# ECMA International

## Standardizing Information and Communication Systems

## Minutes of the 14<sup>th</sup> meeting of TC39
## held in Kohala Coast, Hawaii, on 3<sup>rd</sup> October 2002

**Chairman:** Mr. A. Clinick (Microsoft)

**Vice-Chairman:** Mr. J. Marcey (Intel)

**Secretary:** Mr. J. van den Beld (SG ECMA)

**Attending:** Mr. Adamski (Netscape), Mr. Golde (Microsoft), Mr. Horwat (Netscape), Mr. Jaeschke (Microsoft), Mr. Kadhim (Fujitsu), Mr. Miller (Microsoft), Mr. Plum (Plum-Hall), Mr. Schneider (BEA), Ms Thompson (HP), Mr. Torr (Microsoft)

**Guest:** Mr. Jagger (UK)

**Excused:** Mr. Ksar, Mr. Meyer, Ms. Mingis, Mr. Ruby, Mr. Stapf

## 1 Opening, welcome and roll call

**Mr. Clinick**, Chairman of TC39, opened the meeting. A roll call was held.

## 2 Adoption of the agenda (02/13)

The agenda was adopted.

## 3 Approval of the minutes of the 13<sup>th</sup> meeting (2001/10)

The minutes were approved.

## 4 Matters arising from the minutes not covered elsewhere

None

## 5 Reports / actions

### 5.1 Status report from TG1: ECMAScript

**Mr. Torr**, Convenor of TG1, presented his report (2002/19). The group has been working through the draft of the Edition 4 document, and has made some significant cuts in an effort to maintain the goal of completing the standard by December 2003. Some of these cuts include interfaces, abstract classes, nested instance classes, units, and operator overloading. The group is closer to achieving functional agreement on many other areas of the standard, and a roadmap for completing the standard is currently under development. A still open question in which version of ISO/IEC 10646 (Unicode) is going to be supported: version 4 is about to be published. **Mr. Horwat** is still undertaking most of the work on the document, but other members will be contributing overview text and additional sections to complement the formal content.

A new sub group (TG1/SG01) has been formed within TG1 to standardize XML extensions to both ECMAScript 3 and the forthcoming ECMAScript 4 standard. **Mr. Torr** (Microsoft) will act as convener

and **Mr. Schneider** (BEA/AgileDelta) will be the editor. The plan is to have a standard to present to the GA by December 2003.

The ToR are given in 2002/12 and read as follows:

**Title**

ECMAScript for XML (E4X)

**Scope**

To standardize the syntax and semantics of a general purpose, cross platform, vendor-neutral set of language extensions adding native XML support to ECMAScript.

**Programme of Work**

• Develop a standard set of language extensions to add native XML support to ECMAScript

• Facilitate integration of developed extensions into the ECMAScript Language Specification

• On completion of tasks 1 and 2, investigate the future direction of XML support in ECMAScript and consider proposals for complementary or additional technology

• Maintain liaison with appropriate ECMA and external standards bodies.

<end of ToR>

See also item 7 of these minutes.

TG1 will work with the same Officers in 2003.

TG1 intends to meet on a monthly basis until the completion of the 4$^{th}$ Edition of the ECMA-262 on ECMAScript.

## 5.2    Status report from TG2: C#

**Ms Thompson**, Convenor of TG2, presented her report.

The task group spent the past six months preparing for the ISO balloting process. This involved preparing a write-up of issues identified within the task group, to be submitted to the ISO balloting process, as well as reviewing the comments received from the national bodies, and preparing responses.

The task group submitted 17 technical and 16 editorial issues for consideration in the ISO ballot resolution process, and prepared responses to 48 comments submitted by three national bodies: Japan (14), UK (23) and US (11).

The TG2 supports the proposal to get the forthcoming C# standard ISO/IEC 23270 freely available from the ISO web site. TG2 proposes to adopt the 2$^{nd}$ Edition of ECMA-334 to maintain full alignment with the ISO/IEC standard.

**Mr. van den Beld** thanked TG2 for its outstanding work, and in particular its Convenor, **Ms Thompson** and Editor **Mr. Jaeschke**.

TG2 will work with same Officers in 2003 and have quarterly meetings in 2003.

## 5.3    Status report from TG3: CLI

**Mr. Marcey**, Vice-Convenor of TG3, presented this report (2002/14).

The task group spent the past six months primarily preparing for the ISO balloting process. This involved (1) reviewing internal ECMA-based comments on the CLI specification, (2) determining which were appropriate for the ISO ballot resolution process, (3) preparing a write-up of those issues to be submitted to the ISO balloting process, (4) reviewing the comments received from the national bodies, and preparing responses.

The task group also has briefly discussed a possible roadmap for version 2 of the CLI standard. Microsoft has submitted a proposal for the addition of a concept called Generics to the next version.

The task group submitted 23 technical and 2 editorial issues for consideration in the ISO ballot resolution process, and prepared responses to 22 comments submitted by four national bodies: Japan (16), Switzerland

(1), UK (1) and US (4). Please note that these comments are represented from the CLI specification (ECMA-335).

The task group also prepared responses to 3 comments submitted by one national body, Japan, for the CLI Technical Report (ECMA-TR84).

TG3 supports the proposal to get the forthcoming CLI standard ISO/IEC 23271 and the accompanying TR 23272 freely available from the ISO web site.

TG3 proposes to adopt the 2$^{nd}$ Editions of ECMA-335 and ECMA TR/84 to maintain full alignment with the corresponding ISO/IEC publications.

**Mr. van den Beld** thanked TG3 for the huge task they have completed in such a short time frame, and in particular the Convenor **Mr. Ruby**, and the Editor **Mr. Miller**.

The Officers of TG3 for 2003 are:

– Convenor:         Mr. J. Marcey (Intel)

– Vice-Convenor:   Mr. B. Kadhim (Fujitsu)

– Editor:            Mr. R. Jaeschke (Microsoft)

TG3 intends to have quarterly meetings in 2003.

### 5.4     Status report from TG4: Eiffel

**Mr. van den Beld** reported that the development of the ECMA Standard for Eiffel on the basis of the book ETL 3 (Eiffel The Language) has formally started: each chapter of ETL 3 is reviewed by TG4.

A list of language features for discussion and review has been created and requests for contribution for languages issues have been assigned to TG4 members. A format for the issues has been agreed upon. A subgroup has been created to prepare an inventory of differences and incompatibilities between Eiffel compilers, and proposals how to resolve these.

TG4 will continue to work with the same Officers in 2003.

Meetings are scheduled as follows:

Nr.3, Zürich, 16$^{th}$-18$^{th}$ November 2002.

Nr.4, Santa Barbara, 19$^{th}$-21$^{st}$ February 2003.

Nr.5, Nancy, 29$^{th}$-31$^{st}$ May 2003.

Nr.6, Santa Barbara, 25$^{th}$-27$^{th}$ September 2003.

Nr. 7, Zürich, 20$^{th}$-22$^{nd}$ November 2003.

## 6     New editions of ECMA-334, ECMA-335 and TR/84

ECMA-334 and ECMA-335 have been unanimously approved by JTC 1 as ISO/IEC 23270 and ISO/IEC 23271, resp.

TR/84 has been approved with one negative vote (Japan) as ISO/IEC TR 23272.

TG2 and TG3 propose to publish 2$^{nd}$ Editions of the ECMA Standards and TR which are fully aligned with the forthcoming ISO/IEC publications: see 2002/20, 2002/21 and 2002/22, resp.

TC39 unanimously approved to forward these fully aligned final drafts to the GA for vote in December 2002 for the 2$^{nd}$ Editions.

## 7     Presentation and discussion of new work proposals

### 7.1     ECMAScript in XML

**Mr. Schneider** gave an interesting presentation (2002/17) about this new activity in TG1 which has set up a subgroup SG01 for this project.

The goal is to have something stable in August 2003.

TC39 expressed substantial interest in this work. **Mr. Miller** also expressed some concerns about the possible risk when standardizing something else than prior art:

To his view, using existing practice or a working implementation is a pre-requirement for a standard.

There is an internal prototype implementation based on Jscript (under RINO):

A license may be made available for try-outs.

**Mr. van den Beld** said that publishing a TR first could be a solution for **Mr. Miller**'s concerns, if the situation remains uncertain.

Combining the new functionality with Edition 3 of ECMAScript will be less powerful than with the 4$^{th}$ Edition of ECMAScript which is scheduled for December 2003.

A rationale for the combination with the 3$^{rd}$ Edition will be prepared by TG1: an alternative is the publication of a TR.

TC39 expressed its appreciation to **Mr. Schneider** for bringing this work into TG1.

## 7.2 TG2 and TG3

Both TGs will meet in January 2003 to decide on a possible roadmap for future work.

An interesting presentation in this context was given by Mr. **Hejlsberg** at OOPSLA 2002 (2002/23).

## 8 TC39 Officers for 2003

**Mr. Marcey** was unanimously elected as chairman, and **Mr. Clinick** as Vice-Chairman of TC39 for 2003, swapping their roles.

**Mr. van den Beld** thanked **Mr. Clinick** for his many efforts and thorough guidance during his 3 years as Chairman of TC39 which has been so productive during this period.

## 9 Any other business

### 9.1 Appreciation

The Chairman thanked **Mr. Ruby**, Convenor of TG3, and **Mr. Miller** for their work done in the first two years of TG3. In particular he expressed appreciation to **Mr. Miller**'s meticulous efforts for the timely development of such a complex publication as the CLI standard.

### 9.2 TC39 Chairman's Report to the CC

This report is given in 2002/18.

## 10 Date and place for the next meetings

Nr. 15: Cupertino, 26$^{th}$ March 2003, preceded by TG3 meeting (24$^{th}$-25$^{th}$ March 2003) and followed by a TG2 meeting (26-27$^{th}$ March 2003).

Nr.16: Redmond, 2$^{nd}$ October 2003, preceded by a TG3 meeting (29$^{th}$-30$^{th}$ September 2003) and a TG2 meeting (1$^{st}$-2$^{nd}$ October 2003). To be confirmed.