

These images are each composed of two images:

- **left(Color Image)** and **right(Depth Image)**.

The right one is the depth image resulting from the 3D reconstruction of the left one.

In the Depth Image, the color “**blue**” denotes the objects in the Color Image are **close** to the camera; the color “**white**” denotes the objects in the Color Image are **far** from the camera. In short, the bluer the object in the Depth Image is, the further away in the Color Image it is from the camera.

However, these Depth Images can be **inaccurate** that 1) The ordering of the depth is completely flipped 2) The Depth Image is not showing the depth at all 3) Depth Image is not consistent with Color Image 4) Depth image is severely affected by the sky element.

Our goal here is to have all the images classified into 5 categories:

- **Flip**
- **All-Blue**
- **Bad**
- **Sky-but-not-bad**
- **Good**

More specifically, we would define **Flip** as “The ordering of the depth is completely flipped”; **All-Blue** is “The Depth Image is not showing the depth at all”; **Bad** is “Depth Image is not consistent with its Color Image -- 1) Weird color change: while the objects in the Color Image are on the one plane(same depth) and the objects have no sudden color changes, the Depth Image has its corresponding part with large or sudden color changes(depth change) 2) The ordering of depth is partly reversed: while the object A in the Color Image are closer to the camera than object B, object B is bluer than object A in Depth Image”; **Sky-but-not-bad** is “The image was not classified as bad and the Color Image contains sky element(s)”; otherwise, the image is classified as **Good**, and it is defined as “The Depth Image is consistent with the Color Image even with the light effect or windows/water’s reflection effect”.

See more examples in the pdf.