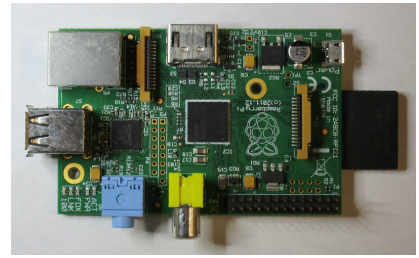
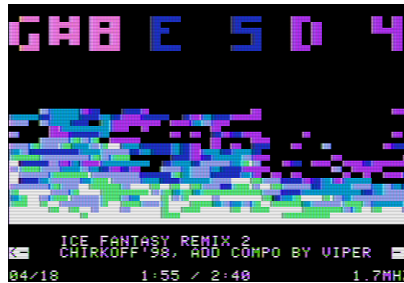


ECE Grad Seminar Talk – All are Welcome

Playing Music on Tiny Computers – Decoding PT3 Tracker files on the Apple II and Raspberry Pi

ECE Assoc. Professor Vince Weaver

Friday 22 November 2019 – 2pm – 228 Barrows Hall



Computer games and demos are more engaging when they provide background music. On small systems with limited resources this can be a challenge, as uncompressed full quality 44kHz 16-bit audio can take up many megabytes per minute of memory space. It is possible to get high quality music on memory-constrained systems by using certain file formats designed for 1980s-era computers. These file formats are often poorly documented, and players are often written in obscure languages (in our case Pascal and Russian-commented z80 assembly language).

In this talk I will describe the conversion of some old code to be able to run on modern C, making it available on all modern platforms. This includes common embedded systems such as the Raspberry Pi and STM32L boards used in UMaine ECE courses. This C code was then converted to 6502 assembly language, as found in the Apple II series of computer dating back to 1977. This code was then used in various game projects, as well as some award-winning demoscene demos.

