

**Minutes of the:**  
**held in:**  
**on:**

**17<sup>th</sup> meeting of Ecma TC39**  
**Melbourne, Victoria, Australia**  
**18 March 2004**

**Chairman:** Mr. J. Marcey (Intel)  
**Vice-Chairman:** Mr. A. Clinick (Microsoft) - Excused  
**Secretary:** Mr. J. van den Beld (SG Ecma International)  
**Attending:** Mr. J. Dyer (Macromedia), Mr. R. Jaeschke (Microsoft), Mr. J. Jagger (Microsoft/JSL), Prof. Mrs. C. Mingins (Monash University), Mr. T. Plum (Plum Hall), Mr. A. Robison (Intel) (by speaker phone), Mr. J. Schneider (BEA/AgileDelta), Mr. B. Schulze (Macromedia), Mr. R. Yu (Microsoft)  
**Guests:** Mr. T. Kurokawa (CSK Japan)

## 1 Opening, welcome and roll call

**Mr. Marcey**, Chairman of TC39, opened the meeting. A roll call was held. **Mr. Marcey** chaired the meeting by speaker phone.

## 2 Adoption of the agenda (2004/5)

The agenda was adopted.

## 3 Approval of the minutes of the 16<sup>th</sup> meeting (2003/46)

The minutes of the 16th 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 and E4X (ECMAScript for XML)

**Mr. Yu**, Convenor of TG1, presented the TG1 report and status: see 2004/11.

E4X is discussed under item 6 of these minutes.

## 5.2 Status report from Task Group 2: C#

**Mr. Jagger**, Convenor of TG2, presented the TG2 report and status: see 2004/12.

Six out of the seven proposed features have already been implemented in the latest C# compiler of Microsoft. There are virtually no questions left. The development of the next edition of the C# standard is well under control. Its final draft will be sent to TC39 for approval in September and to the GA for approval in December 2004.

The C# standard has now been translated in Japanese, in one year; adoption is expected in October 2004.

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

**Mr. Marcey**, Convenor of TG3, presented the TG3 report and status: see 04/13.

The current working draft of the specification is WD2.5, which means that five iterations of the specification have been edited and circulated since edition 2. Incorporated in this working draft are improvements/edits to the edition 2 specifications, the core of the generics technology, relaxed exception ordering and disablement of runtime checks – both of which allow for more performant CLI implementations, and a methodology for exchanging debugging information across implementations.

One important open issue is how the generics technology will affect CLS: it will be discussed in a special CLS Subgroup in TG3.

There are currently 91 open comments on CLI. Despite the need to apply an aggressive schedule to resolve all items, TG3 expects to finish the draft in time for approval by TC39 in September 2004.

To enable more public engagement with the CLI standard, the task group has established a public mailing list, graciously created and hosted by Novell. The public mailing list address is [ecma-cli@lists.ximian.com](mailto:ecma-cli@lists.ximian.com) and can be subscribed to at <http://lists.ximian.com/mailman/listinfo/ecma-cli>.

## 5.4 Status report from Task Group 4: Eiffel

**Mrs. Mingins**, Convenor of TG4, presented the TG4 report: see 04/14.

TG4 uses ETL3 ("Eiffel the Language 3") as base document for the standard: its review has now almost been completed. Currently, 93 proposals are under consideration.

The goal of TG4 is still to have a first edition of the standard ready for approval by the Ecma GA in December 2004. The decision process to determine how many of the 93 proposals will go into this edition, has not yet been completed.

The new Convenor is **Mr. Stapf**.

**Mr. van den Beld** thanked **Mrs. Mingins** – who is on sabbatical leave for most of this year – on behalf of TC39 and Ecma for her enthusiastic guidance of TG4 and her many knowledgeable contributions to successfully complete the difficult task of TG4.

## 5.5 Status report from Task Group 5: CLI Binding for C++

**Mr. Plum**, Convenor of TG5, presented the TG5 report and status: see 04/15.

The goal of TG5 is to complete and approve its Standard in 2004.

The liaison/co-operation with JTC1/SC22-WG21 on C++ is going smoothly. The Ecma Secretariat will create an e-mail archive for WG21, and arrange access provisions for this archive and the TG5 working documents.

## 6 Presentation and discussion of documents for GA adoption

### 6.1 ECMAScript for XML (E4X): 04/10 and 04/16

See also the TG1 report from **Mr. Yu**, Convenor: 04/11.

**Mr. Schneider**, Editor of the E4X draft, gave a very interesting presentation on E4X (04/16) and the interesting possibilities it offers: E4X allows to create, manipulate and navigate XML data, from within ECMAScript. By doing so, a steep learning curve to master XML programming can be avoided. Implementations of the forthcoming Standard can very well attract a lot of interest in the world (called "success disaster").

The development of the Standard has taken 1,5 years, slightly longer than expected , but also requiring substantial amounts of unexpected work.

**Mr. Schneider** gave a demonstration of a preview implementation from BEA (04/6) running on Mozilla/Rhino open source software. The plan is to make this implementation publicly available as open source software. All active TG1 member companies (will) have an implementation, as well as several non-members. There are also several mobile implementations in the works.

This edition of the Standard provides the necessary language extensions, their syntax and semantics, for ECMAScript Edition 3 (the current standards as published by Ecma and ISO/IEC).

The first priority from now on in TG1 will be the development of ECMAScript 4. With respect to E4X, next goal is to support XML Schema. It is likely that **Mr. Schulze** will present some proposals for the future of ECMAScript at the next GA. Also **Mr. Brendan Eich**, the inventor of Javascript, and now CTO of the Mozilla Foundation has an interest to revamp ECMAScript, according to a meeting of **Mr. van den Beld** with him on 25<sup>th</sup> March 2004.

On behalf of TC39 and Ecma, **Mr. van den Beld** thanked all E4X Team members, for their very hard work and perseverance to create the E4X Standard, and all that in a timely way ! He mentioned in particular **Mr. John Schneider**, **Mr. Rok Yu** and **Mr. Jeff Dyer**.

### 6.2 Actions to be taken

TC39 unanimously approved to submit the final draft of the E4X Standard (04/10) for ballot by the GA on 29<sup>th</sup> June 2004, and for fast-tracking processing of the forthcoming Ecma Standard by JTC1. A preliminary session will be sent to JTC1/SC22 for distribution and early information. **Mr. Schneider** will also be the Editor of the ISO/IEC Standard.

## 7 Any other business

- 7.1 The next JTC1/SC22 Plenary Meeting will be held in Seoul from 6th to 10th September 2004, i.e., two weeks before the next TC39 meeting.
- 7.2 The Chairman thanked the host, **Prof. Mrs. Christine Miggins** for her "down under high up" organisation and hosting of all the meetings in the very hospitable and friendly city of Melbourne, including the very pleasant dinner by Microsoft Australia.

## 8 Date and place of next meeting

No 18, Redmond, 24<sup>th</sup> of September 2004, starting at 13:30, on kind invitation by Microsoft.