

Asterisk Project Update

AstriCon 2009

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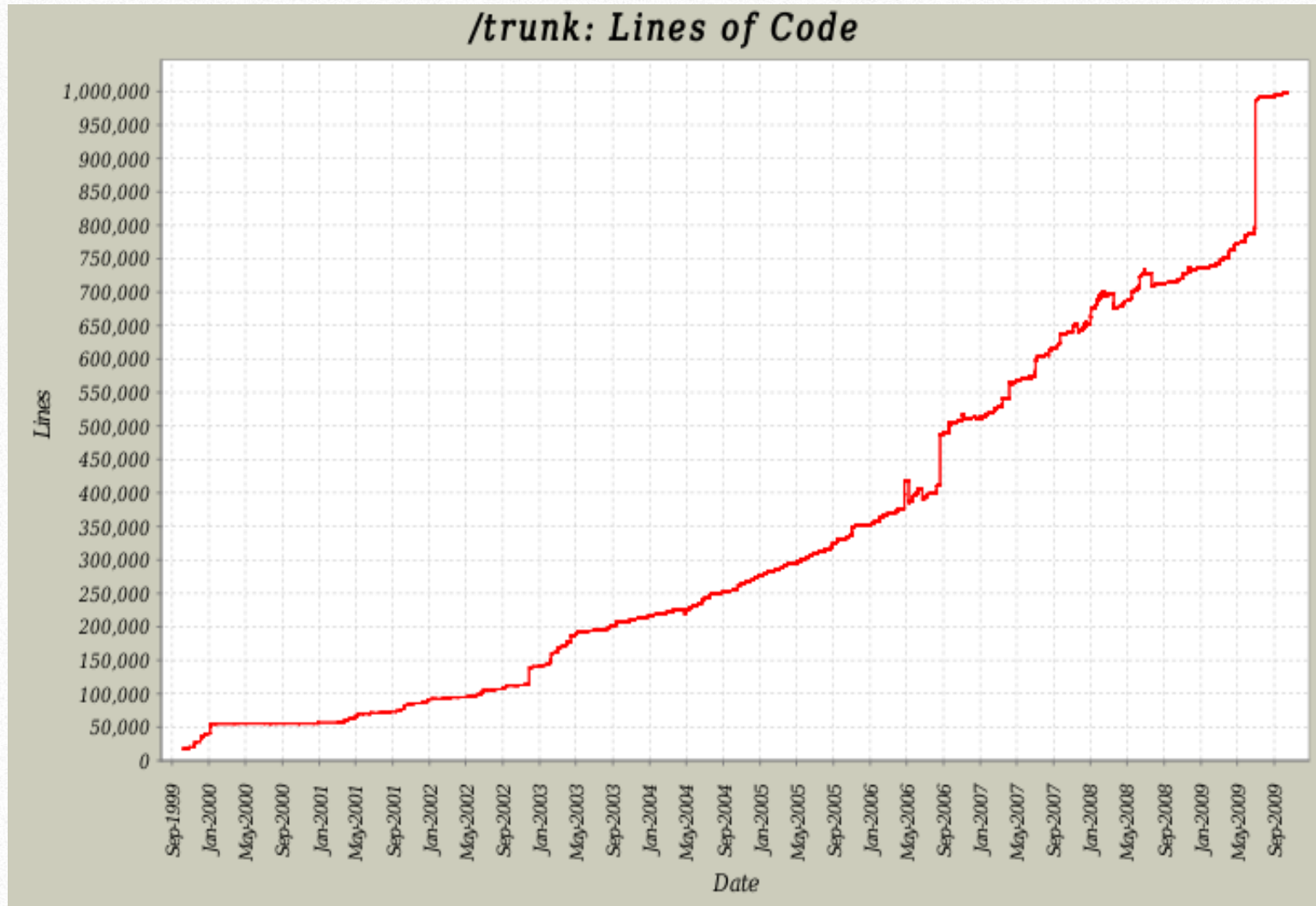
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- Project Statistics
- Release History and Updates
- Recent and Upcoming Improvements
- Q&A Session (Hold your questions)

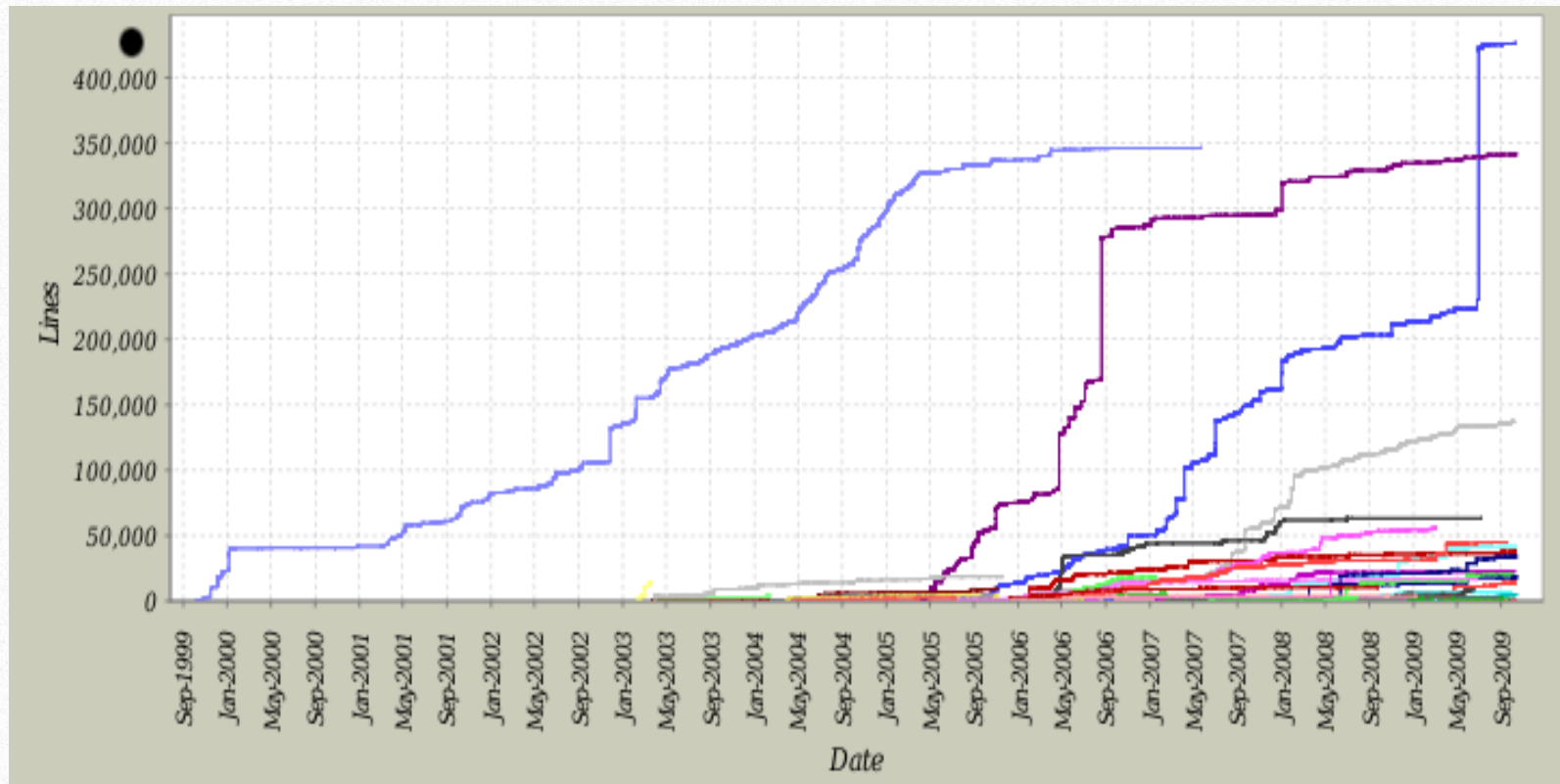
Before we begin ...

**NUMBERS
ARE
AWESOME!**

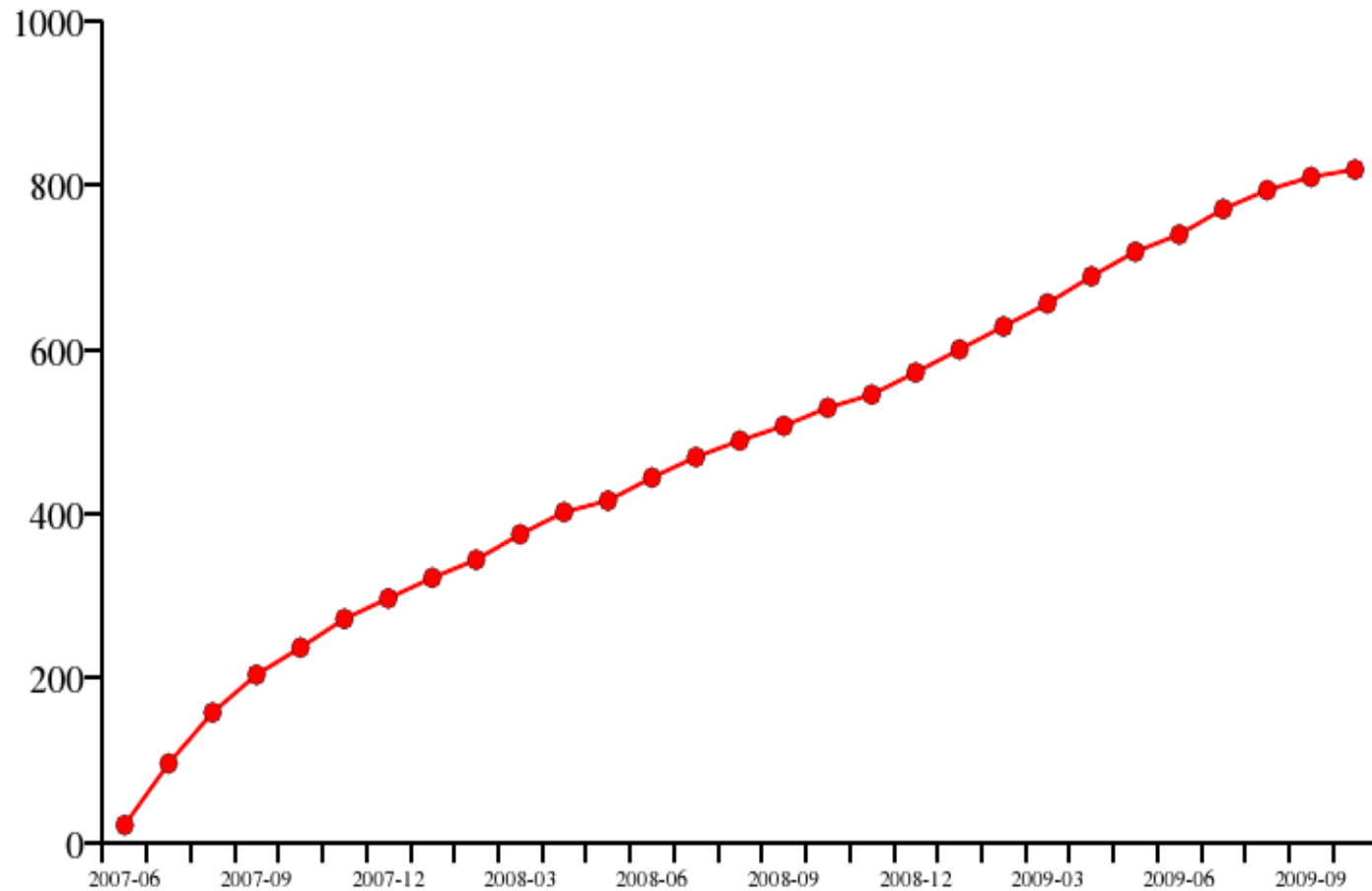
- Center of Asterisk Development
- In the last year:
 - 2320 Commits
 - 825 Files Changed
 - 322148 Lines Added
 - 53251 Lines Removed



- Lines of Code per committer



Contributor License Agreements



Policy changes over time to address
changing needs of the project.

- 0.1 – December 1999
- 0.2 – September 2002
- 0.3 – February 2003
- 0.4 – April 2003
- 0.5 – September 2003
- 0.7 – January 2004
- 0.9 – April 2004

- Released in the Fall of 2004
 - At the first Astricon!
- 1.0.X updates with bug fixes only

- Released November of 2005
- Release management similar to 1.0
- Still updated for security issues

- Released December of 2006
- Release management same as 1.0 and 1.2
- Still fully maintained

Problems so Far

- 1.4 release off to a rough start
 - Took too long to stabilize
- Time to market on features was long
- Upgrades sometimes painful

- Release quality
 - Improve release candidate process
 - Shorten release cycle to have smaller targets for testing
 - Implement more strict code reviews
 - Educate development team on best practices and common problems

- Long time to market for new features
 - Shorten release cycle to deliver new features quicker and in smaller increments

- Painful Upgrades
 - Embrace more aggressive maintenance of older methods to maintain backwards compatibility
 - (Continue to) document all changes that affect configuration and behaviors

- Release every 3 months or so
- Deliver small feature increments that maintain backwards compatibility
- Maintain each increment for at least a year

- Asterisk 1.6.0 – October 2008
- Asterisk 1.6.1 – April 2009
- Asterisk 1.6.2 – Q4 2009

- Closer to every 6 months
- Increments contain much more significant changes than planned

Continuing to Improve

- Introduce Release Type
 - Standard and LTS

- Standard
 - 1 year bug fixes + 1 year security

- LTS
 - 4 years bug fixes + 1 year security

- 1.6.X Release Numbering Confusing
 - Does not accurately reflect the magnitude of change between releases
 - Too different from other projects (and our previous release numbering)

- Go back to previous numbering scheme
 - 1.6.3 → 1.8

- <Concept>.<Feature>.<Minor>[.Patch]
 - *Concept* – Something close to a complete rewrite would be required to change this
 - *Feature* – An update to this number indicates a change to the feature set
 - *Minor* – This number reflects an update with bug fixes only
 - *Patch* – Trivial Changes (usually for a security release)

Release Schedule

Release Series	Release Type	Release Date	Security Fixes Only	End of Life
1.2.X		2005-11-21	2007-08-07	2010-11-21
1.4.X	LTS	2006-12-23	2010-12-23	2011-12-23
1.6.0.X	Standard	2008-10-01	2010-04-01 ***	2010-10-01 ***
1.6.1.X	Standard	2010-04-27	2010-04-27	2011-04-27
1.6.2.X	Standard	TBD (Q4 2009)	TBD + 1 year	TBD + 2 years
1.8.X	LTS	TBD	TBD + 4 years	TBD + 5 years

The fun stuff!

- Completely rewritten T.38 negotiation
- Full support for T.38 send/receive; gateway support in the works
- Configuration options for interoperability requirements
- chan_dahdi improvements to improve stability of FAX over PSTN connections
- Hundreds of hours of rigorous testing

- JABBER_RECEIVE
 - Receive jabber messages in the dialplan
 - 1.8+

- Distributed events
 - MWI and Device State
 - Still in testing

- Full control over connected party ID updates
- Redirecting Party ID supported, too
- 1.8+

- “Camp on extensions”
- CCNR and CCBS
- Support across SIP and ISDN
- Currently in Development

- iCal, CalDAV, Exchange 2003
- Device State Provider
- Access calendar state in dialplan
- Originate calls based on calendar events
- 1.8+

- Infrastructure for Components to report potential attacks
- Includes a module that writes security events to a log file
- 1.8+

- Lots of additional testing
- Improved configuration options
- Successful integration with Microsoft OCS
- Continued work on robustness
- 1.6.0+

- Many improvements to BRI support via mISDN (All versions)
- Native BRI support in libpri / chan_dahdi (1.6)
- R2 support in chan_dahdi with libopenr2 (1.6.2+)
- SS7 support continuing to mature (1.6)

- Makes it very easy to write new C modules that need to bridge channels
- New conference bridge application
 - Conferencing without DAHDI
- 1.6.2+

- Timing abstraction instead of relying on DAHDI timers directly
- `res_timing_dahdi`
- `res_timing_timerfd`
 - Newer versions of Linux
- `res_timing_pthread`
 - Works on all supported platforms
- 1.6.1+

- Rewritten management of core channel objects
- Use of astobj2 object model
- Less channel locking required
- Code that does channel lookups or iterations much more efficient

- Data structures updated for higher performance under load
- `ast_sched_add()` + `del()`

Events	Seconds 1.6.1	Seconds 1.6.2	Percentage of Original
1000000	686.1	3.3	0.4%
100000	53.8	.338	0.6%
10000	.153	.034	22.3%
5000	.049	.017	35.2%
1000	.018	.003	78.0%
500	.003	.002	95.5%

- Development community continuing to grow at a healthy rate
- Release processes modified to meet the needs of users
- Rapid development on new functionality to push Asterisk into more interesting places

Questions?

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