Minutes of the: *2nd meeting of Ecma TC39*

held in: *Mountain View, USA (venue 2008/007)*

on: *27-28 March 2008*

Chairman ad interim:	Mr. B. Eich (Mozilla Foundation)	
Vice-Chairman:	Vacancy	
Secretary:	Mr. I. Sebestyen (Ecma International)	
Attending:	Mr. E. Arvidsson (Google)	arv@google.com
	Mr. D. Crockford (Yahoo!)	douglas@crockford.com
	Mr. J. Dyer (Adobe Systems)	jodyer@adobe.com
	Mr. B. Eich (Mozilla Foundation)	brendan@mozilla.org
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	Mr. J. Neumann (Adobe/Microsoft)	openstrat@aol.com
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1   Opening, welcome and roll call

1.1   Introductions

The Chairman ad interim **Mr. B. Eich** opened the meeting and welcomed the delegates of the second meeting of the new TC39 (after the Ecma GA decision in December 2007 to split up the old TC39 in two parts). A roll call of delegates was made. Participants of the meeting have introduced themselves.

1.2   Host facilities

The host, Mozilla Foundation 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 Palo Alto.

1.4   Lunch

Excellent lunches were provided in local facility of the host.

2   Adoption of the agenda

Agenda was adopted as presented (Ecma/TC39/2008/008).

3   Approval of the minutes of January 24th & 25th, 2008

The minutes of the last meeting in January 2008 (Mountain View) – hosted by Google - have been approved as presented. The final version will be sent to the Ecma Secretariat in Geneva for posting on the Ecma document server.

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

4   Election of the Chairman

Microsoft and Adobe jointly announced in the January 2008 meeting that they were supporting **Mr. Neumann** as Chairman candidate of TC39 for the coming year. Following review of minutes, **John Neumann** was elected by unanimous consent to be Chairman of TC39. The position of Vice-Chair remains open and it can be discussed at the meeting in May meeting of TC39 in San Francisco.

5   ES4 progress report

ES4 is a designer effort as a next major development step for Ecmascript. Its origin goes back for almost a decade, and now it appears that that there is enough momentum in TC39 and enough user needs to have ES4 adopted as new Ecma standard.

In order to progress the work weekly conference calls are held, there is an active E-mail discussion going on, documents and drafts are published on public Wiki pages.

It was pointed out though that ES4 has "reference implementation" and it has been published. Such reference implementation is used as testing and validation tool, and may end up in an informative part of the standard and on the public websites.

As soon as they become available drafts of the document are being posted on the Wiki by the editor and then are subject to further discussion. It is the intent to modify the drafts based on comments, and then further modification depends on the comments that arise from a revised draft. Currently under discussion are "Class method addition and replacement", 'strict mode', "complexity tax", "global object", "primitives VS objects", "array generics and null", "namespaces and expression - qualified names", and a number of lesser subjects.

ES4 technical group met the first three days of the week, and **Mr. Neumann** pointed out that this meeting, while important for progression of the work, was not announced ahead of time (Friday before the meeting), no agenda was available, and no written report provided. This presents a problem for transparency of the project on the Ecma website, and that **Mr. Neumann** would like to see this corrected in the future.

5.1   Schedule discussion

It has been agreed that the target date for Ecma GA approval should be in December 2008. This should be in synchronization with the approval of ES3.1. In order to achieve that the Ecma secretariat needs to publish the final – by TC39 agreed text – in the first days of October 2008 (October 3, 2008 the latest). To achieve that deadline and have a sort "public review" implemented via the public website (of http//ecmascript.org and the Ecma website) the target is to have a stable draft for July 2008. In order to achieve that the first draft of ES4 is targeted for April 2008.

The current plan is to meet again for the ES4 project in Boston area at Adobe in April and before the next meeting of TC39 at Mozilla. Meetings will be announced and agenda's prepared.

6 ES3.1 progress report

The ES3.1 technical group continues to make progress on its specification and continues to interact with ES4 group to insure technical consistency between the two drafts.

In the ES3.1 project weekly telephone conference calls are held, and occasional face-to-face meetings. The last face-to-face meeting took place just before the March 2008 TC39 meeting in Mountain View where the group developed a number of talking points to be discussed with ES4 group. During that discussion good progress was made.

The ES3.1 development started in March 2007. It is an evolutionary development from ES3.0. It has been a discussion point if it has sufficient "deltas" to treat it separately from ES3.0, but now there seems to be a consensus that ES3.1 should be specified as a separate version. There is agreement that 3.1 should be a subset of ES4 (assuming that there will be an ES4). It has been agreed by the group to use the ES4 RI where applicable to avoid duplication of work.

It was pointed out though that ES3.1 has no "reference implementation" yet. Such reference implementation is used as testing and validation tool, and may end up in an informative part of the standard and on the public websites.

The following members participate in the work on ES3.1: Apple, Google, Microsoft, IBM, Stanford University, Dojo Foundation.

6.1 Schedule discussion

It was agreed that "speclets" will be developed for review, and possibility of separate wiki has been discussed. Current plan is to have a final draft for approval in December 2008 GA that is a subset of ES4 and a superset of ES3. This should be in synchronization with the approval of ES4.

In order to achieve that the Ecma Secretariat needs to publish the final – by TC39 agreed text – in the first days of October 2008 (October 3, 2008 the latest). To achieve that deadline and have a sort "public review" implemented via the public website (of http//ecmascript.org and the Ecma website) the target is to have a stable draft for July 2008. In order to achieve that the first draft of ES3.1 is targeted for April 2008. Therefore to meet that early deadline the text of ES3.1 should be developed from ES3.0, rather than ES4.0 which has not been written yet. With that the option of a single ES3.1 and ES4 document with an internal "switch" between the two modes had to be given up.

7 ES3.1/ES4 draft proposal discussion

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 by the chair. Current ECMA-262 (ISO/IEC 16262) is ES3. The next version of ECMA-262 (ISO/IEC 16262) will be ES3.1. After publication, ES3 will no longer be distributed either from Ecma or JTC 1. The subsequent version of ECMA-262 will be ES4. Both ES3.1 and ES4 will be available on the Ecma website for distribution and for download. 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).

8 Discussion of conflicts between ES4 and ES3.1

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.

Mr. Sebestyen explained that 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 version does not get "lost" either but it will be published on the Ecma website under the "Ecma Historic Archive". In 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. So TC39 may arrive to a similar conclusion. In that spirit ES3.1 might be a new Edition under ECMA-262 while ES4 might get a completely new Ecma number (or alternatively a higher number "edition" under ECMA-262). This is up to TC39 to decide.

It was decided that both ES3.1 and ES4 should be developed and approved in Ecma in parallel. The target for both approval is December 2008.

The question was brought up how a similar concept would be implemented in a possible ISO/IEC JTC 1 fast track submission. This is at the moment open. While the ITU-T has been recently recognized the convenience of such standard "editions", ISO/IEC JTC 1 usually replaces the standard with the new version.

* The ES4 reference implementation (RI), though non-normative, will
serve as the initial bridge helping ensure that these two languages
have the intended compatibility relationships.

* The RI will also serve as the ES3.1 reference implementation -- by
testing the subset of its behaviour corresponding to the ES3.1
semantics.
* When this subset of the RI's behaviour differs from the intended
semantics of ES3.1, the ES3.1 WG will alert the ES4 WG, so that we can
work together to repair the subset relationship.

9 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.

As new input to the discussion **Mr. Sebestyen** mentioned 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.

Regarding the expressed concern about IPR and Anti-Trust issues that was brought up at the last meeting **Mr. Sebestyen** agreed that Ecma has to investigate in details how such "public" competition for a design approach fits to its by-laws and rules, and to find solution in cases of conflicts. Indeed input of 3rd party members who have not committed themselves to follow the bylaws, rules and patent policy is an issue to look at. **Mr Neumann** mentioned that once this has been clarified he would inform the Ecma Management and the Ecma GA for approval for such a new project.

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. The schedule is for TC39 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.

10   Process discussion

Mr. Neumann reminded TC39 that the Ecma Secretariat must be involved in the distribution of the most important documents of TC39, such as meeting minutes, invitations, draft and final standard publication and so on.

As example, the agenda for this meeting is TC39-2008-008 even though there exists a version on the ES4 wiki site. Official documents shall always be available in the TC39 Ecma website in the future. **Mr. Neumann** will observe all postings on the wiki to make sure documents that require transparency be available on the internal Ecma website.

11   Any other business

None.

12   Date and place of the next meeting(s)

Schedule moved to every two months. Next TC39 plenary schedule have been conformed on May 29–30 (San Francisco), July 23–25 (Oslo), September 24–26, 2008 (Redmond) respectively.

The ES4 group will meet on April 14–18 at Adobe in Newton, MA, and on May 27-28 at Mozilla-Mountain View, CA.

13   Closure

The plenary meeting of TC39 ended around 5 PM on Thursday. It was decided to continue the technical work on ES3.1 and ES4 in separate break-out groups on Friday.

The Chairman thanked the delegates for their hard work, the host Mozilla for the excellent meeting facilities and Ecma International for the splendid social event in the Palo Alto Indian restaurant.