Current Status of HIPL

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What was wrong?

• Code quality was not what it could have been
  – Research-focused project
  – Too many short-term workers (e.g., master students)
  – Too many ideas for the core team to maintain
  – No commercial focus
  – IETF spec churn
Improvements

• In general: Code quality, clarity, robustness
• Strong focus on main functionality
  – Removed tons of dead and unused code
  – Only main extensions in the development trunk
• Complete rewrite of the build system
  – Parallel builds (make -j x) work now
Achievements

• Developers’ lives are now easier
  – New version control system (bzr)
  – Proper code documentation

• Maintenance is less burdensome
  – Strict warning handling
  – Reformatting of the complete codebase
  – Additional formatting checks and rules
  – Automatic builds and error reporting
Portability & Performance

• Better portability (let’s hope so)
  – Stricter checking of C standard compliance
  – Better ways of dealing with platform-dependent code

• Currently supported:
  – Ubuntu, Fedora, CentOS, Maemo 5 (N900), OpenWRT wireless routers

• Speed improvements
  – Profiled BEX and identified unnecessary delays (eight-fold speed up)
Future Plans

• Modularization of extensions (Tim Just / René Hummen)
  – HIP specs are „modular“
    ... so should be the code.
  – Attempt to decouple functionality and to reduce code churn
  – Code easier to read and to maintain
Future Plans (cont’d)

• Separate mobility management
  – Remove from basic HIP code
  – External mobility management triggers HIP update process

• Better support for Android
  – Tighter integration into main HIPL code
  – Plethora of Android-based devices

• Industry-compatible licensing
  – MIT License
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Code Improvement Rallye (Dec/Jan)

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Future Maintenance

• TKK/Aalto University in Helsinki
• RWTH Aachen
• HIIT
• New release
• Recent snapshots

hipl.hiit.fi