



Window Management

W3C TPAC 2024 Update (Sept 2024) - Second Screen WG

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Spec: github.com/w3c/window-management

Demos: github.com/michaelwasserman/window-placement-demo
github.com/michaelwasserman/iwa-windowing-example

Prior: [Sept 2023 Slides](#) | [Sep 2022 Slides](#) | [May 2022 vF2F](#) | [Oct 2021 Slides](#)



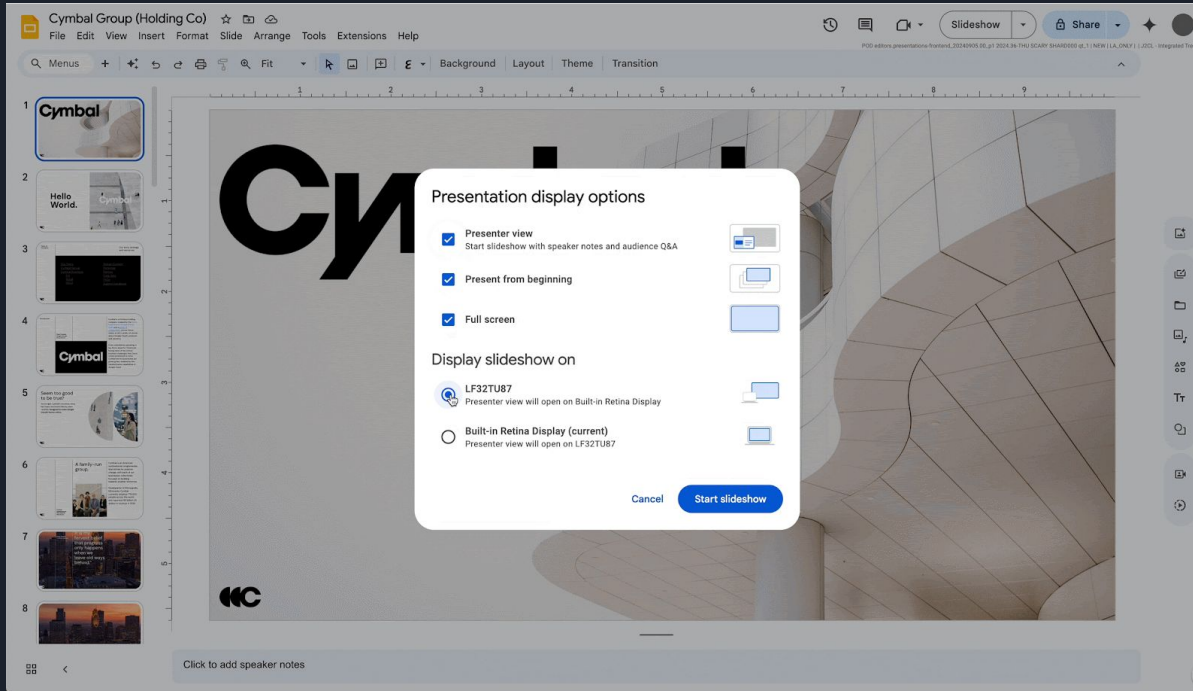
Present Landscape

Window Management capabilities on the web are stronger today than ever before!


- Screen details, cross-screen window placement, and fullscreen
- **NEW!** [MDN API reference documentation](#)
- [Fullscreen Capability Delegation](#), [Fullscreen Companion Windows](#)
- Gesture requirement configuration for Popups
- Gesture requirement configuration for Fullscreen (**NEW! IWA+Enterprise**)

Present Landscape

New! [Google Slides multi-monitor presentations](#)



[“Multi-monitor support is absolutely vital with presentation software”](#) - Android Police



HTML Fullscreen Without A Gesture

[Explainer](#), [ChromeStatus](#) (Chrome 127+), [Demo](#)

Motivation: Gesture requirements preclude advanced fullscreen capabilities

Goal: Enable new fullscreen use cases:

- Open new fullscreen popups (e.g. multi-screen fullscreen)
- Extend fullscreen onto newly connected displays
- Enter fullscreen after activation consumption or expiry (long-tail)

Proposal: HTML Fullscreen gesture req. configurations (spec [Issue](#) + [PR](#)) + permission query:

```
navigator.permissions.query({name: 'fullscreen', allowWithoutGesture: true});
```

Supersedes [Fullscreen Popup Windows](#) and [Many Windows Many Screens](#)



Future Landscape

User and developer feedback informs future investment:

- **Extending APIs:** screen IDs, refresh rates, HDR/WCG
- **Platform support:** Android, Wayland best effort and feature detection
- **Implementation fixes:** fullscreen promises, window bounds oddities
- **API modernization:** `window.setBounds()`, `window.open()`, etc.
- **New capabilities:** [Additional Windowing Controls](#), [window.onmove](#), [Borderless](#)

Hopeful other UAs will someday also support modern Window Management functionality



Virtual Display Testing

[Chromium test framework support for managing virtual displays at the OS level](#)

Implementation complete on all desktop platforms (Windows, Mac, Linux (X11), ChromeOS).

All multi-screen tests migrated to new [utility](#).

Next Steps:

- Advocate for Apple to officially support the [private CoreGraphics APIs](#).
- Develop a wpt driver to support testing multi-screen APIs in web platform tests.



Virtual Displays: Cast Extended Desktop

Prototyped an alternative way to cast from the browser.

Seamlessly create a virtual display and cast it to a nearby Chromecast device.

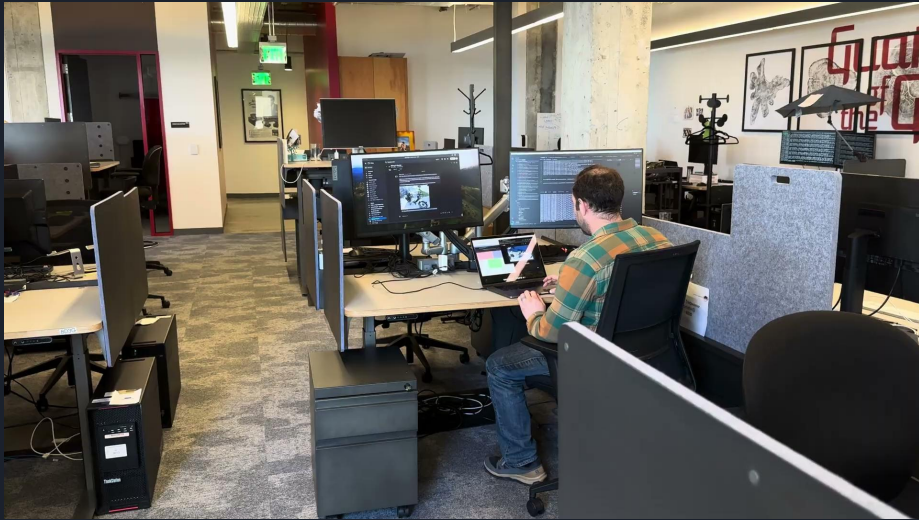
Use cases:

- Using a Chromecast supported tablet as a secondary monitor (Similar to Sidecar)
- Conducting a presentation: wirelessly cast slides to screen and maintain speaker notes on your laptop.

LIVE DEMO

Nearby Screens Demo

Pre-recorded videos





Thanks!