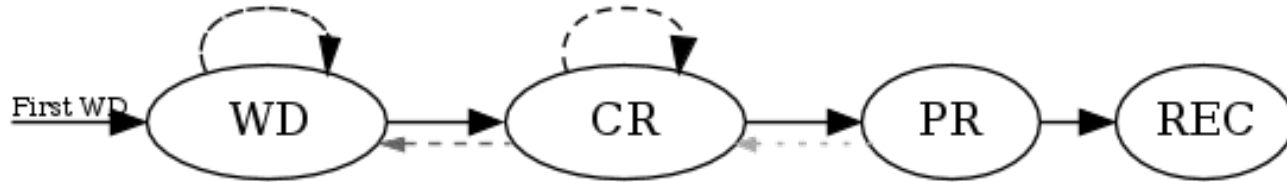# WebRTC-NV

Bernard Aboba
Principal Architect, Microsoft

WebRTC Hacks Q&A here

W3C Standardization Process

- The W3C Standards Process is described [here](#).
- The first standardization stage is CR - Candidate Recommendation.
  - [Candidate Recommendation means](#) that the specification has been widely reviewed, has met WG requirements and is implementable.
  - At CR, the specification may not have been completely implemented (there may be "features at risk") and there may be interoperability issues between browsers.
  - Specifications may recycle at CR.
- At [PR [Proposed Recommendation]](#) it is required to demonstrate adequate implementation experience, in addition to other requirements such as addressing issues and achieving wide review.
  - "Adequate implementation experience" is judged based on what features have been implemented (tracked by [Confluence](#)), as well as the Web Platform Test (WPT) results.
  - [Web-platform-tests](#) are a set of tests for checking API implementation by the W3C. The results are located at https://wpt.fyi.
- Recommendation is the final stage, requiring approval by the W3C membership.

Simplified View of the W3C Standards Process

Source: https://www.w3.org/wiki/SVG_Accessibility/Directed_Graphs

What Does the W3C WebRTC WG Work On?

1. WebRTC Peer Connection (WebRTC-PC) now published as a Recommendation.
   a. Related specifications such as WebRTC-Stats and WebRTC-Priority.
2. Capture, Streams and Output-related specifications, including:
   a. Media Capture and Streams (recycled at CR)
   b. Screen Capture
   c. Media Capture from DOM Elements
   d. MediaStream Image Capture
   e. MediaStream Recording
   f. Audio Output Devices
   g. Content-Hints
3. WebRTC-NV, the "Next Version" of WebRTC.

   a. This is what comes after the 1.0 specification.
   b. It involves work on multiple specifications, not just a single document.
   c. The use cases motivating this work are described in WebRTC-NV Use Cases.

What Are the WebRTC-NV Use Cases?

- Existing Use Cases
  - [Multiparty online game with voice communications](#)
  - Mobile calling service
  - Video Conferencing with a Central Server
- New Use Cases
  - File Sharing
  - Internet of Things
  - Funny Hats
  - Machine Learning
  - Virtual Reality Gaming
  - Don't Pown My Video Conferencing
  - Untrusted JavaScript Cloud Conferencing

What Work Might Be Considered Part of "WebRTC-NV"?

- Extensions to WebRTC PeerConnection, such as:
  - WebRTC Extensions
  - WebRTC-SVC
  - Insertable Streams
  - Features which did not meet the implementation or maturity requirements for inclusion in WebRTC-PC Recommendation , such as WebRTC Identity and WebRTC DSCP
- Extensions relating to Capture, such as:
  - MediaStreamTrack Insertable Streams,
  - Media Capture and Streams Extensions
  - MediaCapture Depth Stream Extensions (recently revived)
- Standalone specifications, not related to PeerConnection or Capture, such as:
  - WebRTC-ICE
  - WebTransport (in the W3C WebTransport WG)
  - WebRTC-QUIC (in the ORTC CG)
  - WebCodecs (in the W3C Media WG)