

# *VEX Robotics Electronic Online Challenge*

## *Sponsored by Texas Instruments*

For the challenge, we selected a Windows XP Dell Dimension 3000 desktop computer. We chose this device because we figured that it would be fun and entertaining to open up something old as well as being interesting to see how much the human race has technologically advanced by comparing some of the components of this old computer to newer and more advanced ones.

When we opened up the computer, we found 7 main parts or components, none of which were parts that belonged to “Texas Instruments” components.



CPU Cooler



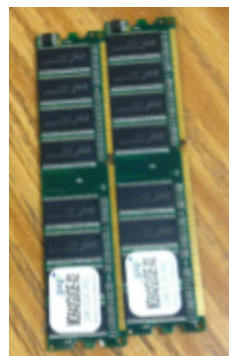
Network Drive



Hard Drive



DVD/CD Drive



RAM Sticks



Power Supply

Motherboard

**Each of the parts (shown above) play an extremely important role on the computer.**

The CPU Cooler Fan cools the CPU so that it doesn't overheat and break the system.

Source: <http://www.nmbtc.com/fans/cpu-cooling-fan/>

The Network Card is a PCI (Peripheral Component Interconnect) card that serves the purpose of giving the computer internet access by a phone line.

Source: <https://www.techopedia.com/definition/25901/modem-card>

The DVD/CD drive is the component in the computer that gives it access to read DVD/CDs for games, video, music, and other purposes.

The RAM (Random Access Memory) sticks is the memory that the computer uses to store memory temporarily and runs programs that are currently in the foreground, as well as the background, such as an Operating System without the computer overloading on programs.

Source: <https://www.lifewire.com/what-is-random-access-memory-ram-2618159>

The Hard Drive provides storage for all your files, programs, and computer preferences.

Source: <https://www.seagate.com/do-more/everything-you-wanted-to-know-about-hard-drives-master-dm/>

The Power Supply provides power for all the components. It can convert AC to DC so the computer can have the power necessary to run it. It also dispenses DC voltage to the motherboard, adapters, and peripheral devices. This makes the component the most important part of a computer.

Source: <http://www.pearsonitcertification.com/articles/article.aspx?p=2024310&seqNum=17>

The Motherboard is a circuit board that connects all of the computer components and allows the parts like the CPU and RAM to communicate with each other.

Source: <https://www.lifewire.com/motherboards-system-boards-and-mainboards-2618154>

## Conclusion

As we worked through the project and studied each of the components, we learned fairly important objectives regarding the old technology.

One lesson we learned from the experiment is that the computer uses plenty of components necessary to operate the computer. Without the motherboard, the power supply, the CPU cooler, the network drive, the hard drive, the RAM, and the DVD/CD drive, the computer would be impossible to use.

Another lesson we learned is that the human race has technologically advanced greatly. The Windows XP we disassembled had very aged parts. One example we found was the fact that

the computer had 2 gigabytes of RAM, but normal laptops at Windows 7 - 10 most likely have 4 at minimum. Considering the original \$636 price tag it had, this computer would've been a very common purchase back in 2005. So far, we have much more reliable/useful PCs and this computer is mostly likely on sale for around \$10 or less online or possibly in thrift stores. dollars today. This shows that technology has been getting better and better at a very reasonable price.