

**Draft minutes of the:** *6<sup>th</sup> meeting of Ecma TC39*  
**held in:** *Redmond, WA, USA*  
**on:** *24-26 September 2008*

**Chairman:** Mr. John Neumann (Adobe/Microsoft)  
**Vice-Chairman:** Vacancy  
**Secretary:** Dr. Istvan Sebestyen (Ecma International)  
**Attending:** Mr. Mike Cowlshaw (IBM), Mr. Jeff Dyer (Adobe), Mr. Cormac Flanagan (UCSC), Mr. Waldemar Horwat (Google), Mr. Pratap Lakshman (Microsoft), Mr. Mark S. Miller (Google), Mr. Chris Pine (Opera), Mr. Arun Ranganathan (Mozilla), Mr. Sam Ruby (IBM), Mr. Rob Sayre (Mozilla), Mr. Herman Venter (Microsoft) and Mr. Allen Wirfs-Brock (Microsoft).  
**Invited guest:** Mr. Michael O'Brien (Embedthis)

## 1 Opening, welcome and roll call

### 1.1 Introductions

Mr. Neumann opened the meeting and welcomed the delegates, who have introduced themselves.

### 1.2 Host facilities

Mr. Wirfs-Brock explained the logistics for the meeting.

### 1.3 Dinner arrangements

Dinner was hosted on Wednesday evening by Ecma, and on Thursday evening by Microsoft. The committee expressed its appreciation for both evenings.

### 1.4 Lunch

Lunch hosted by Microsoft in the Building 41 cafeteria.

## 2 Adoption of the agenda (2008/080-Rev2)

Adopted with changes. It was noted that more detail on expected discussion would be beneficial. It has been decided that for future meeting a more detailed agenda will be prepared, and it will be circulated among TC39 members and seeking input before publication of final agenda.

## 3 Approval of the minutes of July 23<sup>rd</sup> to 25<sup>th</sup>, 2008 (2008/067)

The minutes of the July 2008 TC39 have been approved with the following change: Replace 4.1 text with a reference to the Press Release and White Paper on ES Harmony. It was agreed to republish the revised minutes.

## 4 ES3.1 draft proposal discussion

### **2008/082**: Draft ECMAScript 3.1 Language Specification

- Review most recent edits
- Strict mode (use subset cautious)
  - Normative? Prohibitions
    - Function.caller
    - Function.arguments
    - Arguments.caller

The above have no setter, and the getter must throw meaningful diagnostics. Term will be “use strict” in quotes.

- Decimal: On Thursday morning a Presentation was given by **Mr. Cowlshaw** on status of Decimal in ES 3.1 and IEEE 754-2008 (Thursday morning). A lively discussion ensued.

**Mr. Ruby** will produce further changes to the 3.1 specification to reflect decisions taken at this meeting that there are (1) no user visible cohorts, and (2) that he will address all of **Mr. Horwat’s** concerns and “editorial” inputs. The decision to include decimal will be made at the November meeting depending on the results of this activity.

Clause 11.9.3 needed some changes. Other operators have similar issues. Such as in 11.8.2, etc.

Clause 15.3.1 needed some corrections as well.

Clause 15.13.5.x needs more clarity

- Consts

Consts is in the spec as agreed and **Mr. Wirfs-Brock** has an action to get it specified in the spec.

#### **Others:**

- Blocks introduce scope. Activation records are not objects.

### 4.1 Draft review

Clause 15.2.3.6 Clones should be removed.

Clause 7.9.2 needs to be discussed Friday and removed if not agreed.

Clause 15.12.1 needs to be re-specified, but no one assigned to do it. **Mr. Crockford** will be asked to do this.

Clause 15.12.2 Array pseudo code needs to be carefully looked at.

Clause 15.9.4.4 needs further specification (and time must be monotonically non-decreasing).

Clause 8.6.2 third paragraph last sentence is incorrect.

Clause 10.1.3 Pseudo code (2.b.i) is not clear how this happens (scan time vs run time).

Clause 10.2.2 and 15.1.2.1 need to be closely looked at, and elsewhere in the document. But needs to be further discussed on Friday.(??????? was this discussed? If so, what were the results??)

Clause 11.1.1.1 is incorrect as written.

Clause 11.8.5 needs to be reverted.

Clause 11.13.1.1 "...reference to an object whose base is null."

Clause 12.2 the change is incorrect.

Clause 12.6.4 step 8 and step 9 note needs to be added about strict mode. And 2<sup>nd</sup> last paragraph needs some fine tuning.

Clause 12.10.1 last sentence should be "...must be treated...".

Clause 12.11 and 12.12 also subject to question.

Clause 13 needs some things fixed.

Clause 15.3.4.5 underwent some brief discussion with minor changes. 13.2 needs to be also moved into this section and modified accordingly. **Mr. Miller** has agreed to do some work on Bind.

Clause 15.4.3.2 ?????

Clause 15.4.4 will be reviewed by Mozilla.

## 4.2 Next steps

**Mr. Lakshman** will produce new draft for posting at least two weeks before start of next meeting.

## 5 ES4 draft proposal discussion

### 5.1 Draft revision to agreed new content

Goals, rules, plans, proposals:

There is general agreement that the next version should use as a base the agreements in place for ES 4, So the plan is to generate a new table of features of the ones we agree (red/green) and put that on the wiki and start to solidify consensus.

Nominal Types (????)

### 5.2 Next steps

Spec technology

The choice of approach is still an on-going discussion, however there is general agreement that ES 4 like approach should be used for specifying the next (Harmony) version of the standard.

Staging between ES 3.1 and Harmony

No discussion of this point during the meeting.

There was agreement that a new in/out feature poll would be a good idea. Someone needs to be identified to do the work. In the mean time, the chair will produce a first cut at this.

## 6 Interoperability testing

### 6.1 Concept

Mozilla will provide one of the two implementations. But no other could make firm commitments at this point in time. It was, however, mentioned that Microsoft may be able to provide a standalone implementation of 3.1. This may be sufficient for most of the testing but for new features (ES4 type such as decimal) there should be web based testing. IBM said that at least on Decimals they will have an implementation. Google will also clarify it.

Testing activity will use the Mozilla test suite. Microsoft has interest in making a 3.1 test suite available after implementation. There was some discussion if this should be published by Ecma. There are two license possibilities that are preferred for such publication

(MIT/BST). This type of license basically says: "Use the software as it is, but no guarantee, and please do not sue us".

This will be finalized at the next meeting.

## 6.2 Actions

Objective is that there will be two web based (browser) implementations tested based on the current specification as approved in November. The final decision to seek GA approval in June 2009 will be made in March 2009 and will be based on the success of the testing and the availability of the two independent implementations.

## 7 Progress reports on the "Secure ECMAScript" Plan

Presentations made during the SES Silicon Valley meeting on August 28, 2008 are available @ [www.ses.json.org](http://www.ses.json.org). It was requested that the presentations should also be published as TC39 documents. The current plan is that the presentations will be followed up with an identification of the problems that are solved by each implementation. The intent is to get a firm grasp on all the perceived security related issues in the current ECMAScript and java script products. The SES special group has agreed to meet the day preceding the scheduled meetings of TC39 to reduce travel time and costs. The next meeting will be on November 18, 2008 in Kona, Hawaii.

## 8 Any other business

None

## 9 Date and place of the next meeting(s)

November 18 (SES) Kona, Hawaii

November 19-20: Kona, Hawaii

January 27-29: Mountain View (Google)

March 24-26 Washington DC (Ecma) – If needed, as fallback for the Washington DC meeting Adobe offered its facilities in San Francisco.

## 10 Closure

Meeting was closed at approximately 2 PM on Friday.

Mr. Neuman thanked Microsoft for the excellent hosting of the meeting and the participants for their hard and constructive work.