



Files Transmission using Media Transfer Protocol

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Introduction

In this article we will describe what Media Transfer Protocol (MTP) is, as well as its advantages and disadvantages.

The MTP protocol seeks to address concerns about the distribution of digital content in the consumer market as an increasing number of organizations create and distribute digital audio/video content. The aim of MTP is to deliver content via a secure, easy-to-use interface, and push it to a range of devices.

What is Media Transfer Protocol?

The Media Transfer Protocol, introduced by Microsoft, is a protocol designed for intelligent storage devices like smartphones and digital audio players. It is based on, and fully compatible with, the Picture Transfer Protocol (PTP). MTP allows the synchronization of files between portable devices and a personal computer (PC).

A Brief History of MTP

Standardized in 2000, PTP was originally developed to transfer images from a digital still camera to a PC. PTP is limited to transferring images and is an insufficient solution for media rich portable devices like smartphones and portable media players. Users required a method to transfer different file formats like media files, people contacts or video, which were not supported by PTP. Microsoft therefore introduced the MTP to address the shortcomings in PTP.

Advantages of Media Transfer Protocol over USB Mass Storage Class

Before the development of MTP, mobile phone manufacturers integrated USB Mass Storage Class (USB MSC) into their products to facilitate file transfers between PC and phones. However, since the standardization of MTP as a Universal Serial Bus (USB) device class in 2008, manufacturers have slowly started moving towards implementing support for MTP in their devices.

MTP offers the following advantages over USB MSC:

- A smartphone device in MTP mode controls the input and output to the file system. Hence there is no risk of data loss in case of accidental or intentional disconnection from USB of the host

computer. MTP also prevents formatting of the smartphone's partition as users are only working on a layer over the file system, thus providing a greater degree of lock-down.

- Unlike MTP, USB MSC works at a block level. This means when a phone with this protocol is connected to a PC system, it gives the host computer absolute control over the phone's operating system partition. This can lead to serious consequences, for example, it would be possible for the host to reformat the file system in the phone.
- As the MTP driver uses a simulated file system, it is always compatible with any host computer regardless if the operating system of the host supports the file system or not. With USB MSC, the host PC must support the USB MSC file system natively or download drivers for it to be compatible.
- MTP supports large files transfers (over 4GB).
- MTP is closely related to Windows Media Player and supports copyright protection through digital rights management (DRM). USB MSC don't have any support for DRM.
- USB MSC prevents the PC and device from accessing itself at the same time. With USB MSC, the phone device is locked by the host computer while it is being accessed. Users trying to use their phones during this period will not be able to. MTP does not suffer from such issues and allows simultaneous usage by the host computer and the user. Thus the user could make calls, check SMS messages while the phone is performing file transfer to and from the PC.

Disadvantages of Media Transfer Protocol

- Files on a MTP device cannot be directly viewed or altered. They must first be copied to the host computer before it can be opened. Large files will take a much longer transfer time which can be very inconvenient to the user.
- MTP can only perform a single operation (read, write, delete, etc.) each time and other operations cannot be executed without completing the current running operation first.
- File timestamps are often read-only and set by the device after a file is uploaded to it. SyncBackPro/SE/Free V7 uses a number of strategies to get around this limitation.
- MTP devices are mounted as Windows portable devices. Thus, they show up as an entry in Windows Explorer with no drive letter issued. Software trying to connect to these devices via drive letters will not be able to do so. One example would be the current version (V6) of the backup and synchronization software, [SyncBackPro](#), [SyncBackSE](#), and [SyncBackFree](#). Android devices like smartphones and tablets with the MTP protocol will have no drive letters allocated to them and the current version of SyncBackPro/SE/Free will not be able to perform data backups or synchronization to or from these devices.

However, the forthcoming V7 of SyncBackPro and SyncBackSE supports MTP (it is not supported in SyncBackFree). Currently V7 is available in beta version via the appropriate section of the 2BrightSparks's User Forum:

<http://www.2brightsparks.com/bb/>

Please refer to the posts for important background information. The V7 forum section is also where any questions or comments should be posted about the beta version (so other beta-testers can review the questions and answers). Correspondence may be switched to the Support Area later (depending on the nature of the issue), but an initial post in the forum may let others know the subject has been raised.

Summary

In conclusion, the Media Transfer Protocol (MTP) is a class protocol for current and future portable media devices like portable media players and cellular smartphones. SyncBackPro/SE users can look forward to V7 as it will include MTP support.