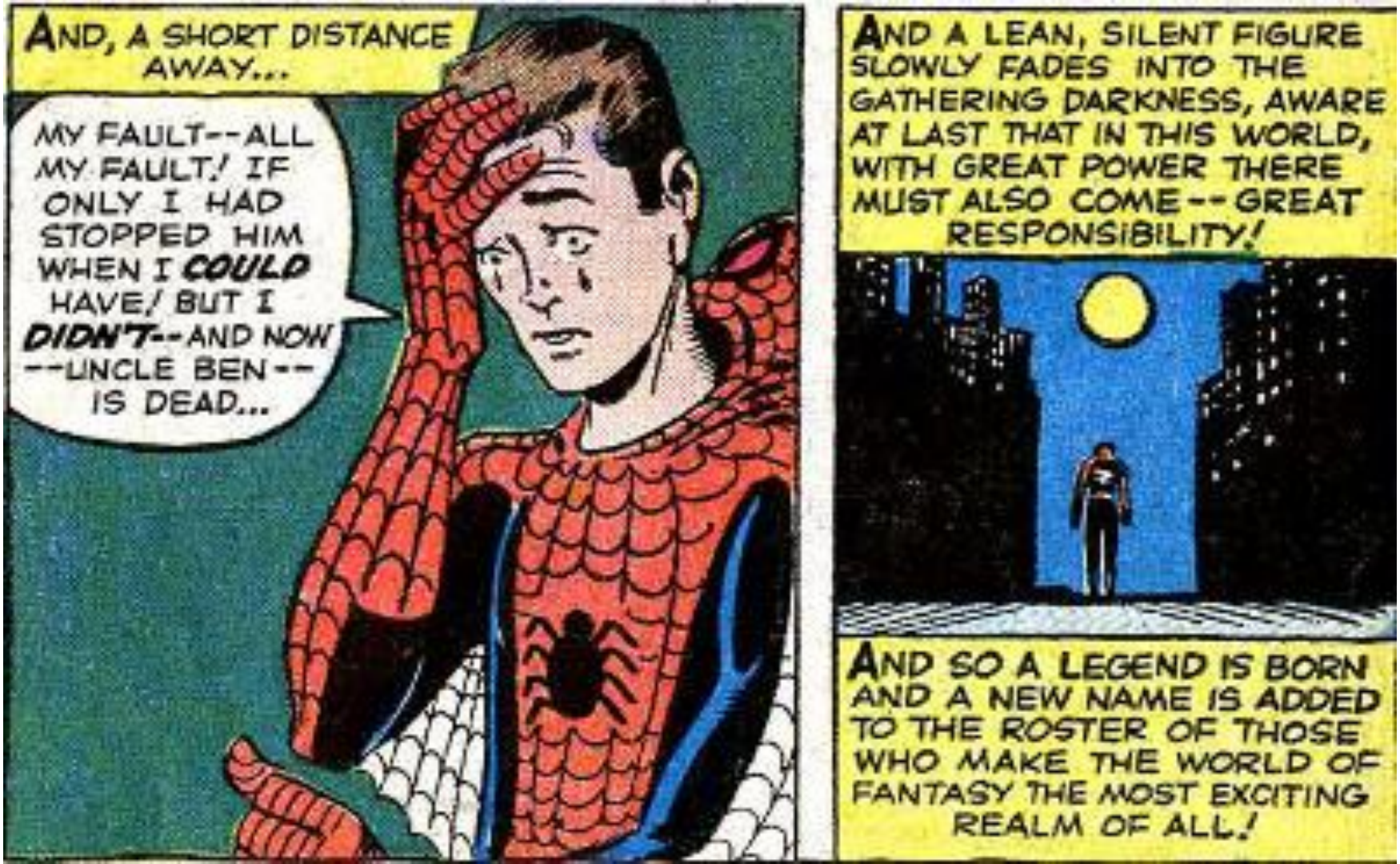
SE101 Lectures 16/17

November 20, 2018

Patrick Lam


AND, A SHORT DISTANCE AWAY...
MY FAULT--ALL MY FAULT! IF ONLY I HAD STOPPED HIM WHEN I COULD HAVE! BUT I DIDN'T--AND NOW --UNCLE BEN-- IS DEAD...
AND A LEAN, SILENT FIGURE SLOWLY FADES INTO THE GATHERING DARKNESS, AWARE AT LAST THAT IN THIS WORLD, WITH GREAT POWER THERE MUST ALSO COME--GREAT RESPONSIBILITY!
AND SO A LEGEND IS BORN AND A NEW NAME IS ADDED TO THE ROSTER OF THOSE WHO MAKE THE WORLD OF FANTASY THE MOST EXCITING REALM OF ALL!

1. As a corporation, what is Facebook primarily trying to do?
2. How does it make money?
3. How does it make more money?

How can Facebook affect behaviour?

How do we know that Facebook affects behaviour?

Propose change to newsfeed

(e.g. only show posts with green pictures, show posts randomly)

Discuss economic, social and technological implications.

Let's keep it concrete.

Find specific examples of harms caused by Facebook.

e.g. cyberbullying, misinformation, and locking people out of their accounts.

Professional Engineers Ontario says...

duty to society

>>>

duty to employer

Whistleblower protections (US)

> (a) No person may take any action to impede an individual from communicating directly with the Commission staff about a possible securities law violation, including enforcing, or threatening to enforce, a confidentiality agreement … with respect to such communications.

Whistleblower protections (Ontario)

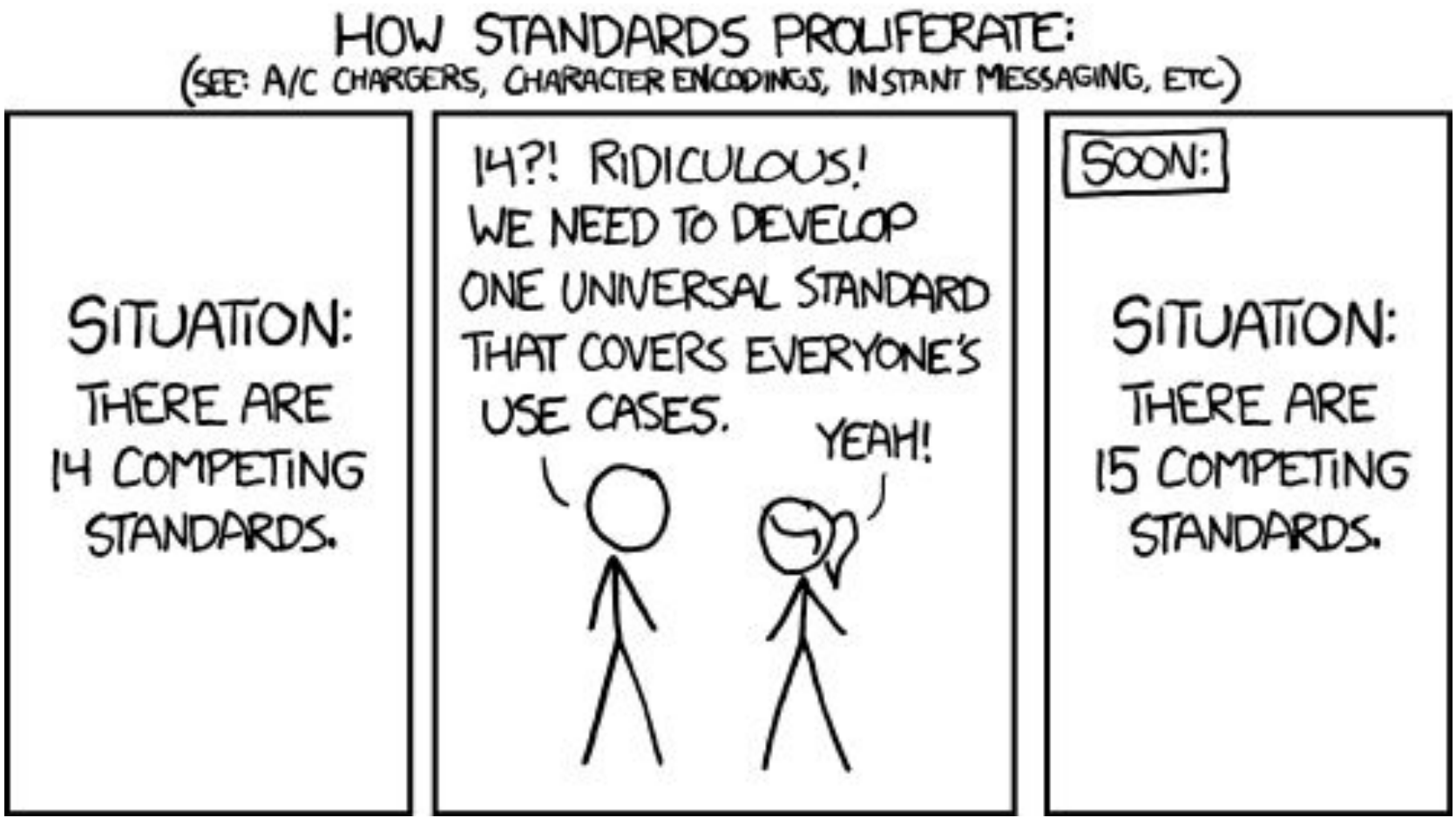
> The Anti-Confidentiality Provision provides that a provision … will be void to the extent that it precludes or purports to preclude the employee from whistleblowing...

Professional Engineering is:

- any act of planning, designing, composing, evaluating, advising, reporting, directing or supervising (or the managing of any such act);
- that requires the application of engineering principles; and
- concerns the safeguarding of life, health, property, economic interests, the public welfare or the environment, or the managing of any such act.

To get a PEng:

- have a BSE/BASc
- pass the PPE
- practice engineering for 4 years under PEng supervision


HOW STANDARDS PROLIFERATE:
(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC.)
SITUATION: THERE ARE 14 COMPETING STANDARDS.
14?! RIDICULOUS! WE NEED TO DEVELOP ONE UNIVERSAL STANDARD THAT COVERS EVERYONE'S USE CASES.
YEAH!
SOON:
SITUATION: THERE ARE 15 COMPETING STANDARDS.

xkcd.org/927

Robustness principle / Postel's Law

"Be conservative in what you do,
be liberal in what you accept from others."

Environmental Impacts of Computers

- manufacturing the computers;
- operating the computers:

  power (from which source?) and

  cooling (especially in data centres);
- decommissioning them.

Mitigating Environmental Impacts

- use fewer computers (virtualization)
- deploy where less cooling (e.g. Iceland);
- power off computers when not in use;
- put fewer harmful substances (Pb) in them; recycle these substances.