

## Principle 3 – PRODUCT

Software engineers shall ensure that their products and related modifications meet the highest professional standards possible. In particular software engineers shall, as appropriate:

- 3.01. *Strive for high quality, acceptable cost and a reasonable schedule, ensuring significant tradeoffs are clear to and accepted by the employer and the client, and are available for consideration by the user and the public.*
- 3.02. *Ensure proper and achievable goals and objectives for any project on which they work or propose.*
- 3.03. *Identify, define and address ethical, economic, cultural, legal and environmental issues related to work projects.*
- 3.04. *Ensure that they are qualified for any project on which they work or propose to work by an appropriate combination of education and training, and experience.*
- 3.05. *Ensure an appropriate method is used for any project on which they work or propose to work.*
- 3.06. *Work to follow professional standards, when available, that are most appropriate for the task at hand, departing from these only when ethically or technically justified.*
- 3.07. *Strive to fully understand the specifications for software on which they work.*
- 3.08. *Ensure that specifications for software on which they work have been well documented, satisfy the users requirements and have the appropriate approvals.*
- 3.09. *Ensure realistic quantitative estimates of cost, scheduling, personnel, quality and outcomes on any project on which they work or propose to work and provide an uncertainty assessment of these estimates.*
- 3.10. *Ensure adequate testing, debugging, and review of software and related documents on which they work.*
- 3.11. *Ensure adequate documentation, including significant problems discovered and solutions adopted, for any project on which they work.*
- 3.12. *Work to develop software and related documents that respect the privacy of those who will be affected by that software.*
- 3.13. *Be careful to use only accurate data derived by ethical and lawful means, and use it only in ways properly authorized.*
- 3.14. *Maintain the integrity of data, being sensitive to outdated or flawed occurrences.*
- 3.15 *Treat all forms of software maintenance with the same professionalism as new development.*