Meeting the DPP Challenges: Combining Flexibility and High Quality with Productivity and Cost Effectiveness

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Abstract

In order to meet the demands of the DPP customer with a reasonable price and cost efficiently, the DPP challenges are to deliver:
- high quality documents (high quality in print, media and finishing)
- diversity and flexibility in applications (in order to handle different kinds of jobs with diversity in media and finishing)
- productively, timely delivery (in order to handle urgent, unscheduled jobs, efficiently dealing with peak-volumes and/or high filling level)
- cost efficiently

Crucial parts of the end-to-end solution to meet these demands, are:
1. a total end-to-end integrated workflow support
2. (digital) production printers, which can productively and reliably handle the needed variety and high quality in a cost-efficient way.

In this paper, the crucial elements in technology and concepts in the end-to-end workflow and in the digital production printers are elucidated.

Introduction

The DPP's serve many customers that require a broad range of document services. In order to meet the demands of the DPP customer, the DPP's are faced with –apparently contradictory- requirements. The DPP challenges are to deliver:
- high quality (in print, media and finishing)
- a big variety in output (data, media and finishing);
- productively, timely delivery (in order to handle urgent, unscheduled jobs with short turn around times, efficiently dealing with peak-volumes and/or high filling level)
- cost efficiently

DPP's therefore need a productive, flexible, reliable system, in order to produce these diverse, complex high quality documents in a productive and cost efficient way.

In this paper, the crucial parts in the end-to-end solution are elucidated.

Crucial Parts in the End-to-End Solution

For the DPP it is of the utmost importance that a total-solution is delivered that:
- optimises the contact with the customer,
- optimises the processes in the DPP and automates where possible
- consists of (digital) production printers and finishers, that productively can handle the big variety in output with high quality.

The crucial parts in technology and concepts of the end-to-end solution which are really needed in order to reach a productive, flexible, reliable system, are:
1. a total end-to-end integrated workflow support
2. (digital) production printers, which can productively handle the needed variety and high quality in a cost-efficient way.

Total End-to-End Integrated Workflow Support

A suitable software application is key that can handle the job submission from customer towards the DPP and provides the DPP operator support for processing incomeing jobs, like viewing and editing, assigning special media types per page, managing and printing received jobs.

DPP's want to:
- Attract print volume: therefore good communication and easy interfacing with their customer is key
- Deliver various (specialised) document services, with high quality, productively in time.

These requirements can be met if the total workflow is designed with the following design rules in mind:
- The total primary process should be supported,
- Business and production workflow must work together
- The workflow should be comprehensible and easy to use
- provide an easy and flexible interface for customer input, (use standards!)

- provide the right feedback at the right time
- Offer a flexible input channel (to meet the variety in customer input), automate the output channel (in order to be able to productively handle the big variety in output) –at various steps in the workflow.

Crucial Elements in Production Printers

Elements in (digital) production printers, which are crucial for productively handling the needed variety and high quality, are:

- A flexible and reliable paper input, using air separation and vacuum feed, ensuring an easy to use, failure-proof paper input at rated speed of a wide media range. This provides:
  - high versatility in processable media
  - high quality and reliability
  - productivity
- Accurate, active paper registration in de printer, in which each page is adjusted in all directions to ensure that the image is correctly positioned on both the front and back sides of the paper. This provides a very high registration accuracy (as tight as 0.5 mm)
- Optimal image processing; each element (photograph, text, graphic, etc,) on each page of a document is actually recognised, examined and processed optimally and automatically, independently of each other, so that automatically high image quality will be reached in a productive way. Pages are scanned and processed in the most optimal way. This provides:
  - Image quality: outstanding image quality for every element on every page
  - Ease of use: with a simple press of the green button, high image quality is reached for the whole document.
- A controller which is the brains & heart of the system, by which an open and integrated workflow is achieved, seamlessly fitting in the customers workflow, providing easy upgradability in functionality, connectivity, ease of use and customisability.

Biography

Monique Sommer received her M.S. degree in Electronics Engineering in 1989 at the Eindhoven University of Technology, and her MBA degree in 2000 at the TSM in Enschede.

She currently works for Océ-Technologies B.V. in Research and Development. Her current research interests at Océ include total end-to-end integrated workflow support and digital production printers in the mid-production segment.