

Chapter one is about a case study. Two planes hit each other near Uberlingen, Germany, killing all 71 persons on both planes.

The person who monitoring the situation of the flight was not realized that these two flights were on the same level and when these two fights were too close to get out the way of each other, he warned them that one of them should raise its height, and another should decrease its height. But only one flight obeyed his instruction. So at the end, they ran foul of each other.

There are some points that matters to this disaster:

1. "Two air traffic controllers were working that night, one was on break at the time."
2. "the screens were located a meter apart from one another, forcing Nielsen(the monitor)'s attention to be divided between them"
3. "the main telephone system used to communicate with nearby air- ports in Germany was —unbeknownst to Nielsen—down for maintenance, and the backup telephone system was not working as a result of software failure."
4. "On the night of the collision, this system(an automated alarm system that alerts controllers 2 min before any potential collision) was down."

According to these points, there comes out an impressive question: which point is the key point that causes this problem?

In fact, it's not a person or a system that causes this accident, it's the interact of these complex reasons.

WHAT IS ETHICS?

1. "ethics concerns human beings, although significant discussion exists about whether or not that should be its limit. "
2. "ethics is concerne with potential effects on others."
3. "ethics is framed in terms of actions"

WHY ETHICS FOR ENGINEERS?

Pre-reason: "*Laws help to establish such rules, and they serve as a foundation for the enforcement of these rules.*"

1. "engineers are singularly important to the world."

2. "engineers are, in fact, different from the general public"
3. "several specific ethical obligations for engineers are derived from the nature of engineering itself."
4. "the positions of engineers entail not only responsibilities but also rights."