



CEO Report

John White
SGB Meeting
October 16, 2014



Association for
Computing Machinery

Advancing Computing as a Science & Profession

On the State of ACM

- ACM is healthy
 - Membership remains over 108,000
 - ACM is sound financially
 - Initiatives in India, China, and Europe are maturing
 - ACM Retreat providing short-term direction
 - We have a new administration
- ... but there are challenges



Outline

- Overall state of ACM
 - Membership
 - Financials
- Special topics
 - International initiative
 - Heidelberg Laureate Forum
 - ACM Strategic Planning Retreat
 - New Administration
- Getting at deep issues facing ACM





Membership



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ACM Today

- Membership

31-Aug-14

Professional
Student

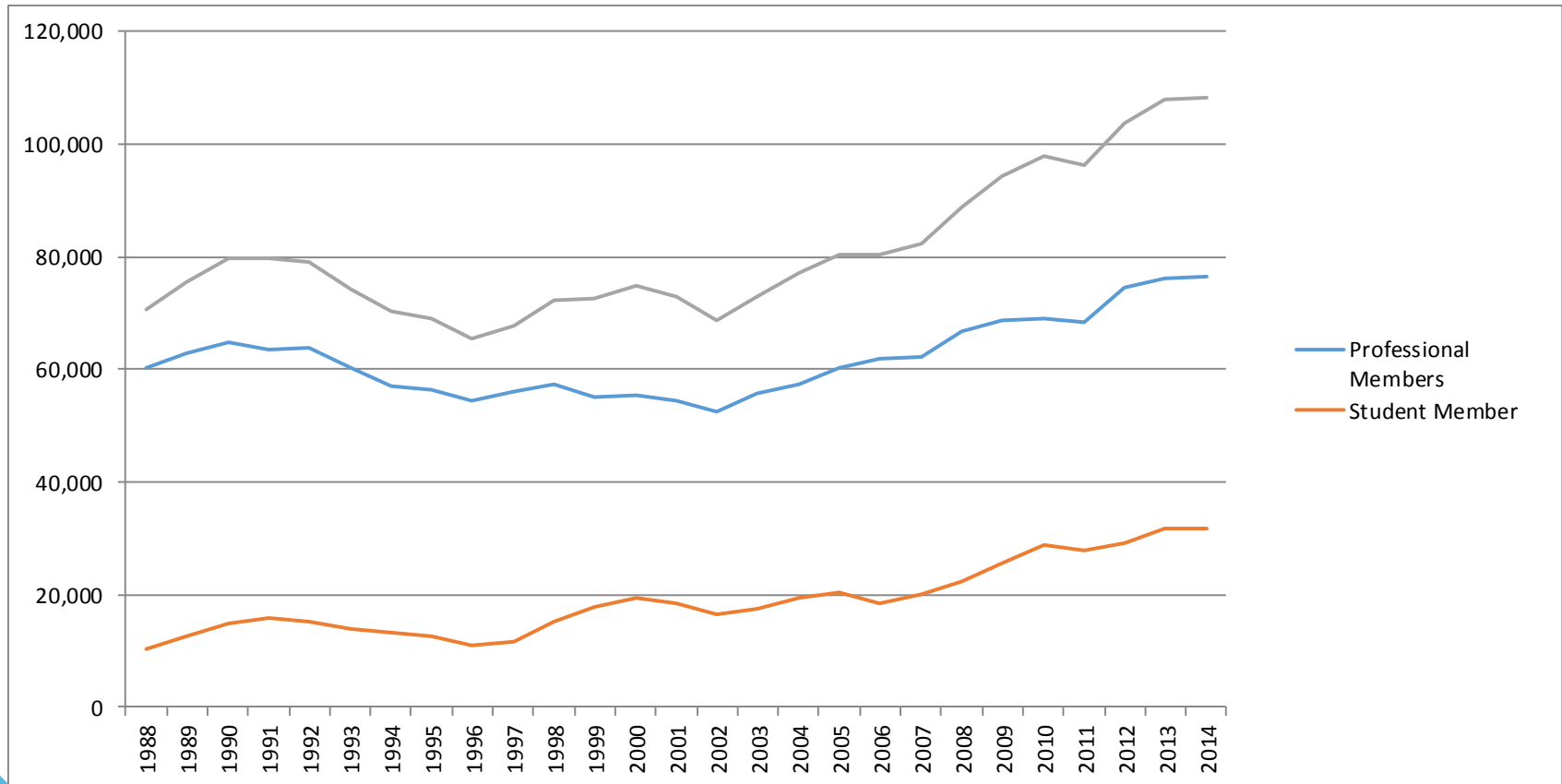
76,413

31,689

108,102



ACM Today



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ACM in General

- Membership - Total

31-Aug-14

Total	108,102	100%
US	49,863	46%
Canada	3,218	3%
Europe	15,454	14%
India	7,899	7%
China	17,601	16%
Hong Kong	426	0%
Other Intl.	13,641	13%



ACM in General

- Membership - Professional

31-Aug-14

Total	76,413	100%
US	37,705	49%
Canada	2,513	3%
Europe	11,890	16%
India	3,626	5%
China	11,262	15%
Hong Kong	354	0%
Other Intl.	9,063	12%



ACM in General

- Membership - Student

31-Aug-14

Total	31,689	100%
US	12,158	38%
Canada	705	2%
Europe	3,564	11%
India	4,273	13%
China	6,339	20%
Hong Kong	72	0%
Other Intl.	4,578	14%



Membership

- Trends – Total

	June-08	June-09	June-10	June-11	June-12	June-13	Aug-14	% Change
Total	88,882	94,204	97,110	96,280	103,663	108,037	108,102	21.6%
US	53,439	55,608	55,744	54,543	53,384	52,202	49,863	-6.7%
Canada	3,498	3,705	4,173	3,867	3,538	3,480	3,218	-8.0%
Europe	14,615	15,328	16,753	17,141	16,514	16,476	15,454	5.7%
India	2,683	2,858	3,868	4,564	4,402	6,405	7,899	194.4%
China	1,149	1,846	1,733	1,556	11,470	14,441	17,601	1431.9%
Hong Kong	421	456	552	478	448	440	426	1.2%
Other Intl.	13,077	14,403	14,287	14,131	13,907	14,593	13,641	4.3%



Membership

- Trends – Professional

	June-08	June-09	June-10	June-11	June-12	June-13	Aug-14	% Change
Total	66,535	68,596	68,717	68,514	74,502	76,282	76,413	14.8%
US	41,882	42,369	41,331	40,612	39,892	39,127	37,705	-10.0%
Canada	2,833	2,936	2,890	2,835	2,723	2,634	2,513	-11.3%
Europe	11,131	11,720	12,374	12,315	12,335	12,401	11,890	6.8%
India	1,457	1,675	2,425	2,742	2,270	2,975	3,626	148.9%
China	482	587	719	680	7,852	9,398	11,262	2236.5%
Hong Kong	359	357	351	354	349	358	354	-1.4%
Other Intl.	8,391	8,952	8,627	8,976	9,081	9,389	9,063	8.0%



Membership

- Trends – Students

	June-08	June-09	June-10	June-11	June-12	June-13	Aug-14	% Change
Total	22,347	25,608	28,393	27,766	29,161	31,755	31,689	41.8%
US	11,557	13,239	14,413	13,931	13,492	13,075	12,158	5.2%
Canada	665	769	1,283	1,032	815	846	705	6.0%
Europe	3,484	3,608	4,379	4,826	4,179	4,075	3,564	2.3%
India	1,226	1,183	1,443	1,822	2,132	3,430	4,273	248.5%
China	667	1,259	1,014	876	3,618	5,043	6,339	850.4%
Hong Kong	62	99	201	124	99	82	72	16.1%
Other Intl.	4,686	5,451	5,660	5,155	4,826	5,204	4,578	-2.3%



Financials



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Financials

- ACM is financially sound
 - FY'14
 - Very solid year for ACM General
 - Very, very solid year for ACM SIGs
 - FY'15
 - FY '15 will be a solid year
 - ACM General and ACM SIGs should do well



Special Topics

- International Initiative
- Heidelberg Laureate Forum
- Strategic planning retreat
- New administration





International Initiatives



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International Initiatives

- Europe
 - Established ACM Europe as a legal entity within the EU
 - ECRC
 - 1st European Computing Research Congress (ECRC) – 2013
 - 2nd European Computing Research Congress (ECRC) – 2017
 - With Informatics Europe
 - Issued report on secondary computing education in Europe
 - Launching a research project to do a first in-depth look at the status of computing at the secondary level across Europe
 - Establishing a policy committee of ACM Europe Council – EUACM
 - Priorities
 - Education
 - Engaging European Commission on computing research funding priorities



International Initiatives

- India
 - Legal entity within India with ACM India Council elected by ACM Indian members
 - Education initiative
 - Established a CRA-like Computing Research Board under the ACM India Council
 - ACM India Doctoral Dissertation Award
 - Annual faculty summit
 - Annual report on PhD production



International Initiatives

- China
 - MOU with China Computer Federation (CCF)
 - Rebuilt the ACM China Council
 - Held two meetings of the full ACM China Council
 - Building agenda for chapters, education, publication, awards
 - Started monthly translation of CACM to Chinese
 - Five articles per month
 - High quality translation
 - » First pass: contractors
 - » Second pass: ACM China CACM Editorial Board domain experts
 - Planning for a Chinese translation of CS2013

CACM in Chinese





Heidelberg Laureate Forum



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Heidelberg Forum (HLF)

- The Forum



Abel, Fields, Turing Laureates Meet the Next Generation

Klaus Tschira Foundation
Heidelberg Institute for Theoretical Studies
Association for Computing Machinery (Turing Award)
International Mathematics Union (Fields Medal)
Norwegian Academy of Science and Letters (Abel Prize)

- Week-long meeting of young researchers and Abel, Fields, Turing laureates

Heidelberg Laureate Forum (HLF)

- First forum was a success
 - 200 young researchers
 - 40 laureates
- Second HLF
 - Same model
 - ACM is driving the process for the computing community
 - Generating awareness
 - Creating and running the ACM HLF Committee for reviewing and ranking applicants
 - Numbers
 - Applicants: 334 in computing 306 in mathematics
 - Slots: 100 in computing 100 in mathematics



Heidelberg Laureate Forum (HLF)



• ACM HLF Committee

Manindra Agrawal (IIT Kanpur)	Theory	India
Ozalp Babaoglu (University of Bologna)	Systems	Italy
Azer Bestavros (Boston University)	Networking, embedded systems	USA
→ Jennifer Chayes (MSR-NE&NYC)	Theory	USA
Baining Guo (MSR-Asia)	Graphics	China
Mor Harchol-Balter (CMU)	Queuing theory	USA
Anna Karlin (University of Washington)	Algorithms, game theory	USA
Lap Chi Lau (Chinese University of Hong Kong)	Theory, algorithms	China
Ed Lazowska (University of Washington)	Systems	USA
Greg Morrisett (Harvard)	Programming languages	USA
Beth Mynatt (Georgia Tech)	HCI	USA
P. J. Narayanan (IIIT Hyderabad)	Computer vision/graphics	India
David Parkes (Harvard)	Game theory, artificial intelligence	USA
Ron Perrott (Oxford)	High performance computing	UK
Dana Randall (Georgia Tech)	Theory	USA
Daniela Rus (MIT)	Robotics, mobile computing	USA
Bernhard Schölkopf (Max-Planck Institute)	Machine Learning	Germany
→ Angelika Steger (ETH)	Theory	Switzerland
Per Stenström (Chalmers)	High performance computing	Sweden
Jennifer Widom (Stanford)	Data management and systems	USA
Jeannette Wing (MSR)	Formal methods, distributed systems	USA
Alexander Wolf (Imperial College, London)	Software engineering, systems	UK
Dongmei Zhang (MSR-Asia)	Software Analytics	China



HLF Demographics – Computer Science

	Applicants		Selected	
Men	242	72.7%	79	71.8%
Women	91	27.3%	31	28.2%
Totals	333	100.0%	110	100.0%

	Applicants		Selected	
Undergraduate	44	13.2%	4	3.6%
Graduate PhD	176	53.0%	53	48.2%
PostDoc	113	33.8%	53	48.2%
Totals	333	100.0%	110	100.0%

	Applicants		Selected	
Africa - except North	20	6.0%	3	2.7%
Africa - North	1	0.3%	0	0.0%
Arab Peninsula	2	0.6%	0	0.0%
Asia-SouthEast	2	0.6%	0	0.0%
Australia and New Ze	13	3.9%	4	3.6%
China	16	4.8%	2	1.8%
Europe-E	13	3.9%	4	3.6%
Europe-NWS	112	33.6%	40	36.4%
India	35	10.5%	7	6.4%
Iran, Afghanistan, Pa	5	1.5%	0	0.0%
Japan and Korea	6	1.8%	1	0.9%
Mexico, Central Ame	1	0.3%	0	0.0%
Middle East	2	0.6%	0	0.0%
South America	2	0.6%	0	0.0%
USA, Canada	103	30.9%	49	44.5%
Totals	333	100.0%	110	100.0%



HLF Demographics – Computer Science

Research Area	Applicants		Selected	
	Count	Percentage	Count	Percentage
Algorithms and data structures	20	6.0%	9	8.2%
Theory of computation	14	4.2%	5	4.5%
Computational Linguistics	5	1.5%	1	0.9%
Formal methods	20	6.0%	11	10.0%
Information and coding theory	4	1.2%	0	0.0%
Artificial intelligence	29	8.7%	6	5.5%
Machine learning	19	5.7%	6	5.5%
Robotics	4	1.2%	1	0.9%
Computational science	15	4.5%	5	4.5%
Information science	6	1.8%	1	0.9%
Computer graphics and visualization	16	4.8%	7	6.4%
Data management	8	2.4%	3	2.7%
Information Retrieval and Management	14	4.2%	5	4.5%
Health Informatics	14	4.2%	4	3.6%
Human Computer Interaction	13	3.9%	2	1.8%
Computer architecture and engineering	15	4.5%	10	9.1%
Programming languages	11	3.3%	3	2.7%
Security and privacy	29	8.7%	9	8.2%
Software engineering	13	3.9%	4	3.6%
Systems and networking	64	19.2%	18	16.4%
Totals	333	100.0%	110	100.0%



Heidelberg Laureate Forum (HLF)

- We need SIGs to help get the word out to young researchers in your technical communities





Strategic Planning Retreat



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Major Issues to Explore

- *Membership*
 - Build an ACM Community Member Database
 - Build an Initial Model for the ACM Community
 - Define the Products, Services, and Benefits for the ACM Community
- *Publications*
 - Improve the Current Publications Business
 - Move Further with OA Publishing within ACM
 - Critically Review the Current Portfolio of Publications
 - Journal vs. Conference Publishing
 - Future Published Content
 - The Future of the Digital Library
- *Conferences/SIGs*
 - Reposition Conferences within the Publishing Culture of Computing Research
 - Explore Conferences Outside the SIG Structure
 - Improve the SIG Structure





New Administration



**Association for
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Senior Volunteer Leadership



Council

President	Alexander L Wolf*
Vice President	Vicki Hanson*
Secretary/Treasurer	Erik R Altman*
Publications Board Co-Chair	Joseph A Konstan Jack Davidson
SIG Governing Board Chair	Patrick H Madden*
SGB Council Representative	Paul Beame* Barbara Owens David A Wood
Past President	Vinton Cerf*
Member-at-Large	Eric Allman Ricardo A Baeza-Yates Cherri M Pancake* Radia Perlman Mary Lou Soffa Eugene H Spafford Per O Stenstrom*

Key Boards/Councils/Committees

Education Board	Mehran Sahami* Jane Prey*
Practitioner Board	George Neville-Neil*
ACM-W Council	Valerie Barr
USACM Council	Ed Felton*
ACM Europe	Fabrizio Gagliardi
ACM India	Srinivas Padmanabhuni*
ACM China	Yunhao Liu
Education Policy	Bobby Schnabel

* New in position



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Emerging Priorities

- Deliver on the ACM Retreat Outcomes
- Continue to develop ACM presence and relevance in India, China, and Europe
- Consider new regional initiatives
- Deeper thinking about the long-term future of ACM



Getting at the Deep Issues Facing ACM



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The Issues

- There are lots of issues for ACM
- The deep issues
 - The future of publications revenue and the impact of that future on the future of ACM
 - Practitioners
- The upcoming Council meeting agenda
 - General stuff
 - Finding the right balance (publications and the future of ACM), and what do we do if we can't
 - Serving practitioners

Finding the Right Balance

- ACM has a relatively straightforward business models
 - Three revenue streams
 - Membership dues
 - Conference registration fees
 - Publication subscriptions fees
 - Three sets of related expenses
 - Results today
 - Membership runs at a loss because we subsidize students worldwide and professional members in developing countries
 - Conferences run at a surplus, but that surplus is retained by the SIGs and invested in serving and subsidizing their respective technical communities
 - Publications generate a surplus

Finding the Right Balance

- The publications surplus
 - Used to underwrite the membership loss associated with subsidies for students and developing countries
 - Used to significantly supplement the operating funds flowing back to the SIGs
 - It is also used to underwrite the programs our volunteers and members want, build, and run – but for which there is no revenue ... the “good works” of ACM.

Finding the Right Balance

- The “good works” of ACM includes ...
 - ACM-W – our 20-year effort to support and see more women in computing
 - CDC – the Committee to Diversify Computing and the Tapia conference – activities focused on broadening participation in computing
 - CSTA – the organization for high school and middle school computing teachers
 - EPC – the Education Policy Committee that advocates for policy changes to see real computer science exist and count in high schools
 - CRA – significant support for the Computing Research Association
 - CSAB – significant support for accrediting computing programs at North American universities
 - USACM – the volunteer committee focused on six major areas of technology policy
 - ACM Europe/China/India – our efforts to be more visible and relevant in these regions in helping advance computing as a science and profession
 - The Education Board and its five-decade effort to develop and maintain curriculum standards for computing and computer science;
 - The Practitioner Board and its development of Queue and the Practice Section of CACM;
 - The Publications Board and its oversight of ACM publications and publications policy
 - The ACM Awards program and its recognition of excellence in computing
 - Many, many more ...



Finding the Right Balance

- The “good works” of ACM
 - These programs exist not because some abstract corporate entity (“the ACM”) built them, but because members *wanted* them, and in many cases *demand*ed they exist
 - And they thrive because the community is committed to doing the enormous amount of volunteer work needed for each
- So, there is a motivation for sustaining a publications surplus
 - Subsidizing students and members from developing countries
 - Subsidizing SIG operating funds
 - Supporting the good works of ACM
- But is it possible?
 - Is there a model that opens content but sustains value in the DL?
 - In other words, is there a balance, and can we find it?

Finding the Right Balance

- To date, finding the right balance has involved engaging OA and increasing free access to SIG content ... all while sustaining the Digital Library
 - Being a Green/Gold/Hybrid OA publisher
 - Complying with government mandates
 - Opening SIG content
 - Opening conference proceedings in the DL surrounding a conference
 - Opening conference proceedings in a series until the next conference
- The above steps were taken in early 2013
 - After much deliberation at the Publications Board, the EC, and Council
 - Structured as a three-year experiment to assess the impact on DL revenue
- For some, the steps taken were not enough

Finding the Right Balance

- Despite opening more content around conferences, we are still perceived as ...
 - Dragging our feet with respect to OA
 - Not an OA (read free/public access) publisher
 - Not comparing well with USNIX and other groups
- This perception is not held by all of the community (or SIGs), but it is an issue within a significant segment
 - SIGACT, SIGPLAN, SIGOPS, ...
- Consequences are a concern
 - SOCG leaving SIGACT because of the ACM “paywall”
 - CCC leaving IEEE but not coming to SIGACT
 - Issues and pressure within STOC
 - Issues and pressure within SIGPLAN
 - Likely to face issues and pressure within SIGOPS ... and other SIGs (but not all)

Finding the Right Balance

- In finding the right balance, there is an additional step to consider
 - Allow SIGs to host all conferences in a series, not just the current year
 - The model
 - Each conference represented by a TOC and Authorizer links
 - Conference proceedings in a series could be maintained on the SIG site or the conference site(s)
 - Papers would also reside in the DL and could only be downloaded from there with a subscription or some other access right
 - The outcome
 - The definitive version of all papers published in a SIG's conferences are freely available on the SIG's site or the conference site (by finding the TOC and clicking on the Authorizer link) ... if a SIG desires
 - The DL is still the definitive aggregation of everything we publish, but the papers in a SIG's conferences could be found on the SIG's site or the conference site (not that different from USNIX).

Finding the Right Balance

- Reaction from one SIG with concerns about “open access”,
 - Handled well, this kind of thing could be a very real win on the OA issue for ACM, and could largely defuse the OA concerns from our community
 - Handled well ...
 - It would have to be a full commitment, rather than just a 3-year experiment.
 - It would have to be something that can be associated with either a permanent conference website or a SIG website - jointly sponsored conferences are an issue, and some conferences operate their main websites quite separately from their SIGs.
 - It would have to work well with the kinds of websites that SIGs/Conferences typically run. In particular, the format for this facility would have to be quite a bit more flexible than the rigid way with a single TOC page that the 1st year Authorizer pages currently work.
 - For many conferences, it is desirable to have conference papers organized in a format that the conference goers would have seen, with links from the program itself. USENIX papers are linked in this way.
 - There would have to be real ACM support for making this work.

Finding the Right Balance



- Reaction from the Publications Board,
 - We understand the context and the demands
 - Taking this step as outlined (and further qualified by the SIG with OA concerns) would ...
 - Mean an end to the three-year experiment in which we assess the impact of revenue-downloads and free-downloads on DL revenue and the SIGs
 - Constitute an additional risk to our goal of sustaining the DL and its revenue stream
 - But ... the Publications Board is willing to support this proposal as long as the SIGs share in the financial risk as determined by the Executive Committee and Council
 - New models for sharing revenue
 - New models for counting revenue vs. free downloads
- Reaction from the SIGs ????????????????????????????

Finding the Right Balance

- Next steps
 - Council discussion of “the right balance”
 - Council discussion of the impact of pending mandates (OSTP)
 - Council discussion of ACM models with no publication surpluses
 - Rethinking the membership model
 - Rethinking the conferences model
 - Rethinking the SIG model
 - Presidential task force to develop serious alternatives

