

JetStream Whitepaper

Dawn Works Limited

All mailhouses face similar problems in every aspect of the data processing life-cycle, from the time their customer's data files arrive, to the moment each mail piece enters an envelope. From time consuming development and testing to complex workflow solutions and managing inserter spoils, each mailhouse faces the same fundamental challenges on a day to day basis.

Background

The print industry is ever changing. With the introduction of new services such as electronic delivery, full colour mail pieces and personalised promotional content, there's always something new to offer the client. One thing which doesn't seem to change is the process of producing the completed product. And this is true around the world.

Typically the client will transfer compressed raw data to the mailhouse where it is detected by a workflow solution or series of batch scripts. The data is then pre-processed, sorting prospective mail pieces into postcode order and splitting the output into new files of a more manageable size ready for formatting.

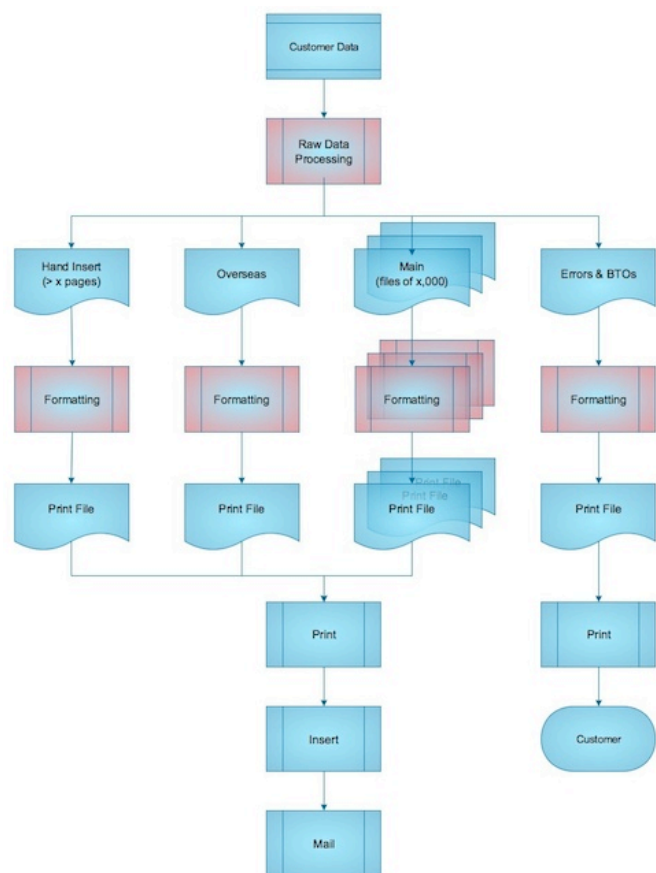
Each resulting file is then run through the formatting tool and often a sample is sent to the customer either physically or electronically for approval.

Finally, if everything checks out, it is scheduled for printing, inserting and mailing.

This traditional process is difficult to set up, run and maintain. The time spent on development and testing is passed on to the customer and many are getting wise to the cost of changing mailhouses and now format their own data, looking to brokers each month for printing and inserting.

The solution is often to introduce or replace the workflow solution, but with the number of files and the complexity of the processing, there is usually little measurable gain.

This document looks at the challenges faced by mailhouses, and offers a simple solution which streamlines and simplifies the whole process, providing measurable benefits to the mailhouse and customer, without replacing the workflow solution.



The Challenges

Time consuming development of raw data processors

Typically each developer has expertise in a particular programming language (VB, FoxPro, C++) and unless a strict standardisation practice is put into place, often only the original developer is able to maintain the processing program to a high standard.

Data processing applications are usually written from scratch, despite performing the same task as existing applications, and can take many days to write, debug and perfect. Data processing application development typically makes up 10 to 25 percent of the end solution, depending on the complexity and functionality required. They also add another layer of weakness to both the workflow, and the integrity of the customer's data.

Time consuming development of formatting application

Most mailhouses standardise on a single formatting tool for layout and design, however it is becoming increasingly more common to maintain an existing tool along with a replacement, or multiple versions of the same formatting tool where functionality and compatibility may differ greatly.

A lot of the formatting development time is spent on the business logic of the application such as multi-page handling, and barcodes or OMR marks for inserters, rather than pure layout and formatting.

Complex workflow solutions

Because of the complexity of each customer's requirements, many mailhouses either process manually or rely on individuals to build complex batch scripts to run each job, causing another weak link in the processing chain.

Clients will often transfer compressed datafiles, which must run through a workflow solution to uncompress, then pre-process. Each of the resulting data files will then be formatted by additional workflow steps, often totaling 10 or more individual processes per job run.

Printer and inserter scheduling

Larger mailhouses may have more than one brand of printer and inserter. Print files are often broken into manageable sizes and spread across multiple printers.

In addition, if each inserter has a specific requirement for document logic (file based, OMR, barcode), unless multiple capabilities are built into the formatting application, a job will only run on a specific inserter.

Such limitations can cause unexpected delays if an inserter requires servicing or another job runs longer than expected, ultimately causing the frustrated client's documents to miss important delivery times.

Managing inserter spoils

Inserters are complex machines and run at incredibly high speeds. They require regular maintenance and sometimes spoil pages with creases, tears or jams.

When this happens, a mailhouse must go through a process of reprocessing the affected documents. This often means running another program to split the required data from the original customer file, formatting it and printing the resulting print file. It is almost always a manual process, and can be very time consuming.

Printing customer supplied print streams

Because of the incurred cost of switching mail houses (data processing, formatting, testing), many companies are now formatting their own data and look to brokers each month for a mailhouse to print, insert and mail.

Not having access to the original datafile or formatting can have its problems including a lack of archiving indexes, complications in the re-printing of spoils, and the necessity of re-applying barcodes.

A Fresh Approach

Each of these challenges can be solved by removing as much custom processing and business logic as possible, opening up formatting to a larger audience of operators and reducing the cost to the mailhouse and customer alike.

Time consuming development of raw data processors

By eliminating the raw data processing entirely, and moving the splitting and postal optimisation to the formatted print file, the end result is faster time to go-live of a new client, and a more flexible and efficient print operation meaning a huge cost-reduction in the setup of a new client and efficiencies in production processing.

Time consuming development of formatting application

Eliminating the need to either process a data file twice, or fast forward and rewind data to calculate page counts in each document means faster production of print files and less complex business logic in the formatting application.

Simplified formatting scripts/applications, can be written in less time, by less technical people when the pre-processing tasks (application of micro lines and page numbering, barcoding for inserters, addition of blank pages for duplex printing etc) is performed on the print file.

Complex workflow solutions

By eliminating raw data processing and providing a generic print file processor, the job as a whole becomes instantly less complicated. Suddenly off the shelf workflow solutions are easier to set up and monitor, require less processing steps, and provide more flexibility.

Printer and inserter scheduling

The ability to split a printfile into appropriately sized batches immediately prior to printing has many benefits. These range from the reprinting of spoils and just-in-time printer scheduling, to minimising valuable time spent on dedicated formatting machines if a data file must be re-split.

When an inserter fails, and they do, the ability to re-barcode the formatted print files for an alternative inserter provides the flexibility required to recover. If barcoding can be accomplished quickly, little or no delays will be noticed.

Managing inserter spoils

Typically the raw data pre-processing application is used to regenerate spoiled pages by searching the original data file and extracting records ready for re-formatting.

By quickly extracting documents from the print file, valuable production time is saved both in man hours in operations, and server time on dedicated formatting machines.

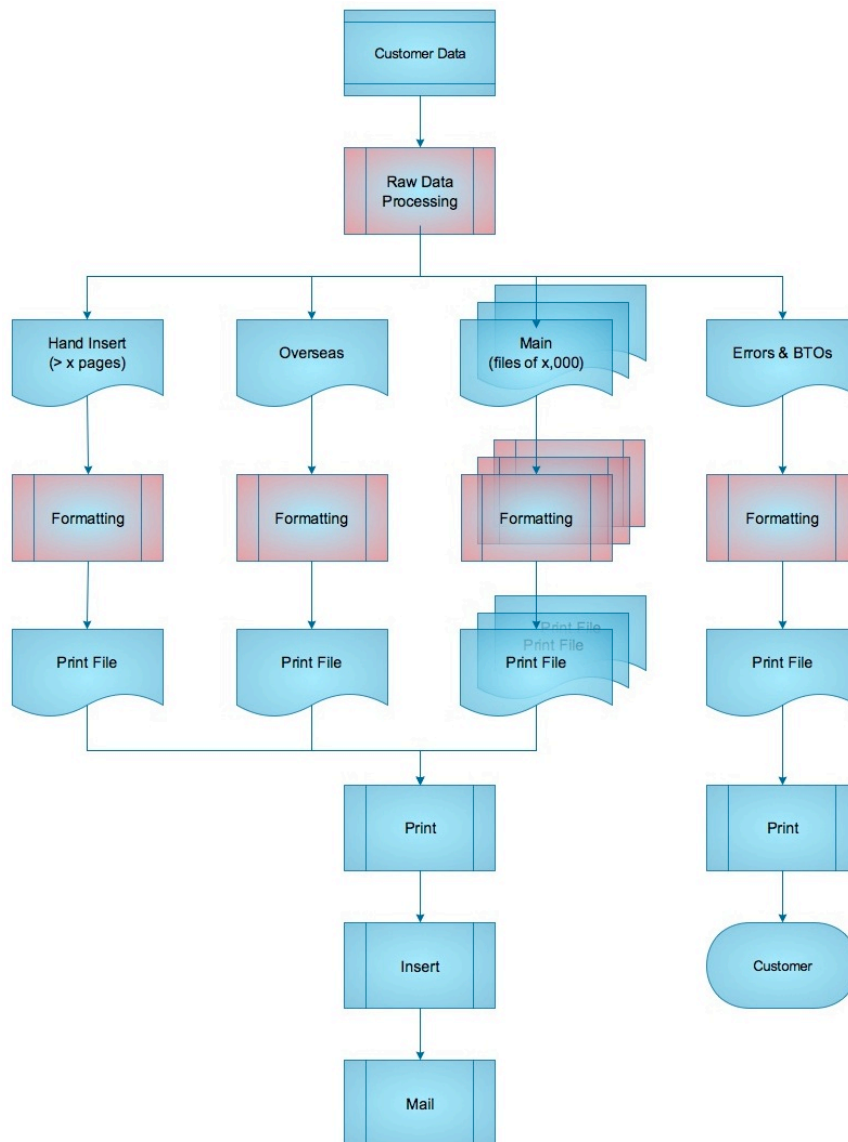
Printing customer supplied print streams

When a prospective customer suggests supplying print ready files, the only format most mailhouses are able to deal with, at some level, is PDF.

JetStream specialises in AFP processing, providing mailhouses with the flexibility they need to process, print and insert customer supplied print files, whether file-per-document, or multi-document files are received.

Traditional Mailhouse Processing

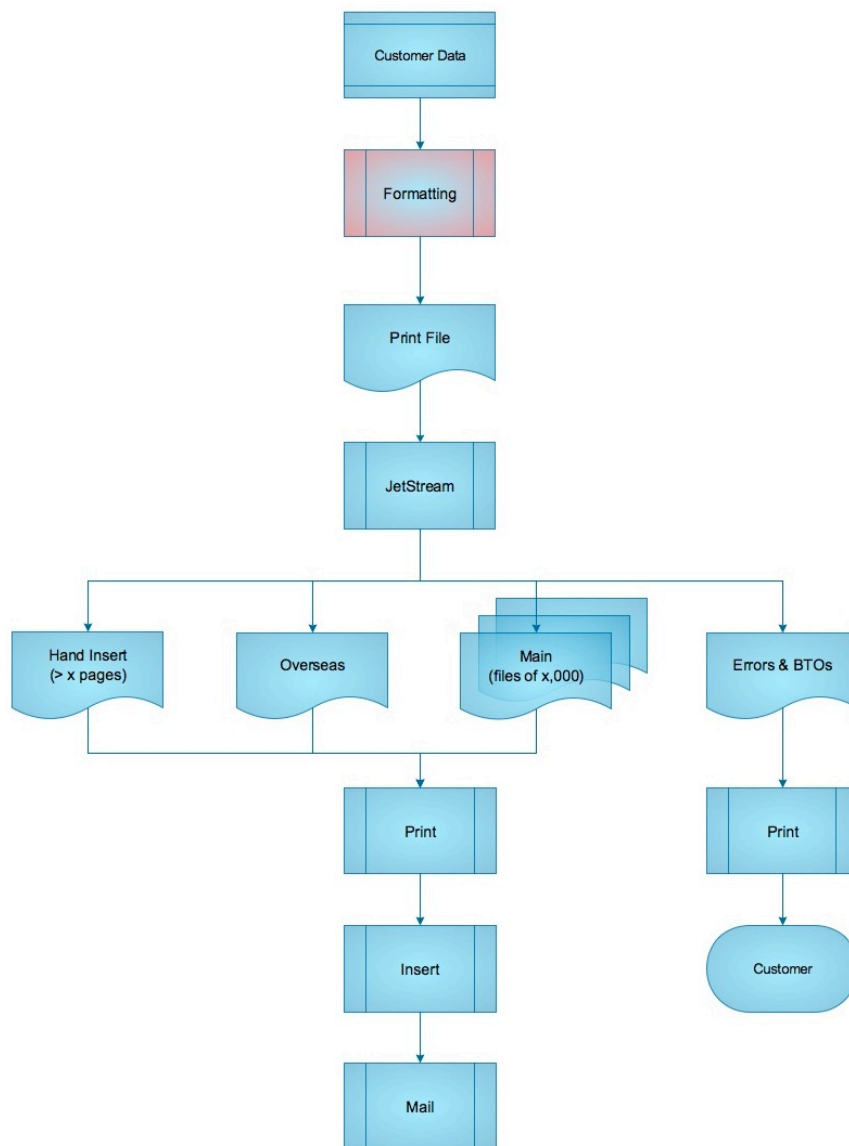
In a traditional production environment, the customer data file is sorted and split into many smaller files. Each file is then run through the formatting tool one by one, executing the same workflow process several times. This complex setup requires that multiple processes are grouped together for a single job run within the workflow.



Red boxes indicate customer specific processing steps

JetStream Mailhouse Processing

The raw datafile is now formatted on arrival, the pre-processing having been eliminated completely. All sorting, splitting and barcoding is performed on the resulting printfile, which is processed through a single workflow process representing the job run. Customer specific processing steps have been reduced to one, simplifying the overall setup.



Red boxes indicate customer specific processing steps

Summary

JetStream is an AFP print file processor capable of producing post optimised output, split into multiple files of manageable size eliminating the need to process the raw data before formatting. It allows the pre-processing functions to be performed on the print file, offering a faster and more cost-effective time to go-live, and a smoother day to day operation.

JetStream can determine document boundaries based on AFPDS NOPs, TLEs and text scraping, add page numbering and barcodes, insert blank pages as appropriate for duplex printing, and produce sample sets for client approval.

It supports every combination of single and multiple file input and output, NOP generation, document sorting, and complex file splitting to produce separate, configurable output streams for hand line, BTO, main, split into manageable sizes.

JetStream runs on any platform and integrates easily with existing workflow solutions. This allows full automation of a customer's data files to be formatted on arrival, sorted, split and barcoded ready for printing.

About Dawn Works

Dawn Works is a UK based software development and consulting company specialising in the development of online and bespoke applications with expertise in print and asset management.

For more information on JetStream, visit our website or contact us directly.

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