

Tizen® 3.0

Crosswalk APIs for IVI

Version 1.0

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Revision History

Revision	Date	Author	Reason for Changes
v0.1	05 Dec. 2014	Crosswalk Engineering	Initial version
v3.0	19 Dec. 2014	Crosswalk Engineering	Changed Time and Web settings requirements from optional to required. Changed version to match release (3.0)

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1. Overview

This specification defines the APIs and features that Crosswalk implements and supports in the Tizen 3.0 IVI release, 2014. These implemented features MUST be implemented by Tizen Compliant IVI solutions.

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2. APIs

The following section defines APIs supported by Crosswalk (version 11) for Tizen 3.0 IVI.

The “Maturity” column indicates the specification state. The order is as follows (WD is least mature and most likely to change or not become standardized):

- WD: Working draft
- LCWD: Last Call Working Draft
- CR: Candidate Recommendation
- PR: Proposed Recommendation
- REC: W3C Recommendation

More details here: <http://www.w3.org/2005/10/Process-20051014/tr.html#maturity-levels>.

2.1. W3C / HTML5 APIs

These APIs are defined in W3C specifications. Crosswalk support is indicated by the “Supported” column.

Sub-Category	Spec	Maturity	3.0 IVI (Crosswalk 11) spec version	Supported and Required
DOM, Forms and Styles	CSS Animations	WD	http://www.w3.org/TR/2013/WD-css3-animations-20130219/	Yes
DOM, Forms and Styles	CSS Backgrounds and Borders Level 3	CR	http://www.w3.org/TR/2014/CR-css3-background-20140909/	Yes
DOM, Forms and Styles	CSS Color Module Level 3	REC	http://www.w3.org/TR/2011/REC-css3-color-20110607/	Yes
DOM, Forms and Styles	CSS Flexible Box Layout	WD	http://www.w3.org/TR/2014/WD-css-flexbox-1-20140925/	Yes
DOM, Forms and Styles	CSS Fonts Level 3	CR	http://www.w3.org/TR/2013/CR-css-fonts-3-20131003/	Yes
DOM, Forms and Styles	CSS Multi-column Layout	CR	http://www.w3.org/TR/2011/CR-css3-multicol-20110412/	Yes

DOM, Forms and Styles	CSS Text Decoration Level 3	CR	http://www.w3.org/TR/2013/CR-css-text-decor-3-20130801/	No
DOM, Forms and Styles	CSS Transforms	WD	http://www.w3.org/TR/2013/WD-css-transforms-1-20131126/	Yes
DOM, Forms and Styles	CSS Transitions	WD	http://www.w3.org/TR/2013/WD-css3-transitions-20131119/	Yes
Graphics	HTML5 The canvas element (Partial)	CR	http://www.w3.org/TR/2014/CR-2dcontext-20140821/	Yes
Graphics	HTML Canvas 2D Context (Partial)	CR	http://www.w3.org/TR/2012/WD-2dcontext-20120329/	Yes
Media	HTML5 Audio	REC	http://www.w3.org/TR/2014/REC-html5-20141028/	Yes
Media	HTML5 Video	REC	http://www.w3.org/TR/2014/REC-html5-20141028/	Yes
DOM, Forms and Styles	Media Queries Level 3	REC	http://www.w3.org/TR/2012/REC-css3-mediaqueries-20120619/	Yes
Graphics	HTML5 SVG	CR	http://www.w3.org/TR/2011/REC-SVG11-20110816/	Yes
Storage	File API	ED	http://dev.w3.org/2006/webapi/FileAPI/	Yes
Storage	File API: Directories and System	ED	http://dev.w3.org/2009/dap/file-system/file-dir-sys.html	Yes
Storage	File API: Writer	ED	http://dev.w3.org/2009/dap/file-system/file-writer.html	Yes
Communication	HTML5 Web Messaging	CR	http://www.w3.org/TR/2012/CR-webmessaging-20120501/	Yes
Storage	Indexed DB	ED	https://dvcs.w3.org/hg/IndexedDB/raw-file/tip/Overview.html	Yes
Device	Online State	ED	http://www.w3.org/html/wg/drafts/html/CR/browsers.html#browser-state	Yes
Storage	Web SQL	Note	http://www.w3.org/TR/2010/NOTE-webdatabase-20101118/	Yes
Communication	Web Sockets	CR	http://www.w3.org/TR/2012/CR-websockets-20120920/	Yes
Storage	Web Storage	REC	http://www.w3.org/TR/2013/REC-webstorage-20130730/	Yes

Communication	XMLHttpRequest	WD	http://www.w3.org/TR/2014/WD-XMLHttpRequest-20140130/	Yes
Performance and Optimization	Navigation Timing	REC	http://www.w3.org/TR/2012/REC-navigation-timing-20121217/	Yes
DOM, Forms and Styles	Selectors Level 1	REC	http://www.w3.org/TR/2013/REC-selectors-api-20130221/	Yes
DOM, Forms and Styles	Selectors Level 2	Note	http://www.w3.org/TR/2013/NOTE-selectors-api2-20131017/	Yes
Performance and Optimization	Web Workers	CR	http://www.w3.org/TR/2012/CR-workers-20120501/	Yes
Device	Device Orientation Events	WD	http://www.w3.org/TR/2011/WD-orientation-event-20111201/	No
Location	Geolocation	REC	http://www.w3.org/TR/2013/REC-geolocation-API-20131024/	Yes
Device	Screen Orientation	WD	http://www.w3.org/TR/2014/WD-screen-orientation-20141023/	Yes
Device	Touch Events	REC	http://www.w3.org/TR/2013/REC-touch-events-20131010/	Yes
Device	Vibration	CR	http://www.w3.org/TR/2014/CR-vibration-20140909/	No
DOM, Forms and Styles	CSS Basic User Interface Module Level 3	WD	http://www.w3.org/TR/2012/WD-css3-ui-20120117/	Yes
DOM, Forms and Styles	WOFF File Format 1.0	REC	http://www.w3.org/TR/2012/PR-WOFF-20121011/	Yes
Multimedia & Graphics	DOM/JavaScript related HTML5 Enhancements	CR	http://www.w3.org/TR/2011/WD-html5-20110525/common-dom-interfaces.html	Yes
Media	HTML Media Capture	LCWD	http://www.w3.org/TR/2012/WD-html-media-capture-20120712	No
Device & Hardware	HTML5 Forms (Partial)	CR	http://www.w3.org/TR/2012/WD-html5-20121025/the-form-element.html#the-form-element	Yes
Device	Battery Status API	LCWD	http://www.w3.org/TR/2014/WD-battery-status-20140828/	No
Media	getUserMedia(Partial)	ED	http://dev.w3.org/2011/webRTC/editor/getusermedia-20111130.html	Yes

Media	Web Audio API (Partial)	WD	http://www.w3.org/TR/2012/WD-webaudio-20121213/	Yes
Communication	HTML5 The session history of browsing contexts (Partial)	CR	http://www.w3.org/TR/2012/WD-html5-20121025/history.html#the-history-interface	Yes
Storage	HTML5 Application caches	WD	http://www.w3.org/TR/2012/WD-html5-20120329/offline.html#appcache	Yes
Device	Network Information API	ED	http://w3c.github.io/netinfo/	No
Performance and Optimization	Page Visibility	CR	http://www.w3.org/TR/2012/CR-page-visibility-20120726/	Yes
Performance and Optimization	Timing control for script-based animations	CR	http://www.w3.org/TR/2013/CR-animation-timing-20131031/	Yes
Security	HTML5 The iframe element	CR	http://www.w3.org/TR/2012/WD-html5-20121025/the-iframe-element.html?path=5_2_8#the-iframe-element	Yes
Security	Cross-Origin Resource Sharing	LCWD	http://www.w3.org/TR/2012/WD-cors-20120403	Yes
Security	Content Security Policy 1.0 (Partial)	CR	http://www.w3.org/TR/2012/CR-CSP-20121115/	Yes
UI	HTML5 Drag and drop (Partial)	WD	http://www.w3.org/TR/2012/WD-html5-20120329/dnd.html	Yes
UI	Clipboard API and events (Partial)	WD	http://www.w3.org/TR/2012/WD-clipboard-apis-20120223/	Yes
UI	Web Notifications (Partial)	WD	http://www.w3.org/TR/2012/WD-notifications-20120614	Yes
Communication	Server-Sent Events	WD	http://www.w3.org/TR/2011/WD-eventsourcing-20111020/	Yes
Widget	Widget Packaging and XML Configuration	REC	http://www.w3.org/TR/2011/REC-widgets-20110927/	Yes
Widget	Widget Interface	WD	http://www.w3.org/TR/2011/WD-widgets-apis-20110607/	Yes
Widget	XML Digital Signatures for Widgets	PR	http://www.w3.org/TR/2011/PR-widgets-digsig-20110811/	Yes
Widget	Widget Access Request Policy	REC	http://www.w3.org/TR/2012/REC-widgets-access-20120207/	Yes

Runtime & Packaging	app: URI	ED	http://www.w3.org/2012/sysapps/app-uri/	No
Multimedia & Graphics	WebRTC	WD	http://www.w3.org/TR/2013/WD-webrtc-20130910/	Yes
Performance & Optimization	Resource Timing	CR	http://www.w3.org/TR/2014/CR-resource-timing-20140624/	Yes
Experimental APIs	Device Capabilities	ED	http://www.w3.org/2012/sysapps/device-capabilities/	No
Experimental APIs	Raw Sockets	WD	http://www.w3.org/TR/2013/WD-raw-sockets-20130514/	No
Multimedia & Graphics	CSS Device Adaptation	ED	<a href="http://dev.w3.org/csswg/css-device-adapt/#the-<u>lsquomin-width</u>rsquo-and-<u>lsquomax-wid</u>">http://dev.w3.org/csswg/css-device-adapt/#the-<u>lsquomin-width</u>rsquo-and-<u>lsquomax-wid</u>	No
Device & Hardware	Web NFC API	WD	http://www.w3.org/TR/2014/WD-nfc-20140114/	Yes
Networking & Storage	Web Speech	Final Report	https://dvcs.w3.org/hg/speech-api/raw-file/tip/speechapi.html	Yes
Performance & Optimization	High Resolution Time	REC	http://www.w3.org/TR/2012/REC-hr-time-20121217/	Yes
Performance & Optimization	Performance Timeline	REC	http://www.w3.org/TR/2013/REC-performance-timeline-20131212/	Yes
Performance & Optimization	User Timing	REC	http://www.w3.org/TR/2013/REC-user-timing-20131212/	Yes

2.2. Vehicle APIs

These APIs are defined in the W3C Vehicle API specifications.

Sub-Category	Spec	Maturity	3.0 IVI (Crosswalk 11) spec version	Supported and Required
Vehicle	Vehicle Information Access API	Draft Report	https://rawgit.com/w3c/automotive-bq/master/vehicle_spec.html	Yes
Vehicle	Vehicle Data	Draft Report	http://rawgit.com/tripzero/automotive-bq/master/data_spec.html	Yes

2.3. Tizen Device APIs

These API are defined in the Tizen Device specifications as listed below.

Sub-Category	Spec	Maturity	3.0 IVI (Crosswalk 11) spec version	Supported and Required
	Tizen	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Ftizen.html	Yes
	Application	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fapplication.html	Yes
	Notification	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fnotification.html	Yes
	Bookmark	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fbookmark.html	Yes
	Alarm	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Falarm.html	Yes
	DataControl	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fdatacontrol.html	Optional
	Package	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fpackage.html	Yes
	Bluetooth	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fbluetooth.html	Yes
	Messaging	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fmessaging.html	Optional
	Network Bearer Selection	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fnetworkbearerselection.html	Optional
	NFC	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fnfc.html	Optional
	Push	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fpush.html	Optional
	SecureElement	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fse.html	Optional
	Content	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fcontent.html	Yes
	Download	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fdownload.html	Yes
	Filesystem	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Ffilesystem.html	Yes

	MessagePort	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fmessageport.html	Yes
	Calendar	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fcalendar.html	Optional
	Callhistory	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fcallhistory.html	Optional
	Contact	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fcontact.html	Optional
	Data Synchronization	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fdatasync.html	Optional
	Power	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fpower.html	Yes
	System Info	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fsysteminfo.html	Yes
	System Settings	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Fsystemsetting.html	Yes
	Time	2.3 Release	https://developer.tizen.org/dev-guide/2.2.0/?topic=%2Forg.tizen.web.device.apireference%2Ftizen%2Ftime.html	Yes
	Web Setting	2.3 Release	https://developer.tizen.org/help/topic/org.tizen.web.device.apireference/tizen/websetting.html	Yes

2.4. Supplementary APIs

These APIs are defined as Tizen Supplementary.

Sub-Category	Spec	Maturity	3.0 IVI (Crosswalk 11) spec version	Supported and Required
	Typed Array 1.0	ED	https://www.khronos.org/registry/typedarray/specs/latest/	Yes
	Fullscreen	Living Standard	https://fullscreen.spec.whatwg.org/	Yes
	WebGL - Khronos (Partial)	1.0 Release	https://www.khronos.org/registry/webgl/specs/1.0/	Yes
	Viewport Meta Tag	REC	https://developer.apple.com/library/safari/documentation/appleapplications/reference/SafariHTMLRef/Articles/MetaTags.html	Yes

2.5. Other

These APIs are defined as “Tizen Other” and are NOT required for compliance. These APIs are provided to extend platform capabilities but are neither part of any W3C group nor official Tizen device APIs.

Sub-Category	Spec	Maturity	3.0 IVI (Crosswalk 11) spec version	Supported and Required
Crosswalk Feature	Single Signon	WD	https://code.google.com/p/accounts-ssso/source/browse/widl/signon.widl?repo=libg-signon-glib&name=devel	No
Device & Hardware	The Audio System API		https://wiki.tizen.org/wiki/User:Tanuk/AudioSystemAPI#The_Audio_System_API	No
IVI/Common Feature	Media Server API	Unofficial Draft	http://01org.github.io/cloud-dleyna/mediaserver.html	No
IVI/Common Feature	Media Renderer API	Unofficial Draft	http://01org.github.io/cloud-dleyna/mediarenderer.html	No
IVI/Common Feature	Locale API		https://bugs.tizen.org/jira/browse/TC-1813	No
Experimental APIs	Launch Screen		https://crosswalk-project.org/documentation/manifest/launch_screen.html	No
Experimental APIs	SIMD		https://github.com/johnmccutchan/ecmascript_simd	No
Device & Hardware	Native Client		https://crosswalk-project.org/jira/browse/XWALK-1214	No
IVI/Common Feature	Network WEBAPI		https://wiki.tizen.org/wiki/WiNet_Architecture	No
	AMB DBus API		https://github.com/otcshare/automotive-message-broker/blob/0.12/docs/amb.idl	No