Khronos Group Releases OpenMAX IL 1.2 Provisional Specification

The Khronos Group announced the release of OpenMAX IL 1.2 as a provisional specification. OpenMAX IL is a royalty-free, cross-platform C-language API for integration of multimedia components into media frameworks to simplify deployment of audio/video encoders/decoders, camera control, and audio, video and image processing algorithms across diverse platforms. OpenMAX IL 1.2 is a backward compatible upgrade that includes dynamic buffer allocation, improved media graph management, in-band signaling, enhanced audio video synchronization, a wider range of standard components and enhanced camera control capabilities together with many other improvements and clarifications to increase interoperability between media processing components. The specification has been released in provisional form to enable developers and implementers to provide feedback before specification finalization. The OpenMAX IL 1.2 provisional specification is available for immediate download.

OpenMAX IL is the integration layer of the OpenMAX family of APIs for multimedia acceleration and application development. Khronos also provides the OpenMAX AL (Application Layer) API for object oriented access to rich media acceleration, and OpenSL ES for advanced audio capabilities. OpenMAX IL is well suited to provide the base graph building infrastructure for such higher-level APIs. A discussion forum for feedback on the OpenMAX IL specification is available online.

“The mobile market is constantly evolving and demanding ever increasing multimedia functionality and performance. The OpenMAX IL specification enables chipset vendors to take best advantage of their acceleration capabilities and is a key element of the overall Khronos solution for accelerated multimedia. This release is an important milestone, proposing an up-to date version of the specification to implementers, and is a strong base of work for future innovation,” said Thierry Vuillaume, standardization manager at ST-Ericsson CTO Office, and chair of the OpenMAX IL Working Group.

Khronos also today released a VP8 and WebP Codec Component extension for OpenMAX IL 1.1.2, enabling integration of encoders and decoders for VP8, the video codec used in WebM media format, and WebP image encoders and decoders, in existing OpenMAX IL implementations. The VP8 and WebP Codec Component extension is available online.

“OpenMAX IL support offers a straightforward, standardized method for device manufacturers to enable WebM hardware acceleration for playback or recording applications in leading mobile platforms,” commented Aki Kuusela, engineering manager for the WebM Project.

Also today, Khronos released the Content Pipe 1.0 specification. Previously part of

OpenMAX 1.1.2, it is now presented as a standalone specification for use in conjunction with OpenMAX IL, OpenSL ES or OpenMAX AL. The Content Pipe specification abstracts data access to streamline media data transfer, enabling a multimedia system to be built for an arbitrary delivery method without having to deal with the specifics of the delivery details. In addition, the Content Pipe specification allows an application to preprocess the data before sending it to the underlying multimedia framework, such as in the case of proprietary delivery methods of premium media content. The Content Pipe specification is available for download online.

OpenMAX IL 1.2 Capabilities
The new OpenMAX IL 1.2 provisional specification includes the following improvements:
The introduction of dynamic buffer allocation, in addition to statically pre-announced buffers, to enable the usage of OpenMAX IL in a wider range of frameworks;
Improvements in robustness of the graph management, such as the elimination of possible race conditions, and the ability to cancel pending commands to avoid deadlocks;
Additional in-band signaling, and event types, ensuring more efficient integration;
The ability to group and commit multiple configuration settings atomically to ensure change of configuration without visible glitches;
Enhanced reference clock selections, and media time notification mechanism for better audio / video synchronization.

The new OpenMAX IL 1.2 specification also widens the number of standard components to include audio and video technologies such as:

- 3D Audio Mixers;
- AMR WB+ Decoder\Encoder;
- Extended WMA and AMR formats;
- VC1 Video Decoder\Encoder;
- VP8 Video Decoder\Encoder;
- NAL Format support.

The OpenMAX IL 1.2 camera component is also updated with the following advanced capabilities:

- Enhanced Focus Range, Region and Status support;
- Field of View controls;
- Flash status reporting;
- ND Filter support;
- Assistant Light Control support;
- Flicker Rejection support;
- Histogram information;
- Sharpness control;
- Ability to synchronize shutter opening and closing events with audio playback.

More information is available at www.khronos.org [1]

Source URL (retrieved on *04/17/2014 - 12:48pm*):
http://www.ecnmag.com/product-releases/2012/02/khronos-group-releases-openmax-il-12-provisional-specification?qt-most_popular=0

Links:
[1] http://www.khronos.org