

Social and Legal Concerns

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Adrian Drury

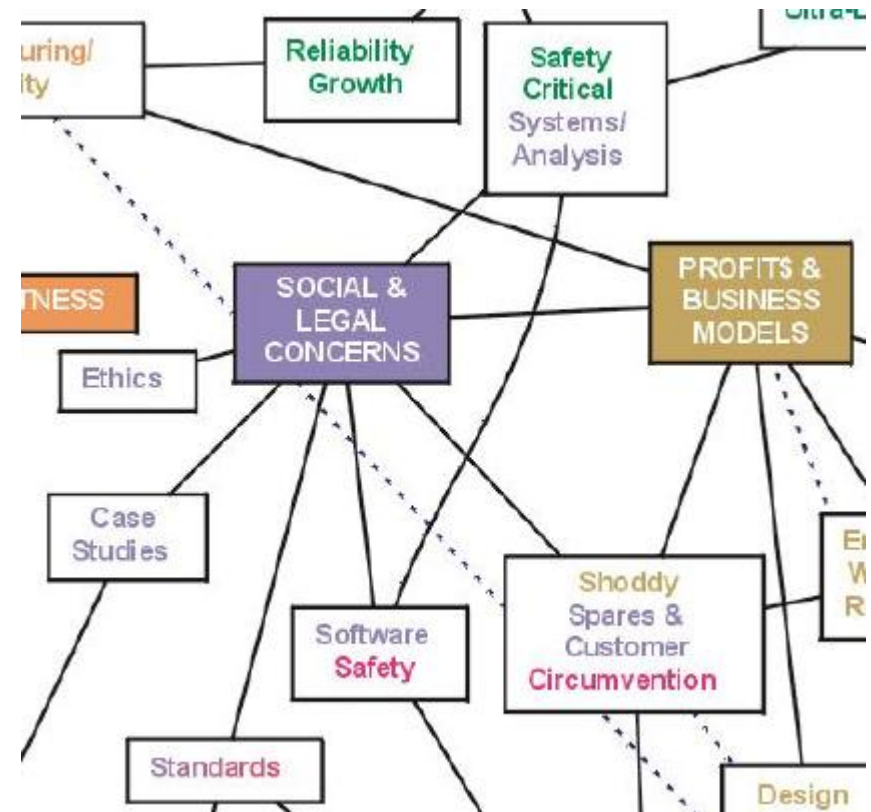
Introduction

- Connections
- Social Concerns
- Legal Issues
- Conclusion, Papers

Motivation - embedded systems are ubiquitous and failure can lead to loss of property or life.

Connections to Other Topics

- Safety Critical Systems
- Profits and Business Models
- Shoddy Spares and Customer Circumvention
- Software Safety
- Standards
- Case Studies
- Ethics



Social Concerns

- Relationship to society
- Social Responsibility - integral part of engineering, not doing harm but good.
- Closely tied to ethics
- Ethics affect what choices you'll make with respect to societal benefit.

Social Concerns

- Cost of a life in different industries
- Strongly affected by public perception
- How much to spend to make it safer?
- How much to spend to cushion litigation?
- Is it worth designing if it will cost that much to make it “safe?”

Legal Concerns

- Unintended use may be an issue - what if your system is used in a safety-critical environment it wasn't originally designed for?
- Failure in extreme conditions - how much is that to be expected?
- What's reasonable effort to guard against failure?
- What did you do to prove correctness?
- What can you prove you did?

Legal Concerns

- Stay out of court in the first place!
- Liability - what's the limit?
- Contracts - what exactly is covered?
- Group Decisions - who's responsible?
- Lawsuits - who pays if there's an award?
- Lawsuits - sometimes an effective way to force change.

Conclusions

- Engineers have a social responsibility.
 - Affected by personal and “societal” ethics.
- Engineers have legal responsibilities.
 - The “hard” side of social responsibility.
- Financial liability is not necessarily correlated with culpability.

Papers

- Computer Risks and Some Legal Consequences. Lloyd, Ian J. and Simpson, Moira. Safety and Reliability of Software Based Systems. Twelfth Annual CSR Workshop, Bruges 12-15 September 1995. pp 378-388.
Nasty scenario, but increasingly likely to happen
- Engineers and Social Responsibility: An Obligation to Do Good. Cohen, Stephen and Grace, Damian. IEEE Technology and Society Magazine. Fall 1994. Pp 12-19.
A slight crossover into ethics

