DIGITIZING THE CORVINAS: A COOPERATIVE PROJECT OF THE NATIONAL SZÉCHENYI LIBRARY OF HUNGARY

In the beginning, the pen was the primary instrument available for making a copy of a book or document. Then, about a hundred and fifty years ago photography began to be used, and our learned predecessors could investigate facsimiles of codices from distant collections. Not too many decades ago, microfilm was invented, which enabled the mass archiving of written culture. In recent years, the technological innovation of digital imaging has yet again changed how we archive and make available copies of books and documents.

Because they are often rare and fragile, many manuscripts and early printed books are not readily available to scholars and the wider public. Most libraries impose strict security measures and store these materials under stringently regulated conditions that necessarily limit their access. In an attempt to improve this situation, several comprehensive digitization programs focusing on manuscripts and early printed books are under way in Europe and North America and countless other digitization projects are in the making. But the digitization process itself raises issues related to preservation. The rapid changes of light and temperature constitute a hazard. In the case of an illuminated codex, the richly painted pages, and especially the gold-leaf decorations, may be imperiled when they are digitized. Folios of parchment decorated with gilt particularly require special care during imaging. Traditional photographic techniques use intense light, which in turn creates significant amounts of heat. An effect of such strong illumination is that the parchment can expand considerably, become temporarily deformed and wavy, and the gold leaf will fragment. It is not uncommon to find a manuscript with a web of fine cracks in the gold leaf that ultimately may exfoliate from the parchment.
The National Széchenyi Library in Budapest considered these issues before accepting the offer of Xerox Hungary to digitize a clearly defined part of the library’s manuscript collection. With assistance from the manufacturer of the DigiBook 6000 scanner, the French firm I2S Solutions, Xerox Hungary developed the Gutenberg 21st Century project for the digitization of medieval materials. The scanner conforms to the strict preservation standards for the digitization of art objects and had already been used in the Bibliothèque nationale de France in Paris, the Österreichische Nationalbibliothek in Vienna, and the Vatican Library in Rome. Beginning in December 2001, the scanner was set up in a darkened room of the Széchenyi Library for a two-month period (fig. 1).

![Fig. 1. The DigiBook 6000 scanner set up in the National Széchenyi Library. With Permission of the National Széchenyi Library.](image)

The camera of the table-sized DigiBook 6000 scanner and its light source run for eight seconds along the manuscript lying on the table, which is only a fraction of the time needed for traditional photography. The amount of light that each page is exposed to is about the same that is used for an exhibition in one day. The heat emission of the cold lamp is hardly perceptible; hence, the pages are not distorted. Another innovation of the DigiBook 6000 is the use of a split tabletop, which can be moved up and down in response to weight. While turning the folios, the weight of the book gradually shifts from the right side to the left, with the right portion of the split tabletop lifting as the left portion proportionately lowers. As a result, the folios remain in almost the same focal plane throughout the process.
Traditionally, when working with a manuscript that has been tightly bound, in order to keep the target folio within the focal plane, one has had to manipulate the manuscript in a manner that could be potentially damaging to the material. Under such circumstances, only a single folio can be imaged before the manuscript must be repositioned once again. Further, such a process exposes the opened manuscript to twice as much light because two images must be made. But the Digibook 6000 is able to make images from both folios even at an angle width of 120° because the software can compensate for the distortion caused by perspective shortening. This allows for much faster processing and also helps to preserve the manuscript by limiting its exposure to light.

Xerox Hungary was interested in digitizing medieval manuscripts, and the National Széchenyi Library wanted to select a medieval manuscript collection that could be digitized in its entirety within the amount of time available. The decision was made to select the manuscripts from the Corvina Library of King Matthias Corvinus of Hungary. The Corvina royal library is rightly held to be the most important of the Hungarian Renaissance.

Matthias began to acquire a sensibility for classical antiquity early in his life through the teachings of Johannes Vitész, Bishop of Várad, the father of Hungarian humanism. While still a youth, Matthias translated the classics for his father, John Hunyadi. King Matthias began his reign in 1458, and soon after, during the 1460s, while seeking to bring a Renaissance courtly environment to the city of Buda, he established a library. He also developed strong diplomatic relations with Italy, and the effect of the current culture of the Italian cities and the princely courts, as well as the presence of Italian diplomats dwelling in Buda, had a major impact on Matthias’s reign.

In the second half of the 1470s, King Matthias began to pay greater attention to his book collecting. Several scholars attribute this to Matthias’s marriage in 1476 to the Neapolitan princess, Beatrix of Aragon, who served as his introduction to the Neapolitan court. Interestingly, however, this relationship did not leave a mark.
on the book culture of the Hungarian royal court, as Matthias continued to buy his codices from Tuscan workshops, especially from Florence, and not from Naples. From his first period of book collecting came the simply decorated, so-called Florentine white vine-scrolled codices, onto which the coat of arms of the king was painted in Buda by an anonymous illuminator. The luxurious, richly decorated manuscripts, such as the Corvina of Philostratus (fig. 2), began to be added to the royal library a decade later, from the middle of the 1480s on. These were commissioned from the finest Italian workshops, or prepared in Buda, where the king not only employed his own illuminators, but also established a bookbinding workshop. From that point on, the library was no longer just for the king’s personal use, but was also open to members of the nobility and the church. Built in the neighborhood of the royal chapel, the library was described by many of Matthias’s contemporaries as having a rich and picturesque quality to it. After the death of King Matthias, the library fell into slow decline. Then after the Hungarian defeat at the Battle of Mohács (1526), and during the subsequent Turkish occupation, the library’s manuscripts were destroyed or dispersed. Not a single Corvina was left in Hungary.

The scope of the library of King Matthias was very broad. It included books in Greek and Latin, the works of many ancient authors, the Bible, and writings of the church fathers, important medieval theologians, and contemporary Humanists. Literature, history, philosophy, rhetoric, military science, medicine, architecture, geography, music, and astronomy were all represented in the library. It was the first Renaissance
courtly collection outside Italy and the second largest library in Europe. The number of codices it contained can only be estimated on the basis of comparative investigations because contemporary descriptions refer to the completeness of the collection but do not provide any idea as to how many works it contained. According to current research, the collection probably consisted of as many as 2,000 volumes, from which 216 manuscripts have survived and are currently found in some of the largest libraries of the world. Fifty-three of these codices are preserved in Hungary, thirty-five of which are in the National Széchenyi Library (fourteen in the University Library, two in the library of the Hungarian Academy of Sciences, and one each in the Esztergom Cathedral Library and the library of the Győr Episcopal Seminary).

The digital images of these thirty-five manuscripts are contained on approximately three hundred CDs. Because of their high resolution (300 dpi), the pages printed from the photographs show even the smallest aspects of the original materials: even the faintest stroke is visible.

We have fulfilled our task of preserving parts of the Corvina Library. But the CDs contain only the raw material, which now requires a multilevel research approach. Since there is currently a great interest in the Renaissance period amongst scholars all over the world, electronic distribution of the digitized images must be facilitated. To do this, a less detailed version of the raw material is needed, since it is still difficult and extremely costly to produce pictures at such high resolution.

A representative sample of the most valuable and interesting pages of the recorded material has been prepared and published by the National Széchenyi Library. Additional work will be necessary to prepare a database, in which the complementary information is added to each manuscript: the author, the copyist, the name of the illuminator, the type of binding, the owner, and possibly a searchable text of the manuscript itself. Such a database could serve as the basis for a project to preserve and process all surviving Corvinas. Such a reunification of the Biblioteca Corviniana in a digital format would provide a unique representation and overview of an extraordinary high point in the cultural heritage of the Renaissance.