

ECMAScript

Andrew Clinick (Microsoft)

Clayton Lewis (Netscape)

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



Demo