

Draft minutes of the: **4th meeting of Ecma TC39**
held in: **San Francisco, USA**
on: **29 - 30 May 2008**

Chairman: Mr. John Neumann (Adobe/Microsoft)
Vice-Chairman: Vacancy
Secretary: Dr. Istvan Sebestyen (Ecma International)
Attending*: Mr. Erik Arvidsson (Google), Mr. David Boloker (IBM), Mr. Douglas Crockford (Yahoo!), Mr. Jeff Dyer (Adobe), Mr. Brendan Eich (Mozilla), Mr. Cormac Flanagan, Mr. Geoffrey Garen (Apple Inc.), Mr. Lars Hansen (Adobe), Mr. Waldemar Horwat (Google), Mr. Pratap Lakshman (Microsoft), Mr. Mark S. Miller (Google), Mr. Sam Ruby (IBM), Mr. Macies Stachowiak (Apple Inc.), Mr. Wayne Vicknair and Mr. Allen Wirfs-Brock (Microsoft)

1 Opening, welcome and roll call

1.1 Introduction

The Chairman, **Mr. Neumann**, opened the meeting and welcomed the delegates of the 4th meeting of the new TC39. A roll call of delegates was made. Participants of the meeting have introduced themselves.

1.2 Host facilities

The host, Adobe, has provided logistical information on the meeting arrangements and facilities.

1.3 Dinner arrangements

Ecma International has kindly invited (with the help of the host) TC39 for a dinner reception in San Francisco.

1.4 Lunch

Excellent lunches were provided in local facility of the host.

2 Adoption of the agenda

Agenda was adopted as presented with small addition on 3.1 on discussion of Unicode related items ([Ecma/TC39/2008/036](#)).

3 Approval of the minutes of the 2nd meeting in Mountain View, March 2008 ([2008/020](#)) and of the 3rd meeting, April 2008 ([2008/021](#))

The minutes of the last meetings in March (Mountain View) and April 2008 (Newton) have been approved as presented unanimously.

The public part of the minutes of the April meeting will be posted on the web at http://wiki.ecmascript.org/doku.php?id=meetings:minutes_march_28_2008 and

http://wiki.ecmascript.org/doku.php?id=meetings:minutes_april_15_2008.

4 Discussion of conflicts between these ES4 and ES3.1

The following summarizes the discussion of progression of the two drafts:

The EcmaScript Committee will produce two official standards documents:

- * An ES3.1 standard, to supersede the ES3 standard
- * An ES4 standard.

Currently, the ES3 spec as written differs from the de-facto ES3 as implemented by web browsers and as employed by web page authors.

- * Both ES3.1 and ES4 seek to be a compatible superset of what **Mr. Eich** calls "ES3+Reality".
- * Both groups will work together to help ensure that ES3.1 be a compatible subset of ES4, i.e., that ES4 be a compatible superset of ES3.1.
- * The ES3.1 spec will be written by modifying the ES3 spec text, which it will supersede.
- * The ES4 spec will proceed along its current lines, and will be available as a distinct document.

The question of publication was then addressed again by **Mr. Neumann**. He reported about his presentation to the CC at their Geneva meeting in May 2008. There some concern was expressed by some CC members regarding Ecma and ISO/IEC numbering of ES3.1 and ES4.

He explained that TC39 recognized that there are no major conflicts between the ES4 and the ES3.1 development efforts, and coexistence of the two versions seems to be a viable solution. It has been therefore also recognized that care has to be applied which editions of which development will be kept as active Ecma standard on the Ecma website.

The usual Ecma policy is to have for an Ecma standard sequential "editions". Normally the new edition replaces the old one. In that case the old will be moved for archival purposes on the Ecma website to the "Ecma Historic Archive". In a few special cases, if the market demands so it is possible to keep more than one "edition" of an Ecma standard in force (this is e.g. done recently by the Ecma U3D standard where industry players implement in practice different editions and they want to see all such editions as official Ecma standards).

He explained to the CC that the current ECMA-262 (ISO/IEC 16262) is ES3. The next Edition of ECMA-262 (ISO/IEC 16262) will be ES3.1. After publication, both in Ecma and ISO/IEC the old ES3 Edition will no longer be supported either from Ecma or JTC 1, but replaced by the new Edition.

The subsequent Edition of ECMA-262 would be ES4. Both ES3.1 and ES4 will be available and supported on the Ecma website for distribution and for download.

He also explained that the current plan is to come out with ES3.1 and ES4 at the same time.

What is still not resolved whether ES4 will become a new ISO/IEC standard or a further revision of ISO/IEC 16262. It depends on whether the ITTF will maintain both ES3.1 and ES4 on its website for distribution and sale. If they agree to do that, then the ISO/IEC solution will be identical to the Ecma solution, otherwise a new ISO/IEC standard will be registered for ES4 (i.e. different from ISO/IEC 16262).

Some CC members expressed concern that this plan would be too confusing and such practice would not be supported by ISO/IEC. **Mr. Neumann** promised to discuss the issue again with TC39, which was done at the San Francisco meeting.

In the TC39 discussions several points were brought up:

- The goal is that ES3.1 should be a subset of ES4, but that is only a “goal”, no assurance that it can be achieved.
- Even if a subset of ES3.1 to ES4 is achieved, there is no guarantee that during further development of ES3.1 and ES4 such a “subset relation” could be hold.
- ES3 is in all cases the “father” of ES3.1 and ES4, and it has now the Ecma number ECMA-262. Both ES3.1 and ES4 would like to express that “fathering” relation in their Ecma number, but how to do it, if both will be different (at least in the long run)? **Mr. Sebestyen** mentioned that in the ITU (sometimes) they would give to ES3.1 e.g. “ECMA-262.1” and to ES4 e.g. “ECMA-262.2”, but in Ecma so far we do not have such practice.
- It was brought up that so far two new Ecma numbers for ES3.1 and ES4 – different from ECMA-262 was not discussed yet, and TC39 members have to think about it, and it also an issue who owns the “Ecmascript” name.
- It was also brought up that the originally planned parallel timing of ES3.1 and ES4 approval in December 2008 might not be hold. It was questioned if the ES4 spec would be ready in June 2008 ? It was mentioned that a more realistic target date for ES4 would be now December 2009. It was brought up that the first version of the ES3.1 draft came out just prior the San Francisco Meeting. So for any text to be approved in December 2008 the final draft must be approved by TC39 and published early October, This means that a stable draft must be available for the July meeting. So it would be not impossible but hard to approve anything in 2008. Maybe ES3.1 could be ready for December 2008 or June 2009.

4 ES3.1 draft proposal discussion

4.1 Draft Review

An overview of the major changes in the ES3.1 Specification was presented:

“#” denotes incompatibility between ES4 and ES3.1 – pointing to current differences in the two drafts (meaning ES3.1 is not a subset of ES4 at the moment).

ES3.1 Major changes:

- STRICT MODE (FAIL STOP) #
- INFRASTRUCTURE FOR GETTERS / SETTERS, SEAR, FREEZE #
- IMPROVEMENTS TO OBJECT, STRING, ARRAY, DATE, FUNCTION #?
- JSON (BASED ON JSON2 API) #
- REFLECTIVE ATTRIBUTE CONTROL #
- REMOVAL OF ISSUES NOBODY IMPLEMENTS (EQUATING, JOINING)
- GENERAL CLEANUPS (REMOVING OF SOME EXCEPTIONS FOR MOST OBJECTS #, ADDING CLARIFYING NOTES, MOZILLA’S ERRATA) ?
- ALLOWING KEYWORDS in OBJECT LITERALS
PENDING
 - DECIMAL SUPPORT
 - UNICODE CLEANUP
 - VERSIONING OPT-IN #

4.2 Next Steps

Detailed discussion of the draft should happen in the July 2008 Oslo meeting of TC39. A final technical review of the document should be done in the September meeting.

4.3 Unicode Issues

On May 30, xxxx from Google participated in the TC39 meeting and answered questions about Unicode. The main issue was in the next Editions of EcmaScript how Internationalization by using Unicode could be achieved.

Major points discussed:

- Identification
- Regex – code points and properties
- String formatting
- Date information
- Radix punctuation
- Supplementary characters

The consultation was very useful and TC39 thanked Mr. Xxxx for his participation in the TC39 meeting.

5 ES4 draft proposal discussion

5.1 Draft review

Documents [2008/041](#) and [2008/042](#) were introduced by the Editor. However, both documents have to be read by the TC39 members first. So, no discussion took place in the San Francisco meeting.

5.2 Next Steps

It was decided that the discussion should happen in the next, Oslo meeting in July 2008.

6 Secure ECMAScript Project

The discussion on a new project for a secure EcmaScript (to be known as Secure EcmaScript (SES)) has continued. In the January meeting it was agreed that it was a new scripting language and that there was not yet a design or approach on the table. It was then suggested that there should be an announced public design competition to arrive at the design for the new language.

Mr. Sebestyen mentioned in the March TC39 meeting that call for proposals and actually to carry out competition among submitted proposals is a normal practice in several standardization groups and in several standardization areas – very often where “anticipatory standards” are being defined. He mentioned as examples JTC 1/SC 29 projects (JPEG, JBIG, MPEG), or the ITU-T SG16 media codecs development projects where such competition is the normal practice. Usually first a “requirements” document is developed and agreed containing the defined terms of reference for the competition accompanied with a schedule. Usually the contest goes in several rounds where the development converges on the final standard. He promised to distribute example documents to SC 39 for such standard development, which has been done before the meeting.

Adobe and Microsoft has agreed to lead the effort in preparing the draft “requirements” (“terms of reference”) for such competition. **Mr. Crockford** (Yahoo!) and **Mr. Miller** (Google) will come up with a plan for discussion at the July meeting. In the San Francisco meeting it was reported that so far no progress has been made, but there is no urgency in the project. The schedule is

for TC39 still is to approve a plan in September, submit for legal review, ask the CC for approval at its October meeting, and ask the GA for approval at its December meeting.

7 Process discussion

None.

8 Any other business

None.

9 Date and place of the next meeting(s)

Next TC39 plenary meeting July 23–25 (Oslo), September 24–26, 2008 (Redmond).

10 Closure

The plenary meeting of TC39 ended around 3 PM on Friday. It was decided to continue the technical work on ES3.1 and ES4 in separate break-out groups on the rest of Friday afternoon.

The Chairman thanked the delegates for their hard work, the host Adobe for the excellent meeting facilities and Ecma International for the splendid social event in the San Francisco Westin Hotel Italian restaurant.