



The Clavius Project 2001-2005

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CAST OF CHARACTERS

- Fr. Joseph MacDonnell, SJ, Clavius Group
- Professor Dennis Snow, Mathematics Department
- Parker Ladwig, Mathematics Librarian
- Eric Morgan/Rob Fox, Digital Access and Information Architecture Department, University Libraries
- Liz Dube/Dorothy Snyder, Preservation Department, University Libraries
- Lou Jordan, Special Collections, University Libraries
- Gay Dannelly/Nigel Butterwick, University Libraries



CRITICAL DECISIONS FOR THE PROJECT

- Why do the project and who will pay for it?
- Digitize the print or some derivative work?
- What is the appropriate quality for the images?
- How do we organize the images?
- How do we make it available on the Web?
- How do we publicize it and celebrate our success?



WHY DO THE PROJECT AND WHO WILL PAY FOR IT?

- Fr. MacDonnell, March 2, 2001, “It is an odd story. Many have tried to get their hands on Clavius’ works (including myself) for some years”
- D. Snow, July 18, 2001, “The Clavius Group is willing to contribute \$1,500 to the project if Notre Dame will pay the remaining cost. Everyone here agrees that converting the microfiche to CD-ROM is the way the project should be done. (There was no real support for producing a facsimile copy.) We hope that a translated index would be part of the package with links to the appropriate pages.”
- P. Ladwig, April 23, 2002:
 1. Funding is in place (Clav. Group \$1,500; ND the rest)
 2. Printing from microform reader would be cumbersome
 3. Opportunity for ND to learn
 4. Print copies could be made from the images
 5. Could encourage a critical edition



DIGITIZE THE PRINT OR SOME DERIVATIVE WORK?

- Spring, 2001—tried to borrow original from U.S. Naval Observatory, Fordham, Harvard; also tried to buy original
- Summer/Fall, 2001—thought about using microfiche in collection, but problems with copyright and quality
- Winter/Spring/Summer, 2001-2002—borrowed microfilm from St. Louis University; P. Ladwig, 6/18/02: “high enough quality for the purposes intended”; Fr. Mac, 6/27/02: “So go ahead”



WHAT IS THE APPROPRIATE QUALITY FOR THE IMAGES?

- Summer, 2001—Lou Jordan, Special Collections, “I thought you would have 600 dpi TIFF’s produced from microfilm. These would be stored on CD-ROM’s Then copies of the TIFFs could be reduced in size and converted to PDF’s or any other file format you may wish to use (another popular option is JPEGs)”
- Winter, 2001-2002—Liz Dube, Preservation, “I might suggest the following test: All bitonal TIF scans, 10 pages each of: 300 dpi, 400 dpi, 500 dpi and 600 dpi.”
- Fall, 2002—L. Dube told Preservation Resources to digitize microfilm into 400 dpi greyscale TIFF images
- Spring, 2003—Apr. 1, L. Dube followed up with more detailed justification



HOW DO WE ORGANIZE THE IMAGES?

- February 20, 2003—received box of 94 CD-ROMS; each page's TIFF image is about 1.5 MB large
- May, 2003—completed check of images (quality and missing pages); asked Fr. Mac to pay bill
- May 28, 2003—tried making a PDF file from several TIFF images; cumbersome process
- June 3, 2003—E. Morgan suggests turning TIFFs into JPGs and “integrating them into a ‘page turning’ program of our own design or written by another university library”
- Summer, 2003-Spring, 2004—investigated METS tools (NYU), DigiTool, DLXS (U Mich), Greenstone (New Zealand). 3/26/03 settled on Greenstone



HOW DO WE ORGANIZE THE IMAGES (slide 2)?

- Fall, 2003—learned of CD-ROM version from Garden of Archimedes project, Florence, Italy. Project put on hold until CD-ROM could be examined. 1/6/04 decided to proceed
- Spring-Winter 2004—tried to get Greenstone to work; 1/6/05 gave up and decided to design our own page-turner software
- December 2004—settled on three images for each page: one for viewing, one for “zooming in”, one for printing



HOW DO WE MAKE IT AVAILABLE ON THE WEB?

- January 28, 2005—draft of page turner made available to Prof. Snow and Fr. Mac
- March 11—all the Clavius images available on the Web site
- March 14—decided to add an “about” page and to make a CD-ROM version for handing out
- June—finalized details about cataloging, copyright, and hyperlinks to other ND Web sites; finished CD-ROM version



HOW DO WE PUBLICIZE IT AND CELEBRATE OUR SUCCESS?

- February 7, 2005—“Team to launch rare mathematics volume online” published in *ND Works*, vol. 2, no. 10
- July 2005—Clavius symposium to present Web site and discuss improvements/next steps
- ???—publish Fr. Mac’s biographical sketch of Clavius with note about project