DRAFT
Scheme Standardization Charter

Participants of the 2002 Scheme workshop in Pittsburgh formed a "strategy" committee to determine a process and direction for future Scheme standards. The committee members are Alan Bawden, Will Clinger, Kent Dybvig, Matthew Flatt, Richard Kelsey, Manuel Serrano, and Mike Sperber.

The committee has produced the following draft charter. This draft will be discussed during the standardization session in the last part of today's workshop. The discussion will be lead by Alan Bawden (panel leader), Will Clinger, Marc Feeley, Richard Kelsey, and Mitch Wand.

Submit written comments and questions (about this charter or standardization in general) to Alan Bawden during the workshop today. The panel will use written questions and comments, as well as this this draft charter, to guide the panel session.

Goals

- Produce a core Scheme specification that refines R5RS in order to make it easier to write portable code, and that removes procedures and forms that would be better organized in separate libraries.

  The new core must include a mechanism for user-defined datatypes that are distinct from all other datatypes. Examples of other possible changes include

  - requiring that `define` be a binding form;
  - defining a fixed order of evaluation for arguments;
  - requiring that inexact numbers use a floating-point; representation, and that representation must have at least the precision of IEEE doubles;
  - making the GC and proper tail-recursion requirements more formal; and
  - specifing the characters set(s) of program source code and strings.

- Define a module system for encapsulating core Scheme programs and libraries. The module system should be orthogonal to the core language, and based on a few fundamental operators.

- Define a macro system to supplement or replace `syntax-rules`. The shortcomings of the current macro system (and its description) have been well documented.

- Designate library modules. Not all Scheme implementations will provide all libraries, and libraries need not be implementable in the core language. For example, a standard library might provide pre-emptive threads or define a foreign-function interface to C. Many libraries will be implementable in the core langage, though language implementors may choose to provide libraries that are built in a different way.

Standardization Committees

Steering Committee

The creation of Scheme standards shall be governed by a Steering Committee that consists of six members. Its responsibility is to ensure that the standardization process continues, to establish processes by which draft standards are reviewed and accepted by the Scheme community at large, and to ensure that standards work towards the goals defined in this charter.

The Steering Committee must replace members who leave. Replacements must be selected within three months, and the Steering Committee must announce the replacement to the Scheme community at large. The Steering Committee itself shall establish procedures for replacing its members.

This charter can be ammended only by a unanimous vote of the Steering Committee.

Standard Editors

The creation of Scheme standards documents shall be governed by a committee of six Editors, including Editor-in-Chief. The Editor-in-Chief is responsible producing standardization documents. None of the six Editors may be a member of the Steering Committee.

When the Editors have produced a candidate standard, they present it to the Steering Committee for review and acceptance. The Steering Committee shall make no rule concerning the process by which a candidate standard is produced or revised, but Editors are encouraged to exploit the Scheme Request for Implementation (SRFI) process for gathering opinions and suggestions from the Scheme community at large.

The Steering Committe must replace Editors who leave. The replacements must be selected within three months, and the Steering Committee must announce the replacement to the Scheme community at large.

Scheme Request for Implementation (SRFI) Editors

The Scheme Request for Implementation process shall remain the primary vehicle for language design and discussion by the Scheme community at large. SRFI standards shall be governed by the SRFI Editors, and shall not be governed or endorsed by the Steering Committee. Standard Editors are encouraged to draw on the SRFI process in developing Scheme standards.

Recommended Timeline

The Steering Committee and Editors are ultimately responsible for the process of Scheme standardization. Nevertheless, as the intent of this charter is to make timely progress towards a standard, the following timeline and process suggestions (for a single round of standards) may serve as a benchmark for the actual process.

Drafting

The Editors should produce a draft standard core Scheme, a draft module system, and a draft set of initial libraries within 24 months of the Editors' establishment.

During these 24 months, the Editors are encouraged to produce short status reports every 6 months, posted on comp.lang.scheme. The Editors are also encouraged to solicit opinions on specific issues concerning the draft.

If the Editors require more than 24 months to complete the draft, they are encouraged to report this as soon as possible to the Steering Committee. If the Editors determine they are unable to produce a draft, they should report this to the Steering Committee as soon as possible.

Review

When the Editors finish the draft standards, they should provide the drafts to the Steering Committee, who should in turn publish the drafts on comp.lang.scheme.

After this, the members of the Steering Committee and the scheme community at large have 6 months to voice concerns, criticism, and suggestions for improving the drafts.

The Editors should attempt to respond to each voiced concern, detailing a rationale against a concern or indicating the way that the drafts will change to address a concern.

The editors are encouraged to publish numbered (or otherwise identified) intermediate revisions of the report during the review period, and announce them on comp.lang.scheme.

Finalization

After the end of the review period, the Editors should submit new drafts within three months. The Steering Committee should then choose either to finalize the drafts or to restart the review process.