

IN THE MEANTIME... INTERIM SOLUTIONS TO AUTOMATED DATA CAPTURE



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 "The need to get paper-based forms into a computer-usable format is greater than ever." Mark Hayes, <u>www.edocmagazine.com</u>

January/February 2001



- 83% of all documents are forms
- \$6 billion spent annually on paper forms
- As much as \$360 billion spent processing them

Source: AIMM - The Association for Information and Image Management

DATA CAPTURE

- Data capture means obtaining data for a computer
 - Collecting documents to be typed or scanned in
 - Turning images into editable/searchable text
 - Not the same as document capture
 - Imaging or photocopying



Automated Data Capture

- Census Bureau In 2000, implemented a data capture & management system.
 - Processed more than 154 million documents in less than 170 days, with a >98% accuracy



Automated Data Capture

- Automated data capture means obtaining data directly by an input device without using a keyboard.
 - Bar code readers
 - Scanning pictures
 - Using document readers (OMR, MICR, ICR, OCR)



Types of document readers

- Optical Character Recognition (OCR): reads text & software recognizes the letters from their shapes
- Intelligent Character Recognition (ICR): Good for capturing handwritten data
- Magnetic Ink Character Recognition (MICR)/Optical Mark Reader (OMR): checks or standardized tests



Data Capture Forms

- Data capture forms are designed to have computer input data written on them.
 - Data is standardized
 - Form designer & Adobe
 - PDF



Missourl Cancer Registry

Missouri Department Of Health And Senior Services

1.Reporting Hospital	2. Accession Number Sequence Number
3.Personal Hx 1 Year	3a.Personal Hx 2 Year
4.Last Name	
5. First Name	6. Middle Name
7.Maiden Name	8.Alias
9. Address at diagnosis Number and Street	
10.Address at diagnosis supplemental	
11.Dx -City	12.Dx- State
	M O
13.Dx-Zip code 14.Dx C	ounty 15.Medical Record Number
16.Current Address Number and Street	
17.Current Address -Supplemental	
18.Current City	
19.C- State 20.C-Zip c	ode
21.Name Of Spouse	
22.Abstracted by 23.Social Security	Number 24.Telephone Number
25.Alcohol History 26.Tobacco Hx 23	7.Tobacco Years 28.Marital Status 29.Sex
31.Span/Hisp Origin 30.Race Code: R	ace 1 Race 2 Race 3 Race 4 Race 5
32.Birth Date - [mm/dd/yyyy] 33.Birthplace	

Database

- Created during form development
- Data exported to preformatted database (NAACCR 10)
- Stored on hard drive
 - Can be networked
- Exported
 - Data exported to database when verification completed



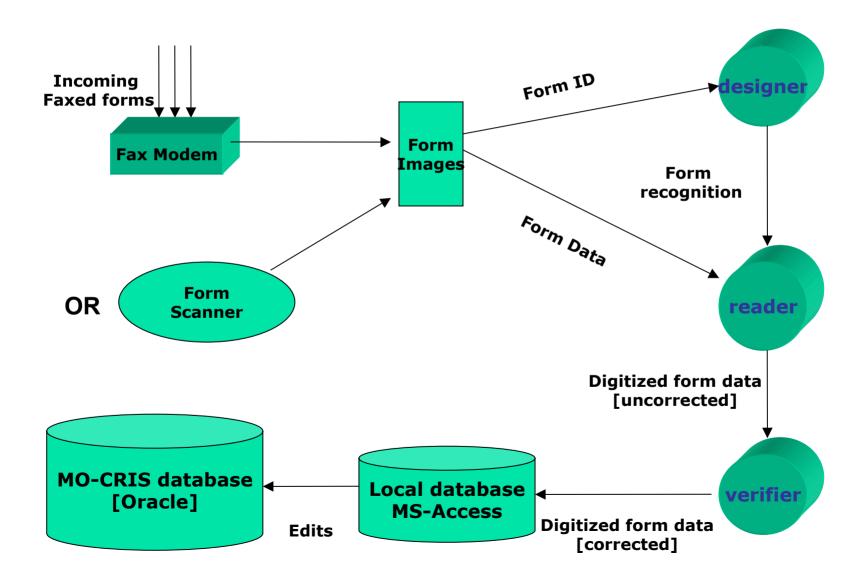
- Can scan supporting documents along with form. Will be bundled as one document.
- Default confidence settings



Phases of Data Capture

- Scanning & Importing
 - (scanner)
- Recognition
 - (reader)
- Verification
 - (verifier)

How it works





Kansas Central Registry

- Storage of non-hospital documentation
- Document management

"Digital Document Management: There is Far More to It Than Meets the Eye"

Sue-Min Lai, Ph.D., MS, MBA

Journal of Registry Management • 2003 • Volume 30 • Number 4



Kansas Central Registry

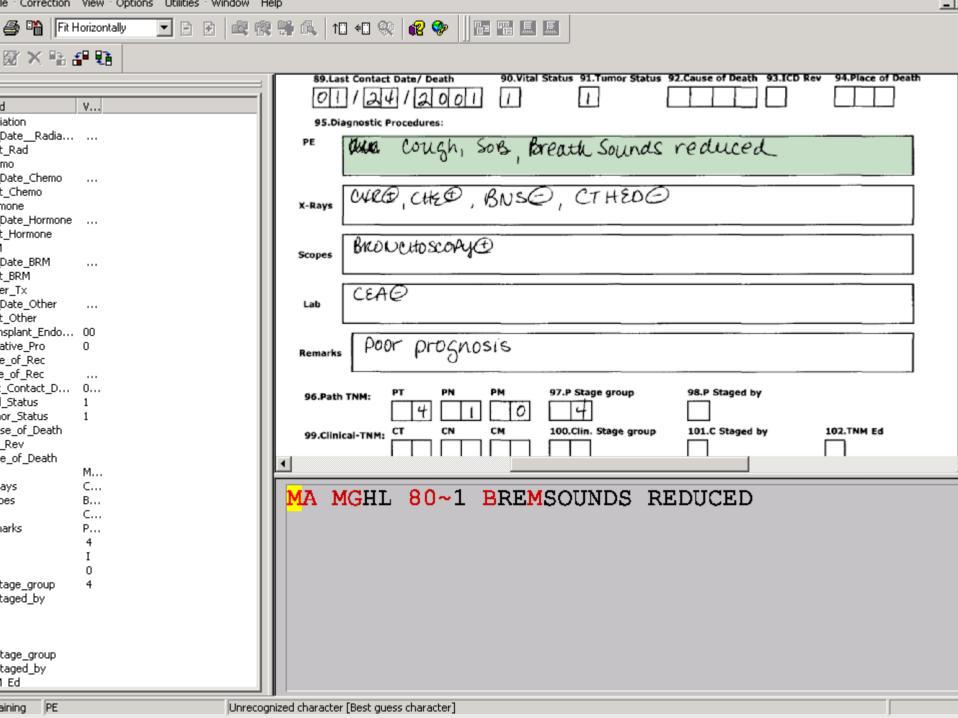
- Scan
- Index by Facility #, Date of Diagnosis,
 Document Type
- Saved in database accessible by staff

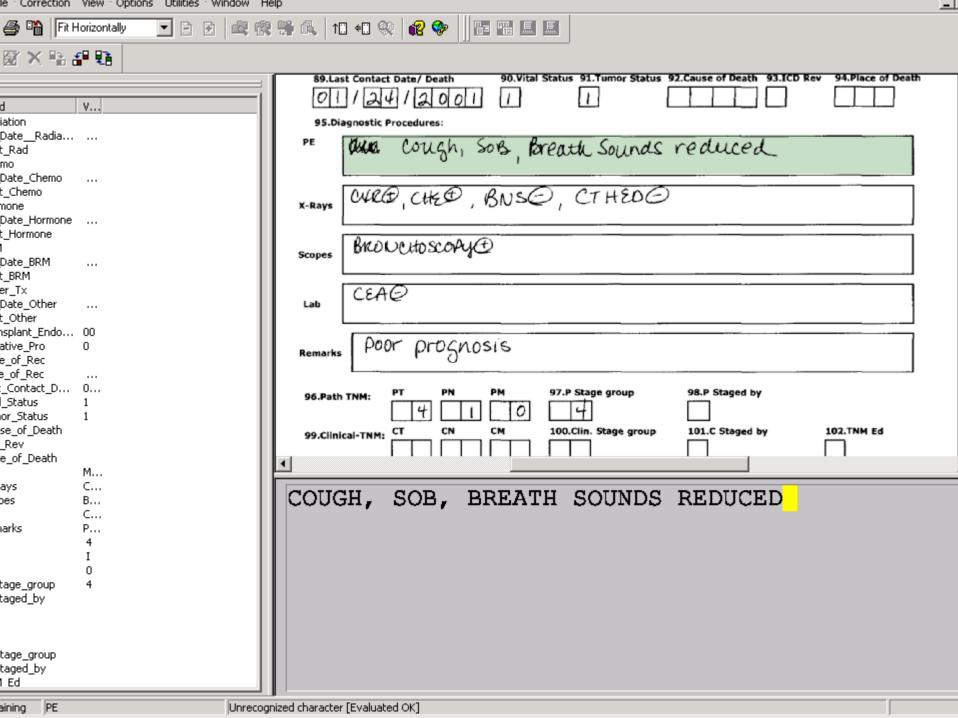
Benefits

- Enhances data quality due to reduced data entry errors
- Reduces personnel necessary for data entry
 - 1,800 abstracts from manual hospitals
- Hospitals like the PDF forms
 - Prefer typing to writing
 - Drop-down boxes helpful
- Good scalability different forms all being handled by the same process

Issues

- Handwritten text hard to recognize
- Data quality review by non-CTR is clerical only
- Difficulties with lost/missing forms submitted via internal fax
- IT Support
- Unused capabilities
 - Can we use it like KCR?
- Expense







Look before you leap!

- How accurate are paper forms processing systems?
- How easy are electronic forms to design & use?
- How much does it cost to implement these capture solutions & what is the payback?
- How much have the systems improved since you last looked at then?

Can you really use this?

- What are your needs?
- What are your goals?
- What are your considerations for:
 - Turnaround time
 - Accuracy
 - Price
 - Volume
 - Speed



- Hardware
 - Dedicated server
 - Scan station
 - Fax modem
 - Work station
- Software
 - Cardiff Teleform Suite (now Verity, Inc.)
 - Phonetools
 - Adobe Professional Version 6.0



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