ECMAScript

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What is a Scripting Language?

- Programs are source format. No binaries, neither hardware nor OS-specific.
- Simplified language syntax. Easier for less-trained programmers.
- Always embedded - controlling its environment, automating its host.
- Scripts (programs) run within other programs - browsers, servers, web pages, applications.
How does ECMAScript differ from other Scripting Languages?

- The only Standard scripting language. Thank you, ECMA!
- Based on and very similar to C, C++, and Java.
- Object-oriented - modern and powerful. Controls the objects of its host.
- Ubiquitous - every high-school programmer knows it.
- It has the best features of a variety of programming languages:
  - Java, C, C++, Perl, Python, Self, Scheme
Java and JavaScript - What's the Difference?

- They are complementary.
  - Java is a traditional, industrial-strength programming language.
  - JavaScript is a related, lightweight scripting language.
- JavaScript adapts well to up-to-the minute changes in its environment.
- JavaScript is very small - a fraction of a megabyte, not several megabytes.
- Unlike Java, all language translation is done in the user's machine - not the developer's.
- Eval - Write scripts while programs run.
Scripting vs Java/Traditional Programming

- ECMAScript is easier to write and easier to learn
  - Read and borrow from deployed scripts.
  - Lower entry-level. It's easier to get started.
  - Huge programmer base.
  - No development cycle for script writers.
  - OO/CS knowledge isn't necessary

- Traditional languages are more controlled
  - Rules and techniques are valuable for large or complex programs
  - Binary delivery protects intellectual property
  - Less flexibility means faster execution speed
ECMAScript Availability

■ In major browsers on most computer platforms
  ■ JavaScript 1.3 (Navigator 4.5) from Netscape
  ■ JScript 3.1 (Internet Explorer 4) from Microsoft

■ Also licensable for use in other products
  ■ JScript 3.1 from Microsoft
  ■ JavaScript 1.3 from Netscape/Mozilla
  ■ ScriptEase 4 from Nombas
  ■ RibbitSoft interpreter

■ Other implementations
  ■ IBM
  ■ Nortel
  ■ Fujitsu