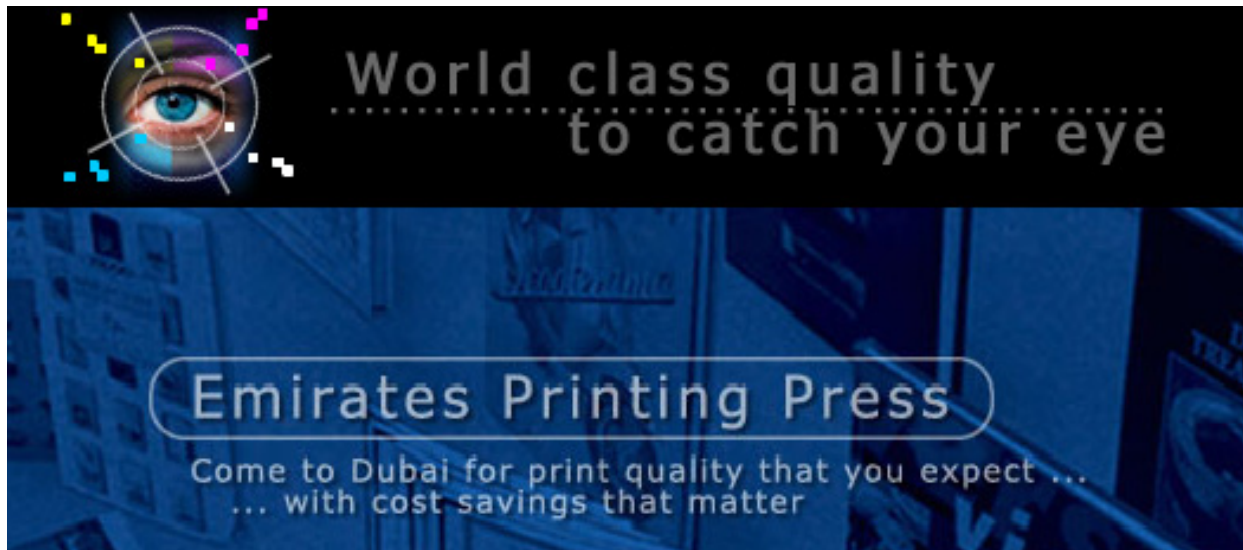


2009 Winner

CIP4 International Print Production Innovation Award For Best Process Automation Implementation — Emerg- ing Markets



**Emirates Printing Press LLC
P.O. Box 5106 Dubai
United Arab Emirates**

Executive Summary

Emirates Printing Press was established in May 1976. Over 33 years of seen Emirates printing press grown to a prominent Industry , renowned for service and quality & benchmark of quality printing in the Middle East. As one of the largest printing press in the region, EPP has undergone a steady evolution since its inception to achieve revolutionary standards that have made Dubai an ideal printing hub between the Far East and Europe.

Our core business is providing a total solution to our clients through a vast array of technologically advanced, in-house pre-press, printing, binding and finishing.

A 21st century ultra-sophisticated printing technology and a level of customer service that's the envy of most have set EPP quite apart from the competition. The state-of-the-art machinery, operating with a clockwork precision round the clock, has given EPP an undeniable reputation for printing excellence.

We have also achieved Quality Management Standard ISO 9001, Environmental Management Systems ISO 14001 and Occupational Health and Safety OHSAS 18001. Accreditation and in addition we also hold Forest Stewardship Chain of Custody Certification (FSC & PEFC) as well.

Our objective is to provide a total solution for our clients satisfying their requirements.

- **The size of the company in revenue and employees**
The company employs around 600 Employees.
- **The nature or type of printing/niche markets served**
EPP produces books, magazines, journals, brochures, leaflets, catalogues, directories, booklets, calendars, annual reports and Luxury packaging materials.
- **A description of the equipment and software integrated.**
We use Kodak Prinergy workflow in pre-press, which consists of CMS, Pre-flight check, In-rip trapping, and Normalizing options. We have one Heidelberg Top setter & Two Kodak Trendsetters.
We use Enfocus PitStop for PDF editing, Preps and Pandora Plus software for Digital imposition. We use Kodak Match Print Virtual for Soft Proofing through Kodak Insite Web approval Portal.
We use GMG Colour server for colour Space transformation using Fogra Standard profiles.
We use GMG color proof with Epson Printer to generate certified proofs; we also have Kodak Veris to generate certified contract proofs.
- **A summary of the situation before and after the integration.**
Before integration, all job details have to be keyed in by the operator in each machine, which was laborious and prone to error.
- **The main benefits/results of the integration.**
The main benefit is that we have all job data readily available from JDF file which is used by the machines which accept JDF File. This avoids any human error during repetitive job entry.
- **Goal:**
Provide a centralized workflow environment that allows multi user access and a repository for standardized job processing settings and definitions. Increase throughput levels in all areas of Postpress activities. Standardize, and automate the following processes:
 - Improve Set Up/Make-ready processes and reduce time by using existing JDF data from Technique MIS System.

- Improve Scheduling and Production status transparency within this department.
- Reduce waste and improve quality control mechanisms within this department.
- Interface manufacturing equipment onto network and integrate into overall workflow system by way of presetting via prepress/planning departments and also live JMF feeds back to MIS (Scheduling).

Section I. Background

- No Management Information System - Resulting in many manually created tasks using
- Lotus Notes, Microsoft Excel, Microsoft Word. Such administrative tasks include
- Purchase orders, Estimates, Quote requests, Quote letters, Job Tickets and Production
- Planning templates.
- Existing pre-press workflow was very robust and reliable, however, throughput speed was becoming an issue and we had to resolve production bottlenecks to keep up with increased demand.
- No Online facility for customer interaction. FTP data transfer was established but did not offer any additional functionality such as soft proofing and web approval.
- Manual entry to record and monitor job costing information.
- Increasing production workloads required more efficient manufacturing and administrative processing so as to maintain profit margins and to keep staff levels at a manageable level.

Year 2007 – Equipment in use:

- Lotus Notes server environment for administration file serving and processes.
- Macintosh and Intel PC Platform support hosting all major DTP software from Adobe & Quark Xpress.
- Pre-press workflow consists of Kodak Prinergy with Pre-flighting, In-Rip Trapping, Colour Management Functions combined, Preps, Pandora for layout and a Heidelberg Topsetter with AL, 2 Kodak Trendsetters & Kodak Match print Virtual for Soft proofing.
- GMG Colour Server for optimizing incoming files to ISO standard profiles.
- Epson Inkjet plotters with GMG & Black Magic S/W for Hard proofs. Kodak Veris for Contract proofs.
- The offset print room comprised of SM102-8-P (CP2000 v3.4), SM 102-8-P (CPC 104), SM102-5-P, SM102-4-V (CPC 32), SM102-4-VP (CPC 32), Komori Lithrone 4 Col, Komori Lithrone 5 col UV press, Komori 6 Colour UV press, Komori L 428, Man Roland 2 colour with double coater UV press. Three Man Roland Rotoman Heatset Web Offset presses. One MOOG 3 Color Sheetfed Gravure press.

All our presses are connected with pre-press to receive CIP 3 - PPF Ink zone Presetting values using Ink Zone presetting S/W from the company Digital Information Technology from the year 2004 onwards.

Through the online transfer of bitmap files, on the one hand a work-intensive detour via the plate scanner is eliminated, while on the other, InkZone will always refer back to first-generation data. That means: shorter set-up times and minimum start-up waste. In view of shrinking print runs and frequent job changes, this means a significant increase in productivity.

JDF technology

InkZone supports the transfer of preset data - also JDF based - between prepress and press. Bitmap or CIP3 files accepted from RIP and converted by DI-Plot into the Job Definition Format are then converted

by InkZone into specific printing machine signals for presetting the ink zones. The conversion function is fulfilled by inkZone also in the case of direct transfer of CIP4/JDF files from any JDF prepress workflow.

Our Sheetfed presses are connected with Techkon SpectroDrive & X-Rite Density control for In-line Density control and closed loop colour control. This is a big advantage in Maintaining ISO Standard densities and maintaining Fogra Standard Dot gain values. All our presses are calibrated to ISO 12647-2 standard printing condition.

The post press area consisted of a Polar 135 Guillotine Machines, Muller Martini C 15 Coronabinder, Muller Martini StarPlus Binder, Muller Martini Normbinder, Muller Martini Prima Plus Amrys, Muller Martini Prima, Muller Martini 221 saddle stitcher.

Shoei, MBO & Stahl Folding machines, Stahl Book Line, Kolbus Case Maker & Sitma Mailing Lines.

Section II. Objectives

2008 - Stage 1: Management Information System – Functionality, Goals and Objectives

We have installed Technique Management Information System with Following Modules :

- 1) MIS Console – Provides application launching, standard reports, organizational structure and user profile security.
- 2) Sales Enquiry – Incorporates quotation status and tracking designed to automate and manage the sales force and customer/prospect database.
- 3) Estimating- Provides route based calculation for preparing job estimate.
- 4) Order Management – Helps in processing order receipt, job detail and allocation where production routing can be assigned across the organizational structure.
- 5) Production Scheduling - Enables to do production scheduling with capacity analysis and key event/progress indicators and plan v actual display
- 6) Data collection - An integrated generic data collection system for all cost centers. Monitors Job performance and helps reduce waste and down time.
- 7) Job Costing – Provides costing and profit Variance Analysis
- 8) JDF Adapter – Generates JDF file and provides integration with machineries with JDF connectivity.

Goal:

To integrate all process of production, Inventory & Job Costing. Improve business analysis processes by having a system that accurately captures and records all activities and materials against any given job. Statistical evaluation by way of reporting to be easily accessible and derived from accurate data.

Cost Reduction Goals:

- Reduce administrative processing costs by 20 %.
- Reduce Cost of data collection by 100 %.
- Reduce Job Cost processing by 30 %.
- Reduce analytical reporting time by 75 %.

Process Integration of:

- Financial management and accounting integration.
- Estimating.
- Purchasing.
- Materials inventory.

- Finished goods inventory.
- Job Planning , tracking & costing.
- Scheduling.
- Shop Floor data collection/ direct machine interface (Touch screen terminals).

JDF Connectivity to Muller Martini Stitchers and Perfect Binders

Technique's Print MIS contains a detailed manufacturing plan for each print product. This plan includes the dimensions of the product as well as detailed hopper assignment for bindery equipment. Technique transfers JDF for job setup to stitcher's and perfect binders via Muller Martini's Connex product. The job setup information contains many of the parameters required for automatic setup of the machines as well as scheduling information (make-ready time, start time, end time, run time, etc.) and net and gross counts. Once the job is transferred to Connex, the operator can inspect and edit the information using Muller Martini's JDF Editor. Once the job is ready start, the operator invokes automatic make-ready.

Sending job information in JDF format provides several benefits:

- Allows the operator to augment/edit the supplied data rather than re-keying from scratch.
- Eliminates redundant data entry, saving time and reducing errors.
- Ensures consistency of data (job names, product descriptions and job numbers).
- Ensures the operator has up to date job.
- Allows fully automatic setup of the machine, which provides significant labour savings and allows more scheduling flexibility, as make-ready is dramatically reduced so changing product sizes from job to job has much less impact.

Section III. Methodology

We have made it our policy to purchase all machineries from Drupa 2008 onwards with JDF connectivity.

We visit all major trade shows like Drupa, Ipex , Print Pack etc and analyze different solutions available and decide that fulfils our market requirement. Then a detailed analysis/Comparison report is submitted to our Top Management, on final discussion with our Technical team the product is decided, negotiated & procured.

MANAGEMENT INFORMATION SYSTEM – Selection Methodology

Estimating

The estimation module needs to be flexible & configurable so that it can be tailor made to our customer requirement. Estimation Should integrate with Order Management , Scheduling , Production Planning & Management and Job costing.

Production Scheduling

Scheduling should cover various types of machines we have in our plant. Once an estimate becomes a live job, its production requirements should make a smooth transition into scheduling module.

Shop Floor Data Collection

Provides real-time feedback from Technique Data Collection systems, in terms of copies, waste estimated finish time. Visually displays planned v actual performance real-time.

JDF Connect

Our aim is to automate & effectively communicate our production systems and MIS. Since Drupa 2000 we have been closely monitoring with much interest the development of JDF standard.

The industry adoption has increased dramatically since the first formal ratification of version 1.1 in May 2002. In addition to this, vendor support has increased dramatically and our own understanding of its capabilities has developed over this time. Thus, to achieve our aim, we believe that a JDF compliant MIS system was mandatory when making purchasing decisions for this area of our business .

Our strong belief that JDF plays the major role in bridging the communication gap between production and Management Information Systems.

From February 2009 our Muller Martini Corona Binder & Muller Martini PrimaPlus AMRYS is integrated with JDF and following are the benefits. Our aim is to eventually provide a means for consistent, automatic, and effective bi-directional communication between our production systems and the MIS

Allows the operator to augment/edit the supplied data rather than re-keying from scratch

- Eliminates redundant data entry, saving time and reducing errors
- Ensures consistency of data (job names, product descriptions, job numbers)
- Ensures the operator has up to date job details (not stale information on an out of date paper job ticket)
- Allows fully automatic setup of the machine, which provides significant labour savings and allows more scheduling flexibility, as make-ready is dramatically reduced so changing product sizes from job to job has much less impact.

Section IV. Implementation Story

We appointed a Project Manager for every project who will be responsible for implementing the The Project Manager is responsible to be a liaison with the Machine / Solution provider to oversee the progress of overall project. Timelines are agreed with supplier & our In-house maintenance team and Consultants are engaged to do preliminary preparation like Power supply, Air-condition e.t.c.

Section V. Resulting Workflow/Processes

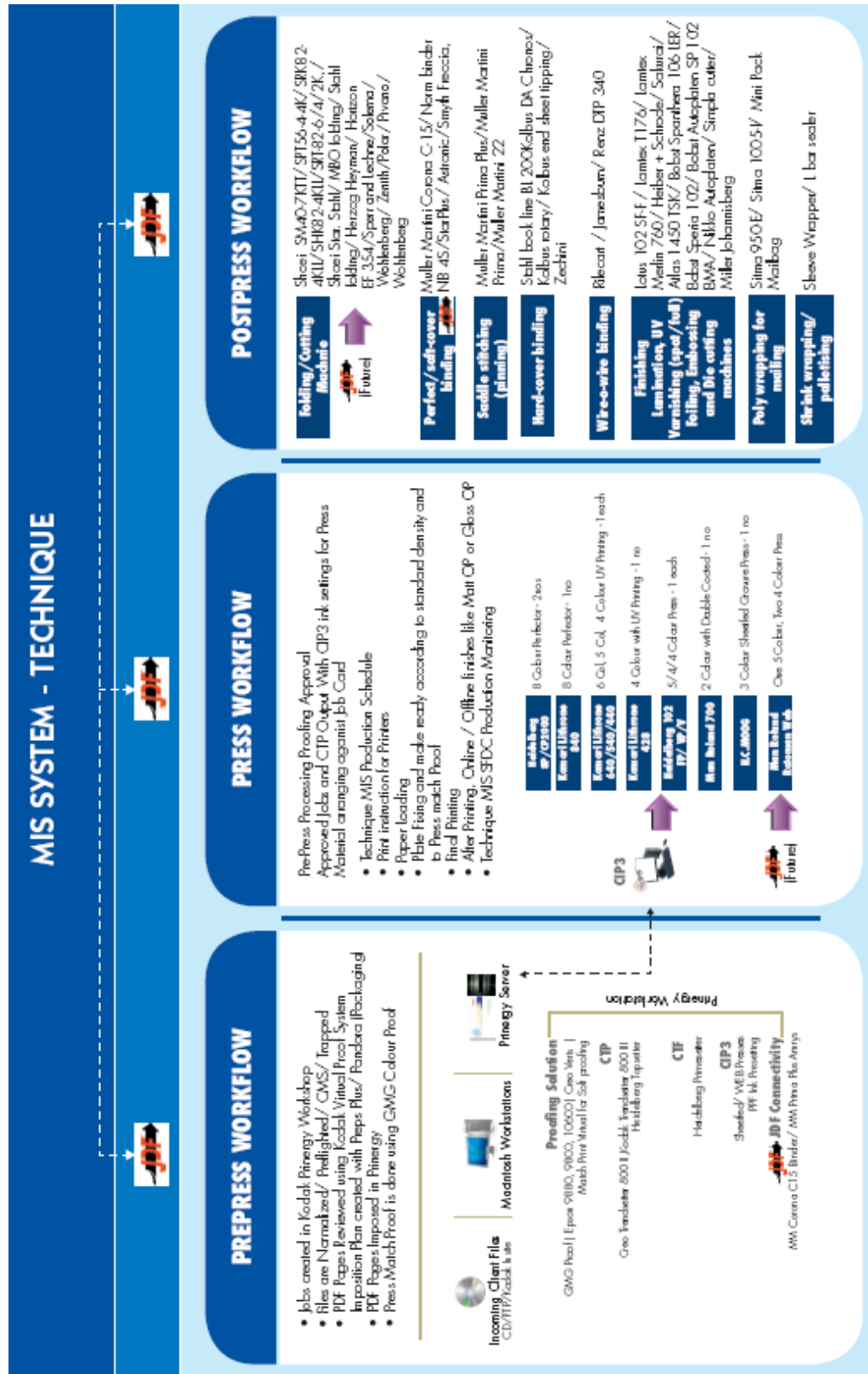
A description of the resulting workflow, including any applicable workflow or process diagrams. At a minimum this must include two workflow diagrams: both the starting workflow (prior to the implementation being described in the application) and the final workflow. Interim phases of workflow may be diagrammed, but are optional.

We have set the following goals while implementing JDF ;

- Reduce administrative processing costs by 20 %.
- Reduce Cost of data collection by 100 %.
- Reduce Job Cost processing by 30 %.
- Reduce analytical reporting time by 75 %.

We have achieved the following against out set goals :

- Reduce administrative processing costs by 15 %.
- Reduce Cost of data collection by 90 %
- Reduce Job Cost processing by 10 %
- Reduce analytical reporting time by 75 %.



EMIRATES PRINTING PRESS (L.L.C.)

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Pre-Press Workflow

	Jobs created in Prinergy Workshop
	Files Processed through Prinergy to create PDF's
	PDF Pages Reviewed in Acrobat Pages Edited, if needed, Traps Verified/Edited
	Imposition Signature created in Preps 5.3
	PDF Pages Imposed in Prinergy
	Imposed Plates Proofed on Screen for final checking

Primergy Connect Workflow System

- 2950 Primary Primergy
- 2950 Secondary 1
- 2950 Secondary 2
- 2950 Tertiary File
- 2x Aubrey 10 Slit
- 2900 Reinstatebin 1*
- 2900 Reinstatebin 2*

JDF Connectivity

Muller Martini Corona C 15

Muller Martini Prima Plus AMRYS

CIP3

Komori Lithrone S10

Hilb Berg

Man Roland Rotoman Web

CTP

Trendsetter 800 III Auto Loader - X-tread Mercury VS 1250 + Stacker

CTF

Heidelberg Primeoffset

Meta Print Manager

Proofing Solution

Creo Vets

GMG Colour Proof

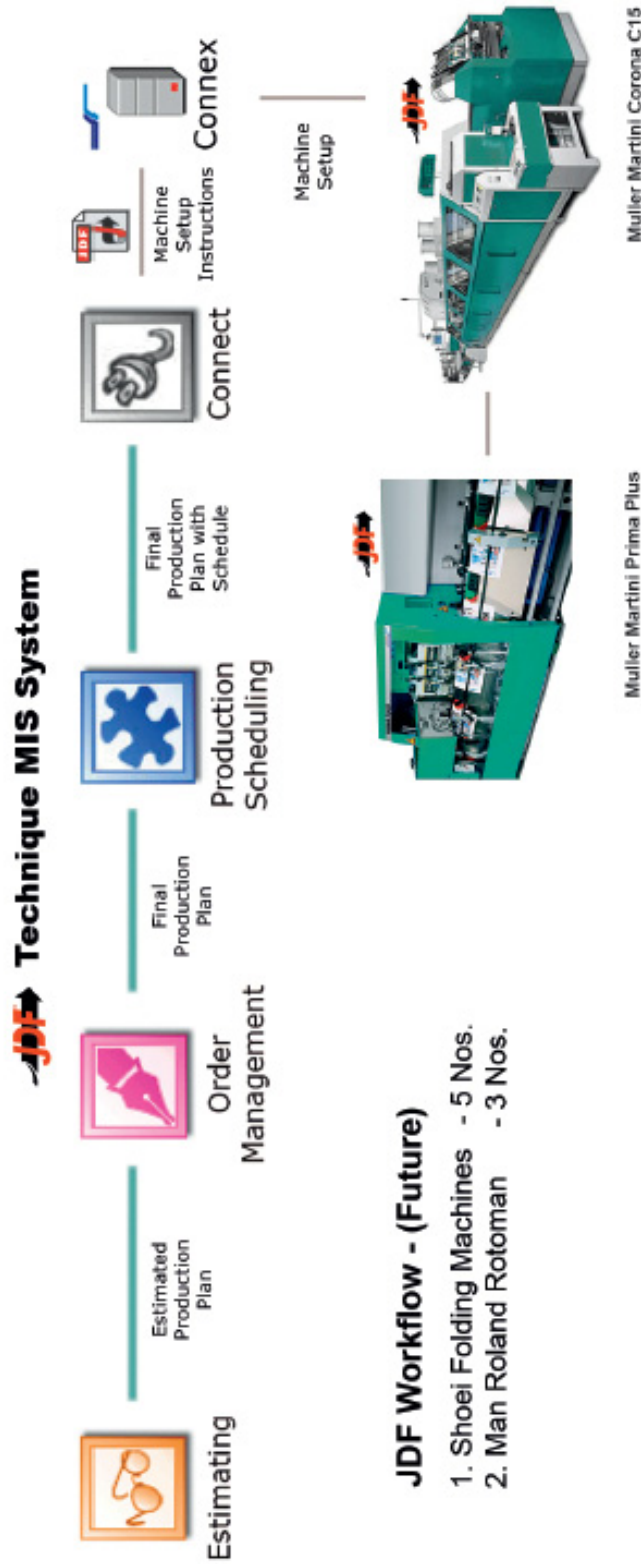
Epson 10600

Web-based Match Print Visual Proof System

Macintosh Workstations

Incoming Client Files

Emirates Printing Press - JDF Connectivity



Section VI. Optional Detail

- **ROI**

Since it has been only 4 months since we implemented JDF connectivity it is very difficult to analyze ROI at present. Anyhow we expect to have at least 5 % savings in operator's entry time & make ready time.

- **Improvement in Quality and Customer Service**

JDF helps in producing Quality product by using correct job data from MIS System , no need for the operator to key in any job data thus avoiding Human Error.

It also helps in providing completed JMF data to our customer. Also helps in reducing make ready waste.