Revision History

25 March 2008	pratapL	Added errata from Mozilla (http://www.mozilla.org/js/language/E262-3-errata.html).
26 May 2008	pratapL	Updated to introduce the following: Strict mode, infrastructure for the introduction of getters/setters, and improvents to String, Date, Array, Function, and Object. Removed the notions of equating and joining.
9 June 2008	pratapL	Added Array generics (§15.4.4.14 to 15.4.4.22) Added support for "abc"[0] (§8.6.2.1.2). Reverted the change to separate internal properties on functions.(§8.6.2) Changed Unicode Version to 4.0.
11 June 2008	pratapL	Updated 15.9.1.15 (Date Time string format) calling out that it is not required for all the fields in the ISO date format to be present. Integrated first draft of JSON changes Applied styles uniformly for NOTEs.
14 June 2008	pratapL	Incorporated basic placeholders for Decimal.
15 June 2008	pratapL	Incorporated updated JSON exposition.
24 June 2008	pratapL	All changes related to introduction of internal [[Extensible]] property and updating the statics on Object: 4.3.3 – abbreviated the definition of object. 4.3.24 – added 223larifying note: function contains executable code 4.3.25 to 4.3.28 – added definitions for property, method, attribute, own property, inherited property 8.6.1 – changed title text to add 'and Descriptors'. Changed first and second para to introduce clarifying text – introduced Ddesc and Pdesc formally. 8.6.2 – introduced [[Extensible]], removed [[Dynamic]], restored allowances for host objects, and added clarifying section text. 8.6.2.1.3 – updated to use [[Extensible]] 8.6.2.2 – updated to use [[Extensible]]; steps that said 'throw something' now say 'throw TypeError'. 8.6.2.5 – step that said 'throw something' now says 'throw TypeError'. 10.1.8 – property attributes for each non-negative integer arg specified. 13.2.1, 13.2.2 – updated steps to use [[Extensible]] 15.2.3.15 – object statics specified. 15.2.4 onwards – called out the intial value of the internal [[Extensible]] property.
28 June 2008	pratapL	7.8.4, Annex A – introduced 'LineContinuation' to account for string literals with line terminators.
29 June 2008	pratapL	4.2 onwards – changed Writeable to Writable 4.2.2 – removed "Strict and Non-Strict Modes" and replaced with "Language Subset Selection" (placeholder) 4.3.7 – introduced built-in constructor 4.3.24 – fixed nature of a *function* 4.3.29 – added Built-in Method 7.8.5 – minor language cleanup 8.5 – fixed reference to sections 9.5 and 9.6 8.6.1 onwards – Property Attributes; changed [[Dynamic]] to [[Flexible]], introduced default values for the attributes, changed 'Strict' flag to 'Throw' flag, changed [[SetOwnProperty]] to [[DefineOwnProperty]], added [[ThrowablePut]] 8.6.2.2 – removed 'Strict' flag from [[Put]] 8.6.2.2.1 – introduced [[ThrowablePut]] 8.6.2.7 to 8.6.2.10 – addednew internal properties 8.10 – introduced whole new section 9.10 – introducded IsCallable 12.2 – introduced const into the grammar

		14 – introduced UseSubsetDirective into thegrammar 15.4.4 – fixed Array methods to use [[ThrowablePut]] 15.4.5.1 – defined [[ThrowablePut]] for Arrays 15.9.4.2, 42 – applied Lars' comments regarding dates 15.9.5.42, 43 – fixed reference to section 15.9.1.15 Annex C – placeholder Annex D – placeholder
30 June 2008	pratapL	11.1.5 - introduced syntactic sections for getters/setters in object literals
1 July 2008	pratapL	Integrated Unicode changes.
2 July 2008	pratapL	[Integrated changes from Allen] 7.8.5 : Backed out change requiring early reporting of invalid regex literals; removed additional language requiring that each such literal represent s single unique object. 11.1.5 Added optional trailing comma in object initiaisers 15.10.6 made RegExp.prototype be a RegExp and its [[class]="RegExp" 11.8.2,11.8.3,11.8.5 Fixed evaluation order for > and <=
3 July 2008	pratapL	11.6.1, 11.9.3, 15.13 – incorporated intial edits for Decimal. Introduction of "usage subset cautious", and all restrictions (7.9.1.1, 10.1.3.1, 10.1.6.1, 10.1.8.1, 10.2.2.1, 11.3.1.1, 11.4.1.1, 11.4.5.1, 11.13.1.1, 11.13.2.1, 12.0.1, 12.6.4.1, 12.10.1, 15.1.2.1.1) 12.15 0 introduced ConstantStatement 15.5.3.3 – introduced String.uniqueIdentifier
4 July 2008	pratapL	7.2 – added <NEL> as a white space character. 7.5.2 – reverted the change that made eval a keyword 7.8.4 – allowed embedded LineTerminator in string literals provided they are not followed by white space. 8 – introduced Property Descriptor and Property Identifier as new types. 8.6.1 – introduced [[Const]] as a property attribute. 8.6.2.1, 8.6.2.3, 8.6.2.9, 8.6.2.10 – updated the algorithims to account for [[Const]]. 10.1.2, 10.1.3, 12, 12.1, 12.2, 12.5, 12.6, 12.6.1, 12.6.2, 12.6.3, 12.6.4, 12.10, 12.15 - introduced Const statements, lexical scoping of consts and function declarations, restricting declarations from use as "pseudo blocks". 12.0.1 – deleted this section and added 12.1.1 instead. 15.13.2 – the Decimal constructor can no longer be called as a function; added a clarification that it does not support the internal [[Call]] method. 15.13.5.17, 15.13.5.20, 15.13.5.30, 15.13.5.31, 15.13.5.35, 15.13.5.41 – made mc an optional argument. 15.13.5.19 – made roundingMode an optional argument. Annex C – newly added. Added a 'Draft' watermark to main content section (section 4), and 'saved date' in the footer of the page. Regenerated TOC.
14 July 2008	pratapL	4 - updated the Scheme reference to R6R5. 5.1.4 - fixed reference to Syntactic grammar. 7.8.4 - clarified *NonEscapeCharacter* 7.8.4 - introduced u {} syntax for Unicode escape sequences. 15.1.2.3 – fixed reference to *StrDecimalLiteral*. 15.2.3.2 through 15.2.3.14 - changed first step to throw a TypeError exception if the first parameter was not of type Object. 15.2.3.15 - introduced Object.keys static method. 15.3.2.1 - adding the "name" and "parameters" properties in the Function Constructor algorithm (steps 17, 18). 15.3.5.4 - introduced the "name" property. 15.3.5.5 - introduced the "parameters" property. 15.5.4.21 - introduced String.prototype.toJSON. 15.6.4.4 - introduced Boolean.prototype.toJSON.

		15.7.4.8 - introduced Number.prototype.toJSON. A.1 - added *NonEscapeCharacter*, and productions for u { } to the lexical grammar.
15 July 2008	pratapL	8.6.2 - changed -> to → in internal properties table. 8.6.2.3 - added check for "readonly" accessor properties to [[CanPut]]. 10.1.2 - removed the ability to include UseSubsetDirective in the code of a function body passed as a string to the Function constructor. 10.2.4 - new section. 12.1 - various tweaks to match changes to section 10. 12.6.4 - made for-in ignore expressions whose values are either null or undefined rather than throwing a TypeError. 12.14 - update catch semantics to match changes to sections 10 and 12.1. 15.2.3.2 - moved getOwnProperty to 15.2.3.3. 15.2.3.3 - moved getProperty to 15.2.3.4. 15.2.3.4 - eliminated getOwnProperties method. 15.2.3.4, 15.2.3.5 - added not stating that implicit string properties, corresponding to character positions are not included in the returned property descriptor. 15.2.3.5 - corrected algorithm to correctly deal with shadowed inherited properties. 15.2.3.5 - eliminated method getProperties, replaced with getOwnPropertyNames. 15.2.3.8 - changed name of second argument. 15.2.3.9 - reinstated optional second argument to Object.create. 15.2.3.14 - moved getPrototypeOf to 15.2.3.2. 15.2.3.2 through 15.2.3.13 - defined a length property for the function. A.5 - sync Program grammar in appendix with that in 14. Throughout most in section 10: changed the term "variable object" to "environment object" and the term "variable instantiation" to "environment binding instantiations". Major overhaul of section 10 to better accomodate block scoped consts and function declarations.
4 Aug 2008	pratapL	Incorporated the following based on the Oslo review: 4 - updated the Scheme reference to the IEEE standard. 7.8.4, A.1 - reverted the addition of u { UnicodeHexEscapeSequence }, the UnicodeHexEscapeSequence production, and the elaboration on its CV. 7.2-7.3, A.1 - restored <LS> and <PS> as line termination characters. Made <CR><LF> a line terminator. 7.8.4, A.1 - restored original definition of NonEscapeCharacter. 7.8 5 - call out scan time reporting of invalid RegExp literals. 8.6.2 - changed term "procedural property" to "accessor property", removed stray mention of [[Identity]]. 8.6.2.1 - changed references to Result(4) to Result(5). 8.6.2.10 - removed redundant call to [[GetOwnProperty]](O, P) in step 5. 10.1.2.3 - updated this class number to be 10.1.2.1. 15.5.4.21, 15.6.4.4, 15.7.4.8 - added 'key' as a parameter to the toJSON functions. 15.12.2 - updated step 5.b.i to call V.toJSON(KEY); updated step 5.c.i to call replacer.call(object, KEY, V). 8.6.2.4 - corrected and refactored algorithm. 8.6.2.9 - made any attribute change to a "flexible" data property acceptable. 8.10.1 - inlined IsValidDescriptor into ToPropertyDescriptor. Removed other references and deleted definion causing renumber of other definitions. 8.10.5 - (FromPropertyDescriptor) changed undefined arg result and deleted bogus step 8. 8.10.6 - (ToPropertyDescriptor) corrections in steps 1 and 9b.

		15.5.3.3 – reverted the addition of String.uniqueIdentifier. 15.2.3.4 - renamed Object.getProperty to Object.getPropertyDescriptor. 15.2.3.11, 15.2.3.13 renamed Object.const to Object.freeze and Object.isConst to Object.isFrozen. 15.2.3.12, 15.2.3.15 Added Object.nonExtensible and Object.isExtensible functions. 11.6.1, 11.6.2 - incorporated changes to the Addition and Subtraction operators to handle Decimal.
11 Aug 2008	pratapL	11.3.1, 11.3.2, 11.4.4, 11.4.5, 11.4.6, 11.4.7, 11.5, 11.8.1, 11.8.2, 11.8.3, 11.8.4 - incorporated changes to introduce support for Decimal. 15.2.3.2 - deleted Object.getOwnProperty; renumbered the remaining sections under 15.2.3. 15.2.3.3 - renamed Object.getPropertyDescriptor to Object.getOwnPropertyDescriptor. 15.2.3.11 - renamed Object.nonExtensible to Object.preventExtensions.
18 Aug 2008	pratapL	11.3.1, 11.3.2, 11.4.4, 11.4.5, 11.4.6, 11.4.7, 11.5, 11.6.1, 11.6.2, 11.8.1, 11.8.2, 11.8.3, 11.8.4, 11.8.5, 11.9.3 - incorporated changes to these operators' support for Decimal to use the (yet to be defined) Form() and ToDouble() "specification helper functions".
01 Sep 2008	pratapL	11.1.5 – Fixed a typo in the step 4 of the algorithms for get/set property name. 11.3.1, 11.3.2, 11.4.4, 11.4.5, 11.4.6, 11.4.7, 11.5, 11.6.1, 11.6.2, 11.8.1, 11.8.2, 11.8.3, 11.8.4, 11.8.5, 11.9.3, and 11.9.6 - incorporated Decimal related changes; these revert the introduction of the Form() and ToDouble() specification helper functions, and introduces calls to instanceof and Decimal functions. Handling of NaNs in comparisons has been changed to make the result more consistent with ES3. Renamed the [[Flexible]] attribute to [[Configurable]] and updated all references to it.
22 Sep 2008	pratapL	Decimal is now a primitive, with a wrapper. 4.3.30, 4.3.31, 4.3.32 - added new sections for Decimal. 4.3.2, 9.9, 9.10, 11.3.1, 11.3.2, 11.4.3, 11.4.4, 11.4.5, 11.4.6, 11.4.7, 11.5, 11.6.1, 11.6.2, 11.8.1, 11.8.2, 11.8.3, 11.8.4, 11.9.3, 11.9.6, 15.1.2.4, 15.1.2.5, 15.13.2 - updated all relevant operators. 15.13.4.1 - deleted Decimal.valueOf() 15.13.4.2, through 15.13.4.9 – introduced new statics on Decimal 15.13.5.14, 15.13.5.15 – introduced Infinity and NaN on Decimal 15.13.5.16 through 15.13.5.43 - deleted these functions. 7.9.1.1 - introduced restriction in cautious subset for automatic semicolon insertion that results in dead code to detect a SyntaxError. 8.10.5 - minor correction of spelling mistake (DescObj changesd to Desc). 15.3.4.5 - incorporated algorithmic steps for Function.prototype.bind 15.9.4.4 - introduced Date.now( ) 15.12.1 - introduced restriction in JSON.parse that key strings within an object must be unique. C.1.1 - updated restriction (1) according to 7.9.1.1; added restrictions (15) and (16).

| 13 Oct 2008 | pratapL | 4 - corrected minor spelling.
4.3.3, 4.3.24, 4.3.25, 4.3.28, 4.3.30 - added clarifications in the definitions of Function, Property, Own Property, andBuilt-in Method.
5.2 - added illustrative numbering for the algorithm steps.
7.1 - corrected minor spelling.
8.6.1 - Table 1: removed [[Const]]. Simplified description for [[Writable]]. Table 3: removed [[Const]]. Made default values for [[Writable]], [[Enumerable]] and [[Configurable]] false.
8.6.2 - restored original text that said that the description of the internal properties was for "native" ECMAcript objects. Updated second column header to be "Value Domain", and updated second column for every internal property.
8.6.2.1 - corrected step numbering in steps 5, 7.
8.6.2.3 - updated the algorithm in steps 2, 7, and added a clarifyinh note.
8.6.2.8 - updated the algorithm introducing steps 2 through 8.
8.6.2.9, 8.6.2.10 - updated the algorithms removing all mention of [[Const]].
8.7 - restored original text on the non-provision within the spec for functions (built-in, and user defined) returning a reference.
8.10 - clarifications regarding absent fields, and object literal syntax for Property Descriptors.
8.10.1, 8.10.2, 8.10.3 - updated the algorithms to account for absent fields.
8.10.4 - updated algorithm removing the checks for "Unspecified".
8.10.5 - updated algorithm removing the checks for "Unspecified", and corrected step numbering in steps 13d, 15, 15d.
9.10 - clarified the result of IsCallable on Object.
10.1.2 - clarified exclusions for "lexical block code".
10.1.2.1 - added to the classification of "unrestricted" code.
10.2 - clarified that a thrown exception may exit one or more execution contexts.
11.1.1.1 - Removed this section.
11.3.1.1 - corrected step numbers that need to be replaced, and provided the new steps.
11.9.3 - corrected step numbering in step 1, and changed to an 'or' condition in step 4.
11.13.1.1 - clarified restriction on assigning to implicit global variables, and corrected the step number that needs to be replaced.
12.1 - corrected minor spelling.
12.2 - clarified interaction between Block and VariableDeclaration, fixed step 4 in the production *VariableDeclaration : Identifier Initialiser*.
12.6.4 - corrected steps 6, 8 in the first algorithm, and step 9 in the second algorithm.
12.6.4.1 - corrected the replacement steps mentioning the right Results.
12.10.1 - made the syntax error to be mandatory.
12.15 - clarified semantics around access to consts.
13.2 - replaced mention of "properties" with "parameters".
14 - updated "use subset …" to "use strict …"
15.2.3.15 - corrected step numbering for the algorithm.
15.3.5.2 - updated [[Enumerable]] to be false.
15.3.5.5 - removed this section (it was about "parameters").
15.4.3.2 - clarified definition of isArray.
15.10.7.5 - updated [[Writable]] to be true.
15.12.1 - corrected step 2 to mention T instead of I. |
| 20 Oct 2008 | pratapL | The "cautious" subset is now "strict" mode.
4, 4.2.2, 10.1.3.1, 10.1.6.1, 10.1.8.1, 10.2.2.1, 11.3.1.1, 11.4.1.1, 11.13.1.1, 12.1.1, 12.10.1, 15.1.2.1.1, C.1.1 - renamed "cautious" to "strict"
7.9.1.1 - removed this section (this was related to semicolon insertion in strict mode.
10.1.6.1, 10.1.8.1, 10.2.2.1, 11.3.1.1, 11.3.2.1, 11.4.1.1, 11.4.4.1, 11.4.5.1, |

		11.13.1.1, 11.13.2.1, 12.1.1, 12.6.4.1, 12.10.1, 15.1.2.1.1 - removed "cautious" from the section heading. C.1 - replaced "cautious" with "strict" in the section heading. C.1.1 - deleted the first exclusion (this was related to semicolon insertion in strict mode. 14 - Updated the productions for *UseSubsetDirective* 15.2.3.6 - removed this section (this was about Object.clone), and renumbered subsequent sections. 15.5.4.21, 15.6.4.4, 15.7.4.8, 15.9.5.44 - specified the toJSON methods using pseudo-code. 15.12.1 - Updated the note with behaviour in the case of duplicate key strings; duplicate key strings are now permitted. 15.2.3.2 through 15.2.3.14, 15.3.4.5, 15.4.4.14 through 15.4.4.22 – removed redundant specification of the value of the length property for these methods on the native objects. It is already specified in section 15. 15.4.4.22 - change reduceright to reduceRight.
27 Oct 2008	pratapL	8.6.2.9 - removed an unnecessary reference in step 6, fixed minor typos in steps 9.b.i and 9.c.1. 11.2.3 - swapped the order for steps 2, 3, and updated references to these step numbers in the rest of the algorithm; with this, the value of the *MemberExpression* will determine what function gets called even before the *Arguments* have been evaluated (and potentially caused side effects). 12.1 - deleted NOTE 1. 12.2 - clarified scoping for variable statements occurring inside a *FunctionExpression*. 12.6.4 - removed the intial part of the second last paragraph that talked about the mechanics and order of enumeration of properties being implementation dependent. Added a clarification that newly added properties during enumeration are not visited in the active enumeration. 15.3.4 - clarified the "initial" value of Function.prototype's [[Extensible]] property. Removed all "this" coercion: 15.3.4.3, 15.3.4.4 – both apply and call will no longer attempt to coerce "this" to an object, or to the global object. 15.4.4.16 through 15.4.4.20 - the "this" parameter, if it is passed in, is used as-is to invoke the callback; if the this parameter is not passed in, **undefined** as used. C.1.1 - updated item 5 calling out removal the this coercion. C.1.1 – fixed minor typo in item 8, updated item 11 calling out that deleting an unbound reference should throw in strict mode, fixed minor typo in item 14. Annex D - changed [[class]] to [[Class]] in the third paragraph Annex E - added a clarification regarding RegExps in the second paragraph. 15.5.4.21, 15.6.4.4, 15.7.4.8, 15.9.5.44 - fixed step 3 in the algorithms to test for IsCallable(Result(2)).
03 Nov 2008	pratapL	13.2.1 - made "this" coercion logic conditional on the strictness of the function. 15.3.4.5 - incorporated revised formulation for Function.prototype.bind 15.3.4.5.1, 15.3.4.5.2 - introduced [[Call]] and [[Construct]] semantics for bind. 15.4.4 - fixed a section reference to [[ThrowablePut]].

		15.4.5.1 - clarified own/inherited property usage in step 14. 15.12 - introduced JSON grammar. 15.12.1 - revised pseudo-code for JSON.parse 15.12.2 - revised pseudo-code for JSON.stringify 4.2.2 - changed section title to 'The Strict Variant of ECMAScript' 10.3.2.1, 10.4.2.1, 11.4.1.1, 11.13.1.1, 11.13.2.1, 12.1.1, 12.6.4.1, 12.10.1, 15.1.2.1.1 - changed section title to 'Strict Mode Restrictions' 4.3.25 - moved text from section 10.1.1 here; renumbered subsequent subsections. 11.3.1.1, 11.3.2.1, 11.4.4.1, 11.4.5.1 - deleted these sections on usage subset restriction. 13 - function bodies can also now have a use strict directive. Introduced the notion of Lexical Environments. 8.6.2 - renamed "scope chain" to "lexical environment" throught out the document starting from this point onwards. 8.7 - clarified the components of a "Reference" and their access (abstract operations). 8.7.1 - updated GetValue in terms of the revised abstract operations on References. 8.7.2 - PutValue no longer takes a 'Throw' parameter. Updated algorithm in terms of revised abstract operations on References. 10 - incorporated changes to the entire section to introduce the notion of Lexical Enviroments. Deleted 10.2.4 (Lexical Block Code). 11.2.3, 11.4.1, 11.4.3, 11.13.1.1, 11.13.2.1 - updated algorithm in terms of the revised abstract operations on References. 11.3.1, 11.3.2, 11.4.4, 11.4.5, 11.13.1 - updated algorithm in terms of revised PutValue. 12.2 - updated description for the VariableStatement, and the evaluation of the *VariableDeclaration* **:** *Identifier Initialiser* production. 12.10 - revised the algorithm in terms of the Lexical Environment and environment records. 12.14 - revised the algorithm in terms of the Lexical Environment and environment records. In ES3.1 this is the primary use case for the notion of lexical environments. 15.1.5.2 - added this subsection to call out JSON as a property on the Global Object. Removed all mention of ConstantStatment 12, 12.15, A.4 - deleted all mention of ConstantStatement and relevant productions. Introduced "debugger;" as a statement form. 12, 12.15, A.4 - introduced DebuggerStatement. 15.3.2.1 - removed the second last step that was adding the "parameters" property. This property is no longer supported on function instances. C.1.1 - removed mention of when an arguments property is initialized. D - added mention of the swapping of steps in 11.2.3.
07 Nov 2008	pratapL	11.9.7 - introduced this new section for the internal Same Value comparison function. 15.4.4.14, 15.4.4.15 - replaced '===' comparison of *searchElement* with a call to the SameValue function. 15.9.4.2 - corrected minor spelling

15.12.1, 15.12.2 - added suitable notation to indicate optional arguments in the function signatures; replaced the the test for type being "function" with IsCallable(); replaced check for the Class by actually testing the [[Class]] property.

10.3.3 - corrected minor spelling.
8.10.1, 8.10.2, 8.10.3, 8.10.4, 8.10.5, 10.2.2, 10.2.2.1, 10.2.2.2, 10.2.2.3, 10.2.2.4, 10.3.1, 10.3.2, 10.3.3, 15.5.4.14, 15.10.2.5, 15.10.2.6, 15.10.8.2, 15.10.2.15, 15.12.1, 15.12.2, 15.12.2, 15.12.2 - Replaced inconsistent use (w.r.t. section 4.3.25) of "internal function" with "abstract operation" in relevant places

15.2.3.3,15.2.3.4, 15.2.3.8, 15.2.3.9, 15.2.3.10 - removed all mention of "the static"
15.2.3.5, 15.2.3.6, 15.2.3.7 - renamed "method" to "function".
15.2.4.5, 15.2.4.7 - updated algorithm to use [[GetOwnProperty]].

12.6.4 - mentioned that the property enumeration order is not specfied, and deleted the sentence saying that the order of enumeration is defined by the object.

7.5.3 - moved 'const' back to the FutureReservedWords lists and added a note alluding to the future use of 'const', 'let', and 'yield'.
8.11 - added this section as a place holder for the Environment Record Type.
9.11 - Moved SameValue algorithm here from 11.9.7
12 - added a note regarding *FunctionDeclaration* within a *SubStatement*.
Annex C, D, E - added a note saying these need to be updated.
15.2.4.1 through 15.2.4.7 - All methods that make use of their ThisValue now account for the possibility that they are being invoked (via Function.prototype.apply or Function.prototype.call) with a non-object value passed as the thisArg.
15.2.4.3 – introduced pseudo-code for toLocaleString.

Incorporated updates for Decimal
7.8.3 - introduced *DecimalLiteral*, and clarified rounding in the case of Decimals
8.5 - defined the Decimal Type (alongside the Number Type).
9.2 - defined ToDecimal conversion (alongside the ToNumber conversion).
9.3.1 - defined the ToDecimal conversion as applied to Strings (alongside the ToNumber conversion).
9.8.1 - defined the ToString conversion as applied to the Decimal Type (alongside the Number Type).
11.3.1, 11.3.2, 11.4.4, 11.4.5, 11.4.7, 11.6.1, 11.6.2, 11.9.3, 11.9.6, 15.1.2.4, 15.1.2.5 - explicitly call out the method (as defined in IEEE 754-2008) to apply.
11.8.1, 11.8.2, 11.8.3, 11.8.4 - removed special casing for Decimal.
11.8.5 - added step 21 for Decimal
15.13.2.1 - introduced Decimal ([value])
15.13.3.1 - clarified semantics for the constructor
15.13.4.1 through 15.13.4.9 - moved from the earlier sections 15.13.5.7 through 15.13.5.15
Deleted getExponent (was section 15.13.4.5), reduce (was section 15.13.4.8), quantize (was section 15.13.4.9), roundingMode (was section 15.13.5.3). Introduced rescale (now section 15.13.4.15).

Regenerated TOC

01 Dec 2008	pratapL	4, 4.2, 4.2.2, 4.3.13, 4.3.16, 4.3.34, 9.11, 10.3.3, 12.15, 13.2.2, 15.3.4.5 - minor editorial corrections. 10.4.2.1 - clarified strict mode restriction for eval code. Reverted the Statement/SubStatement distinction. 12, 12.1, 12.1.1, 12.5, 12.6, 12.6.1, 12.6.2, 12.6.3, 12.6.4, 12.10, A4 - reverted the Statement/SubStatement distinction because it isn't needed in the absence of lexical blocks in ES3.1 12.5.1, 2nd paragraph in 12.6, 12.11.1 - introduced new strict mode restrictions. C.1.1 - introduced strict mode retriction number 12. Annex D - introduced 4th paragraph clarifiying semantics for nested variable declarations. 13.2.1 - reverted to original form (except section reference in step 1) because the added step is already taken care of in 10.4.3. Annex E - called out incompatibilities related to handling of <NEL>, <ZWSP>, <BOM>, <CR><LF>, and the called out the requirement for scan-time reporting of RegExp constructor errors. Reverted introduction of Decimal 4.2, 4.3.2, 7.8.3, 8.5, 9.3, 9.3.1, 9.8.1, 9.11, 11.3.1, 11.3.2, 11.4.4, 11.4.5, 11.4.6, 11.4.7, 11.5, 11.6.1, 11.6.2, 11.8.5, 11.9.3, 11.9.6, 15.1.2.4, 15.1.2.5, 15.13 (including all subsections) - reverted all special casing for Decimal. 4.3.32, 4.3.33, 4.3.34 - deleted these sections. Regenerated TOC.
08 Dec 2008	pratapL	4, 4.2.2 - cleaned up the 3rd paragraph that introduced strict mode. 4.3.19 - cleaned up type definitions. 5.2, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.8.1, 9.9, 9.10, 9.11 - introduced notion of *abstract operations*. 7.8.5 - reverted the change that said a RegExp literal evaluates to a value of the RegExp type. 4.2.25, 4.3.31 - renamed "Internal Function" to "Built-in" Function, and updated definition of "Built-in Method" [trac 416, 417]. 7.3, 7.8.4 - updated LineTerminator production to match <CR>, and clarified the appearance of <LS> and <PS> in String literals [trac 412]. 7.8.5, Annex A.1 - updated RegExp literal grammar to accept /[/]/ as a valid literal [trac 419]. 7.5, Annex A.1 - removed *ReservedWord* and *Identifier* from the *Token* production [trac 426]. 8 - large reorganization of this section [trac 420, 421, 422, 425]. 10 - large reorganization of this section [trac 427]. 15.2.3.14, 15.12.2 - removed the "fast" parameter from Object.keys and updated its calls [trac 415]. Regenerated TOC.
15 Dec 2008	pratapL	4.3.31 - Removed all mention of "internal function" [trac 417]. 11.4.3 - clarified host objects masquerading as "function" 16 - updated the list of runtime errors that an implementation must treat as syntax errors [trac 438]

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		7.3, Annex A.1 - fixed typo introduced when updating the *LineTerminator* production to match <CR>; we now have the *LineTerminatorSequence* production [trac 412]. 8.6.2 - introduced [[FormalParameters]] as an internal property in Table 5. It is then used in 10.6, 13.2. 8.6.2 - introduced [[Code]] as an internal property in Table 5. It is then used in 10.4.3, 13.2. 8.6.2 - added clarifications in the description for the internal properties in Table 5. 8.12 - throughout this section explicitly added "internal" when referring to internal properties/methods. 9.10, 9.11 - mentioned that the arguments to these abstract operators must be ECMAScript language values. 10 - reorganization of this section continued 10.2.1, 10.2.1.1, 10.2.1.2 - minor clarifications. 10.2.2.1, 10.2.2.3, 10.2.3, 10.3 - cleanup. 10.4 - renamed "Entering and Execution Context" to "Establishing an Execution Context" and moved it to this section number. 10.5 - moved the Arguments Object to this section number. 10.6 - moved the Declaration Binding Instantiation to this section number. 11.1.4, 11.1.5 - cleanup of Array Initialiser and Object Initialiser algorithm pseudo-code. 11.2.1 - clarify handling of Unicode escape sequences in *CallExpression*. 11.4.1 - cleanup of algorithm pseudo-code. Deletion of sections calling out strict mode restrictions 11.4.1.1 - deleted this section, and folded it into a NOTE in 11.4.1. 11.13.1.1 - deleted this section, and folded it into a NOTE in 11.13.1. 12.1.1 - deleted this section. 12.2, 12.10, 12.14 - cleanup of algorithm pseudo-code. 13, 13.2, 13.2.1, 13.2.2 - cleanup of algorithm pseudo-code. 15.1.2.1, 15.2.3.2 through 15.2.3.14, 15.3.2.1 - cleanup of algorithm pseudo-code. 15.4.4.11 - clarification on the behaviour of the **sort**. Regenerated TOC.
22 Dec 2008	pratapL	8.6, 8.10, 8.10.1, 8.10.4, 8.10.5, 8.12.1, 8.12.3, 8.12.5, 8.12.10, 10.5, 11.1.5 - renamed Getter/Setter properties to Get/Set [trac 441]. 11.1.4 - using [[DefineOwnProperty]] to define own properties on Array [trac 443]. 15.3.5.4 - made the 'name' property on function instances non-enumerable [trac 440]. 15.4.4.11 - clarified the semantics of sorting an array with numerically indexed accessor properties [trac 442].
12 Jan 2009	pratapL	6, 7.6, 7.8.4, 8.4, 11.8.5, 11.9.3, 15.1.3, 15.5.3.2, 15.5.4.5, 15.10.2.8, 15.10.2.10, 15.10.2.15, 15.10.2.16, V.1.2, B.2.1, B.2.2 – changed terminology; all use of "code point" is replaced with "code unit" [trac 446]. 8.7.2 - made "base" italic in step 2. 8.10.4 - eliminated Result(n) usages. 8.10.5 - made ToPropertyDescriptor throw a TypeError if the type of the descriptor argument is not Object. This means that

		Object.defineObjectProperty/defineOwnProperties will throw if passed a non-object descriptor argument. Also cleaned up some confusing intermediate result names. 9, 9.1 through 9.10 - changed terminology; all use of abstract operator is replaced with 'abstract operation' [trac 445]. 11.2.1 - added appropriate setting of the strict flag for a reference created for a property access. Replaced all Result(n) usages with named intermediate results. 15.9.5.2, 15.9.5.42, 15.12.1 - changed typography of "NOTE" to be consistent with the rest of the document. 15.2.3.10 - generated step numbers for the algorithm. 15.12.1 - renamed the abstract operation "walk" to "Walk". 15.12.2 - renamed the abstract operation "str" to "Str" [trac 445] Annex D&E - various grammar, spelling and usage tweaks Annex E - regarding 15.10.2.2 eliminated statement about line terminators.
15 Jan 2009	pratapL	8.6.2(Table 5), 15.4.3.2, 15.4.4, 15.4.5 - changed Array.isArray specification to use [[IsArray]] internal property. 8.6.2(Table 5), 15.3.4.5, 15.3.4.5.1, 15.3.4.5.2 - improved definition of Function.prototype.bind including various bugs. 8.6.2, 10.5 - rewrote CreateArgumentsObject and associated helpers. 8.7, 8.7.1, 8.7.2, 9.10, 9.11, 9.12, 11.2.1 - allowed primitive values to be used as the base value of References, eliminating transient wrapper object creation. 10.1.1, 13, 14, 14.1, A.5 - changed method of specification for Use Strict Directives. 11.1.5 - made the name of getter/setter functions defined using object initializers be prefixed with "get " and "set ". 12.5, 12.6, 12.11 - eliminated strict mode restrictions on var statements agreed to in Kona. 12.6.4 - fixed step 8 of the algorithm to refer to the right Results. 13.2, 15.3.3, 15.3.4 - restricted use of "arguments" and "caller" properties of the Function instances and Function instances, particularly relating to strict mode. 15.3.3 - added restriction of use of Function.caller and Function.arguments Annex C Preliminary cleanup Spell checked and corrected through sections 0 through 14. Regenerated TOC.
9 Feb 2009	MV+1 (pratapL)	8.6.2 - added [[ThrowingPut]] to the set of internal methods that all objects must implement.

		8.6.2 - removed exemptions for host objects that define a [[Class]] property.
		10.4.1 - eliminated setting **this** to **undefined** for global strict code.
		10.4.2 - step 2b made to parallel step 2c. Inserted new step 3.b that sets the lexical environment for strict eval code.
		11.8.5, 11.9.3 - minor wording change; deleted the word "value" in the "code unit value values".
		15.1.3 - changed UCS-2 and UCS-4 to UTF-16 and UTF-32 respectively.
		8.6.2 - removed the [[IsArray]] internal property from Table5.
		15.4.3.2 - Array.isArray now uses the [[Class]] internal property.
		15.4.4 - the Array prototype object no longer has an [[IsArray]] internal property.
		10.5 - corrected the "caller" and "callee" properties on the arguments object in strict mode; in strict mode, these are accessor properties that throw a TypeError exception on access.
		12.5.1, 12.6, 12.11.1 - removed these strict mode restrictions on substatements within control structure statements.
		C.1.1 - updated "Excluded Features" for strict mode.
		15.5.5.2 - changed [[Enumerable]] to **true** in step 9. Also, fixed section reference in step 1.
		15.3.4.5 - explicitly called out that the value of the bind method is 1.
		15.3.4, 15.4.4, 15.5.4, 15.6.4, 15.7.4, 15.8, 15.9.5, 15.10.6, 15.11.4, 15.11.7.7, 15.12 - added explicit language about standard built-in prototypes, and corrected section references.
		6 - removed the '.' after 6 (not used in any other section heading).
		8.6.1 - correct spelling in Table2 in the description of [[Set]].
		8.10.4 - deleted repetition of 'the following steps are taken'.
		15.4.4.11 - minor wording change in step 2 of SortCompare.
		9.1, 15, 15.2.4.5, 15.4.5.1, 15.11.6.5 - fixed section reference.
		8.12.5 - fixed step numbering to start at 1.
		8.5 - corrected spelling of "Not-a-Number".
		10.5 - corrected spellings in steps 12a, 13b, 13c.
		10.6 - corrected spelling of VariableEnvironment.
		11.1.5 - corrected spelling of 'result'.
		15 - restored style to section heading.
		Deleted all internal comments.
		Regenerated TOC.
16 Feb 2009	MV+2 (pratapL)	8.6.2 - forbid host objects from using specification-defined [[Class]] values.
		15.4.5.1 - Change from defining special [[ThrowingPut]] to defining special [[DefineOwnProperty] that maintains array invariants
		8.12.5 - Modified [[ThrowingPut]] to delegate to [[DefineOwnProperty]]. This allows overrides like Array's to centralize their special semantics in [[DefineOwnProperty]] rather than override both it and [[ThrowingPut]. Centralized recognition and invocation of set accessors in [[ThrowingPut]. Removed mention of special Array [[ThrowingPut]]. Also fixed up italics and bold emphasis within algorithm.
		8.12.10 - Added a note calling out the more elaborate [[DefineOwnProperty]] for Array.
		10.5 - eliminated special [[ThrowingPut]] because [[DefineOwnProperty]

		now does the heavy lifting. 12.2.1 - Added strict mode restriction on using eval as a variable name. 13.1 - Repurposed unused section as strict mode restrictions. Added restriction on use of eval as argument name or function name. 10.6 - Removed strict eval restrictions that are now enforced via strict mode restriction on Function Definition. 8.7.2 - made strict mode PutValue to simple 'eval' reference throw an EvalError exception. C.1.1 - updated "Excluded Features" for strict mode. 15.1.2.1.1 - new section defining a direct call eval. 10.5 - strict mode arguments don't get mapped, setting [[Writable]]: false breaks argument/formal parameter joining. 15.3.4.3, 15.3.4.4 - Added algorithm specifications for apply and call. 15.3.4.5 - Function.prototyp.bind eliminated 'prototype' property of bound object. Set 'name' property of bound function. 15.3.4.5, 15.3.4.5.3 - Add special[[HasInstance]] for bound functions. 15.3.5.3 Changed default attributes of Function instances 'name' property to be writable and configurable for backward compatibility reasons. 15.4 - Updated prose description of special Array invariants. 15.4.4.14, 15.4.4.15 - replaced of 'strict equality' the 'internal SameValue comparison operation (9.12)'. 15.4.4.16, 15.4.4.17, 15.4.4.18 - deleted step 5, and updated line number references. 15.4.4.19 - fixed the algorithm by deleting steps 2, 6, 13, 14 and updated line number references. 15.4.4.20 - deleted step 7, and updated line number references. 15.4.4.21, 15.4.4.22 - deleted step 4, and updated line number references. 15.4.5.2 - made the 'length' property writable. 11.6.1 - Restored comment in step 7 constrasting use of 'or' to 11.8.5. Restructed to avoid line number references 11.8.5 - Restored string type test in step 3 to use and. Reformated to eliminate goto. 15.11.6.1 - Changed description and section references for EvalError. 16 - fixed description of conflicting data/access properties in object literals. 8.12.10 - added missing return value in step 4.c. 9.3 - restored lost bullets. 8.7.2, 10.1, 10.1.1, 10.2, 10.4.1.1, 10.4.2, 15.4.5.2 - clarified wording. Regenerated TOC.
23 Feb 2009	MV+3 (pratapL)	5.1.5, 5.1.6 - introduced new sections 5.1.7 - renumbered from earlier section number. 7.8.4, Annex A - changed LineTerminator to LineTerminatorSequence. 7.8.5, Annex A - fixed RegularExpressionClass grammar.

		8.12.9, 15.4.4.11 - added IsCallable checks before invoking [[Call]]. 14.1 - simplified grammar for Use Strict Directive and added clarifications. 15.2.3.3 - eliminated conversion of null and undefined to the empty string in step2. 15.4.4.2, 15.4.4.3, 15.4.4.4 - made [[Class]] == Array check explicit. 15.4.5.1 - modified the deletion algorithm to stop when it reaches a non-deletable property. 15.10.1, 15.10.2.6, 15.10.2.8, Annex A - RegExp grammar Atom/Assertion fixes. 15.10.4.1, 15.10.6.4 - Made RegExp.source and toString tround-trippable. 15.12.1 - new section introducing the JSON lexical and syntactic grammar. 15.12.2 - renumbered from old section (15.12.1). 15.12.3 - renumbered from old section (15.12.2). 16 - removed exemption for detecting EvalError. **The following changes are clarifications, and refactoring of algorithms to eliminate 'Result(n)' references and 'goto step(n)' statements:** 4.2.1, 4.2.2, 4.3.5, 4.3.23, 4.3.25, 4.3.26, 9.5, 9.6, 10.3, 10.2.1.1, 10.4.3, 10.5, 12.15, 13, 13.1, 15.2.2.1, 15.2.3.4, 15.2.3.8, 15.2.3.9, 15.2.3.12, 15.2.3.14, 15.3.3.2, 15.3.4.5, 15.4, 15.5.4.2, 15.5.4.3, 15.6.4.3, 15.7.4.2, 15.7.7.4, 15.9.5.42, 15.9.5.43, 15.12.3, 16, Annex D, Annex E - clarified wording. 7.5.2, Annex A - repacked keyword table. 7.5.3, Annex A - repacked reserved word table. 8.7.1 - removed Result(n) reference. 15.2.4.6, 15.3.5.3 - refectored algorithm to eliminate goto step(n) statements. 8.12.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 11.1.5, 11.1.6, 11.2.2, 11.2.3, 11.2.4, 11.2.5, 15.1.2.2, 15.1.2.3, 15.1.2.4, 15.1.2.5, 15.2.4.2, 15.2.4.3, 15.2.4.5, 15.2.4.7, 15.3.2.1, 15.3.5.3, 15.4.4.3-22, 15.5.4.4, 15.5.4.5, 15.5.4.6, 15.5.4.21, 15.5.5.2, 15.12.2, 15.12.3 - refactored algorithm to remove Result(n) references. Regenerated TOC.
02 March 2009	MV+4 (pratapL)	Changed title to be "ECMAScript 3.1 Language Candidate Specification Draft". 7.8.3, Annex B - in strict mode, NumericLiteral cannot be extended to include OctalIntegerLiteral. 7.8.4, Annex B - in strict mode, EscapeSequence cannot be extended to include OctalEscapeSequece. 7.8.5, Annex A - clarified syntactic grammar for Regular Expression Literal 10.5 - setting the "constructor" property (instead of [[Constructor]] on the arguments object using [[DefineOwnProperty]].

		15.1.2.2 - removed allowance for implementations to treat leading zero string in parseInt as octal. 15.2.3.7 - fixed algorithm to use [[Get]] instead of [[GetOwnProperty]], and made it work only on own enumerable properties. 15.3.4 - specified the "name" property. 15.3.4.3 - removed allowance for implementations to throw a RangeError. 15.4.4.6 through 15.4.4.9, 15.4.4.12, 15.4.4.13, 15.4.4.19 - changed to use [[ThrowingPut]] so array algorithms don't silently misbehave in the presense of non-writable properties and non-extensible objects. 15.4.4.15 - changed max check to min check in step 6. 15.4.5.1 - allowing array index properties to be accessor properties. 15.5.4 - inserted CheckObjectCoercible tests in all algorithms as the first step. 15.11.4.3 - setting the initial value of the Error.prototype.message to the empty string. **The following changes are clarifications, and refactoring of algorithms to eliminate 'Result(n)' references and 'goto step(n)' statements:** Wording improvements and clarifications: Brief History, 4.3.16, 7, 8.6.1, 8.6.2, 8.7.1, 8.7.2, 8.10.4, 8.10.5, 8.12.1, 8.12.4, 8.12.5, 8.12.9, 8.12.10, 9.1, 9.7, 9.8.1, 9.9, 9.10, 9.11, 10.2.1.1, 10.2.1.2, 10.2.1.2.1 through 10.2.1.2.4, 10.2.2.1, 10.2.3, 10.3.1, 10.4, 10.4.1.1, 10.4.3, 10.5, 11.1.4, 11.1.5, 11.2.2 through 11.2.4, 11.4.1, 11.5.3, 11.6.1, 11.8.5, 11.9.6, 12.2, 12.7, 12.8, 13, 13.2.1, 13.2.2, 14.1, 15, 15.1, 15.1.2.2, 15.2.3, 15.2.3.1, 15.2.3.4, 15.2.3.7 through 15.2.3.9, 15.2.4, 15.2.4.2, 15.2.4.3, 15.2.4.5, 15.2.4.7, 15.3.2.1, 15.3.3, 15.3.4, 15.3.4.4, 15.3.4.5, 15.3.4.5.1, 15.3.4.5.2, 15.3.5, 15.3.5.2, 15.3.5.3, 15.4.2.1, 15.4.2.2, 15.4.3, 15.4.4, 15.4.5, 15.4.5.1, 15.5.2.1, 15.5.3, 15.5.4, 15.5.4.17 through 15.5.4.19, 15.5.5, 15.5.5.2, 15.6.2.1, 15.6.3, 15.6.4, 15.7.2.1, 15.7.3, 15.7.4, 15.7.4.2, 15.7.4.3, 15.8, 15.8.2.15, 15.9.1, 15.9.1.1, 15.9.1.15, 15.9.3.1, 15.9.3.3, 15.9.4, 15.9.4.4, 15.9.5, 15.9.5.9, 15.10.2.1 through 15.10.2.5, 15.10.2.8, 15.10.2.9, 15.10.2.11, 15.10.2.16, 15.10.2.19, 15.10.3.1, 15.10.4.1, 15.10.5, 15.10.6, 15.11.1.1, 15.11.2.1, 15.11.3, 15.11.4, 15.11.7.2, 15.11.7.4, 15.11.7.5, 15.11.7.7, 15.11.7.10, 15.12, 15.12.1, 15.12.1.1, 15.12.2, 15.12.3, 16, Annex A, Annex B, B.2.5, Annex D, Annex E. Restored lost bullets: 7.8.3, 7.8.4, 15.8.2.1 through 15.8.2.18, 16. Refactored algorithm to remove Result(n) references, and goto step(n) statements: 11.3.1, 11.3.2, 11.4.2, 11.4.4 through 11.4.9, 11.5, 11.6.2, 11.7.1 through 11.7.3, 11.8.1 through 11.8.4, 11.8.6, 11.8.7, 11.9.1 through 11.9.6, 11.10, 11.11, 11.12, 11.13.1, 11.13.2, 11.14, 12.1, 12.4, 12.5, 12.6.1 through 12.6.4, 12.9, 12.11, 12.13, 12.14, 13, 14, 15.1.3, 15.1.3.1 through 15.1.3.4, 15.2.2.1, 15.5.4.7 through 15.5.4.16, 15.5.4.20, 15.5.4.21, 15.6.4.2 through 15.6.4.4, 15.7.4.5 through 15.4.7.8, 15.9.1.11 through 15.9.1.14, 15.9.3.1, 15.9.3.2, 15.9.4.3, 15.9.5.27 through 15.9.5.41, 15.9.5.44, 15.10.6.2, 15.10.6.3.

		Added algorithmic specification: 15.2.4.4, 15.4.4.2.
		16 - updated set of runtime errors that implementations may detect and report early.
		A.1 - removed duplicate line in Punctuator.
		A.8 - introduced section for the JSON Lexical grammar and the JSON Syntactic grammar.
		Annex C - updated strict mode restrictions and exceptions.
		Updated TOC.