Interfacing of a CD transport to an MU1

First it needs to be noted that there are receiving electronics on the MU1's digital inputs … in this case the Coax S/PDIF input … and that forward the incoming signal from the CD Transport to the MU1's FPGA.

The FPGA has "AES receiver" code running that captures and decodes the signal into Data and Clock.

The Data is then put into a buffer, and when the user selects this source, the MU1 starts to slave to its clock. This means that the read-out clock of that buffer is very slowly pulled towards the average frequency of the captured clock. Short term variations of that input clock are ignored, hence the de-jittering.

This topology with a buffer is called an 'FLL' or Frequency-Locked Loop. So just the average frequency is the same, not the phase like in a PLL. In hifi the short latency of a PLL is of no use, and an FLL then offers optimal performance, like immediate sound as soon as the source is selected.

After the buffer, the data is sent to the upsampler, and then to the AES transmitter coder of the FPGA, and finally to the AES reclocking circuitry that removes all jitter that the FPGA itself adds.

This treatment is identical to the processing that a Roon stream gets. That means there is no fundamental sonic difference between a Roon stream, a cheap CD transport and an expensive CD transport, as long as the data is the same (ie when playing a properly ripped CD from Roon).

Of course, the connected DAC can still be influenced by the difference in power supply voltage / grounding noise from the CD transport. But this interference goes around the MU1 and Grimm cannot solve that.