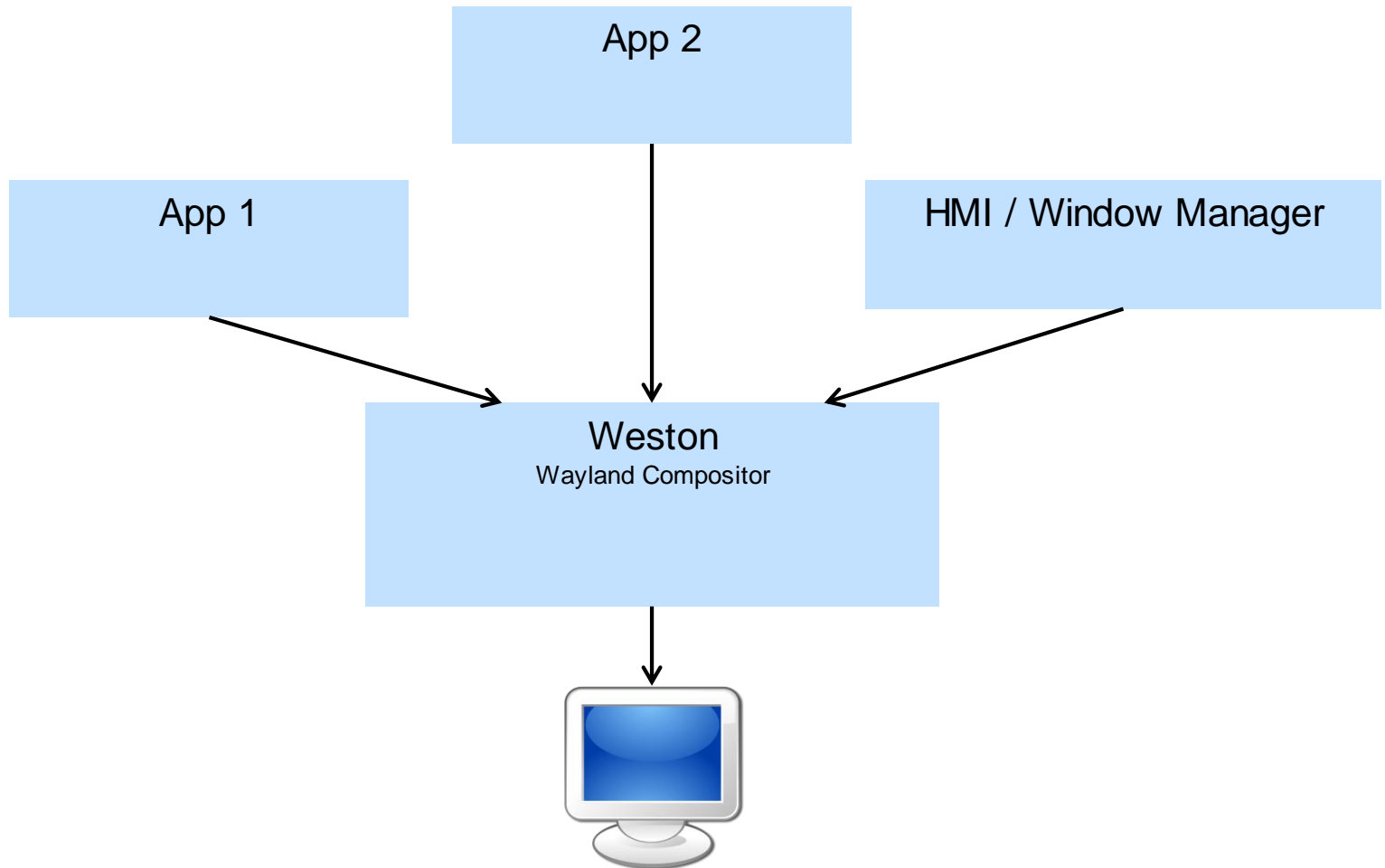


XDG-Shell Support for IVI-Shell

Michael Teyfel – Graphics Engineer, ADIT

- **Introduction**
- **What's new?**
- **Current and New Setup**
- **How is it done?**
- **ivi-id-agent**
- **Benefits**

- **Michael Teyfel**
- **Electrical Engineer (M.Sc.)**
- **Working for ADIT since 2016 as Graphics Engineer**
 - ◆ Weston
 - ◆ Wayland-IVI-Extension
 - ◆ Performance Analysis
- **ADIT is a Joint Venture between BOSCH and DENSO for Platform Development of Their IVI-Systems**
- **Contact: mteyfel@de.adit-jv.com**



- **Shell for weston (wayland compositor)**
- **Focus on ivi-systems**
 - ◆ Numerical id to handle surfaces by a HMI
 - ◆ Modular window manager

■ Xdg-shell support added

- ◆ wl-shell protocol added
- ◆ xdg protocol added
- ◆ ivi-application protocol still supported

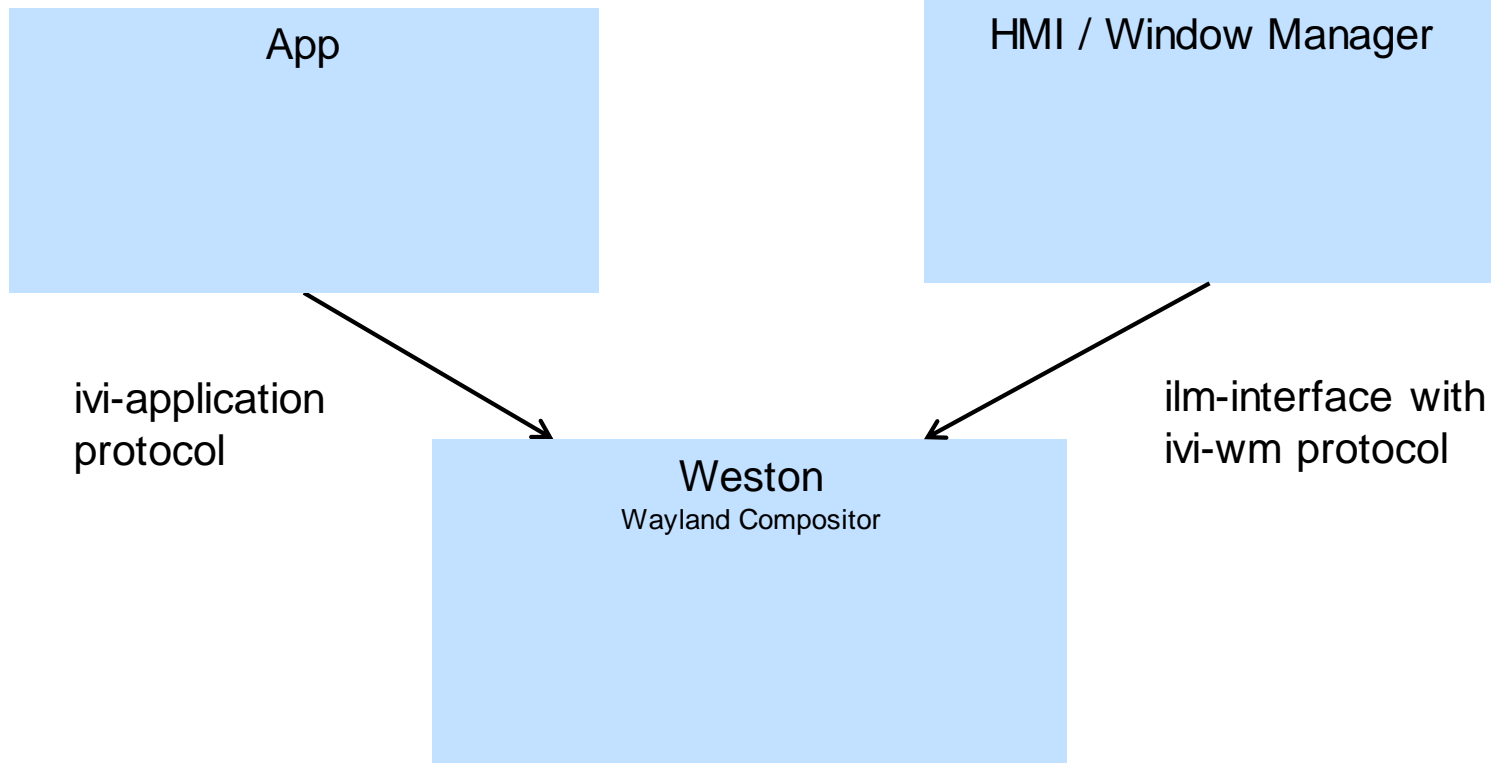
■ Custom id agent plugin for weston (wayland compositor)

- ◆ generate ids for applications
- ◆ configuration file

Id is generated in app

Notify compositor about id:
custom protocol required

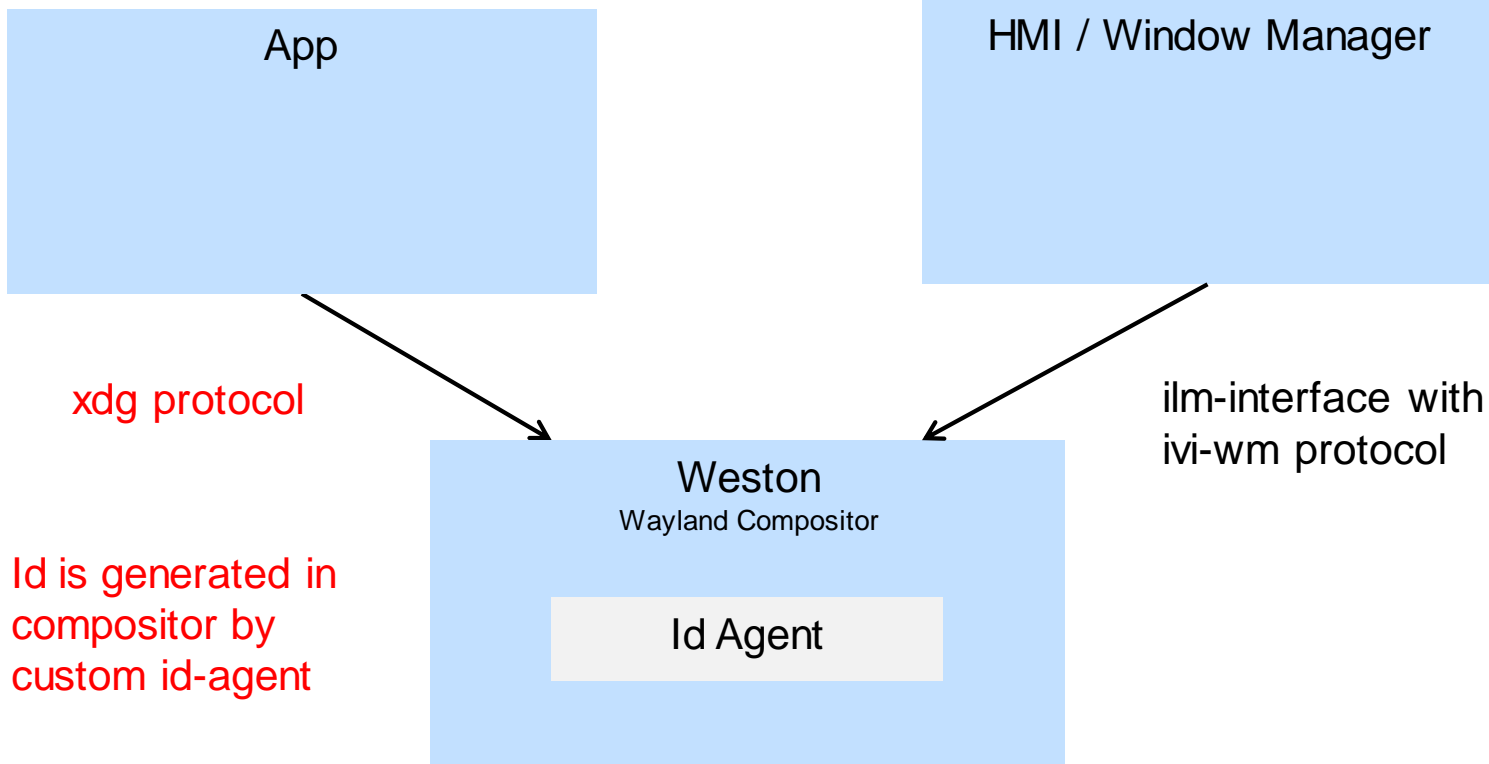
Modular Window Manager: easy
to exchange and develop

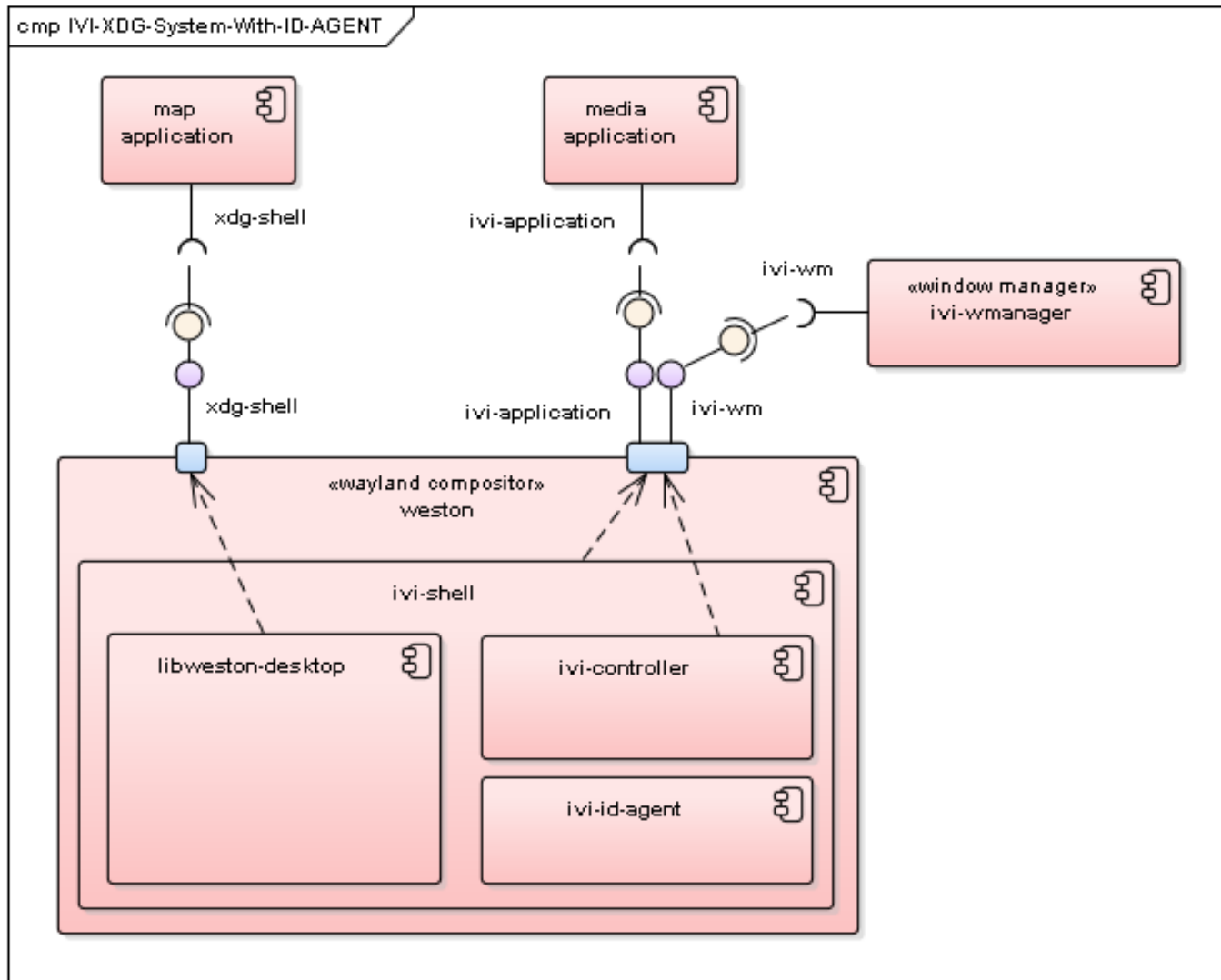


Id is **NOT** generated in app

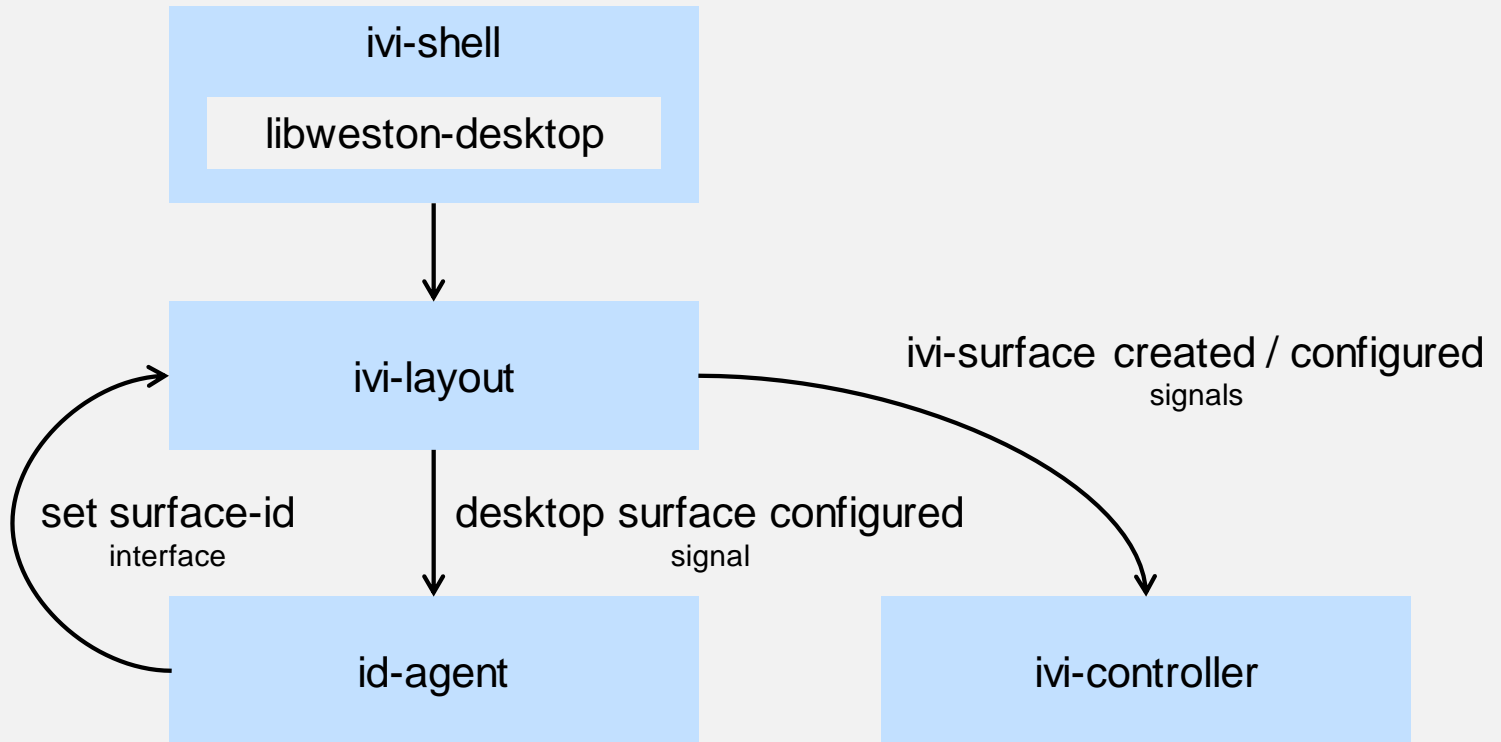
Common protocol can be used:
xdg protocol

Modular Window Manager: easy
to exchange and develop





Weston (Wayland Compositor)



- **Reference implementation: wayland-ivi-extension repository**
- **Parameters for application configuration**
 - ◆ surface-id (numeric, mandatory)
 - ◆ app-id (part of xdg protocol, optional)
 - ◆ app-title (part of xdg protocol, optional)
- **Optional: Default behavior for unconfigured applications**
 - ◆ default-surface-id (numeric, mandatory)
 - ◆ default-surface-id-max (numeric, mandatory)
- **Feasibility check of configuration at initialization**
- **<https://github.com/mtey/wayland-ivi-extension/commit/ce4074f946c54d1d980b4a5e5e762b991af79739>**

- **Resent weston patches to the community (rebased to weston v4.0)**
- **Patches available on my github: @mtey**
 - ◆ Weston: https://github.com/mtey/weston/tree/xdg_support_ivi_id_agent
 - ◆ Wayland-ivi-extension: https://github.com/mtey/wayland-ivi-extension/tree/xdg_support_ivi_id_agent

Thanks for your attention!

Are there any questions?

- **ivi-application protocol is still supported within ivi-shell**
- **xdg-shell support is added to ivi-shell which enables to use desktop applications with automotive window management**
- **Application development does not require extra knowledge about ivi-systems → easier and faster application development**
- **Many desktop applications can be run natively**
- **Open source frameworks (for Wayland) can be supported out of the box**

