

ACM Education Board Meeting

(Newark, NJ, Saturday October 29, 2005)

Attendees: Lillian Cassel, Robert Aiken, Larry Snyder, Russ Shackelford, Richard LeBlanc, Robert Cartwright, Eydie Lawson, Dave Patterson, Lillian Israel, Marvin Israel, John Impagliazzo, Joyce Currie Little, Kati Lovasz, Gordon Davies, Andrew McGettrick, Eric Roberts

1. Reporting on ACM Council and Executive Committee Meetings

A. The Professions Board and ACM's Practitioner Members (Dave Patterson)

With the Professions Board ACM has begun to take steps towards solving the longstanding problem of how it serves computing practitioners, especially young professionals. In general, researchers, especially those working in academia, are better served by ACM. The Professions Board was created, with Steve Bourne's leadership, to address this problem. Some of the Board's plans for the future include an experts exchange service (a vetted advice service similar to what ACM publication Queue now has), a career advice service, and, eventually, to connect with student chapters and give students access to advice from professionals. This would also add value to ACM membership for students.

The Professions Board is still "under construction" – adding people and holding preliminary meetings – and not yet ready to reach out to other ACM entities. Dave Patterson indicated that he would like to see them reach out to the Ed Board eventually, though only after the initial period of setting up the Profession Board's administrative structure and beginning to implement their agenda.

The Professions Board will also work with the Membership Board to form electronic communities; one task assigned to the Membership Board is to research what the options here might be. Possibly the career advice and expert exchange services are good topics to form electronic communities around.

Ed Board members expressed concern over the Professions Board not reaching out to the Ed Board during the initial period of its formation and operation. Dave Patterson responded that ACM wants to give the new Professions Board a chance to determine its agenda and structure for itself, without any other ACM entity attempting to impose anything from outside or above. The ACM Council and EC felt it is extremely important for the new Professions Board to grow organically and not begin its operation with a superstructure already in place.

Joyce raised a question about whether it would be a good idea to involve the Professions Board with the work of certification groups. Gordon mentioned that BCS has been trying to do this for years.

Another question regarding professionals arose in connection with the membership grades that the IEEE has; practitioners like these and it's something that makes the IEEE membership attractive to them. ACM is planning to add 2 new categories (or grades, ranks) of membership: senior member and distinguished member. ACM fellow would be the "rank" that follows these. These two additional membership

categories were approved at the last meeting of the Council and EC. They will not constitute a necessary progression like membership grades within the IEEE but will be important nevertheless: they will provide members with a way to demonstrate that they are moving ahead in their careers.

There are, however, cultural issues to be considered with respect to the number of membership categories. For example, it is highly probable that the number of membership grades will have to be doubled in India or China. Task force groups will likely have to be formed in India and China, composed of ACM members from India and China, to better address as many potential cultural issues as possible. In other words, ACM wants ACM members from India and China to say what ACM can do for them. These task forces will be required to provide 5-year working plans to help proceed with ACM's drive for internationalization and globalization, goals that emerged from the brainstorming session of the Council and EC's spring meeting.

B. Job Migration Task Force Report (Dave Patterson, Eric Roberts)

The report authors had problems with especially two chapters: the ones on risk and education. These two chapters took a prescriptive point of view while everything else in the Report was mostly descriptive. This latter approach appears to have worked better. The problem with a prescriptive attitude is that the field of computing changes so fast that anything written is almost obsolete by the time it's published. Both the risk and education chapters had to be rewritten extensively. William Aspray, who is writing the education chapter, was highly influenced by Eric Roberts's review of that chapter, and much of Eric's response will be reflected in the new draft (set to be ready sometime around Nov 4-7). The hope is that just one more review process will be sufficient to produce a draft. The report will go out ASAP – sometime early in the new year. There is an urgency here because misinformation about outsourcing appears to be a major (if not the single most significant) factor in the current CS enrollment crisis, and ACM wants get information out about the actual situation with outsourcing. Eric Roberts stated that he felt enough progress has been made with the education chapter that publishing the report in its entirety is now possible – in a large part thanks to the three reviewers from the Ed Board.

C. Revised Charter of Education Board and the New Education Council (Eric Roberts, Dave Patterson)

At the meeting in Monterey the idea arose to split the current, large Ed Board into a smaller, more agile Board (an executive group of sorts) and a larger Council: a more diverse group that could considerably enhance ACM's educational activities but would also have the benefit of serving as a training ground for younger ACM members who would like to be active in ACM's educational efforts. Dave Patterson had been concerned with the length of service on ACM boards and councils: there is an extremely low rate of turnover and very few new people have become involved lately. This is worrisome for the future of ACM: what will happen if we can't convince the next generation of members to begin volunteering? This issue was addressed at the EC meeting (on

10/28/05) and the conclusion was reached that service, in general should not be longer than 8 years. The EC and Council had approved the new charter for the Ed Board (see the revised charter handed out at the meeting), as well as the proposed formation of a wider-ranging Education Council.

One thing the EC was concerned about with having two education groups is that there could be tensions if the board and council had separate chairs. Therefore, EC had advised that both be chaired by the same person(s), and the Ed Board be made up of members of the Ed Council. The current Ed Board is the only one in ACM that moved towards constituency programs, and in the future, the Ed Council can represent the range of these programs, while the Ed Board will have a tighter focus and more agility for decision-making.

D. Overview Volume

The volume was well received at Council and EC; Maria Klawe said that this may well be one of the most important documents put out by ACM. A formal motion had been approved by Council to thank Russ Shackelford for all his work on this.

The volume's audience expands sideways and upward from the audiences of the other curricular volumes; ACM has to be aware of this when creating the distribution plan. It is high-priority to get it out but keeping the quality is also important – ideally, the Overview Volume would have been published by December 31st, however, it is crucial to do it well and the deadline has been extended.

One question that came up is: how we can reach the audiences we want to get the Overview Volume to? The Ed Board should work with people who understand publicity (including Kati), as well others at ACM Headquarters and elsewhere who know how to present sciences to the public. The next step is to design a shorter, “brochure” version of the Overview Volume for a U.S audience; then for a wider, more international audience, i.e. produce a version that can then be translated into other languages. Gordon suggested that, in the interest of making the topic of the volume (and subsequently the brochure) more obvious, we should change the title from ‘overview volume’ to something more descriptive. The brochure version would take a bottom-up approach, allowing people to realize what ACM can do for the computing disciplines.

Council and EC also saw this as another opportunity to address the enrollment crisis. Boots Cassel mentioned that parents' influence over students when deciding career paths is very important. We therefore need to reach a very wide range of persons who can be considered role models for students and thereby influence student decision making. It is very probable that parents simply don't tell their kids to study CS. For example, math enrollments are going up while IT/CS enrollments are down, which would indicate that people not knowing what a given field is about is not our only problem.

However, Andrew McGettrick warns that we should not believe that the solution to all our problems lies in a brochure. We also have trouble attracting younger people to ACM membership and should try to project a younger image, perhaps involving more students in committees and councils. Lillian Israel can help with this – she has identified eloquent students from all around the world. We should find out what young people see as exciting in the context of computing, and possibly consider co-branding ACM with other societies.

Curricular recommendations for other countries are tricky –Europe alone is an extremely varied region, with each country taking a different approach to when and how computing is included in the curriculum. France, for example, has it as a policy not to teach any computing K-12. Interestingly, in France and other countries with similar policies there is a higher enrollment in CS departments in colleges than in countries that do teach computing at the primary and secondary school levels.

The issue of joint approval with IEEE-CS also remains, and we need to make sure this is on the agenda for IEEE-CS's next meeting. It is imperative that ACM publish the overview volume – which means that ACM will create the cover and front matter for it.

Marvin Israel suggested that a curriculum component of the Education Web site could summarize and contain links to other countries recommendations.

Actions:

1. Kati to work on creating the cover and front matter for the Overview Volume to be presented to the ACM and IEEE-CS for approval. Note: the content of the Overview Volume has been approved by ACM so only the cover/front matter remains to be approved by ACM.
2. The creation of the shorter brochure version, along with a distribution/marketing plan for it (Andrew, Russ, Gordon, Kati, Bob Sloan, Heikki Topi...)

F. New Education Board Charter and Education Council (Andrew McGettrick)

The Education Board and Council will have a lot of tasks for the future – curricular volumes, the challenges set by the ACM Job Migration Task Force, women in computing, diversity in computing, the current enrollment crisis. The Ed Board chairs are seeking suggestions for the way ahead from current Board members – by November 15, everyone was asked to write down the following:

- who from industry and from among younger academics should be invited to serve on the council
- who should serve on the new Ed Board
- what can each of the present Ed Board individually contribute

The Board and Council would like to involve young people from the industry. However, it is important to bring in people who would not simply push a particular company's angle but will look at long-term educational goals instead. At the Ed Council's first meeting one aim should be to define the issues and main problems the council will engage with. It is important that the Council own its agenda fully and not be handed one from other organizations. The first meeting should, possibly, involve one or more brainstorming sessions, keeping in mind that the Council is a superset of the smaller Education Board, which is the main decision-making body of this two-unit group. The Board will continue to have more frequent meetings while the Ed Council will likely meet once a year, and the Board will be the liaison to ACM on broader, non-parochial issues. Constituency-representatives from outside ACM (e.g. from IEEE-CS) are not yet being sought.. The time frame for this restructuring: we want to start planning for the Council's operation in early December.

The Ed Board has operated as a two-tier structure a while back in its history, at which time it had the problem that people who were a part of the superset group did not quite have a buy-in or vested interest in the smaller, more focused group's process. There will be a need to be vigilant about this as the new Ed Board/Council commences operation. The Ed Board/Council will note this potential issue and in six months, as council members if this buy-in is working. Key here will be to maintain transparency, and to keep the awareness alive that if council succeeds the board succeeds as well.

G. Updates from CEO John White (in absentia, see PDF file of John's report, sent to the Ed Board e-list earlier)

- NCAA letter
- ABET funding model

2. The Zurich Meeting and Related Initiatives in Europe (Russ, Gordon, Andrew)

It became clear at the September '05 London meeting that, with the possible exception of UK institutions, virtually every European institution is wrestling with the implementation of the Bologna declaration. The impact of Bologna extends well beyond the EU, as ~45 nations are signatories. While the details and the pace of implementation vary by nation, there are many common issues that present challenges for virtually all universities in these nations. This creates a potential community of shared interest that extends across Europe and beyond.

At present, there is no effective organization or venue for facilitating communication, sharing, and cooperation across this large, important community. This state of affairs suggests opportunities for ACM to provide support to a community in which ACM has traditionally had a low profile and a small base of members. One output of the London meeting was a set of specific ideas for possible ACM initiatives in Europe.

Concurrent with the London meeting, planning was underway in Zurich for an October meeting among heads of computing departments of EU universities. This meeting was organized by Bertrand Meyer of ETH for the purpose of exploring the idea of creating a Euro-centric organization analogous to the CRA. We thought it would be helpful to present the findings of the London meeting to those attending the Zurich meeting to obtain feedback and suggestions. We asked Meyer about this and were invited to attend and present.

The Zurich meeting spanned approximately 1.5 days. Representatives from 23 nations attended. Attendance was primarily from research-oriented universities. While the purpose was to explore the idea of creating a research-oriented organization similar to CRA, ~80% of agenda topics were focused on education, with Bologna-related issues being prominent.

Unfortunately, we did not have a reasonable opportunity to present the ideas from the London meeting or to obtain feedback about them. While the CRA representative was granted more than 1.5 hours of time, our presentation time was initially scheduled for 10-minutes and later trimmed to 7 minutes. Furthermore, it became necessary to use some of that time to correct misimpressions provided by the CRA representative (e.g., that ACM is dominated by industry and is not influenced by academics or other

researchers, and that top US universities share an explicit agreement to oppose accreditation). No discussion or feedback about the ideas from the London meeting was permitted in the public forum. However, Meyer did publicly comment that “ACM is and always will be an American organization” and that its help in Europe is not needed.

In stark contrast to the way that the meeting organizers responded to ACM’s invited presence, there was a good deal of positive, informal communication with attendees during lunch and in the hallway during meeting breaks. Attendees from various nations reported that they found the ideas from the London meeting interesting and potentially valuable. Several of them commented that we should not be discouraged by ACM’s treatment by the meeting organizers. The general thrust of several comments was that we “had gotten the word out and it would spread” and that a different venue is required. There seemed to be agreement that there is a need for a forum that gets people together in pan-European way to address computing education, and that a CRA-like organization is not a viable way to do that.

Summary of observations from the Zurich meeting:

1. Although the meeting was nominally focused on research, and was attended primarily by those from research universities, it was clear that attendees wanted to address educational issues and don’t have other opportunities for doing so. This reinforces the finding of the London meeting that there is no pan-European forum for computing education.
2. A key concern shared by meeting organizers and attendees is that, in EU nations, there is risk of research being evaluated and funded based on the judgment of bureaucrats, and that a European computing research organization is needed to ensure that research evaluation is done by members of the research community. There is a great deal about CRA that seems to be a useful model for a new Euro-centric organization.
3. It appears that Meyer and colleagues wish to form an organization of top European universities that will serve a CRA-like agenda while also meeting European needs for attention to computing education. We believe it likely that such an organization will be heavily research-oriented, will primarily represent top-tier universities, and will pay insufficient attention to education. Indeed, a strong theme in the public discussion among attendees re: future planning was that there are indeed two distinct agenda items here and that they should not be blurred together.
4. There is a broad perception that ACM is *explicitly* an American organization. Several attendees (including some who are ACM members) thought that the “A” in “ACM” stands for “American”. This reinforces the finding of the London meeting that ACM has a significant image problem to overcome if it is to make inroads beyond North America.
5. Various meeting attendees informally expressed the hope that ACM’s educational activities could somehow take root in Europe. There could be several opportunities for this:
 - Versions of the yet-to-be-named “Overview brochure” may be distributed in the EU;
 - Europeans can get involved with the Ontology Project;
 - We can develop other PR opportunities to help computing educators realize there is an organization that can and will support their work;

- An ACM-sponsored computing education conference, with an emphasis on the Bologna declaration's effects, can help convey the message to European attendees that this is the sort of thing ACM does and can assist with in the future. (*Special thanks to Russ Shackelford for this update.*)

Andrew McGettrick and Dave Patterson also mentioned issues with citation counting in the DBLP, and that not all ACM pubs are accounted for. In fact, approx. 90% of ACM conference proceedings are not in it, and only about 25% of journals. This ties in with other discussions we need to have about awareness of ACM in Europe and that ACM might have a negative perception there. ACM may well have to rethink impressions there of the ACM brand. It is also a continuing problem that things that don't sound U.S.-centric to us do to everyone else.

Actions:

1. Gordon to solicit support for ACM to sponsor a CS education conference in Europe, possibly by French contacts, and to take place in France next September. This should be a workshop-style conference, relatively small, with output – the form of which is still to be determined. Gordon will circulate something more formal in a month to 6 weeks, after talking more with Andrew and Eric.
2. Andrew & Eric: possibly - to look at question of US and ACM and its perception in other countries.

3. Taking stock: 10-minute short report and question sessions

A. CSTA (Christ Stephenson, in absentia – see Chris's written report circulated the week before the meeting.)

B. The IT2005 Volume – or, now, IT2006 Volume (Eydie Lawson)

SIGITE's annual conference just happened, and the membership voted on the newest draft and approved it. It appeared that on the relevant web site there was an indication that there would be one further round of consultation prior to moving to publication.

Action: Eydie to check on arrangements.

C. The MSIS2006 Volume (John Gorgone - absent)

To be addressed in conference call in November and, if thought appropriate, approved by telephone.

D. The Ontology Project (Boots Cassel)

The project is nearing the end of the phase of having specified all detailed elements; a meeting is scheduled for April in France. Gordon has been developing relationships to get additional people active and evaluate what the task force is doing. What needs to happen at this point is more feedback on wiki page:

<http://what.csc.villanova.edu/twiki/bin/view/Main/OntologyProject> .

A working group at ITICSE came up with useful ideas. In terms of funding, the project's NSF grant ended this spring but has been extended and there are still funds because ACM has generously supported project along with IEEE-CS. Murali Varanasi has indicated that he is interested in this project and will continue to support it.

E. The Great Principles Project (Peter Denning, in absentia)

The project is moving ahead slowly. The Education Board suggests it might be good to have some form of publicity for the project in place by spring of 2006, perhaps in the form of a link to the project website from a prominent spot on the ACM site.

F. The Java Task Force (Eric Roberts)

Currently published design is final. The project was received very positively at SIGCSE 2005 and valuable feedback was obtained. The plan is to have it completed by the end of the calendar year; this works in anticipation of academic calendars and so we've missed the adoption period of this year, but this is still in time for SIGCSE 2006 and the next academic year. There are currently several people working on it so that beta version will be out soon, documentation is being written and code review is under way. The project will be delivered via the ACM website with a license. The question of advertising it: via SIGCSE, usage in JETT workshops, possibly a book, etc.

G. CSAB (John Impagliazzo)

(a) The new officers of CSAB are Murali Varanasi as President, Patrick Walsh as Vice President, and Art Price as Treasurer. ACM representatives are Gordon Bailes, Kenneth Martin, Patrick Walsh, and Larry Jones. John Impagliazzo and Barbara Price are alternates.

(b) CSAB has reorganized itself with a new committee structure. John Impagliazzo is still overseeing program evaluators (PEVs) and he is part of the training team.

(c) New ABET criteria (general and program specific) for computer science and information systems are under review. Pilot visits using the new criteria should take place in the 2007-2008 accreditation cycle. Implications are that the existing 220 PEVs will require retraining.

(d) In the area of information technology, pilot reviews are taking place using the general criteria of ABET. Its current "home" is with CSAB, though little enthusiasm exists due to negative financial implications under the current ABET funding model.

(e) The funding model between ABET and its representative societies such as CSAB is an ongoing concern and has led to several "summit" meetings among representative society directors.

(f) A study by the Cordea Group recommended that ABET centralize all training, which will further disenfranchise ABET's member societies such as CSAB.

(g) CSAB is becoming more proactive and functioning more as a professional society. It has updated its website and it is exploring international possibilities. It is also starting a department head association piloted by John Impagliazzo, Heikki Topi, Pradip Srimani.

(h) CSAB engaged in a five-year reflective study to review the pros and cons of its integration with ABET. The study concluded that the action was a mistake and that it generated serious long-term financial problems for ACM and the IEEE Computer Society. Under the circumstances, we can do little about it now.

H. Fluency report (Larry Snyder)

4. In-cooperation and support requests (John Impagliazzo)

- Perspectives on Soviet and Russian Computing
- History of Computing and Education—Santiago, Chile
- Pioneering Software in the 1960s—Amsterdam

The Russian computing conference will come right after ITICSE. This is an important event because this is first conference of its kind. The people involved are very enthusiastic, among them the head of the virtual museum on computing in Russia, and the co-program chair used to work for Kremlin to approve all hardware used for satellites. SIGCSE has recommended putting in for a special project grant, what the conference needs money for is to bring the Russian greats still living in Russia to attend conference. Even currently working college professors in there can barely afford traveling to this conference, so pensioners can afford it almost not at all – and the people who ARE the history should be there.

John is asking Ed Board to allocate funds, in addition to the funds from SIGCSE, in the amount of \$5,000. Additional ways the Education Board could provide assistance were mentioned during the discussion that ensued, one way we could help is by doing outreach. John mentioned that Dave Patterson was encouraging about the conference, and suggested other fundraising opportunities: IEEE-CS, SIGARCH, etc.

John described some of the logistics: the language of the conference will be English, simultaneous translators will be provided, and the proceedings are, at present, set to be published by Springer (price of this to come out of conference fee). The Education Board raised the possibility of publishing the proceedings through ACM instead as this would save a significant amount of money. This could be a way for ACM to contribute. However, John indicated this could be problematic as IFIP's official publisher is Springer.

Action:

John to find out more about conference's funding details and the publication rights/venue requirements. The Ed Board wants to support this conference and wants to know best way to do it.

Motions about in-cooperation requests:

1. To be 'in cooperation' with Russia conference – **approved**
2. To be 'in cooperation' with Chile conference – **approved**

3. Amsterdam conference: To be addressed at March/February meeting

5. Planning for next meeting (plans to be finalized by phone and e-mail)

1. Ed Council meeting

- Seattle, and not have it in conjunction with anything
- first meeting of Council, probably in March or February – 2nd or 3rd weekend? – one day meeting on Saturday?

2. Ed Board meeting

- on Sunday after Ed Council meeting, also in Seattle
- another in-person discussion before Ed Council meeting, just a few hours in the evening? Then the Sunday meeting above would be a shorter meeting as well.

3. Another possibility

- to hold both meetings in conjunction with AAAS meeting in St Louis

6. Review: Action Items

1. Everyone to send suggestions/statements about Ed Board/Ed Council by Nov 15th
2. Boots – group to look at ontology project site and give feedback
3. Russ, Andrew, Kati – work on brochure version of Overview Volume, to present CS to public
4. Eydie – check and see what happened with IT volume
5. Lillian – coordinate with CSTA on Ed Board related matters, e.g. student involvement in ACM committee/council activities and finding interested and articulate students.
6. John – find out if for CSAB training session-goers, first time could be free?
7. Kati – work with ACM HQ marketing to design a cover and front matter for the Overview Volume, to be approved by ACM and IEEE-CS, send lunchtime discussion notes to Andrew and Boots
8. John – research Russia conference’s funding details and the publication rights/venue requirements.
9. Gordon – French organizing
10. Andrew – and Boots to make sense of lunch session notes

Appendix: Brainstorming Session of the ACM Council/EC [Note: put in appendix]

Three groups were formed that all came up with different ideas to discuss:

- international issues
- enrollment crisis
 - o All agreed there is crisis
 - o Maria said she knows why & Eric too: agreed on what the problems were, reasons, and priorities
 - Offshoring and myths about it have scared far too many people away
 - More important than dot com bomb, which is also problem
 - Google zeitgeist: offshoring was #3 on the list, beating out even Britney Spears (this is in U.S. – not in Europe)
 - Change in population: people want instant gratification & not long-term career building
 - Many institutions still teaching as if they were in boom period when they weren't trying to attract people – instead they were filtering...
 - o problems involved with getting CS into k-12 era, but this may be too hard
 - o so other solutions: camps like NSF summer camps in Sputnik era
 - ACM to be involved with getting students to get going with computing in summers

Discussion of the enrollment crisis will be a top item on the agenda for the next year, and we have to remember how important it is to build links to other field – something that even the JMTF report does not mention. Bio-computation is one example of this. We should remember that building bridges to other fields will be a big piece of getting people involved.