

DigiBook

Mag

■ November 2006, no. 13

Dear All,

It is with great pleasure that I welcome you to this new issue of DigiBook Mag. As indicated in the previous edition (DigiBook Mag no. 12), we are proud to confirm the good health of our latest model - the **CopiBook** scanner.

The installed fleet of this new generation of scanners will reach 200 units by the end of the year, and will be spread over more than 25 countries the world over!

I take the opportunity on this occasion to thank the large number of customers who have trusted in us, congratulate the distribution network for the work they have accomplished, and renew my great motivation to pursue our R&D efforts so that the **CopiBook** range remains the reference on the market.

In this issue you will find:

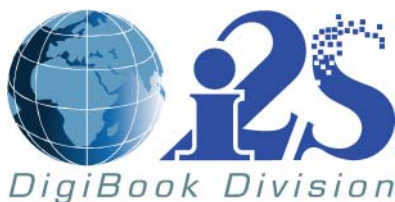
- several customers' testimonies: Dominican Republic, University of Florida,
- the continuation of our advice on productivity with this time an article devoted to lighting control,
- the presentation of **CopiBook** Assistant. A new software that will revolutionize the remote maintenance management as well as the computing management of a fleet of **CopiBook** scanners,
- a report on the various demonstrations that have taken place in 2006 as well as a schedule of upcoming shows,
- a presentation of our new distributors in the world.

In the hope of meeting you personally, I send you my very best regards.



Alain COSTE
DigiBook Business Unit Manager

CopiBook in the Caribbean...	Page 2
University of Florida	Page 3
Lighting Control	Pages 4-6
New CopiBook Assistant Software	Page 7
News & Events	Page 8



CopiBook in the Caribbean...



This summer, 5 **CopiBook** scanners were installed in the Dominican Republic as part of the digitisation project of the National Archives (Archivo General de la Nación).

Initiated two years ago by the Director of the Archives, Mr. Roberto Cassá, the aim of this project is to digitise the entire historical content housed at the Archives located at Santo Domingo. This content represents about 25 million pages that recount the history of the Dominican Republic.

To successfully complete this large modernisation project, the National Archives have literally been transformed over the last two years. In effect, the Archives that employed 38 persons in 2004, now have 300 employees with the common aim to contribute to the advancement of this project. Substantial investments were made in terms of the purchase of the most modern equipment for digitising and conservation of works, as well as in terms of the infrastructure to accommodate all the personnel.

The first step taken by the team of Roberto Cassá was to prepare a complete inventory of the archives. This inventory considerably reduced the time required to physically locate a document, from several hours to only a few minutes. It was after one full year of work locating the books, that this inventory could be created.

This year, thanks to the acquisition of 5 **CopiBook** scanners, the digitisation phase of the historical content began.

The Archives opted for the **CopiBook** scanner model for the digitisation of its documents. Its ease of use, its ability to preserve old books, as well as its high production capacity made it a suitable tool for successfully undertaking the digitisation project.

The National Archives enlisted a team of specialised consultants in the management of digitisation projects to monitor the progress of the project and to train the personnel in tasks relating to the preparation of books, digitisation, image monitoring and finally digital archiving.

This project will allow the public to access all old books relating to the history of the Dominican Republic, and ensure that the information is preserved for future generations.



University of Florida

At the beginning of May the University of Florida at Gainesville took delivery of the first **CopiBook** RGB scanner in the United States. Three days later they ordered four more units.

The University was evaluating equipment for their digital conversion lab and found the **CopiBook** to be much faster and more flexible at delivering exceptional results with less training than other scanning equipment being evaluated. The **CopiBook** was able to scan 15 newspaper pages or 40 book pages (2x20) in under 2 minutes. This was even faster than their microfilming.

The "Florida Digital Newspaper" project was the primary focus for the **CopiBook** purchase. The 17x24 inch scan area allows for either single or double page scanning in primarily grey scale but color if needed. With over 275 newspaper titles from 2006 back to the early 1800's, this project will take many months of 10 hours a day scanning.



After 5 months the University of Florida has its workflow down. All images are scanned in grey scale or color if needed, with de-skew, curvature correction and cropping all being performed on the scanner in real time. The resultant images are saved as uncompressed 8 or 24 bit TIFF files. Then in batch processing, using Adobe CS2, the images are color/contrast corrected and derivative images like thumbnails are produced.

During the quality control process the **CopiBook** created images are reviewed and metadata assigned. They are then run through an OCR process, typically producing 99% accuracy with a little less for older works. The text is then corrected by hand and marked up for indexing. The images and text are finally loaded to the Digital collections.

The University runs the **CopiBook** scanners 5 days a week, 10 hours per day using student operators. They chose the **CopiBook** based not only on its speed, quality and ease of use but also the caliber of the integrated book cradle. Erich Kesse, manager of operations says "It takes very little time to train a new operator with **CopiBook** where it would take days for other equipment. This is very important when we have over 50 students working in the lab."

In addition to the Florida Digital Newspaper project the University is also scanning the Baldwin Collection of Children's books and all the Florida House of Representatives Publications. They are also an active partner in the "Digital Library of the Caribbean" which is scanning and processing many of the small local island newspapers.

Over the last few months 28,000 newspaper pages and 400,000 pages of the Baldwin Children's literature have been processed. Numbers going forward will significantly exceed these now that the parallel microfilm operation is being closed down.

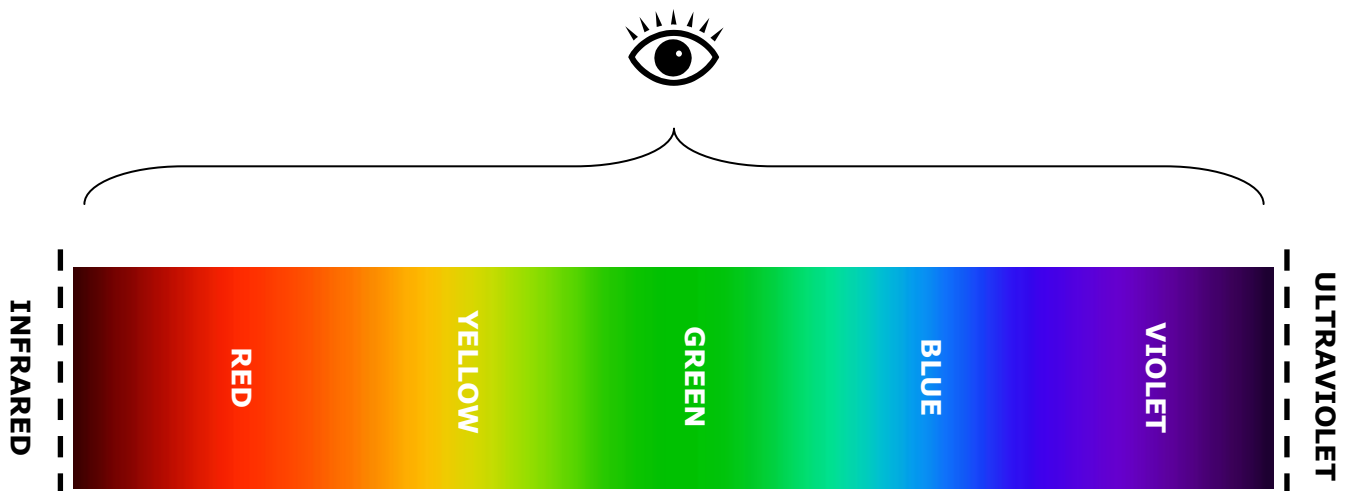
*Article written by Derek JENKINS,
CEO and President of IImage Retrieval, Inc (IIRI).*

Lighting Control

In the previous issue (see DigiBook Mag no.12), we had talked about the productivity of a book scanner. We had observed, in particular, that increasing light was favourable to the digitisation quality and speed. We are thus led to believe that it is preferable to use very powerful illumination. However, as we will explain to you in this article, using a large quantity of light may be harmful to the document and annoying to the operator. In effect, light is electromagnetic radiation and thus contains energy.

Light can be broken down into three components:

- radiation to which our eye and the scanner are sensitive: this is the visible range of the electromagnetic spectrum,
- infrared radiation that mainly generates heat,
- ultraviolet radiation: this contains maximum energy and is thus the most harmful component.



Visible domain of the electromagnetic spectrum

Only visible radiation, which is also harmful at a strong dose, is useful for digitisation. The light source must therefore generate as less infrared and ultraviolet radiation as possible. Unfortunately, it is not possible to completely eliminate the emission of ultraviolet radiation close to the visible range without reducing the emission of blue light, which is why it is not possible to have strictly "UV free" light sources.

Three essential elements must be considered when selecting a light source. These are: document safety, operator comfort and image quality.

Document safety:

The effect of light is cumulative, i.e. short exposure under strong illumination will cause the same effect as long exposure under low illumination. We must therefore take into account not only the quantity of light on the document (measured in lux) but also the duration of exposure.

The cumulative quantity of light is expressed in lux.hours (lx.h). For example, 40 hours of exposure under an illumination of 50 lux will provide 2000 lx.h. The currently permissible limit for sensitive documents is 13000 lx.h

When a scanner equipped with a linear camera is used (see DigiBook Mag no.12), it is possible to illuminate only the line viewed by the camera and move the illumination as the acquisition progresses. Each part of the document is thus exposed to light for a very short period of time, which helps reduce the cumulative quantity of light. We generally get 10 to 200 lx.h, i.e. a quantity of light significantly lower than the recommendations (13000 lx.h). It may be noted that a quantity of light of 10 to 200 lx.h is also much lower than the exposure at 50 lux for 40 hours (2000 lx.h).

When a scanner equipped with a matrix array camera is used, it is necessary to illuminate the entire document. However, the exposure time of each pixel corresponds to the total duration of the digitisation, which helps considerably reduce the required illumination. We thus obtain an even lower cumulative quantity of light. For example: 500 lux for 5 seconds, which represents less than 1 lx.h.

Operator comfort:

The operator is sensitive to light in his field of vision. We must therefore avoid, as far as possible, too much light contrast and particularly ensure that the light is not placed in the operator's direct vision. As a result, the light source must be situated either very high with respect to the operator, or below the operator's eyes and, in this case, covered with a hood.

The ideal would be to digitise in ambient light.

Image quality:

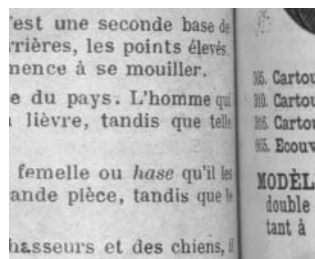
The image quality depends on:

- **The quantity of light**

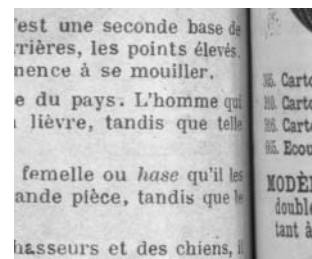
By increasing the quantity of light, the diaphragm of the camera lens can be closed and thus the depth of field increased (see previous issue).

- **The angle at which the document is illuminated**

Shadows or reflections may appear on the digitised document depending on the illumination angle.



Correct lighting



Shadow on the binding

It must be noted that it may at times be wise to use a play of shadows to highlight the depth of an object. In this case, cross light will be used.



Multi-directional lighting



Cross lighting

- **The quality of the light spectrum sent**

The quality of the light spectrum sent influences the rendering of colours, which is represented by the colour-rendering index (noted CRI). CRI is the ability of a light source to restore the various colours of objects that it illuminates without altering the shades. The higher this index, better the colour rendering.

CRI Value	Group (according to DIN 5035)	Color Rendering Quality
90-100	1A	Very good
80-89	1B	Very good
70-79	2A	Good
60-69	2B	Good
40-59	3	Satisfactory
20-39	4	Unsatisfactory

See you in the next DigiBook Mag with an article about work organization and accessories!

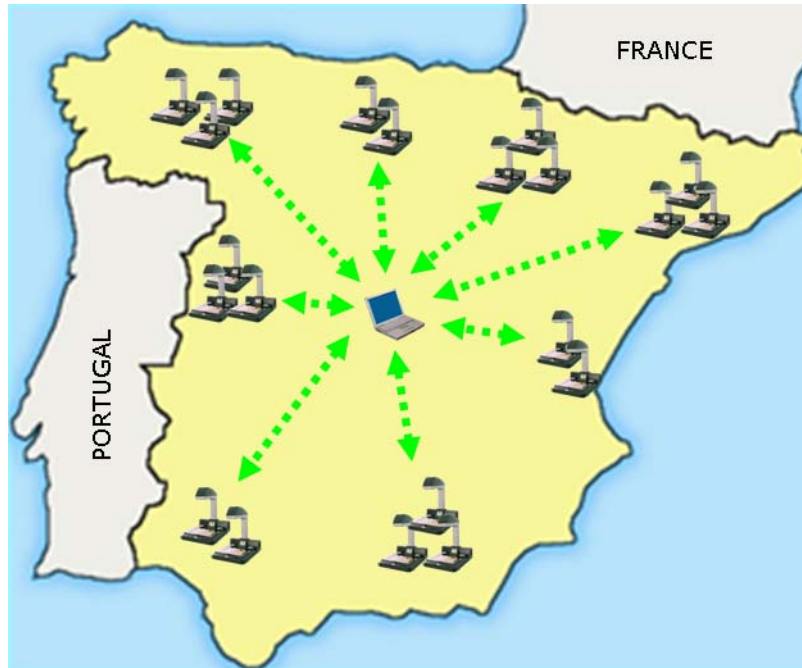
New

CopiBook Assistant Software

CopiBook Assistant is an administration software for one or more **CopiBook** scanners. Installed on a control computer, it is used to locally or remotely manage **CopiBook** scanners.

CopiBook Assistant features three major functions:

- management of configurations for one or more **CopiBook** scanners,
- remote update of the software version or the language catalogue,
- complete remote control of **CopiBook** for configuration or diagnosis.



Configuration Management

This module is used to save the parameters selected for one specific **CopiBook** on a control computer.

This module is also used to update the configuration of a **CopiBook** from selected data (on a control PC). Thus, this function is very useful for the deployment of a configuration to all **CopiBook** scanners of a fleet.

The following parameters can be saved or exported:

- user projects (format, resolution, color, greyscale or binary mode...),
- backup destinations,
- lighting corrections,
- network configuration,
- configuration files specific to one **CopiBook**.

Remote updating

This function is used to update the software version of **CopiBook** and the language catalogue. Three languages (French, English, Spanish) are present by default on the **CopiBook** graphical interface. A fourth optional language (written in the Latin character set) can be added to the **CopiBook** interface.

Remote control

Remote control is used to take complete control of the remote **CopiBook**:

- configure the various parameters,
- perform a diagnosis.

For instance, one can remotely launch the scanner and receive the resulting image on a control PC. One can also perform a focus or a white and black balance on the remote **CopiBook**.

Flashback to the trade shows!

Every year, i2S DigiBook participates in numerous trade shows and professional events throughout the world. The year 2006 was particularly rich in terms of communication. We participated, directly or through our distributors, in twenty-odd professional trade shows including the CeBIT, the AIIM, the IFLA or more recently the Forum de la GEIDE.

These fairs were the opportunity to showcase our products and present our latest developments to the professionals.

Technical and commercial specialists were present at each show to advise and guide users to the digitizing solution best suited to their needs. Our visitors were also given demos in order to appreciate the quality and performances of our scanners.

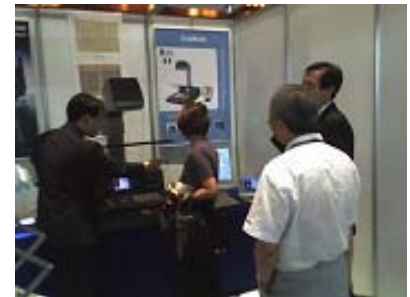
We would like to thank all the visitors for their interest in our products as well as our distributors for their precious collaboration.



AIIM - Philadelphia



ALA - New Orleans



IFLA - Seoul

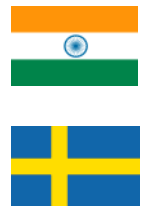
News & Events

New distributors!

i2S DigiBook is pleased to welcome two new distributors in India and Sweden. These new partnerships allow us to strengthen our commercial and technical presence in these markets.

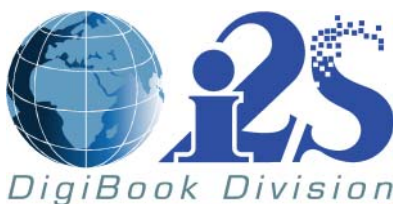
We are really willing to develop successful, fruitful and long-lasting business relations with them.

For further information, please contact our sales department.



Schedule for 2006

- **ICDL - New Delhi, India**
5-8 December, 2006
Booth ANKITA ENTERPRISES
- **ALA MIDWINTER MEETING - Seattle, United States**
19-24 January, 2007
Booth IIRI



+ (33) (0) 557 26 68 98
+ (33) (0) 557 26 68 99
www.i2s-bookscanner.com
info-bookscanner@i2s.fr



All remarks & suggestions should be sent to
Sabrina ROY, s.roy@i2s.fr