Subject: Re: Gryphon 68030
Posted by lynchaj on Fri, 10 Jun 2016 18:43:05 GMT
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Hi

My plan is to capture the original design in KiCAD first and use it as a basis for further work because that's what is available right now and is necessary work regardless. There are many issues with the translation from Proteus to KiCAD and a lot of opportunities for problems to be introduced. Once we know there is a solid design foundation, the Gryphon schematic can be further decomposed into small modular subsystems much like the hierarchical schematic of the 6x0x-ATX-6U board. We need a KiCAD schematic that can reasonably pass ERC first though as a basis for modification.

IMO, there is a lot of IO on the Gryphon that can be exported off the main PCB onto IO subsystem board(s). Also opportunities for reusing the DRAM logic from the KISS-68030 and/or consolidating some off the glue logic & PALs into a CPLD for a more integrated "CPU and memory" board. However without some basis of a design in KiCAD that is all theoretical. Since the PCB version 1.1 schematic is available here and now that's where I started.

I think the most important thing we can do for the Gryphon is to release it from the trap of proprietary EDA of Proteus and get a solid verified design in KiCAD so others can more directly participate. It almost does not matter where we start with that as long as the cycle of prototype PCBs can begin somewhere. As with other boards I helped create it is not unusual for the design to evolve significantly over time introducing major changes. We can do the same with the Gryphon. I am using the technical data we have now to capture the design and it can be modified once it is decomposed into smaller schematic modules. For instance the first page of the schematic 1.1 could easily be broken down into a CPU+coprocessor, Flash+SRAM, and controller+DRAM subsystem pages if not even further.

Thanks

Andrew Lynch