Last but not least:
Professional Ethics

MY BOSS WANTS ME TO INTEGRATE A GREAT PRODUCT WITH A TERRIBLE ONE JUST TO VALIDATE OUR MERGER.

IS IT ETHICAL FOR ME TO STALL FOR A MONTH UNTIL HE FORGETS WHAT HE ASKED FOR?

SURE. YOU CAN EVEN HIT HIM WITH A ROCK TO SPEED UP THE FOR— GETTING.

MAYBE I'M ASKING THE WRONG ETHICIST.

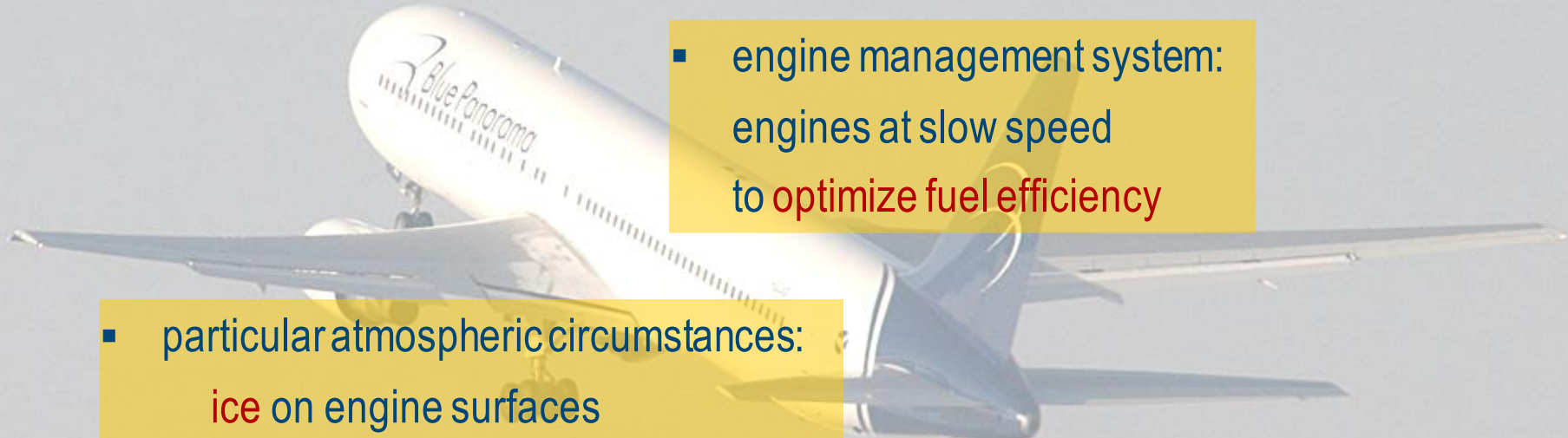© Scott Adams, Inc./Dist. by UFS, Inc.

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- 1983: Boeing 767 went into four-minute powerless glide

  - overheating → pilot had to shut down both engines

  - engine management system: engines at slow speed to optimize fuel efficiency

  - particular atmospheric circumstances: ice on engine surfaces → reduced flow of air → engines work harder and overheat

  - "The problem is that the designer *didn't anticipate all the possible demands the software would face. The computer will always do something. But it will only do the correct thing if it has been programmed for that situation*."

Sample Ethical Dilemmas

- Disagreement in principle with the policies of senior management.

- Your employer acts in an unethical way and releases a safety-critical system without finishing the testing of the system.

- Participation in the development of military weapons systems. or nuclear systems. or genetic manipulation. or…

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ACM/IEEE Code of Ethics

- The professional societies in the US have cooperated to produce a code of ethical practice.

- Members of these organisations sign up to the code of practice when they join.

- The Code contains eight Principles related to the behaviour of and decisions made by professional software engineers, including practitioners, educators, managers, supervisors and policy makers, as well as trainees and students of the profession.

Software Engineering Ethics

- *ACM/IEEE-CS Joint Task Force:*
  Software Engineering Code of Ethics and Professional Practices

  - www.acm.org/about/se-code (v5.2)

- *"Software engineers shall commit themselves to making the analysis, specification, design, development, testing and maintenance of software a beneficial and respected profession.*

- *In accordance with their commitment to the health, safety and welfare of the public, software engineers shall adhere to the following Eight Principles:"*

Software Engineering Ethics (contd.)

1) **PUBLIC** – consistent with public interest.

2) **CLIENT & EMPLOYER** - best interests of client & employer, consistent with public interest.

3) **PRODUCT** - ensure that products & related modifications meet highest professional standards possible.

4) **JUDGMENT** - maintain integrity & independence in professional judgment.

5) **MANAGEMENT** - managers & leaders: subscribe to & promote ethical approach to SE management.

6) **PROFESSION** - advance integrity & reputation of profession consistent with public interest.

7) **COLLEAGUES** - fair to & supportive of their colleagues.

8) **SELF** - lifelong learning, promote ethical approach