WebKit for Wayland

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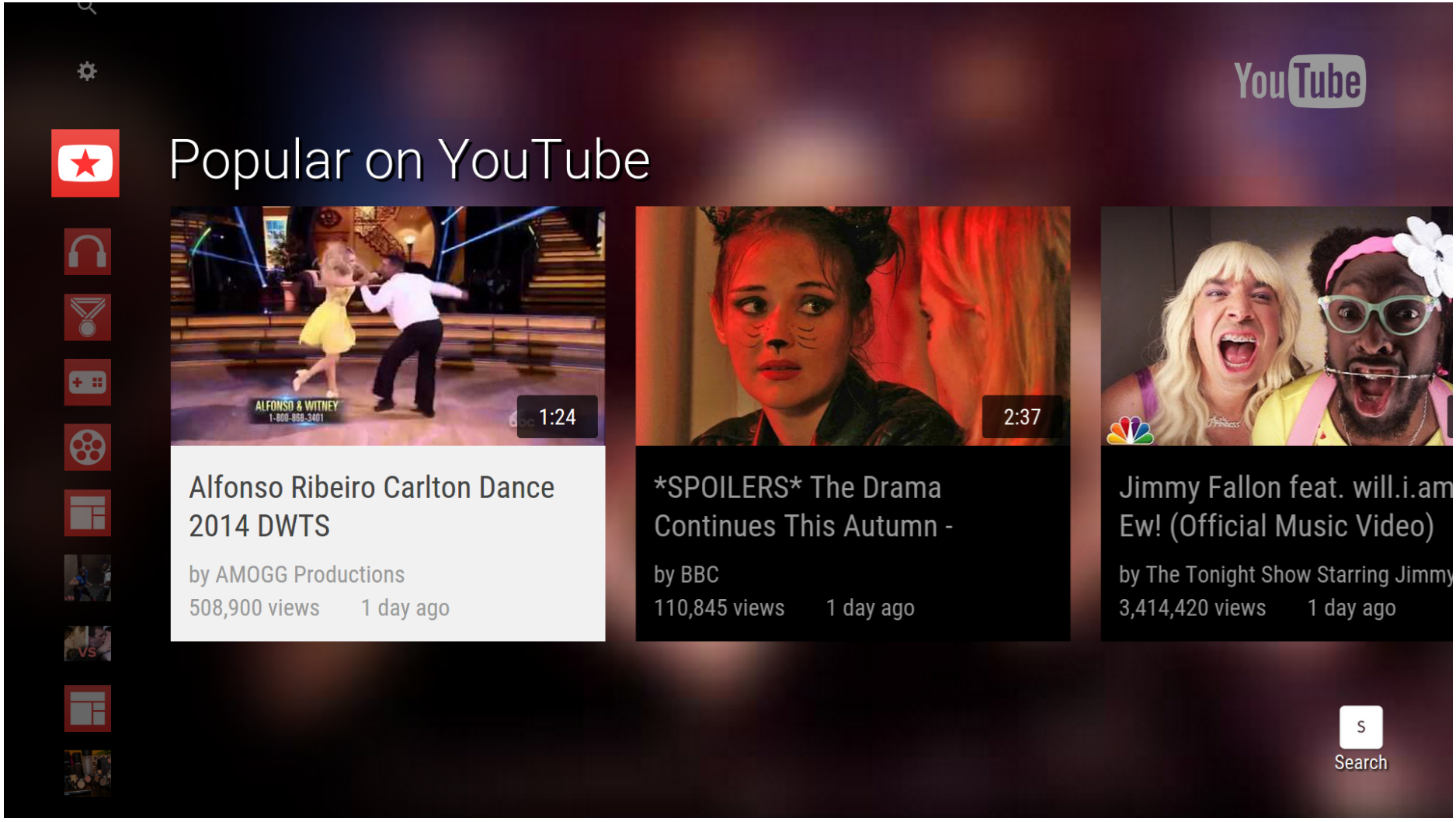


youtube.com/tv

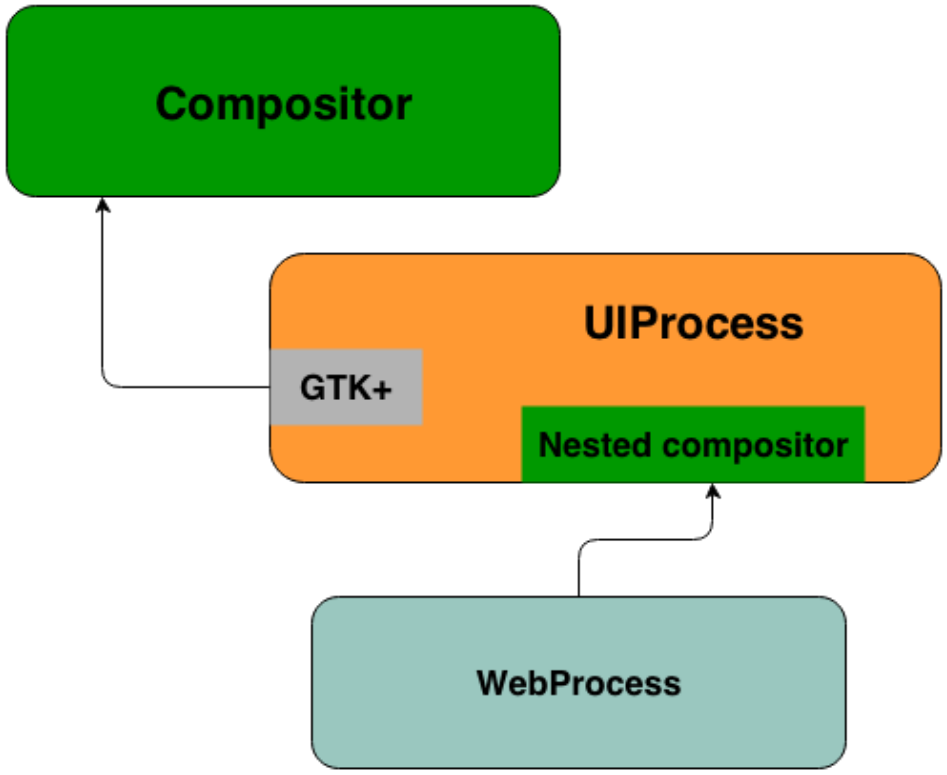
WebKit and Wayland

Wayland support provided by the toolkit.

Must be run under the parent compositor.

Complicated hardware-accelerated compositing of Web content.

- A nested Wayland compositor needed in the UIProcess.


Compositor
UIProcess
GTK+
Nested compositor
WebProcess

... but why the toolkit?

Adds unnecessary complexity in the architecture.

No need for various widgets, theming support.

Not run under the traditional desktop environment.

The idea

Merge the UIProcess and the compositor.

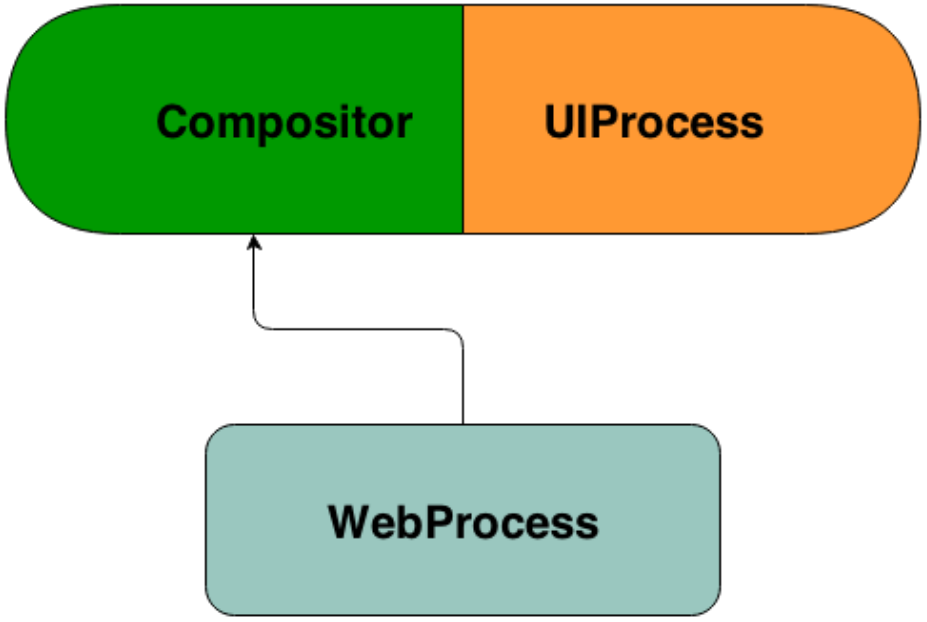
Have the WebProcess interact directly with the compositor.

Benefits

Removes the intermediate purpose of the UIProcess.

Reduces the architectural complexity.

Enables simplifying the compositor.


Compositor
UIProcess
WebProcess

Implementation

UIProcess now a shared library that the compositor loads.

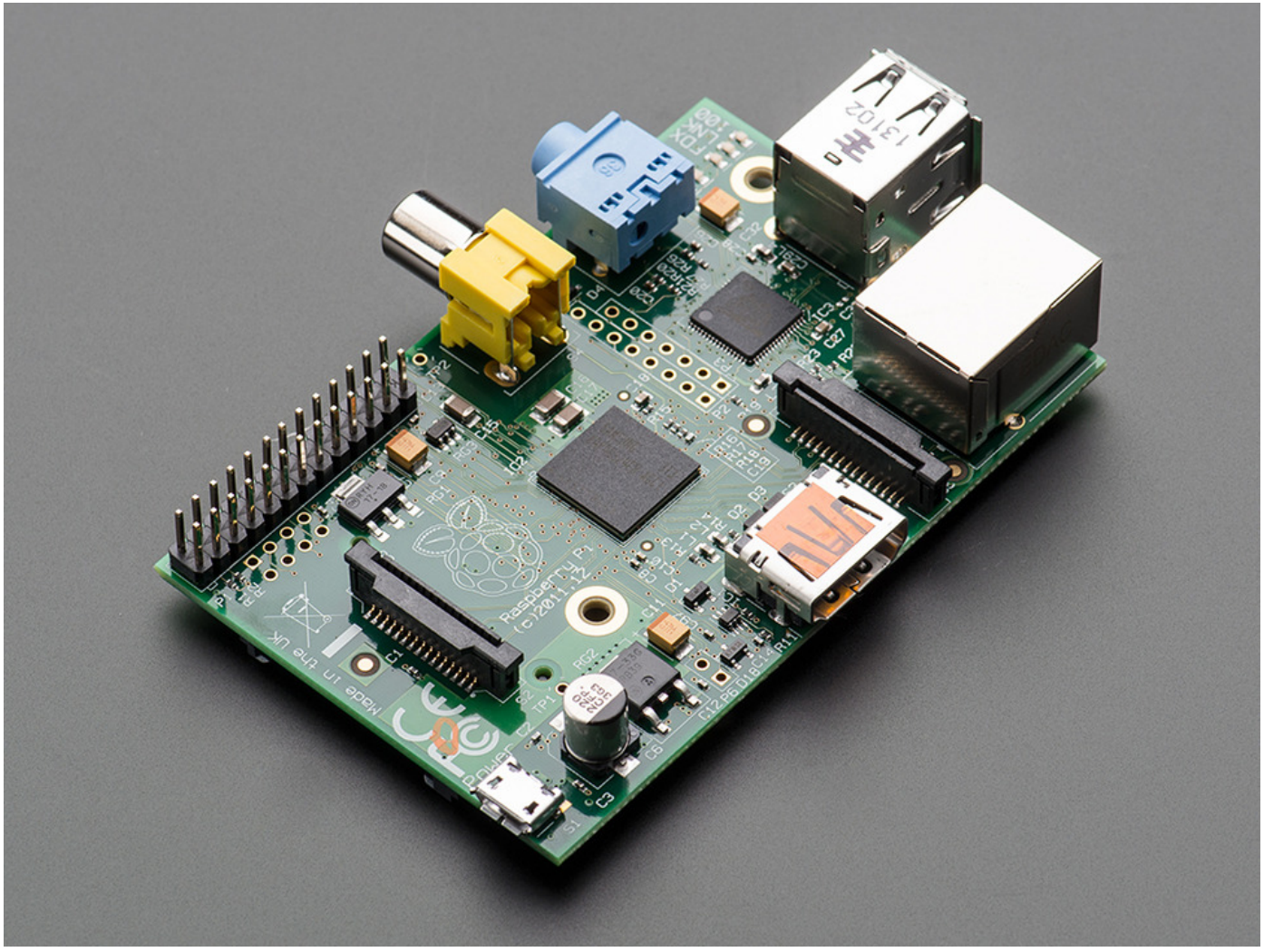
Compositor shows the single surface designated to the WebProcess.

Input events originate from the compositor, handled by the UIProcess.

Hardware

#1 requirement: support for the Wayland EGL platform

Raspberry Pi



Jetson TK1

Future hardware

As much as possible.

- Minnowboard Max
- Nexus 9
- Something with the Adreno GPU
- Something with the Mali GPU
- Something with the PowerVR GPU
- Something with a GPU

Future software improvements

Improving graphics performance in WebKit, Cairo.

Improving W3C/WHATWG standards support in WebKit.

Never implement NPAPI/PPAPI/NaCl plugins. Ever.

Questions

Thank you.

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