

# Intel® Video Metadata Framework

## Release notes

VERSION: 3.0

DATE: 2016-06

### NEW FEATURES & BUG-FIXES

- Stat object: a configurable dashboard-like object that coalesces data from added metadata using a number of built-in statistical operations (Last value, Average, Sum, Count, Min/Max) and user-defined ones; it updates asynchronously either on every metadata addition or on the specified time interval or by request.
- Compression: all the metadata can be compressed with the built-in or user-provided algorithm before save to media file or serialize to a string.
- Encryption: metadata can be encrypted with the built-in or user-provided algorithm before save to media file or serialize to a string on the following levels: a field in a metadata record, a complete metadata record, a field in all metadata records of the type, all metadata records of the type, all metadata records of the schema, all metadata records.
- Java API: Java bindings to the C++ API are added to the VMF; they can be used on desktop or in Android project code.
- Test coverage: unit tests coverage is increased to affect all the valuable VMF source code.
- IReader and IWriter interfaces are joined into a simplified Format one.
- Several minor bugs are fixed.
- A new demo is developed (see 'demo' folder), it consists of Android and iOS live streaming parts and Qt-based desktop viewer.

### KNOWN BUGS & LIMITATIONS

- Intel® VMF SDK v 3.0 has binary and source level incompatibilities with 2.x and 1.x versions

VERSION: 2.0

DATE: 2014-12-02

## **NEW FEATURES & BUG-FIXES**

- Switched to XMP CC-201306
- Enabled build for MacOS X and iOS
- Added standard (pre-defined) metadata schema (STD\_DST)
- Added 'optional' attribute to the metadata field
- Added raw binary buffer, vector2d, vector3d, vector4d and array types for fields
- Added metadata and schema export to / import from XML and JSON format (including incremental mode for streaming needs) (libxml2 and libjson are added as 3<sup>rd</sup>-parties)
- Added API for saving and verification of media stream checksum (not all file formats are supported, makes sense for MP4 and 3GP containers)
- Added API for use of timestamp as an alternative association type for frame index
- Added named references support (have to be declared in schema before use)
- Fixed bug in metadata loading causing metadata invalidation, in queryByNameAndValue() function and some others
- Moved C++ headers to 'vmf' subfolder to prevent collision (#include "vmf/vmf.hpp")

## **KNOWN BUGS & LIMITATIONS**

- Intel® VMF SDK v 2.0 has binary and source level incompatibilities with 1.x versions

VERSION: 1.0

DATE: 2014-07-22

## NEW FEATURES & BUG-FIXES

- Added '.3gp' file format support
- Qt samples switched to Qt5
- Added new console sample 'metadata-manipulation'
- Installer maker changed from NSIS to WiX-3.8
- Fixed bug with partially deleted items when calling 'MetadataStream:: remove(MetadataSet&)'
- Workarounded bug with dropped empty metadata fields (now they keep a space symbol)
- 'FindVMF.cmake' script became smarter, VMF-related CMake variables manes became shorter
- Pre-built package for Windows includes static and dynamic VMF lib-s for MSVS 2010, 2012 and 2013 for x86 and x64 targets as well as for armeabi, armeabi-v7a and x86 Android targets

## KNOWN BUGS & LIMITATIONS

- Existing schemas and sets ('MetadataDesc'-s) can't be deleted from stream

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VERSION: 0.7

DATE: 2013-12-11

## **ENHANCEMENTS & NEW FEATURES**

- Updated the samples to the new API: ski resort and photobook (the functionality is the same as mentioned in milestone 3)
- Added the installer package
- Updated the Architecture Design Document
- Updated the User Guide

## **KNOWN BUGS & LIMITATIONS**

VERSION: 0.6

DATE: 2013-11-13

## **ENHANCEMENTS & NEW FEATURES**

- Initial integration of the new API design
- Updated API document description
- Updated unit tests
- Updated Architecture Design Document

## **KNOWN BUGS & LIMITATIONS**

- Metadata can be added to a MetaStream only when the MetaStream is associated with a file (open function is called)
- Open function does not clear metadata in memory
- Clear function (to erase content of MetaStream in memory) is not yet implemented
- Some sections of the User guide are out-of-date

VERSION: 0.5

DATE: 2013-10-08

## **ENHANCEMENTS & NEW FEATURES**

- Implemented relations functionality
- Implemented queries functionality
- Added a Windows installer
- Added relations demo to illustrate how to use relations and queries
- Updated the User Guide: demo application description, new features description, added information about Intel® VMF architecture

## **KNOWN BUGS & LIMITATIONS**

- Samples installed by the installer currently require video files to be copied manually
- If you create the installer in Release mode the Qt-dependant samples crash in Debug mode for some unknown reason

VERSION: 0.4

DATE: 2013-09-10

## **ENHANCEMENTS & NEW FEATURES**

- Implemented metadata shifting functionality
- Implemented metadata consistency functionality
- Implemented functionality to copying metasources, properties and set of items
- Added “version”, “application” and “detector” fields to the Property
- Added two demos: consistency demo and shifting demo to illustrate how to use implemented features
- Added build support for Android platform
- Most of user API is now covered by Doxygen documentation
- Updated the User Guide: demos description, new building instructions
- Updated the Architecture Design Document: description of consistency and metadata shifting functionality

## **KNOWN BUGS & LIMITATIONS**

- In debug mode the samples may work slowly due to limitations of the XMP library (Release mode is recommended)



VERSION: 0.3

DATE: 2013-08-14

## **ENHANCEMENTS & NEW FEATURES**

- Implemented “Photo book” and “Ski resort” samples (in terms of the stage #1 – see the “Samples description” document for more details)
- Added support of structures as a Metadata type
- Implemented relative time associations
- Updated the User Guide: samples description, new building instructions

## **KNOWN BUGS & LIMITATIONS**

- In debug mode the samples may work slowly due to limitations of the XMP library (Release mode is recommended)

VERSION: 0.2

DATE: 2013-07-10

## **ENHANCEMENTS & NEW FEATURES**

- Added support of basic data types (signed and unsigned integer numbers, floating point numbers) and strings
- Implemented basic functionality for metadata insertion and extraction
- Added global properties and properties with associated values (time stamps or/and arrays of frame regions)
- Added basic functionality of metadata values filtration. Supported the following queries: equal, less than, greater than
- Created 2 basic demos illustrating metadata insertion and retrieval functionality
- Prepared an initial version of User Guide

## **KNOWN BUGS & LIMITATIONS**

- Metadata relations are not supported
- Unable to filter values by range
- Unable to clone metadata from one file to another
- Metadata deletion is not supported yet
- In case of working with multiple files at the same time Intel® VMF library can generate incorrect (duplicate) IDs (not a problem as relations are not implemented yet)