File Stream Encyclopedia Article

File Stream

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File streams are used to place information directly into a file. The information can be that which is being acquired--an input file stream--or can be information coming from a program that is running on the computer. The latter is known as an output file steam.

File streams are a ubiquitous feature of **programming** languages. For example, in **Windows** 2000, the file **stream** functions as outlined above, and also functions to divide a file into several sub-files (or streams). In **C++**, file streams can be used to attach files to incoming or outgoing file streams.

An **object** of a file stream is information residing in a file (external to the computer or residing in the computer). The user can create a file stream by the invocation of **commands**. In the Lisp programming language, for example, the "open" and "with-open-file" commands are used. Also, file streams can be a built-in feature of the programming system, via functions such as "load."

A file stream may be created using the command statement that is germane to the particular operating system. Then, a file can be associated with the stream; this is also described as declaring a file stream object.

An important feature of file streams is that they can be used globally. That is to say, a large amount of **data** can be moved in such a way that it is available for subsequent manipulation. For example, a file can be sent to a recipient, changed, and the altered version sent back to the original source. Such two-way **access** to information makes long-distance electronic collaboration feasible.

Despite their usefulness to the acquisition of information, file streams have been maliciously utilized. In the year 2000, a virus designed Win2K/Stream, became the first known example of a virus that uses the file stream feature of Windows 2000 to infect personal computers. Upon infection of a file the virus creates a new stream and assigns to the file the name "filename:str." The original file can now only be accessed using the newly-assigned file name, which is hidden from the user. Thus, the user is barred from use of the infected file. Infection of an executable file, responsible for the performance of a program of aspect of a program, can seriously set-back computer operations.