The first reason I chose the eMachines e627 for my subject in this research was that I was diagnosing its issues for my dad nearing the due date. I didn't want to even to chance the wrecking of a working piece of technology. That would cause extra technological waste in a time that we already have so much of it.

When I finally diagnosed the issue, I had went to looking at the chips. The vast amount made the analysis of all them made it impossible to fit in the word limit, even if I purely wrote on the chips. I will list the most important ones and their jobs.

The CPU in the system is a single core AMD Athlon 64 TF-20 at 1.6 GHz. This is the main processing unit that interprets the binary to thing we can understand. It includes 512KB of L2 cache which allows it to store more important processes in an area faster to access. The GPU is a AMD Radeon HD 3200. This is based off the desktop HD 2400 and includes the UVD video engine to decode HD video. THis meaning it is based on the 55 NM transistor. It shares RAM with the Cpu and maxes at 512MB of usage of it. The computer has 4GB of RAM and uses 2 Dimms of 2GB. The installed RAM is branded by Samsung. Each of the chips on the dims can hold 128MB

Those were all the main components. Those I understood fairly well the next few were harder to find information on and yet just as important. The AMD southbridge is the first chip that sticks out when you open the laptop. This is part of the chipset of which there is a north and southbridge. The south does less demanding tasks and acts as a middleman between the CPU and the USBs, Ethernet controller, and others of the I/O port or wireless technology variety. The northbridge is communication between the CPU with the GPU, RAM, and hard drives, and ROM chips including the BIOS. The NS0013CF was interesting to find as I had never realized a LAN port had a controller. This helps the encoding of packets sent by the PC, the MAC address, and holds your IP address. The ENE K69269 is the Cmos chip or BIOS chip. It holds the firmware of the BIOS and keeps the settings.

This project, though cut short on explanation, was eye opening and interesting to do the research for. I am currently in a hardware class in school and enjoyed learning a bit more on the topics we had been looking at. I still don't have the PC fully working but I do plan on focusing on it after finals week and should be able to fix it. I am glad I had an opportunity to do this experiment and learn more about a passion of mine. That passion being one for the microprocessor.

CPU
RAM
GPU
CMOS Chip
Southbridge
Northbridge
LAN Controller
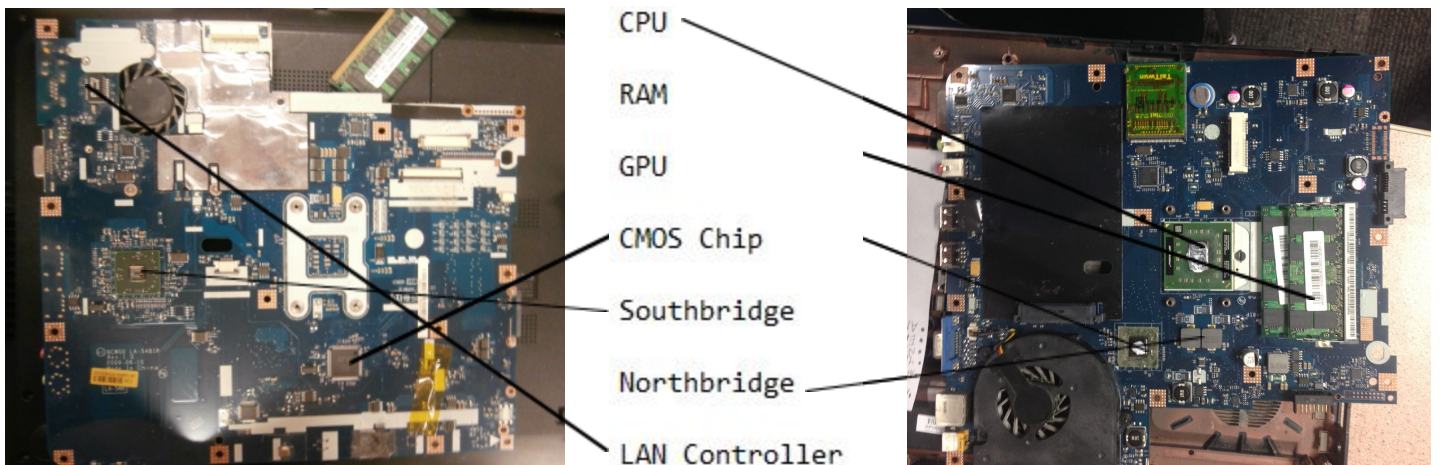
This is a picture previous to the full deconstruction.

This is a picture of a chip I struggled to find anything
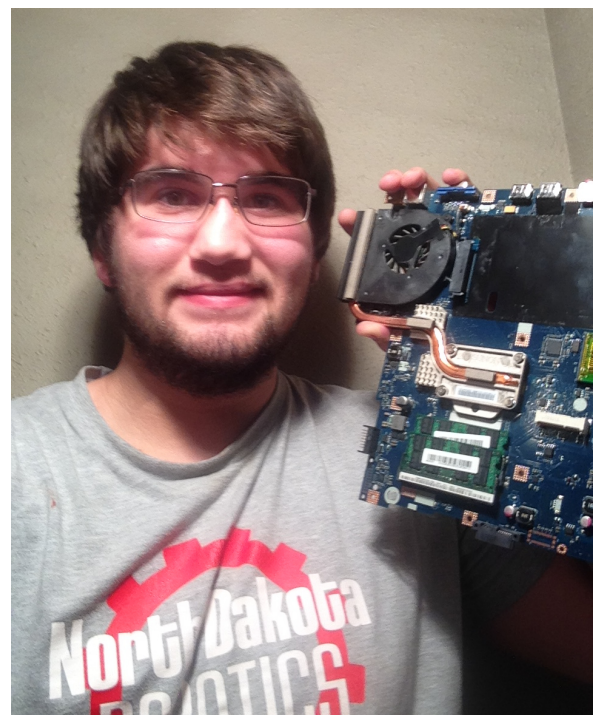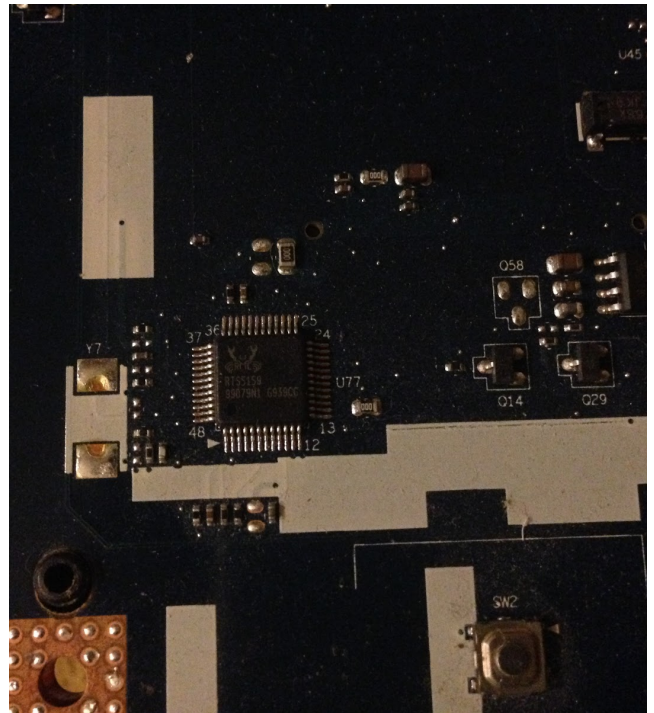
This is Evan with the motherboard