ecma INTERNATIONAL

Standard ECMA-414

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ECMAScript®
Specification Suite

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Introduction

ECMAScript is the general purpose programming language that is an essential part of the Web Browser application platform, but it is also widely used in many other environments.

Essential components of an ECMAScript implementation are described in several individual standards and technical reports.

The ECMAScript Specification Suite is just a collection of those. The specifications that define the ECMAScript Specification Suite and its built-in libraries are development by Ecma International.

The International Standard for ECMAScript Specification Suite defined by this document aggregate these specifications via normative and informative references to the latest published Ecma International ECMAScript specifications. This has the advantage that an update of the Suite is only needed if there is a change (addition or deletion) in the set of the individual ECMAScript standards and technical reports.

This Ecma Standard was developed by Technical Committee 39 and was adopted by the General Assembly of December 2016.

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ECMAScript® Specification Suite

1 Scope

This International Standard defines the ECMAScript Specification Suite containing the ECMAScript programming language and its required and optional built-in libraries. It defines all the necessary components (both normative and informative) that is needed to implement this suite of standards. This Suite is only changing of new components will be added to the Suite and / or old components are removed from it. The Suite, however, does not change if one or more components are updated by a new standard edition.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ECMA-262, *ECMAScript® Language Specification*

ECMA-402, *ECMAScript® Internationalization API Specification*

ECMA-404, *The JSON Data Interchange Format*

3 Informative references

ECMA TR/104, *ECMAScript® Test Suite*

4 ECMAScript

An implementation of ECMAScript consists of the ECMAScript programming language, required built-in libraries, and optional built-in libraries. The implementation of the ECMAScript language and required library shall conform to ECMA-262. The required library include data interchange functions that shall conform to ECMA-404. An implementation of ECMAScript may include an optional internationalization library that if included shall conform to ECMA-402.

The following Ecma Standards are part of the current ECMAScript Specification Suite (see Figure 1):

- ECMA-262, *ECMAScript® Language Specification*
- ECMA-402, *ECMAScript® Internationalization API Specification*
- ECMA-404, *The JSON Data Interchange Format*

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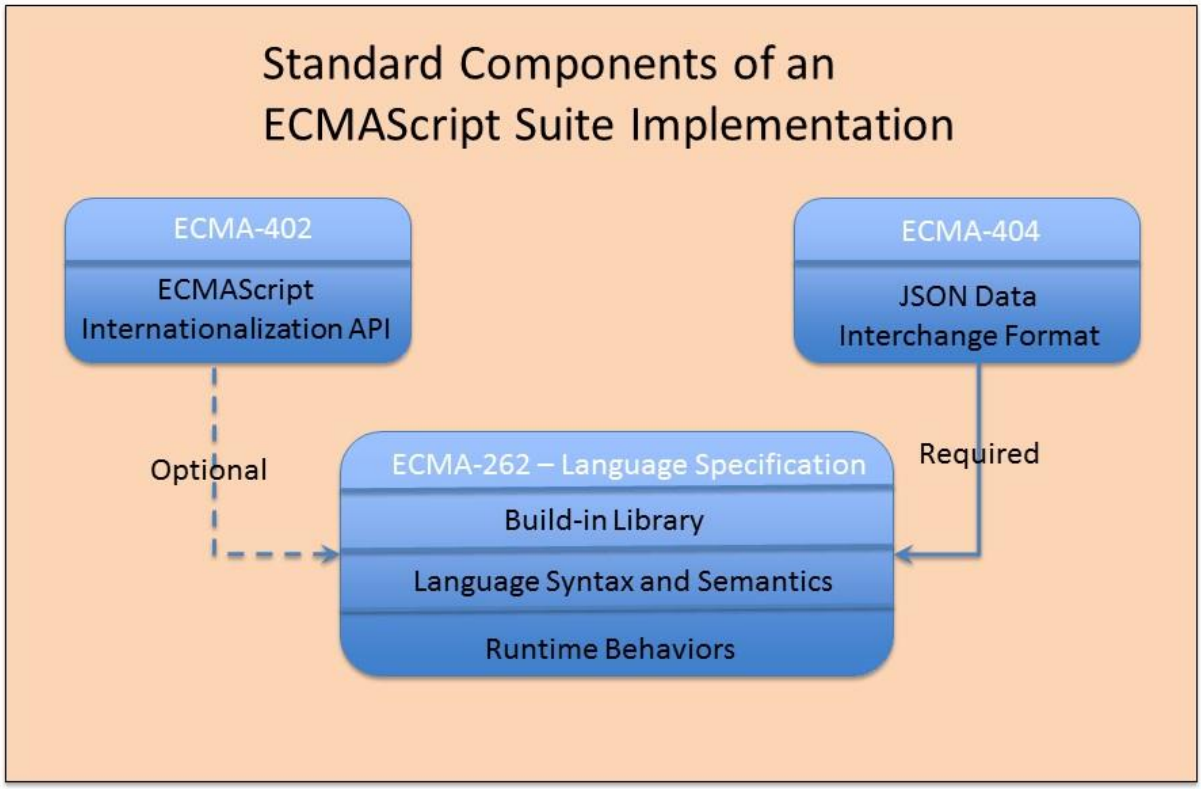

Figure 1 – Architecture of the ECMAScript Specification Suite Standards (ECMA-414 which shall be equivalent with ISO/IEC 16262)

4.1 ECMA-262, ECMAScript® Language Specification

This Standard defines the ECMAScript general purpose programming language. The language specification define the syntax and semantics of the ECMAScript language; the language's execution environment; and, a built-in library that is available for use by ECMAScript programs as they execute.

4.2 ECMA-402, ECMAScript® Internationalization API Specification

This Standard defines the application programming interface for ECMAScript objects that support programs that need to adapt to the linguistic and cultural conventions used by different human languages and countries.

4.3 ECMA-404, The JSON Data Interchange Format

JSON is a lightweight, text-based, language-independent data interchange format. It was derived from the ECMAScript programming language, but is programming language independent. JSON defines a small set of structuring rules for the portable representation of structured data.

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5 ECMAScript Test Suite

ECMA TR/104, ECMAScript® Test Suite provides a set of non-normative software tests that ECMAScript implementers can use to help verify conformant ECMAScript implementations.

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