

A Review of OTG (On-The-Go)

Aavash Chhetri

Submitted to: Anand Kumar Shah



An Instrumentation-II Homework Assignment

June 22, 2023



June 22, 2023

OTG (On-The-Go)

USB OTG is a USB 2.0 supplement that extends the functionality of existing USB devices and mobile phones by adding the host functionality for peripheral connections. The use of OTG ensures the device can switch back and forth as a host and device. USB has always used a host peripheral topology, PC being its host and other peripherals are relatively simpler devices, additional capabilities were introduced by OTG to enhance the USB technology:

- Typical smartphone or tablet to act as a USB host or USB peripheral
- Easy file transfer and data sharing using phone or tablet
- Easy device charging enabling host with higher battery capacity to charge the peripheral device.

Also, USB OTG was considered as a new standard for the connection of USB devices, connectors and cables with tiny form factor. As it could be used to transfer data without the use of PC, it gained excessive popularity in a relatively smaller period of time. It added host functionality to the devices with which previously merely a peripheral. Also, smaller amount of electricity was required for the USB OTG communication among the battery powered host which was also considered a major advantage of the USB OTG.

Advantages

- Peripheral Support
 - OTG enables the connection of a wide range of USB peripherals, such as flash drives, external hard drives, keyboards, mice, game controllers, and more.
 - This feature enhances the functionality and productivity of portable devices by expanding their capabilities beyond their built-in hardware.
- Plug-and-Play Functionality
 - OTG devices support plug-and-play functionality, allowing for seamless device recognition and setup.
 - When an OTG-enabled device is connected to a peripheral using an OTG cable, it automatically detects and configures the peripheral, eliminating the need for manual driver installations or additional software.
- File Transfer and Data Sharing
 - One of the primary benefits of OTG is its ability to facilitate easy file transfer and data sharing between devices.
 - Users can connect a USB flash drive or external storage device to their smartphone or tablet, quickly and conveniently accessing or transferring files without the need for an internet connection.
- Device Charging
 - OTG devices often support charging functionality, enabling the charging of other USB devices using the host device's battery.



June 22, 2023

- This feature is particularly useful when the host device has a larger battery capacity than the peripheral, allowing for on-the-go charging and power sharing.

In spite of these advantages, a device must have hardware compatible of OTG for supporting USB OTG technology. Most modern smartphones and tablets, particularly those running Android or iOS operating systems, offer OTG support. However, it is essential to verify the device's specifications and compatibility before using OTG. Also, the software and apps installed on the host device must also support OTG functionality. Many apps, such as file managers, media players, and productivity tools, now include OTG support, allowing for seamless integration and expanded functionalities.