Table of Contents

Comparing AMD GPU Moonlight+Sunshine Streaming Using H264 AVC vs H265 HEVC 2

Comparing AMD GPU Moonlight+Sunshine Streaming Using H264 AVC vs H265 HEVC

To my eyes, in certain conditions, H.264 looks better than H.265 when running Sunshine and Moonlight from my desktop to laptop.

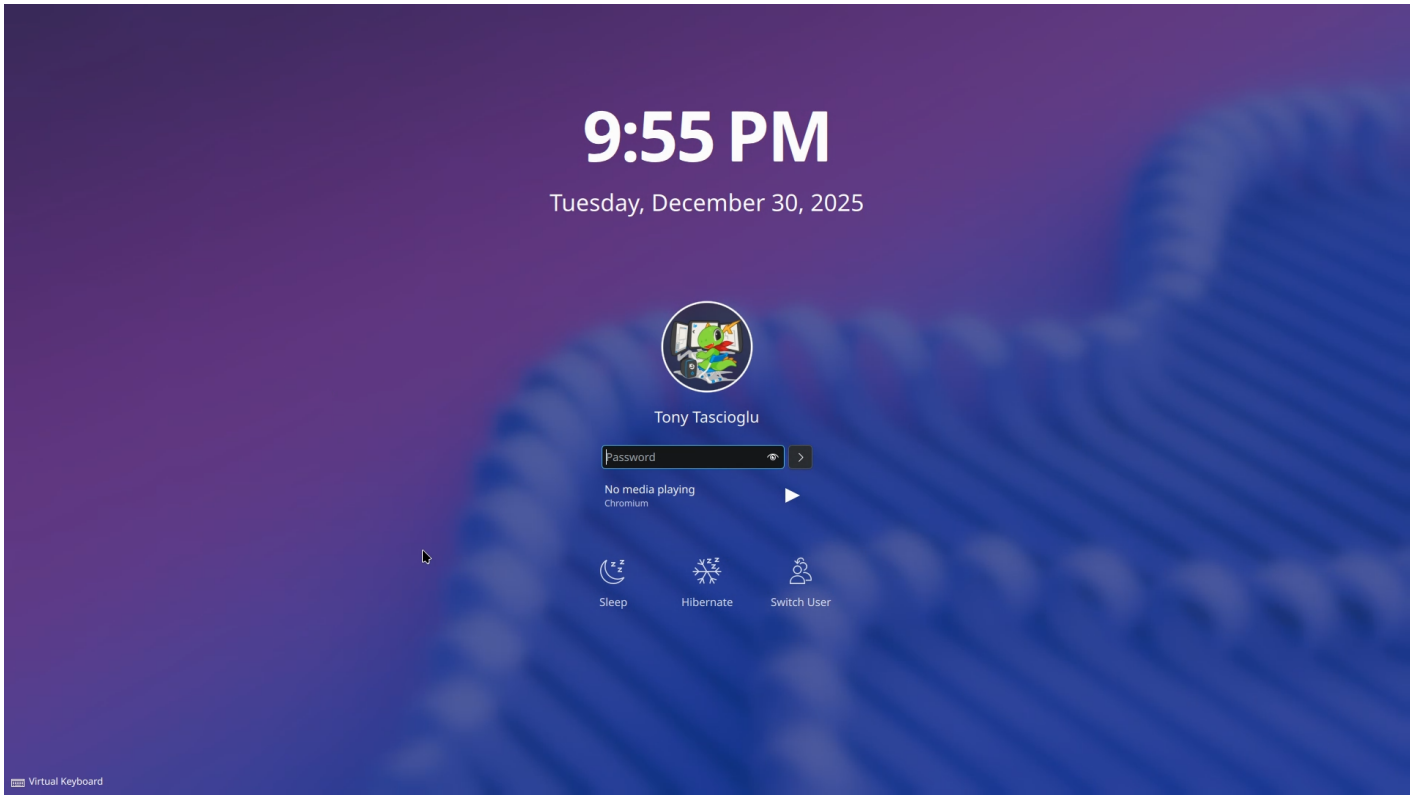
Desktop is running a R9 7900X with RX 6700 XT. Laptop is a R5 5650U.

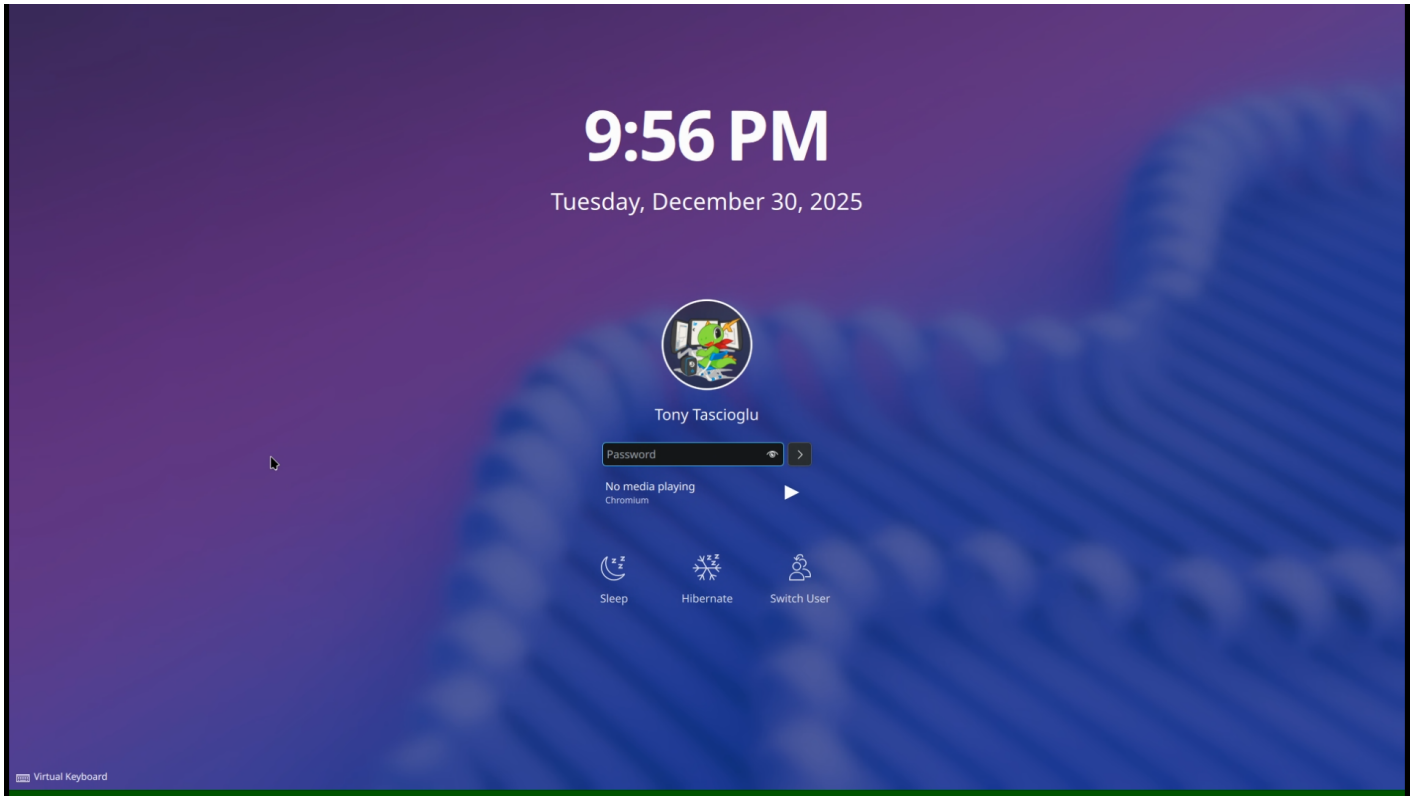
H@VC should almost always outperform H264, right? Except to my eyes, sometimes, H264 looks better…

Found two causes:

a) h264 remains sharper (but with blocking artifacts), whereas h265 is overall higher quality but blurrier thanks to deblocking

b) look at this same image, captured at 1920×1080, in h264 and hevc of streaming my computer:





Look at the text! (I know this is a poor example, I should have put more 1px wide lines and text)

Notice how the 265 has the green bar at the bottom?

h264 is sending real 1920×1080, so it is displayed with no scaling hevc for some reason has the green bar on the bottom. this messes up the aspect ratio, and thus the whole image is scaled, resulting in all 1px lines and text being blurry

that's contributing to why I keep thinking hevc is blurrier - because it is. you can't have crisp text on bilinear scaled content

so wtf is the green bar? is this like the AMD 1920×1082 issue on AV1? where the hw encoder only outputs blocks of certain sizes?

Both are running 1080p60 at 4 Mbit/s. Low, but fine for my non-gaming use.