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TITLE

Image Management System for Compatibility with Mobile Devices

ABSTRACT

An Image Handler Module within the operating system of a personal computer determines if images to be sent to a mobile device are compatible with the display capabilities of the mobile device. If the image is not compatible, the Image Handler Module presents the user with alternative adjusted images that are compatible with the mobile device.

1. BACKGROUND

Problem/Opportunity

It is often desirable for a user to transfer data from a personal computer to a mobile computing device such as a smart phone or an electronic reading device. This data could include image files that the user intends to view on the mobile device. However, the display capabilities of mobile devices vary greatly from the capabilities of desktop and laptop computers.

When an image is sent to the mobile device from a personal computer, the image properties may be incompatible with the display capabilities of the mobile device. This can cause unwanted alterations to the image or an inability to view the image at all. A system is needed to recognize these situations and provide possible alterations to the image that would render the image fully viewable.

Background Publications

Previous publications have attempted to address the problems associated with image compatibility. However, none of the previous publications were able to address the issue of image compatibility when sending images to mobile devices.

US Patent Application Number 20050179918 describes a system for adjusting image colors for a display device. The system matches colors from the original image to colors

capable of being displayed on the external display device rendering the image viewable. This invention does not relate to the transfer of image files to mobile devices.

US Patent Number 5612715 describes a system for adjusting the resolution of archaic applications. The system adjusts the resolution of legacy software so that the software window fills the display area even when the display area is designed for greater resolution than the legacy software. This invention does not relate to the alteration of image files or the transfer of files to a mobile device.

US Patent Number 7088472 describes a system for ensuring quality of an image from input to output. A reference property file for an image output device assists in the conversion of image input data to image output data to be used by the output device such as a printer. This invention does not relate to the adjustment of image properties for display over a digital medium, such as the display of a mobile device.

2. SUMMARY OF THE INVENTION

Invention Summary

An Image Management System for Compatibility with Mobile Devices can adjust images to address problems of display compatibility with mobile devices.

When a user requests to transfer an image file to a Mobile Device, an Image Handler Module first queries the device. The Mobile Device returns a summary of its display capabilities. The Image Handler Module then develops multiple versions of the image that are compatible with the Mobile Device. The user is then given the option to select the best version of the image for transfer to the Mobile Device. The selected image is transferred to the Mobile Device where it can be viewed without issue.

Unique Concepts

The unique concept of the present invention is the ability of the operating system of a personal computer to preemptively adjust the properties of an image before it is transferred to a mobile device.

3. DESCRIPTION OF THE INVENTION

Description of Elements of Image Management System in **Figure 1**:

The Personal Computer is a computing device with high level display capabilities such as a desktop or laptop computer.

The Operating System is a standard operating system such as Linux.

The User Interface is an interface through which a user interacts with the operating system.

The Image Handler Module analyzes images to determine if they are compatible with the display capabilities of the Mobile Device. If not, the module develops an alternative image with compatible properties.

The Database stores the original and modified images for the Image Handler Module.

The Image File is an image that is intended for transfer to the Mobile Device.

The Mobile Device is a mobile computing device with image display capabilities. The image display capabilities are less advanced than those of the Personal Computer.

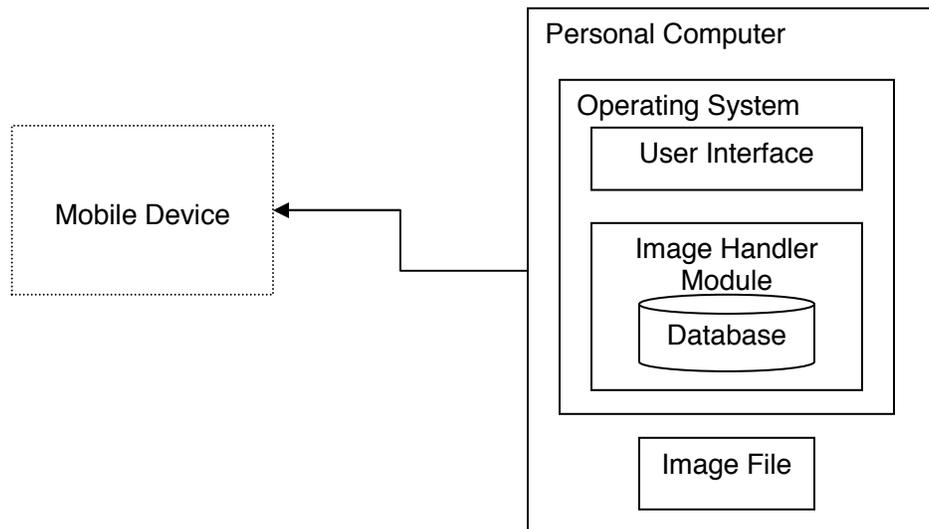


Figure 1. Image Management System

Figure 2 describes the method for transferring an image file to a mobile device using the Image Management System.

In step 1, the User requests, through the User Interface, to transfer the Image File to a Mobile Device via a physical or wireless connection.

In step 2, the Personal Computer requests information about the display capabilities of the Mobile Device.

In step 3, based on the display capabilities provided by the Mobile Device, the Image Handler Module determines if the Image File is compatible with the Mobile Device. If the image is not compatible with the Mobile Device, proceed to step 4. If the Image File is compatible, proceed to step 6.

In step 4, the Image Handler Module develops alternative images using properties that are compatible with the Mobile Device and stores these images in the Database.

In step 5, the Image Handler Module prompts the user, via the User Interface, to select a desired alternative image.

In step 6, the selected alternative image or the original Image File is transferred to the Mobile Device.

The method ends.

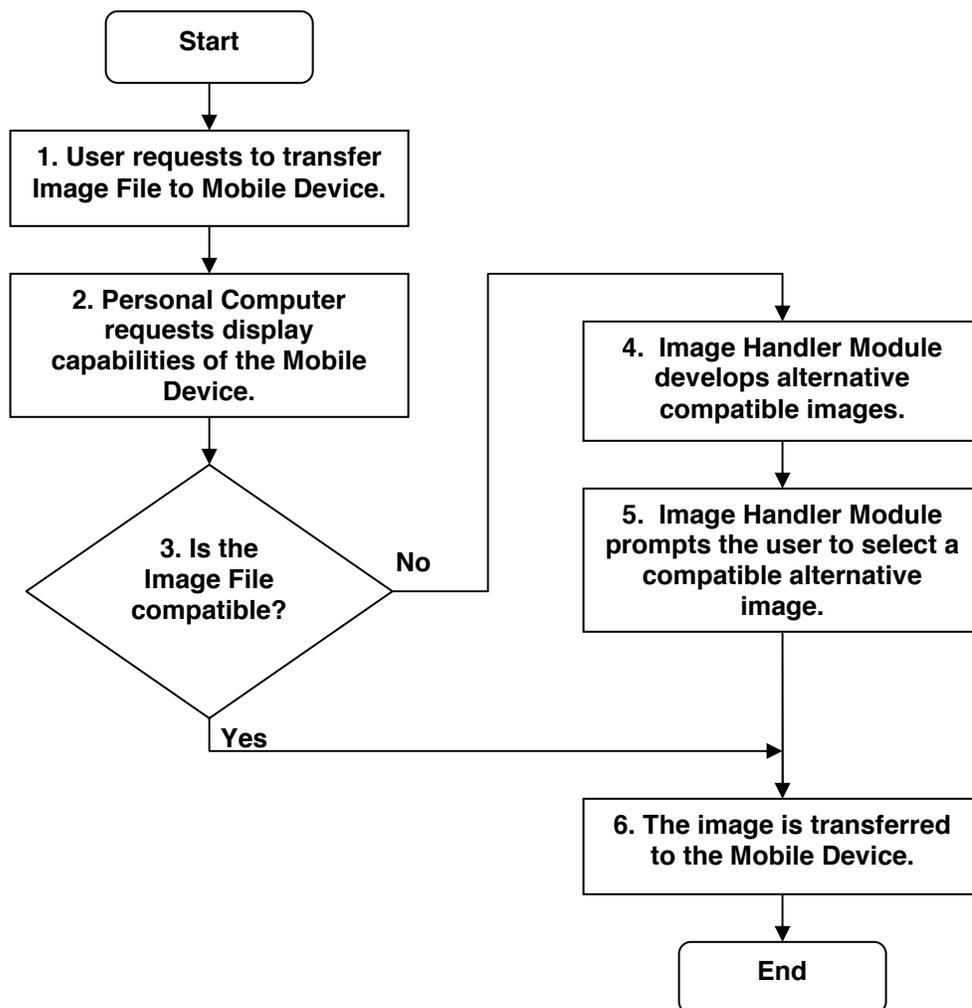


Figure 2. Method for transferring an image to a mobile device using the Image Management System