

Digitisation and Digital Library Presentation System – A Resource-Conscientious Approach

Tuula Pääkkönen, Kimmo Kettunen, Jukka
Kervinen,

National Library of Finland

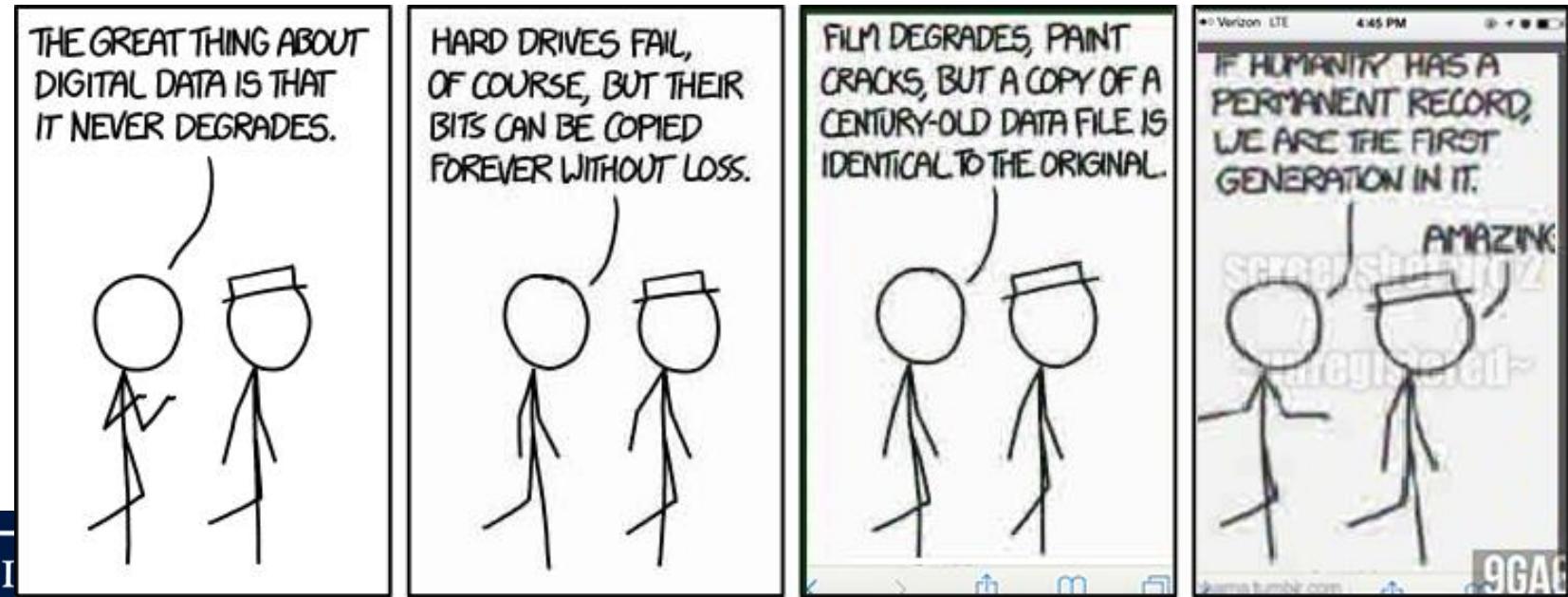
DHN18, 7.-9.3.2018



THE NATIONAL LIBRARY OF FINLAND

Mission

- Most materials, most easily available for most users
 - Researchers, citizens, institutions
- Digitized? Digitisation policy & Time, Quality, Cost



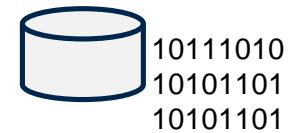
Source: <https://xkcd.com/1683/>

Glimpse to Nordic digitization

- Yesterday, we went past 13 million pages digitized (journals and newspapers combined)

Region	Pages (estimate, million pages)	Material Type	Reference
Denmark	33,3	Newspapers	http://www2.statsbiblioteket.dk/mediestream/avis
Finland	6,0	Newspapers	https://digi.kansalliskirjasto.fi/info?language=en
Iceland	5,4	Newspapers, periodicals	http://timarit.is/about_init.jsp?lang=en
Norway	22	Newspapers	R. Jøsevold, 'Digitization of copyright protected newspapers in Norway' (Liber 2015)
Sweden	17	Newspapers	http://feedback.tidningar.kb.se/viewtopic.php?id=89

Digital chain



Choose what to
digitize + cataloguing
Material deposit /
return

Deploy, use and
preserve

Preparation
Conservation
Scanning

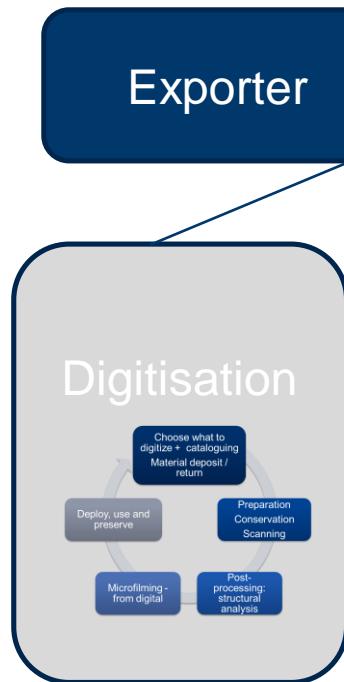
Microfilming -
from digital

Post-
processing:
structural
analysis

ALTO XML
METS XML



Digitisation & presentation system together



- Export package (zip)
- Preservation image (tiff)
 - Access image (jpg, 300dpi)
 - ALTO&METS XML
 - Thumbnails
 - Pdf



THE NATIONAL LIBRARY OF FINLAND

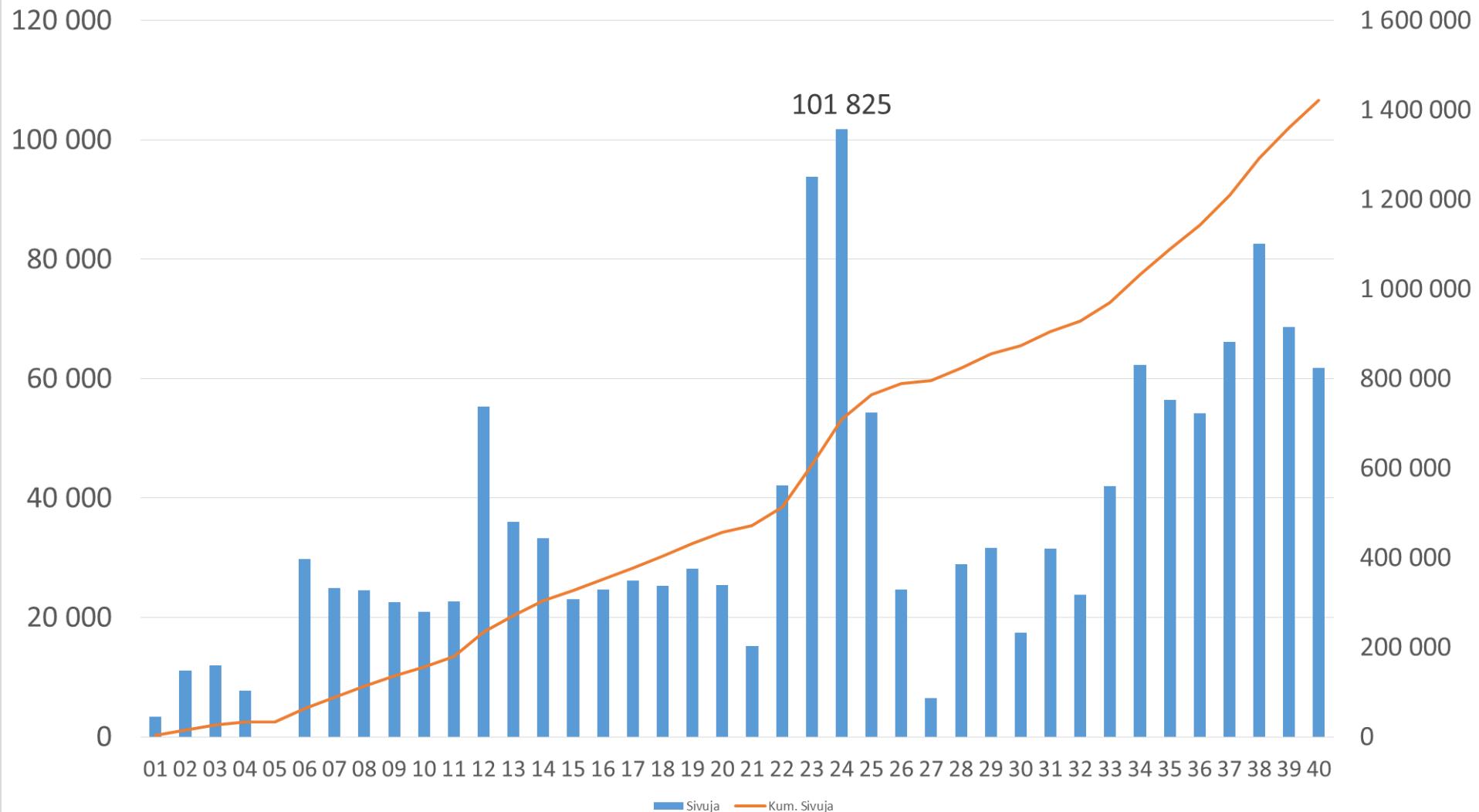
Audit trail of digitization

- Metadata of post-processing stored

```
1457-4683_1775-09_0_mets.xml x Untitled-4 • Untitled-1 • ...  
335 <mix:ImageCreation>  
336     <mix:SourceType>Newspaper</mix:SourceType>  
337     <mix:SourceID>MF59418</mix:SourceID>  
338     <mix:ImageProducer>The National Library of Finland</mix:ImageProd  
339     <mix:Host>  
340         <mix:HostComputer>DW19</mix:HostComputer>  
341         <mix:OperatingSystem>windows</mix:OperatingSystem>  
342         <mix:OSVersion>5.2 Service Pack 2</mix:OSVersion>  
343     </mix:Host>  
344     <mix:DeviceSource/>  
345     <mix:ScanningSystemCapture>  
346         <mix:ScanningSystemHardware>  
347             <mix:ScannerManufacturer>nextScan, Inc.</mix:ScannerManufa  
348             <mix:ScannerModel>  
349                 <mix:ScannermodelName>Eclipse Rollfilm</mix:ScannerMo  
350                 <mix:ScannerModelNumber>n/a</mix:ScannerModelNumber>  
351                 <mix:ScannerModelSerialNo>448013</mix:ScannerModelSer
```

Pages imported per week

Year 2017 , weeks 1 - 40



Make room, make room!

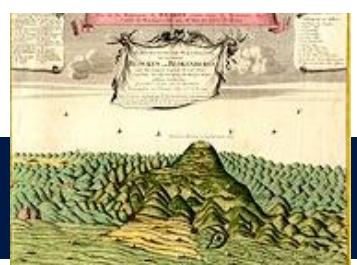
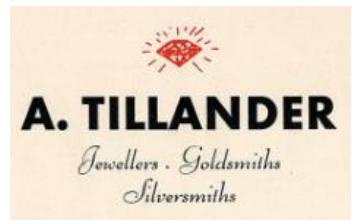
- More and more material available as digital/digitized
- New formats and getting existing material digitized requires space somewhere
- Researcher data packages
Enrichment work
 - Re-ocr, illustration content analysis, etc.

The screenshot shows a web browser window with the URL <https://digi.kansalliskirasto.fi/opendata/submit>. The page displays a hierarchical list of digital datasets:

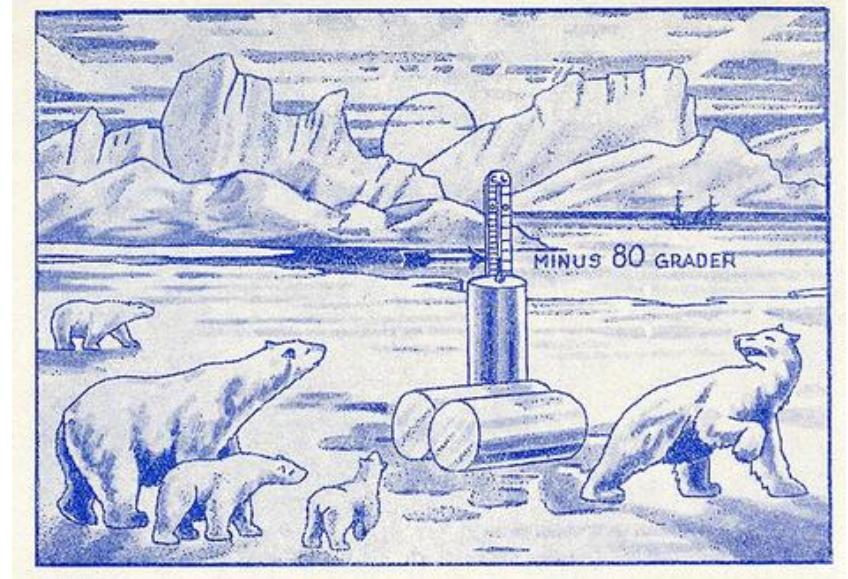
- Research data
 - Creating and using ground truth OCR sample data - article (PDF file) [v1] (326.7 kB)
 - OCR Ground Truth Pages (Finnish Fraktur) [v1] (4.8 GB)
- Newspapers
 - Newspapers 1771-1870 [v1] (12.0 GB)
 - Newspapers 1871-1880 [v1] (13.2 GB)
 - Newspapers 1881-1885 [v1] (12.4 GB)
 - Newspapers 1886-1890 [v1] (17.0 GB)
 - Newspapers 1891-1893 [v1] (13.2 GB)
 - Newspapers 1894-1896 [v1] (15.5 GB)
 - Newspapers 1897-1899 [v1] (17.1 GB)
 - Newspapers 1900-1902 [v1] (16.7 GB)
 - Newspapers 1903-1905 [v1] (19.0 GB)
 - Newspapers 1906-1907 [v1] (18.3 GB)
 - Newspapers 1908-1909 [v1] (20.6 GB)
 - Newspapers 1910 [v1] (10.6 GB)

Final words

- More digitized pages available => more users
- Digitisation is a prioritization issue
 - National
 - Organisational
 - Between material types and projects
- Mass digitization & small-scale digitisation to live together?



Thank you!



Tuula.paakkonen@helsinki.fi

Image from: Kuiva-jää Jäähdystekniikan voittosaavutus, , p. 2
<https://digi.kansalliskirjasto.fi/pienpainate/binding/342428?page=2>
National Library's Digital Collections

References

- K. Kettunen, E. Mäkelä, T. Ruokolainen, J. Kuokkala, and L. Löfberg, ‘Old Content and Modern Tools – Searching Named Entities in a Finnish OCRed Historical Newspaper Collection 1771–1910’, *Digit. Humanit.* Q., vol. 11, no. 3, 2017.
- T. Pääkkönen, J. Kervinen, A. Nivala, K. Kettunen, and E. Mäkelä, ‘Exporting Finnish Digitized Historical Newspaper Contents for Offline Use’, *D-Lib Mag.*, vol. 22, no. 7/8, Jul. 2016.
- M. Koistinen, K. Kettunen, and T. Pääkkönen, ‘Improving Optical Character Recognition of Finnish Historical Newspapers with a Combination of Fraktur & Antiqua Models and Image Preprocessing’, in *Proceedings of the 21st Nordic Conference on Computational Linguistics, NoDaLiDa*, Gothenburg, Sweden, 2017, pp. 277–283.
- <https://wiki.helsinki.fi/display/Comhis/>



THE NATIONAL LIBRARY OF FINLAND