

# The Digital Mailroom: Real Answers, Not Just Suggestions

By: Bo Minogue, ICP, CDIA+

## The Questions Remain the Same

The document capture industry has certainly evolved since 1985. Back then, a proprietary networked Word Processing System integrated with the corporate database meant you were at the top of your game. Scanning into those systems was done through a serial connection and the task was limited to full text OCR with almost no formatting. That really was very impressive stuff then. The systems were expensive and challenging to install, yet easy to use (usually one button like a low end copier). Going paperless also required far more horsepower then.

The scope of capture systems and the technologies have changed, but the questions remain the same. Every year I receive several emails asking these open-ended questions:

- What is the best way to implement a capture system in my environment?
- What are the Best Practices for my industry?
- Where do I go to get information about building the “paperless office”?
- How do I get started?

Participating in industry discussion groups has increased the frequency of these questions. Last year, someone submitted the following questions to the TAWPI Discussion Group:

- What is the best way to setup my mailroom?
- I just inherited a mail operation with large volumes and a variety of mail types. How do I get started?
- Can someone recommend the best way to setup an efficient digital mailroom operation?

Responses came flowing in from the community describing how they process their mail, what hardware or software they use, vendor recommendations, and even invitations to call or visit to see the process they were so proud of. Others suggested attending webinars and trade shows or obtaining white papers and publications to gather preliminary information and learn the jargon being bantered around. There were a lot of good suggestions but not a lot of real answers. Certainly, there is value in many of the responses that she received. However, what she really needed was, “Here’s what we did...,” responses that outline the specifics about the process and results.

Over the past 10 years, I have spoken with thousands of mailroom employees and visited hundreds of sites gathering information to help answer the questions posed to the TAWPI Discussion Group. Embedded within each mailroom are pieces of the perfect mailroom process. By pulling those pieces together, I hope to offer a framework for the optimal digital mailroom currently possible.

## Developing Our Mailroom

Let's assume we have just been hired to implement a new digital mailroom system. We need to configure the ideal processes and staffing, as well as the best mix of available technology, and report back on our findings.

Here are the specs for our new mailroom – how much, how often and what types:

- It is a single shift operation running 5 days per week, 260 days per year.
- We are expecting 90,000 envelopes per day.
- We are expecting 80,000 checks per day.
- We will likely handle an additional 80,000 pieces of paper per day.

Let's start by reviewing the mail that our mailroom receives. Mail may arrive from multiple sources; both businesses and individuals. It includes forms (surveys, invoices, applications, summary bills, etc.) and payments; some in business reply envelopes that our organization has some control over and others in envelopes of all sizes. We've got volume.



Each mail type has its own perfect process and, given enough volume, a system could be defined around each. With high volumes of all types of mail, we will need to find the best path for each of our mail types. Clearly, we have our hands full. Our goal will be to minimize the labor to process these documents and increase the accuracy of the information we capture. Fortunately, we can lean on the collective wisdom of the hundreds of mailrooms we have visited and the countless conversations with vendors, integrators, users, managers, and their support staff.

We will categorize our mail into four types:

1. **the good (high speed)**: clean mail, usually retail payments
2. **the bad (low speed)**: some exception items with mixed contents of checks, stubs, and/or full page forms.
3. **the ugly (semi-automated)**: non-standard envelopes or form types, correspondence, staples, paperclips, tape, folded contents, multiple sizes and shapes, and damaged contents, with less than 8 full pages enclosed.
4. **the rest (manual)**: bulk mail, flats, boxes, file folders, and anything crammed inside something that resembles an envelope.

There are many vendors and many products to choose from in the following categories:

- mail sorters
- mail openers and extractors
- scanners
- transports
- capture software
- content management software
- remittance software

## Matching Mail Types with Technologies & Processes

Next we need to match our mail types with the appropriate equipment and software. The first step is mail sorting.

### Mail Sorting

Whether the postal service sorts our mail or we receive it in mixed bundles, it is clear a mail sorter has its purpose. After the mail is received at our site in mail trays and tubs, we deliver it to the sorter. Sorters read and count the mail, apply an envelope audit trail, and bundle the mail in target processing groups. Sorting criteria include PO Box, address, envelope type, thickness, and even contents based on MICR, metal content, and weight. The sorters installed at the sites we've visited could handle the majority of all four categories of mail we receive (75% to 85%).

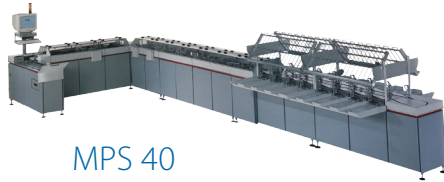
### Mail Opening, Extraction, Prep, and Capture

We will combine multiple steps, where possible, for much of our mail. Next, we move on to the steps from mail opening to capture for each of the four types of mail we receive.

*High speed* (clean mail – 50,000 envelopes per day): Check and remittance advice get opened, extracted, oriented, and imaged. Recognition is performed, checks are validated and reconciled against remittance, an audit trail is assigned, and items are batched together by transaction type. Approximately 50% of the transactions are executed in the first pass via ARC and Check 21 decisioning. This is all performed in seconds by one operator on a high speed transport like the OPEX Eagle. Other batches may require additional downstream processing via image. 70% of our payment mail would be handled in one pass on this device.

*Low speed* (exception items – 15,000 envelopes per day): These items typically begins as a clean mail but get quickly out-sorted due to the detection of metal or thickness and are placed in a mail tray and delivered to the mail extraction desk. There are approximately 10,000 extraction desks in use at a variety of mailrooms with a range of extraction rates. We would expect our operators to open, extract, prep, and scan our envelopes and contents at a rate of 500 to 1000 envelopes per hour. Each envelope contains 2 to 4 pieces of paper inside (there are an average of 1.1 checks per envelope). Recognition is performed on checks and stubs and audit trails are assigned (batch ID, transaction number, archive box number, operator ID, scan date and time, etc.). We would expect that 4 operators on 4 machines would handle this volume in a single shift.

Checks will be sorted and bundled for temporary storage (and later scheduled destruction), and the other contents (remits, forms, correspondence, etc.) will be placed in a barcoded box for archive storage. If necessary, any originals could be outsourced for further special handling. This is all performed on automated mail extraction equipment either with an integrated scanner (like the OPEX AS3690i) or a stand-alone scanner (like a Kodak, IBML, Fujitsu, etc.).



**MPS 40**  
High Speed Letter Sorter



**OPEX Eagle**  
High Speed Remittance Processor



**OPEX AS3690i**  
Mixed Mail Extractor-Scanner



### Omatation 206

High Volume Envelopener



### Omatation Quiet Jog

Automatic Jogger/Justifier

*Semi-automated* (non-standard items – 15,000 envelopes per day): These items go directly from the sorter to a mail extraction device. The envelopes are a variety of sizes and each envelope contains 3 to 8 pages. There are approximately 8,500 checks pulled from these envelopes with an average of 75,000 pages scanned per day. We would require 9 operators on 9 machines to handle this mail in a single shift. We can expect our operators to process 150 to 400 envelopes per hour depending on the mail encountered. This is also performed on automated mail extraction equipment either with an integrated scanner or a stand-alone scanner.

*Manual* (messy items – 10,000 envelopes/packages per day): These go to an envelope opener directly from the sorter where the envelope is cut open on one side at a rate of approximately 35,000 items per hour. The mail is then placed back in a tray and delivered to a document prep station. With 6 to 10 pages in each envelope or package, we encounter approximately 75,500 pages and an additional 4,500 checks on a daily basis. Our prep station will consist of prep tools (tape, scissors, staple remover, etc.) and sort bins (25) for each of our work types. We will expect our operators to open, extract, prep, and sort at a rate of 50 to 150 envelopes per hour. When the operators finish a tray of mail, they will bundle the mail in 6-inch thick stacks (approx. 30 envelopes worth) with a color coded and barcoded batch header sheet and place them in the “to-be-imaged” cart.

A scan room operator will pick up the cart, move it to the scanner area, and log in each batch. The batches are then jogged for several minutes before being placed onto the high speed scanner. The scanner will separate the pages and scan both sides – using the envelope as the transaction boundary – at an average rate of 8,000 pages per hour. Recognition is performed (MICR, OCR, auto-classification), an audit trail is assigned to each piece, and pages are sorted for archive or destruction. We will require 2 people to run the 2 Envelopener machines used to cut the envelopes open. We will also need 17 prep operators and 17 prep stations, 2 people to transport mail, and 2 operators to run 2 high volume scanners.

## Final Considerations & Tabulations

We will be scanning all our envelopes except for high speed mail. Magnetic and optical MICR reads are performed on all checks. We will be applying ARC and Check 21 decisioning on all checks we process. The high speed sorter will provide the ID and sorting requirements to segregate our mail into processing groups. This will require 1 or 2 additional FTEs to operate the machine and help transport the envelopes to the next steps. Two supervisors will also need to be added to the staff.

Our budget for 44 staff members will be approximately \$1.23 million a year to handle 23.4 million transactions. Are you still with me? We are now finally ready to request proposals from vendors to implement the system we have configured.

## Summary of the Proposed Approach

Mail Type	Envelopes Per Day	Checks Per Day	Pages Per Envelope	Pgs Imaged Per Day	Equipment Needed	Staffing FTEs	FTEs per 1k Envelopes	Cost per 1k Envelopes (\$27k/yr loaded)
High speed	50,000	50,000	2	100,000	(1) High-speed transport	2	0.04	\$4.15
Low speed	15,000	16,500	3	60,000	(4) Mail extraction desks with integrated scanner or (4) Mail extraction desks (4) Stand-alone scanners	5	0.33	\$34.26
Semi-auto	15,000	8,500	5.5	106,000	(4) Mail extraction desks with integrated scanner or (4) Mail extraction desks (4) Stand-alone scanners	10	0.66	\$68.53
Manual	10,000	4,500	8	94,500	(2) High speed scanners (2) Joggers (2) Envelopers (17) Prep Station	2 2 19	2.3	\$238.83
	90,000	79,500		360,500		40	0.44	\$45.69

### The Rest of the Story

So what about *the rest of the story*? Well, I will leave that to Paul Harvey and the remittance, forms processing and document management vendors. We will certainly need the following:

- CAR/LAR performed on all checks
- ARC and Check 21 compliant processes in place
- Auto-classification and forms processing tools to automate indexing and verify document types and data fields
- Data validation against corporate databases and customized rules engines
- Security measures to ward off viruses and un-wanted operator intervention
- Document management and retrieval systems to provide access from within the organization and to our customers remotely through secure access points
- Workflow systems to track each transaction, form, and batch in the process
- RAID and redundancy technology to guard against system failures
- Reporting, tracking and statistical information from the moment the envelope enters the mailroom until the transaction is complete and images are archived

In your real organization, you may not need the elaborate system we designed during this exercise. Still, best practices need to be applied at every level. Regardless of your volumes, you have mail that should be captured at the earliest point in the process. Minimally, this will reduce your labor costs and the cost per transaction.

Digital mailroom applications have existed for years in the payments environment. Finally, non-payment mail applications can be highly automated as envelope contents are captured in the mailroom with minimal touches and labor. Image processing technology can also be applied earlier in the process allowing the documents to be identified, classified, prioritized, routed, verified and validated – all with minimal manual intervention. The dream mailroom isn't here yet, but getting real answers from hundreds of mailrooms will put you at the top of your game with today's technology.