

# DigiBook

# Mag

July 2002, issue no. 2

## From books or films up to the web !

Dear All,  
 I am hoping that you will enjoy the DigiBook Mag no.2. This issue includes interesting news coming from the field and of course from our R&D department too! In the coming weeks, we are going to exhibit a **Full Content Management Workshop** (see IFLA exhibition article on page 5). This exhibition is a unique opportunity to see a complete Content Management workshop and have all your technical problems solved within 12 square meters ! Please come and visit us at booth 112. During this event I will be personally at your full disposal to answer any questions you may have.  
 Hoping see you soon.  
 Very Best Regards,



Alain COSTE  
 DigiBook Business Unit  
 Manager



## Gutenberg Bible copy from the University of Texas soon online.

AUSTIN – Johann Gutenberg, welcome to the Internet age.

A rare copy of the Gutenberg Bible, the book that revolutionized printing in Western civilization, is going digital this week at the University of Texas. Officials say a digital copy being made available on disk and the Internet will make it easier for scholars to conduct research. Anyone will be able to browse the pages of one of the world's most valuable books.



"I hope there will be some really substantive scholarship to come out of this," said Richard Oram, head librarian at the university's Harry Ransom Center, one of the world's top cultural archives. Gutenberg printed his famous Bibles in Mainz, Germany, in the 1450s, using what was then a revolutionary printing press. It was the first major Western book printed from movable type. According to the Ransom Center, only about 200 were produced and only 48 copies exist today. The center acquired its two-volume copy in 1978. The Texas Gutenberg isn't the first to go digital. It has already been done in Britain and Japan, and the Library of Congress is working on a similar effort.

But scholars say the Texas effort is important because the university's copy provides valuable information the others do not. For example, the Texas copy was one of the most-used copies still in existence, said Dr. Paul Needham of Princeton University's Scheide Library. It bears a Jesuit stamp and was used in monasteries in southern Germany as late as the

*(Cont'd on page 4)*

### >> i2S BRIEF

#### New Book Restorer pricing policy :

- Book Restorer unlimited licence : 4,000 €
- Page restorer : Book Restorer limited licence for 50,000 pages : 1,000 €

**By the end of this year**, i2S will enlarge the performances of its SUPRASCAN scanners :

- New mechanic allowing DIN A0 formats
- New B&W and Color scanner heads with 14,000 pixels resolution.

These options will be compatible with SUPRASCAN scanners.

### In this issue

Editorial	1
Gutenberg Bible enters 20th Century	1
Geometrical correction	2
About Book-cradle 500mm / 40Kg	3
Reflective document issue	3
DigiBook web site	4
IFLA event	5
Contact us	5

## Geometrical correction. How it works ?

The digitising of a book shows, first of all intrinsic defects in the bookwork (stains on the paper because of passing time, paper quality, ink acidity, humidity of the archiving area) and secondly defects linked to the digitising operation itself (lighting variation, sampling, curvature of the page, position of the document ). Apart from the classical methods of parallax correction and stains elimination, and considering the nature of the images, it is necessary to make advanced restoration treatments of among which the geometrical correction.

The general shape of the book plus the physical constraints brought by the binding usually lead to the curvature effect (see image 1). In order to avoid this phenomena, two solutions : one consists in flattening the document in front of the camera (thanks to a pane of glass in example) and the second solution is trimming the pages of the documents. But

the rare and precious works must not be damaged. So i2S prefer digitising the bookwork placing it without pressure in front of the camera and applying software treatments.

The former used correction methods by data processing consist in mono-directional transformations in horizontal and/or vertical axis. Basically, the principle is detecting only one type of information in order to estimate the correction to do (lines of text, edges of pages, ...).

This method shows its limitations when the document presents damaged edges of pages, lines of hand-written texts which do not characterise the straightness of the edges, or rotated pages (see images 2 and 3). To get an optimal result whatever the condition of the document is, i2S developed an innovative geometrical correction function available in BookRestorer™ software. This outstanding function was patented at the international level.

For that purpose, the geometrical correction utilises several criteria at the same time, tak-



Im.1 : ORIGINAL IMAGE

ing into account all the information available pertaining to the curvatures of the documents (edges, lines of text, images,..) Then, thanks to a results synthesis, the geometrical transformation interpolates the displaced pixels of the original image and replaces them as closely to their original position as possible.

This method allows you to correct any sort of documents including images from recent books, hand writing and columns of text typified by newspapers. (see image 4).



Im.2 : IMAGE CORRECTION FROM EDGES

Comments : edge criteria does not allow a geometrical correction in the horizontal axis.



Im.3 : IMAGE CORRECTION FROM TEXT LINES

Comments : no convincing result



Im. 4 : BOOK RESTORER GEOMETRICAL CORRECTION

Comments : perfect ...corrects page curvature, page rotation and local distortion. Alignment of columns is now correct and graphics are respected.

## New book-cradle version, without glass for bound documents with 500 mm thickness and 40 Kg maximum weight

One of the main functions of i2S scanners is the use of a book cradle without glass, equipped with a binding compensation device. The advantages of such an option are



Im.1 : front view of the book cradle

pivotal for optimal digitisation quality while respecting standards of documents preservation :

- Be able to balance both sides of the open document, which must be slightly at the same horizontal level, whatever its dimensions and whatever the open page of the document is.
- Help the operator to locate

the whole document between both rear and front focussing planes to remain sharp on the document (depth of field).

- Partial opening of the document (for instance 120°) when the fragility of the binding does not support maximum opening.

For further flexibility, the operator can lock the balancing system in any position. Moreover, i2S book cradle does not integrate a hydraulic system, so there is no risk of either pressure or a fluid leak damaging the documents.

Images 1 and 2 illustrate the new option 500mm / 40Kg book cradle. Its platens are motorised from a very easy-to-use switchboard situated on the right hand of the operator. This way, he can drive the vertical position of the platens manually or automatically. The

horizontal axis position of the platens are manually set-up depending on the size of the document. A cunning mechanical device holds the position of both platens according to the weight of the work.



Im.2 : platens with maximum amplitude

## New lighting device for SUPRASCAN scanners range

Henceforth, i2S digitisers propose a new lighting device specifically developed for bright/reflective documents. Several illumination configurations are available according to the coating:

- The first configuration allows a bilateral illumination dedicated to bright documents : photos with bright and glazed paper, adhesive (plastic-coated) documents are not included).
- The single lateral illumination of the second configuration is ideal for relief document

(for instance, the seals).

- The third configuration realises a central illumination particularly adapted to lighting the bottom of the binding.
- The final configuration implements the whole illumination in order to decrease the exposure time of the imager, increasing productivity.

All configurations are selectable with a unique rotating switch located on the control panel of the scanner.

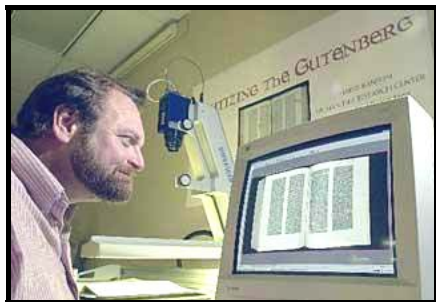
The RD (Reflective Document) lighting version is delivered as standard with DB10000BW and DB10000RGB scanners and as an option with DB2000LC, DB6002BW and DB6002 versions.



## Gutenberg Bible copy from the University of Texas soon online.

(Cont'd from page 1)

1760s. It was marked up by monks who scratched out some passages and corrected others. Other markings indicate which sections were to be read aloud or reserved for church services.



"It really is a remarkable copy," Dr. Needham said. "To study it at your own leisure at your computer desk, you can go to a whole new depth of research like never before without travelling all over the world."

Because the book is so valuable, the Ransom Center keeps it locked away. An armed guard is on hand whenever it is unlocked for scholars, which has happened only twice in the last 12 years. Both times it was for Dr. Needham and for just a few hours.

Ransom Center staff began transferring the 1,200 pages to digital format on Wednesday, with each page taking about seven seconds to scan. IImage Retrieval of Carrollton\* is providing the technology for free, Mr. Oram said.

The first digital copies will be available on disk or CD-ROM within six months, Mr. Oram said, with Internet access available later.

Similar digital efforts have been very successful. Officials at the British Library said earlier this year that the Web site featuring

the library's two copies of the Gutenberg Bible received 1 million hits in its first six months. Ransom Center Director Thomas Staley expects similar success. "We're going to get more people reading the Bible than you can believe," Mr. Staley said.

06/27/2002

By JIM VERTUNO / Associated Press.

\* IImage Retrieval is our US distributor. The technology provided was a DigiBook6002RGB scanner with BookRestorer software.

## News from DIGIBOOK web site.

Since its creation, the DIGI-BOOK web site ([www.i2s-bookscanner.com](http://www.i2s-bookscanner.com)) increases its audience continuously reaching now more than 1400 visitors a month. Many thanks to all past and future internet visitors which sign their presence on our web site and helps us to improve its content.

In the new HIGHLIGHTS page we try to give you the best information regarding the performances and advantages of i2S scanners. This month a new **OPTIONS MENU** will propose you a quick selection guide of scanners options like Book Cradle devices, the new Reflective Document lighting device and A0 mechanic.



For a direct access to these pages click on the following links :

- [Options page .....](http://www.i2s-bookscanner.com/en/products_options.asp) ([http://www.i2s-bookscanner.com/en/products\\_options.asp](http://www.i2s-bookscanner.com/en/products_options.asp))
- [Highlights page...](http://www.i2s-bookscanner.com/en/highlights.asp) (<http://www.i2s-bookscanner.com/en/highlights.asp>)

# News from our last training—June 2002 session

Our Indian distributor was our last trainee participating in i2S advanced technical training sessions (3-day course) dedicated to the DigiBook scanners and Book Restorer software. The feed back we

have received from our distributors has been very positive and we can be safe in the knowledge that we are doing our committed to providing the best possible local support to our end users and customers.



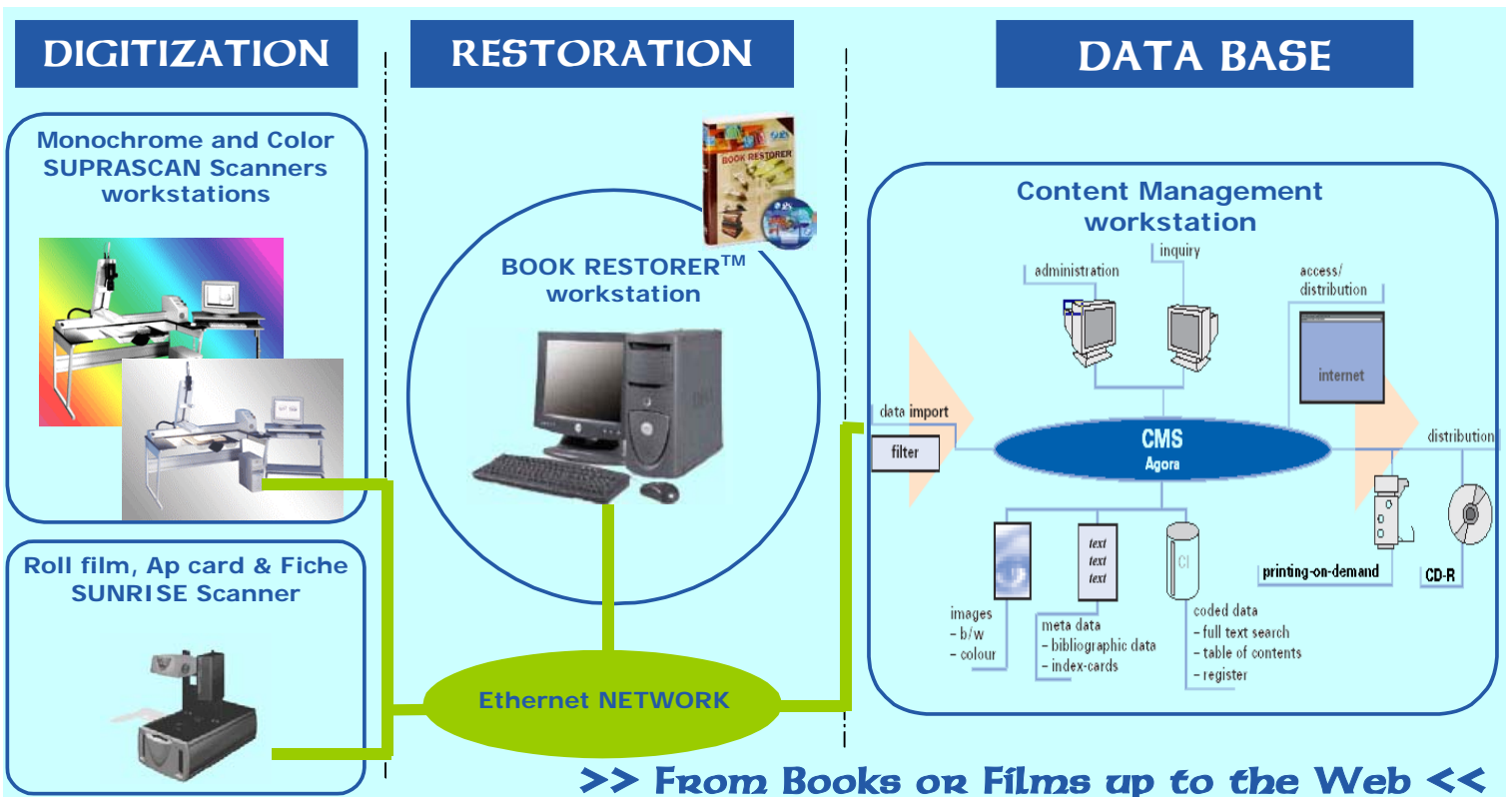
On the left, Sylvie LACOUTURE (BookRestorer Software Manager) helps Mr Pradipt to use advanced functions of BookRestorer

## Show time ! come and visit our Content Management Workshop on IFLA exhibition in August 18-21 / Glasgow / Booth no.112

At the IFLA show event, i2S will be proud to present to all visitors a unique **CONTENT MANAGEMENT WORKSHOP** including digitisation, restoration and con-

tent management solutions. Exceptionally, both of our partners will be present on our booth to demonstrate complementary solutions in micro-films digitisation


and image data base management. The following diagram features all solutions available on i2S booth (no112).



**Other upcoming exhibition :**  
**Jornadas de Archivos Eclesiasticos**  
 9-12 Septiembre de 2002 - ORENSE (Galicia) - ESPAÑA



**i2S DigiBook**  
 phone +(33)(0)557 26 68 98  
 fax +(33)(0)557 26 68 99  
 www.i2s-bookscanner.com  
 info-bookscanner@i2s.fr

 All remarks and suggestions have to be sent to Pascal CHEVALIER, in charge of Communication. p.chevalier@i2s.fr