Java Support

Internet Explorer is designed to be an open, Internet standards-based platform. This platform enables content developers to create and end users to view all the latest active Web content. With its Beta 2 release, Internet Explorer provides the fastest implementation of Java on the Web today.

Java Applets
Microsoft Explorer 3.0 Beta 2 enhances the power of Java by merging it with ActiveX technologies to make them one and the same. In fact, the Java language is one of the best languages with which to create ActiveX components. This initial release of Java support for the Microsoft Internet Explorer 3.0 beta provides one of the fastest implementations of Java available with its own Just-in-Time (JIT) Java compiler.

Plus, because it uses standard component architecture, Microsoft Internet Explorer 3.0 enables you to use scripting languages, including ActiveX Scripting or JavaScript, to link Java applets to other ActiveX controls, making it one of the most functional and complete implementations available.

With the Java reference implementation for Windows, developers can invoke interfaces on other ActiveX Controls, and can write ActiveX Controls in other languages (Visual Basic, Visual C++) that call Java interfaces. In addition, Java is an ideal language for creating and implementing ActiveX Controls and all other COM controls.

Internet Explorer Java Support Features
Microsoft is committed to delivering first class Java development tools, as well as the reference implementation of the Java virtual machine for Windows platforms. Microsoft's Component Object Model is the cornerstone of the ActiveX™ platform. It provides tight integration between Java and COM technologies, which enables customers and developers to build upon their knowledge of development tools, applications, and other infrastructure while still being able to take advantage of new and exciting technologies such as Java.

Internet Explorer Java support includes the following features:

- View a wide set of set of Java applets reliably
- Provides the reference implementation for Win32 of the Sun Microsystems virtual machine.
- Enables content developers to script Java applets with other Java applets and Active Controls, using the scripting language of their choice.
- Provides built-in Java security. A primary concern for all levels of users is that a browser provides standard security schemes such as code-signing for trusted code in addition to the Java sandbox security scheme.
- The JIT compiler provides tool vendors with the richest debugging support on the market.
- Fast JIT support. The Microsoft Just-In-Time Java compiler provides the fastest way to run Java applications as shown in recent performance tests that Microsoft conducted against Netscape Navigator 3.0 (Beta 5).

Microsoft Performance Test (higher numbers are faster)	Netscape Navigator 3.0 Beta 5	Internet Explorer 3.0 with JIT
Sieve	4263	4665
Loop	7654	8112
Logic	2108	2181
String	36	132
Float	1228	2661
Method	2305	2903
Image	26	137
Graphics	61	47

Dialog	171	31
OVERALL	**1383**	**1705**

This table shows that with the Java Just-in-Time compiler, Internet Explorer 3.0 (Beta 2)'s implementation of Java is 18% to 21% faster than Netscape Navigator 3.0 (Beta 5). Note that higher numbers mean faster speed.

Other independent parties have also run performance tests that show Internet Explorer's implementation to be faster than Netscape Navigator. For example Microbenchmark and Linpack performance tests showed that currently, Microsoft's JIT beats Netscape's. In their tests, Internet Explorer is faster at accessing variables, marginally slower on simple math operations, and much faster at creating objects and using synchronized methods. On the math-intensive Linpack benchmark, Internet Explorer is 50% faster than Netscape. To view their data, visit http://www.cs.cmu.edu/~jch/java/optimization.html.