Notes: (see bottom for this version's notes)

from CodeMonkey: https://youtu.be/3yuBOB3VrCk?si=xboyeeVr-nvEVvUF

When CodeMonkey said to drag the Player from Hierarchy to the NetcodeForGameObjects folder in Assets, we don't have a NetcodeForGameObjects folder.

I dragged it inot a folder I called Prefabs and it did fine dragging to the Player Prefab, but it wouldn't drag into a new Network Prefab. One of the comments below suggested making a NetworkPrefabs list manually, which I did and dragged Player to it, where it renamed itself PlayerVariant. Who knows?

He likes to watch Console on an asset called QuantumConsole which I didn't install but could (at 12:13 in video)

but without that console have to go to users\weast\AppData\LocalLow\CompanyName\ProductName\Player.log

screen moded was fullscreen, but as windowed defaulted to 1920 x 1080 but we changed to 1024 x 768

Notice VSCode is depreciated now; went in the project to Preferences, External Tools and changed external script editor from "open by extension" to "Microsoft Visual Studio 2022"

triede: added package from gitURL for ClientNetworkTransform: Multiplayer Samples Utilities

https://github.com/Unity-Technologies/com.unity.multiplayer.samples.coop.git?path=/Packages/com.unity.multiplayer.samples.coop#main

https://github.com/Unity-Technologies/com.unity.multiplayer.samples.coop.git?path=/Packages/com.unity.multiplayer.samples.coop#main

kept getting "Error adding package https://github.com/Unity-Technologies/com.unity.multiplayer.samples.coop.git?path=/Packages/com.unity.multiplayer.samples.coop#main

tried adding line to manifest.jason

"com.unity.multiplayer.samples.coop": "https://github.com/Unity-Technologies/com.unity.multiplayer.samples.coop.git?path=/Packages/com.unity.multiplayer.samples.coop#main"

restarted unity and got error that no git engine found even though I have git desktop installed.

then installed git SCM from https://gitforwindows.org/

then added package and got message

A screenshot of a computer

Description automatically generated

A screenshot of a computer program

Description automatically generated

and warning A meta data file (.meta) exists but its folder 'Packages/com.unity.multiplayer.tools/MetricTestData/Runtime/TestData/Definitions' can't be found, and has been created. Empty directories cannot be stored in version control, so it's assumed that the meta data file is for an empty directory in version control. When moving or deleting folders outside of Unity, please ensure that the corresponding .meta file is moved or deleted along with it.

8/26/23 got the two players working in client and server successfully. Got to 22:38 on video where he starts making network variables…

btw, we are running two windows on the same computer now, as project settings are set to window instead of full screen. Will experiment with full screen on different machines, with using Oculus, and with networking over Internet, and with saving and retrieving from GitHub.

8/28/23 made repository on GitHub; all my other repositories say weastridge/<ProjectName> but Github desktop put mine at eastridges/CodeMonkeyNGO

Cloned it to Spectrum; files did download… then opened with Unity Hub, it started downloading the files referenced by the project, then gave error "No 'git' executable was found. ugh. I said continue… It downloaded more, then said an error occurred while resolving packages, and machine froze, requiring reboot., got blue screen your device ran into a problem and needs to restart…

It rebooted, and I loaded it again; this time opened; I had to click on scenes in Assets for it to show up in Hierarchy, then screen froze again. Ugh. Blue screen again, restarted.

This time I clicked project properties to see if VS 2022 was listed as the c# editor and got message it was waiting on mscor.dll - Tried opening VS Studio 2022 and it crashed again

This time I opened VS 2022 first and it said there was an update, so I updated that…

locally , I changed 127.0.0.1 to machine ip which is 10.0.0.16 right now. Build and run works for host, but not for client. Opened firewall for port 7777; also checked box allow remote connections in Network Manager, Unity Transport. That works (local machine two instances)

Then trying to run on Oculus - XR plugin manager downloaded, and downloaded components for Android (in project settings)

Library\Bee\artifacts\Android\AsyncPluginsFromLinker: Burst internal compiler error: Burst.Compiler.IL.Aot.AotLinkerException: Burst requires the Android NDK to be correctly installed (it can be installed via the unity installer add component) in order to build a standalone player for Android with ARMV7A\_NEON32

UnityEditor.BuildPlayerWindow:BuildPlayerAndRun ()

But in Unity Hub, when I go to add modules it says Android NDK is already installed, as well as openJDK

. ugh - just loaded program again and it worked - shows a 2d screen in Oculus and of course no controls are linked, but does work. Will go back to windows for multiplayer experiments.

8/29/2023 Tried to make 3d view in Oculus but when I check the Game Object>XR>, Convert main camera to XRRig I got a message that it couldn't because camera wasn't in root of hierarchy. (see below- needs to tick the box saying Main Camera in properties)

Now I can't get it to show me the capsule when I click host. Ugh. Had to reposition the camera; but I don't know how to assign Oculus input to make capsules move. Going back to Windows

Back to running program on the other computer, Spectrum 2, it still freezes and crashes Windows. Went to Unity Hub and clicked the gear on the latest Unity install, and chose Add Modules, and chose the two android related modules. Bummer, it still crashes…

After several quick starts with saves before crashes, then checking project and player settings and saving before crashing, I got it to run once and hopefully it will keep running

Successfully got one client on Spectrum 2 and two clients on new computer to run together, each moving their own players.

Next: try to get GitHub to work so Sam can run it, and also try running it through the Internet instead of local network.

If I do get GitHub to work remind people to add modules (using Unity Hub, click on Installs, then the current vesion of Unity, then the gear, "add modules" and add OpenJDK and Android SDK and NDK Tools, and preferably BEFORE trying to load the program in Unity.

2023 August 31 -

cloned project to \stuff\CodeMonkeyNGO and changed it to Quest 2 to try work on controller input

I did get the program to load in Quest 2 and was able to click on the Host button to make the capsule show up, AND was able to run it on Quest 2 unplugged and it connected as Client to the Windows version running on the computer! But still couldn't get the joystick input.

found a tag for "Main Camera" in camera properties, allows VR to update to VR camera

Unfortunately, even though that does make an immersive experience, it makes the buttons to start the host or client disappear; tried to go back to plain camera. It just stays immersive, so now I can't click the buttons to start the client even. Ugh.

Well, Sam said just to make an empty object, give it a name, add code, an in the code make a public variable

public InputReader MyInputReader; or something

then look at that object's properties, the public variable will say it's empty. Then drag InputReader from the Hierarchy to that slot and it will assign it; Then you can use it in that object's code

Trouble is the objects that will be invoked only when players join can't be pre-assigned. He said :

inputs = GameObjects.FindObjectWithTag(whateverTheTagIs). trouble is InputReader isn't a game object; It's a MonoBehavior. So I can start the Host now using the code hooked to the plane I created, but the Player code has errors, and therefore the capsule isn't constructed right.

later, I just copied some of the code from InputReader into the PlayerNetwork code script and it works. I made the capsule object move with the X key. There's still an error somewhere because the capsule looks like a crumpled paper wad but it connects as client and both capsules look good on the Host screen on Windows. And they both move appropriately on both environments!

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starting over because I can't get the capsule to stop looking like a crumpled piece of paper.

Make project

Set for Android

Set Project Settings, XR Plugin Management to Oculus

Window, Package Manager, (Unity Registry) Netcode for Game Objects

Create empty object, call it NetworkManager, reset the transform?; Add Component, Netcode?, Network Manager.

Then Package Manager, Multiplayer Tools

Create empty object, call it Player, reset the transform;

Right click Player and Create a capsule, offset Y by one

Player inspector, add Component, Network Object

Drag the Player from the Hierchy into the project assets in the scene; Then drag that Player from Assets , scene into NetworkPrefab in Network Manager Inspector to make it a prefab. Then when the player connects, it will spawn a prefab for each player. Then remove Player from the Scene hierarchy.

(He also says to drag player from Assets into the NetworkPrefabs list in NetworkManager Inspector, but when I try to the cursor stays circle/slash (no)

A comment under his Youtube suggested creating a NetworkPrefabsList to project. Right click assets folder in the project tab and click, Create -> Netcode (was at top of list) -> Network Prefabs List. That did make a list in the Assets folder but it still didn't let me drag player into it. However, I doubleclicked it and got in the inspector a button that said Create, and I added an item; Still wouldn't let me drag to it but I clicked the override box and then it did let me drag to it. It still says none for the overriding prefab - I'll see if I have to drag it there too or not.)

Push play (it will ask us to add the scene to the build list - yes) - it shows blank til you click Start Host in the Network Manager inspector.

I added a plane called floor for perspective.

Right click Hierchy, create-> UI -> Canvas

Inside Canvas, create empty object and call it Network Manager UI

He says put camera in 2d and zoom out to see the NetworkManagerUI, but I just created the ButtonMesh buttons inside Canvas in the middle and incremented their Y positions

The buttons don't show up when I run in Quest. Might try going to Windowed instead of full screen. But the version in c:\stuff\CodeMonkeyNGO won't go back to windowed and I don't know if this will or not

Can't get it go go windowed

Interesting, the only one I can get windowed is the original source\CodeMonkeyNGO file, when I make it windowed player in Android, and Build and Run it comes as window and the hand device can click Host or Client and it works either way. Of course it can't move itself but that's a starting point - I could make a copy of that folder and work on it some more to try to get Sam's code to work.

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these notes are from the CodeMonkeyNGOForQuest2 version in c:\stuff\Quest2Controllers

9/14/23

changed platform to Android, and made Oculus the device

build and run; shows in Quest2 and the capsule dances around on its own.

I had already made InputManager a network object, but now I edited InputReader.cs to say using Unity.Netcode and made the class inherit from NetworkBehaviour instead of MonoBehaviour.

Sounds like a great idea, but it still dances around. Shucks.

Next edited PlayerNetwork to make Inputs public instead of internal, and then Inputs shows up on the inspector for Player. I thought that would be a great idea and I could drag InputManager into Inputs to assign it but it won't accept the drag.

Of course, we assign InputManager's InputReader to Inputs in PlayerNetwork's Start() method, but now move that assignment to the Update() method. Still dances.

InputMangager Network Object was unchecked. I checked it. No change, still dances

Project settings, XRPlugin Management, check Oculus (already had initialize on setup) -> Ugh, that made it go to full screen and I don't have the Host, Client buttons to click. I unchecked Oculus and it went back to windowed (which was already selected in settings) and the capsule of course dances again.

I suppose the next thing to do is to convert main camera to XR Rig, but I'm afraid that will make the Host, Client buttons go away and won't be able to get them back.

Added a square. Interestingly, it shows up in the headset, but not in the computer when computer is host. Might use that for some debugging.

So, made script CubeController for it, and put reference to INputReader. Then dragged hierarchy InputManager to the INputs field of Cube and it took. It references left controller instead of right, to move the block. -> It just moves autmoatically just like the capsule does; doesn't recognize the controller input.

I may have to make buttons I can see within the area so I can use XRRig since that seems to be what made TestingSamsInputManager work.

Added UI Button to NetworkManagerUI, added code to NetworkManagerUI.cs to add listener for it, and located it at 0,0 so can see it. Dragged it from hierarchy to NetworkManagerUI Inspector

Now I can convert main camera to XRRig and see if that helps the controllers work, as per TestingSamsInputManager project.... NO good. Got error "Your Main Camera is not at the root of your hierarchy. We are unable to automatically convert your scene. Please see the documentation on how to upgrade your scene.

Oh, well. Went back to Project Settings, XR Plugin Management and clicked Oculus. -> Well, isn't that interesting? As before, it made the project show XR full screen even though the settings said Windowed, but the Canvas buttons don't show up so I can't click StartHost. But the controllers DO WORK! The cube moves by the right hand joystick! So, now I just need to take those Canvas buttons off and make in input method that will startHost or startClient and we should be in business!!

PM - tried making a wall to put buttons(mesh) on but couldn't figure out how to rotate my view of the scene to see the buttons.

Ok, Made a reference to InputReader.cs in the code of NetworkManagerUI.cs and dragged InputManager to the Inspector of NetworkManagerUI at Inputs. It took it. Now try starting host if A button pressed. made method Update() in NetworkManagerUI to start host if buttonA or client if ButtonB. -> Well, it worked, sort of. It ruined the shape of the capsule -(looks like crumpled paper or sticks) but it DOES work. Now the Player capsule does in fact get input from the joystick and move accordingly, as does the cube simultaneously.

I'm sure there's an error in the Update() logic somewhere that messes up the capsule, but it's nice at least to see it. Tried bypassing the InputReader code in PlayerNetwork, and that made the player move the square dance, but didn't give it it's shape back.