

# DRM leasing on Wayland

## A short history from XR POV

Prepared by Frédéric Plourde, XR Lead at Collabora



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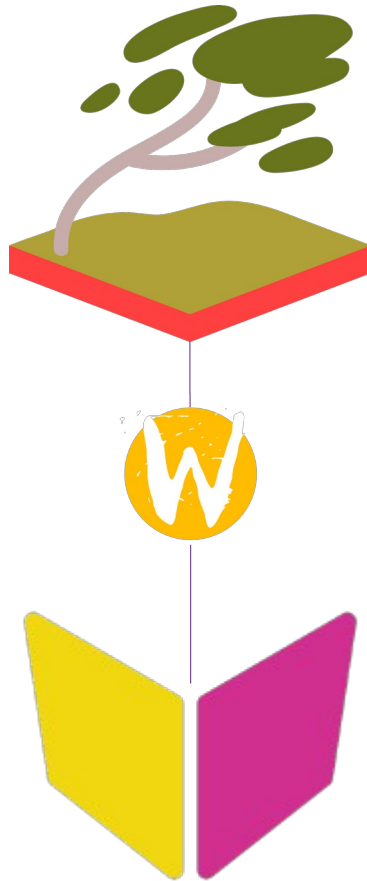
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# Picking an output for leasing...

- Wayland compositors have to make a choice
  - Offer leases for all DRM outputs available
  - Offer leases only for DRM outputs with non-desktop flag set
  - Offer no leases at all, allow the user to opt-in by defining connector names to announce



What outputs should Wayland compositors offer for lease?



Non-desktop = false

Non-desktop = true

Non-desktop = false



Non-desktop = false

Non-desktop = true

Non-desktop = false

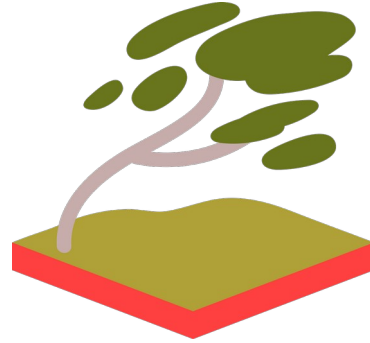


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# BEFORE

➔ **Some take the *non-desktop* flag into account**

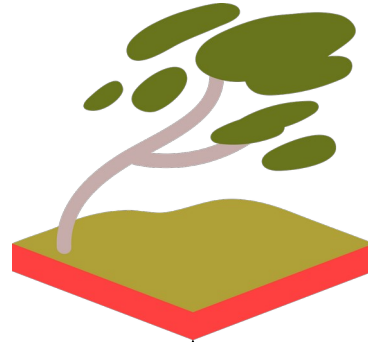
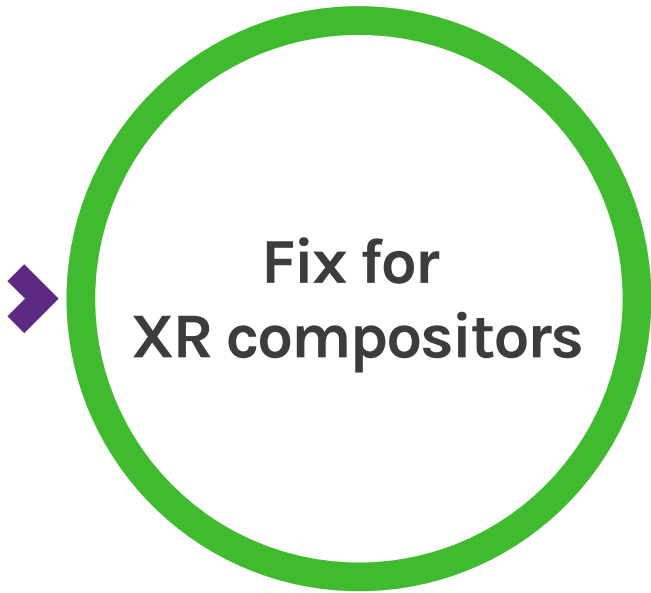


- 1 Non-desktop = false
- 2 Non-desktop = true
- 3 Non-desktop = false



AFTER ?

# Introducing output leasing commands to Sway



- 1 Non-desktop = false
- 2 Non-desktop = true
- 3 Non-desktop = false



output\_cmd\_leasing (1)



Still under discussion : <https://github.com/swaywm/sway/pull/7207>



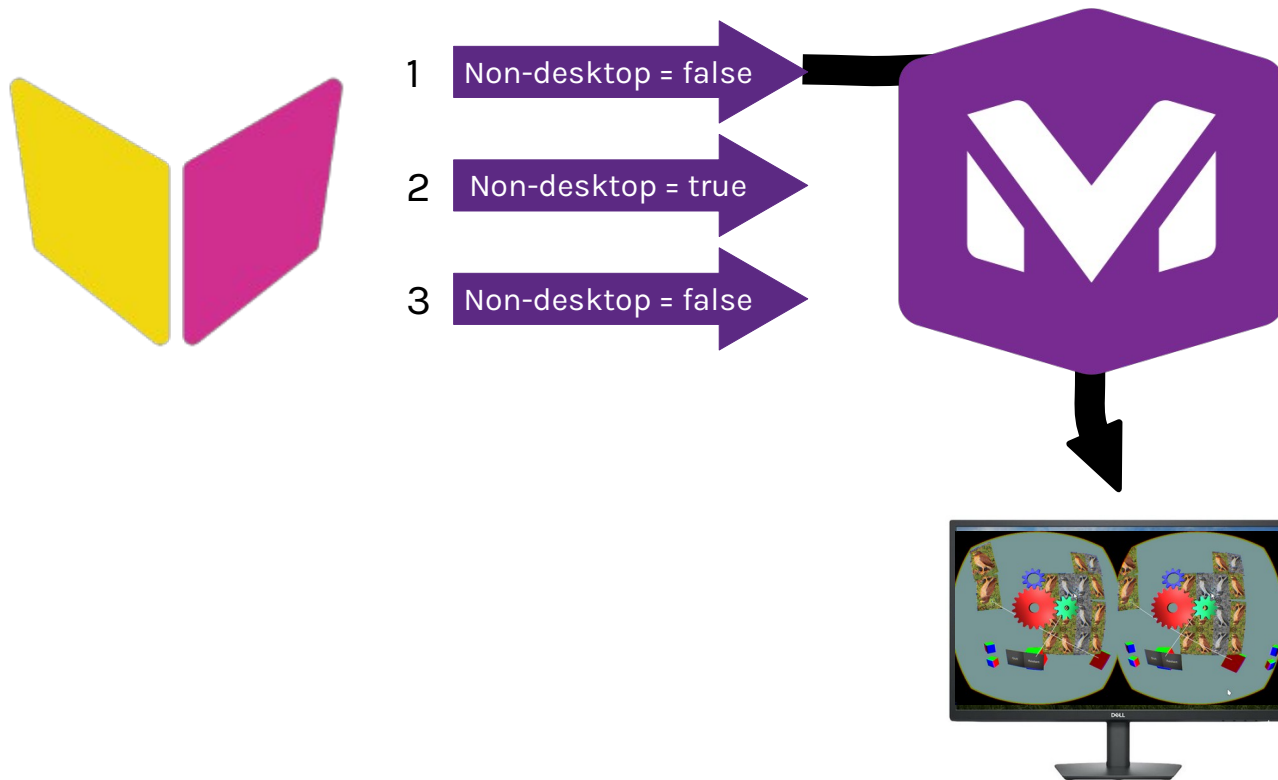
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BEFORE



## Monado picking the 'first' output in the list

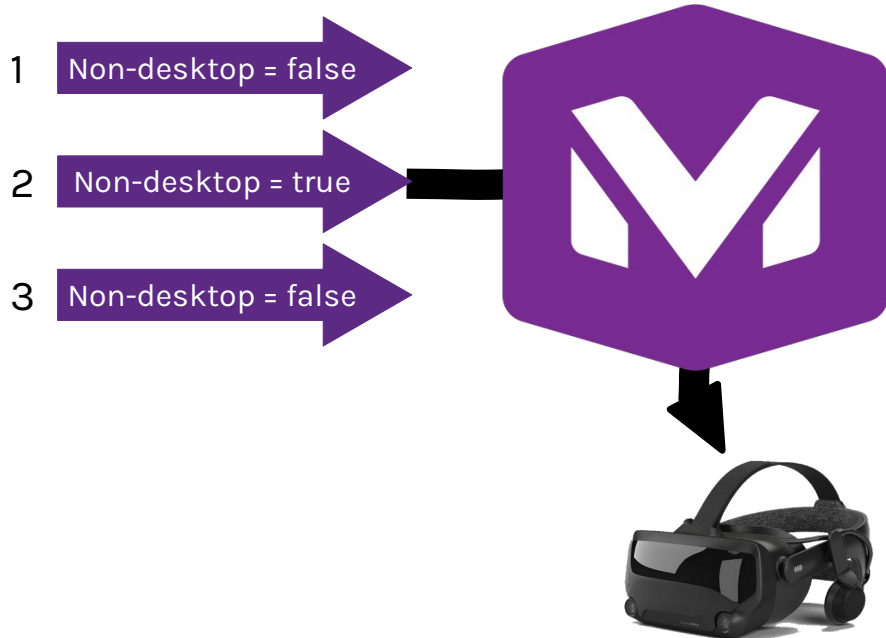


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AFTER

Monado can now select which WAYLAND\_CONNECTOR it wants



Merged on July 30th : [https://gitlab.freedesktop.org/monado/monado/-/merge\\_requests/2295](https://gitlab.freedesktop.org/monado/monado/-/merge_requests/2295)



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# Movement on the drm-lease protocol !

- Found undefined behavior w.r.t to the “withdrawn” drm-lease event.
  - `<event name="withdrawn">`
  - `<description summary="lease offer withdrawn">`
  - Sent to indicate that the compositor will no longer honor requests for
  - DRM leases which include this connector. The client may still issue a
  - lease request including this connector, but the compositor will send
  - `wp_drm_lease_v1.finished` without issuing a lease fd. **Compositors are**
  - **encouraged to send this event** when they lose access to connector, for
  - example when the connector is hot-unplugged, **when the connector gets**
  - **leased to a client** or when the compositor loses DRM master.
  - `</description>`
  - `</event>`





# Movement on drm-lease protocol !

The connector's *withdrawn* event is now much better defined.



Olivier Fourdan @ofourdan · 2 months ago

FTR, this discrepancy has triggered a bug in Xwayland and caused me headaches for several months until I eventually figured that was due to the difference in behavior between different compositors used by the original contributor of a change (who was using and testing with sway) and the reporter of a regression with that change (who was using kwin).

Eventually fixed with [xorg/xserver!1482 \(merged\)](#)

So yup, definitely a 🙌 from me!



Daniel Stone closed with merge request [!322 \(merged\)](#) 4 days ago

<event name="withdrawn">

<description summary="lease offer withdrawn">

Sent to indicate that the compositor will no longer honor requests for DRM leases which include this connector. The client may still issue a lease request including this connector, but the compositor will send `wp_drm_lease_v1.finished` without issuing a lease fd. Compositors are encouraged to send this event when they lose access to connector, for example when the connector is hot-unplugged, when the connector gets leased to a client or when the compositor loses DRM master.

**If a client holds a lease for the connector, the status of the lease remains the same.** The client should destroy the object after receiving this event.

</description>

</event>

<https://gitlab.freedesktop.org/wayland/wayland-protocols/-/tree/main/staging/drm-lease>



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Complement the non-desktop  
flag logic by Leveraging  
libdisplay-info

- Deal with EDIDs better.





**Thank you!**



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