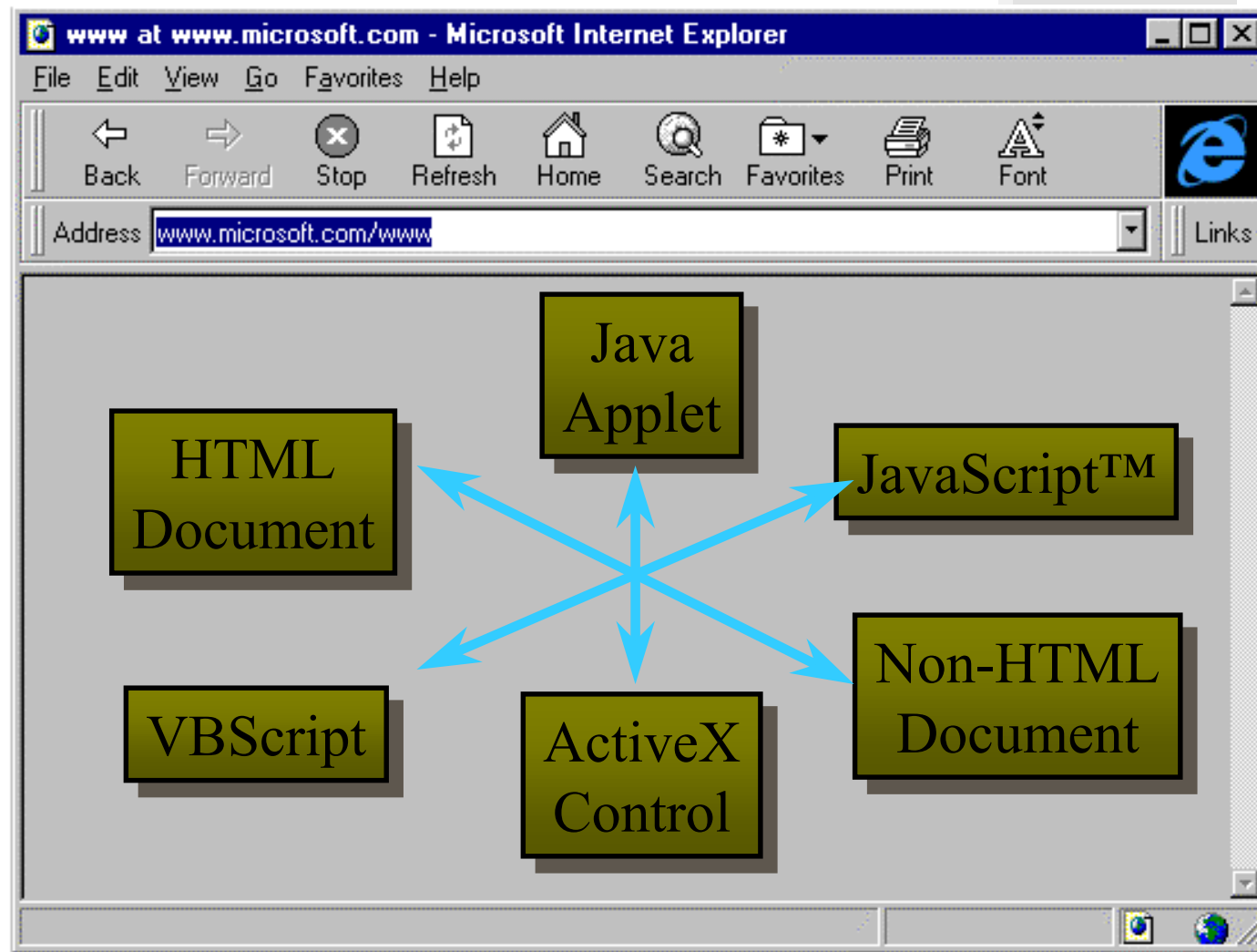


# What is ActiveX?

- A marketing name for a set of technologies and services, all based on the Component Object Model (COM)
- It's just COM!
  - "DCOM" is just COM with a longer wire

# ActiveX Bridges the “Islands”

*Makes it easy to integrate and reuse any component*



# Elements Of ActiveX

Web Pages, Documents, and Applications/Containers

## Scripting

Visual Basic, Scripting Edition, JScript, Tck/Tk, etc.

## Controls and Applets

C++, Delphi®, Java, Visual Basic®, etc.

## Components and Services

URLs, hyperlinking, browser frame, HTML, Java VM, etc.

## Component Object Model (COM)

Standard component packaging

Windows®

Macintosh®

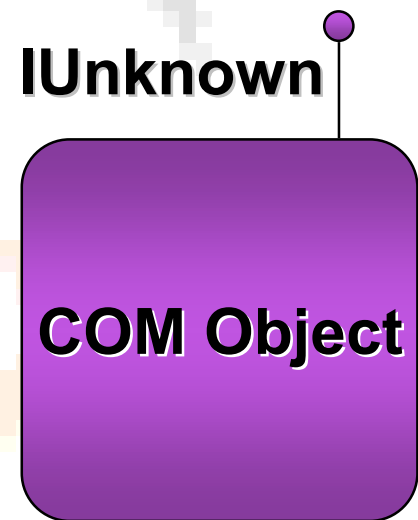
UNIX®

Distributed COM  
Internet/distributed computing

# Component Object Model (COM)

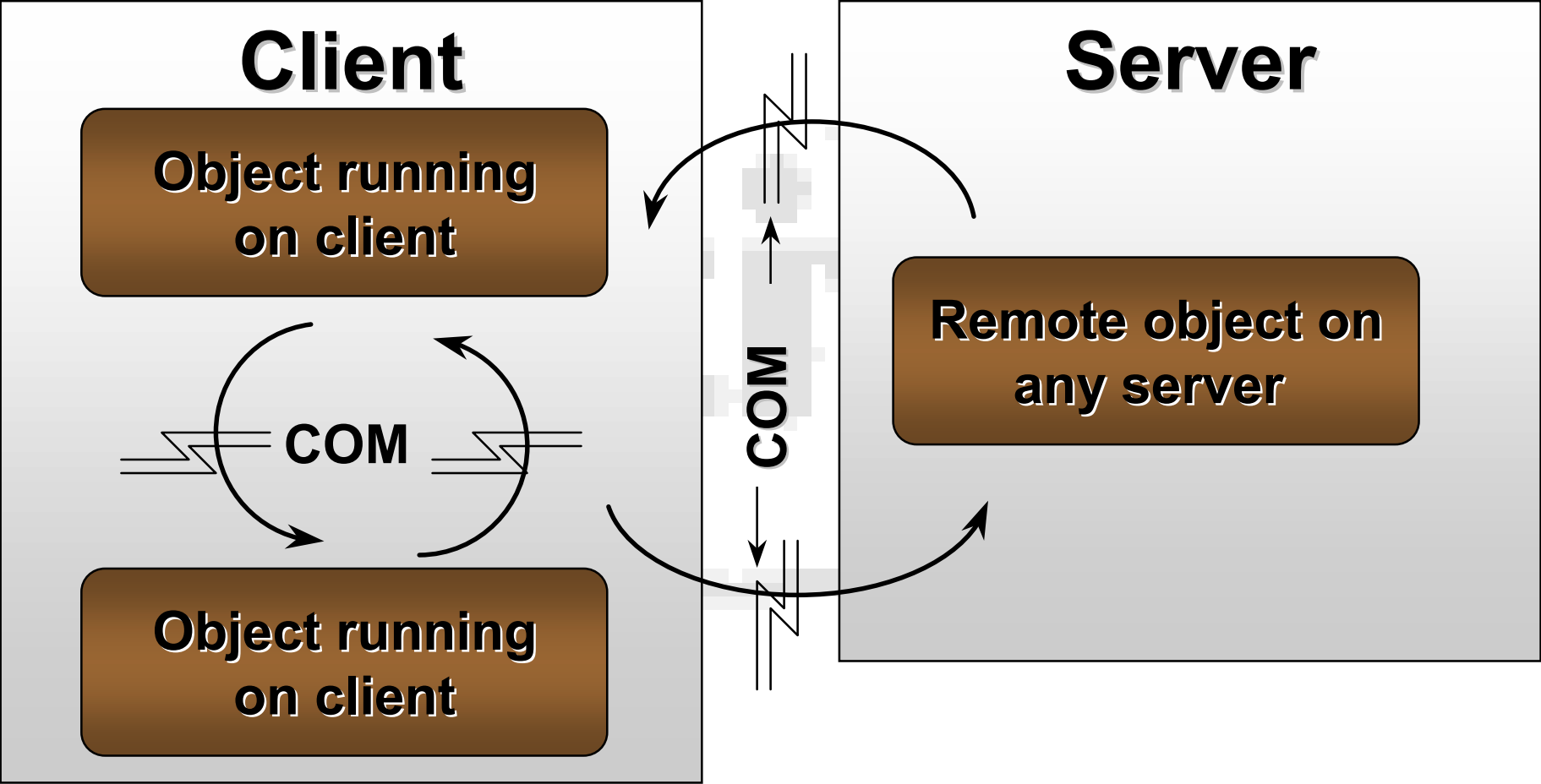
## *Foundation for ActiveX components*

- Versionable, programmable
- Lightweight, fast
- Open standard
  - Language and tool-neutral
  - Works with today's applications
  - Cross-platform
- ActiveX components are COM objects
- Distributed COM extends interactions between components across networks

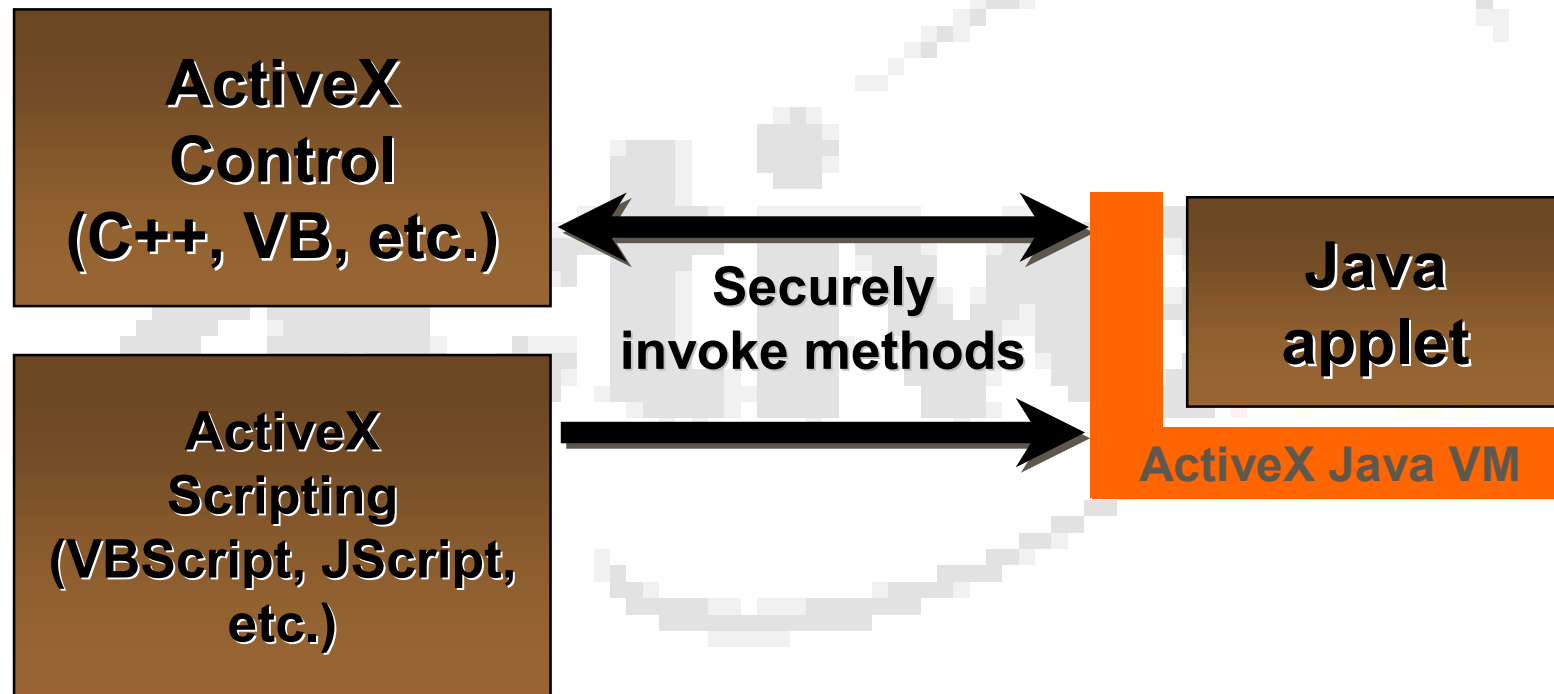


# COM/DCOM

*Lets ActiveX components run anywhere*



# How Does Java Fit With ActiveX?



# Code-signing and Sandboxing

- Code-signing - “shrinkwraps” code
  - Identifies publisher; validates integrity of code
  - Doesn't prevent bugs or malicious operation
  - Gives accountability for market and legal recourse
- Sandbox - code isolated inside virtual machine
  - Doesn't prevent bugs; limits malicious operation by limiting functionality
  - Least common denominator capabilities
  - Relies on airtight implementation, proven difficult in practice

# ActiveX Benefits: Choice

- Mix and match from huge industry arsenal of tools, languages, code and expertise
- Deliver applications for Internet and/or Intranet
- Run components in the browser or other applications (any container)
- Program with any tool or language
- Supports Macintosh®, UNIX® and Windows®
- Integrate components using any scripting language