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Apache Cordova

Apache Cordova (formerly **PhoneGap**) is a mobile application development framework originally created by Nitobi. Adobe Systems purchased Nitobi in 2011, rebranded it as PhoneGap, and later released an open source version of the software called Apache Cordova.[8] Apache Cordova enables software programmers to build applications for mobile devices using CSS3, HTML5, and JavaScript instead of relying on platform-specific APIs like those in Android, iOS, or Windows Phone.[9] It enables wrapping up of CSS, HTML, and JavaScript code depending upon the platform of the device. It extends the features of HTML and JavaScript to work with the device. The resulting applications are hybrid, meaning that they are neither truly native mobile application (because all layout rendering is done via Web views instead of the platform's native UI framework) nor purely Web-based (because they are not just Web apps, but are packaged as apps for distribution and have access to native device APIs). Mixing native and hybrid code snippets has been possible since version 1.9.

The software was previously called just "PhoneGap", then "Apache Callback".[10][11] As open-source software, Apache Cordova allows wrappers around it, such as Appery.io or Intel XDK.

PhoneGap is Adobe's commercial version of Cordova along with its associated ecosystem. Many other tools and frameworks are also built on top of Cordova, including Ionic,[12] Monaca, TACO, Onsen UI, Visual Studio, GapDebug, App Builder, Cocoon, Framework7, Quasar Framework, Evothings Studio, NSB/AppStudio, Mobiscroll, the Intel XDK,[13] and the Telerik Platform.[14] These tools use Cordova, and not PhoneGap for their core tools.

Contributors to the Apache Cordova project include Adobe, BlackBerry, Google, IBM, Intel, Microsoft, Mozilla, and others.[15]

Apache Cordova	
Original author(s)	Joe Bowser, Michael Brooks, Rob Ellis, Dave Johnson, Anis Kadri, Brian Leroux, Jesse MacFadyen, Filip Maj, Eric Oesterle, Brock Whitten, Herman Wong, Shazron Abdullah
Initial release	2009
Stable release	9.0.0 / March 20, 2019[1][2][3]
Written in	C#, C++, CSS, HTML, Java, JavaScript and Objective-C
Platform	Android, iOS, Windows 8.1, Phone 8.1 and 10, OS X,[4] Electron (software framework) **Deprecated Platforms:** BlackBerry, Firefox OS, Symbian, Ubuntu Touch, webOS, Windows Phone 7.0 and 8.0[5]
Available in	English
Type	mobile development framework
License	Apache License 2.0[6][7]
Website	cordova.apache.org (https://cordova.apache.org)

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History

First developed at an iPhoneDevCamp event in San Francisco,[16] PhoneGap went on to win the People's Choice Award at O'Reilly Media's 2009 Web 2.0 Conference,[17] and the framework has been used to develop many apps.[18] Apple Inc. has confirmed that the framework has its approval, even with the change to clause 3.3.1 of the Apple iPhone SDK developer license agreement 4.0 adopted in 2010.[19] The PhoneGap framework is used by several mobile application platforms such as Monaca,[20] appMobi,[21] Convertigo,[22][23] ViziApps,[24] and Worklight[25][26] as the backbone of their mobile client development engine.

Adobe officially announced the acquisition of Nitobi Software (the original developer) on October 4, 2011.[27] Coinciding with that, the PhoneGap code was contributed to the Apache Software Foundation to start a new project called Apache Cordova. The project's original name, Apache Callback, was viewed as too generic.[28] Then, it also appears in Adobe Systems as *Adobe PhoneGap* and also as *Adobe PhoneGap Build*.[29] The Phonegap Blog shows more details, why finally the name "Cordova" was chosen. It says: "While genesis stories of PhoneGap often vary with the teller, most committers can agree the project was born at Nitobi, when the office was on Cordova Street in Vancouver."[30][31]

Early versions of PhoneGap required an Apple computer to create iOS apps and a Windows computer to create Windows Mobile apps. After September 2012, Adobe's PhoneGap Build service allows programmers to upload CSS, HTML, and JavaScript source code to a "cloud compiler" that generates apps for every supported platform.[32]

Design and rationale

The core of an Apache Cordova application uses CSS3 and HTML5 for rendering and JavaScript for logic. HTML5 provides access to underlying hardware such as the accelerometer, camera, and GPS. However, browsers' support for HTML5-based device access is not consistent across mobile browsers, particularly older versions of Android. To overcome these limitations, Apache Cordova embeds the HTML5 code inside a native WebView on the device, using a foreign function interface to access the native resources of it.[33]

Apache Cordova can be extended with native plug-ins (http://docs.phonegap.com/en/3.0.0/guide_hybrid_plugins_index.md.html#Plugin%20Development%20Guide), allowing developers to add more functionalities that can be called from JavaScript, making it communicate directly between the native layer and the HTML5 page. These plugins allow access to the device's accelerometer, camera, compass, file system, microphone, and more.

However, the use of Web-based technologies leads some Apache Cordova applications to run slower than native applications with similar functionality.[34] Adobe Systems warns that applications built with Apache Cordova may be rejected by Apple for being too slow or not feeling "native" enough (having appearance and functionality consistent with what users have come to expect on the platform).[35][36]

Supported platforms

As of version 9, Apache Cordova currently supports development for the operating systems Apple iOS,Google Android, Windows 8.1, Windows Phone 8.1 , Windows 10 and Electron (software framework) (which in turn runs on Windows, Linux and macOS). Earlier version of Apache Cordova used to support Bada, BlackBerry, Firefox OS,[37][38] LG webOS, Microsoft Windows Phone (7 and 8), Nokia Symbian OS, Tizen (SDK 2.x), and Ubuntu Touch. The table below is a list of supported features for each operating system for Adobe PhoneGap/ Apache Cordova 3.[39][40]

Feature	Android[41]	Apple iPhone /iPhone 3G	Apple iPhone 3GS and newer	Bada	BlackBerry 10 and PlayBook OS	BlackBerry OS 4.6–4.7	BlackBerry OS 5.0-6.0+	Firefox OS	Symbian	Tizen	webOS	Ubuntu Touch
Accelerometer	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes
Camera	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes
Compass	Yes	N/A	Yes	Yes	Yes	N/A	N/A	Yes	N/A	Yes	Yes	Yes
Contacts	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes	N/A	N/A
File	Yes	Yes	Yes	N/A	Yes	N/A	Yes	N/A	N/A	Yes	N/A	Yes
Geolocation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Media	Yes	Yes	Yes	N/A	Yes	N/A	N/A	N/A	N/A	Yes	N/A	Yes
Network	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Notification (alert, sound, vibration)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Storage	Yes	Yes	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes

See also

- List of rich Internet application frameworks
- Multiple phone web-based application framework
- RhoMobile Suite
- Cocos2d
- WinJS

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External links

- Official website (https://cordova.apache.org/) 🖉