

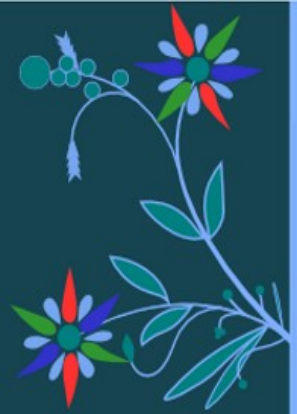
Towards GStreamer 1.0



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A Brief History



0.0.1 – Jun 1999

0.1.0 – Jan 2001

0.2.0 – Jun 2001

0.3.0 – Dec 2001

0.4.0 – Jul 2002

0.6.0 – Feb 2003

0.8.0 – Mar 2004

0.10.0 – Dec 2005



The Early Years



- 0.0.1 – 0.4.0 (June 1999 – February 2003)
 - Experimenting with the design
 - Plugins, Elements, Pads
 - registry
 - cothreads, bufferpools
- In GNOME 2.0 as early as 0.4.0



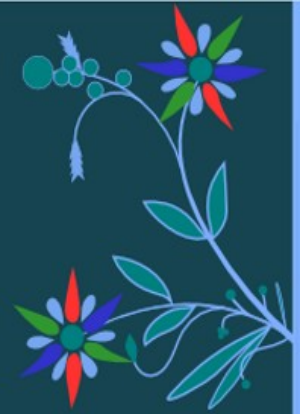
0.6.x



- February 2003 to March 2004
- OK at audio playback
 - rhythmbox
- Video playback experimental
 - gst-player



0.8.x



- March 2004 to December 2005
- Good audio playback
- Video playback OK
 - totem
- Some content production
 - Pitivi, Flumotion
- New caps system

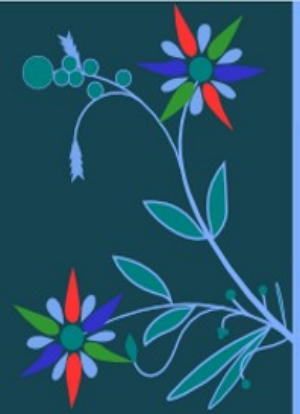


0.10.x



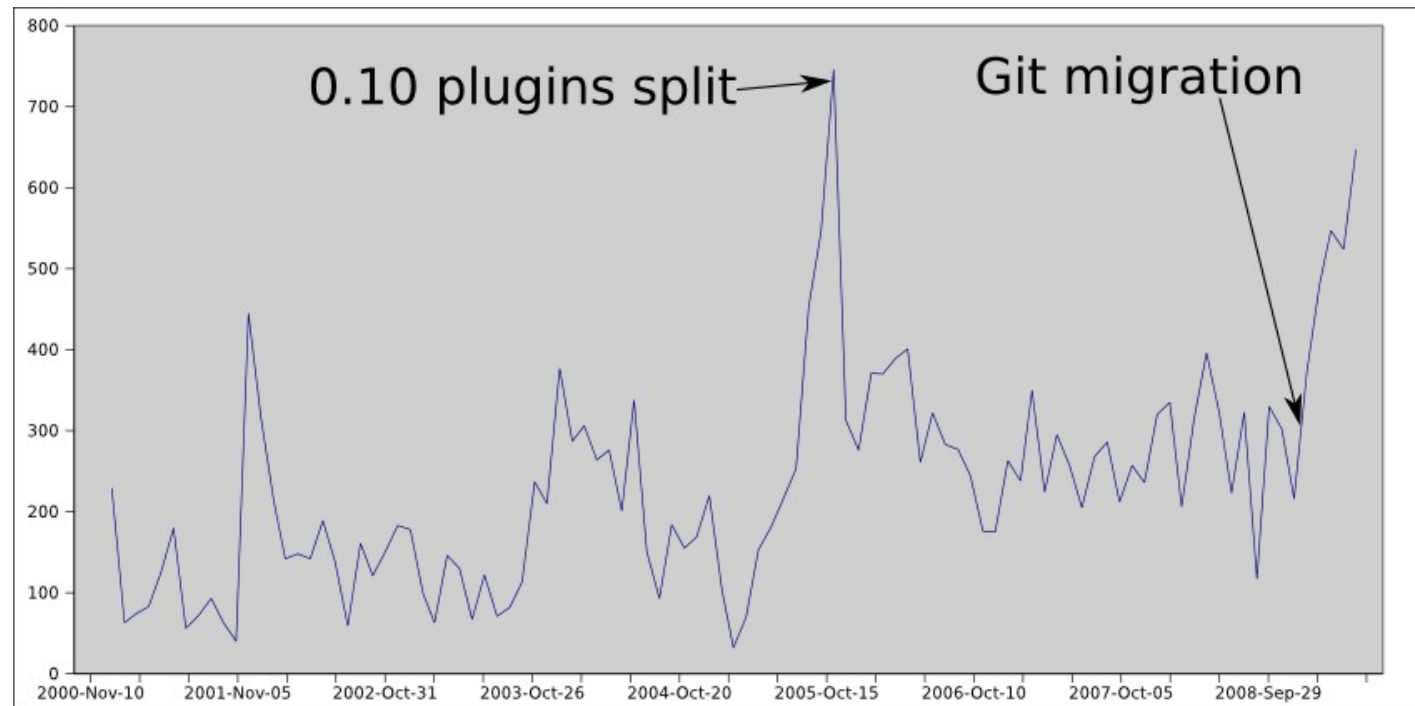
- Released December 2005
- Significant design changes
- Use OS threads – no more co-threads
- API/ABI stability
- Plugins split to Good/Bad/Ugly



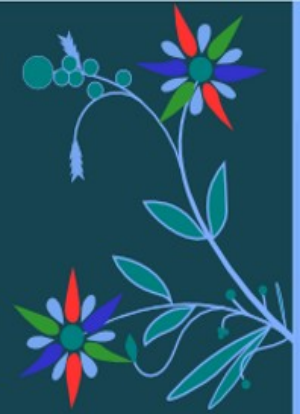


Progress

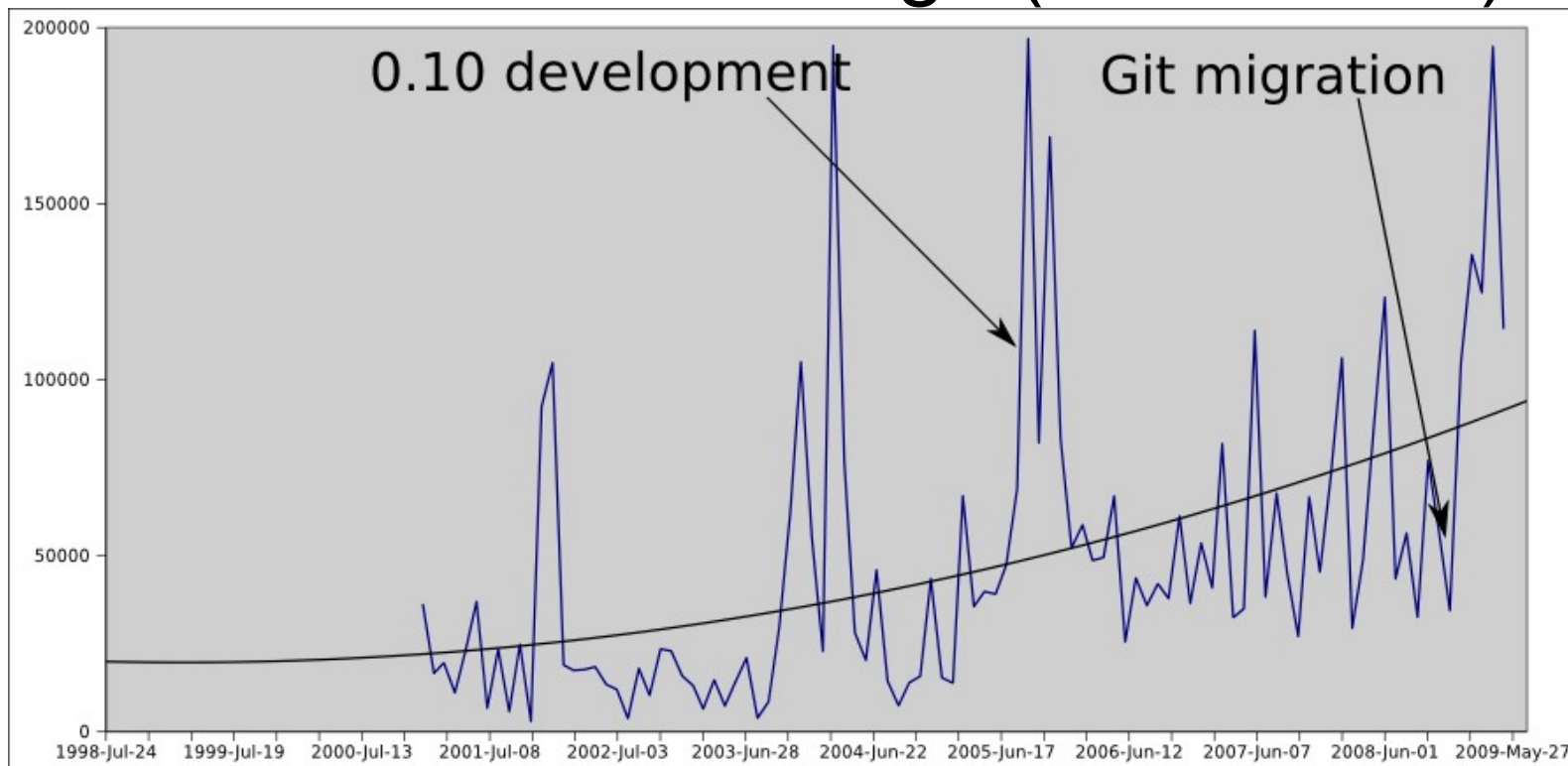
- Number of commits



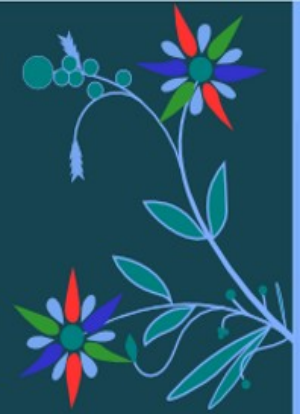
Progress



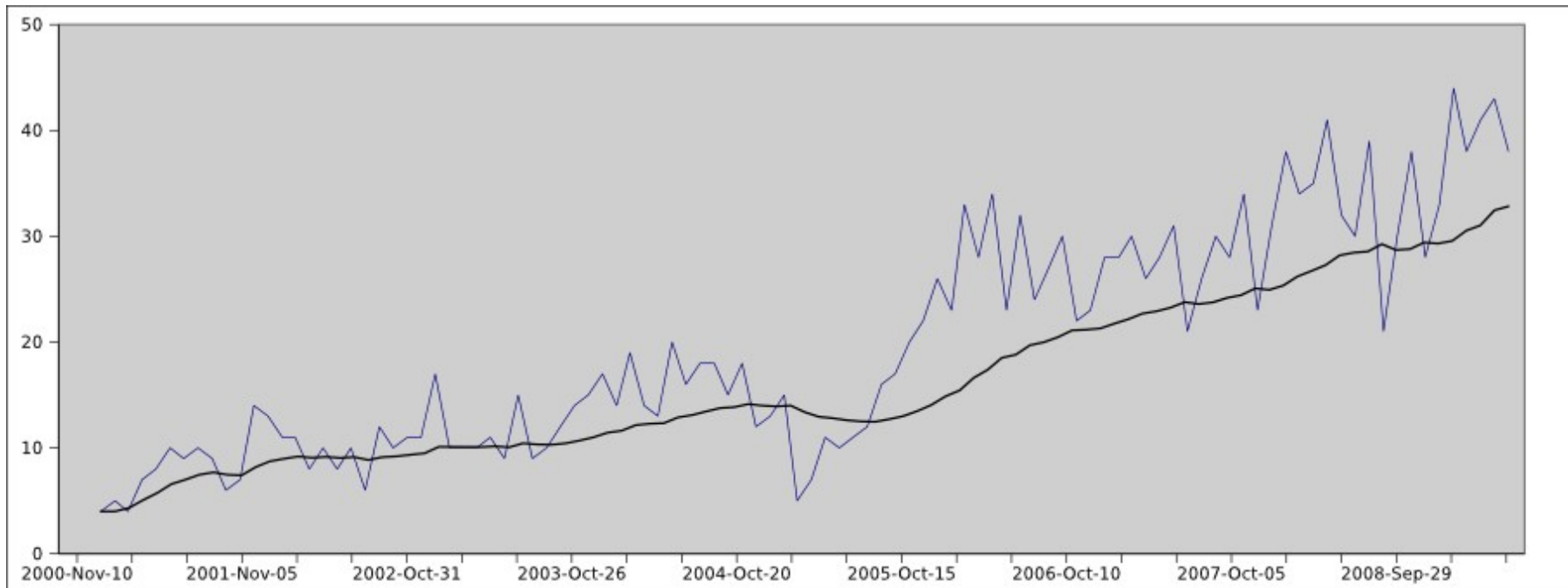
- Amount of code change (lines/month)



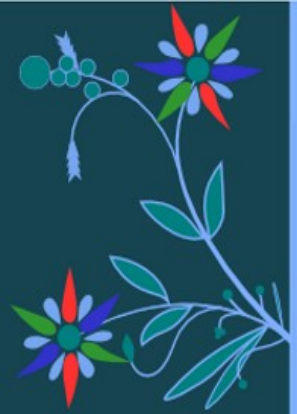
Progress



- Growth in contributions - authors/month



Recent Developments



- Since June 2008:
 - 32 individual module releases
 - Switched to Git
 - Binary registry
 - Presets
 - playbin2



Recent Developments



- Since June 2008:
 - Interlacing support
 - Usable DVD playback
 - appsrc/appsink
 - RTP/RTSP
 - HDV support
 - DVB



Recent Developments



- Since June 2008:
 - More muxers, filters, effects
 - MPEG-TS, mp4/mov
 - gst-plugins-gi
 - More external plugin projects



GStreamer 1.0?



Pros & Cons



Reasons not to...



- 0.10 has been working well
 - Proves new stuff can be added



Reasons not to...



- 0.10 has been working well
 - Proves new stuff can be added
- Breaking API/ABI causes porting hassles



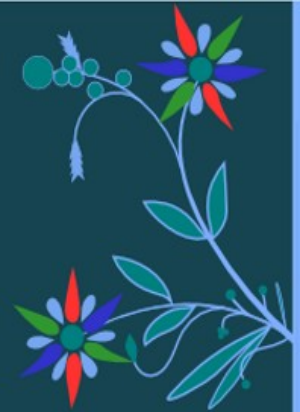
Reasons not to...



- 0.10 has been working well
 - Proves new stuff can be added
- Breaking API/ABI causes porting hassles
- Lull in development



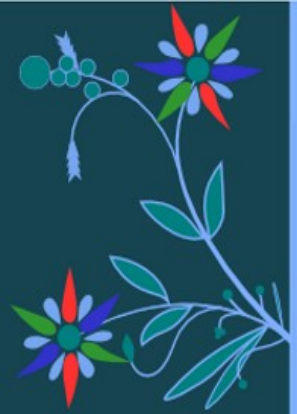
Reasons not to...



- 0.10 has been working well
 - Proves new stuff can be added
- Breaking API/ABI causes porting hassles
- Lull in development
- Supporting 0.10



Reasons to think about 1.0



- Things that are hard to fix in 0.10



Reasons to think about 1.0



- Things that are hard to fix in 0.10
- Remove deprecated API



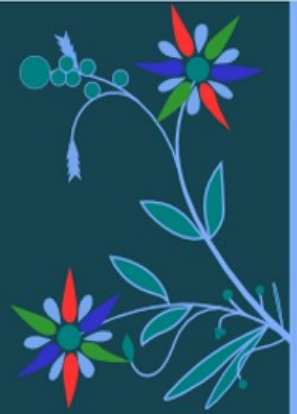
Reasons to think about 1.0



- Things that are hard to fix in 0.10
- Remove deprecated API
- Fix API warts



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- Symbolism of 1.0



Reasons to think about 1.0



- Things that are hard to fix in 0.10
- Remove deprecated API
- Fix API warts
- Symbolism of 1.0
- Git makes things easier



Deprecated API



- `gst_element_get_pad()`
- stream time
- some `gst_controller` bits
- `playbin` and `decodebin`
- `GstMixer`
- RTP library APIs
- `GstCollectPads`



Butt ugly API



- GstImplementsInterface
- GstTuner
- Others?



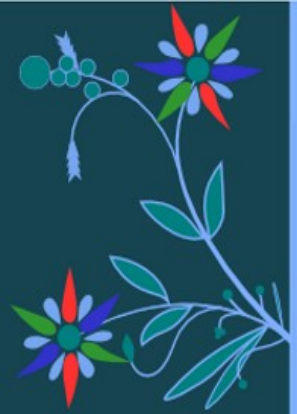
Fix deficiencies



- In caps
 - video clean-regions, strides
- In API
 - Public stuff that should be private
- Where we're out of padding
- FIXME: 0.11
 - Backwards compatibility behaviours



Invigorate the blood



- Hack without worrying about ABI/API
- Moving plugins around
- New features I'd like
 - Better hardware acceleration support
 - More base classes



Proposal



- Create a Git playground
- Merge from master regularly
- WIP branches to demonstrate ideas
- Keep developing 0.10
- Pull branches together as 0.11



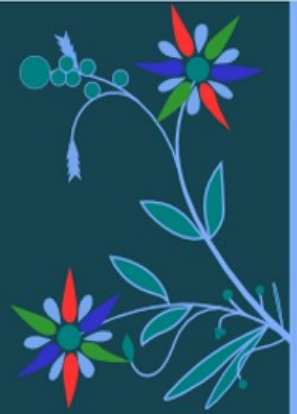
Proposal



- Create a Git playground
- Merge from master regularly
- WIP branches to demonstrate ideas
- Keep developing 0.10
- Pull branches together as 0.11
- Target GStreamer 1.0 for GNOME 3.0
 - October 2009 to March 2010



Next step...



Come to the
GStreamer Summit Thursday – 11am

Questions?



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Gran Canaria Desktop Summit, July 2009