

eBooks and JavaScript Internationalization

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JavaScript Platform

- Language and core API: Ecma
 - Object, String, Array, RegExp, ...
 - Internationalization API
- Web API: W3C and WHATWG
 - DOM, HTML5, XMLHttpRequest, apps, ...
- Libraries: jQuery, Dojo, YUI, Node, ...

Unicode in ECMAScript

- ECMAScript started with 16-bit Unicode, evolved to UTF-16
- Some functionality still limited to BMP
 - Especially regular expressions
 - To be fixed in 6th edition
- Normalization to be added in 6th edition
- Unicode properties?

ECMAScript Intl API 1.0

- Approved December 2012
 - String comparison
 - Number, currency, percent formatting
 - Date and time formatting

Formats

- Numbers: 123,456.789 – 123.456,789 –
1,23,456.789 – ١٢٣٤٥٦,٧٨٩
- Dates: 2013년 6월 4일 – June 4, 2013 – 4.
Juni 2013 – 4 มิถุนายน 2556 – 25年6月4日

ECMAScript Intl API 2.0

- Under development; approval planned for December 2014
 - Time zones
 - Text segmentation (words, lines, sentences, ...)
 - Message formatting (e.g., gender and plural handling)

JavaScript in eBooks

- EPUB 3 allows for `<script>`ing
- Language assumed to be JavaScript
- Only references HTML 5 as source of APIs
 - DOM, Navigator as prerequisites
 - XMLHttpRequest? WebApps APIs?
- Few implementations yet

Where does it lead?

- Drawing and animations using HTML canvas
- Quizzes using HTML forms
- Multilingual books?
- Fully interactive applications?

Requirements for Internationalization?

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