text files
- Only a small number of people can update the data
- Rules created for printed matter
- No support for multilingual metadata would be useful
 - In some cases multilingual fields have been added in metadata conversions, but can be automated only to some extent
- We may have to wait for the next-generation library system and the adoption of new description formats



Master data and interoperability

- In an ideal world all of the master data would be in one place and any changes made to it would be propagated to other systems
- So far works only on a very modest scale between the DocWorks system of the Digitization Centre and DSpace
- Ephemera collection in Doria: Corrected METS data is re-sent to the repository, and a new record automatically replaces the old version







Name: img0002-access.jpg



For whom are we building our services?

- Libraries and other memory organizations have their own inherent motives for the digitization and long-term preservation of their assets
 - However, the services produced by the libraries don't always serve the short-term needs of the scholars or other potential end users
- We need to maintain a dialogue with our stakeholders and try to find out what kind of materials or services they really need from us
 - How to balance the digitization done for internal reasons with projects that are done in co-operation with the scholars?



Fenno-Ugrica

(http://fennougrica.kansalliskirjasto.fi)

- A special repository for the researchers of Finno-Ugric languages
- Contains books and newspapers published in Finno-Ugric languages in the Soviet Union in the 1920s-1930s
- Materials digitized in co-operation with the National Library of Russia (St. Petersburg)
- The Digitization Project of Kindred Languages has been funded by the Kone Foundation

NATIONAL LIBRARY NETWORK SERVICES



RHEMERL HVALT.

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БОЛЬШЕВИКЕКС ЮТАВСЫНЕ



OCR correction and annotation tools

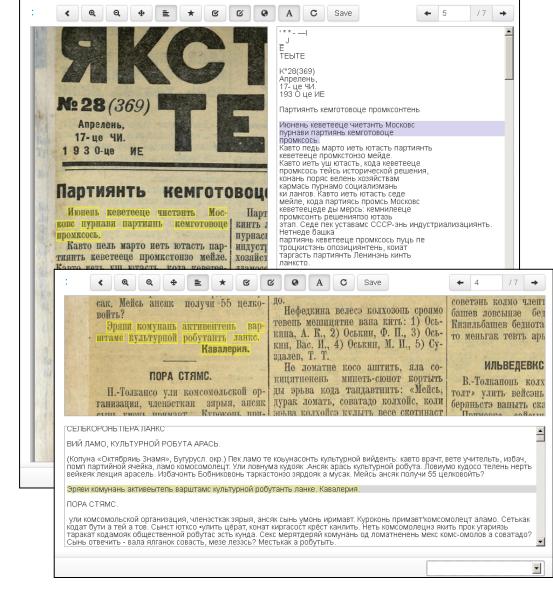
- The materials are digitized for the needs of linguistic research – near-perfect quality required
- Poor printing quality & obscure languages => the results of automatic OCR far from optimal
- The National Library has been working on an HTML5-based OCR correction and annotation tool for scholars

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Work in progress

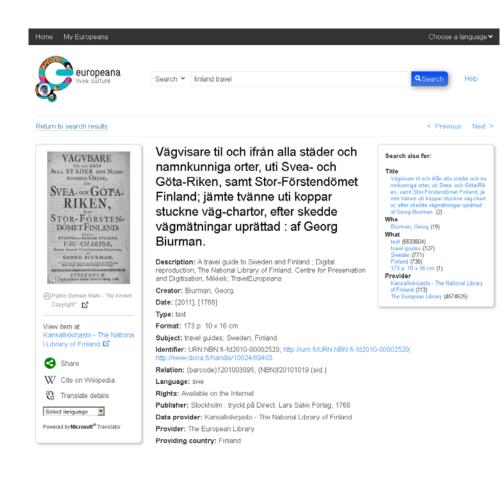
- OCR correction and annotation of the corrected text contained in a PDF file works fine in most cases
- Can deal with texts that have several separate columns
- Works with both latin and cyrillic letters
- The synchronization of the results back to the repository still requires work
- Integration with DSpace?





Re-use of the data / metadata

- The National Library has decided to use CCO license for the metadata of its digital collections and for the out-of-copyright materials they contain
- Some of the materials are already available via <u>Europeana</u> and <u>Finna</u>

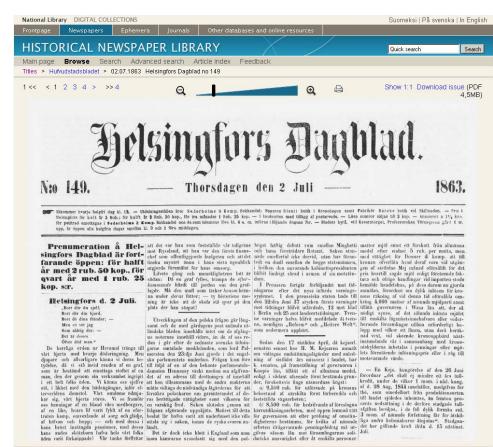




Future challenges: Newspapers and journals?

- The National Library has digitized all Finnish newspapers up to 1910 and most of the other periodicals up to 1944
- Millions of pages freely available, hugely popular service
- Crowdsourcing solutions being developed for the correction of OCR'd text and the annotation of the content

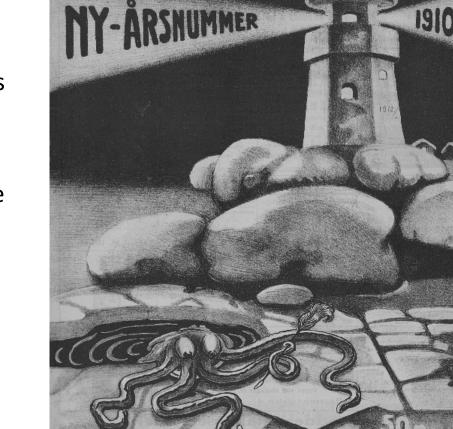






Future challenges (2)

- The technical platform for newspapers and journals is getting old
- Needs to be replaced at some point
- One option would be to build on some repository platform



FLEN'S



THE NATIONAL LIBRARY OF FINLAND