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Title of the Invention

METHOD AND SYSTEM FOR MAINTAINGING FILE COMPATIBILITY BETWEEN FUNCTIONAL DEVICES

Description of the Invention

A system for maintaining file compatibility over a range of functional devices, allowing data files to be viewed across many different platforms.

Problem/Opportunity

A problem exists with synchronizing data files across a variety of functional systems, such as a desktop and a mobile device, creating a situation where many basic database operations are suspect. Particularly, compatibility issues arise when a given file a user wishes to view on one device can not be readily viewed on the other. For example, since different devices, such as a desktop computer and a cellular phone, both use different means to interpret a given file type, certain file types are often not viewable on both devices. If the file is not viewable, the user may be able to manually convert the file on their computer, before re-syncing the file to the mobile device. This process is time consuming, especially if the user is not near their computer. Furthermore, the inconvenience of needing to convert each file manually before being able to access them on the mobile device may lead to user frustration, and result in a loss of information due to human error. The absence of an automated system for this process greatly reduces the usability of synchronized functional systems.

Detailed Description of the Invention

This invention is a system for insuring the compatibility of different file types with a variety of different computing devices. The system of the invention allows the content of a given file, sent from one device, to be readily viewed on a second device, despite differences in hardware, Operating System, or software applications. This system is designed to eliminate any file compatibility issues between two functional devices, such as a desktop computer and a mobile device, by recognizing files that can not be viewed and automatically converting them so that they can be viewed on different platforms.

Figure 1 illustrates the structure of the Translation Server System (1.0). The Translation Server System (1.0) is composed of a set of Functional Devices, Device 1 (1.1a) and Device 2 (1.1b), which may include computers such as desktop or laptop PCs, cellular phones, PDAs, or any other processing device running an Operating System, such as Linux, (1.2) with an Internet connection. These Functional Devices are capable of sending files between one another over the Internet (1.3). There is also a Translation Server (1.4) located on the Internet, composed of a server running an operating system connected to a Device Type Database (1.5). The Device Type DB contains file compatibilities for given Devices and their Operating Systems. Using this, the Translation Server (1.4) handles any file conversions needed to open a given File (1.6a and 1.6b) on a given Functional Device.

Effectively, the Translation Server works to ensure that file compatibilities are maintained between systems. For example, consider the situation when Device 1 sends a file to Device 2. In the event the file can not be opened by Device 2, Device 2 would consult a Translation Server, located on the internet, to convert the file. To do this, Device 2 would first send the unrecognized file, Device model, Device type, and OS version to the Translation Server over the Internet. The Translation Server would then use this information to consult a Device Type Database that contains a list of compatible file types for a given Device model, type, and OS version, to determine if there is a file type that is compatible with Device 2. If the Translation Server finds a file type compatible with Device 2, it would convert the file and send it back to Device 2.

The method of operation of the Translator Server System is shown in Figure 2:

2.1 Device 1 sends a file, File.a, to Device 2. On receiving the file, Device 2's OS recognizes the file File.a is not compatible with Device 2.

2.2 Device 2 sends the file and information about Device 2 to the Translation Server for conversion.

2.3 The Translation Server consults a Device Type DB to determine what the file needs to be converted to.

2.4 If there is a compatible file type, the Translation Server converts the file to the new file type, creating File.b, and sends the converted file back to Device 2.

2.5 If there is not a compatible file type, the Translation Server notifies Device 2 that the file can not be converted to a readable type.

In this way, any file received that can not be read on a given device is automatically sent out to a remote Translation Server to be converted and sent back. This eliminates the problem of file compatibility between two Functional Devices, as any unrecognizable file is automatically converted to a recognizable format for any given receiving Device.

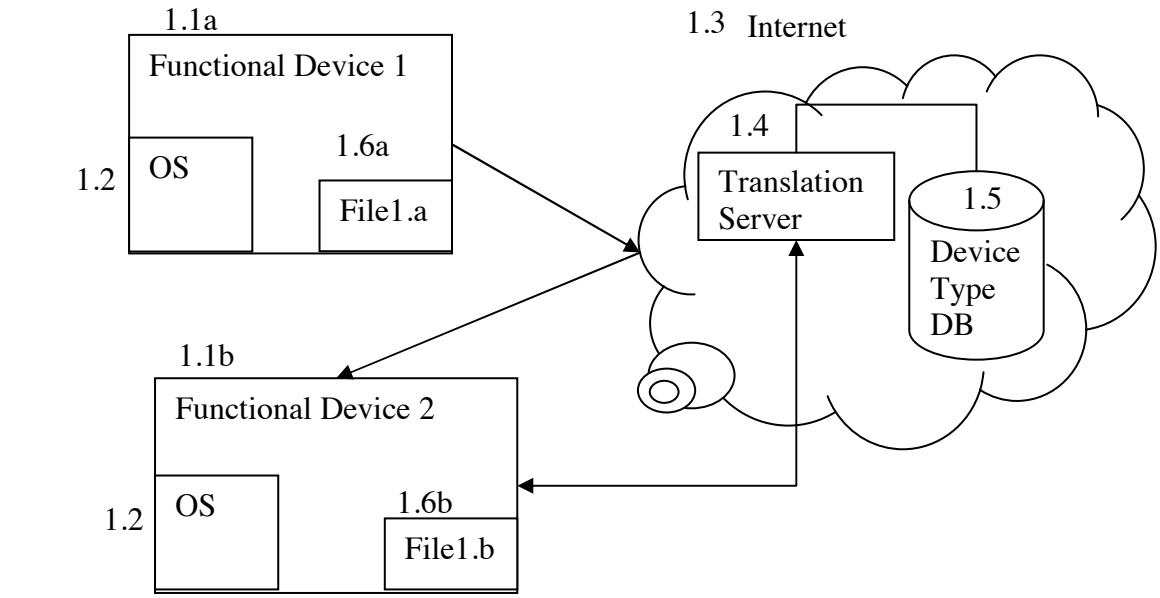

Figure 1: Structural Diagram of the Translation Server System

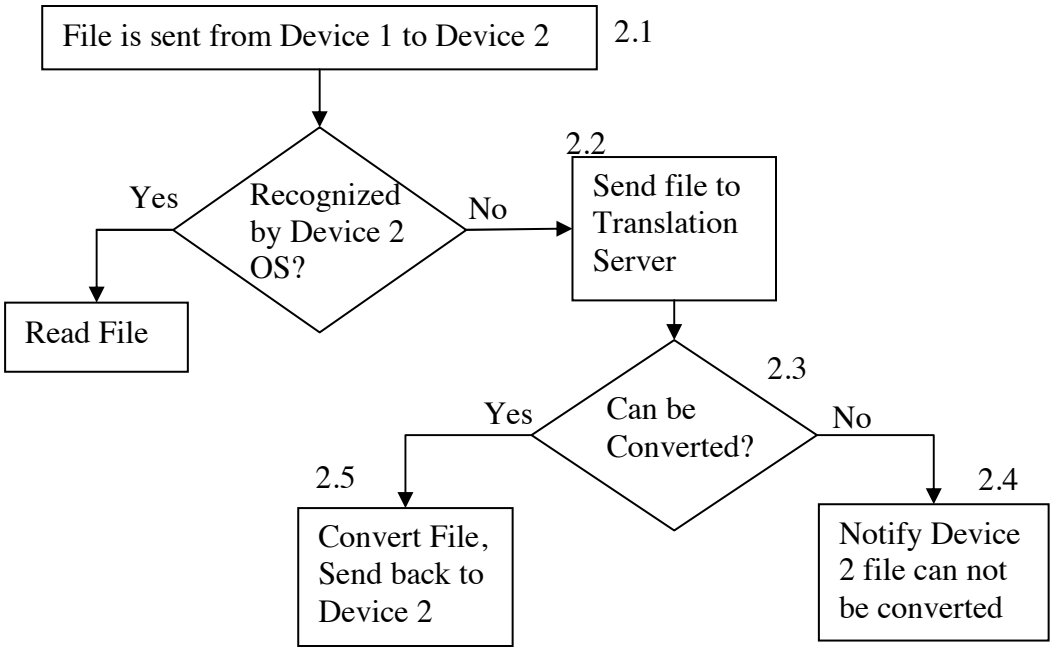

Figure 2: Flowchart illustrating Translation Server Operation