GStreamer and OpenMAX IL

Plug-and-Play

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GStreamer is:

- A media processing library
- Modular
- Extensive
- Cross-platform
- GObject based (easy language bindings)
- Driven by an active community
- Proven

GStreamer
What uses GStreamer?

- Media Player (Banshee, BMPx, Exaile, Kaffeine, Muine, Rhythmbox, Totem, amaroK)
- Media Recoder (Cupid)
- Audio Editor (Jokosher)
- Video Editor (PiTiVi)
- Music Authoring (Buzztard)
- Backup Utility (Thoggen, Sound Juicer, Gnome Baker)
- Screen Recorder (Istanbul)
- Media Center (Elisa)
- Stream Server (Flumotion)
- Other MMFs (Phonon)

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OpenMAX DL (Development Layer)
: Low-level building blocks

OpenMAX IL vs GStreamer

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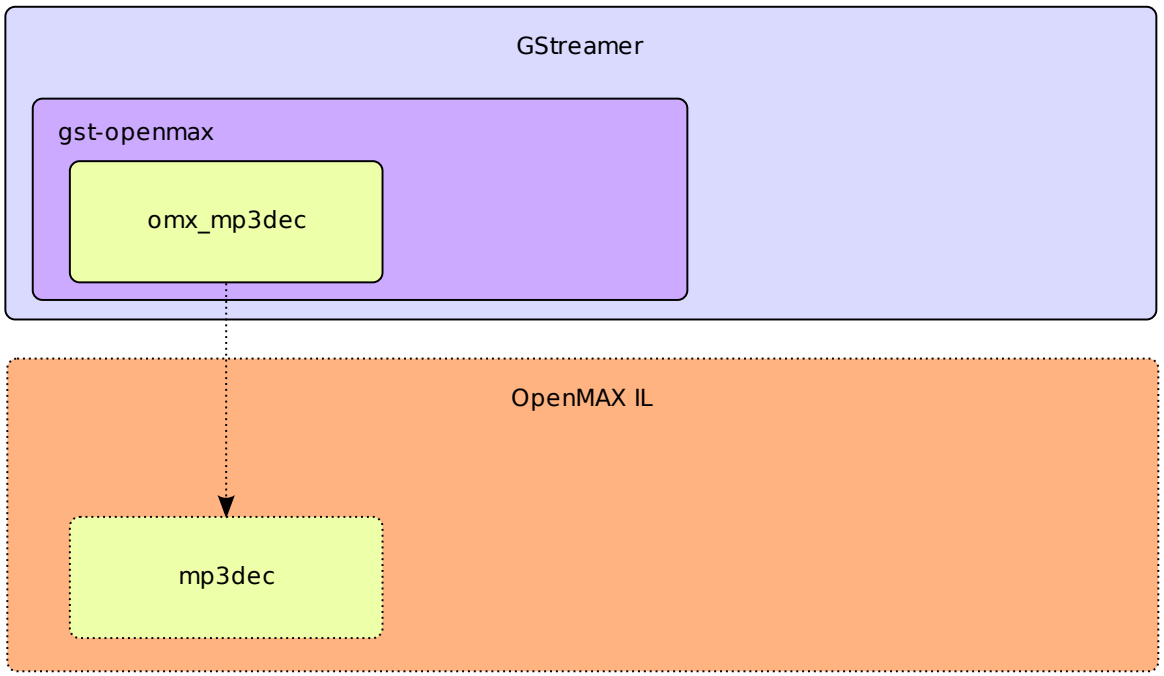
- OpenMAX IL was developed with embedded devices in mind
- OpenMAX IL has more industry support: AMD, Apple, ARM, Creative, Dell Inc, Ericsson, Freescale, Imagination Technologies Group plc, Intel, IBM, Motorola, Nokia, Nvidia Corporation, Samsung Electronics Co. Ltd, SK Telecom, Sony Computer Entertainment Inc, Sun Microsystems Inc and Texas Instruments.

gst-openmax
What is gst-openmax?

gst-openmax is a GStreamer plug-in that maps OpenMAX IL standard components as GStreamer elements.



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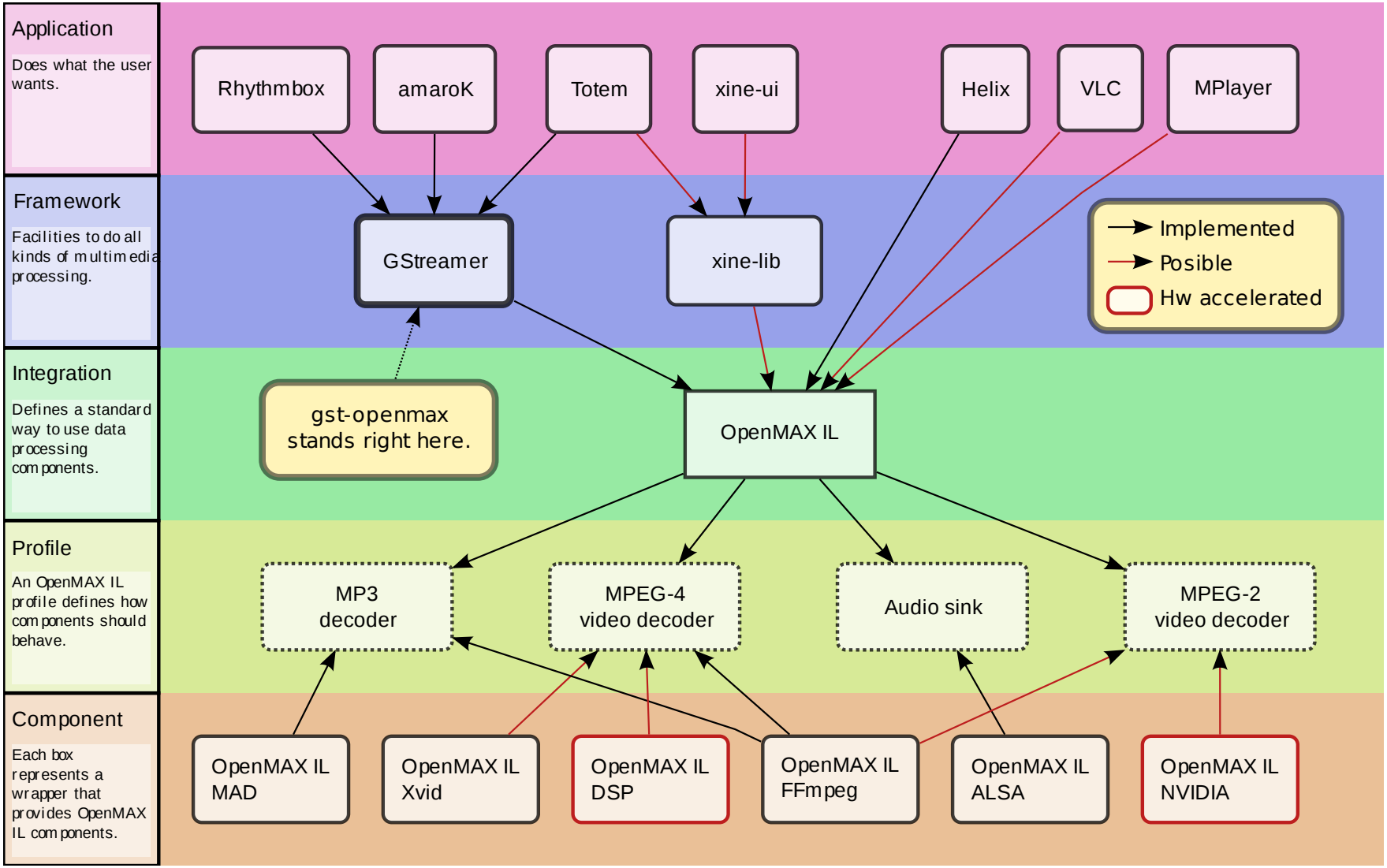

gst-openmax
What is gst-openmax?

- Is a collaboration between: Nokia, STMicroelectronics, Texas Instruments, NXP, and the GStreamer community.
- Can use multiple OpenMAX IL implementations at the same time.
- Transparent to applications (thanks to GStreamer's extensibility).
- Usable, but not yet production ready.
- Can play, pause, stop, seek; keeping audio/video synchronization.
- Main work focused on filters; encoders, decoders. (Keep it simple)

gst-openmax
Current status

- ADPCM audio encoder/decoder
- AAC audio encoder/decoder
- AMR-WB audio encoder/decoder
- AMR-NB audio encoder/decoder
- MP3 audio decoder
- Vorbis audio decoder
- H.263 video encoder/decoder
- H.264/AVC video encoder/decoder
- MPEG-4 video encoder/decoder
- WMV video decoder
- video sink
- audio sink

gst-openmax
Issues

- zero-copy

gst-openmax
Planned features

- Tunneling (thanks to NXP)
- Seeking fixes
- Unit tests
- Documentation

Demo time

gst-openmax
Contributions

- Testing (just try it out)
- Implement/improve sources/sinks
- Bellagio improvements
- Hardware accelerated components on the Linux desktop (ATI, Nvidia)

Contact

- felipe.contreras@nokia.com

- http://www.freedesktop.org/wiki/GstOpenMAX