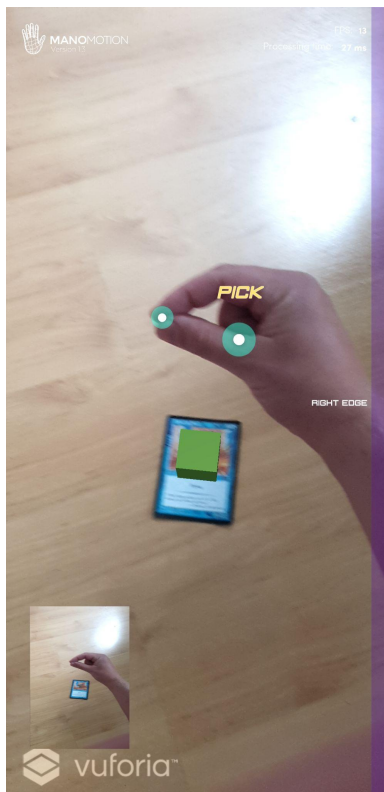


Using Vuforia with ManoMotion SDK

This implementation uses the ManoMotion SDK + AR Foundation

This will show the basic principle of how Vuforia can be used with manomotion SDK, it can be modified to better fit to your project.



Here is some information on how to receive the camera image using Vuforia.

<https://developer.vuforia.com/forum/general-discussion/how-access-camera-image-unity>

The captured texture needed to be flipped to align to the view.

Here is some information on how to flip the texture.

<https://forum.unity.com/threads/flipping-texture2d-image-within-unity.35974/>

Changes in InputManagerARFoundation

Texture format to RGB 24

Change addon to AddOn.DEFAULT

Don't run the UpdateFrame in the Update method.

Replace the arCameraBackground.material with a new material in the update method.

```
public void UpdateFrame(Material vuforiaMaterial)
{
    if (vuforiaMaterial == null)
    {
        Debug.LogError("vuforiaMaterial is NULL!");
        return;
    }

    Graphics.Blit(null, inputRenderTexture, vuforiaMaterial);

    if (currentFrame.texture.width != inputRenderTexture.width ||
        currentFrame.texture.height != inputRenderTexture.height ||
        currentFrame.texture == null)
    {
        DestroyImmediate(currentFrame.texture);
        currentFrame.texture = new Texture2D(inputRenderTexture.width,
        inputRenderTexture.height, textureFormat, false);

        Resources.UnloadUnusedAssets();
        GC.Collect();
    }
    currentFrame.texture.ReadPixels(new Rect(0, 0,
    inputRenderTexture.width, inputRenderTexture.height), 0, 0);
    currentFrame.pixels = currentFrame.texture.GetPixels32();

    if (OnFrameUpdated != null)
    {
        OnFrameUpdated(currentFrame);
    }
}
```

Add to the vuforia camera script.

Create a texture:

Raw image

Reference to the inputManager.

```
private Texture2D texture;
public RawImage rawImage;
public InputManagerArFoundation inputManager;

Void Start()
{
    texture = new Texture2D(Screen.width, Screen.height,
TextureFormat.RGB24, false);
```

When the pixels are set from the vuforia image, load them to the texture. I assigned them to a material and displayed it on a raw image to see so everything is correct. Then run the inputManager.UpdateFrame (this can also be done with events) with the material from the render texture and replace the arCameraBackground.material with the new material.

```
if (pixels != null && pixels.Length > 0)
{
    texture.Resize(image.Width, image.Height);
    texture.LoadRawTextureData(pixels);
    texture.Apply();

    FlipTextureVertical(texture);

    rawImage.texture = texture;
    rawImage.material.mainTexture = texture;

    inputManager.UpdateFrame(rawImage.material);
}
```