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WebRTC Native APIs

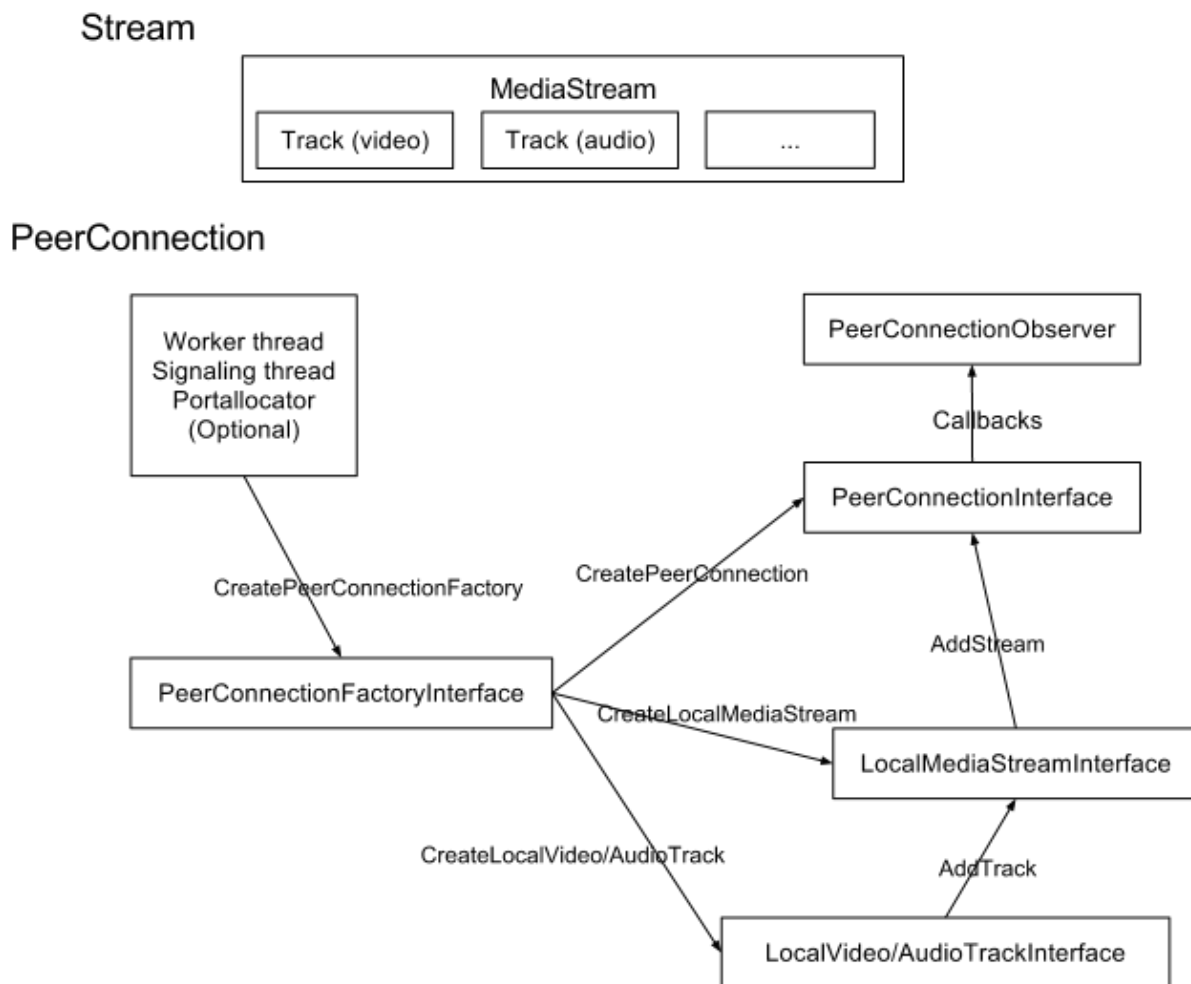
The WebRTC Native APIs implementation is based on W3C's **WebRTC 1.0: Real-time Communication Between Browsers** (<http://w3c.github.io/webrtc-pc/>).

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The code that implements WebRTC Native APIs (including the `Stream` and `PeerConnection` APIs) are available here (<https://chromium.googlesource.com/external/webrtc/+master/talk/app/webrtc>). A sample client application (<https://chromium.googlesource.com/external/webrtc/+master/webrtc/examples/peerconnection>) is also provided.

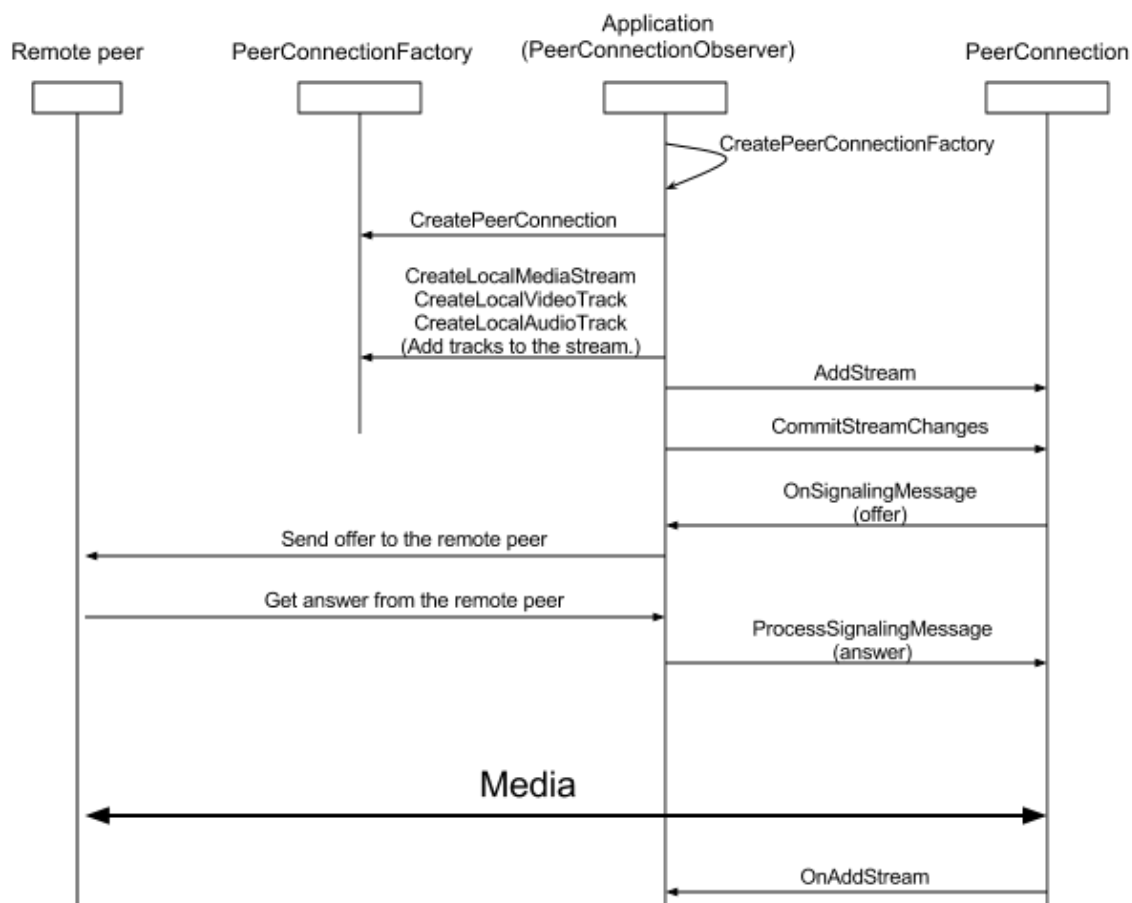
The target audience of this document are those who want to use WebRTC Native APIs to implement WebRTC JavaScript APIs or to develop native RTC applications.

Block Diagram

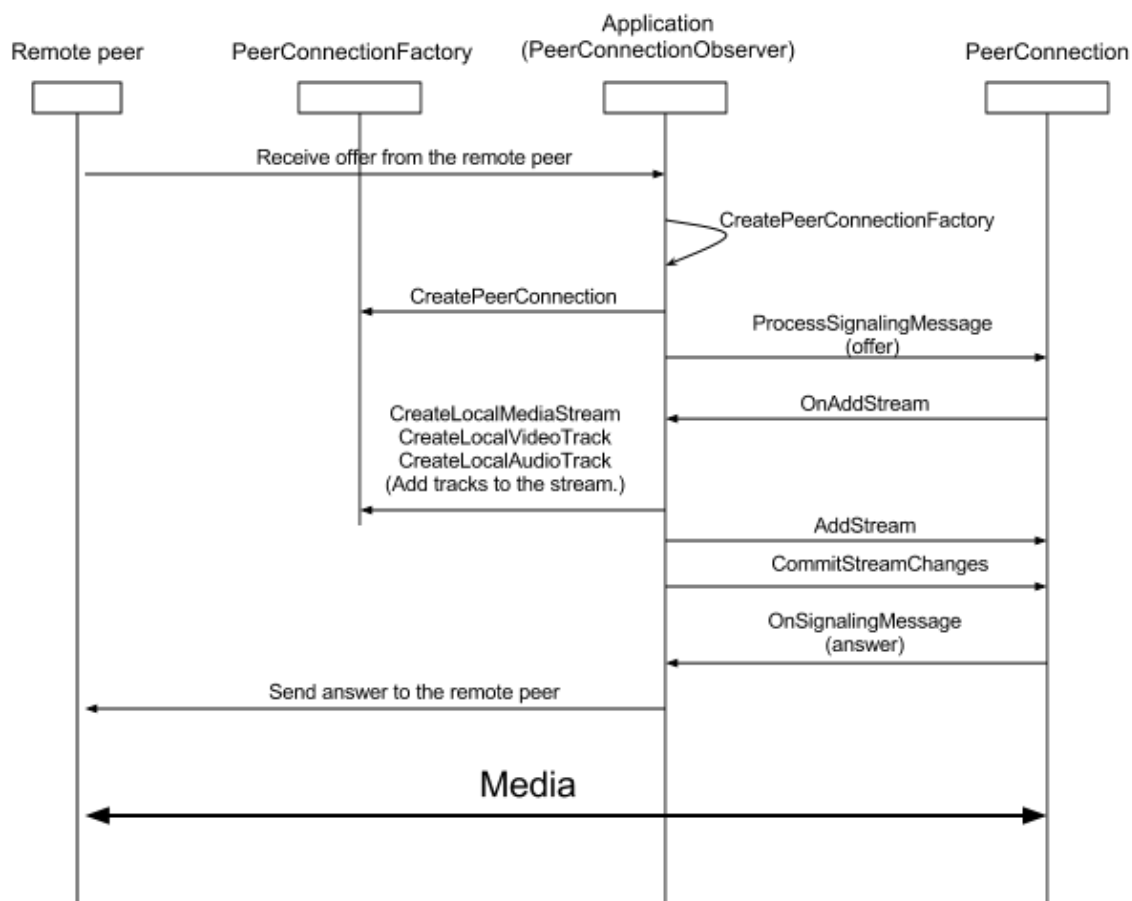


Calling Sequences

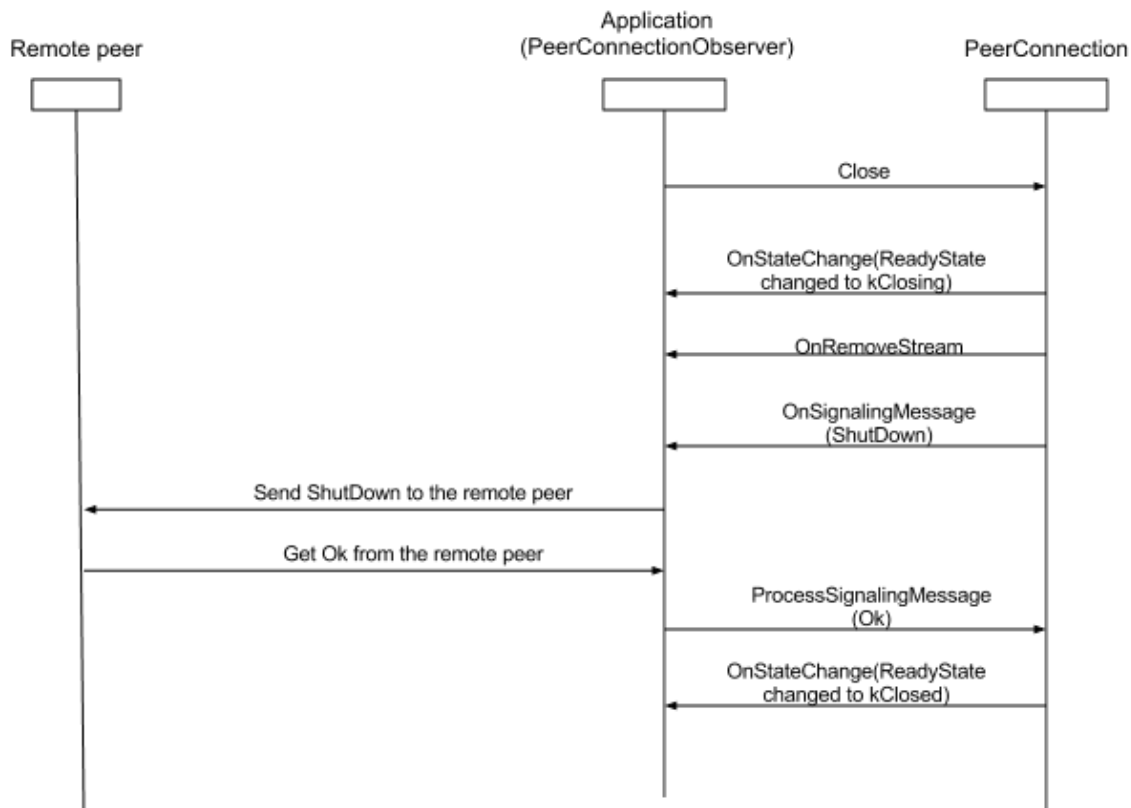
Set up a call



Receive a Call



Close Down a Call



Threading Model

WebRTC Native APIs use two globally available threads: the signaling thread and the worker thread. Depending on how the PeerConnection factory is created, the application can either provide those two threads or just let them be created internally.

Calls to the Stream APIs and the PeerConnection APIs will be proxied to the signaling thread, which means that an application can call those APIs from whatever thread.

All callbacks will be made on the signaling thread. The application should return the callback as quickly as possible to avoid blocking the signaling thread. Resource-intensive processes should be posted to a different thread.

The worker thread is used to handle more resource-intensive processes, such as data streaming.

- Stream APIs (mediastream.h
(<https://chromium.googlesource.com/external/webrtc/+master/talk/app/webrtc/mediastream.h>))
- PeerConnection APIs (peerconnection.h
(<https://chromium.googlesource.com/external/webrtc/+master/talk/app/webrtc/peerconnection.h>))

Reference

The current HTML5 specification for WebRTC is here:

<http://dev.w3.org/2011/webrtc/editor/webrtc.html>
(<http://dev.w3.org/2011/webrtc/editor/webrtc.html>)

The source code of the WebRTC Native API is here:

<https://chromium.googlesource.com/external/webrtc/+master/talk/app/webrtc>
(<https://chromium.googlesource.com/external/webrtc/+master/talk/app/webrtc>)

Client and server sample apps can be found here:

<https://chromium.googlesource.com/external/webrtc/+master/talk/examples>
(<https://chromium.googlesource.com/external/webrtc/+master/talk/examples>)

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