Status on Waltham upstream
From AGL to Wayland community

24-Sep-2019 ADIT
Outline

- Status on Waltham implementation as standalone backend
- Waltham backend requirements
- Next steps + discussion
- **Waltham-Transmitter plugin**: Handle connection and transmit surface

- **Waltham-Receiver**: Receive buffer from transmitter.
**Waltham backend (Weston >= 7.0)** functionalities remain same.

- **Waltham backend**: Handle connection and transmit surface

- **Waltham-Receiver**: remaining same.

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**Diagram Description**

**ECU / Transmitter side**
- **IVI application**
- **AGL compositor**
- **libweston**
- **Waltham backend**
- **displays**
- **input devices**

**ECU /Receiver side**
- **Wayland**
- **Waltham**
- **libweston**
- **Waltham-Receiver**
- **Weston**
- **displays**
- **input devices**

- Receive buffer transmitted from Transmitter side.
- It makes connection to Waltham-Receiver side and transmit surface buffer via gstreamer.

**Notes**

- Waltham backend: Handle connection and transmit surface
- Waltham-Receiver: remaining same
High level Waltham backend requirements

- **input handling:**
  - keypoint input
  - pointer input: useful for AXIS events
  - touch input: local coordinates are shared: receiver is always sent local coordinate along with the surface...
    (prio2) also global display coordinate should be able to share.
  - notification about the input devices availability on the remote site.

- **surfaces sharing:**
  - it shall be possible to share a single surface.
  - it shall be possible to share multiple surfaces separately.
    (prio2) it shall be possible to share combined content from the complete display to remote site

- **lifecycle management**
  - it shall be possible to recover if transmitter or receiver disappears
  - needs more clarification what should be possible: waiting for connection, recovering connection, handle rebooting of one of the components (ether receiver or transmitter)
Next steps (Weston >= 7.0) as backend

Enable Weston to have multiple backends

- ECU / Transmitter side
  - IVI application
  - AGL compositor
  - Other backend
    - libweston
    - drm backend
    - Waltham backend
  - displays
  - input devices

- ECU / Receiver side
  - Weston
  - displays
  - input devices

Wayland

This libweston shall be same one in upstream Weston. When Weston supports multiple backends, it can see show surface on Transmitter side and Receiver side at same time. This is not possible with standalone Waltham backend.

TBD:
- pointer
- keyboard
References from ADIT

**AGL**

- Waltham transmitter upstream discussion from UI&GRA, March 2019
  - Waltham_transmitter_upstream_20190301_02.pptx
- Face to Face July in Tokyo 2019
  - weston-multiple-backends.pptx

**Genivi**

- GENIVI Technical Summit
  - [https://at.projects.genivi.org/wiki/display/WIK4/GENIVI+Technical+Summit+Session+Content+2018](https://at.projects.genivi.org/wiki/display/WIK4/GENIVI+Technical+Summit+Session+Content+2018)
    - ADIT/Bosch Implementing Waltham in practice
    - Waltham in Practice - working session (Harsha Manjula Mallikarjun)
- GENIVI 18th All Member Meeting
  - [https://at.projects.genivi.org/wiki/display/WIK4/18th+GENIVI+AMM+Presentations](https://at.projects.genivi.org/wiki/display/WIK4/18th+GENIVI+AMM+Presentations)
    - Domain Interaction - Wayland-IVI-extension / Waltham Usage in Shared Graphics Environment