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July 2020

## TO SWITCH BETWEEN TWO DIFFERENT HOST SYSTEMS BY ROTATING MONITOR

HP INC

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### Recommended Citation

INC, HP, "TO SWITCH BETWEEN TWO DIFFERENT HOST SYSTEMS BY ROTATING MONITOR", Technical Disclosure Commons, (July 09, 2020)  
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## Invention Title:

To Switch between Two Different Host Systems by Rotating Monitor.

## Abstract:

As some of monitor supports PBP (Picture by Picture) function. That makes user able to connect different host and display on the same monitor (Panel) at the same time, this feature is to share video only and doesn't support USB data transfer and power transfer. Sometimes we will have a change to switch back to one graphic source only in order to enlarge the videos.



Figure 1. A monitor supports PBP, to provide different host display at the same time.

## Problem Solved:

This disclosure describes a method to make user can switch the connection between different host systems without any OSD keys to control it.

## Prior Solutions:

Prior solution is to use OSD key switching graphic source for different systems.

## Descriptions:

There is a monitor base connects to a monitor which can support clockwise and counterclockwise rotating, Fig2. There is a scalar IC inside monitor, which able to get video from different host thru video cables, controls PBP function (if scalar supports) and provide final video to the panel, scalar can detect the angle change by using below example methods we can call them "angle sensor", "angle sensor" can be inside the monitor or in a monitor base, "angle sensor" requires to connect with scalar IC.

- a. Magnet + magnet sensor
- b. Video sensor
- c. Variable Resister.

Fig3 shows example topology to support scalar IC for angle detection.

Even if a monitor doesn't support PBP and supports two USB-C connection to host system for the video, data, power transfer. To rotate monitor and let scalar controls data(the data here is the data but not video, in common case should be USB)/power transfer path by "angle sensor" to different host based on like Fig 4.

Fig5, shows an example, if user rotate the monitor can switch video/(Optional for data & power) to desktop

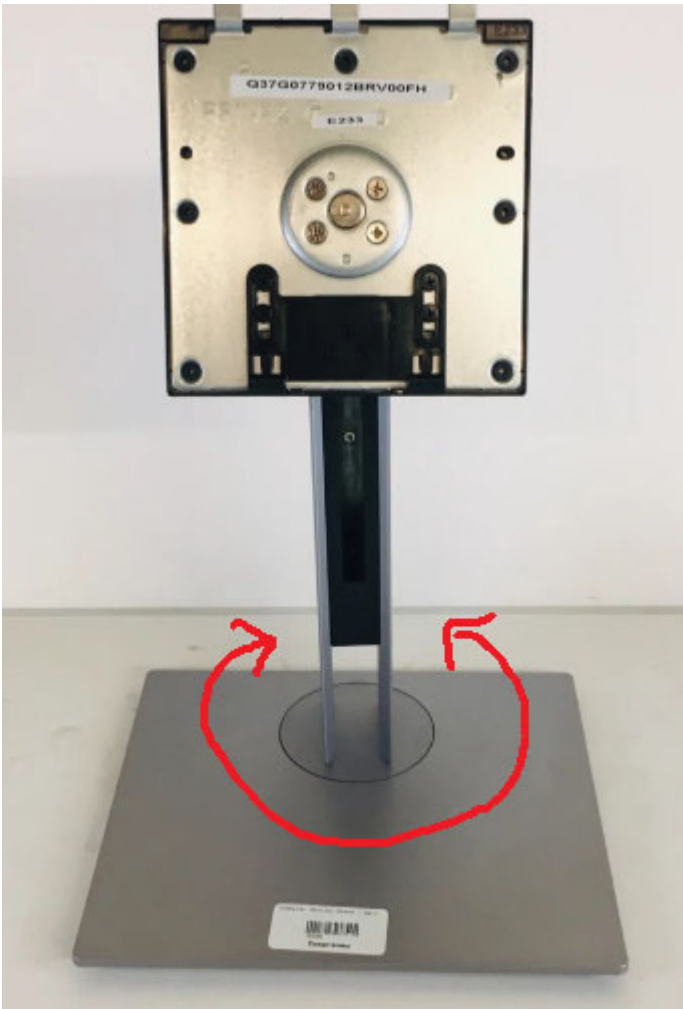


Figure 2. A rotatable monitor base.

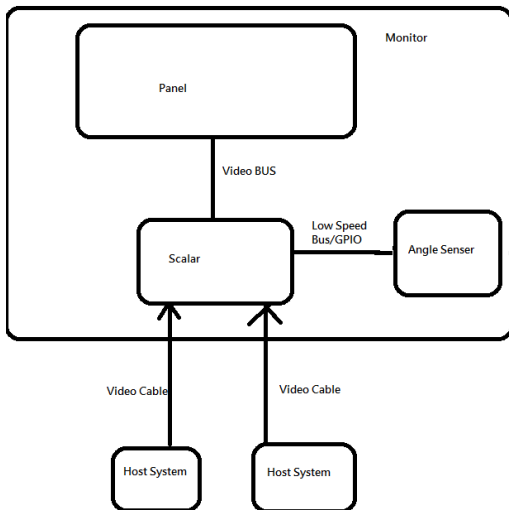


Figure 3. Example topology to use angle sensor to support angle detection by Scalar.

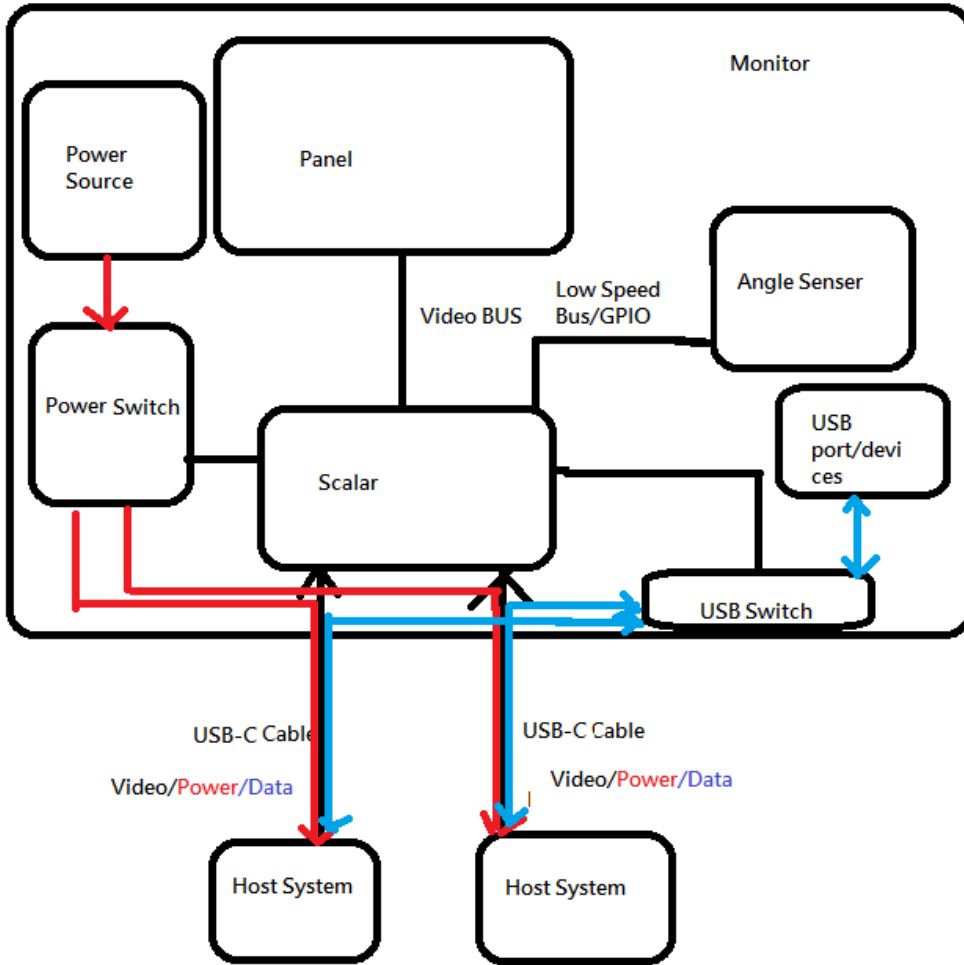


Figure 4. An example topology if using 2 of USB-C to connects to 2 of host system, by using angle sensor to let scalar know the angle change, also able to switch to different host by monitor base rotation.



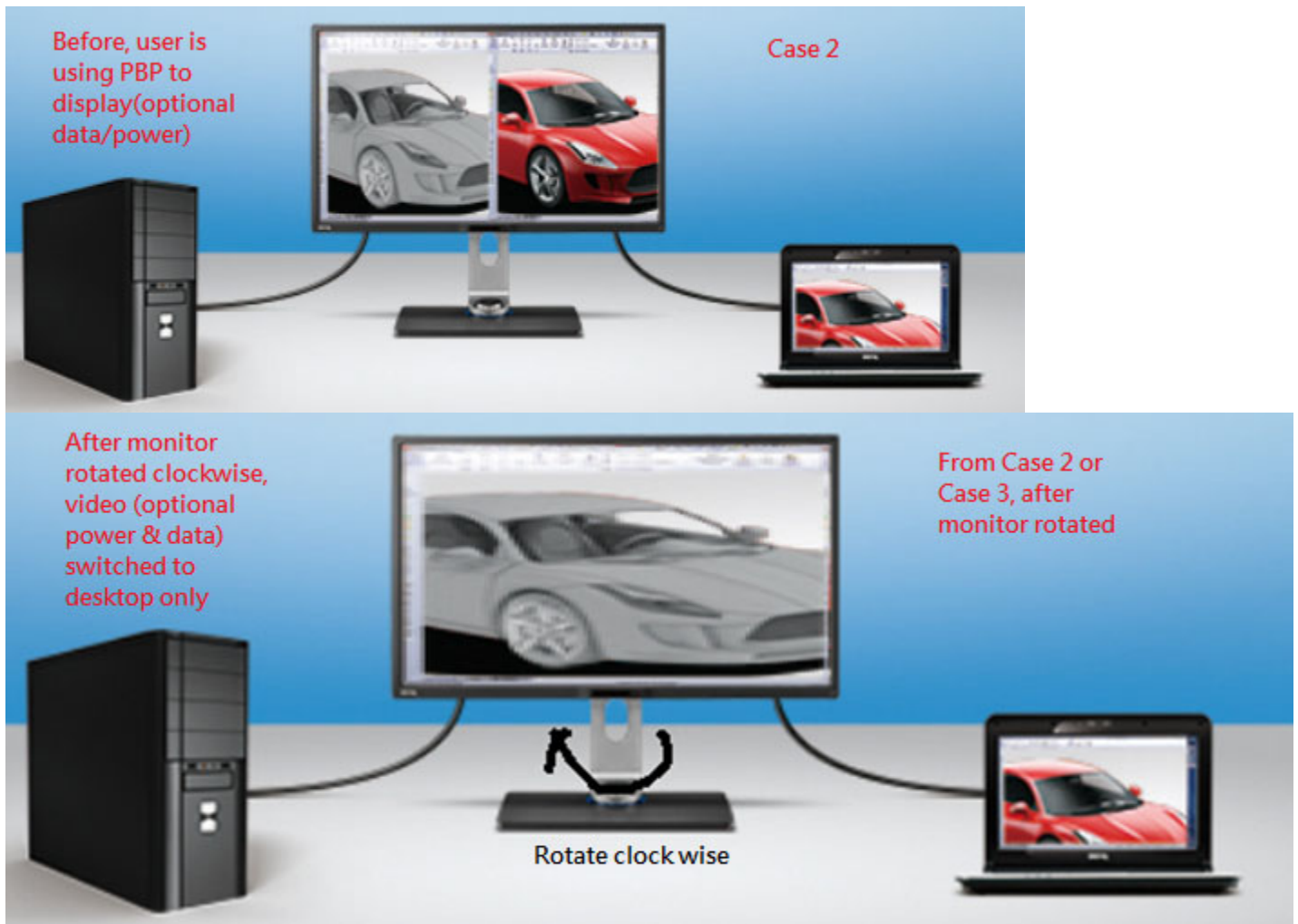


Figure 5. The example flow, monitor rotated for an angle with clockwise rotation, then video (Optional data or power deliver) switched to desktop from case 1, notebook display only or case 2, desktop and notebook sharing PBP

## Advantages:

This disclosure tells a method to let user able to switch video/data/power connection between different hosts by a monitor base rotation, or switch PBP display to only one host display to enlarge the videos very quickly, below example scenarios:

1. If user use PBP for a small conference in a meeting room, user can easy switch/enlarge video by rotating the monitor base
2. User wants to switch between 2 display hosts very quickly.
3. User wants to transfer data between two host systems, user can connect a storage device as a mid-point and switching between two different host very quickly, user don't need to break the connection or change the OSD just a simple rotate the monitor base

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