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EE 394

Ethics essay

Ethics are an often-overlooked portion of engineering. However, engineers often design powerful systems that if abused could have disastrous consequences. Often engineers are in a tight spot with projects that are ethically gray. Have one's own code of ethics and following prevents an engineer from entering any gray area they may feel uncomfortable with or have a negative impact.

Recently, I have accepted an offer for a co-op at Rockwell Collins. Initially this was an easy decision as it is a wonderful experience with a plethora of benefits, but it put a strain on my ethics. Rockwell Collins is a government defense contractor that develops equipment for the military. This means my work could be used in combat situations and therefore somewhat complicit in any loss of life. This ethical dilemma has led me to not want to be in a fulltime position at any government defense or weapons manufacturing company. This will prevent my pacifist values from being compromised by my work. To come to this conclusion, I had to evaluate how my work would impact the world, and if that impact would be positive or negative. Before an engineer accepts or applies for a position he/she needs to research the company to be sure that they don't engage in anything that would compromise the engineer's ethics.

This is like the case my group discussed in 394 of the wi-fi security protocol WPA2 used by the clear majority of internet traffic being discovered by Belgian researchers to be easy to break through and extremely vulnerable to hacking. The Belgian researchers who discovered the flaw first alerted the organizations responsible for developing and maintaining Wi-fi protocols, before sending out a memo to the media. This gave the organization time to prepare a statement and begin to fix the problem. My group and I believed that this was the most ethical course of action because this gave the company time to repair the damage, and allowed the public to be wary of their actions online thus minimizing damage. The manner of which this case was handled displayed great Integrity, honesty and responsibility. As soon as the Belgian researches found the vulnerability they had a responsibly to inform the public which they did. They had the integrity not the exploit the vulnerability for themselves or sell the information to hackers. They came forward in an honest manner very eager to help find a solution that would minimize any damage for all parties involved.

All engineers encounter and test their ethics within their careers. Engineers need to be prepared for these moments.