

## Standardizing Information and Communication Systems

### Minutes of the 15th meeting of TC39 held in Cupertino, California, USA

- Chairman:** Mr. Joel Marcey (Intel)
- Vice-Chairman:** Mr. Andrew Clinick (Microsoft)
- Secretary:** Mr. Jan van den Beld (SG ECMA)
- Attending:** Mr. Peter Torr (Microsoft), Ms. Carol Thompson (Hewlett-Packard), Ms. Christine Mingins (Monash University), Mr. Rex Jaeschke (Microsoft), Mr. Emmanuel Stapf (ISE), Mr. Peter Hallam (Microsoft), Mr. Waldemar Horwat (Netscape), Mr. Heikki Toivonen (Netscape), Mr. John Schneider (BEA/AgileData), Mr. Rok Yu (Microsoft)
- Guest:** Mr. Jon Jagger (JSL)
- Excused:** Mr. Sam Ruby (IBM)

#### 1 Opening, welcome and roll call

Mr. Marcey, chairman TC39, opened the meeting. A roll call was held

#### 2 Adoption of the agenda (2003/004)

The agenda was adopted with the addition of a discussion re: the ISO publication of the C#/CLI specification added to Other Business

#### 3 Approval of the minutes of the 14<sup>th</sup> meeting (2002/024)

The minutes of the 14th meeting were approved

#### 4 Matters arising from the minutes not covered elsewhere

None

#### 5 Reports / actions

##### 5.1 Status report from Task Group 1 ECMAScript

Mr. Torr, convener of TG1, presented the TG1 report and status.

Both ECMAScript Edition 4 and the ECMAScript for XML efforts continue to move forward, although there is considerable risk around finalizing both standards this year. The committee is currently debating the best course of action to enable completion of one or both of these standards by September.

The algorithms for the core language are mostly complete, with some work remaining in object instance construction and type coercions. There has been good progress made on the E4X standard, with the initial draft being written in Edition 3 notation.

The committee has been aggressive at cutting features from E4 to meet the September deadline. **Mr. Jaeschke** (liaison to SC22 from ECMA) will contact SC22 in August to let them know of the possibility of the TG1 specs to come down the pipeline.

Mr. Torr announced his resignation as convener of TG1. Mr. Yu was appointed as incoming convener of TG1. The committee thanked Mr. Torr for his outstanding service and welcomed Mr. Yu into his new position.

No drafts or recommendations.

## 5.2 Status report from Task Group 2 C#

**Ms. Thompson**, convener of TG2, presented the TG2 report and status

Edition 2 of ECMA-334 was approved by the ECMA General Assembly in December 2002. Edition 2 has been fast-tracked into ISO and will be an official ISO standard on 1 April 2003.

The task group is currently working on edition 3. This edition is expected to include new features, as well as resolution of some issues and comments that have been identified in edition 2.

The current work item list for edition 3 includes the following items: Generics, Indirect member function calling, Anonymous methods and anonymous delegates, Iterators, Partial types (aka extensible types), Static classes, Separate property accessibility, Explicit namespace qualifier, Fixed size buffers, Keywords, Pragma, Assembly disambiguation, Volatile ref/out, Miscellaneous comments/issues (tracked via spreadsheet)

The task group anticipates submitting edition 3 of ECMA-334 for GA approval during the March 2004 TC39 meeting.

**Ms. Thompson** announced her resignation as convener of TG2. **Mr. Jagger** was appointed as incoming convener of TG2. The committee thanked **Ms. Thompson** for her long and outstanding 2 ½ year service and welcomed **Mr. Jagger** into his new position.

No drafts or recommendations.

## 5.3 Status report from Task Group 3 Common Language Infrastructure

**Mr. Marcey**, convener of TG3, presented the TG3 report and status

Edition 2 of ECMA-335 was approved by the ECMA General Assembly in December 2002. Edition 2 has been fast-tracked into ISO and will be an official ISO standard on 1 April 2003.

**Mr. Jaeschke** has officially transitioned into the editor role for the task group. The convener would like to thank **Mr. Jim Miller** for his previous editorial work. **Mr. Jaeschke** has also officially transitioned into the owner of the CLI comments spreadsheet maintenance.

The task group spent the past six months primarily preparing for work on edition 3 of the CLI specification (ECMA-335). Member companies prepared submissions for consideration as edition 3 work items. At the January 2003 meeting, the submissions were reviewed and considered, and the task group created a work schedule for the submissions that were approved for edition 3 work items. Other work items may come mid-stream during the edition 3 process.

The task group is handling the CLI comments that were not addressed for the edition 2 submission. Currently, most of the comments related to the CLI Partitions have been assigned owners, many of which are assigned to the editor to incorporate agreed upon changes. There has been good progress on this front.

The current work item list for edition 3 includes: Generics, Extensible Metadata, Extended Threading API, Runtime Check Disablement / Exception Re-Ordering, Serialization API, Debugging Format, Resolving the current CLI comments, with the caveat that some items may be postponed/withdrawn.

The task group has a goal to submit edition 3 of ECMA-335 for GA approval during the March 2004 TC39 meeting.

No drafts or recommendations.

## 5.4 Status report from Task Group 4 Eiffel

**Ms. Mingins**, convener of TG4, presented the TG4 report and status

It has been agreed that only language modifications that are already implemented by an Eiffel compiler can be considered for standardization. Currently three Eiffel compiler implementations are being used to form the basis of standardization.

A call for proposals resulted in a number of sponsored proposals being submitted to the committee.

In parallel, the committee began a review of 'Eiffel the Language 3' (ETL3). This document forms the draft ECMA standard.

A "Compiler conformance subcommittee" was established to resolve all low-level compiler differences not directly connected to the language definition.

Current proposals under consideration and their status are:

1. Assignment attempt on expanded types [AABT]: acknowledged
2. Remove validity constraint on equality [OPV]: acknowledged
3. Type conversion mechanism: pre-approved
4. Specifying reference / expanded as constraints on types [TCONST]: pre-approved
5. Explicit reference / expanded Formal\_generic\_name [LER]: pre-approved
6. Indexing clauses on features {ICF}: acknowledged
7. System validity [CAT]: pre-approved
8. Assertions on attributes [AOA]: pre-approved
9. Remote assignment on attributes [ASSIGN]: pre-approved
10. Array manipulation syntax [AMS]: pre-approved and [SPECOP]: rejected
11. Once creation procedures [CRONCE]: acknowledged
12. Reverse type inheritance [ADOPT]: acknowledged
13. Ternary operators [TERNOP]: withdrawn
14. Extend loop variants with any comparable [LVAR]: pre-approved
15. Inline agents [INLA]: pre-approved
16. Addition of the keyword 'only' [ONLY]: acknowledged

The task group anticipates submitting edition 1 of the standard for GA approval in December 2004 and there has been informal discussion re: submitting the standard to ISO, with positive thoughts in this regard.

No drafts or recommendations.

## 6 Any other business

### 6.1 External Input Into Standards Process and Maintenance of Existing Standards

There has been some thought amongst the TG2 and TG3 committees in expanding their scope of public support with respect to specification working drafts and the standardization process. The current process is to periodically post specification working drafts onto member company maintained mirror sites. A possible expansion to this process is to, through the mirror sites, let the public know that the task groups will either (1) monitor current relevant mailing lists for specification feedback (2) create a specific newsgroup/ mailing list specific to the standard specifications.

Wording on the mirror sites would state that this is for monitoring purposes only and no guarantee of support would exist.

A dedicated newsgroup / mailing list would not necessarily be endorsed by ECMA, and as such, ECMA has no objection to such a support mechanism. **Mr. van den Beld** stated, however, that ECMA may be able to set up a dedicated hardware resource to support such a mechanism, as long as a clear mandate for the purpose of the list existed.

**Mr. Horwat** and **Mr. Stapf** explained that the TG1 and TG4 respectively have a similar type of monitoring capability already established.

Given there was no objection amongst the committee, the TG2 and TG3 will discuss the support possibilities within the respective task group meetings.

## 6.2 ISO Publication Status for C# and CLI Specifications

ECMA-334 (C#), ECMA-335 (CLI) and ECMA-TR-84 (CLI Technical Report) will become official ISO standards and published on April 1<sup>st</sup>, 2003. The specifications will be published as ISO document numbers 23270, 23271, and 23272 respectively. **Mr. van den Beld** will formally request a waiver for the price of the ISO documents soon after public publication.

## 6.3 ECMA Public Relations

**Mr. van den Beld** discussed the public relations position within ECMA. **Mr. Martin Jacklin** is the public relations manager for ECMA. **Mr. Jacklin** can be utilized to assist in publicizing work and events that occur within the ECMA technical committees. **Mr. Jacklin** will be sending out emails to announce the opportunity of a press release with respect to the ISO publications of the C# and CLI specifications. Committee members are welcome to work with Martin on the content of such a press release and/or provide quotes for such a press release.

## 6.4 Appreciation

Special thanks and regards to the two departing conveners, **Ms. Thompson** and **Mr. Torr**, for their wonderful service to the respective task groups.

Thank you to HP and **Ms. Thompson** for their hosting of the 15<sup>th</sup> meeting.

## 7 Date and place of next meetings

16th Meeting: Dillington House, Somerset, United Kingdom, October 2nd 2003, 1300-1700 GMT, hosted by Mr. Jagger

## 8 Closure

The 15<sup>th</sup> meeting of TC39 was successfully closed