Licensing and Accreditation

- Many professions require a license to practice
  - Medicine
  - Law
  - Engineering in some cases
- May require graduation from accredited schools to get license
- Consequences of a licensed profession
  - Sign off on the design
  - Legal liability for failure or malpractice
- Texas added Software to established engineering licensing
  - Current practitioners “grandfathered in”
- There now is a test
States Offering Software Engineering Liscensing Exam ~2013

Alabama
Arkansas
Colorado
Florida
Georgia
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Michigan
Minnesota
Mississippi
Missouri
Nebraska
New Hampshire
New Mexico
North Carolina
North Dakota
Oklahoma
South Carolina
South Dakota
Tennessee
Texas
Utah
Vermont
West Virginia
Wyoming
Should There Be Licensing?
(after Prof. Shannon Vallor of Santa Clara University)

- “Professionalization”
- Society my respond to ethical failures of software developers
  - Market Solutions [car breaks, fewer bought]
  - Government Regulation [e.g. FTC]
  - Self-regulation/ Professionalization / peer review
- Other professions becoming us!
  - Lessig: “code [software] is law”
  - Doctors, Lawyers, etc. now work through Software
    - Therefore coders in charge of them all (?)
    - coders regulate our lives (?)
- Responsible coders will invite professionalization
ACM Opposes Licensing At This Time

• 1999:
  • “. . . it is premature and
  • would not be effective at addressing the problems of software quality and reliability”

• 2000:
  • “. . . current efforts of the Software Engineering Coordinating Committee (SWECC) toward licensing is misguided
  • . . . under the rubric of the Professional Engineers Licensing structure and requirements”
ACM Opposes Licensing At This Time (continued)

• 2002 (CACM November 2002 (Vol. 45 No. 11):
  • “the only way to be a licensed SE is to become a PE [Professional Engineer]”
    • (for legal reasons)
  • “several topics on which all prospective PEs are tested . . . are beyond the scope of software engineering” such as
    • fluid mechanics
    • thermodynamics
  • “could detract from the study of more relevant areas”
  • “license would be interpreted as authoritative statement that the licensed engineer is capable of producing software systems of consistent reliability, dependability, and usability”
The Accreditation Process

- Outside Evaluation of the program
- Many licensed professions require graduation from accredited schools
- Voluntary
- School applies about January
- Self Study by June
- Campus Visit in Fall
- Report to school by February?
- Reply from school
- Decision in July
The Accreditation Organizations

- Computer Sciences Accreditation Board (CSAB)
  - The legal entity
  - Sets policy
  - Established by ACM and IEEE jointly
- Computer Sciences Accreditation Commission (CSAC)
  - Formed from chairs of teams that visit campuses
  - Different Chair, etc. than CSAB
  - Decides on accreditation
  - Meets for 2 days in July
- Now under ABET
  - Computing Accreditation Commission (CAC)
  - CSAB becomes sponsoring “society” (c.f. ASME, etc.)
The On-Campus Visit

- Team chair
- Two Program Evaluators
- All are volunteers
- Arrive Saturday
- Leave Tuesday afternoon
- The “eyes and ears” of the Commission
  - Examine “Course Display” of student work
  - Interview faculty, staff, administrators
  - Meeting with students
  - Observe labs, library, support departments
- Draft initial report
- Brief the Dept. Chair, Dean, President before leaving
ACM

IEEE

CSAB

CSAC

CS

ABET

TAC

EAC

... ...

Electrical

Mechanical

Civil

IEEE

ASME

ASCE
Accreditation Board for Engineering and Technology, Inc. ("ABET")

Is NO MORE!

Now

ABET, Inc
Computer Sciences Accreditation Board, Inc. ("CSAB")

Is NO MORE!

Now

CSAB, Inc