SmallEiffel: The Open Source Eiffel Compiler

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Overview

- About Open Source and the GPL
- About SmallEiffel (SE)
- How to contribute a (partial) ELKS 2001 `STRING` class to SE
- Remarks

About Open Source and the GPL

Open Source:

- Sources avilable without NDA (sometimes)
- No other implied characteristics

Open Source under the GPL (Gnu Public License)

- Copyleft
- Usually can be compiled
- Derived work possible
- Derived work also GPL'd
- Contributions often welcome

About SmallEiffel

SmallEiffel - The GNU Eiffel Compiler:

- Eiffel compiler under the GPL
- Academic project at LORIA
- Maintainer: Dominique Colnet
- First release: September 1995
- Status: Fully usable and stable, currently version -0.76
- Name: SmallTalk inspired
- Home: `http://www.loria.fr/projets/SmallEiffel/`

SmallEiffel: Aims and Characteristics

- 'Lean and Mean':
  - Fast compilation
  - Fast execution (virtual function dispatch, gc, ...)
- Compiles to ANSI-C and Java Bytecode
- Available on numerous platforms:
  - Any UNIX-like OS
  - MS Windows (with lcc-win32 as free backend)
  - VMS, MacOS, Amiga-OS, MSDOS (djgpp),...
- Complete Eiffel sources included
- Small: ca. 1MB as gzip'ed tar

How to Contribute a (Partial) ELKS `STRING` class to SE

1. Make the offer to Dominique
2. Have to offer accepted
3. Implement changes based on last SE beta version
4. Tell Dominque about problems and solutions
5. Send changes to Dominique
6. Dominique modifies the changes
7. Changes are included in the next beta version (some days later)

Implementation

- Full and 'production' implementation
- Memory footprint must not be changed

Problems/Issues/Decisions:

- Features with changed semantics
- Name changes
- Different parameter conventions
- Mark nonconform names/features as obsolete?

'Vendor' concerns

- Keep shorter names (e.g. `append` vs. ELKS `append_string`)
- Keep old functionality (`index_of`, `first_index_of`)
- Conformity of features with class `COLLECTION` (`add_first`,...)
- Other details

⇒ SE `STRING` keeps many non-ELKS names/features

⇒ SE `STRING` gets all ELKS features

Final Remarks

- The SE project will continue
- Many people contribute to SE
- Responses to error reports are fast
- Libraries are still growing
- ...