OnStream MediaPlayer+ Player API Upgrade

An Application Guide for

All Platforms

SDK Version 3.16

VisualOn, Inc.

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1   Added one function for Android and iOS:

    enableSEIPostProcessVideo

2   Added one callback for Android, iOS, and plug-ins:

**VO_OSMP_SRC_ADAPTIVE_STREAMING_INFO_EVENT_PLAYLIST
_DOWNLOADOK**

1   Added one function for all platforms:
     enableSubtitleAutoAdjustment

2   Added one function for Android:
     enforceSoftwareVideoScaling

1   Added seven functions for Android:
     setSubtitleFontPosition
     setSmoothBAWhiteListFile
     setView
     setSubtitleFontPosition
     setSurface
     resume
     setSubtitleTrim

2   Added three functions for Android and iOS:
     enableAnalyticsFoundationLocation
     getDRMKeyExpiredStatus
     setPreference

3   Added five function for all platforms:
     setAnalyticsFoundationCUID
     setSubtitleGravity
     setSubtitleBoundingBox
     enableAnalyticsFoundation
     setAudioEffectEndpointType

4   Changed two functions for Android:
     resume
     setView

5   Deleted one function for Android:
     setSubtitleFontPosition

6   Added two event IDs for plug-ins:
     VO_OSMP_CB_SUSPEND
     VO_OSMP_CB_RESUME

7   Added three event IDs for all platform:
     VO_OSMP_SRC_RTSP_ERROR_HTTP_ERROR
     VO_OSMP_SRC_RTSP_ERROR_URL_EXPIRED
     VO_OSMP_CB_SUSPEND

8   Added two event IDs for Android and iOS:
     VOOSMP_PID_ANALYTICS_FOUNDATION_LOCATION
     VOOSMP_PID_ANALYTICS_FOUNDATION_CUID

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1   Added five functions for all platform:
      enableHTTPGzipRequest
      getProcessorType
      getErrorCode
      getValidBufferDuration
      getDownloadStatus

2   Added two functions for Android:
      enableSEIPostProcessVideo
      setVolume

3   Deprecated function for iOS and Plugin, to sync up with Android:
      enableDolbyLibrary
      replaced with **enableAudioDecoderLibrary**

4   Deprecated Events for API2:
      VO_OSMP_SRC_CB_SYNC_AUTHENTICATION_DRM_SERVER_INFO VO_OSMP_SRC_CB_SYNC_IO_HTTP_START_DOWNLOAD
      VO_OSMP_SRC_CB_SYNC_IO_HTTP_DOWNLOAD_FAIL
      VO_OSMP_CB_OUTPUT_CONTROL_DOWNGRADE_RESOLUTION
      VOOSMP_CB_Downgrade_Resolution
      VOOSMP_PID_SUBTITLE_DISPALY
      VOOSMP_PID_MEDIACODEC_AUDIO_DECODER

5   Added Events for API2 as replacements:
      VOOSMP_AUDIO_DECODER_TYPE_IOMX
      VOOSMP_PID_AUDIO_DECODER_TYPE
      VO_OSMP_DEC_AUDIO_IOMX
      VOOSMP_PID_SUBTITLE_DISPLAY
      VOOSMP_CB_Output_Control_Change_Resolution
      VO_OSMP_CB_OUTPUT_CONTROL_CHANGE_RESOLUTION
      VO_OSMP_SRC_CB_IO_HTTP_START_DOWNLOAD
      VO_OSMP_SRC_CB_IO_HTTP_DOWNLOAD_FAIL

6   Added function for Android:
      setDRMFilePath

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1 Added four functions for all platform:
getUTCPosition
setRTSPMaxSocketErrorCount
setRTSPConnectionTimeout

2 Added two functions for Android and iOS:
enableAnalyticsDisplay
setAnalyticsDisplayType

3 Added two functions for Android:
getSeriesTitle
enableVOAdaptivePlayback

4 Changed parameters for:
init
open

5 Deleted functions for iOS:
getDRMUniqueIndentifier
setDRMUniqueIndentifier

6 Deleted functions for Android:
getDRMUniqueIndentifier
setDRMUniqueIndentifier
getFileSize
setFileSize

1   Added two functions for output control **isOutputControlActive** and **isOutputControlEnforce**

1   Added functions for iOS:

    enableAudioDecoderLibrary

    setPreferredAudioLanguage

    setPreferredSubtitleLanguage

    setInitialBufferingTime

    setInitialBufferTime

    setMaxBufferingTime

    setMaxBufferTime

2   Added functions for Android:

    enableAudioDecoderLibrary

    setPreferredAudioLanguage

    setPreferredSubtitleLanguage

    setInitialBufferingTime

    setInitialBufferTime

    setMaxBufferingTime

    setMaxBufferTime

    resume

3   Added functions for Plugin:

    enableAudioDecoderLibrary

    setRenderType

4   Deprecated followings for Android and iOS, they will be removed in the future:

    setDefaultAudioLanguage

    setDefaultSubtitleLanguage

    VO_OSMP_SRC_CB_ADAPTIVE_STREAM_WARNING

    VO_OSMP_CB_SRC_BUFFER_TIME

5   Added event IDs :

    VO_OSMP_CB_SRC_BUFFERING_TIME

    VO_OSMP_SRC_CB_ADAPTIVE_STREAMING_WARNING

    VO_OSMP_SRC_FFSTREAMING_PUSHPD

    VO_OSMP_CB_OUTPUT_CONTROL_CAPTURE_SOFTWARE_RUNNING

6   Changed return value for Plugin API. **getPlayingAsset.Returned** JSON content changed.

1   Added functions for iOS:
       notifyViewSizeChanged
       setDefaultAudioLanguage
       setDefaultSubtitleLanguage
2   Added event IDs :
       VO_OSMP_CB_OUTPUT_CONTROL_BLOCK_PLAYBACK
       VO_OSMP_CB_OUTPUT_CONTROL_BLOCK_OUTPUT
       VO_OSMP_CB_OUTPUT_CONTROL_DOWNGRADE_RESOLUTION
       VO_OSMP_OUTPUT_CONTROL_TYPE
       VO_OSMP_CB_CODEC_NOT_SUPPORT

3   Updated comments for **setZoomMode** and **setDisplayArea.**
4   Added **setDRMVerificationInfo, setDRMUniqueIdentifier, setDRMLibrary, getDuration,** and **deleteContent**.

1   Added two keys for **getAudioProperty** API, **"bitrate"** and **"channelcount"**

2   Added error codes :

     VO_OSMP_HTTP_CONNECT_FAILED

     VO_OSMP_HTTP_INVALID_RESPONSE

     VO_OSMP_HTTP_CLIENT_ERROR

     VO_OSMP_HTTP_SERVER_ERROR

3   Added APIs **playbackDuration, registerEventHandler, setOnEventHandler, getTotalCodecDropNum, getTotalDocodedNum, getTotalRenderDropNum, getTotalRenderedNum,** and **getTotalSourceDropNum**

4   Added APIs **getRootURL** and **getURL.**

5   Added API of **setHTTPRetryTimeout**

6   Added types **rootURL/URL/startTime/duration/timeScale** into **VOOSMPChunkInfo**

7   Added events of **VO_OSMP_ERR_MULTIPLE_INSTANCES_NOT_SUPPORTED, VO_OSMP_CB_AUDIO_RENDER_FAIL,** and **VO_OSMP_MODULE_TYPE_DRM_VENDOR_A**

8   Added **setSubtitleTypeface** (Typeface type)

1   Added new method **enableCPUAdaptation.**

2

Cleaned up API categorizations for iOS:

- Moved followings to VOCommonPlayerStatus:

getPlayerType, getPlayerStatus, canBePaused, isLiveStreaming, getPosition, getMinPosition, getMaxPosition, getDuration, getScreenBrightness, getDRMUniqueIndentifier, getDRMUniqueIdentifier, getVersion, and **getSEIInfo**

- Moved followings to VOCommonPlayerAnalytics:

enableAnalytics, startAnalyticsNotification, stopAnalyticsNotification, getAnalytics, getVideoDecodingBitrate, and **getAudioDecodingBitrate**

1   For Android/API3, the arguments of setDRMAdapter() were changed. If you are using this API, you have to modify your code.
     Except for this particular case, others API changes were additions only and do not require changes to code.

2   From V3.7.2, there is a clear distinction between what is selected and what is playing. Please check getCurrentSelection() and getPlayingAsset().

3   From 3.7.10, plugin, the function open added two more parameters. VO_OSMP_SRC_FORMAT sourceType, VOOSMPOpenParam* openParam.
     New added functions: getVideoDecodingBitrate, getAudioDecodingBitrate, getDRMUniqueIdentifier, setDRMUniqueIdentifier.

4   From V3.7.11, there are several functions changed return value. It can provide better debugging information.

API2: license check changed as below.

setParam(VOOSMP_PID_LICENSE_TEXT) is a must for formal licenses (it can be omitted on Android before). The general API call sequence for license check is:

a. init()

b. setParam(VOOSMP_PID_LICENSE_FILE_PATH, "Path here") or setParam(VOOSMP_PID_LICENSE_CONTENT, content)

c. setParam(VOOSMP_PID_LICENSE_TEXT, "License key here")

d. open()

API3: see guidelines below.

1. Type of parameter 1 of VOSyncEvent() was changed from VO_OSMP_CB_EVENT_ID to VO_OSMP_CB_SYNC_EVENT_ID. You must change the type in your code, otherwise you will get a compilation error.

2. VOCommonPlayerControl.open() and VOCommonPlayerControl.init() were overloaded. Use the new one, i.e.
 VO_OSMP_RETURN_CODE open(String url, VO_OSMP_SRC_FLAG flag, VO_OSMP_SRC_FORMAT type, VOOSMPOpenParam openParam);
 VO_OSMP_RETURN_CODE init(VO_OSMP_PLAYER_ENGINE playEngineType, VOOSMPInitParam initParam);

3. If you are using event ID VO_OSMP_SRC_CB_DRM_VERIFICATION, rename it to VO_OSMP_SRC_CB_SYNC_AUTHENTICATION_DRM_SERVER_INFO (It was actually moved from enum VO_OSMP_CB_EVENT_ID to VO_OSMP_CB_SYNC_EVENT_ID).

4. setPreAgreedLicense() is a must for formal licenses (it can be omitted on Android before). The general API call sequence for license check is:

a. init()

b. setLicenseFilePath() or setLicenseContent()

c. setPreAgreedLicense("License key here")

d. open()

5. Known issues:

Event VO_OSMP_SRC_CB_SYNC_IO_HTTP_DOWNLOAD_FAIL is not correct (with wrong Object type);

Implementation of enablePCMOutput() is not complete

Category	Ver	Action	Type	Platform	Name	Description
API3	V3.16.0	change	Event ID	all	VO_OSMP_SRC_ADAPTIVE_STREAMING_INFO_EVENT_PLAYLIST_DOWNLOADOK	callback for accessing the downloaded MasterPlaylist
API3	V3.16.0	add	function	Android, iOS	enableSEIPostProcessVideo	Enable or disable video post-processing with SEI
API3	V3.15.0	add	function	Android	enforceSoftwareVideoScaling	Enable or disable the video scaling using software.
API3	V3.15.0	add	function	all	enablesubtitleAutoAdjustment	Enable or disable the automatic adjustment of font size and position for subtitle.
API3	V3.14.0	add	function	Android, iOS	setPreference	Set preference for playback
API3	V3.14.0	add	function	Android	setSubtitleTrim	Trim String to make subtitle position correct
API2	V3.14.0	add	Event ID	Android, iOS	VOOSMP_PID_ANALYTICS_FOUNDATION_LOCATION	
API3	V3.14.0	add	function	all	setAnalyticsFoundationCUID	
API3	V3.14.0	change	function	Android	resume	Change parameter to Object, in case Surface is used only for video playback
API3	V3.14.0	add	function	Android	setSurface	Add new interface to use Surface for video playback
API3	V3.14.0	add	Event ID	all	VO_OSMP_SRC_RTSP_ERROR_HTTP_ERROR VO_OSMP_SRC_RTSP_ERROR_URL_EXPIRED	
API3	V3.14.0	add	function	all	setSubtitleGravity	Set gravity for subtitle
API3	V3.14.0	add	function	all	setSubtitleBoundingBox	Set bounding box for subtitle
API3	V3.14.0	add	function	Android	setDRMFilePath	Support multiple users with Verimatrix DRM
API3	V3.14.0	add	function	Android, iOS	getDRMKeyExpiredStatus	Add new interface to check license expiration of downloaded content
API3	V3.14.0	deprecated	function	Android	setSubtitleFontPosition	Rename to setSubtitleBoundingBox
API3	V3.14.0	change	function	Android	setView	Use voSurfaceView
API3	V3.14.0	add	function	all	setAudioEffectEndpointType	Speaker endpoint settings
API3	V3.14.0	add	Event ID	Plug-ins	VO_OSMP_CB_SUSPEND	Support session control events
API3	V3.14.0	add	Event ID	Plug-ins	VO_OSMP_CB_RESUME	Support session control events
API3	V3.14.0	add	function	Android	setSmoothBAWhiteListFile	Add device.xml related interface implementation
API3	V3.14.0	add	function	Android	setSubtitleFontPosition	Set position for subtitle
API3	V3.13.0	add	function	all	getValidBufferDuration	
API3	V3.13.0	add	function	all	getDownloadStatus	
API3	V3.13.0	add	function	Android	enableSEIPostProcessVideo	
API3	V3.13.0	add	function	all	enableHTTPGzipRequest	
API3	V3.13.0	add	function	Android	setVolume	
API3	V3.13.0	add	function	all	getProcessorType	
API3	V3.13.0	add	function	all	getErrorCode	
API3	V3.13.0	deprecated	function	iOS, Plugin	enableDolbyLibrary	sync up with Android: Replaced by enableAudioDecoderLibrary
API3	V3.13.0	add	Event ID	all	VO_OSMP_SRC_CB_IO_HTTP_START_DOWNLOAD VO_OSMP_SRC_CB_IO_HTTP_DOWNLOAD_FAIL	

Category	Ver	Action	Type	Platform	Name	Description
API3	V3.13.0	deprecated	Event ID	all	VO_OSMP_SRC_CB_SYNC_AUTHENTICATION_DRM_SERVER_INFO VO_OSMP_SRC_CB_SYNC_IO_HTTP_START_DOWNLOAD VO_OSMP_SRC_CB_SYNC_IO_HTTP_DOWNLOAD_FAIL	replaced with above new added events
API2	V3.13.0	add	Event ID	all	VO_OSMP_CB_OUTPUT_CONTROL_CHANGE_RESOLUTION	
API2	V3.13.0	deprecated	Event ID	all	VO_OSMP_CB_OUTPUT_CONTROL_DOWNGRADE_RESOLUTION	replaced with above new added event
API2	V3.13.0	add	Event ID	Android,iOS	VOOSMP_CB_Output_Control_Change_Resolution	
API2	V3.13.0	deprecated	Event ID	Android,iOS	VOOSMP_CB_Downgrade_Resolution	replaced with above new added event
API2	V3.13.0	add	Event ID	Android	VO_OSMP_DEC_AUDIO_IOMX	
API2	V3.13.0	add	Event ID	iOS	VOOSMP_PID_SUBTITLE_DISPLAY	
API2	V3.13.0	deprecated	Event ID	iOS	VOOSMP_PID_SUBTITLE_DISPALY	replaced with VOOSMP_PID_SUBTITLE_DISPLAY
API2	V3.13.0	add	Event ID	Android	VOOSMP_AUDIO_DECODER_TYPE_IOMX	
API2	V3.13.0	add	Event ID	Android	VOOSMP_PID_AUDIO_DECODER_TYPE	
API2	V3.13.0	deprecated	Event ID	Android	VOOSMP_PID_MEDIACODEC_AUDIO_DECODER	replaced by VOOSMP_PID_AUDIO_DECODER_TYPE
API3	V3.12.0	add	function	all	getUTCPosition	
API3	V3.12.0	add	function	Android	enableVOAdaptivePlayback	
API3	V3.12.0	add	function	all	setRTSPMaxSocketErrorCount	
API3	V3.12.0	add	function	all	setRTSPConnectionTimeout	
API3	V3.12.0	add	function	Android	getSeriesTitle	
API3	V3.12.0	add	function	Android,iOS	enableAnalyticsDisplay	
API3	V3.12.0	add	function	Android,iOS	setAnalyticsDisplayType	
API3	V3.12.0	change	function	all	init	
API3	V3.12.0	change	function	all	open	
API3	V3.12.0	delete	function	Android,iOS	getDRMUniqueIndentifier	
API3	V3.12.0	delete	function	Android,iOS	setDRMUniqueIndentifier	
API3	V3.12.0	delete	function	Android	getFileSize	
API3	V3.12.0	delete	function	Android	setFileSize	
API3	V3.11.10	add	function	all	isOutputControlActive	
API3	V3.11.10	add	function	all	isOutputControlEnforce	
API3	V3.11.0	deprecated	Event ID	Android,iOS	VO_OSMP_CB_SRC_BUFFER_TIME	replaced with VO_OSMP_CB_SRC_BUFFERING_TIME
API3	V3.11.0	add	Event ID	Android,iOS	VO_OSMP_CB_SRC_BUFFERING_TIME	
API3	V3.11.0	deprecated	Event ID	Android,iOS	VO_OSMP_SRC_CB_ADAPTIVE_STREAM_WARNING	replaced with VO_OSMP_SRC_CB_ADAPTIVE_STREAMING_WARNING
API3	V3.11.0	add	Event ID	Android,iOS	VO_OSMP_SRC_CB_ADAPTIVE_STREAMING_WARNING	

Category	Ver	Action	Type	Platform	Name	Description
API3	V3.11.0	add	Event ID	all	VO_OSMP_CB_OUTPUT_CONTROL_CAPTURE_SOFTWARE_RUNNING	
API3	V3.11.0	add	function	all	enableAudioDecoderLibrary	
API3	V3.11.0	add	function	Android	resume	
API3	V3.11.0	deprecated	function	Android,iOS	setDefaultAudioLanguage	**replaced with setPreferredAudioLanguage**
API3	V3.11.0	deprecated	function	Android,iOS	setDefaultSubtitleLanguage	**replaced with setPreferredSubtitleLanguage**
API3	V3.11.0	add	function	Android,iOS	setPreferredAudioLanguage	
API3	V3.11.0	add	function	Android,iOS	setPreferredSubtitleLanguage	
API3	V3.11.0	add	Event ID	Android,iOS	VO_OSMP_SRC_FFSTREAMING_PUSHPD	
API3	V3.11.0	add	function	Android,iOS	setInitialBufferingTime	
API3	V3.11.0	deprecated	function	Android,iOS	setInitialBufferTime	
API3	V3.11.0	add	function	Android,iOS	setMaxBufferingTime	
API3	V3.11.0	deprecated	function	Android,iOS	setMaxBufferTime	
API3	V3.11.0	change	function	Plugin	getPlayingAsset	return value JSON object content changed
API3	V3.11.0	add	function	Plugin	setRenderType	
API3	V3.10.0	add	Event ID	all	VO_OSMP_CB_CODEC_NOT_SUPPORT	
API3	V3.10.0	add	Event ID	Android,iOS	VO_OSMP_CB_OUTPUT_CONTROL_BLOCK_OUTPUT	
API3	V3.10.0	add	Event ID	Android,iOS	VO_OSMP_CB_OUTPUT_CONTROL_BLOCK_PLAYBACK	
API3	V3.10.0	add	Event ID	Android,iOS	VO_OSMP_CB_OUTPUT_CONTROL_DOWNGRADE_RESOLUTION	
API3	V3.10.0	add	Event ID	Android,iOS	VO_OSMP_OUTPUT_CONTROL_TYPE	
API3	V3.10.0	add	function	all	setDefaultAudioLanguage	
API3	V3.10.0	add	function	all	setDefaultSubtitleLanguage	
API3	V3.10.0	add	function	Android,iOS	deleteContent	
API3	V3.10.0	add	function	Android,iOS	getDuration	
API3	V3.10.0	add	function	Android,iOS	setDRMLibrary	
API3	V3.10.0	add	function	Android,iOS	setDRMUniqueIdentifier	
API3	V3.10.0	add	function	Android,iOS	setDRMVerificationInfo	
API3	V3.10.0	add	function	iOS	notifyViewSizeChanged	
API3	V3.10.0	change	function	iOS	setDisplayArea	only change on comment.
API3	V3.10.0	change	function	iOS	setZoomMode	only change on comment.
API3	V3.9.3	add	add	all	VO_OSMP_ERR_MULTIPLE_INSTANCES_NOT_SUPPORTED	new return code
API3	V3.9.3	add	data	Plugin	VOOSMPChunkInfo	add type/rootURL/URL/startTime/duration/timeScale
API3	V3.9.3	add	Event ID	all	VO_OSMP_MODULE_TYPE_DRM_VENDOR_A	
API3	V3.9.3	add	Event ID	Android,iOS	VO_OSMP_CB_AUDIO_RENDER_FAIL	
API3	V3.9.3	add	function	all	getPlayebackDuration	
API3	V3.9.3	change	function	all	getRootURL	
API3	V3.9.3	add	function	all	getTotalCodecDropNum	
API3	V3.9.3	add	function	all	getTotalDocodedNum	
API3	V3.9.3	add	function	all	getTotalRenderDropNum	

Category	Ver	Action	Type	Platform	Name	Description
API3	V3.9.3	add	function	all	getTotalRenderedNum	
API3	V3.9.3	add	function	all	getTotalSourceDropNum	
API3	V3.9.3	change	function	all	getURL	
API3	V3.9.3	add	function	all	setHTTPRetryTimeout	
API3	V3.9.3	add	function	Android	setSubtitleTypeface	
API3	V3.9.3	add	function	Android, iOS	previewSubtitle	
API3	V3.9.3	change	function	Android, iOS	startAnalyticsNotification	Removed to PlayerControl
API3	V3.9.3	change	function	Android, iOS	stopAnalyticsNotification	Removed to PlayerControl
API3	V3.9.3	change	function	Plugin	playbackDuration	
API3	V3.9.3	change	function	Plugin	registerEventHandler	
API3	V3.9.3	change	function	Plugin	setOnEventHandler	
API3	V3.9.0	add	function	all	enableRTSPOverHTTP	
API3	V3.9.0	add	function	all	getRTSPStatistics	
API3	V3.9.0	add	function	all	setRTSPOverHTTPConnectionPort	
API3	V3.9.0	add	function	all	setSegmentDownloadRetryCount	
API3	V3.9.0	add	function	Android	setSurfaceHolder	
API3	V3.8.3	add	function	all	enableCPUAdaptation	default is Enabled.
API3	V3.7.11	change	function	Android	getmProxyHost	returns String
API3	V3.7.11	change	function	Android	getmProxyPort	returns int
API3	V3.7.11	change	function	Android	setDataFlag	returns VO_OSMP_RETURN_CODE
API3	V3.7.11	change	function	Android	setmProxyHost	returns VO_OSMP_RETURN_CODE
API3	V3.7.11	change	function	Android	setmProxyPort	returns VO_OSMP_RETURN_CODE
API3	V3.7.11	change	function	Android	setResponseString	returns VO_OSMP_RETURN_CODE
API3	V3.7.11	change	function	Android	setVerificationString	returns VO_OSMP_RETURN_CODE
API3	V3.7.10	add	function	all	getAudioDecodingBitrate	
API3	V3.7.10	add	function	all	getDRMUniqueIdentifier	
API3	V3.7.10	add	function	all	getVideoDecodingBitrate	
API3	V3.7.10	add	function	all	setDRMUniqueIdentifier	
API3	V3.7.10	change	function	Plugin	open	new added with parameters VO_OSMP_SRC_FORMAT sourceType, VOOSMPOpenParam* openParam. They are null by default.
API3	V3.7.7	add	Event ID	Android	VO_OSMP_AD_CB_PLAYBACKINFO	
API3	V3.7.7	add	function	all	enableLiveStreamingDVRPosition	The function will extend usage of getPosition, getMinPosition, getMaxPosition
API3	V3.7.6	add	Event ID	iOS	VO_OSMP_SRC_CB_PD_BUFFERING_PERCENT	
API3	V3.7.6	add	Event ID	iOS	VO_OSMP_SRC_CB_PD_DOWNLOAD_POSITION	
API3	V3.7.6	add	function	Android	addTrackingServer	
API3	V3.7.6	add	function	Android	enableFullScreen	
API3	V3.7.6	add	function	Android, iOS	enableSEI	
API3	V3.7.6	add	function	Android, iOS	getSEIInfo	
API3	V3.7.6	add	function	Android, iOS	startSEINotification	
API3	V3.7.6	add	function	Android, iOS	stopSEINotification	

Category	Ver	Action	Type	Platform	Name	Description
API3	V3.7.6	add	function	iOS	captureVideoImage	
API3	V3.7.5	add	function	Android	setAdTrackingAPI	
API3	V3.7.5	add	function	Plugin	getDRMUniqueIndentifier	
API3	V3.7.5	add	function	Plugin	showCursor	
API3	V3.7.4	add	constant	Android, iOS	VO_OSMP_SEI_INFO_FLAG	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_AD_END	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_AD_LOAD_ERROR	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_AD_START	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_CONTENT_END	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_CONTENT_START	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_DATA_LOAD_ERROR	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_NO_AD_CONTENT	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_PLAYLIST_END	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_PLAYLIST_START	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_STATE_CHANGE	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_VIDEO_DONE	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_VIDEO_GEO_BLOCKED	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_VIDEO_NOT_AVAILABLE	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_CB_VIDEO_PROGRESS	
API3	V3.7.4	add	Event ID	Android	VO_OSMP_AD_STATUS	
API3	V3.7.4	add	Event ID	Android, iOS	VO_OSMP_CB_SEI_INFO	
API3	V3.7.4	add	Event ID	Plugin	VO_OSMP_SRC_CB_SYNC_AUTHENTICATION_DRM_SERVER_INFO	
API3	V3.7.4	add	Event ID	Plugin	VO_OSMP_SRC_CB_SYNC_IO_HTTP_DOWNLOAD_FAIL	
API3	V3.7.4	add	Event ID	Plugin	VO_OSMP_SRC_CB_SYNC_IO_HTTP_START_DOWNLOAD	
API3	V3.7.4	add	function	Android	getVideoAdClickThru	
API3	V3.7.4	add	function	Android	loadAdCall	
API3	V3.7.4	add	function	Android	loadVideoByUrl	
API3	V3.7.4	add	function	Android, iOS	enableSEI	
API3	V3.7.4	add	function	Android, iOS	getSEIInfo	
API3	V3.7.4	add	function	Android, iOS	startSEINotification	
API3	V3.7.4	add	function	Android, iOS	stopSEINotification	
API3	V3.7.3	add	function	Android	loadVideoById	
API3	V3.7.2	add	constant	all	VO_OSMP_RATIO_AUTO	
API3	V3.7.2	add	constant	all	VO_OSMP_RATIO_ORIGINAL	
API3	V3.7.2	rename	constant	Android, Plugin	INDEX_VIDEO_AUTO	Rename to VO_OSMP_ASSET_AUTO_SELECTED
API3	V3.7.2	add	constant	Android, Plugin	VO_OSMP_ASSET_NOT_SELECTED	
API3	V3.7.2	add	Event ID	all	VO_OSMP_SRC_CB_NOT_APPLICABLE_MEDIA	

Category	Ver	Action	Type	Platform	Name	Description
API3	V3.7.2	change	function	all	getPlayingAsset	Return the actual indices of video/audio/subtitle tracks which are being played. 1. If a track is being played, its index is returned through VOOSMPAssetIndex. 2. If no track of a specific type (mostly likely subtitle) is being played, then the corresponding index in VOOSMPAssetIndex is set to VO_OSMP_ASSET_NOT_SELECTED.
API3	V3.7.2	add	function	all	setAnewBufferingTime	
API3	V3.7.2	add	function	Android, Plugin	getCurrentSelection	
API3	V3.7	add	Event ID	Plugin	VO_OSMP_CB_FULLSCREEN_INDICATOR	
API3	V3.7	add	function	all	Configuration::setPresentationDelay	
API3	V3.7	change	function	Android	setDRMAdapter	Argument changed: from setDRMAdapter(int adapter) to setDRMAdapter(Object adapter, boolean isLibraryName)
API3	V3.7	add	function	Android, iOS	Configuration::getVersion	For plugin, use .version property of plug in object instead
API3	V3.7	add	function	iOS	getCurrentSelection	
API3	V3.7	add	function	Plugin	isFullScreen	
API3	V3.7	add	function	Plugin	toggleOverlayUI	
API3	V3.6	add	Error Code	all	VO_OSMP_ERR_LICENSE_FAIL	
API3	V3.6	add	Event ID	all	VO_OSMP_CB_LICENSE_FAIL	
API3	V3.6	add	Event ID	all	VO_OSMP_CB_PCM_OUTPUT	
API3	V3.6	rename	Event ID	all	VO_OSMP_SRC_CB_DRM_VERIFICATION	to VO_OSMP_SRC_CB_SYNC_AUTHENTICATION_DRM_SERVER_INFO
API3	V3.6	add	function	all	Configuration: setAudioPlaybackSpeed	
API3	V3.6	change	function	all	onVOSyncEvent	type of argument 1: from VO_OSMP_CB_EVENT_ID to VO_OSMP_CB_SYNC_EVENT_ID
API3	V3.6	add	function	Android	OpenParam: getDecoderType	
API3	V3.6	add	function	Android	OpenParam: setDecoderType	
API3	V3.6	add	function	Android, iOS	Buffer: getBuffer	
API3	V3.6	add	function	Android, iOS	Buffer: getBufferSize	
API3	V3.6	add	function	Android, iOS	Buffer: getTimestamp	
API3	V3.6	add	function	Android, iOS	Configuration: enablePCMOutput	
API3	V3.6	add	function	Android, iOS	Configuration: setDRMAdapter	
API3	V3.6	add	function	Android, iOS	HTTPDownloadFailure: getReason	
API3	V3.6	add	function	Android, iOS	HTTPDownloadFailure: getResponse	
API3	V3.6	add	function	Android, iOS	HTTPDownloadFailure: getURL	
API3	V3.6	add	function	Plugin	Control: setOnEventHandler	
API3	V3.6	add	function	Plugin	RTSPConfiguration: getRTSPStatistics	
API3	V3.6	add	function	Plugin	RTSPConfiguration: setRTSPConnectionPort	
API3	V3.6	add	function	Plugin	RTSPConfiguration: setRTSPConnectionType	
API3	V3.5	overload	function	all	Control:init	
API3	V3.5	overload	function	all	Control:open	
API3	V3.5	add	function	all	onVOSyncEvent	

Category	Ver	Action	Type	Platform	Name	Description
API2	V3.10.0	add	Param ID	Android, iOS	VOOSMP_PID_OUTPUT_CONTROL_ACTIVE	
API2	V3.10.0	add	Param ID	Android, iOS	VOOSMP_PID_OUTPUT_CONTROL_ENFORCE	
API2	V3.7.4	add	Event ID	Android	VOOSMP_PID_SUBTITLE_TIME_OFFSET	
API2	V3.7.2	add	constant	Android, iOS	VOOSMP_RATIO_2331	API3 already has it
API2	V3.7.2	add	constant	Android, iOS	VOOSMP_RATIO_AUTO	
API2	V3.7.2	add	constant	Android, iOS	VOOSMP_RATIO_ORIGINAL	
API2	V3.7.2	add	Event ID	Android, iOS	VOOSMP_SRC_CB_Not_Applicable_Media	
API2	V3.7	add	Event ID	Android, iOS	VOOSMP_SRC_CB_DRM_Init_Data	
API2	V3.7	add	Event ID	Plugin	VOOSMP_CB_FullScreen	
API2	V3.7	add	Param ID	Android, iOS	VOOSMP_PID_DRM_UNIQUE_IDENTIFIER	
API2	V3.7	add	Param ID	Android, iOS	VOOSMP_PID_MODULE_VERSION	
API2	V3.7	add	Param ID	Android, iOS	VOOSMP_SRC_PID_PRESENTATION_DELAY	
API2	V3.6	add	Error Code	all	VOOSMP_ERR_LicenseFailed	
API2	V3.6	add	Event ID	all	ID_STREAMING_VOLIBLICENSEERROR	
API2	V3.6	add	Event ID	all	VOOSMP_CB_LicenseFailed	
API2	V3.6	add	Param ID	all	VOOSMP_PID_AUDIO_PLAYBACK_SPEED	
API2	V3.6	define	Param ID	all	VOOSMP_PID_MODULE_VERSION	
API2	V3.6	add	Param ID	all	VOOSMP_SRC_PID_DRM_ADAPTER_OBJECT	

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Action	Description
add	type/constant/function added
remove	type/constant/function removed
change	argument changed in a function
rename	function renamed; constant renamed or moved from one enum to another
define	defined, but not really used or not implemented
overload	added function with same name but different arguments
deprecated	not recommended, will be remvoed in the future.