

Chromium Ozone

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What is Ozone

- Wrapper for the platform, interfaces for everything
- Created at run time
- Many platforms in one binary
- Can (technically) be used outside of Chromium



Igalia's experience

- Wayland (alpha)
 - Long project since 2016
 - A lot of challenge
 - <https://crbug.com/578890> still has many tasks
- X11 (beta)
 - Shorter (since mid 2019)
 - Easier, mostly refactoring of the existing code
 - <https://crbug.com/789065> is only blocked by the Finch trial

Ozone approach is proven to work and to be reasonable for Linux!



Ozone/Wayland challenges

- Wayland has restrictions untypical to other platforms:
 - Only the process that owns the surface may use it
 - Global coordinates are not known to clients
 - Clients have limited control over their assets
- Other things:
 - No support for some UI features, see <https://crbug.com/1193374>
 - Different method to handle pixel density



Ozone/X11 challenges

- Move a lot of things without breaking anything
 - Migrated from XEvent to ui::Event
 - Migrated a few hundred sites from

```
#if defined(USE_OZONE)
```

to

```
if (IsUsingOzonePlatform())
```
 - Merged the builds so that Ozone is included always for Linux
 - Unified the core implementation classes such as DesktopWindowTreeHost
- Do all the above silently to avoid unnecessary discussion



Intermediate summary

- Ozone interfaces are currently likely to be sufficient (at least for Chromium)
- Platforms have plenty of specific things that are not likely to be generalised
- More platforms can follow, but will they?



Thank you!

- Questions?

