

KF4011 Systems Analysis

Professionalism and information security

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Last time...

... talking about the many problems with projects
With a focus on information security

- Senior responsible owners
- Project management, choice of methods, iteration and prototyping
- Consultation, especially end-users
- UX and (end-user) work processes
- GDPR, DPIAs
- Requirements capture (and change)
- Authentication
- Decommissioning
- Cloud
- Resource limits
- Bugs

Is computing a profession?

- Are we engineers?
- Or scientists?
- Do we just “bodge” it until it “sort-of” works?
- Are we craftspeople?

Consider examples of other professions such as

- Doctors, nurses
- Lawyers (solicitors, barristers)
- Civil engineer, architect
- Teacher, social worker
- Police or armed forces

What does it mean to be professional?

OED

“The competence or skill expected of a professional.”

All the issues we're about to cover *and* technical competence

Doing the right thing for the right reasons?

What about regulation?

Read

- 1 the BCS¹ Code of Conduct
<http://www.bcs.org/category/6030>
- 2 the Engineering Council's Code of Conduct
<https://www.engc.org.uk/engcdocuments/internet/website/Guidelines%20for%20Institution%20Codes%20of%20Conduct.pdf>
- 3 the Engineering Council's policy statement on whistleblowing
<https://www.engc.org.uk/engcdocuments/internet/website/Whistleblowing%20Policy%20Statement.pdf>

¹The British Computer Society (BCS) is the most relevant professional body for this course.

Is membership of a professional body a “good thing”?
What does it achieve?

Comparison

The General Medical Council and the practice of medicine

We often talk about

- **L** legal,
- **S** social,
- **E** ethical, and
- **P** professional

issues

Appropriate consideration of information security issues is required by LSEPI!

Large amount of legislation. Four highlights:

- Copyright Designs and Patents Act 1988
- Computer Misuse Act 1990
- Data Protection Act 2018 (*a.k.a.* GDPR)
- Communications Act 2003

Talked about GDPR and DPIAs last time. . .

Is our society “ethical”? Is it “fair” and “just”?

Ethics Explicit, philosophical reflection on moral beliefs and practices. Ethics is a conscious stepping back and reflecting on morality

Morality first-order beliefs and practices about good and evil by means of which we guide our behavior

Ethics is reflection and thought about morality — “doing the right thing for the right reasons”?

- 1 *Should* you take into account societal issues?
- 2 Do we —as IT professionals— just implement systems or do we consider what they are for...?
 - *Should* we?
 - Consider:
 - “Digital by default”
 - Exclusion of communities or groups
 - Potential for abuse
 - Potential for social good

Consider the potential for abuse of biometric systems, or voter influence/misinformation via social media

Discussion: Drones

a.k.a. “Unmanned aerial vehicles”

- How can drones be used for “good”?
- What about deliberately harmful acts?
- Inadvertent acts of harm?

Discussion: Driverless cars

a.k.a. “Autonomous vehicles”

(Could also apply to aircraft, but here we're considering cars, vans, buses, LGVs)

- What safety requirements should be satisfied before autonomous vehicles are allowed on the road?
- What about malicious or faulty software? Who is responsible?
- How could autonomous vehicles be confused or obstructed?

Would you want to be carried in a fully autonomous vehicle later today?

Last one: what about “computing”?

- What good has computing brought us?
- What's bad?

The end

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