

## IEEE Information Theory Society Board of Governors meeting minutes

Catamaran Resort, La Jolla, 02.05.2012, 1-6pm

Natasha Devroye

**Present:** Giuseppe Caire, Muriel Medard, Bruce Hajek, Gerhard Kramer, Natasha Devroye, Frank Kschischang, Abbas El Gamal, Alex Vardy, Emanuele Viterbo, Prakash Narayan, Aylin Yener, Hans-Andrea Loeliger, Paul Siegel, Michelle Effros, Rolf Johannesson, Li Ping, Max Costa, Salman Avestimehr, Tara Javidi, Elza Erkip, Urbashi Mitra, Martin Bossert, Alon Orlitsky, David Tse

The meeting was called to order at 1:09pm by the Information Theory Society (ITSoc) President, Muriel Medard, who welcomed the Board of Governors (BoG). Everyone introduced themselves.

1. The minutes of the BoG Meeting on 10/17/2011 at ITW Paraty, Brazil were approved.
2. The agenda was approved.
3. Muriel presented the President's report: the main topic was the IEEE society review process. New BoG members were mentioned: Abbas El Gamal, Elza Erkip, Ubli Mitra, Alon Orlitsky, Paul Siegel and Sergio Verdu. Outgoing members are Alex Grant and Emina Soljanin.

Ad-hoc committees were mentioned: Ad-hoc committee on the future of the IT Transactions with members Helmut Bolcskei, Emmanuel Candes, Abbas El Gamal (chair), Bruce Hajek, David Forney, Frank Kschischang, Madhu Sudan and Alex Vardy. A full report will be given in fall 2012, the committee has been working very hard. Partial recommendations are expected at the ISIT 2012 BoG in Boston. Michelle Effros is leading another Ad-hoc committee to consider potential opportunities for our Society to advocate activities; she will report on this later.

Finances are stable but less strong than in the past, the quality of the Transactions is still outstanding, conferences have strong participation, membership has a slight, slow but steady erosion which we need to think about. In terms of # of downloads our ranking (compared to other IEEE periodicals on Xplore) we are still quite strong (around 11) but there is a slight but steady erosion.

Society review: Muriel Medard will be going to the TAB meeting for the IT Transactions review in February 2012 in Arizona. A review of the society (other than the Transactions) will take place in November. She attended the past IEEE review meeting in November and saw the review as quite useful, thorough and thoughtful. She believes it is an opportunity for us to consider what our vision is for the Society and to reflect on what our contribution is to our members. At the Officer's retreat on 02/24/12 this was discussed.

Some interesting issues are coming up in the IEEE: 1) bundled membership: a committee is considering to offer free choice of membership to societies as part of the standard IEEE membership package; an informal poll showed very high interest in joining ITSOC if it were free. 2) issues in publications: there is a proliferation of new publications coming up. Helmut does not feel these will affect the Transactions. There is a proposal for a Rapid Process service for IEEE journals. There is a proposal for an IEEE Open Forum (an Open Access journal), but Muriel stated that it is still not very clear which type of online open access model will be considered.

4. ITSOC treasurer Aylin Yener reported on the ITSOC's financial health in 2011.

The forecast for 2011 is a net operating loss of -15.4K, in line with earlier projections; this loss is due to a significantly increased page budget in 2011 to clear our IT Transactions publication queue (approx. 2000

pages). The investment return for 2011 is still unknown; the final numbers are due in spring 2012. Quite a bit of our income comes from the downloads on IEEE Xplore (regular IT Transactions paper, ISIT and ITW papers). **TO DO:** Aylin Yener check if Conference Explore includes any technically co-sponsored conferences. Goal is to end up at  $+\epsilon$  in the future.

Society membership is fairly flat, so member due income is fairly stable. Print subscriptions number have been going down (this was the hope when prices were increased). Non-member subscriptions are not subsidized and provide significant revenue.

In terms of 2012 outlook, Aylin highlighted that the IEEE per page charge is \$63, and its value is not clear (versions often return with more mistakes than the originally submitted papers), something Helmut the EIC is looking at. IEEE sends the papers to multiple vendors to translate the papers handed in in latex to the final product. There is a general sense of dissatisfaction about the editing process and costs. Alex Vardy wants to get a feeling from the BoG as to whether this is an urgent issue. Muriel highlighted that hundreds of thousands of dollars are paid each year (half a million USD last year), and that this is one of our largest ticket items. Andreas believes there must be translators from latex to XML (format IEEE uses). Alex Vardy asks whether XML is necessary or not. Alex Vardy suggests forming a small committee to look at this. **TO DO:** Muriel Medard will query other society presidents to see what type of editing they are using. Frank Kschischang suggests Stefan Moser who is a latex expert and has written papers on how to best write papers so that IEEE would least distort them. **TO DO:** Muriel Medard contact Stefan Moser.

Possible avenues to reduce cost is looking at the page editing costs, redirect to initiatives that benefit members (esp. students, perhaps junior faculty?) IT Society Student Membership is \$15, but there do not appear to be any benefits beyond what they obtain by becoming an IEEE Student member; should we re-visit (no charge, or give them something for it)?

5. Membership and Chapters committee report was given by Abbas El Gamal and Gerhard Kramer.

Job of this committee is: follow up on the IT summer schools, approve the Padovani lecturer (2012 will be Tom Richardson), select the Distinguished Lecturers and encourage them to convert the title into action (only about 25% actually lecture). **TO DO:** Abbas will try to update the list of chapter and send an email to the Distinguished Lecturers to encourage participation. Abbas will propose a re-organization of the committees, as there is very little to do in the Membership and Chapters committee.

Salman Avestimehr reported on the North American IT School to be held in Cornell in summer 2012, co-organized by Salman Avestimehr and Aaron Wagner. Will be June 19-June 22, 2012 (one week after ICC, 2 weeks before ISIT). Applications due March 30, 2012, decisions are made by April 16 and must register by May 1, 2012. Four lecturers are confirmed: Tom Richardson, Suhas Diggavi, Elza Erkip, Pramod Viswanath. The website is up. Lodging will be in the Cornell dorms, lecturer in the Statler hotel. Meals will be in all-you-can-eat cafeterias. Expecting about 125 students. Fundraising: IT School from ITSOC \$20k, Cornell ECE department \$20k, \$2k from IBM, \$2k from FoIE, will submit proposal to ARO (Bob Ulman) for \$15k. Will there be registration? Thinking about \$50 registration so can be sure how many people will come. Gerhard says it is important to have a credit card registration. Aylin suggests having students send cheques and return them if they come, keep otherwise.

Gerhard Kramer reported on the European IT School to be held in Antalya, Turkey from April 16-20, 2012. Deniz Gunduz and Gerhard Kramer are the general organizers (Deniz is doing most of the work). Lecturers are Frans Willems, Sennur Ulukus, Meir Feder, Alex Dimakis, Michael Gastpar, Amos Lapidoth.

There will be a charge of 450 euro/person (double), 590 euro/person (single) includes everything. So far 63 registrations representing 12 countries. ITSOC support is about \$15k euros.

6. Elza Erkip spoke for Joerg Kliewer on the Outreach committee. Main idea of Mentoring program is to outreach to students, junior faculty and young professional, a tool for membership retention. An important event has been the Mentoring breakfast at ISIT; new initiatives are planned. First item is to recruit more mentors, perhaps in collaboration with student committee. Joerg was thinking about asking for travel grants to make sure mentors and mentees can meet. Committee headed by Joerg Kliewer, four additional members are Elza Erkip, Daniela Tuninetti and Bobak Nazer.

7. Muriel Medard reported on behalf of WITHITS at ISIT. An event is planned at ISIT, jointly co-ordinated with IEEE Society of Women in Engineering.

8. Frank Kschischang reported on the Nominations and Appointments Committee which consists of Giuseppe Caire Daniel J. Costello, Jr., G. David Forney, Jr., Frank Kschischang (chair), David L. Neuhof.

The fellow committee is Frans M. J. Willems (chair), Michelle Effros, Rolf Johannesson, A. Robert Calderbank, Alon Orlitsky, Thomas J. Richardson, Raymond W. Yeung.

2012 Shannon Award Selection committee: Muriel Medard (Chair), Gerhard Kramer, Abbas El Gamal, Richard E. Blahut, Sergio Verdu, Raymond W. Yeung, Jacob Ziv.

New committee was formed last year, the external nominations committee which consists of Prakash Narayan (Chair) Muriel Medard, Max H. M. Costa, Alon Orlitsky, A. J. Han Vinck. 2012 will be the first year of operation of this committee, created in a bylaws amendment by the BoG last year. This committee is responsible for the solicitation, processing and submission on behalf of the Society of nominations for appropriate IEEE awards (such as, for example, the IEEE W. R. G. Baker Award) and, as applicable, for awards outside of the IEEE.” The bylaws stipulate that the committee shall consist of a Chair and three additional members appointed by the NAC, along with the society President.

Motion: to approve the student committee chairs Elza Erkip and Sriram Vishwanath. Motion was passed.

**TO DO:** 1) create a slate of candidates for election to the BoG, 2) appoint a new Conference Committee Chair (to start Jan. 2013), 3) start looking for a new IT Transactions EiC (to start Jul. 2013), 4) staff the 2013 Fellows Committee

9. Rolf Johannesson presented the 2011 Fellows Committee report on behalf of Frans Willems. Members 2011: Rob Calderbank (1st year), Michelle Effros (2nd year), Hideki Imai (3rd year), Rolf Johannesson (2nd year), Alon Orlitsky (1st year), Marcelo Weinberger (3rd year), Frans Willems (chair, 2nd year)/ Members 2012: Rob Calderbank (2nd year), Michelle Effros (3rd year), Rolf Johannesson (3rd year), Alon Orlitsky (2nd year), Tom Richardson (1st year), Frans Willems (chair, 3rd (final) year), Raymond Yeung (1st year), Rolf Johannesson (reporter) and Frans M.J. Willems (chair).

The committee evaluated 13 candidates in April - June 2011. In November the IEEE BoD approved the list of newly elevated Fellow Members. The list included 6 of our candidates: Erdal Arikan, for contributions to coding theory; Martin Bossert, for contributions to reliable data; transmission including code constructions and soft decision decoding; Adam Krzyzak, for contributions to nonparametric algorithms and classification systems for machine learning; Jong-Seon No, for contributions to sequences and cyclic difference sets for communications algorithms; Emre Telatar, for contributions to information theory and coding; Bane Vasic, for contributions to coding theory and its applications in data storage systems and optical communications.

Interesting / surprising to note that the ITSOC Fellow Committee society does not see the letter of recommendation for the IEEE Fellows. A discussion was had about whether the letters have any impact – what the IEEE committee selects as fellows tends to align with the ITSOC recommendations. **TO DO:** ask Frans Willems on whether seeing letters would be important to the ITSOC fellows committee. It seems that many people in our society are elevated to Fellows by other societies; there seems to be a trend compared to other societies to elevate at later stages. There is a perception that ITSOC is a difficult one to go through; standard is higher. Ubli Mitra: should we encourage more nominations through our society? Michelle Effros thinks putting up more nominations would be beneficial to the society.

10. Nick Laneman (on Skype) reported on the Online Committee for Matthieu Bloch. Website is running well, quite a bit of traffic. Matthieu has had trouble getting contracts through IEEE for SixFeetOut (developers). Quality of Skype made a conversation impossible, just looked at report online. <http://www.itsoc.org/people/bog/it-bog-meeting-ita-2012-ucsd/online-committee-report-ita-2012>

11. Bruce Hajek reported on the Conference Committee. ISIT 2011 expects about a \$80k surplus. ISIT 2012 in Cambridge, MA is on track. There were roughly 1000 submissions, similar to last year. Things are going well. ISIT 2013 in Istanbul seems on track. ISIT 2014 Hawaii and ISIT 2015 Hong Kong on track. Future ISITs - next one not decided is in 2016; usually approve this in BoG in summer (at ISIT). Barcelona, Stockholm, Aachen, Melbourne are proposals at the moment. Nothing is set in stone that ISIT alternates between North America, non-North America, but this is how it has been happening in the past. Whether there will be any proposal from North America for 2016 is still open. Ubli and Michelle (on behalf of a potential submission from Los Angeles area) suggest asking a location to do ISIT and working out the details after rather than having competing proposals; not to waste everyone's time if the decision is location based anyways. Giuseppe Caire states that putting together proposal is a good exercise; David Tse agrees. Frank says that given BoG and ISIT tradition he agrees with Bruce Hajek's guess of 95% successful North American proposal for ISIT 2016, if one were to be made (but there is none at the moment).

Motion to make broad geographic decision (North America versus non North America) for ISIT 2016 ahead of proposals being received. A long discussion was had. Motion was not passed.

ITW Paraty was a success, surplus of \$24k. Lausanne ITW in 2012 is going to be unique: the format will be all session plenary, everyone speaks for 5 minutes and then everyone has a poster. Should be an interesting experiment. There are no proposals for ITW 2013 this far, hoping there will be a proposal. Max Costa says for ITW 2011 they tried a new format which was interesting: in a session 3 invited papers and then explicit time allocated to a panel-like discussion.

Frank states that ITW should not become “mini-ISITs”. Bruce stated that officers agreed that there is not enough industry participation and welcomes any ideas on this (ITW focuses?).

12. Michelle Effros spoke on the Ad hoc Committee to look into potential opportunities for the IT Society to advocate activities. She is serving on a committee for the NSF CISE in an advisory role, which is insightful in how decisions are made at NSF. It has made her aware that there are other communities that are taking a more active role in putting forth their research, leading to more funding opportunities in these areas. This ad hoc committee was formed to ask whether the ITSOC could be doing more in this direction. The title of Michelle's presentation is to “Educate, Inspire and Empower”. The more active communities are active on a wide variety of fronts - hence the title. Examples of things she has seen other societies do:

1) Educate: media, popular culture (try to improve image), K-12 (e.g. teach CS earlier, they are very active in talking to people in congress), AP exams (new one in CS and one in statistics, as people

in communities go out and sell why this area is important), government (put together workshops with government officials, show impact of their investment, what are the next great things that we could help with, what needs to be done), many internal leadership roles (make more visible and understood).

2) Inspire: visioning workshops (pro-active workshops to think about the future), “wild-ideas” sessions (at conferences) , enablement of white papers (to help program officers by giving them a menu of topics of interest to put together a program)

3) Empower: fellowship programs (group formed to ask NSF for postdoctoral fellowships which they got), jobs data bases (all sorts of positions), educational and inspirational materials (blog, videos to inspire people about what it would mean to study a certain area), active role in trying to define new initiatives for funding programs

Does the ITSOC want to get involved in these types of activities? Michelle encouraged everyone to think about these types of questions. Abbas noted that CS and statistics are much broader fields than us, so we should compare with smaller sub-branches. Michelle: do we consider ourselves in isolation or as a part of other communities (CS, statistics, math,...?). We could join forces with others, or do nothing. EE is not present at all in CISE (NSF), but computer science is almost synonymous with CISE (perception-wise). Very organized web-site <http://www.cra.org/ccc/> Bruce believes that CS is such a large community, we must join them. Vardy stated that this effort of the CS community was a very very large effort. Giuseppe asked whether it would be possible/relevant to join forces with the Engineering side of NSF rather than the CISE side. Michelle feels we have been in a reactive rather than a pro-active role. Alon believes two sides: 1) trying to convince people what we do is relevant and 2) trying to do things that are more relevant. David believes terminology is important: computer scientists use the word “computational” which may be added to almost anything, interesting way to strategize. Gerhard believes the word “information” is a fantastic word and we do have a fundamental understanding so could be applied in many areas. Everyone is interested in “information” – like “computational”. How to capitalize on it?

Muriel asked whether anyone has an active collaboration outside our traditional funding areas. Very few in the room did. Frank says Physics people are much better at conveying and extrapolating the importance of the research. We should write better letters, be better sales-people. Abbas: we need to find out what we want to sell, need to figure this out as a community, what is the big idea to sell? Elza: are we too modest and too self-critical to have great visionary ideas? David: his perception is that our field is very narrow, this may be hindering us. Prakash says people in other fields that have used information theory in their work have done so with great success. Andy applauded Alon for putting on this ITA workshop which is exactly a little broader than the usual IT venues.

Alon asked whether if we decide to take a proactive role, whether BoG will help organize this and in what fashion. Muriel said this would be appropriate. Abbas says visibility can be done; online, friendly courses, not to be confused funding and the larger vision or what to sell. One proposal would be to try and have an online course reaching tens of thousands of people. Tell people what is interesting about information theory. We could try to be more visible online; the transactions may need to change format to more magazine-like.

Muriel thanked the committee members for the excellent work in stimulating an excellent conversation and encouraged specific ideas and proposals on this matter. Muriel would love to hear back about progress in the Fall ITW BoG meeting.

13. Muriel wanted to share some highlights of the Officer’s retreat on 02/04/12, which focussed on preparing

for the 5 year IEEE SRC review. One of the tasks was to go through the report we gave in the last review in 2006. One of things that came out of this was the Field of Interest (FOI) and Mission and Vision statements, which were re-visited.

Our FOI was last updated in 1987 and is currently as follows:

*The processing, transmission, storage, and use of information, and the foundations of the communication process. It specifically encompasses theoretical and certain applied aspects of coding, communications and communications networks, complexity and cryptography, detection and estimation, learning, Shannon Theory, and stochastic processes.*

Question: do we as a board want to examine our FOI at the next ISIT? There was an interest. Frank mentioned that this might be a risky undertaking as new FOIs need approval at TAB meetings and can get contentious.

In looking at the review document, one of tasks is the vision and mission statement. The officers looked at these and came up with new mission and vision statements. The new statements that the officers came up with on 02/04/12 were presented to the board:

*Vision: To be the pre-eminent community developing the mathematical underpinnings of information technology for the benefit of humanity.*

The BoG was concerned about the words “mathematical” and “under-pinning” and “technology”. Suggestion to change to “information science and technology”, the vision was changed.

*Mission: To support the open exchange of ideas in information theory, broadly construed, through publications, communications, meetings, outreach, education, mentoring, and recognition of excellence.*

The BoG liked the mission statement.

14. Other business was brought to the table. Abbas El Gamal stated that we have 13 standing committees. He stated that the Membership and Chapter Committee does not do much. Abbas’ brief recommendation is to have one committee called ”Membership” which would combine Membership, Student and Outreach committees, and have members in these committees deal with the specific sub-tasks. We have too many committees. A discussion was had about the different roles of the different committees. There is interest in exploring this. **TO DO:** Abbas to make specific recommendations, could present a motion at the next BoG.

The meeting was adjourned at 5:06pm.