

Electronic Archive of the Transcripts of Records

Presenters:

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Electronic Archive of the Transcripts of Records American University of Beirut

This presentation describes how the Electronic Archive of the Transcript of Records was implemented at the Office of the Registrar at the American University of Beirut.

At most universities, a file folder is created for each entering student

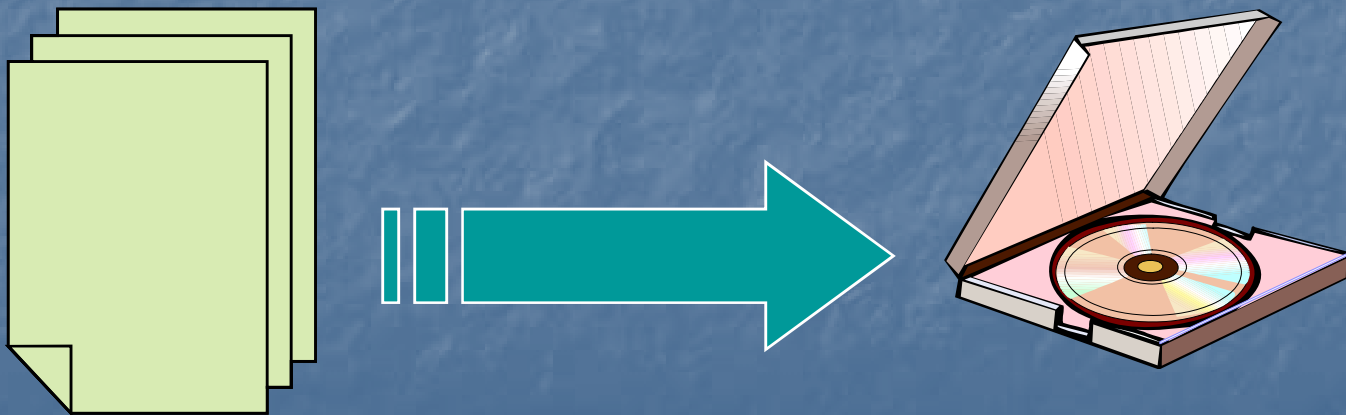
The challenge has been to

- organize and store each file**
- find it, to retrieve a single document**
- return the document, hoping that it will be filed correctly so that it can be retrieved later.**



The American University of Beirut enrolls approximately 7000 students, and maintains more than 20000 electronic data base records for the period 1990- Present, and 60000 paper student records for the period 1866-1989.

In order to manage the large amount of paper records, the Registrar's Office studied the components needed for electronic imaging and optical storage of the transcripts of records for all students for the period 1866-1989.



The scanning process started on August 19, 2002 and completed by the end of February 2003. The storage media is DVD. The new imaging system provides a query access that allows finding and displaying any transcript when running either from the archives server on line or DVD's standalone. In addition, it allows the archiving of electronic records at the end of each semester.

With this new system, staff can

- ✓ **Request and view document images**
- ✓ **Print the images**
- ✓ **Route documents to other users**
- ✓ **Add new documents**

System Requirements

The system consists of various components connected by a local area network

Hardware

- Server: A Windows 2000 Server to host the electronic archive/document management software
- Scanners: Duplex scanners with sheet feeders and flat bed capability
- Workstations: regular Windows based PCs

System Requirements

Software

- Windows 2000 Server
- Microsoft SQL Server
- Document Management/Archiving System

How does the system work?

Back-file Conversion

Converting 60,000 student record files into electronic format presented itself as a big task that required proper planning and execution. Files not only needed to be scanned, checked for any scanning errors, and saved, but, also, data about each file had to be collected from the documents and entered into a database under the corresponding files' record in the database.

The plan was to complete back-file conversion in six months. This meant that around six hundred student files had to be processed every business day. To fulfill this requirement, three teams of two were formed, and each team had to complete two hundred student files per day.

The two member team had a simple job.

The first team member:

- opens a student folder and takes out the transcripts,
- scans them in order,
- saves the file giving it the student ID number as a file name
- places it in a special folder on the network.





The other team member:

- opens the file over the network,
- checks for the quality of the scan
- enters the data of the student into the database.

And then moves to the next student folder.

The whole conversion job took five months only. A great success.

Daily Operation

- Once the student files were loaded on the system, they were ready to be retrieved by authorized Registrar's Office staff directly from their PCs.
- An authorized staff member would log on to the archive software from a PC connected to the network. Once logged on, he/she could browse the stored files by Year, Faculty, and Major, or could search for a file by First Name, Middle Name, Family Name, Student ID, Year of Graduation, or Major, or any combination thereof.

Student files could be searched for and retrieved much quicker than before. They would be found every time with no possibility of not finding a student record because it was misfiled previously or had been withdrawn and still not returned

Benefits

- Reduction in storage space
- Faster document retrieval: Documents can be retrieve in seconds using at least one of six retrieval keys:
 - First Name
 - Family Name
 - Middle Name
 - ID number
 - Major
 - Year of graduation.



Benefits

- Improved services: (Rapid access to documents. A document cannot be lost any more due to misfiling)
- User friendly. Staff training was easily accomplished
- Increased productivity.
- Improved security: Access can be restricted to specific in-charge users.
- Backup: Multiple copies.



ST. NO. 40-9001

COURSE NUMBER	TITLE OF COURSE	SEM CREDIT HOURS	GRADER FINAL MARK UP
40-9001	FALL '84-85		
ARAB 201	SF. ARAB LIT&LANG	3	85
B.AD 210	FUND. OF ACCOUNTING I	3	75
C.S. 201	ANC. MED. & REN. CULT	3	70
ENGL 203	ENGL. COM. SKILLS III	3	60
MATH 203	MATH. SOC. SCI I	3	85
40-9001	SPRING 84-85		
B.AD 211	FUND. ACC. II	3	70
C.S. 202	ANC. MED. & REN. CULT.	3	75
ECON 212	ELEM. ECON. TH.	3	65
ENGL 204	ENGL. COM. SKILLS IV	3	65
MATH 204	MATH. SOC. SCI. II	3	85
40-9001	FALL 85-86		
C.S. 203	MOD. AND CONTEMP. CULT.	3	75
ENGL 200	EARTH & HUMAN AFF.	3	85
ECON 213	ENGL. INTERNAT. BUS.	3	85
ECON 211	ECON. STATIS. I	3	85
	ELEM. ECON. TH.	3	85
CUM.CR.COMPL. = 42	CR. NEEDED = 48	SEM. AVG. =	82.50
40-9001	SPRING 85-86		
ARAB 246	BACKD ST. MOD. ARAB. LIT.	3	75
C.S. 204	MOD. AND CONTEMP. CULT.	3	75
B.AD 254	QUANT. METH. BUS. DECIS.	3	65
B.AD 224	FINANCIAL MANAG.	3	85
B.AD 241	MARKETING MANAGEMENT	3	85
CUM.CR.COMPL. = 54	CR. NEEDED = 36	SEM. AVG. =	75.00
40-9001	SUMMER 85-86		
B.AD 251	MANAGERIAL ECONOMICS	3	80
B.AD 255	OPERATIONS RESEARCH	3	90
CUM.CR.COMPL. = 60	CR. NEEDED = 30	SEM. AVG. =	85.00

Grading System: 90-100 (A), excellent; 80-89 (B), good; 70-79 (C), fair; 60-69 (D), weak; below 60 (F), failing; I, incomplete; IF, incomplete fall; S, satisfactory; U, unsatisfactory; P, pass; W, withdraw; WF, withdraw fall; X, no grade reported for this course; NC, no credit

DATES	PLACED ON THE GRANTS HONOR LIST

PAGE (1)

NOT AN OFFICIAL TRANSCRIPT UNLESS SIGNED AND SEALED BY THE REGISTRAR

OVER

DATE

REGISTRAR

STUDENT UNDERGRADUATE RECORD AMERICAN UNIVERSITY OF BEIRUT, BEIRUT, LEBANON

(1) Abbas Bouziab (2) Anis Bouziab (3) Bouziab

(1) PERSONAL NAME (2) FAMILY NAME (3) ACCORDING TO PASSPORT OR IDENTIFY CARD)
Abbas Anis Bouziab

NAME IN ENGLISH AS STUDENT WANTS IT ON DEGREE
Anis Bouziab

NAME IN ARABIC AS STUDENT WANTS IT ON DEGREE
أنيس بوزياب

Lebanese
Jahlieh, Lebanon

NATIONALITY
PLACE OF BIRTH, CITY & COUNTRY
Jahlieh, Lebanon

Oct 1984
Sopomore

DATE OF BIRTH
Aug 19, 1966

International School of
Choueifat, Lebanon

PREVIOUS EDUCATION
Candidacy for B.Sc. Bac. II
(Philo) + EEE + S.Q. Tests.

Bus. Adm. 8.8.4 - July 21, 1987

COURSE NUMBER	TITLE OF COURSE	SEM CREDIT HOURS	GRADER FINAL MARK UP
40-9001	FALL 86-87		
ARAB 249	SUF1 LITERATURE	3	75
B.AD 212	COST ACCOUNT. & CONTROL	3	70
B.AD 231	MANAG. OF ORGANIZ.	3	85
B.AD 236	BASIC COMPUTERS	3	55
ECON 227	INTERMED. MACROECON.	3	80
CUM.CR.COMPL. = 72	CR. NEEDED = 18	SEM. AVG. =	73.00
40-9001	SPRING 86-87		
ARAB 222	ADV. ST. ARAB. GRAM.	3	65
B.AD 220	BUSINESS LAW	3	70
B.AD 223	FINANC. MARKET. & INST.	3	80
B.AD 224	FINANCIAL MANAG.	3	75
B.AD 256	BASIC COMPUTERS	3	75
ENGL 208	ENGL. INTERNAT. BUS.	3	70
CUM.CR.COMPL. =	CR. NEEDED =	SEM. AVG. =	72.50
40-9001	BAD ZIAB/ABBAS ANIS		

DATES	PLACED ON ACADEMIC PROBATION

DATES	ACADEMIC PROBATION REMOVED

Concerns

Technology Changes and compatibility:

- Changes in Storage Media
- Changes in Operating systems on user workstations
- Life of storage media in use and the need to maintain that storage media
- DVD Life
- Backup Tape Life



We have a large student record system. The need for rapid retrieval system and the desire to increase student service without adding staff caused us to look for this new archiving technology.

“The son of an alumnus came to the Office of the Registrar asking for a copy of his father’s records. His father attended AUB around 1905. To his astonishment, those records were immediately found, and printed. He was so impressed with the system that he promptly donated an amount of money to the Office of the Registrar towards funding this project.”

Document Management Solutions for Student Files in the Registrar's Office at NDU

The Context

- Notre Dame University – Louaize(NDU) was founded in 1987 by the Maronite Order of the Holy Virgin Mary, one of the three Maronite male orders . The University is a private, Lebanese non-profit Catholic institution of higher education which adopts the American system of education.

Historical Overview

- After establishing itself as one of the leading universities in Lebanon in 1987, NDU's administration, guided by the needs of the North Lebanon and Shouf regions and neighboring communities, decided to start Off Campus programs in North Lebanon in 1990(NLC) and in 2001(SC).

Number of Faculties

- NDU has now seven Faculties with undergraduate and graduate programs:
- Faculty of Architecture Art and Design
- Faculty of Business Administration and Economics
- Faculty of Engineering
- Faculty of Humanities
- Faculty of Natural and Applied Sciences
- Faculty of Nursing and Health Sciences
- Faculty of Political Science, Public Administration and Diplomacy
- **Enrollment**
- The number of enrolled students for Fall semester 2008 is 5738, out of which 5439 are Lebanese and the rest are International students

Overview

- In this fast paced business environment, one finds himself needing vital information at the finger tips. Computers were supposed to make our lives easier but have ended up complicating things because people keep finding ways to create more information.
- We had lots and lots of boxes filled with documents and had them organized and labeled. In some cases, getting to the right box and the right document could take a week.
- Document management systems can transform the way business nowadays operates.
- The goal of this presentation is of three fold:
 - 1- Transform your paper filing system to enable greater information access,
 - 2- Promote information sharing enterprise-wide
 - 3- Optimize your business processes to increase efficiency and productivity

Definition

- Document management is the conversion of paper documents to electronic images on the computer. That is, a computer system used to track and store electronic documents and/or images of paper documents. Once it is archived, in seconds one can retrieve any documents wanted from the file of the student.

Common Issues

- **There are several common issues that are involved in managing documents:**
- **Location:** Where will documents be stored? Where will people need to go to access documents?
- **Filing:** How will documents be filed? What methods will be used to organize or index the documents to assist in later retrieval?
- **Retrieval:** How will documents be found?
- **Security:** How will documents be kept secure? How will unauthorized personnel be prevented from reading, modifying or destroying documents?

Document Management

- Document Management system comprises five elements:
 - 1- Scanning
 - 2- Storage
 - 3- Indexing
 - 4- Retrieval
 - 5- Access

Why Document Management?

- Document Management prevents lost record.
- Document Management saves storage space.
- Document Management manages records easily.
- Document Management finds document easily
- Document Management makes images centrally available
- Document Management eliminates the need for file cabinets (www.laserfiche.com)

Methodology

- When students are accepted and enroll for the first time at NDU, their files are sent to the Office of Registrar.
- **The scanning system** captures [images](#) of paper documents using [scanners](#) or [multifunction printers](#) to make them machine readable text.
- The staff member, who is responsible for archiving, scans the original file of each student which includes the following documents:
 - the application form of the student
 - Recommendation letters from his previous school
 - The last three years of school grades
 - The official baccalaureate from the ministry of education
 - A photocopy of his Identity card/Passport
 - Entrance exams results
 - The Acceptance Letter to NDU

The storage system

- Provides long-term and reliable storage for documents. It accommodates changing documents, growing volumes and advancing technology.
- Any additional papers of the student will be archived and added to his electronic file. Such papers may include, but not limited to; petitions, disciplinary warnings, letters for the Dean's list.

The Indexing System

- Creates an organized document filing and makes future retrieval simple and efficient. One area of critical importance for rapid retrieval is the creation of an index [topology](#). At the Registrar's Office, the indexing is through I.D. sorting.

The Retrieval System

- Retrieves the electronic documents from the storage. Retrieval of individual documents can be supported by allowing the user to specify the unique document identifier. At NDU, the unique document identifier is the I.D of the student and accordingly the documents needed from the file of the student are displayed. Sometimes human error occurs like entering the petition of the student, so whenever we retrieve the petition, error is identified and accordingly the human error is corrected.

A Good Access System

- Makes documents viewable to authorized personnel in the Office. Access control is mandatory component of a document management system.
- In the near future when all the documents are archived, access across multiple offices in the University that are involved in viewing the file of the student are allowed, such as Financial Aid Office, Student Advisor or the Student Affairs Office. Such Offices will only be viewers of the documents but cannot alter anything in the archiving system.

The Benefits of Document Management in the R.O.

- Document management systems provide several key benefits:
- **Cost Savings**
One of the biggest hidden costs that paperfull businesses face is **the time** it takes to work with paper files.
- Document management system also eliminates the “**lost document**” cost – the time it takes to recreate a document that’s been destroyed or misplaced.
- Additional cost savings come from the **office space** that can be freed by eliminating most paper records. Thus it can eliminate filing problems.

Disaster Recovery

- Document management system protects paper records by creating electronic copies that can be **backed up** in multiple ways. They also can include off-site data backups and other steps to ensure that a fire, flood, or break-in won't cripple business.

Access

- Current and archived information is never more than a few mouse clicks away. The right document management system allows your employees to access vital records from wherever they are. Simply allowing more than one employee to look at a file at the same time is a significant improvement over paper files.

Enhance Communication

- Scans and existing electronic files are available for viewing by all authorized university personnel. Paper documents usually require photocopying to be shared. Such possibility enhances **information sharing**.

Document Management and Imaging

- *It is a lifetime management*
- *Reduces manual entry costs*
- *Reduces human errors document loss and misfiling*
- *Provides quick access*
- *Improves efficiency*
- *Enhances productivity with instant, flexible search and retrieval*
- *Registrar's archive interfaces supports widespread use*

Conclusion

- As a conclusion, it is important to mention that a good imaging system will make work easier than before. It is very secure and the easy way to back-up documents for offsite storage and disaster recovery. Paper is bulky and expensive way to back-up records and is vulnerable to fire, flood and theft.