



HAVi Level 2 UI

a TV UI Framework

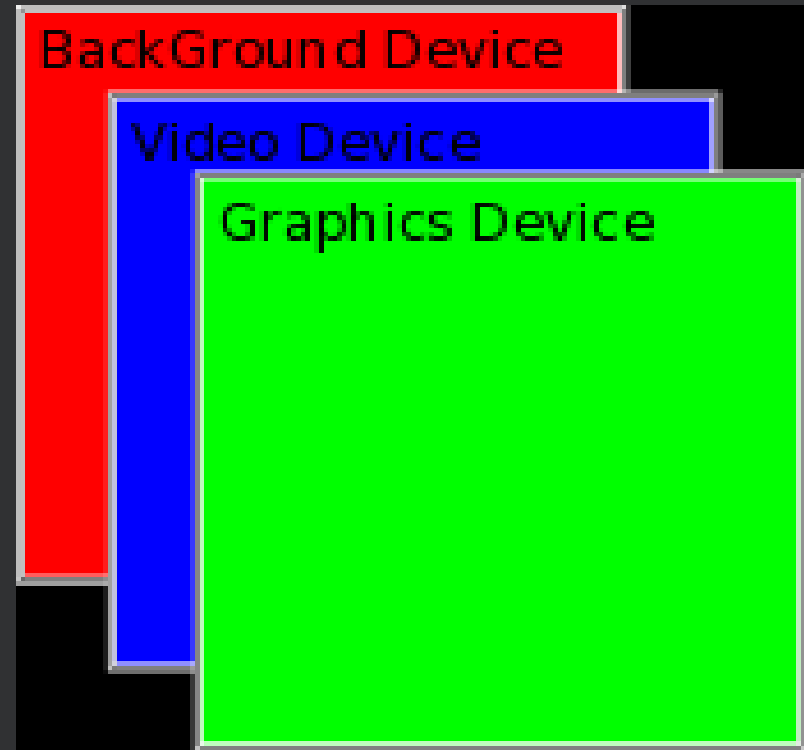
- Software Framework?
- What a TV UI Framework Needs?
- What HAVi is?
- What HAVi Level 2 UI Is?
- Introduce to HAVi Features
- How HAVi Control Devices?
- HAVi UI Widgets
- Widget Pluggable Looks

Software Framework?

- A software framework is a **reusable** design for a software system to fulfill **user requirements**.

What a TV UI Framework Needs?

- Device Configuration
- Graphics and Video Mixing
- Color Space Management
- Widgets (Components)
- Device Resource Management
- User Interaction
- Portability

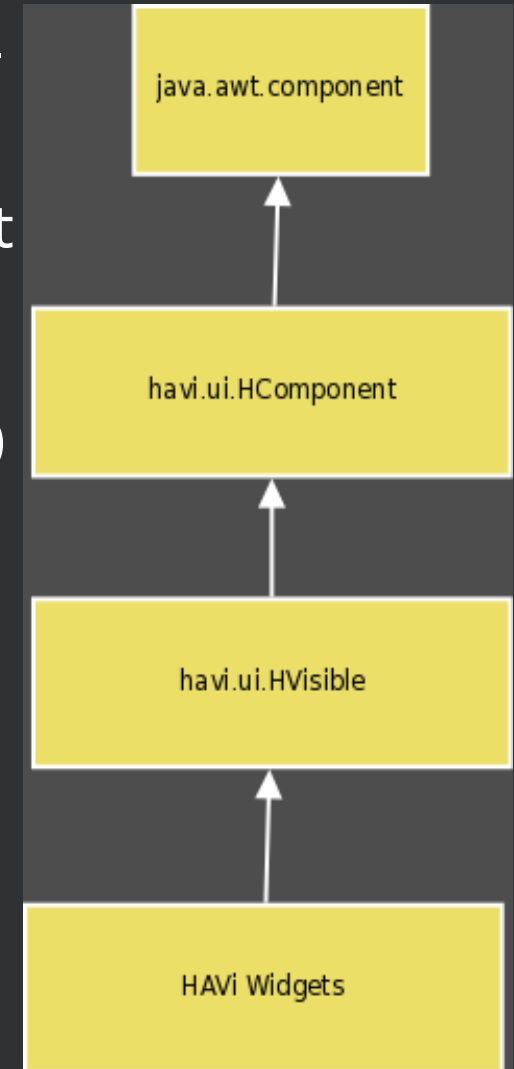


What HAVi is?

- Home Audio Video Interoperability
- Funded in April 1997
- Funded by Sony, Philips and Other CE Manufacturers
- Home Entertainment Network
- Devices interoperate over IEEE1394

What HAVi.ui is

- TV-Friendly Graphics User Interface Framework
- Base on Java AWT Light-Weight Component
- Easy to Use and Imp. on Variety Platforms
- Provide UI Widgets and Devices(Resources) Management Mechanisms
- Included in MHP and BD-J Spec.



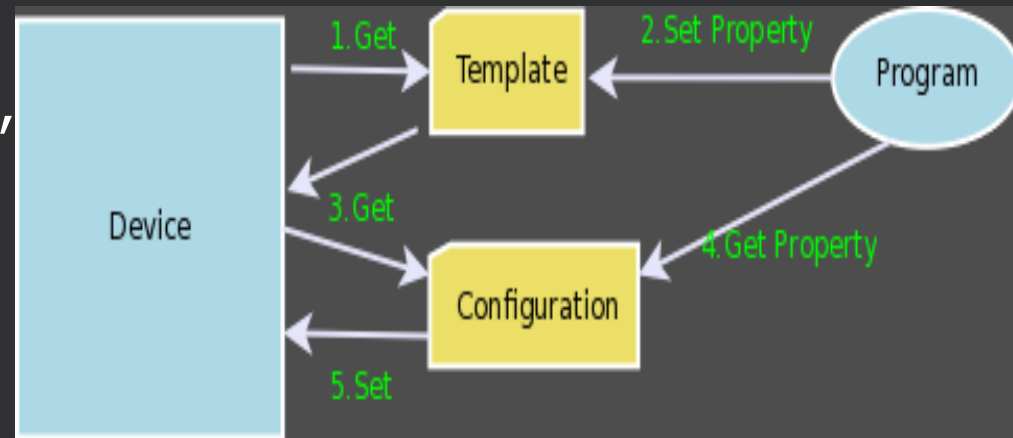
Introduce to HAVi Features

- Device Configuration
- HAVi Widgets

HAVi.ui Device Configuration

- Device Properties
 - Aspect ratio (4:3,16:9,.....)
 - Resolution (720p,1080p,480i)
 - Video/Graphic Mixing Property
 - Background Color or Image
- Configure Devices without Affect Other Devices
 - User Decides the Rule of Devices Interaction
 - Platform Depend Features

- Create a Template to set preferences
- Preference include Aspect ratio, Resolution, Video Mixing, Graphics Mixing....
- Use Template to get configuration from Device
- Set configuration into Device

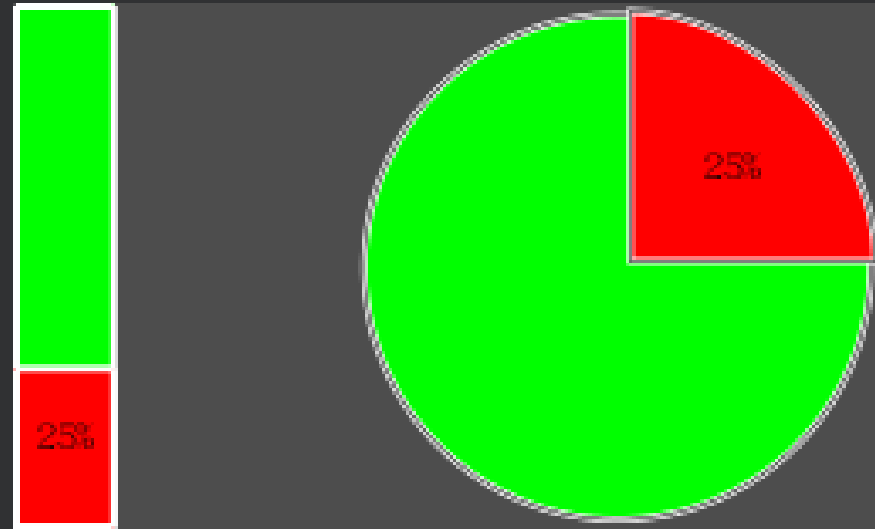


- Text
 - For Display Texts
- Icon
 - For Display Image
- Range
 - For Display Value and Change Value
- TextEntry
 - For Text Input
- Animation
 - For Display Animation

- Static Widgets
 - Don't Have any Interaction Option
- Focusable Widgets
 - Focus can Transfer to these Widgets
- Actionable Widgets
 - User can Interaction with these Widgets

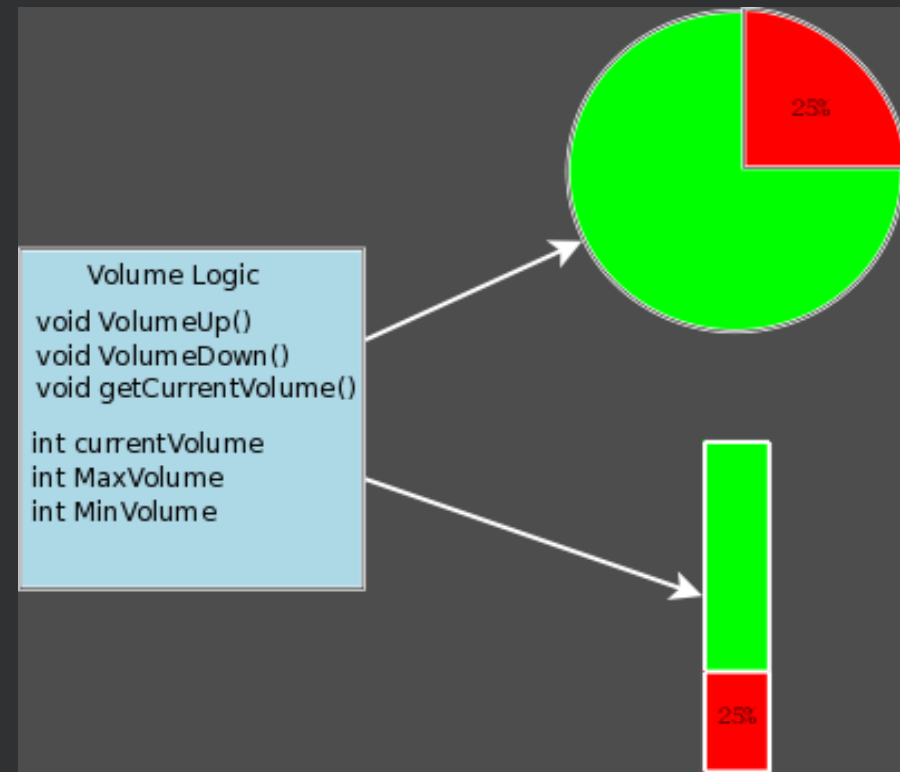
Widgets Pluggable Looks

- Two Volume Control Widgets
- What a Volume Control Needs?
 - Increase Volume
 - Decrease Volume
 - Store Current Volume Value



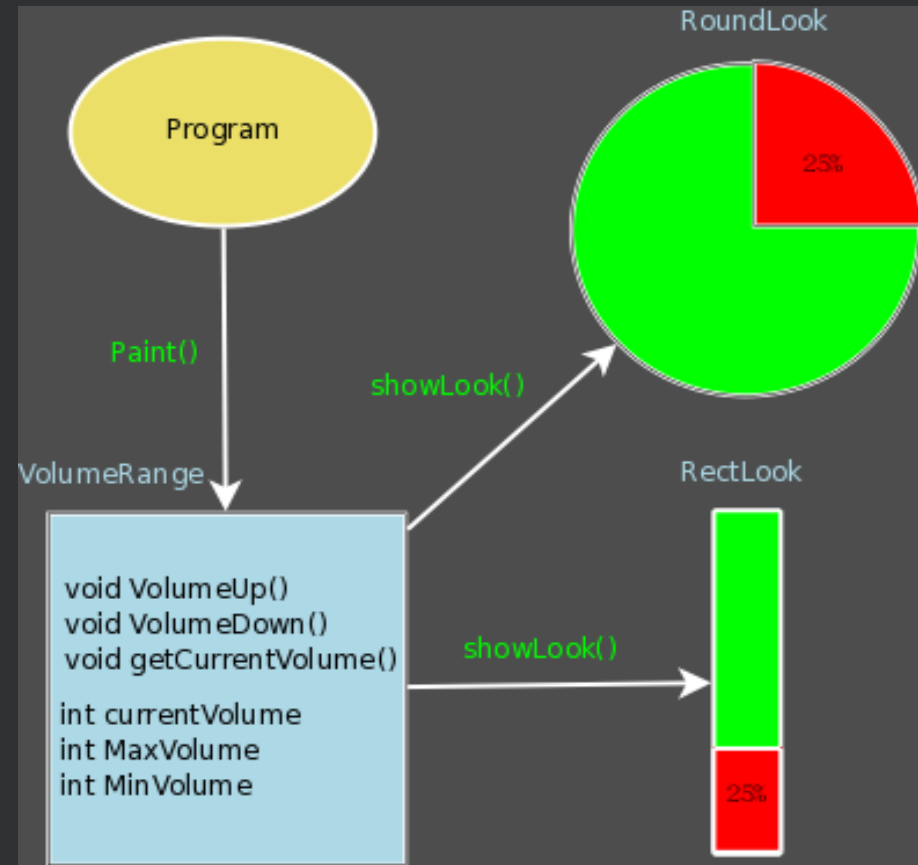
Widget Pluggable Looks (Cont.)

- Two Volume Control Widgets
- Widgets Have **Same** Logic with **Different** Looks



Widget Pluggable Looks (Cont.)

- Widgets Don't Paint Itself Directly
- Widgets Paint via HxxxLook Classes
- HAnimateLook, HGraphic-sLook, HRangeLook, HTextLook.....



- A **Solid** Framework
- Have **Flexibility** to fulfill Different Requirement
- **Easy to Port** on Different Platform



See you !

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