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## **The National Archives of the Netherlands: Manuscript maps and digital access**

*Keywords:* Manuscript maps, cartographic heritage, digital access to maps.

### *Summary*

Digital access to manuscript maps is not enough to research the original meaning and archival context of the maps. Unfortunately manuscript maps are often less accessible since they were frequently separated from the documents that they illustrated. The lack of standards in the metadata demands different strategies. Using geo-reference to find the maps is one of them, using the knowledge of the public in a web 2.0 environment is another. Working together with Cultural Heritage Institutes that keep the same kind of maps, Universities and international partners will create solutions for better accessibility of manuscript maps in the future.

### **Introduction**

The National Archives keeps the archives of government agencies and departments, including ca. 300.000 archival maps and drawings. These archival maps, mostly manuscripts, belong to records and are unique historical sources. The manuscript maps are made in the context of planning and control of the governmental administrations. The map in figure 1 shows the new borders between the Netherlands and Belgium after their separation in 1839. This was part of the Treaty documents.

Manuscript maps were made with a specific function in a process such as constructing a dike, a law suit, the building of a fortification or raising tax. Or the manuscript map of New Netherlands (figure 2), a map that was given to Dutch explorers from the Dutch Government, the States General, to sail across the Atlantic for commercial activities in 1614 (4.VEL 520). As a rule manuscript maps are less accessible than printed maps. You can compare them to handwritten archival documents and printed books. The map of Blaeu (figure 3), the Atlas Maior, has got a title, a year of creation and a place of publication. It can be retrieved in the world wide catalogue of libraries (Worldcat for the Dutch known as Picarta) with standard metadata and descriptions.

But, this is not possible for manuscripts. There is no thesaurus for geographical names like used in libraries. Historical toponyms changed or disappeared during the centuries. And there is another problem. Because of their size they were made and kept in special map rooms, or separated later from the documents that they originally illustrated. Without the reconstruction of the historical relations, these manuscripts cannot be used for historical research.

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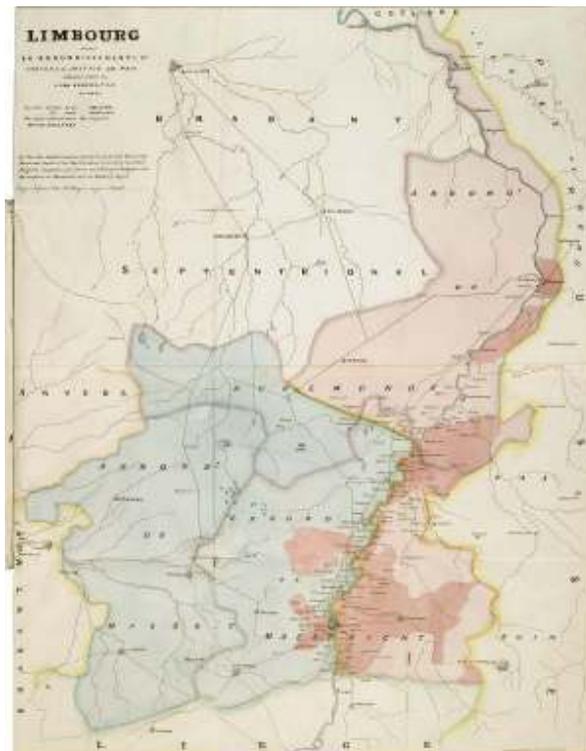


Figure 1.



Figure 2.



Figure 3.

### The strategies needed

#### *Digitise as many maps as possible*

Without digital access, the manuscript maps do not exist for most of the researchers. Unfortunately, the Dutch government only provides budget for developing tools, infrastructure or special projects. Nevertheless we managed to put more than 7000 maps on our website and this amount is still growing (<http://beeldbank.nationaalarchief.nl>). We also use the high quality scans ordered by the public over the last years in the Beeldbank. Participation in digitising programmes with other Cultural Heritage institutions like the Rijksmuseum in Amsterdam and the Royal Library in the website of the Atlas of Mutual Heritage gave the opportunity to digitize many maps of the Dutch East Indies Company and West Indies Company of the 17<sup>th</sup> and 18<sup>th</sup> centuries.



Figure 4. Chart of the Dutch East Indies Company, National Archives, 4.VEL 312 .

*Finding aids providing the scans with metadata:*

Most of our finding aids of the manuscript maps are digitised in XML with a standard developed Encoded Archival Description or EAD. This enables the connection of metadata to the images in the database with images, as well as the connection of the images to the finding aids. This is used in the project to build a European portal, a gateway to all European archives within the European Digital Libraries.

*Research on the kind of relations between maps and archives:*

Relations between maps and archival documents are not easy to reconstruct. Sometimes there is a date of the resolution on the map or even in the finding aid of the map collection. Sometimes there is an old number on the map or a reference in the finding aid of the archives. Research on the pattern of these relations with different examples, will show the way how to restore them semi-automatically.

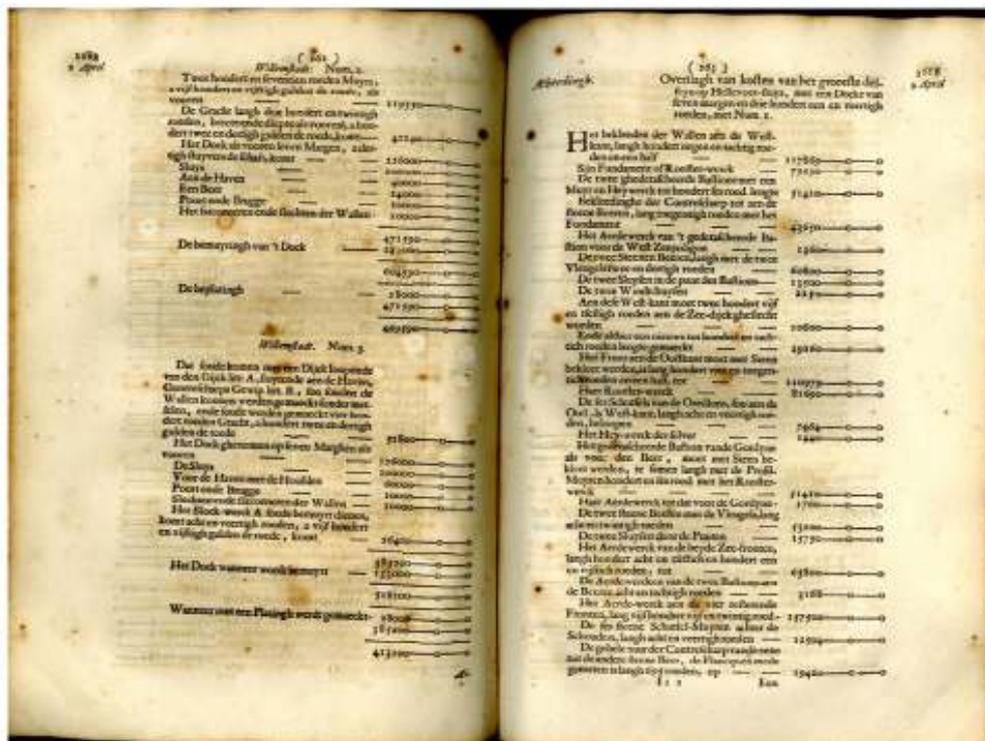


Figure 5. Resolution of Holland, about the harbour of Willemstad, April 2nd 1688.



Figure 6. The map of the harbour made for the decision of Holland. 4.OPV W66. This year we will start a pilot to connect them to their context.

*Geo-reference:*

Users of geospatial data want to find their maps as easy as possible and prefer a visual system like Google Earth. For this purpose, our manuscript maps need to be geo-referenced. Geo-referencing is adding a standard to the insufficient metadata we already have. When we use KML for instance, it can be connected to the original metadata in XML. The aim is not to put them in a perfect fitting GIS-system, because these manuscripts vary in scale, precision, projection, color, reliability, size and perspective.



Figure 7. Portolan-map of the Mediterraneum, Russus 1533, NationArchives Collection Hingman, 4.VTH 3803.

Rubber sheeting will not solve all this problems. Geo-reference is just a tool to find the maps and maybe we can present them next to each other like Rumsey, with the following example of Manhattan (Figure 8.). Two students of the University of Utrecht did some research on geo-reference and presentation of manuscript maps and the results were hopeful. We intend to geo-reference our maps in the near future and hope we can start soon.

*Annotation for the public:*

Web 2.0 is an attractive instrument to involve the public in improving the accessibility of maps. We have already invited the public to add metadata to our photos and maps in the Beeldbank. A moderator selects the comments and adds what is useable. Last year we uploaded a set of photos on Flickr the commons with the purpose to reach the public and collect information about tagging the images. This year we want to research tagging on Flickr the commons with a pilot of 25 manuscript maps on watermanagement.

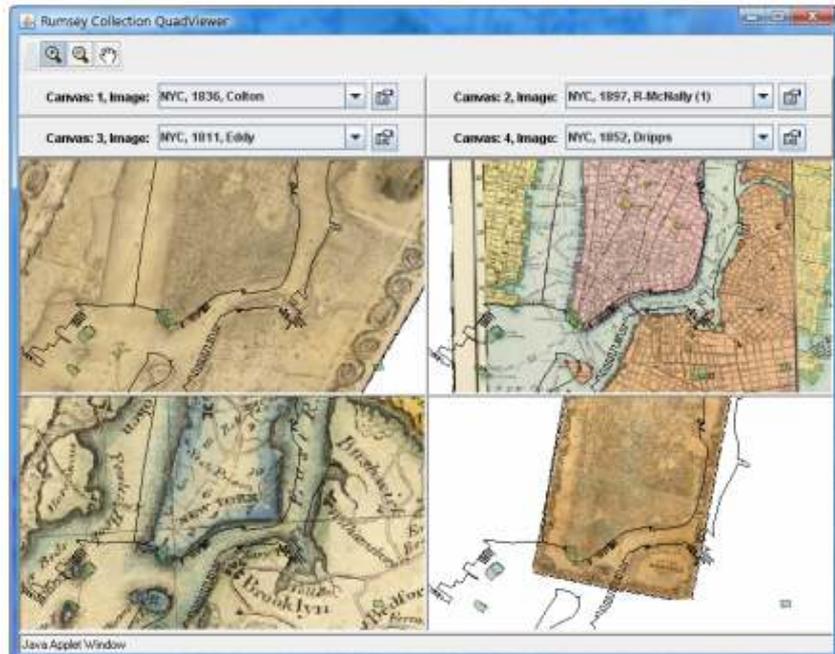


Figure 8.

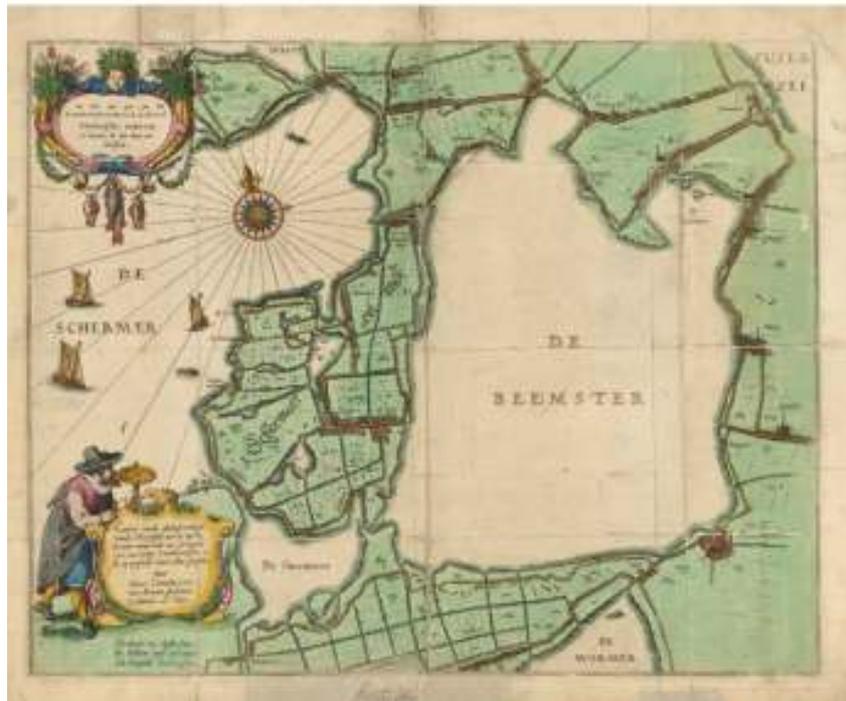


Figure 9. National Archives, Beemster, polder on the Unesco World Heritage list, 1607 4.VTH 2598.

We hope to learn from this experiment for our new website. If we give the public the instrument for tagging and annotating the manuscript maps, we expect to be able to connect the maps to the original context, the archives. Researchers and semi-professionals can help to find the connection.

*A gazetteer:*

We analysed gazetteers with a lot of toponyms like the Alexander Digital Library or the Getty. It would be great to have a gazetteer with possibilities to add historical toponyms and use the standard to find the map. Recently we consulted José Borbinha (Borbinha et al, 2009; Manguinhas et al. 2009; Martins et al 2009), who presented the DigMap project last year in Barcelona. This big European project developed a lot of useful tools for maps, among which a gazetteer combining abovementioned gazetteers with millions of toponyms and the possibility to add more (historical) geographical names.

*Co-operation:*

With the University of Utrecht, Department of Information and Computing Sciences (Dr. L. Breure, Ir. S. Spruit and Dr. H. Voorbij), the Virtual Knowledge Studio from the KNAW (Dr. C. van den Heuvel) and the Library of the University of Leiden (Drs. M. Storms) we set up a research proposal called MAPS (Manuscript map Annotation and presentation System). Linking of maps with contextual documents was one of the items involved in the proposal/ Although we did not manage to be within the selection of 4 projects out of more than 30 proposals, we will write a new proposal to combine the research techniques of the Universities and Science Institutes to the Map collections of both National Archives and the Bodel Nijenhuis Collection in Leiden. The Bodel Nijenhuis Collection contains a large collection of manuscript maps, that are sometimes complementary to the archival maps in the National Archives. Both institutes use EAD, which makes it suitable to connect and solve the same problems of the missing context.

With the Dutch land registry department we will try to agree on a co-operation for instgeo-reference. Last year on our annual meeting in Barcelona I visited the study-room and depot of the Institute Cartogràfic de Catalunya (figure 10). I became aware that the combination of knowledge of the mapmakers and the cultural heritage institute is required to give better access to researchers.



Figure 10. Third International Workshop on Digital Technologies in Cartographic Heritage, Barcelona, 26-27 June 2008.

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