www.i2s-bookscanner.com

DigiBook Mag

June 2004, no. 8

New improvements again and ever.

As promised in the previous editorial, we keep on progressing as far as technical and trade developments are concerned, you become more numerous to choose our DigiBook products and I benefit from the given opportunity to sincerely thank you for the increasing trust that motivates us day after day to improve again both our products and services. Do not hesitate to ask us about the reference list, we will definitely send it to you!

You will find in this DigiBook Mag issue the information regarding the latest updates and/or improvements, i.e.:

- a new 14,400 pixel colour camera which allows the digitization at 400 dpi over an A0 format
- a new Book Restorer algorithm: BKR Watcher which eases and optimizes the use of Book Restorer™
- the latest image of the vacuum table for our A0 scanners
- a very important improvement of the productivity of our scanners, particularly interesting for wide formats and high resolutions in colour: imagine an A0 map digitized at 300 dpi in colour in less than 30 seconds! And of course without getting in contact with your originals ever!

Of course an important part of the newsletter is dedicated to our first Digitizing Line clients, with their testimonies and photos of the assembly hall where we manufacture them four by four.

Obviously, we give you an appointment on our booth #69 at the IFLA Buenos Aíres next August, and in our next issues of DigiBook Mag to discuss about the technical improvements.

See you soon!

Alain COSTE
DigiBook Business Unit Manager

Digitization of the manuscripts of the Mont-Saint-Michel for the opening of the handwritten books centre

After the French revolution, the city of Avranches (France) received as a deposit the major part of the books and sacred arts collections of the famous abbey of the Mont-Saint-Michel. Unique from their origins, they benefit from the abbey cultural and tourist influence. An important part of the monastic library, two hundred and three (203) manuscripts and some cultic objects, are preserved in the library and the museum. Since the year 2000, the city has decided the creation of a handwritten books centre which aims at enhancing the value of these collections as towards the casual visitors than to the more specialized audiences like schools or researchers.

The new technologies impose themselves upon the visitors and these fragile works; only some manuscripts will be presented in the end of the museum round. The multiplication of multimedia terminals will allow an understanding of these manuscripts through an educational presentation, offering for instance, some image enlargements or text translation. A whole of selected reproductions takes part in the scenario development; the final goal is to digitize the complete collection in order to ensure the management of it and propose a research tool to the public. The realisation began in the end of the year 2003 for the digitization of a part the original collections.

Zoomorphic and vegetal initial Q(uam)
saint Augustin, Opuscules, about 1060-1070
(Avranches, B.M., ms. 86, fol. 32v)

Digitizing – a fundamental step

[...] Beyond the architectural project, the relevance of the equipment such as the Centre of the Handwritten Books resides in the quality of the museum content proposed to the different audiences. That is in this quality oriented perspective and in the diversity of the contents that the digitizing step of these works revealed itself as necessary. Actually, it is going to allow the handling of some 22,000 images, which will lead to the permanent exhibition as well as temporary ones.

[...] These works and particularly the manuscripts of these old collections are extremely fragile and for most of them inaccessible by visitors. The use of the multimedia tool has quickly imposed itself like an unavoidable solution for the contents spreading. The digitization, i.e. the transfer of text and image data into digital information, actually permits to show a large audience some works never seen so far. The information broadcast is possible via interactive and multimedia terminals lining the museum walkway and that propose image enlargements or text translations (zoom-in/out, virtual page-turning), or

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DIGITIZING LINE: our clients tell

It has been such a long road we have been following since the first installation in Stanford, CA (USA) in October 2002! After the installation of a second DIGITIZING LINE in November 2003 on the production site of the company Infotechnique, four new devices have been manufactured and delivered.

Tale of a 'success story', see page 4.

In this issue

LAND OF VISION

Technology

NEW

DigiBook still improves its scanners productivity by making the image recording independent from the scanning operation

How does it work?

In a DigiBook scanner, the digitization process includes a document scanning phase (see step ❶ on 1st timing chart), followed with an image recording phase, to the local disk or the network (see step ❷). While the camera head and its embedded lighting system are scanning the document, the image acquisition and display are done simultaneously. At the end of the scanning period, the image is available in the processor memory, and is saved on the disk.

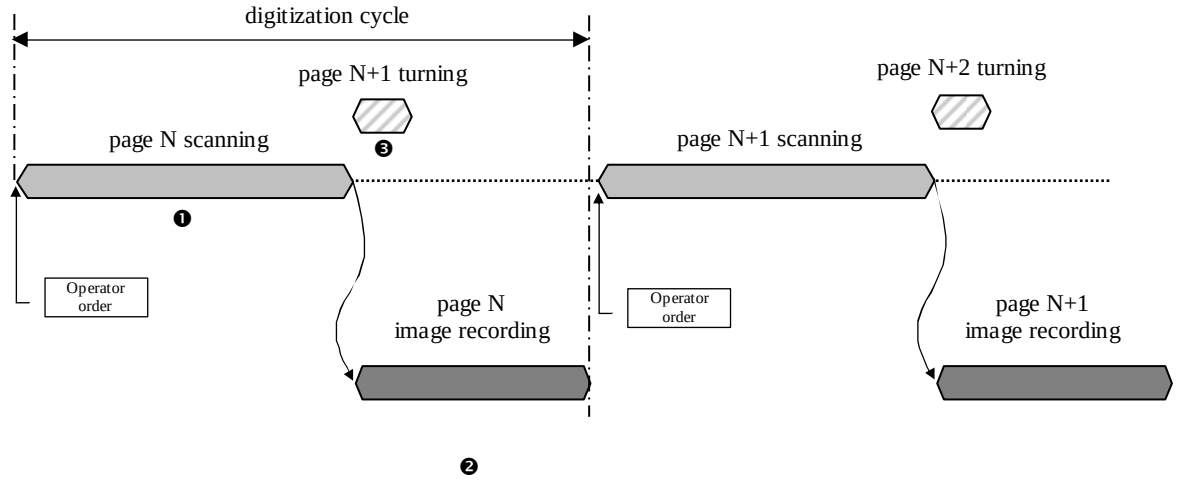
So far, a new scanning step could not be launched before both of the following conditions were realised: the end of the previous image saving and the end of the page turning (see step ❸).The new DigiBook application software allows now to execute in parallel the scanning and the saving step. Consequently the scanning operations can be run more quickly, without waiting for the end of the image recording. Whatever the format of image used, and with very rare exceptions, the image archiving period is always lower than the one of a scan. The productivity is now directly dependent on the scanning time of your document and on the necessary time to turn the page or to change the document (see 2nd timing chart).

This release is particularly interesting for large size and high resolution colour formats, where recording times are long and critical for the productivity. The attached chart compares the productivities measured on a machine equipped with a 10,000 pixel colour camera head, between two recent versions of the DigiBook software (V5.22 and V5.3), the last one integrates this release. These productivities take into account an average time of page turning equal to 3 seconds. The gain of productivity can reach almost 30 %.

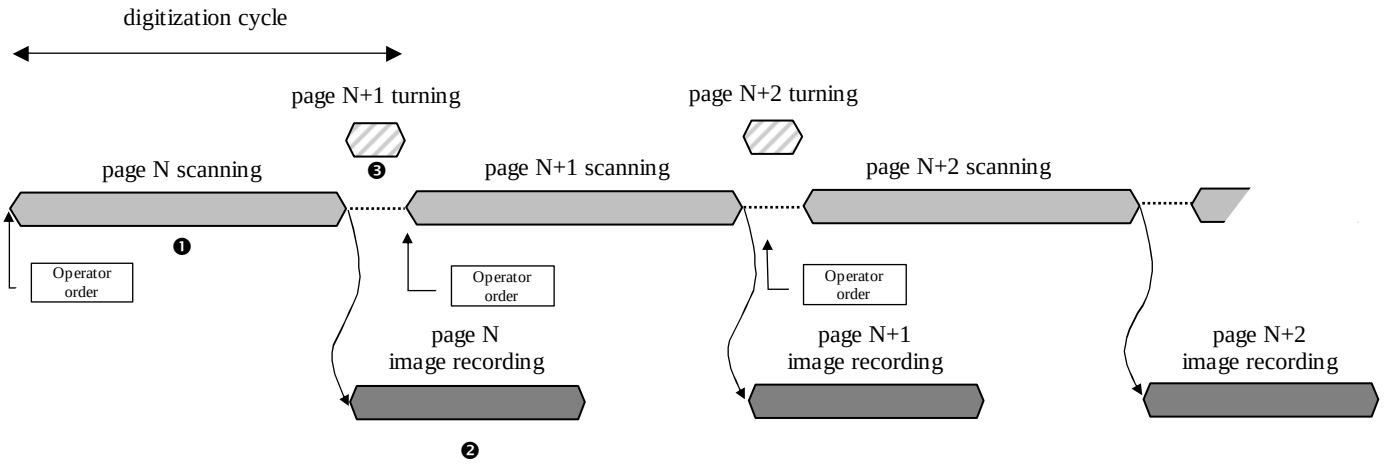
Format	Resolution	Previous theoretical productivity	New theoretical productivity	Gain
2*A3 Colour	600 dpi	131 p/h	170 p/h	+ 29,7 %
2*A2 Colour	400 dpi	148 p/h	189 p/h	+ 27.7 %

This release will soon equip all the A0 and A1 DigiBook scanners, except the DB5600 model. To upgrade already delivered machines, contact our technical department to check that memory and processor configuration inside your machine are sufficient.

1st timing chart: current digitization cycle of DigiBook scanners



2nd timing chart: new digitization cycle of DigiBook scanners



NEW

A new A0 400 dpi colour DigiBook scanner!

A new version of the A0 format DigiBook scanner is born. It uses a new scanner head equipped with a 14,400 RGB pixel CCD sensor. A few months ago we launched the development of a new 14,400 pixel colour camera head, compatible with the current range. This new camera is now in production and can equip an A0 scanner to digitize colour maps and documents with a resolution of 400 dpi in full format.

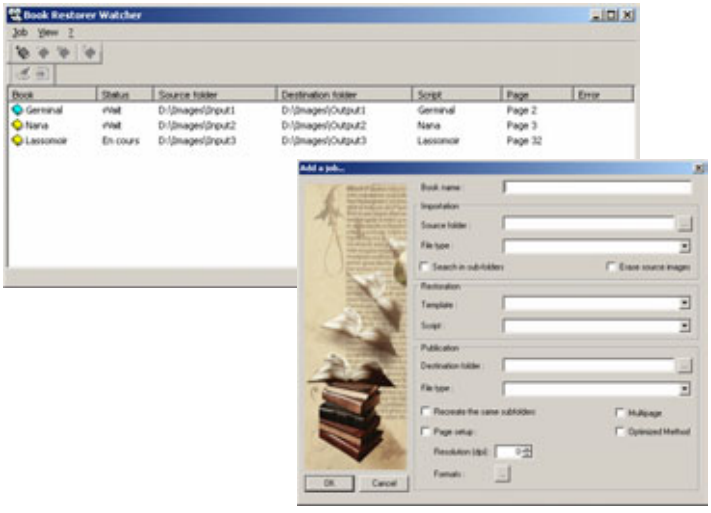
The camera has the same field of view as the 10,000 pixel version one. To obtain the fully 400 dpi resolution it must be positioned on the upper mechanical adjustment setting kit of the scanner.
Fixed on the lower one, the camera allows resolutions from 400 to 600 dpi on A1 formats, even more on smaller formats.

From the performance point of view, the DigiBook A0 400 dpi scanner provides a very great image quality and optimized times of productivity. When digitizing a 400 dpi colour AO format (approximately 740 MB!), the obtained scanning time is lower than 1 minute.

NEW

BKR Watcher: a new module added to BOOK RESTORER™

To offer a larger flexibility to the restoration work, the BookRestorer™ software development team developed a new module : BKR Watcher.
Usable during or after your digitising work, it allows the creation of an unlimited number of processing tasks, each one analysing one folder continuously, in order to import, restore and publish each new image appearing in this 'scanning' folder.



The use of the BKR Watcher module is a complementary function to the BKR Automaton whose tasks are launched only once in order to process all the images already saved in the folder.
BKR Watcher will improve your productivity because the restoration process will be done during the scanning job.

BKR Watcher has the same interface as the Book Restorer Automaton : the operator has the possibility to add one or several jobs which can be run in parallel.

Thus, for each defined job, BKR Watcher consists in :

- regularly analysing the source folder (the time between each checking can be set by the operator) that generally is the scanning folder.
- importing and restoring each new image saved in the specified folder (by using the specified script).
- publishing the final image into the 'Destination folder'.

To do that, just a few parameters have to be defined in the opposite dialog box.

The A0 vacuum table: final version

Presented in its prototype version in our last DigiBook Mag issue, here is the image of the finalized and industrialized version of the A0 vacuum table.

A0 vacuum table characteristics

- Accepted formats: up to A0 /E
- Useful surface: 840 x 1180 mm
- Honeycombed plate with 2 vacuum arms linked to 2 turbines
- Maximum vacuum arm length: 5 meters
- Plate on a wheeled table with adjustable height
- Vacuum power adjustable
- Command with footswitch
- Dimensions: 880 (P) x 1228 (L) x 60 (H) mm
- Electrical power: 2.2 KW

Additional DigiBook software function
Specific image rotation function with adjustable settings

Tests on a vacuum table
in the DigiBook production room

Route of a world unique automatic digitizing device:
the DIGITIZING LINE

Stanford : the first successful strides of the DIGITIZING LINE.

October 2002 the Swiss firm 4Digitalbooks-ASSY designer of the DIGITIZING LINE, installed its first device at the 'Green Library', one of the University Libraries of Stanford, CA. Directly gotten out of a prototype which digitized books up to A4 formats as a maximum, the first industrialized version of the DIGITIZING LINE allows to scan in a complete automatic way, not only bound works but newspapers up to the A2 format. This machine, equipped with an innovative automatic page-turning solution, is the world only one device able to digitize works of this format range. This first model sets from then on, the characteristics of the actual DIGITIZING LINE and already integrates the technology of the i2s scanners.

For Michael Keller, the Stanford University Library Manager, and responsible for this project, the acquisition of this robotized scanner has for objective to speed up in a drastic manner, the « going digital » efforts by processing the bound works five times faster than doing it manually.

Michael Keller comments[1]:
« *When you're turning pages by hand, you can do maybe 150 to 200 pages per hour. It's slow. But the robot can easily do 600 to 1,200 pages per hour without damaging the books. And it's rigorously consistent - the page is always flat, the image is always good, and software conversion allows you to index the text so you can search it* ».

As far as working with the DIGITIZING LINE is concerned, Michael Keller explains:
« *We spent the first several months putting it into operation, tuning up the software that controls it, and testing it with a wide variety of books from our collection: small books, large books, colour books, black-and-white books, books with charts, books with text, books with coated paper, books with thin paper, books with heavy paper, books set by hand, books set by machines, and on and on. We discovered that the machine doesn't do any more damage than putting a book on a photocopier - less, actually. It's very gentle with the books.* »

The Stanford University libraries represent approximately 8 million books to digitize with such important projects as all the titles published by the Stanford University press or the preservation of people works dated back in 1923. If the acquisition of performing technologies aims at preserving and allowing everybody's access, it offers a reactivity and a perfect local mastery of the digitization compared to any subcontracting in India or the Philippines.

Concerning this subject Michael Keller clarifies:
« *One advantage is that the books never leave our hands. We don't have to ship them off for six or ten weeks. If it takes only 20 minutes or so to run a 300-page book through the machine, then it's only off our shelves for a day. Secondly, our people handle the books in ways that we prescribe, and that we can easily supervise. Third, the end product is under our control. We can get a PDF, ASCII text, Word documents. We can save the source images, the TIFFs, and reprocess them later as technology improves. There are a lot of control issues* ».
Today the DIGITIZING LINE installed in Stanford is in total production to scan several thousand books a year.

Computerization of the property book of Alsace Moselle: birth of the biggest automatic digitization centre in the world

Confident thanks to this success, the second unit of the DIGITIZING LINE is installed in November 2003, near Strasbourg, in La Walck, within one of the production sites of the Infotechnique company. This machine and three others, destine to digitize thousands of big registries similar to A2 format.

In partnership with IBM, the Infotechnique company is involved in the computerization of the property book of Alsace Moselle (AMALFI application). It provides a secure logistic for the collection of 40000 volumes, located in 46

(Cont'd on page 5)

DIGITIZING LINE features

- Automatic digitizing system including an innovating automatic page turning device and a scanner
- Provide outstanding image quality
- Preserve your documents
- Digitize up to 1500 pages/hour
- Accept formats up to 620 mm (H) x 450 mm (W) (DIN A2 / C +)
- Outstanding productivity: 4 to 5 times faster than a human operator

The automatic digitization consists in a precise mechanical movement that warrants the work integrity. It goes without saying that the mounting and the adjustment of such a device does not leave any place for hazard. Below, two images of the production room where four machines are being tested and assembled for upcoming deliveries.

Route of a world unique automatic digitizing device: the DIGITIZING LINE

(Cont'd from page 4)

property offices and composed of some 2 500 000 sheets on which are handwritten since the year 1900, all the information concerning 1 800 000 property districts, 2 000 000 owners, and 4 500 000 plots of lands and co-property lots... These figures give an idea about the dimension and the task for the reprise of these data. Such an idea involves the digitization of these sheets and a new data entry of the volumes (worked out by sites located in Madagascar & Mauritius) based on the gotten digital images.
This project really is a sweeping one which mobilizes around 150 persons. David Gray, Sales Manager at Infotechnique details[2] : « Our investment of around €*4 Million in La Walck foresees the installation at the beginning of the summer 2004, for four scanners of this kind. Equipped like that, we will digitize and process the data of 125 books per day. With such a humongous project, it will take us four years to computerize 46 land offices of Alsace-Moselle* ».

Quality of images and productivity have been the keywords in the technical choice of a solution such as the DIGITIZING LINE. Today, it is able to digitize up to 1,000 pages per hour[3], without damaging the work at all. As far as the already damaged works are concerned, they are scanned thanks to a manual scanner.
With three other machines as the DIGITIZING LINE, delivered and installed, the La Walck digitizing workshop is completely operational to take care about the Property Registry digitization until January 2007.

From now on, we hope to market many more devices for projects being as exciting as this one is. It is already the case for the University Library of Southampton which recently acquired a DIGITIZING LINE, but we will certainly have the opportunity to tell you more about this in a next issue of this magazine.

(1) Extracts from 'The Book & The Computer' interview
(2) Extracts from DNA interview
(3) in the format of the registers processed in this application.

Installation of a DL on the production site of the company Infotechnique

Tough and 'muscled' transport for the DL

4 DL working, only one operator watching after

Testimony

Digitization of the manuscripts of the Mont St-Michel for the opening of the handwritten books centre

(Cont'd from page 1)

even image enlargements integrated into the museography, .
Following a public tender bid procedure, the setting of such an extraordinary ant-builder's work was confided to the company Pro Montage Multimedia from Bailly, in the Paris outskirts, for the digitization of Museum objects and of the Saint-Gervais treasure; the company Arkhenum, based in Pessac, Gironde (French area), for the digitization of manuscripts, imprints, and archives.

A digitization in two steps

The first step of this huge project started last winter and will last until the end of June. It all started by the digitization of post cards of the city of Avranches, and the one of objects (statuaries, columns,...).
Thus, within the library of the Ancient Works, manuscripts (50 on the whole: entirely digitized text, background or illustrations...), all the illustrations of the manuscripts, i.e. the entire background, some etchings, lithographies and drawings were taken in charge by the company Arkhenum. This part of the work is processed within the Department of the Ancient Works in the town hall. Once achieved, this first step will allow to have access to entire image or reproduction monies, enough to prepare the Centre opening, foreseen in 2006.

Author: Agnès Babois - city of Avranches

DigiBook now represented in Taiwan

The DigiBook distribution network now counts with a new distributor and partner in Taiwan. This new collaboration registers our expansion strategy of the network we have built, to offer our clients a better and nearer technical and business back-up. Please get in contact with our sales department to obtain more information.

2004 events

➲ **IFLA 2004 - BUENOS AIRES - Argentina**
22 - 27 August 2004
World Library and Information Congress: 70th IFLA General Conference and Council
Stand #69

LAND OF VISION

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