

## IEEE Information Theory Society Board of Governors meeting minutes

Catamaran Resort, San Diego, CA, 02.09.2014, 1:15-4:55 PM

Edmund Yeh and Tracey Ho

### Present:

Present: Abbas El Gamal, Jeff Andrews, Gerhard Kramer, Andrew Barron, Aylin Yener, Alon Orlitsky, Paul Siegel, Ruediger Urbanke, Matthieu Bloch, Nick Laneman, Mike Honig, Muriel Medard, Tara Javidi, Ram Zamir, Alex Vardy, Sid Jaggi, Emanuele Viterbo, Urbashi Mitra, Michelle Effros, Joerg Kliewer, Tracey Ho, Vijay Kumar, Ashish Khisti, Sergio Verdu.

The meeting was called to order at 1:15 PM by the Information Theory Society (ITSoc) President, Abbas El Gamal, who welcomed the Board of Governors (BoG).

1. Abbas presented the President's Report. Abbas welcomed the new BoG members (Andrew Barron, Stephan ten Brink, Tracey Ho, Nick Laneman, Alex Vardy, Emanuele Viterbo) and the new second VP (Alon Orlitsky). Abbas offered thanks to Gerhard Kramer for his service as President, Giuseppe Caire for his service as Senior Past President, Helmut Bölcskei for stepping in as interim Editor-in-Chief (EiC), Frank Kschischang for agreeing to become our next EiC, and Bruce Hajek for acting as interim conference committee chair.

Abbas congratulated IT members who recently received major awards: David Donoho (Shaw Prize), Argyaswami Paulraj (Marconi Prize), Dariush Divasalar (IEEE Alexander Graham Bell Medal), Thomas Richardson and Rudiger Urbanke (IEEE Hamming Medal), John Proakis (IEEE James Mulligan Education Medal), Tamar Basar (IEEE Control Systems Award), John Cioffi (IEEE Kirchmayer Graduate Teaching Award), Balaji Prabhakar (IEEE Innovations in Societal Infrastructure Award). He also congratulated the IT members who recently became IEEE Fellows: Randall Berry, Shuguang Cui, Guang Gong, Vivek Goyal, Martin Haenggi, Peter Hoher, Syed Jafar, J. Nicholas Laneman, Mingyan Liu, Angel Lozano, Balaji Rajan, Ashutosh Sabharwal, Philip Schniter, Patrick Thiran, Wade Trappe, Wei Yu.

Abbas then outlined the main work items for the BoG for 2014. These include exploring new strategic directions (as recently examined by the ad hoc committee chaired by Jeff Andrews), managing the size of the Transactions (including considering page charges, page limits, and online supplements, and forming a more robust editorial board), managing declining membership (including instituting differentiated fees for conferences, workshops, and schools), and improving visibility into Society finances. Abbas showed statistics showing the continued climb in the Transactions page count and the continued gradual decline in Society membership. The latter contrasts with the recent increase in the membership count of the IEEE Communications, Control Systems, and Signal Processing societies.

2. Aylin Yener presented the Treasurer's Report. Aylin started with the 2013 budget. The 2013 budget as finalized in November 2012 was predicting a \$159k surplus. Given the very large surplus from 2012, we had about \$100k that we could spend on initiatives with the 50% rule. Three initiatives were approved totaling \$62k. This would have yielded about \$100k in surplus. However, due to reduced revenue forecasts in October, and a transaction page adjustment from 8000 to 8465 pages, the budget surplus for 2013 is now much closer to 0.

Aylin next reviewed initiatives for 2013. It was noted that initiatives requiring less than \$50k does not require IEEE approval. Three initiatives (Student Committee, WITHITS, and Online Committee) were approved and implemented successfully. Student Committee expenses involved \$8020 (main budget)+

\$1932 (Special initiative budget), giving a total amount roughly equal to the yearly budget. The initiative expenses were below the budgeted amount (\$4k). The WITHIS initiative expenses totaled \$11k, which is \$3k over the budget of \$8k. An additional \$2k invoice will have to be paid from the 2014 budget since the invoice is sent in 2014. Aylin suggested that we report this as continuation of this initiative and fund it as such. The Online initiative was originally funded at \$49.99k. Given that the 2013 budget is strained, \$40k will be charged to this initiative, while the rest will be transferred to the 2014 budget.

The current estimated budget surplus for 2013 is \$49.2k. Including the Online initiative cost of \$40k, the new estimated surplus is \$9.2k, which translates to about \$4.5k for initiatives for 2014 (\$2k of which is taken by WITHITS). The budget surplus numbers may still change due to updated revenue numbers.

Aylin moved to the 2014 budget. For 2014, print subscription fees have been increased to \$80 for non-IT IEEE members and \$105 for non-IEEE members (with student rates at 50% discount). Due to the change in the IEEE publication revenue algorithm, the budget balance is projected to be -\$35k for 2014. Due to the adoption of moderate editing, the budget balance is projected to be +\$60k.

Aylin noted that we have \$10k left over for SixFeetUp services from 2013. We have committed to providing \$30k additional support for schools in India, Hong Kong, and Australia. Unfortunately, there is essentially no money left for any additional activity unless we decide to go in the red this year. Aylin noted that another mechanism for new initiatives is to spend from the reserves. This requires approval from IEEE. On two recent occasions, the Society has applied to spend from the reserves but was denied.

Aylin outlined the financial challenges for the Society looking ahead. The new IEEE revenue distribution formulas result in reduced revenues for the IT Society. We are already seeing the impact of this in 2014 in spite of switching to moderate editing.

TAB fees have steadily increased for IT Society, disproportionate in percentage terms compared to other societies. Technical Sponsorship for conferences soon will bring significant cost per conference. Current sponsorship of non-IEEE conferences (Allerton, CISS, ITA, NetCod, ISITA) entail almost no cost. However, under new proposed rules, the costs will rise significantly. This cost can be passed on to the conferences, but requires a new motion.

Aylin ended by noting that discussion is needed on how to go forward and stay financially sustainable within IEEE rules and practices.

3. Muriel Medard presented the Nominations and Appointments (N&A) Committee report. Muriel reviewed the current membership of the N&A Committee, the Awards Committee, the External Nominations Committee, the Shannon Award Committee, and the Wyner Award Committee.

During the discussion that followed, the Awards Committee chair was asked to seek nominations for the IT Paper Award from the Editor-in-Chief. It was noted that the Joint ComSoc/ITSoc Paper Award committee makes decisions before the IT Society Awards Committee. This can become an issue if a paper is nominated for both awards. It was suggested that the issue can be revisited with the bylaws at the end of the year.

4. Alon Orlitsky presented the External Nominations Committee (ENC) report. The awards considered by the ENC include IEEE Medals (Medals: Bell, Hamming, Mulligan, Edison, Founders, Honor), IEEE Field Awards (Kirchmayer, Kobayashi, Sumner), IEEE paper awards (Baker, Fink), European awards (Dobrushin, Marconi (IT/US), BBVA, QE), Japanese awards (Okawa, NEC, Kyoto, Japan).

Recently, four ENC nominations were awarded. The IEEE Hamming Medal was awarded to Tom Richardson and Ruediger Urbanke. The IEEE Bell Medal was awarded to Dariush Divsalar. The IEEE Mulligan Medal was awarded to John Proakis. The Dobrushin award was given to Imre Csiszar.

In the discussion which followed, a French award was mentioned as another possible external award for consideration. Alon asked BoG members who know of other relevant awards to inform the committee.

5. Matthieu Bloch presented the Online Committee report. Matthieu reviewed the progress of the web initiative approved at the ITW Seville BoG meeting in September 2013. The main objective of the initiative has been to develop enhancements to the website that would enable us to integrate videos and media resources into the website, and in particular to give a more prominent place and more visibility to the lectures recorded during the schools of Information Theory. In addition, the initiative will provide simple means of sharing ITSoc resources on social media (Facebook, Google+, etc.). 80% of the development (infrastructure upgrade and early enhancements) was completed before the end of 2013. In December 2013, IEEE indicated that we had to submit to an IEEE Project Request (IPR) procedure. The IEEE review process has been particularly slow. On a positive note, IEEE has approved the budget and we will be able to pay SixFeetUp for past development and move forward with the last remaining features. As far as the web initiative is concerned, we should be able to proceed as originally planned, but further interactions with IEEE on this are to be expected. The Online Committee will report on this in a timely manner once IEEE provides feedback. It is noted that the Society President and Treasurer will be updated on developments.

6. Gerhard Kramer presented a report on the European School of Information Theory to take place April 14-18, 2014, in Tallinn, Estonia. The scientific program places emphasis on security, coding, and networks and features Venkatesan Guruswami, Camilla Hollanti, Yuval Ishai, Yingbin Liang, Bobak Nazer, and Ruediger Urbanke as speakers. The School is supported through a \$20k grant from ITSoc. Gerhard reviewed the logistics of the School and presented the current registration information. Gerhard mentioned that Vitaly Skachek has been very helpful and effective in taking care of arrangements.

In the discussion that followed, it was mentioned that the School website should have a convenient link for becoming a student member. It was also noted that this should be done for conference/workshop webpages in general.

7. Sid Jaggi presented a report on the first East Asian School of Information Theory to take place July 7-11, 2014, in Hong Kong. The program features David Tse, Alon Orlitsky, Ruediger Urbanke, Yasutada Oohama, and Chandra Nair as speakers. The School is supported through a \$10k grant from ITSoc. Sid noted that there will be recordings of talks if the speakers agree. Also, registration costs are about 1/4 of the actual cost per participant.

8. Ashish Khisti (on behalf of Stark Draper) presented a report on the North American School in Information Theory, to take place June 18-21, 2014, in Toronto, Canada. Confirmed tutorial speakers include Robert Calderbank, Brendan Frey, Andrea Goldsmith, Alon Orlitsky, Henry Pfister, and En-hui Yang. The School is supported through a \$20k grant from ITSoc. The School is pleased to report that the program has been established, the logistics arranged, and that the School will be able to run with the funds raised so far. Help is needed to advertise the application deadline (March 7) and to promote the School within communities outside of IT. Travel grants are being processed through Penn State. It was suggested that the School increase the differential in registration fee for IT society members.

9. Alex Vardy (on behalf of Frank Kschischang) presented the EiC report. Frank assumed the role of EiC

on December 16, 2013, taking over from interim EiC Helmut Bölcskei. The Executive Editorial Board (EEB) comprising of Dave Forney, Prakash Narayan, Vince Poor, and Shlomo Shamai, has agreed to continue until mid-2014.

A new slate of Associate Editors was appointed in January 2014. These include Salman Avestimehr, Osvaldo Simeone, Stephan ten Brink (Communications), Jun Chen, Sae-Young Chung, Tie Liu, Chandra Nair, Haim Permuter, Sandeep Pradhan (Shannon Theory). There are number of other AEs stepping down in February 2014, and a new slate of candidate AEs will be proposed. The Editorial Board currently includes 40 AEs. Papers arrive at a rate of roughly 1200/year, giving an average load of 30 papers per year.

By mid-December, 2013, all papers formerly hosted on Pareja had been transferred to ScholarOne. This was accomplished by much hard work from Helmut, Lisa Jess at IEEE, but most particularly, Michael Lerjen at ETH Zurich. Frank suggested that the President send Michael a letter and an official IEEE Certificate of Appreciation in recognition of his valiant efforts. Abbas agreed.

The Transactions moved to moderate editing in December 2013. Under moderate editing, IEEE performs all the usual editing functions except editing text for grammar, punctuation, spelling or style. Moderate editing reduces IEEE page charges from \$57/page to \$37/page (and reduces publication costs from \$100/page to \$80/page).

In 2014, the Transactions is expected to bring a subscription/IEEEExplore gross revenue to the Society on the order of \$920k, at an expense of about \$680k to produce and deliver (8500 pages at \$80/page), resulting in a net revenue of around \$240k. Had we remained at \$100/page with full editing, this income would have been reduced (by \$170K) to just \$70K. Frank noted that we could bring the net revenue to \$340K, say, by reducing the number of pages from 8500 to 7250. This could be done by reducing the average page-count from 14 pages/paper to 12 pages/paper. Frank then presented a number of scenarios for revenue gains from imposing page limits.

Frank also mentioned the possibility of creating an electronic-only Supplements to IEEE Transactions on Information Theory, in which additional material associated with a paper (e.g., proofs, tables, graphs) might be published. Production of such material would cost say \$65 per page. If the trial LATEX-to-XML project reaches fruition, these costs might be pushed down quite substantially. The EiC seeks the advice of the Board on the issue of page charges.

Frank next discussed possible transition to a new editorial board structure. The operational structure of the Transactions currently has a single point of failure: the EiC. Should the EiC become incapacitated, the handling of papers, and the production of issues, etc., would halt until a replacement could be found. Two models have been discussed among the members of the EEB and the officers of the Society, the “Area Editors Model” and the “Shift-register Model.”

The Area Editors model, adopted by many journals, imposes a tree-structured hierarchy on the editorial board, in which a number of “area editors” or “senior editors” play the role of mini-EiC for their area, distributing submitted papers to a number of Associate Editors for handling. This model was suggested by the Transactions review committee chaired by Alexander Vardy in 2006, and by the Transactions review committee chaired by Abbas El Gamal in 2011. Frank described how this model is currently being carried out by the *IEEE Transactions on Automatic Control*. The Area Editors model likely reduces the EiC’s workload by at least a factor of 5.

The Shift-register model was also called the “EiC pipeline model” by Gerhard Kramer, and corresponds

also to a suggestion of Prakash Narayan. Here the idea is to create overlapping EiC terms. In the proposed implementation, there would be two people in the pipeline: an EiC and a past-EiC. In general terms, the EiC handles the review process, while the past-EiC handles the production process. The natural evolution would be to serve as EiC for 18 months and as past-EiC for 18 months. The technical areas of the EiC could be chosen to complement that of the past EiC (e.g., one in coding theory, one in Shannon theory). The pipeline model reduces the EiC workload by about a factor of 2.

Frank then presented the potential benefits and disadvantages of the two models. The EiC seeks the advice of the Board on the issue of a transition to a new editorial board structure.

In the discussion that followed, Abbas indicated that he has asked IEEE about posting supplementary material with papers on IEEE explore, and would inform the BoG of IEEE's response. It was noted that peer-reviewed supplementary material provides a way to reduce costs without sacrificing the paper's completeness. It was also noted that award-winning papers have been long. Rather than imposing hard limits and over length charges, AEs could be vigilant not to let unnecessary material be published. Instead, some material could be set aside in a supplementary document. It was noted that this makes for easier reading and indeed is a well established practice in other journals. Some expressed the view that AEs should be trusted to determine paper length. It was suggested that a page limit might lead to a larger number of shorter papers.

Other questions raised include the following. Should we charge non-members to publish? Should we charge authors a per page amount for publishing? Should we coordinate with other societies to negotiate page charges with IEEE? It was pointed out that almost all of the societies have page limits and overlength charges. It was also noted that publishing independently of IEEE is expensive and not typically successful.

10. Alon Orlitsky presented the membership committee report.

11. Joerg Kliever presented the Outreach Subcommittee report. The subcommittee members are Negar Kiyavash, Elza Erkip, Daniela Tuninetti, Bobak Nazer, and Joerg Kliever. The key activity of the subcommittee is the mentoring program, which has steadily grown since 2009. There are currently 29 mentor/mentee pairs. An overview of the program was presented at the IEEE TAB meeting in November 2013. A panel discussion titled "Landing Your Dream Job" has been planned for ITA, jointly with the Student Committee. The subcommittee is currently considering new events with more industrial focus, and also considering integrating mentoring activities with the IEEE mentoring website. A budget of \$3k is deemed sufficient for the planned activities.

12. Osvaldo Simeone presented the Student Subcommittee report. The Student Subcommittee consists of faculty coordinators Sriram Vishwanath, Deniz Gunduz, and Osvaldo Simeone, along with a number of student/postdoc volunteers. At ITA 2013, the subcommittee co-hosted a panel on jobs and mentorship with the outreach committee. This will become a regular event. At ISIT 2013, there were two new initiatives: the video competition (with accompanying lunch event) and lunch with the Shannon awardee. For the video competition, only one submission was received (from MIT, interview with Bob Gallager and Dave Forney on "what is good research?"). At ITW 2013, a lunch event accompanied a presentation and discussion on MOOCs with Sriram Vishwanath. The Subcommittee operated with a budget of \$8020 (main budget) plus \$2032 (special initiative budget).

For 2014, the Subcommittee wishes to continue the Shannon Lecturer lunch event, and organize at least one student event at an European conference and an Asian conference.

In the discussion that followed, it was noted that the video competition may have been too open-ended.

It was suggested that a YouTube tutorial is needed on how to make a video, and that a theme/topic be chosen to anchor the competition. It was also suggested that the competition could benefit from more publicity. \$10K has been budgeted for student subcommittee activities this year. Abbas indicated that the student committee can come back to the BoG if the budget runs out.

13. Joerg Kliewer presented a report for the Ad Hoc Committee on Young Professional Program (YPP). The committee members are Emina Soljanin, Ram Zamir, and Joerg Kliewer. The focus of the committee is to assist and promote “young professionals” actively and efficiently. There is prevailing impression among students and postdocs that there is little professionally available for information theorists. The committee is trying to address this impression by identifying IT-related problems in industry, fields where IT can have an impact, and IT people who are successful in industry and other disciplines. Possible courses of action include panels where participants tell how IT help them in their work, awards for junior IT graduates working in other fields or in industry, and plenary talks by senior ITs working in other fields or in industry.

In the discussion which followed, it was suggested that we should communicate to students what is information theory. The possibility of an information theory MOOC was suggested. An industry impact award was also suggested.

14. Matthieu Bloch presented the report on the Ad Hoc Committee on Media Resources. The committee has started investigating options to develop a long-term and sustainable approach to handle ITSoc’s numerous media resources. Following Gerhard Kramer’s suggestion, the committee has initiated discussion IEEE.tv, an IEEE-wide effort that was launched in 2007 and that aims at making media resources (essentially videos) available to the general public and IEEE members. In particular, IEEE Societies have the option of creating individual channels (similar to YouTube channels) to stream their own media resources. IEEE.tv can create a channel and host videos for us at no cost. The default video player can be customized to fit ITSoc’s website theme for USD 500. Channels can be accessed from mobile devices, using free applications available for iPhone or Android devices. Matthieu mentioned that IEEE.tv is compatible with our web initiatives. It will be possible to embed videos hosted on IEEE.tv into [www.itsoc.org](http://www.itsoc.org). Using IEEE.tv could also be a efficient way of ensuring long-term and sustainable archiving of video resources. As long as the uploaded material was shot/made for the Society and for IEEE purposes, there should not be any issues with copyright.

The Ad Hoc Committee suggests that ITSoc set up a channel and goes through the process of uploading a few videos. If successful, ITSoc could then proceed to organize and upload its resources on IEEE.tv more systematically.

In the discussion which followed, BoG members generally agreed with the proposed approach. It was suggested that student paper award presentation videos be uploaded. The approach was seen to be good for outreach purposes.

15. Jeff Andrews presented the report of the Ad Hoc Committee on Future directions. The committee members are Jeff Andrews, UT Austin, Alex Dimakis, UT Austin, Lara Dolecek, UCLA, Michelle Effros, Caltech, Olgica Milenkovic, UIUC, Muriel Medard, MIT, Andrea Montanari, Stanford, Sriram Vishwanath, UT Austin, Edmund Yeh, Northeastern.

The report starts by defining information theory as a mathematical science that studies the ultimate limits of, and optimal methods and algorithms for (1) the representation of information, (2) the communication of information, (3) the processing and utilization of information. The report takes the view that information theory’s future lies largely in the deepening and broadening of intersections with many fields of science

and engineering, and also in the exploration of new boundaries with additional fields. Information theory's abstract and rigorous approach to the above three aspects of information offers a great deal to many fields where the approach is typically more observational or heuristic.

The report notes that information theory has matured into a field that defies easy categorization. It is not comfortably cast as subfield of electrical engineering, neither can it simply be considered a field of applied mathematics or probability. Many of the most exciting recent breakthroughs, and those this committee expects to see in the next 10-20 years, lie at the boundaries with other fields. Indeed, soon perhaps, information theory may be seen as an inseparable tool in traditional fields, not unlike calculus or computer programming. The report represents an effort to articulate some of these exciting connections: past, current, and future. The report begins with native and closely-related fields for information theory (communications, networks, control theory, signal processing, statistics and machine learning, theoretical computer science, physics), moves into several more emerging areas (genomics and molecular biology, economics and finance), and concludes with a brief list of recommendations.

Among the major recommendations of the committee are (1) consider the launch of a new journal entitled IEEE Journal on Special Topics in Information Theory or some other appropriate name; (2) encourage Awards committee to make special efforts to recognize sufficiently novel and high-risk papers outside the mainstream with awards; (3) encourage and promote broader and more accessible instruction of information theory at universities; (4) encourage a pilot government funding program exploring applications of information theory and related mathematical sciences to life and physical sciences.

Jeff requested feedback and support from the BoG on a draft report to the IEEE. Discussion followed the report presentation. Andrew Barron suggested including connections to probability, discrete math, and volunteered to help write this section. Sergio also supported including the connection to probability and statistics. He also suggested lossy and lossless compression (bridging the gulf from theory to practice). Abbas proposed that data science be included (showing that IT is driven by big real problems). A number of members were in support of balancing the report between big open problems in core IT and new areas. BoG members were requested to provide suggestions by 2/28.

In response to the committee recommendation on starting a Journal on selected topics in IT, discussion ensued on whether it is time for the society to start publishing more than one journal, e.g. selected topics, letters. Many BoG members thought it would be good to consider this question in a committee. An ad hoc committee will be formed to address this.

Related discussion on teaching awards followed. Gerhard mentioned that the society is considering an award honoring Jim Massey to recognize mid-career assistant/associate professors for combining teaching and research. Abbas has asked Gerhard to put together a recommendation.

16. Ruediger Urbanke present the Conference Committee report on behalf of Elza Erkip. Outgoing members Bruce Hajek and Paul Siegel were thanked for their service. The organizers of ISIT 2014 sent the procedures for reserving space to the BoG. Rooms for events and meetings at ISIT 2014 must be reserved by April 14, 2014. The report moved onto conference updates. ISIT 2013 (Arikan, Erkip) in Istanbul, Turkey, has successfully closed with 14% surplus. For ISIT 2014 (Kavcic, Host-Madsen, Veeravalli) in Honolulu, Hawaii, paper submission has closed. ISIT 2015 (Tse, Yeung) in Hong Kong will use a new format of four semi-plenary sessions. ISIT 2016 (Guillen i Fabregas, Martinez, Verdu) in Barcelona, Spain, will use a new venue at Universitat Pompeu Fabra, which the conference committee endorses. Sergio gave a description of the venue. ISIT should have access to the dorms but this is not yet confirmed. ITW 2015 (Song, Caire) in Jeju, Korea, has formed its committee and will submit budget/loan request in spring 2014.

ITW 2014 in Hobart has submitted its budget for approval. The surplus is 15% in expected and pessimistic scenarios. Details are available on the web. The conference committee recommends BoG approval.

**Motion:** To extend a load request of \$40k for ITW 2014 in Hobart. Motion was passed.

ITW 2015 in Jerusalem has submitted its budget for approval. The surplus is around 10% for both optimistic and pessimistic scenarios. Details are available on the web. The conference committee recommends BoG approval.

**Motion:** To approve the budget for ITW 2015 in Jerusalem. Motion was passed.

In terms of future conferences, interested groups for ISIT 2018 and beyond include Stockholm (contact: Lars Rasmussen), Melbourne (contact: Emanuele Viterbo), Chicago (contact: Daniela Tuninetti, Randall Berry), New York (contact: Aaron Wagner, Roy Yates). For ITW 2016 and beyond, interested groups include Napa, California (contact: Andrea Goldsmith), and Armenia (contact: Gurgen Khachatryan).

Moving onto requests for technical sponsorship. Technical sponsorship is subject to the condition that the sponsored conferences will pay fees if imposed by IEEE. Conferences need to be alerted about possible costs from IEEE.

For Allerton, ITSoc has provided technical co-sponsorship since 2008. The conference committee recommends BoG approval.

**Motion:** To approve technical sponsorship for Allerton 2014. Motion was passed.

For the International Symposium on Problems of Redundancy in Information and Control Systems, ITSoc has provided technical co-sponsorship in 2007, 2009 and 2012. The conference committee recommends BoG approval.

**Motion:** To approve technical sponsorship for International Symposium on Problems of Redundancy in Information and Control Systems 2014. Motion was passed.

For the International Conference on Systems, Communications and Coding, ITSoc has provided technical co-sponsorship in 2002, 2006, 2008, and 2013. The conference committee recommends BoG approval.

**Motion:** To approve technical sponsorship for 10th International Conference on Systems, Communications and Coding (SCC 2015), Feb 2-5, 2015. Motion was passed.

The meeting was adjourned at 4:55 PM.