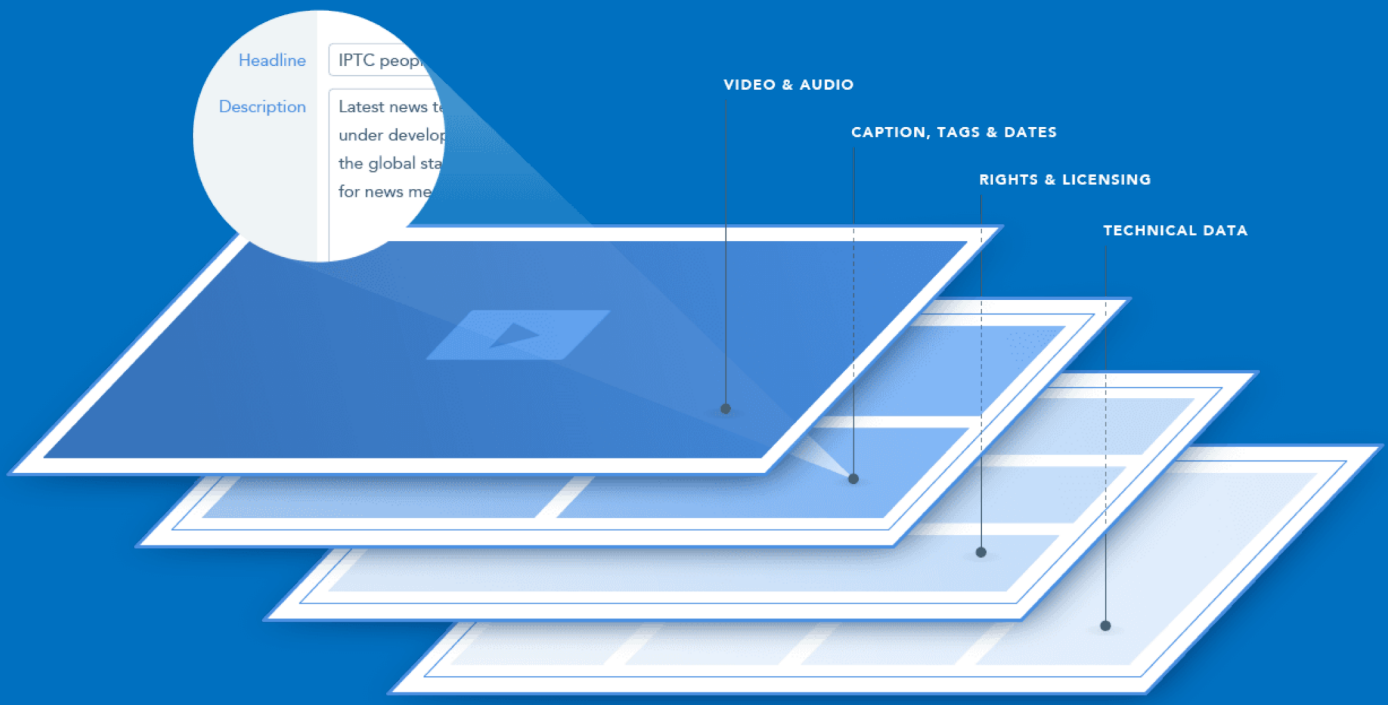
IPTC Video Metadata Hub

A common ground for video management



IPTC's Video Metadata Hub is a **universal metadata schema** developed with the key goal of storing and exchanging metadata in a safe and reliable way.

The Video Metadata Hub is a single set of video metadata properties based on the properties in multiple technical formats, joining metadata across **QuickTime**, **XMP**, **MPEG4**, **MPEG7**, **MXF**, **EBUCore**, **PBCore** and **NewsML-G2** plus manufacturer-specific metadata formats such as **Sony XDCAM** and **Panasonic/SMPTE P2**.

These properties can be used for describing the visible and audible content, rights and licensing information, administrative details and technical characteristics of a video in a system-independent way.

What problem are we solving?

Metadata is stored in different ways in existing video formats. For video editors it is very hard to move video metadata between systems and the semantics are not always clear.

For example, location information can be described as:

- "`location with role=0`" in QuickTime
- "`Creation/location`" in MPEG7
- "`located`" in NewsML-G2
- "`locationCreated`" in schema.org
- "`Shoot/Location`" in SMPTE P2

IPTC Video Metadata Hub describes two fields, **Location Shot** and **Location Shown**, with very clearly defined semantics, and the fields are mapped to fields of existing video formats, so metadata can be moved between systems from different vendors.

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Core properties

The Video Metadata Hub's set of metadata properties includes:

- 23 properties describing what can be seen and heard in the video
- 14 properties providing rights-related information
- 22 properties for administrative purposes
- 26 properties covering technical characteristics
- 15 property structures which are used for the properties listed above.

Each property is defined by:

- a name
- a definition of its semantics
- a basic data type
- a definition how often it may occur in the metadata about a piece of video (cardinality)

Each property can be used to describe a clip within a video or the video as a whole.

Technical implementation

All Video Metadata Hub properties can be expressed by these technical standards:

- EBU Core – for metadata in stand-alone documents associated with the video binary
- XMP – for metadata embedded into the binary video file
- JSON – for standalone and light-weight exchange of metadata, e.g. by APIs

Recommended mappings

Many Video Metadata Hub properties are mapped to properties defined by one or more of these standards, to make implementation easier for vendors:

- Apple QuickTime
- MPEG 7 (ISO 15938-5)
- IPTC NewsML-G2
- EBUCore
- PBCore
- Schema.org
- Sony XDCAM & planning*
- SMPTE P2 as used by Panasonic*
- Canon VideoClip XML*

* new in VMH Recommendation 1.2

How can you help?

- **Software vendors**: implement the standard in your systems to support interoperability. The standard is freely available and free to implement.

- **Broadcasters and video producers**: encourage your software vendors and manufacturers to implement IPTC Video Metadata Hub in their systems.

Contact us

If you would like to implement IPTC Video Metadata Hub, suggest changes or help us spread the word, please contact Brendan Quinn, Managing Director, IPTC at mdirector@iptc.org.

For more details see https://iptc.org/standards/video-metadata-hub/