Workshop to Consider Global Aspects of Software Engineering Professionalism

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1. Aim

The aim of the workshop is to gather information and opinions that will feed into discussion group meetings that are to be held during The International Federation of Information Processing (IFIP) 7th World Conference on Computers in Education [1]. The workshop also complements a panel discussion which was held at IEEE-CS 24th Computer Software & Applications Conference in October 2000 [2] and a workshop held at the IEEE-CS 14th Conference on Software Engineering Education & Training held in February 2001 [3].

2. Rationale and background

The call for papers for ICSE 2001 highlighted that the engineering of software profoundly impacts on world economies. It is thus of the utmost importance that there exists a strong profession to support the Software Engineering (SE) discipline that can be seen to operate at a global level rather than simply at a national one. However, a major problem within SE is that significant proportions of both industry and academia have been less than positive towards professional issues. In addition, progress that could be seen within the USA due to the actions of the joint IEEE-CS/ACM Software Engineering Coordinating Committee (SWECC) have been thrown into question since ACM decided to withdraw from SWECC in June 2000 (information on the activities of SWECC, related topics, and ACM’s withdrawal is available on the workshop web site [4]). Nevertheless, recently there have been developments under the auspices of the International Federation of Information Processing (IFIP) that should provide a positive input into the process of developing a strong SE profession.

IFIP is a non-governmental, non-profit umbrella organisation for national societies working in the field of information processing. Technical work, which is the heart of IFIP's activity, is managed by a series of Technical Committees (TCs). Each of these Technical Committees in turn is responsible for a number of Working Groups (WGs). For example, WG3.4 is concerned with professional and vocational education and training in the field of information technology. One of the recent activities within WG3.4 has been to develop a document entitled “Harmonization of Professional Standards” (a copy of this is included in the additional information for the workshop [4]). In the document introductory sections explain the overall purpose of the work, why professional standards are needed, to whom the standard will apply, and clarifications concerning the terminology used. The main part of the document then addresses the following areas:

- Ethics of professional practice,
- Established body of knowledge,
- Education and training,
- Professional experience,
- Best practice and proven methodologies, and
- Maintenance of competence.

Each of these areas has obvious importance to SE professionalism and IFIP's proposals may well provide a framework that could be used globally. Also, within IFIP's WG3.4 professional groups have been created which will run discussion group meetings during WCCE 2001. The role of professional group for Professional Standards in Software Engineering is to:

“discuss the needs for appropriate education for Software Engineers at undergraduate level, postgraduate level and professional/industrial levels. It will also consider how common professional standards in Software Engineering can be developed world-wide. In the discussions the group will have to take into account that the body of knowledge is based on rapidly changing technology, that the discipline has not yet fully matured, and that this is a truly world-wide discipline that requires common standards and approaches.”

If the work of this group for Professional Standards is to be effective it must take a wide-ranging consultative approach. Such an approach should also act against the sorts of problems that have occurred between IEEE-CS and ACM over the SWECC projects.
3. Workshop goals

The workshop will provide a forum to consider the global dimensions of a SE Profession and determine the relevance and usefulness to the SE community of IFIP’s initiative concerning harmonization. The goals are to examine:

- The current situation with regard to certification of licensing in different countries.
- The drivers and constraints regarding SE Professionalism.

And to determine:
- The extent to which world-wide SE Professionalism is achievable (particularly in the light of IFIP’s proposals).
- Possible strategy(ies) that would assist in achieving such world-wide SE Professionalism.

4. Participants and position papers

Educators, practitioners, managers, legislators, and members of certifying or professional bodies are all likely to be participants at the workshop. The position papers will address either or both of the following subjects:

1. Current situations regarding the licensing or certification of SE and IS/IT professionals in different countries (e.g. The Texas Licensing situation in the USA, Chartered Engineering status in the UK).
2. What are the likely drivers and constraints regarding SE Professionalism within particular countries and/or globally?

To ensure the time in the workshop is spent as effectively as possible, position papers and the proposals from IFIP regarding harmonisation are available at the workshop web site [4]. In coming to the workshop the participants are expected to bring with them a list of key issues that need to be considered (some of which will have been highlighted in the position papers).

5. Workshop activities

The workshop will involve the active participation of all attendees and extensive use will be made of activities within small groups. The workshop will essentially consist of two distinct parts, each occupying half a day.

Part 1
1. Recap the goals of the workshop and present summaries of the most relevant position papers.
2. Break out into activity groups. Each group will be allocated a particular topic to consider which will either be in the area of certification and licensing or in the area of drivers and constraints.
3. Feedback to full group: a nominated speaker from each activity group will provide feedback on the themes emerging from their group’s discussions.

Part 2
1. Break out into new activity groups. The groups will, in the light of the feedback provided in stage 3 above, appraise the usefulness of IFIP’s proposals for the Harmonization of Professional Standards with regard to SE Professionalism within different parts of the world or within different sectors of the software industry.
2. Feedback to full group. A nominated speaker from each activity group is to feed back themes emerging from their group’s discussions.
3. Brainstorming session with all participants to identify future goals and strategies.

6. Workshop output

A final outcome of the workshop will be the production of a report detailing the major recommendations relevant to the objectives and the topics considered. This will be circulated to participants and materials based on the report will be used to feed into the discussion sessions that are to be held during IFIP’s 7th World Conference on Computers in Education (WCCE 2001). The results of these final discussions will be developed into a paper and submitted for journal publication.

References and further information