

Proposal to Refocus TC39-TG1 On the Maintenance of the ECMAScript, 3rd Edition Specification

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Preface

We believe that the specification currently under development by TC39-TG1 as ECMAScript 4 is such a radical departure from the current standard that it is essentially a new language. It is as different from ECMAScript 3rd Edition as C++ is from C. Such a drastic change is not appropriate for a revision of a widely used standardized language and cannot be justified in light of the current broad adoption of ECMAScript 3rd Edition for AJAX style web applications. We do not believe that consensus can be reached within TC39-TG1 based upon its current language design work. However, we do believe that an alternative way forward can be found and submit this proposal as a possible path to resolution.

Proposal

We propose that the work of TC39-TG1 be reconstituted as two (or possibly three) new TC39 work items as follows:

Work item 1 – On going maintenance of ECMAScript, 3rd Edition.

In light on the broad adoption of ECMAScript, 3rd Edition for web browser based applications it is clear that this language will remain an important part of the world-wide-web infrastructure for the foreseeable future. However, since the publication of the ECMAScript, 3rd Edition specification in 1999 there has been feature drift between implementations and cross-implementation compatibility issues arising from deficiencies and ambiguities in the specification. The purpose of this work item is to create a maintenance revision of the specification (a 4th Edition) that focuses on these goals:

- Improve implementation conformance by rewriting the specification to improve its rigor and clarity, and by correcting known points of ambiguity or under specification.
- Add commonly implemented and used extensions to the standard (specifically most JavaScript 1.6 and 1.7 features)
- Consider proposals for additional incremental extensions that support current usage experience and best practices
- Consider proposals for minor language changes that correct well known performance or reliability issues

This work item should become the primary focus of TC39-TG1.

Work item 2 – Creation of a standard for Adobe's ActionScript Language (assuming Adobe's interest and concurrence)

ActionScript is a language, originally derived from ECMAScript, that is widely used in Adobe's Flash and other related products and technology. Technically, it represents a significant departure from ECMAScript 3rd Edition in its support of a class-based object model and a static typing system. The

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ActionScript3 specification has served as the starting point for the new “ECMAScript 4” language currently being designed in the context of TC39-TG1. The goal of this work item would be to create a standard definition of ActionScript based upon either Adobe’s current specification and/or the currently ongoing language design work of TC39-TG1.

This work item should be assigned to a new TC39 TG.

Work item 3 – Creation of a new next generation browser programming language
(this item could possibly be merged with work item 2)

Some members of TC39-TG1 favor the creation of a new, less scripting focused, programming language that could not only ultimately replace ECMAScript 3rd Edition as a webpage scripting language but could also be used as a web browser implementation and extension language. This desire has been a significant driver in the creation of the new “ECMAScript 4” language currently being designed in the context of TC39-TG1. However, this effort has been significantly burdened by the requirement that the work product of TC39-TG1 must maintain backwards compatibility with ECMAScript 3rd Edition. The goal of this item would be to develop a new programming language that is not required to maintain backwards compatibility with ECMAScript 3rd Edition. This language could be used as an alternative to ECMAScript for scripting web pages (but would not be considered a replacement for ECMAScript) and could also be used for other purposes within browsers and other hosts.

This work item should be assigned to a new TC39 TG, possibly the same TG as work item 2.