







Software Engineering - Craft or Engineering Discipline?

- "It's like musket making was before Eli Whitney." (Brad Cox, quoted in Gibbs, 1994, p. 87)
- "Despite 50 years of progress, the software industry remains years perhaps decades short of the mature engineering discipline needed to meet the demands of an information-age society." (Gibbs, 1994, p. 87)
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Legal Status of Software Engineering (Jones, 1995)

- "Software engineering is not one of the 36 engineering professions recognized and licensed in the United States... 48 states have laws... that prohibit anyone who is not licensed from using the term 'engineer' in describing his occupation and work." (Jones, 1995) "Tennessee now actively prohibits the use of 'software engineering'
- in business literature and advertising." (Jones, 1995) "The state of Texas has forced universities to stop offering master's
- degrees in software engineering." (Jones, 1995) ABET has asked the IEEE to look at software engineering
- accreditation. ABET, the Accreditation Board for Engineering at Technology, is the legally-recognized accrediting agency for all ring and engineering, engineering technology, and engineering-related education in the U.S.A. (Gillespie, 1997)

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Legal Status of Software Engineering (Jones, 1995)

What makes an engineering profession?

- Well-defined body of knowledge, often many sub-specialties Academic curricula to transfer the knowledge and prepare students to pass qualifying exams
- Qualifying exams certifying minimal competence for practicing the profession
- . Continuing education, to maintain currency
- Code of ethics
- Strong professional associations
- Recognized canon of standard practices malpractice may be evaluated against these Methods for monitoring and addressing malpractice
- Liability insurance

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- engineering principles in order to obtain economically software that is reliable and works efficiently on real machines." (Fritz Bauer, quoted in Pressman, 1992, p. 23.)
- "The development, on schedule and within budget, of high quality software that meets the users' and organization's needs." (Turk) AU INSY 560, Singapore 1997, Dan Turk
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- Most industrial organizations who successfully implement the PSP training program are at CMM level 2 or greater. (Although I think that introducing the PSP can be a tool for getting organizations TO levels 1 and 2...)
- Visible senior management support. (Project managers will support it if senior manager does.)
- Voluntary engineer participation.
- Apply the techniques to text's problems, not to work at first. (Turn-around and feedback quicker.)
 Work problems as you read the chapters.

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5