

Challenging the world to change



ALSA - the past year



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ALSA - new drivers

- ATI IXP 150,200,250 chips
- RME HDSP MADI
- Digigram miXart
- Intel 8x0 soft modem
- Aureal au88x0
- Bt87x (video grabber cards)
- Tescam US-122, US-224, US-428
- PDAudioCF (Core Sound)
- ... and extended others - especially USB, PCI ...

ALSA - statistics

- alsa-driver 0.9.3 vs. 1.0.4
 - 1024 vs. 1203 files (17% gain)
 - 297711 vs. 343654 lines (15% gain)
 - 704 files changed, 79401 insertions, 33438 deletions
- alsa-lib 0.9.3 vs. 1.0.4
 - 269 vs. 319 files (18% gain)
 - 118536 vs. 137514 lines (16% gain)
 - 194 files changed, 25598 insertions, 6598 deletions

ALSA - WWW/FTP hits

- WWW server
 - 100000 hits & 1.6GB per day
 - 540GB transferred last year
- FTP server
 - 5000 hits & 3.2GB per day
 - 950GB transferred last year

ALSA - 2.6 kernel integration...

- more driver code cleanups
 - new driver DMA API
 - Kconfig / Makefile cleanups
 - configuration is parsed from Kconfig files (alsa-driver package)
- architecture dependent problems
 - cache coherency for DMA pages (user & kernel space)

ALSA - Mantis - tracking system

- very good tool
- 27.1.2004-20.4.2004
 - alsa-driver 184 reports, 81 open
 - alsa-lib 20 reports, 7 open
 - other packages - small counts

ALSA -Driver debugging problems

- Too many variations especially for cheap hardware
 - Integrated soundcards on motherboards
 - AC'97 codecs
- Testing environment
 - very time consuming (setup hardware etc.)
 - almost impossible for many cases
- we rely on user problem reports

ALSA - Development problems

- Limited human resources
- Driver maintenance is preferred
- Bug-fixing is preferred
- alsa-driver
 - alsa-lib
 - alsa-utils -> alsa-tools

ALSA - Hardware vendors

- three categories
 - very co-operative (documentation, hardware, answer questions)
 - documentation only
 - no documentation
- example #1 - Core Sound
 - perfect communication including contacts to hardware engineers
- example #2 - Creative Labs
 - too big company, difficult to reach right person to make decision
 - SUSE signed NDAs to get datasheets for older ISA chips
 - PCI chips - information taken mostly from emu10k1 driver
 - no information for Audigy LS and EMU10KX chips

Why ALSA 1.0 release ?

- Reasons
 - 2.6.0 kernel release
 - Kernel APIs are matured enough
 - Many applications have ALSA support
 - Message to all developers - ALSA is ready for full use now

ALSA – future

- Driver
 - Move instrument layer to alsa-lib
 - Better wavetable support
 - Improve lowlevel drivers for soundcards

ALSA – future

- Library
 - Use integrated lisp for better configuration
 - Finish design and implementation extensions (abstract mixer, simple PCM initialization)
 - Design runtime configuration interface
 - Work on the instrument layer
 - Split library to module (embedded solutions)
- Utils
 - Graphical configuration utility for alsa-lib
 - Dataflow control
 - Assign hardware I/O (speakers etc.) to applications

Questions?

Thank you

