



Electronic Access Conference

2002

THE U.S. Department of
EDUCATION

Imaging and Data Capture (IDC)....

*“Paper to data in 7 days or
less!!”*



Overview of Session

- What is “IDC”?
- Innovations for 03/04
- Service Levels
 - Turn-around Times
 - Quality Control
- IDC Processing
 - Capture Processing
 - Exception Processing
 - Returned Mail
- System Management Tools
- Quality Control
- Resources, Staffing & Training
- Technology



What is “IDC”?

Mission:

To capture and validate the data contained on submitted FAFSAs, Spanish FAFSAs, Student Aid Reports, Renewals, Signature Pages and Correspondence within the established turnaround times and quality levels.

“We do Paper!!!”

What is “IDC”?

Primary Business Process Functions

- Mail Receipt
- Imaging/Scanning
- Data Capture
- Exception Processing
- Student Returns
- Return Mail
- Archive



Innovations for 03/04

Customer Focus...

- Processing Status Data
- “Normalized” Spanish FAFSA Processing
- Email Address
- Bar codes



Innovations for 03/04 (con't)

Process Improvements...

- Streamlined Processing
- Automated Document Analysis
- Document Level Processing
- Enhanced Integration with Eligibility Determination



Service Levels – Turn-around Times

	<u>2002/2003</u>	<u>2003/2004</u>
FAFSA / Spanish FAFSA	7/8	7
Renewal	6/7	5
SAR	5	4
Correspondence	5	4
Signature Pages	5	3
	average	maximum



Service Levels – Data Quality

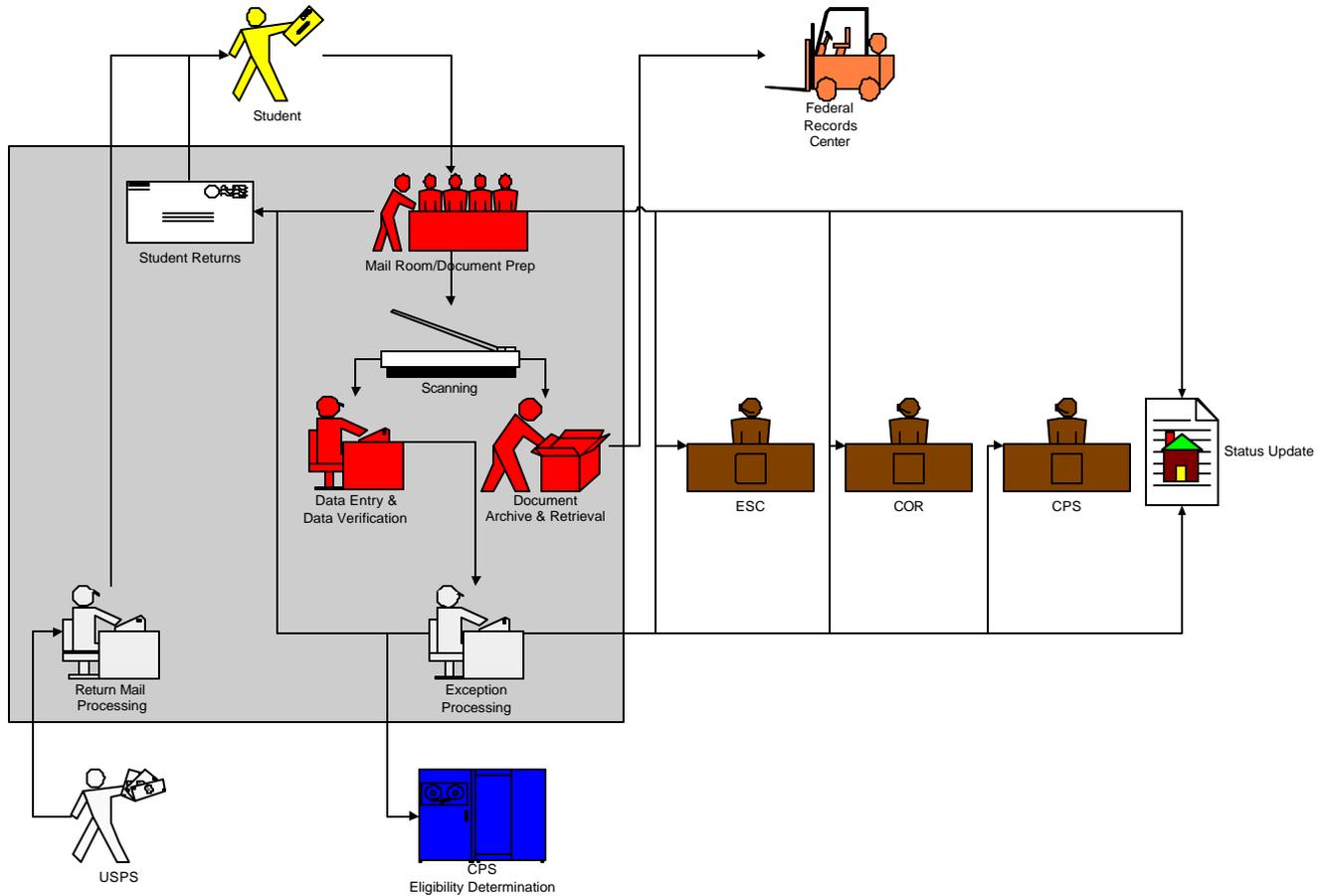
■ **2002/2003 Cycle:**

- 98.5%
- Document Level

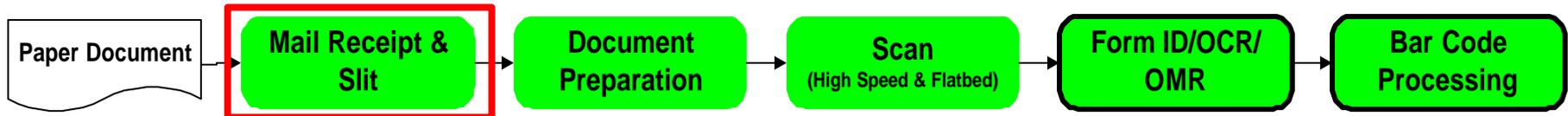
■ **2003/2004 Cycle:**

- Field Level
- Critical Fields 99.5%
- Non-Critical Fields 97.0%

IDC Processing



IDC Processing – Capture Processing



■ 7 P.O. Boxes

- FAFSA, Spanish FAFSA, SAR, Renewal, Signature Pages, Correspondence, Administrative

■ Pack mail trays +/- 500 envelopes

■ Inventory tracking begins

■ Ovation 106 slitter

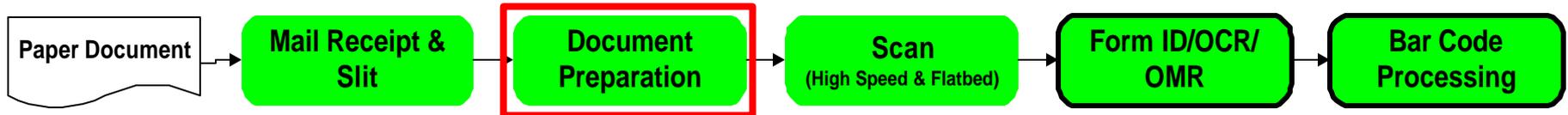
- Rated 6,000 envelopes per hour

■ Process Inspection and IQCU Audit



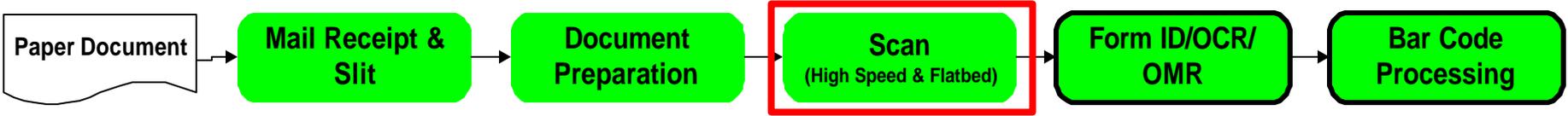
Mt. Vernon, IL.

IDC Processing – Capture Processing *(con't)*



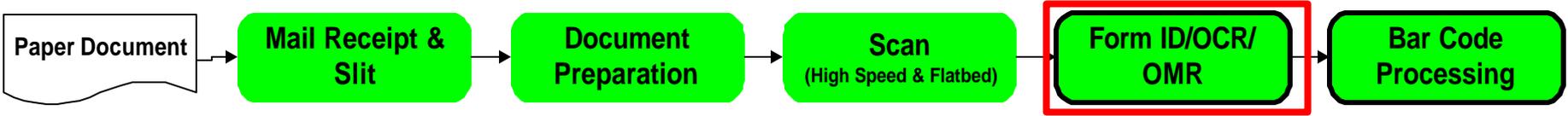
- Forms extracted from envelopes
 - Form type / single vs multiple / kfp
- Single – contains form only
- Multiple – contains form plus extraneous
- Key From Paper – probable poor image quality
- Scan stacks
- Unprocessable materials removed
 - COR, ESC, Student Return
- Process Inspection and IQCU Audit

IDC Processing – Capture Processing (con't)



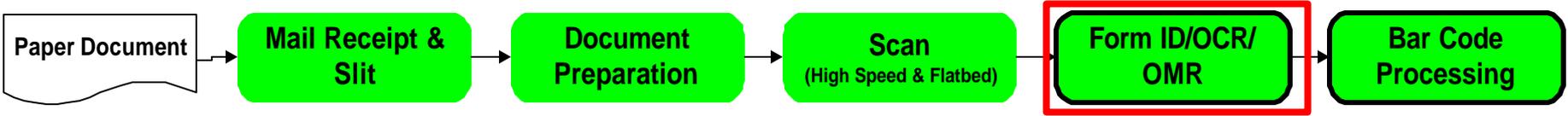
- Kodak i840 High Speed Scanners
 - Rated at 2,000 pages per hour
- Image Level DCN's printed on front of each scanned page
 - Double feed detection
- Manual image quality verification
 - Images are displayed to scan operator
 - QC after scan
- IQC, Process Inspection, and IQCU Audit

IDC Processing – Capture Processing (con't)



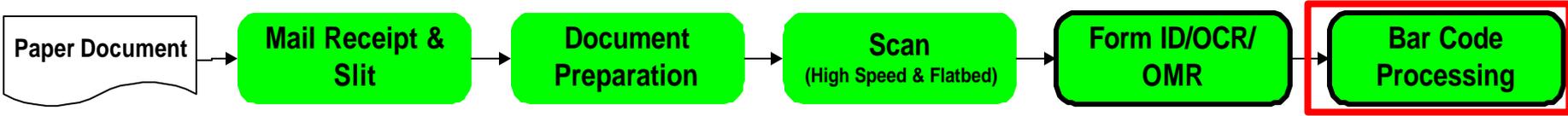
- Form ID / Deskew / OMR / OCR
 - Images are identified via predefined line placement characteristics
 - Image rotated and aligned to a standard position
 - Optical Mark Recognition (ovals)
 - Optical Character Recognition (handwritten data)
- Unidentified forms are manually identified
- Form sequences sent to operator review
- IQC

IDC Processing – Capture Processing (con't)



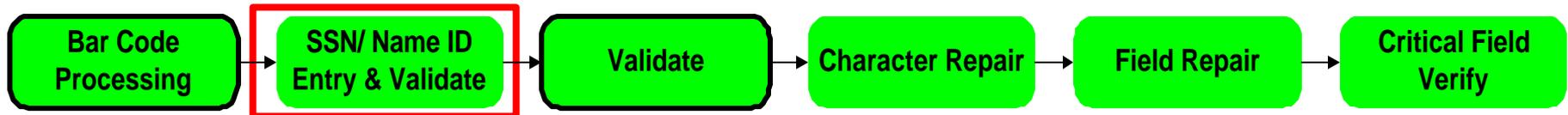
- Dual OCR Processing
 - CGK Recostar
 - AEG PSW 6120 Recognition Software
- Voting algorithm
 - Increased accuracy
 - Reduced rejections
 - Reduced substitution errors
 - Machine print and handprint recognition
- IQC

IDC Processing – Capture Processing (con't)



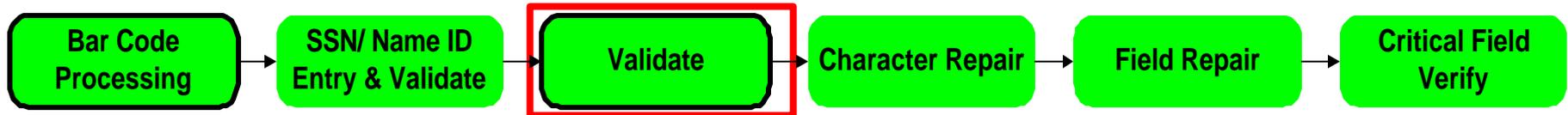
- SAR, Signature Page, Renewals
 - If barcode does not match required pattern, operator entered
 - Barcode Repair and Verify
- Document level DCN assigned
- Posted to CPS Status
- IQC

IDC Processing – Capture Processing (con't)



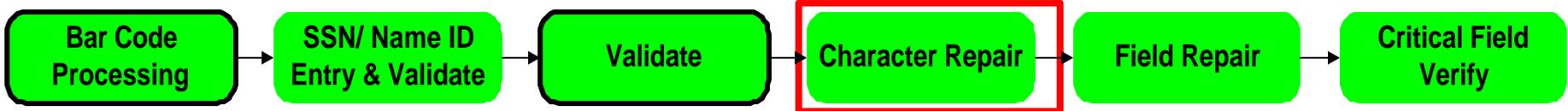
- FAFSA
 - SSN/NameID manually entered
 - Verified
- Document level DCN assigned
- Posted to CPS Status
 - Pacific Islander '888' not posted
- IQC

IDC Processing – Capture Processing (con't)



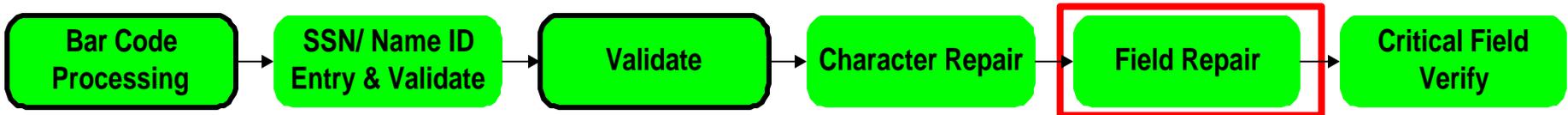
- Scan stacks subdivided into Data Entry batches
 - Batch size based upon form type and approx 1 hour data capture effort
- Auto machine correction
 - City, State, Zip
- Common substitution using word context
 - “DRLVE” → “DRIVE”
- Elimination of special characters in specific fields
 - Eliminate alpha characters in numeric only fields

IDC Processing – Capture Processing (con't)



- Numeric character repair
 - “low” confidence from machine read process
- Alpha-numeric character repair
 - “low” confidence from machine read process
- Field repair flagging
- Validation step performed again
- IQC and IQCU Audit

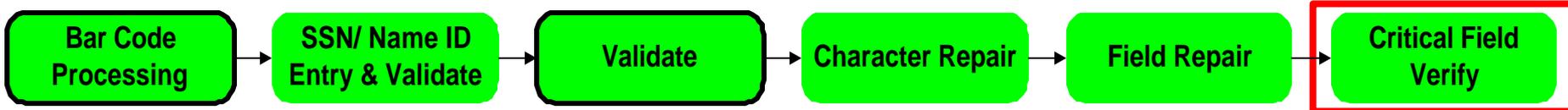
IDC Processing – Capture Processing (con't)



- “Flagged” fields
- Fields containing too many “low” confidence characters
- Unreadable fields marked for Exception Processing
- IQC and IQCU Audit

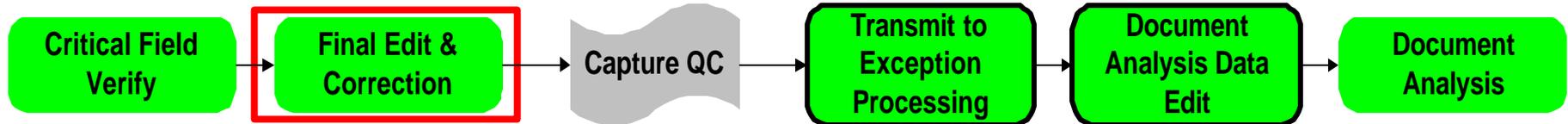
At completion, all data has been captured from form

IDC Processing – Capture Processing (con't)



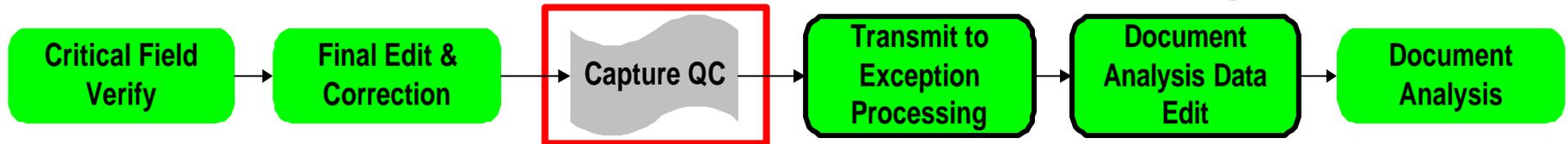
- ED determined and approved
- Critical field is re-keyed by operator
- Operator stopped if **ANY** character is keyed differently than the existing field contents
 - Operator determines whether to keep original or update
- IQC

IDC Processing – Capture Processing (con't)



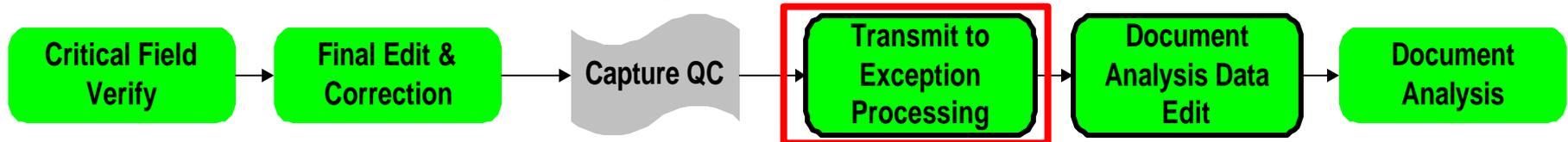
- System-performed edit Checks
 - Length
 - Data type
 - Table lookups
- Edit failures checked/corrected by operator

IDC Processing – Capture Processing (con't)



- Random 2%
 - Document count determined
- 100% checked
- In-line QC Process
- Error rates reported to FSA
 - Critical and Non-critical fields

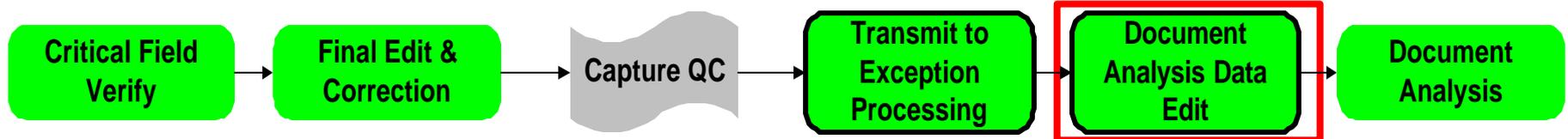
IDC Processing – Capture Processing (con't)



- Data
 - XML format
- Images
 - Single, multi-page TIF
 - Correspondence
 - Field, Page, Document Flag
 - Extraneous
- Document level transmission

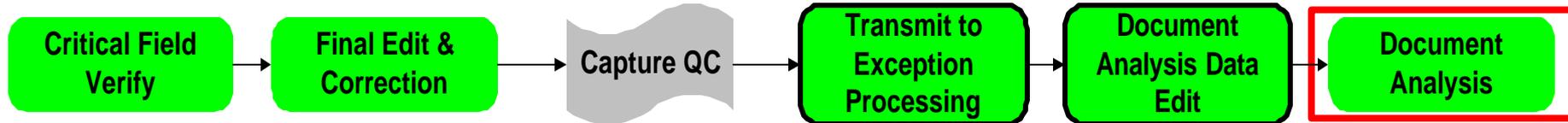


IDC Processing – Exception Processing (con't)



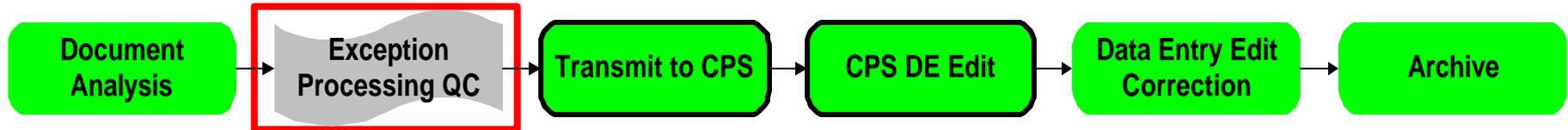
- Automated Business Rule & Field Level Edits
 - Auto-fix
 - Exception Processing required
- Cycle / Form / Field specific
- If “Exception Processing” is not required...
 - Document Analysis is bypassed
 - Document (Data and Image) is transmitted to CPS
- If “Exception processing” is required...
 - Image automatically requested from Capture Processing (if not originally sent)
- IQC

IDC Processing – Exception Processing



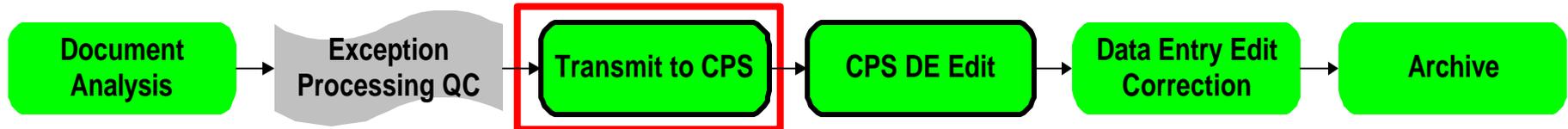
- Operator presented with Business Rule and Field Level Edit failures for data correction
- School Code Lookup
- Address Length Fix
- Routes to COR, ESC, CPS(IC), Student Returns
- Annotation
- IQC, Process Inspection and IQCU Audit

IDC Processing – Exception Processing (con't)



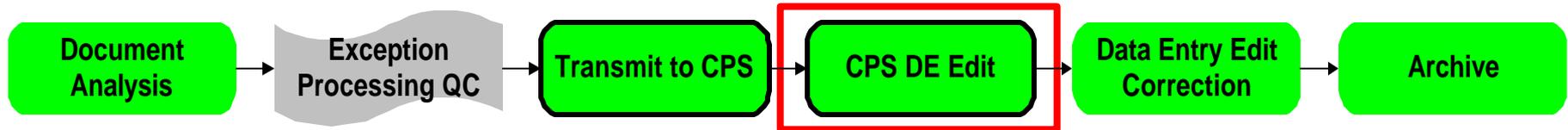
- Changed Data
- ANSI supported document sampling rates
 - “Normal”, “Reduced”, “Tightened”
 - Sampling rate determined by standard deviation from standard and history
- Random selection as documents complete Document Analysis
- Documents are grouped into virtual QC “Lots”
- Error rates reported to FSA
 - Critical and non-critical fields

IDC Processing – Exception Processing (con't)



- Completed documents (updated data and image) transmitted to CPS for processing
- Document level transmission

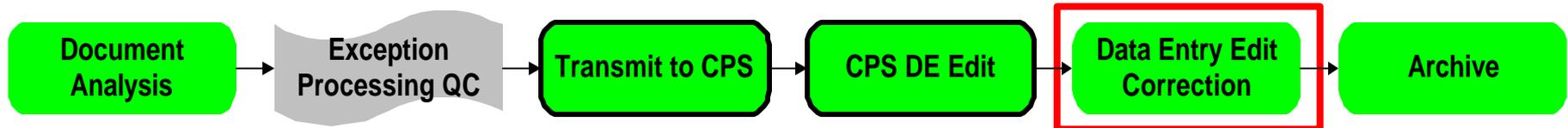
IDC Processing – Eligibility Determination



■ CPS DE Edit

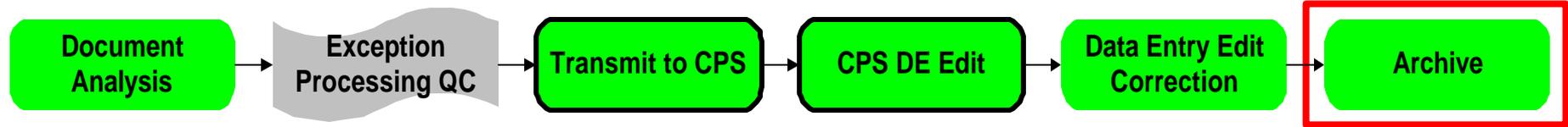
- If errors detected, document is sent back to Exception Processing for correction/handling
- Same edit routine used in WEB entry
- If no errors detected, document continues CPS “Eligibility Determination” processing
 - Status sent to Exception Processing

IDC Processing – Exception Processing (con't)



- Operator reviews DE Edit errors
 - Correct Data and resend to Eligibility Determination
 - Return to Student (Not-on-database)
 - Updated status to CPS
- Process Inspection and IQCU Audit

IDC Processing – Exception Processing (con't)



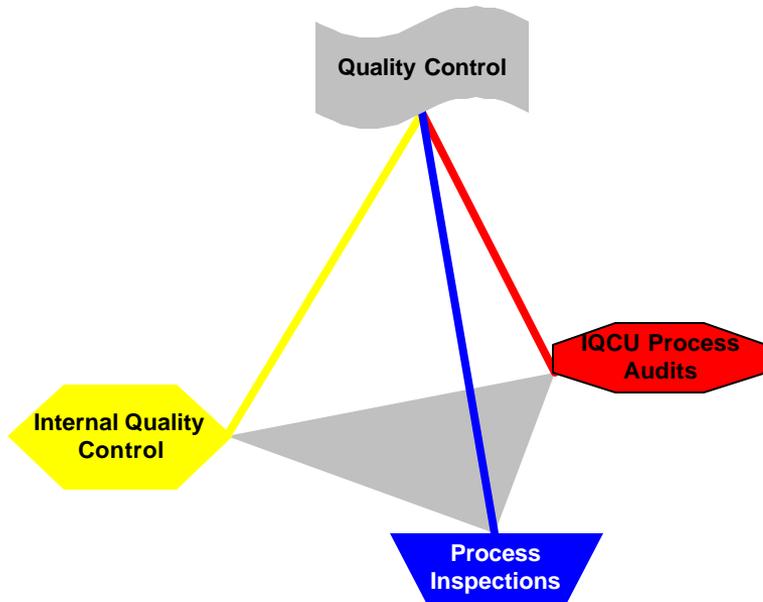
- Electronic data and images archive after 120 days from CPS Eligibility confirmation
- Processing Cycle Closeout
 - Paper documents archived to Federal Records Center
 - Electronic data and image archives <media> erased
- Process Inspection and IQCU Audit



IDC Processing – Returned Mail

- USPS returned mail
 - “Reason” recorded
 - Documents re-sent (if possible)
 - Return Mail statistics sent to FSA
- Process Inspection and IQCU Audit

Quality Control



- Quality Control
 - Reported to FSA
 - Process Level
- Internal Quality Control
 - Operator Level
- Process Inspections
 - Internal
- IQCU Process Audits
 - Independent from Project/Program
 - Reported to FSA



System Management Tools

- WEB Based Reporting
 - MIS Reporting (Inventory, Turn-around, Quality)
 - Internal Reporting
 - Processing Metrics
 - MIS Reports Archive

- Process History
 - Document and Process Level
 - Where, What, When, Who



Resources, Staffing & Training

■ Production Peak

- Document Prep → 6 slitters / 35 FTE
- Scanners → 5 scanners / 13 FTE
- Data Capture → 205 FTE
- Exception Processing → 31 FTE
- Returned Mail → .5 FTE

■ Operators training

- “Certified”
- Performance and quality monitored continuously

Technology

- Capture Processing
 - Delphi based
 - Queue based Client/Server Commercial Capture System
 - MS SQL 2000 Database Backend
- Exception Processing
 - Microsoft .NET Infrastructure (vb, asp, crystal)
 - MS SQL 2000 Database backend
 - Queue based Client/Server
- Data/Image Transfers
 - IBM MQ Series
 - Dedicated T1 Data Lines



Questions???





Contact Us...

We appreciate your feedback and comments. We can be reached:

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