

Reality, Robustness and Murphy's Law

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Abstract

In this paper, the author reviews the strategic approaches to the verification/checking of the construction process for structural safety and performance. The notorious problem with this is that it must be enacted with limited resources in terms of expenditure, time and personnel, while not producing any tangible return. Originally checking and verification were thought to be the essence of quality assurance, through uncovering and correcting faults and errors. The concept of quality assurance has, however been derailed and is now mostly a documentation producing exercise without any real effect on faultiness.

Faults and flaws in an industrial product nearly always originate from human error, through lack of attention, communication, competence etc. true to the essence of Murphy's law: If something can go wrong, it will.

The optimization of the checking process for maximum effect in terms of risk reduction and performance must be oriented following such considerations as:

- Error proneness
- Timing
- Magnitude of Risk
- Available means

Since the checking is organized and carried out by humans, the competence of the people involved becomes an important additional parameter relating to education as well as personal qualifications such as dedication, attention and circumspection.

In the paper, some of these parameters are presented and discussed, mostly based on common sense, in the almost complete absence of scientific data relating to the generation and correction of human error which is at the origin of most or all losses and mishaps.

References

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