Rygel: OpenSource DLNA

Ready for consumer products?

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Disclaimer

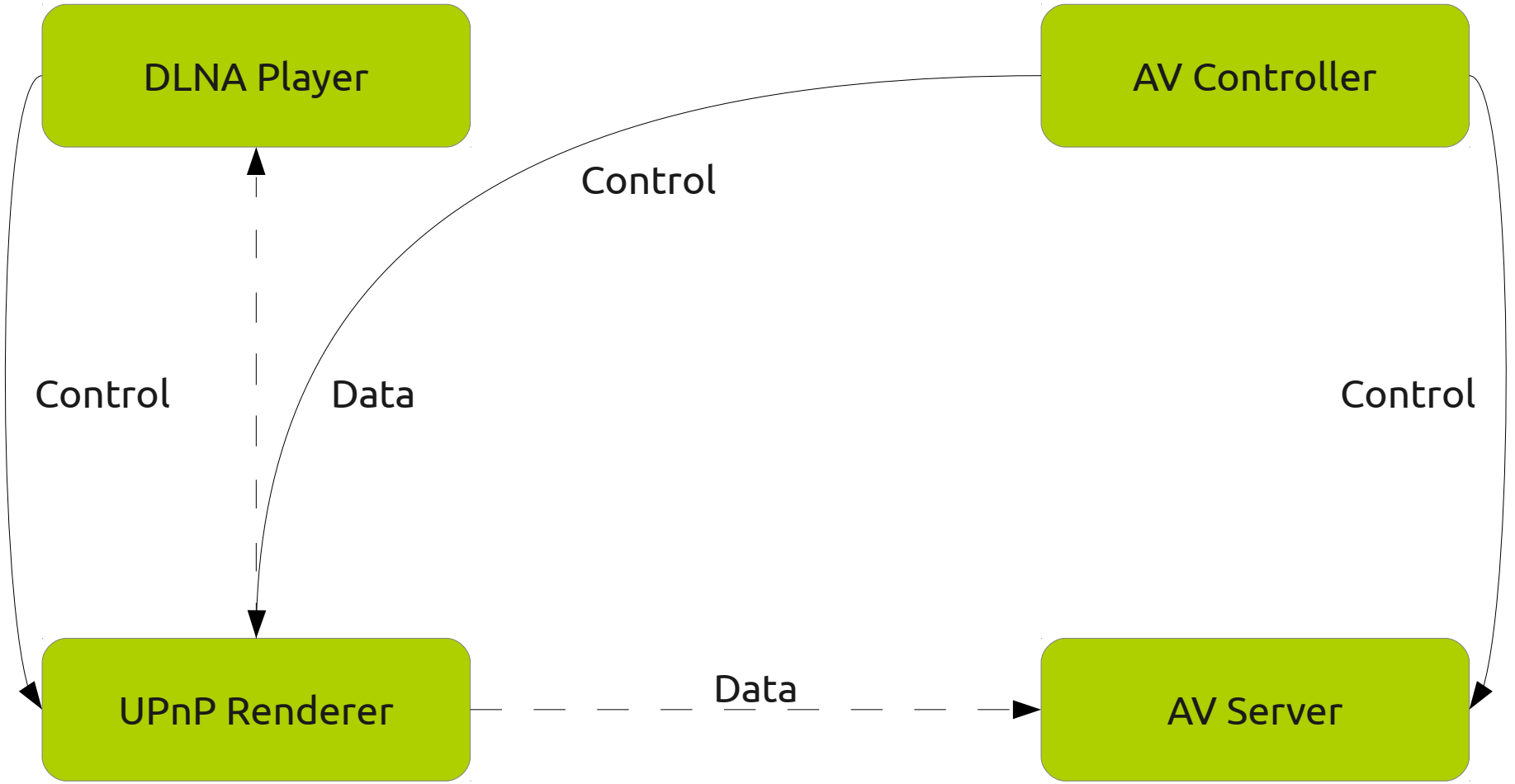
DLNA

- Vendor-independent (more or less)
- Set of use-cases and scenarios
- Set of media formats
- Guidelines and interoperability rules
- On top of UPnP-AV

UPnP(-AV)

- Technology
  - Discovery
  - RPC
  - Eventing
- Devices and Services
  - Servers
  - Renderer
  - Controller

UPnP-AV/DLNA Architecture



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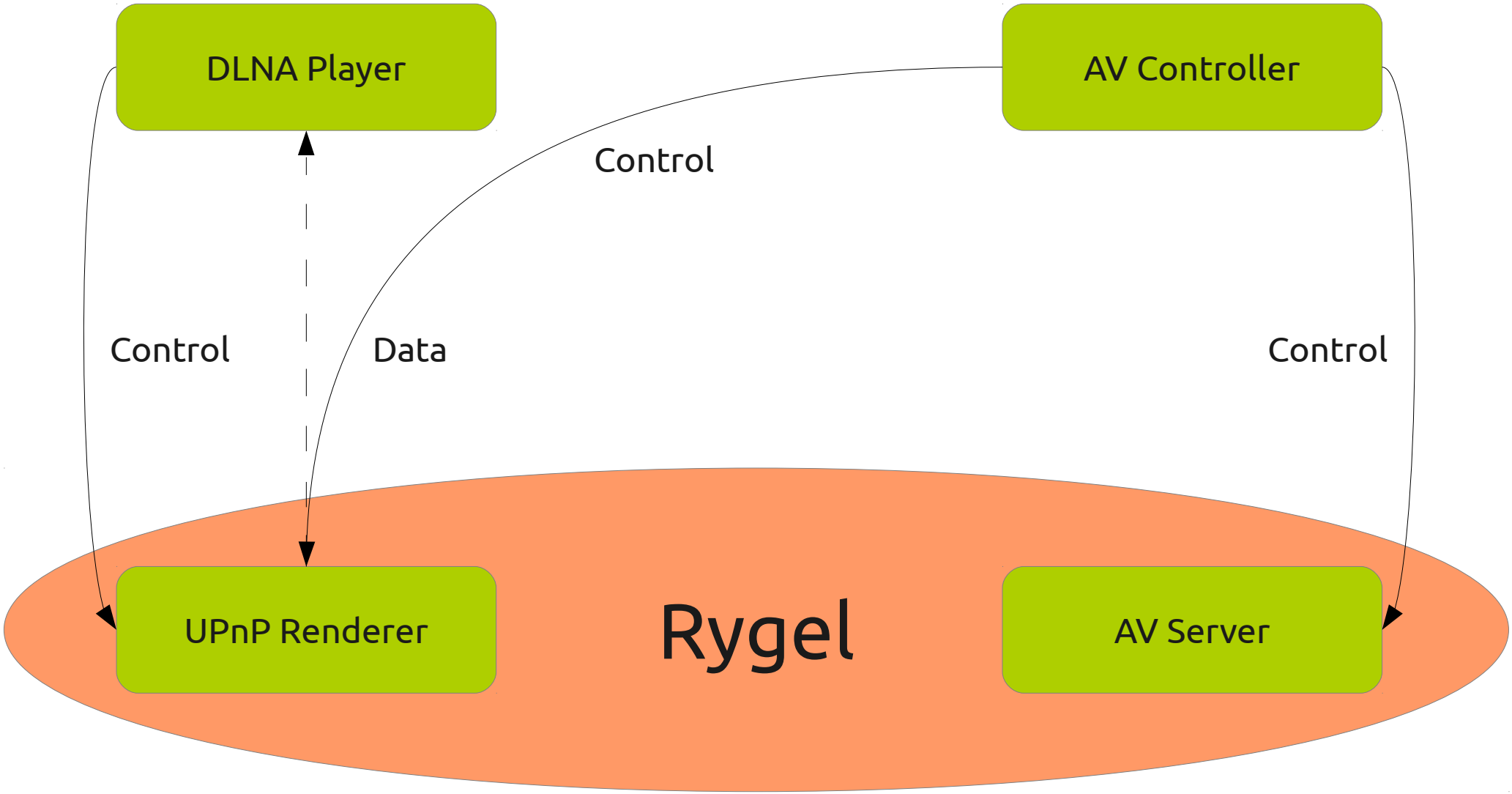

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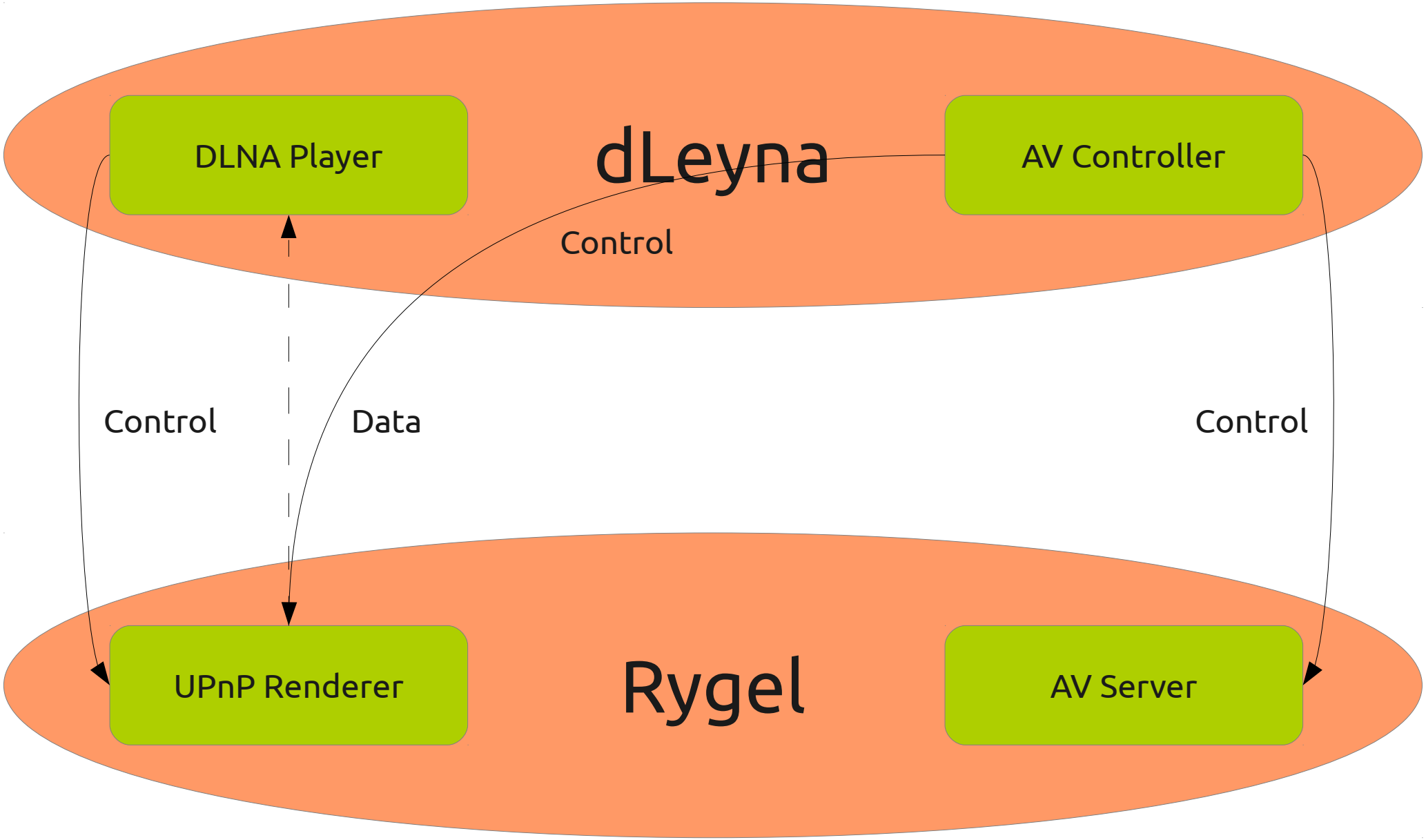

Rygel

- Based on GUPnP
- Plug-in based implementation of
  - AV Media Server
  - AV Media Renderer
- LGPL2 licensed
- Deployed in products

Rygel aims to:

- Be small
- Use no to minimal configuration
- Work out-of-the-box with a wide range of devices
- But: As a software **NOT** certified

Rygel + DLNA

- Nokia's N9 Smartphone – certified
- Upload feature
- Powered by Rygel + GUPnP
- A base for a fast path to certification
  - **BUT** always depends on the base system and data source

The Past

- Based on GStreamer
- Media server executable

The Past

- Based on GStreamer
- Media server plug-ins

The Past

- Based on GStreamer
- Media server plug-ins
- Media renderer plug-ins

The Past

- Based on GStreamer
- Media server plug-ins
  - Via code
  - Via DBus
- Media renderer plug-ins
  - Via code
  - Via DBus

The Work-in-Progress

- Binary
  - Flexible media back-ends
    - Default GStreamer
  - Extension-points via plug-ins and DBus

The Work-in-Progress

- SDK - Set of libraries
  - librygel-server
  - librygel-renderer
  - librygel-renderer-gst

The Work-in-Progress

- Functionality
  - Change tracking and synchronisation
  - UDA 1.1
  - Playlist support
- Enhanced documentation

The SDK: Plugins

- Rygel process necessary
- Plugins can live out-of-tree

The SDK: DBus

- Rygel process necessary
- Decoupling UPnP process from content
- License separation
- Restricted in flexibility
- Issues in DLNA compatibility
  - Particularly for Renderer

The SDK: librygel-server

- In-process
- UPnP-AV server
- Implement folder structure
- EPG

The SDK: librygel-renderer

- In-process
- UPnP-AV renderer
- Simple interface

The SDK: librygel-renderer-gst

- In-process
- Based on GStreamer playbin2

The other side

- Rygel implements server
- Consumer:
  - DLNA Player
  - UPnP Controller

dLeyna: The other side

- Rygel implements server
- Consumer:
  - DLNA Player
  - UPnP Controller
- Use dLeyna

dLeyna: The other side

- http://01.org/dleyna
- Access server and renderer via DBus
- Implementation of missing features
  - Server-side Search

Questions?