

**xmp**™

**Adding Intelligence to Media**



# Key Points

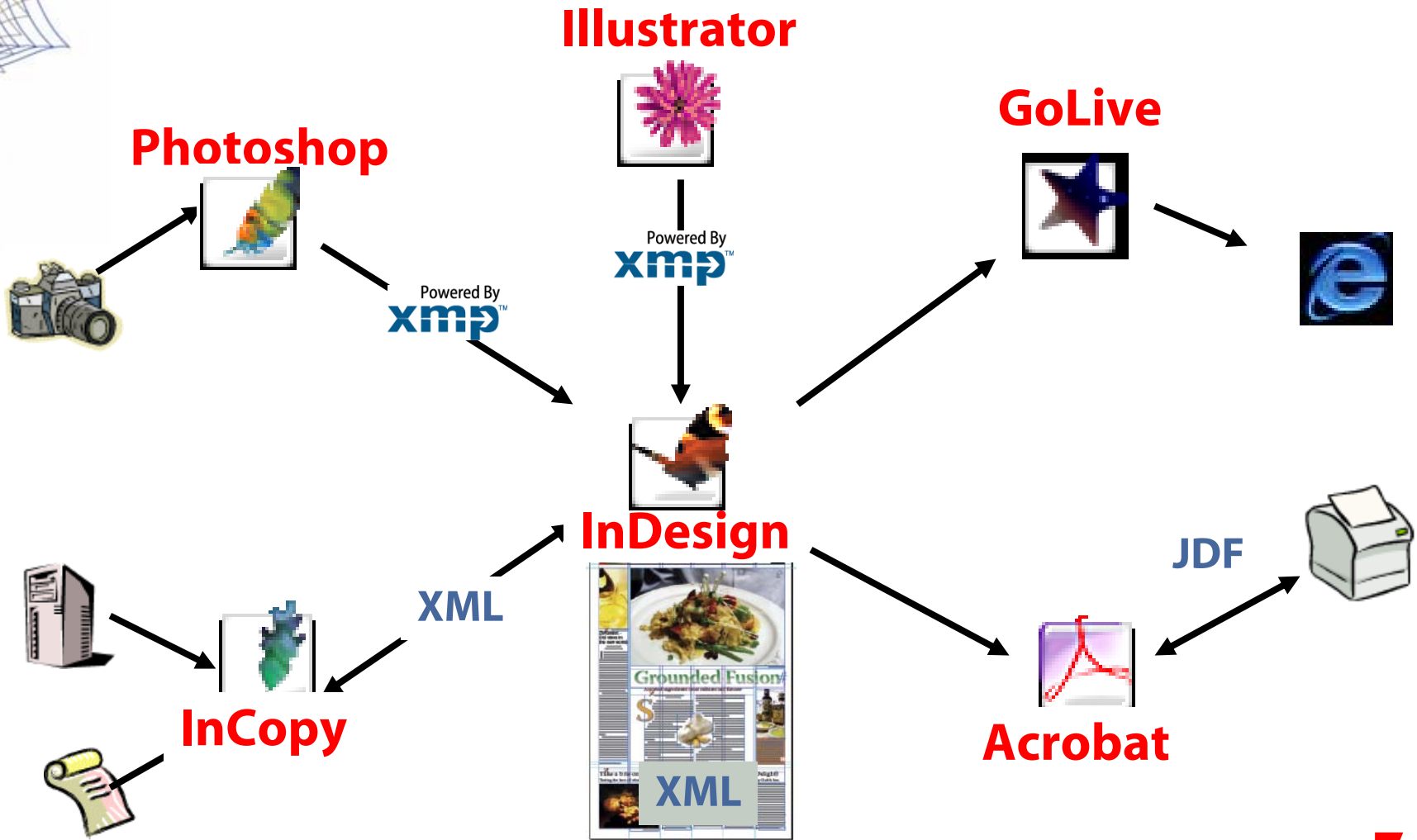
- **Metadata is strategic to digital workflows**
  - To drive efficiencies across multiple processes
  - If you can't describe it, you can't control it
- **XMP enables a common platform**
  - Brings together Adobe products, partner solutions, and **industry standards**
- **XMP enables open information flow**
  - Metadata can be stored within many file formats
  - Framework is extensible



# Adobe's XML Platforms for Publishing

- **XMP** for image and text metadata
- **XML** for page layout templates
- **XML** for content description
- **JDF** for print job production

# Suite Platform for Production





# Adobe's XML Platforms for Publishing

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# What is XMP?

- **Technical description**

“Adobe’s Extensible Metadata Platform (XMP) is a labeling technology that allows you to embed data about a file, known as metadata, into the file itself. XML for metadata”

- **Human description**

*“The message is in the medium”*

- apologies to Marshall McLuhan



# The Need for Intelligent Media

- **Workflows are becoming more digital**
  - Digital camera capture and upload into the production process
  - Desktop publishing and collaboration
  - Output to print, web, CD, handheld, wireless, eBook, RSS, video ...
- **Proliferation of digital assets**
  - Migration from physical and analog to digital
  - Re-use, re-purposing, re-expression of media assets
- **Efficiency is driving data interchange**
  - Rights and usage mgmt between supplier & consumer
  - Standardization for interchange
- **Metadata is a **strategic** advantage**
  - If you can't describe it, you can't control it



# Imagine if your files could talk...

- **You would know where they've been**
  - Store contact info and e-commerce links
- **Whether it's appropriate to use them**
  - License usages, copyright notification
- **They could tell you what happened to them**
  - I've been cropped, rasterized, dithered...
- **Who their relatives and friends are**
  - I'm related to or derivative of this licensed file
- **Where they are going**
  - What expected next in the workflow
- **XMP provides a common language for interchange**

*"XMP - adding intelligence to media"*



# Key Elements of XMP

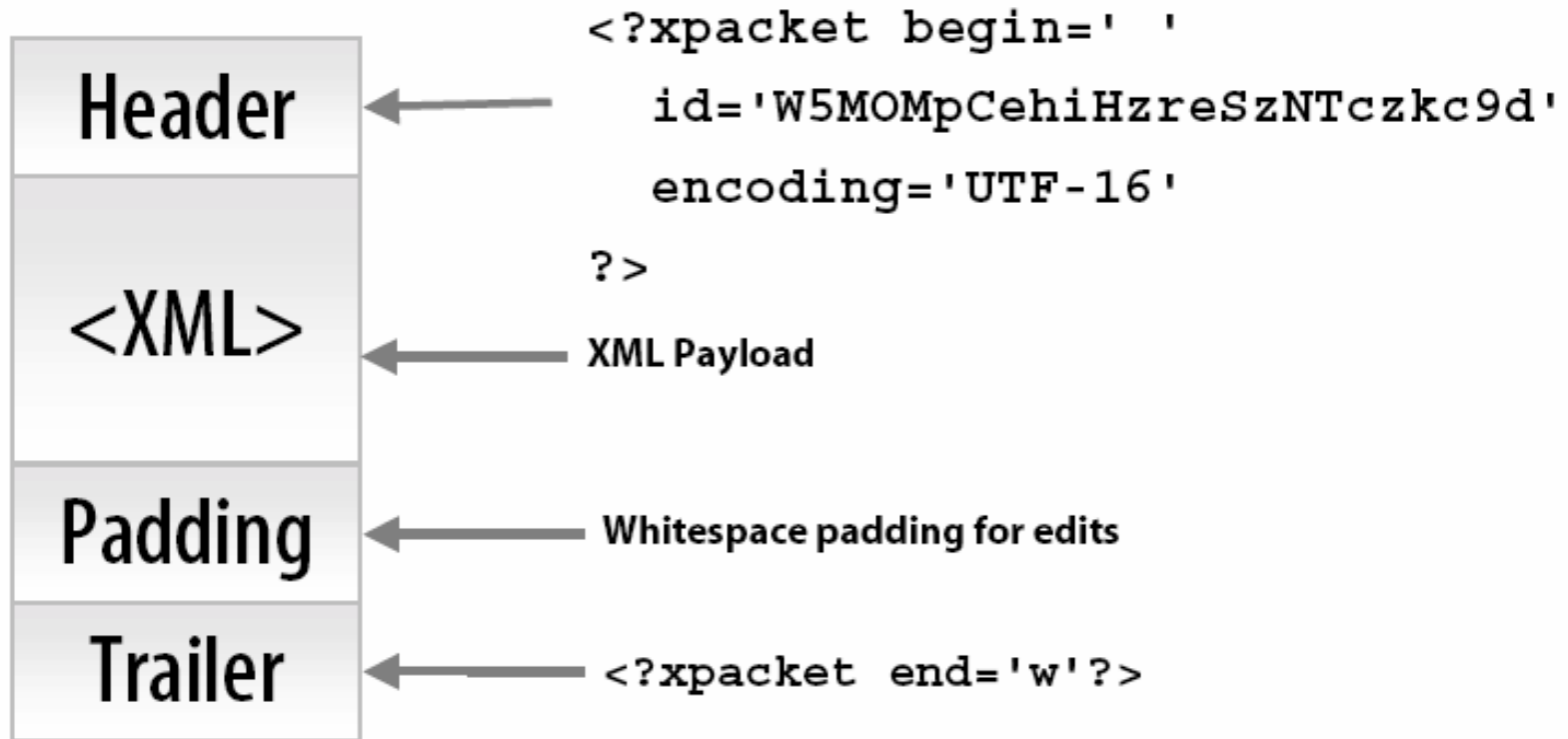
- **Framework**
  - XML structure for storing information
- **Packet**
  - Where information is stored and accessed in the file
- **Specification**
  - Description of relationship to other **standards**
- **Development tool (SDK)**
  - Freely available, **open** source licensed tools
- **Custom Panels User Interface**
  - Human interface interaction with metadata
- **Platform**
  - Standardized access to metadata across Adobe CS



# XMP is Based on RDF

- **RDF: *Resource Description Framework***
- **Framework for metadata**
  - Used to define metadata languages
- **Scalable across domains**
  - Can be serialized in XML, but has important advantages over XML Schema-based languages
    - Mixed vocabularies
    - No order constraints
    - Less “Brittle”

# XMP packet





# Specification

- **Description and relationship to other standards**
- **Namespace & Schema definition**
  - Defines 'built-in' properties supported within Adobe applications & XMP platform
- **Relationship & support of standards**
  - Includes support for Dublin Core, EXIF,...
  - Defines built-in mapping between properties
- **Specification publicly available from Adobe**
- **Namespace**
  - domain of property's existence & applicability
- **Schema**
  - Set of namespaces & properties to describe a standard
  - Expressed as human readable or by structure



# Schema Support in XMP

- Get the latest spec from [adobe.com/xmp](http://adobe.com/xmp)
- Schema support
  - Dublin Core
  - Photoshop (IPTC subset)
  - EXIF
  - Basic XMP
  - Rights Management
  - Media Management
  - Job Ticket Management
  - XMP Page Text
  - Adobe PDF
- File format embedding guidelines



# Custom panels

- **Human interface with metadata**
- **Consistent metadata dialog across CS**
  - Standard view of metadata within workflow
- **Panels defined by text file**
  - Defines the user readable **label** for properties
  - Describes the visual **layout** & interactivity
  - Defines the **storage** of metadata in properties
- **Links data input to data storage structure**
  - Data entered via panel is stored in XMP packet according to panel description
- **Enables standards interoperability & customization**



# Custom Panel Demo



# Standards Update

- **IPTC (IPTC Core)**
  - IPTC standard expressed with XMP framework
  - <http://www.iptc.org>
- **DISC - Digital Image Submission Criteria**
  - Photographers submitting photos to magazines
  - <http://www.disc-info.org/>
- **DNG - Digital Negative Format**
  - For Camera Raw file interchange
  - <http://www.adobe.com/dng/>
- **AdsML – Advertising Submission Standards**
  - Subset of AdsML carried into workflows with XMP
- **PDF/A - Archive**
  - Adopting XMP as metadata archive standard



# IPTC story so far...

- **Legacy support for IIM in Photoshop**
  - IIM fields mapped to XMP namespace
- **Subset of fields stored**
  - TIFF tag locations
  - PSD files in image resource tags
  - Macintosh specific locations
- **Photoshop will synchronize IIM with XMP**

# IIM - XMP Mapping

## Property

photoshop:Caption  
photoshop:Author  
photoshop:Title  
photoshop:Keywords  
photoshop:WebStatement  
photoshop:Copyright  
photoshop:CaptionWriter  
photoshop:Headline  
photoshop:Instructions  
photoshop:AuthorsPosition  
photoshop:Credit  
photoshop:Source  
photoshop:DateCreated  
photoshop:City  
photoshop:State  
photoshop:Country  
photoshop:TransmissionReference  
photoshop:Category  
photoshop:Marked  
photoshop:SupplementalCategories  
photoshop:Urgency  
photoshop:JobName  
photoshop:History (4)

## Type

Text  
ProperName  
Text  
bag Text  
URL  
Text  
ProperName  
Text  
Text  
Text  
Text  
Date  
Text  
Text  
Text  
Text  
Text  
Boolean  
bag Text  
Integer  
Text  
Text

## IIM Record

2:120 Caption/Abstract  
2:80 By-line  
2:05 Object Name  
2:25 Keywords  
2:116 Copyright Notice  
2:122 Writer/Editor  
2:105 Headline  
2:40 Special Instructions  
2:85 By-line Title  
2:110 Credit  
2:115 Source  
2:55 Date Created (1)  
2:90 City  
2:95 Province/State  
2:101 Country/Primary Location Name  
2:103 Original Transmission Reference  
2:15 Category (2)  
2:20 Supplemental Category  
2:10 Urgency (3)

## Alias

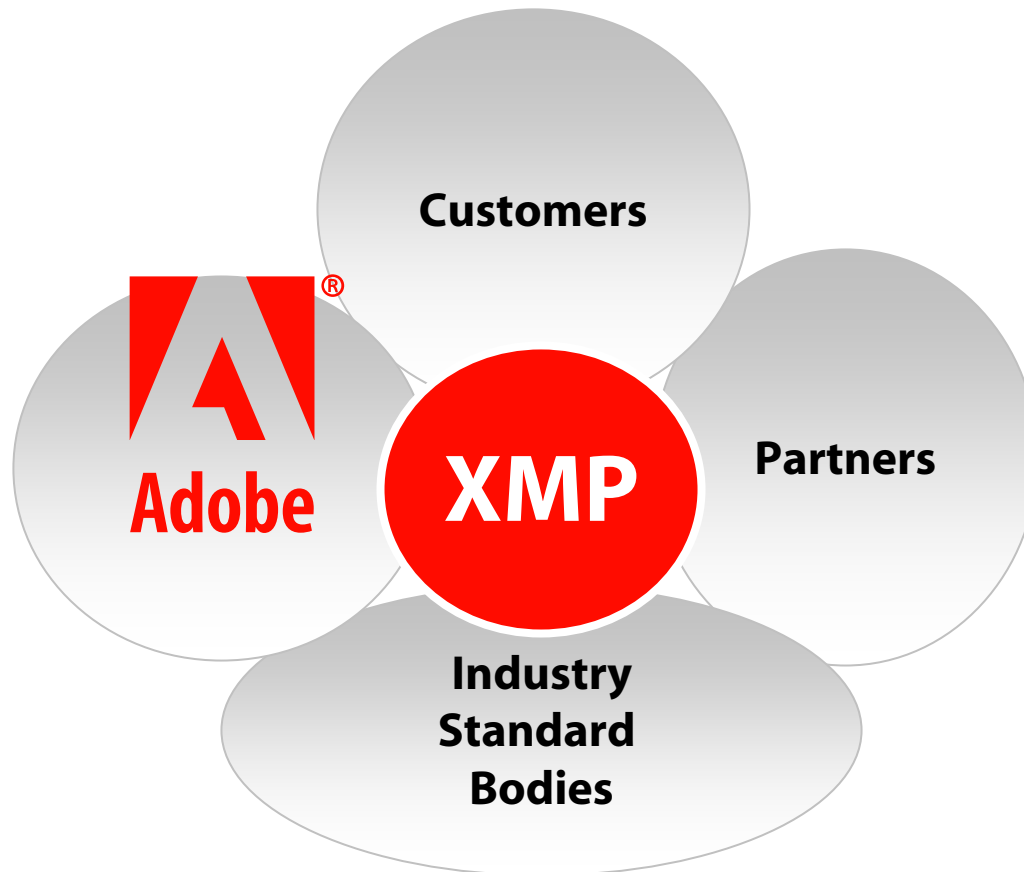
dc:description/\*[@xml:lang='x-default']  
dc:creator/\*[1]  
dc:title/\*[@xml:lang='x-default']  
dc:subject  
xapRights:WebStatement  
dc:rights/\*[@xml:lang='x-default']  
  
xapRights:Marked



# For the manager, design director, industry...

- **Higher quality ingredients, earlier**
  - “Nutrition labels” on files
  - Push preflight earlier upstream - DISC
- **Minimize mistakes**
  - Find file faster, ensure proper file usage, compliance with rights & reuse policies
- **Flexible, open integration platform**
  - Legacy and future extensible, vendor neutral, interoperable
- **Standard bodies implementation vehicle**
  - Create a panel, distribute it, adhere to it

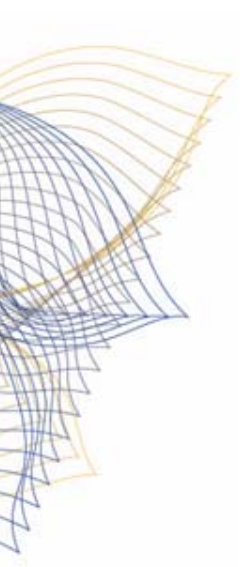
# XMP Ecosystem





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**Better by Adobe.™**