CIP4 and JDF: 15 years dedicated to graphic industries workflow automation

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What you do not need to know about JDF[1]

```
<JDF ID="n1" Status="Waiting" Type="Product" Version="1.2"/>
  <ResourcePool>
    <Layout Class="Parameter" ID="r112" Status="Unavailable">
      <Signature>
        <Sheet SurfaceContentsBox="0 0 1842.5197 1417.3228">
          <Surface Side="Front">
            <MarkObject CTM="1 0 0 1 42 66" Ord="0"/>
```

```
%PDF-1.3
%âãÏÓ
1 0 obj <</Type /Page /Parent 9 0 R /Resources 3 0 R /Contents 2 0 R
/BleedBox [ 0 0 635 881 ] /TrimBox [ 0 0 627 873 ] /Thumb 37 0 R >>
endobj
2 0 obj<</Length 698 /Filter /FlateDecode>>
stream
H‰ìSMk1ýþ:¦q,Ëöxzk6H¡ì„B(a°ùêîB³¡ÿ¾'å™@sï!büÞÓ³4úmžÀx,œ=
```

Integration through Cooperation

- JDF is a Graphic Arts Job Ticket **Data Interchange Format Specification** - JDF is *not* an Application or System

- JDF allows systems to Communicate

- JDF is encoded in XML

- Content is referenced, not embedded

- JDF is extensible

- # Why JDF?

  - Automation increases Efficiency

  - Digital information reduces errors compared to paper job jackets

  - Information allows for informed decisions

- **What does JDF enable?**
  - Setup a Job in the graphic arts from the view point of:
    - Technical Applications
    - Management Information Systems
    - Customers
  - Collect data that is relevant to a Job from origination to delivery
    - Business Data
    - Technical Data
- Realtime Job Tracking
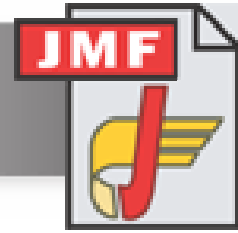- Comprehensively describe many areas of the graphic arts

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Integration through Cooperation

JDF in the workflow

- MIS passes data it knows to JDF-enabled production systems
- JDF-enabled production systems can add more data to the JDF ticket
  - Production parameters
  - Costing data
  - General notes
- JDF ticket passed back to MIS
- Bridges the islands of information

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Integration through Cooperation

- ***Semi Real-time data interchange format***
  - Small XML structures
  - Network Data (HTTP)
  - Used for:
    - Snapshots of Job / Device status
    - Dynamic job update (Change Orders)
    - Job submission and queue scheduling

Customer requirements for JDF

Customers can be either End Customer or business partner!

- Describe the final product or the requested service

- Details may vary in detail from very rough to very detailed

- Allow price and contract negotiations

- Job Tracking

- Manage the approval cycle

- Change order Management

PRINT TALK

- Format to specify the context of a JDF in a business transaction
  - JDF describes the product to be produced
  - PrintTalk describes the business context of the JDF product
    - Request For Quote
    - Quotation
    - Purchase Order
    - Invoice
    - Change Order
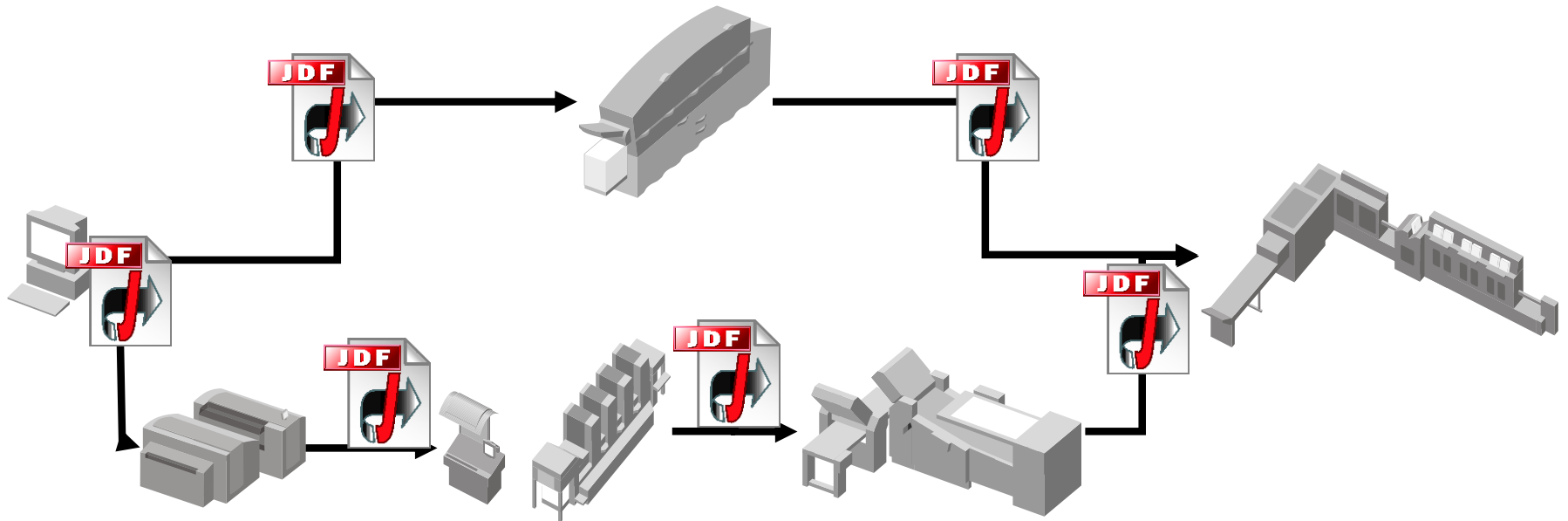 - PrintTalk also contains Pricing Information

JDF Complete Job Ticket

JDF describes the entire Production in one File
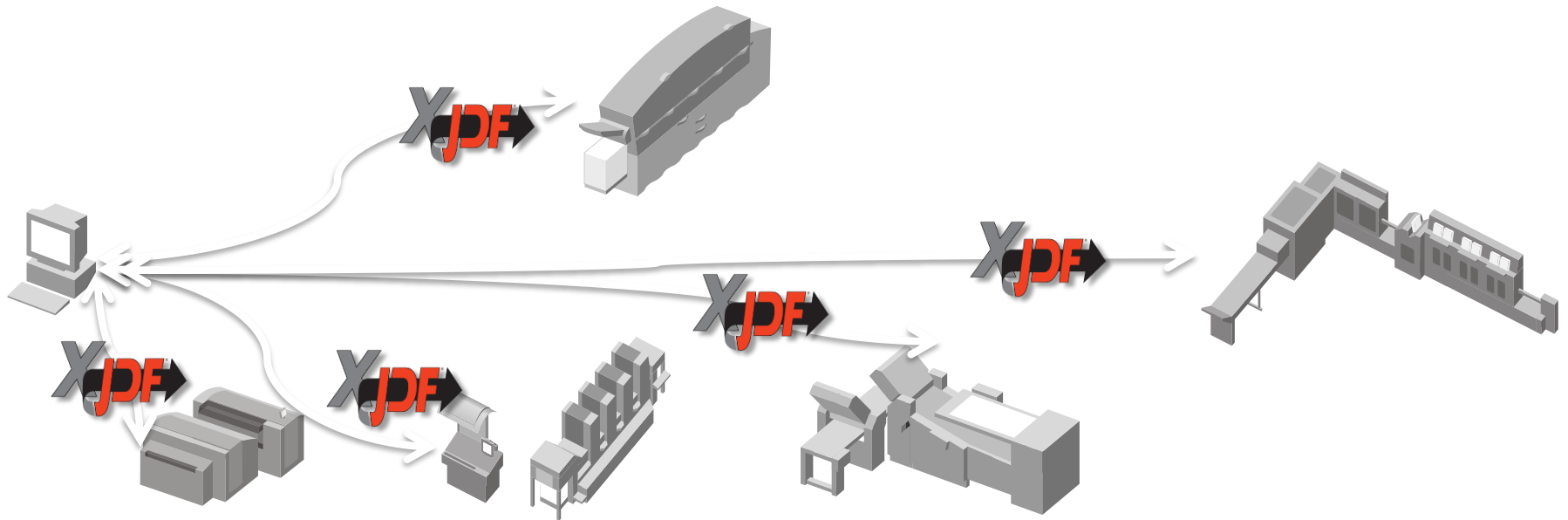– JDF Descibes Process interdependencies

All processes are described in one single Job Ticket

- **XJDF is a simplified version of JFD**
  - **Point to Point interactions only**
  - **Easier to understand and implement**
  - **Closely aligned with new developments in XML Technologies**

JDF/XJDF in PDF metadata

- **JDF/XJDF is being used as the semantic basis for an Interoperability Conformance Specification (ICS) to define transport of product intent with PDF:**

  > Metadata may vary depending on page and/or document
  > Media selection
  > Finishing options
  > Recipient data
  > - …

- **Collaborative effort with ISO TC130 TF2/WG3**

- Digital Film
- Description of printed Pages
  - Colors
  - Fonts
  - Trim Boxes
  - …
- Global metadata in a document context (Author, Customer)

Page description language

What does PDF NOT represent today?

- Description of Media properties
- Binding
- Page layout (simplex, duplex…)
- …

~~No Product description language~~

- Products may be described with JDF

Why Metadata in PDF?

- Applying Metadata to page ranges
- Variable data / PDF/VT
  - Variable Metadata
    - Paper for the Cover
    - Different paper for the body
    - Localized page binding
- Product and page description in one single file

Product description language

Which Metadata in PDF?

- Only product details that are known to the customer/producer of the pdf.
- Independent of production process.
- Based on: JDF Product Intent
- Encoding: PDF (NOT XML)

~~No Process description language~~

Preview version:
https://confluence.cip4.org/display/PUB/ICS-CommonMetadata.PDF.1.5

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Integration through Cooperation

Applications of PDF Metadata

- Loose coupling of variable data generation and print.
- Complete description of simple products for online print procurement (excluding amounts)
- Extended „Preflight" including finishing requirements
- …