

IPTC

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xmp™

Adding Intelligence to Media

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XMP & IPTC

- **Key concepts to understanding XMP**
- **IIM & XMP legacy support**
- **IPTC4XMP: Using XMP to express IPTC**
- **Implementation considerations**



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.”

- **Human description**

“The message is in the medium”

- apologies to Marshall McLuhan



Metadata - Requirements

Open

Build on standards

Extensible

Support custom
schemas/vocabularies

Universal

Support diverse file formats,
databases & relevant
containers

International

Unicode, multilingual

Robust

Keep metadata with asset



Key Elements of XMP

- **Framework**
 - XML structure for storing information
- **Packet**
 - How and where information is stored and accessed
- **Specification**
 - Description of & relationship to other standards
- **Custom Panels**
 - Human interface interaction with metadata



Framework

- **The structure to store & retrieve metadata**
- **Built on W3C recommendations (standards)**
 - Open, accessible, understandable
 - Common language for information
- **Uses XML for RDF description of data**
 - Provides rich description of data
 - Ease of extensibility and interoperability
 - Non proprietary, non binary, text based
 - International support
 - Customization and standards support

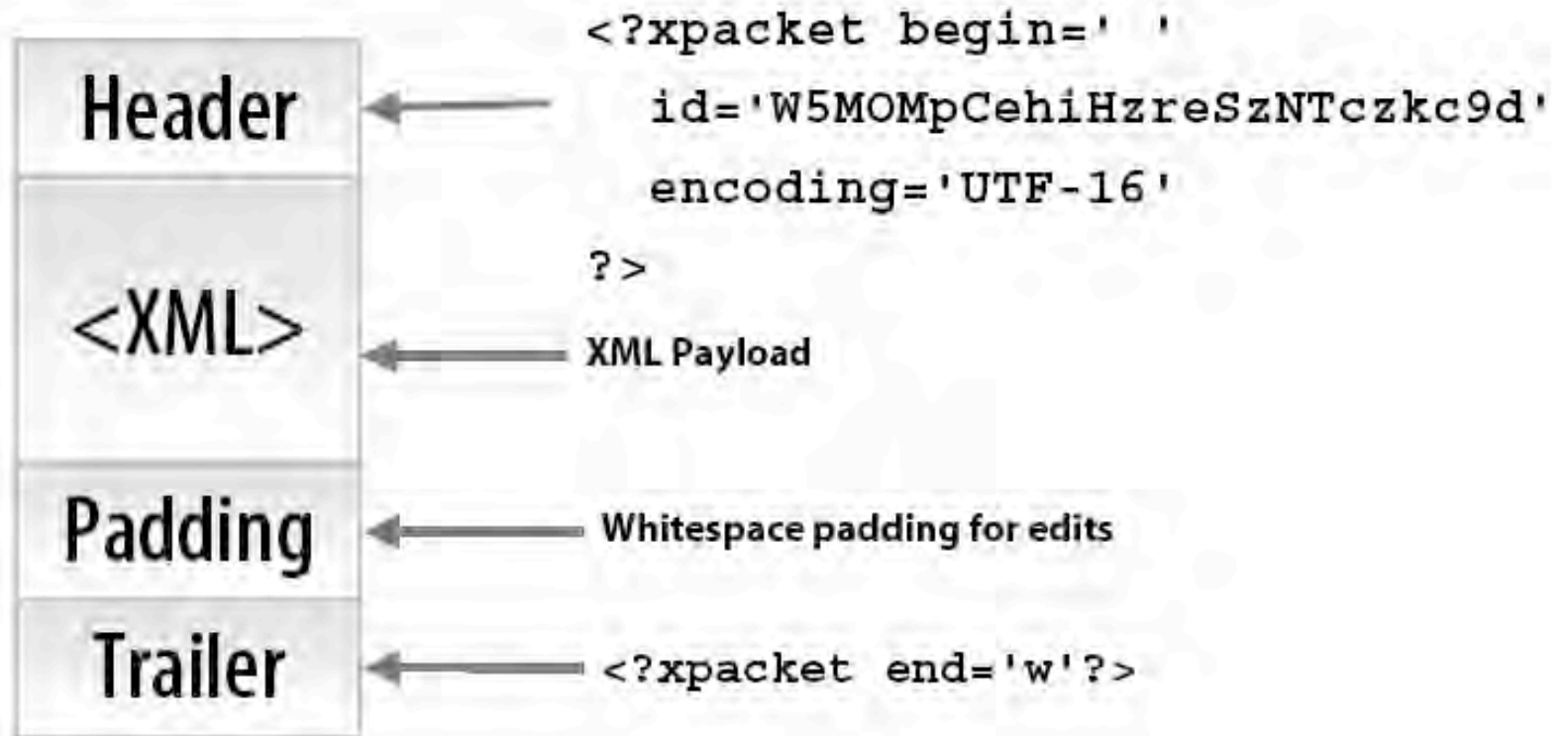


XMP Packet

- **How and where metadata is stored**
- **XML window into binary world**
 - Stored directly within file (also as 'side-cars' files)
 - Easily accessible for reading, writing, updates
- **File format neutral**
 - Stored in the custom data section of files
 - Storage location defined in specification
 - JPG, TIFF, GIF, PDF, EPS, DNG, PSD, AI, INDD, INDC
- **Manifest support**
 - Storage of document and object level metadata
- **Legacy support**
 - Via synchronization routines in applications



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
- 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 panels

- **Standards implementation**
 - Panels can be created, distributed and installed
- **Custom panel dialog**
 - Create metadata templates for frequent, batch input
 - Access to most recently used items
- **3rd Party tools for customization**
 - Pound Hill software for schema & panel development

```
group(placement: place_row, spacing: gSpace, horizontal: align_fill, reverse: rtl_aware)
{
  static_text(name: '$$$/IptcCore/CreatorCity=City:', vertical: align_top, font: font_big_right);

  edit_text(horizontal: align_fill, xmp_namespace: 'http://www.iptc.org/IptcCore/1.0', 'CciAdrCity' );
}
```



Demo

- **Demonstration of custom panels**
- **Demonstration of XMP storage structure**



The 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**
- **Legacy data changes know via MD5**
 - IIM record is uniquely 'remembered'
 - XMP updated if changed



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
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



IPTC4XMP Objectives

- **Definition of Core properties**
 - Review of existing IPTC properties
 - Identification of new properties
- **Backward compatibility with IIM**
 - Continue support of existing expression
 - Definition of new namespace for new properties
- **Interoperability with existing standards**
 - Continued support of namespace 'reuse'
- **Coordination with partners & communities**
 - IDEAlliance participation
 - Developer and partner participation
- **Planning for implementation**
 - Recommended property labels for users
 - Custom panel creation



Workgroup Summary

- **Backward Compatibility**
 - Existing IIM - XMP support remains
 - Supported through photoshop namespace
- **Clarification of existing properties**
 - ByLine Title ->Creator Job Title
 - Caption Writer -> Caption/Description Writer
 - Transmission Ref -> Job ID
 - XMP:RightsUsageTerms -> Rights Usage Terms
- **New properties -Supported through IPTC namespace**
 - Creator contact information
 - ISO Country Code - content related, ISO-3166
 - Intellectual Genre - intellectual/journalistic characteristic
 - Location - location of content subject
 - SubjectReference - IPTC subjectCore ctrl'd vocab



Next Steps

- **Update specification**
 - Public update of XMP specification
 - Reference to IPTC4XMP schema definition
- **Custom panel creation**
 - New panel definition based on working group recommendations
- **Distribution & Feedback**
 - Post panels on IPTC website for installation
 - Support in existing & legacy Adobe products
- **Support in future Adobe products**
 - Build in schema support in applications & SDK



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