Professions Board
FY'10 ANNUAL REPORT
August 31st, 2010

Submitted by Steve Bourne

Summary

The Professions Board has been operating since June 2005. The board itself meets via teleconference as needed and we have 3 face to face meetings a year. The board is actively engaged on the projects that we have undertaken and we have good staff support.

Board Membership

Steve Bourne (Chair)
Bryan Cantrill
Terry Coatta (Vice Chair)
Ben Fried
Jim Waldo
Theo Schlossnagle
Steve Petschulat

Committee Chairs
Steve Teicher
Terry Coatta
Mache Creeger
Mark Compton

Professions Board Projects

1. Queue
    a. Articles
    b. Case Studies (Coatta)
    c. CTO round tables (Creeger)
2. Professional development
3. Distinguished Speakers Program

Queue

In the past 12 months, the Queue website has shown remarkable growth both in attracting readers and delivering content.

Since this time last year, the site has delivered nearly a million (966,260) page views to nearly half a million (452,628) readers.

About two thirds of the readers visiting the site have not done so before, showing the success Queue has had in attracting readers otherwise unfamiliar with the site.

The number of pageviews delivered by the site has grown by nearly 65% (64.52%), the number of visits has increased by nearly 80% (77.74%), and the number of visitors to the site in the past year has grown by more than 80% (81.21%)

2010 has turned out to be a significant year as the site has gotten more attention from other sites, helping to drive more readers to Queue.

Just this past June, the site experienced record traffic with over 50,000 visitors in a single day.

We attribute this success to the work of Queue's outstanding authors who, working in close collaboration with the Queue Board, have produced unique articles of great interest to Queue's practitioner readership.

CTO Round Tables

Discussions

- 5-6 "CTO" level experts in moderated panel discussion
    - Topics selected of current interest to practitioners
    - Expert guide and moderated by Mache Creeger
    - Content captured and edited into published articles
        - Summary article giving overview of key discussion points
        - Transcription of discussion edited/massaged for publication

- Past Topics published
    - Storage
    - Virtualization
    - Cloud Computing
    - Malware Defense
    - Network Virtualization
    - Theft of Business Innovation – Jointly with BCS
        - To be published in CACM in December issue

- Candidates for future
    - Mobile devices in the enterprise service stack

- Issues & Responses

- What we know:
    - Web numbers could be higher

- We don't think it's the topics
  - Discussion to publication latency needs to be reduced

- How we plan to respond:
  - More upfront prep work on the topic
    - Pre-panel interview by Mache Creeger of panelists
    - Generation of a more in depth topic outline
      - Able to effect discussion completeness more efficiently
      - Much more focused discussion threads
    - Somewhere between a free flowing discussion (what we have today) and a scripted multi-person interview
  - Lowering the number of panelists from 5-6 to 3-4
    - Limits the number of parallel conversation threads
  - Reduce discussion times from 2+ hours to 90+ minutes
  - More topic selection guidance and support from Queue editorial board
    - Currently topics selected by Mache Creeger and Steve Bourne
    - We could use help - especially in narrowing the topics

- <u>Summary</u>

- CTO Round Tables
  - Good content published on Queue Web Site and in CACM
  - Smaller than expected audience
  - Restructuring content to have a more focused and linear narrative
    - Smaller panel size
    - More pre-discussion outline prep
    - Limiting discussion to 90 minutes

Case Studies

The case study program turned a corner over the past year, transforming from an undertaking that seemed full of promise to something that actually started to deliver on the promise. That began with the August, 2009, posting of a case study focused on the evolution of GFS on the Queue website. It's since gone on to become one of the most popular items ever posted on the site, with more than 50,000 unique visits to date. The GFS case study was also Slashdotted, and it subsequently appeared as part of the March 2010 issue of CACM, where it once again proved to be quite popular. Another case study focused on the efforts made to scale the performance of Photoshop on multicore platforms is just about to be posted and, if anything, it promises to drive even more traffic than the GFS case study did. A discussion between Clem Cole (Architect of Intel Cluster Ready) and Russell Williams (Principal Scientist of Adobe Photoshop) is central to this new case study.

Also well underway are additional case studies spotlighting efforts at SAP BusinessObjects to implement a user experience design for a new business intelligence tool now marketed as "Explorer" as well as the extensive protocol test efforts that have been mounted by Microsoft as

part of its work to comply with court decrees that settled US and EU antitrust cases against the company. Both of these case studies are expected to
be complete by the end of the 2010 calendar year.

In addition, the case study program has developed five articles to accompany the case studies completed to date. Three of these so far have appeared in CACM as well as on the Queue website. One, having to do with the lessons learned in the course of developing Google Web Toolkit, was also Slashdotted. Yet another article about to be posted on the Queue website, "Keeping Bits Safe" by Stanford's David Rosenthal, is an important contribution that will also appear in CACM and is certain to attract a lot of attention.

Looking ahead, now that the case study program is truly in production mode, the goal is to increase the article yield year-over-year. As the program continues to become more established and case studies and articles developed as part of the program gain greater visibility, it's anticipated that author recruitment ought to become somewhat easier. As for the case studies themselves, the goal is to bring three to term over the next year.

The Case Study Steering Committee, meanwhile, has grown to include Jim Gettys from Alcatel-Lucent Bell Labs and Eileen Smith from the University of Central Florida. The group they joined already included Steve Bourne, Terry Coatta, Steve Teicher and Dick Sites. Adding several more qualified people to the committee is yet another goal for the year to come.

Professional Development Committee Report
August 18, 2010

Prepared by: Lillian Israel, ACM Director of Membership and Steve Teicher, Chair

Members of the PD Committee include:
Adam Barr, Microsoft
Nativa Caftori, Northeastern Illinois University
Terry Coatta, Vitrium Systems
Stephen Ibaraki, IT Consultant, Past CIPS President
Maggie Johnson, Google
Terry Linkletter, Central Washington University
Joyce Currie Little, Towson University
Tan Moorthy, Infosys
Jon Rolph, BTS INS
Eileen Smith, University of Central Florida
Francis Tsang, Adobe

ACM Liaisons:
Lillian Israel, Director of Membership
Yan Timanovsky, Education Manager

PD Committee Activities:
FY'10 was a very busy year for the Committee – from understanding members' technical needs via **ACM's PD Survey** (November'09) to creating **Tech Packs** (integrated learning packages specifically geared for Practitioners and Managers). Highlights include:

Highlights of the ACM PD Survey:
The grid below lists the topics selected as top-10 favorites by 10%+ of one or both of Practitioners and Managers:

Topic	% of Pract. & Mgrs., in top-10	Most interested in	Topic	% of Pract. & Mgrs., in top-10	Most interested in
Cloud Computing	26%	Both	Web Design	16%	Both
Soft. Dev. Method.	26%	Mgrs.	Soft. Dev. Lifecycle	16%	Mgrs.
Soft. Proj. Mgmt.	25%	Mgrs +	Data Mining	16%	Both
Open Source	23%	Both	Cybercrime	15%	Both
Databases	23%	Both	Parallel & Multicore	15%	Both
Web Dev.	22%	Both	Program. Style	14%	Pract+
Soft. Arch.	22%	Both	Network Security	14%	Mgrs+
OOP	22%	Pract+	Infor. Sys.	13%	Mgrs+
Design Patterns	18%	Pract+	Visualization	13%	Mgrs+
Infor. Security	18%	Mgrs	Compilers & Lang. Theory	13%	Pract
User Inter.	18%	Both	Open Source Software	13%	Pract+
HCI	18%	Mgrs+	Concurrency & Realtime Program.	12%	Pract+
Project Mgmt.	17%	Mgrs+	Data Warehousing	12%	Mgrs+
AI	17%	Both	Social Networks	11%	Mgrs+
Distrib. Computing	17%	Pract	Bus. Proc. Mgmt.	10%	Mgrs+

The grid below indicates those topics that Practitioners and Managers would like ACM to focus on at least "somewhat more" in the future:

Topic	% feel ACM should focus somewhat more on	Topic	% feel ACM should focus somewhat more on
Social Networks	94%	Open Source	73%
Software Arch.	88%	Network Security	71%
Project Mgmt.	84%	HCI	70%
Open Source Soft.	83%	Web Develop.	69%
Design Patterns	81%	Virtual Machines	69%
User Interfaces	81%	Soft. Dev. Lifecycle	69%
Bus. Proc. Mgmt.	81%	Visualization	69%
Infor. Security	80%	Databases	66%
Web Design	80%	Data Warehousing	66%
Cloud Computing	79%	Soft. Dev. Method.	65%
Soft. Proj. Mgmt.	79%	Compilers & Lang. Theory	65%
Program. Style	78%	Distrib. Computing	63%
Concurrency & Real-time Program.	77%	Data Mining	62%
AI	76%	OOP	58%
Parallel & Multicore	76%	Information Systems	50%

- **Programming Languages/Scripting Languages**: The majority of Practitioners, and 50% of Managers, are interested in programming/scripting languages. 7 of the 13 languages asked about were identified by about 1/3 of these members as topics they are interested in; in order of interest, they include: C++, Java, SQL, XML, Python, C, and Javascript.

- A significant portion of Practitioners and Managers interested in these programming/scripting languages would like ACM to focus at least somewhat more on (in order of interest): Python, SQL, XML, Javascript, Java, C++, C.

- **Operating Systems**: Linux/Variants is the OS in which Practitioners and Managers are most interested. A high percentage of those interested in the five OS's rated highest – Linux/Variants, Windows 7, Unix/Variants, Mobile Systems, and MacOS – would like to see ACM increase their focus on these systems in the future: Mobile Systems 90%), Linux/Variants (75%), Windows 7 (73%), MacOS (73%), Unix/Variants (64%).

- **Certification**: 25% of Practitioners and 38% of Managers report they currently hold one or more Certifications – 29% of Practitioners hold Microsoft Certifications; 19% of Managers hold Project Management Institute Certifications; and 17% of Managers hold an IT Infrastructure Library Certification. Only 25% of those with a certification feel that it has been extremely or very valuable to their career.

- **Career Advancement Aids & Preferred Learning Channels**: Online books, online tutorials, and online courses are the career advancement aids and channels for learning about new techniques and keeping skills current that Practitioners and Managers are most interested in; they would like to see ACM devote more resources to them in the future.

- **Member Interests**: In addition to CACM, Practitioners and Managers read about two other technical publications on a regular basis; neither constituency appears to have a strong favorite after CACM. Google and Wikipedia are the websites they visit most often on a regular basis. 23% of Practitioners indicate that they are members of a "Local User Group." 22% of Practitioners report they are a member of a Technical or Industry "Meet-Up" Group.

A Tech Pack Update:

In looking at the topics of ACM's current online book and course offerings, and comparing these offerings to the topics cited by members in the PD survey, the PD Committee decided that other means needed to be developed to deliver technical information. At the same time, the PD Committee acknowledged that ACM had great technical assets, specifically its Digital Library that offered reviewed articles/papers from ACM journals, magazines, conference proceedings, videos from conferences, etc. Could ACM's assets be leveraged to create new learning artifacts?

Tech Packs, integrated learning packages, geared for Practitioners, designed around an annotated bibliography of resources selected from ACM's DL, ACM's online book and course offerings, non-ACM resources, created by experts on current computing topics were recommended; ultimately, a community might be built around Tech Packs with members commenting on selected resources and suggesting new ones.

Tech Packs are created by Committees consisting of subject matter experts; the Chair of the Tech Pack Committee recruits Committee members, sometimes with the help of ACM staff. And, a cadre of Practitioners review the annotated bibliography created by the Tech Pack Committee to ensure its usability.

Tech Packs will help fill the technical information gap by offering –
- Resources from the ACM DL recommended for Practitioners.
- Recommended resources from the ACM DL **plus** extra recommended ACM **and** non-ACM resources (i.e., Tech Pack Committees and reviewers filter the DL and non-ACM materials to ensure usability)!
- An interactive component of Tech Packs creates new communities.
- Recommended open courseware enhances aggregator courseware.

- Members take "ownership" of Tech Packs by virtue of their recommendations and suggestions.
- Members are the catalyst for suggesting new Tech Packs; ACM is the facilitator of Tech Packs; and ACM subject matter experts are the developers and filterers.

The "heart" of the Tech Pack, the annotated bibliography can consist of ACM DL resources, ACM non-DL resources, as well as non-ACM resources – it depends what the Tech Pack Committee deems important enough to be part of the "blessed" annotated bibliography.

To feature "Tech Packs," a new website was required to in order to house a richer and more varied selection of learning artifacts. The name "**Learning Center**" was chosen because of its all-encompassing nature. This website will be launched in early FY'11.

When the Learning Center launches, the **Cloud Computing** (Doug Terry, MSR Tech Pack Chair, SIGOPS Chair and ACM Fellow, and **Parallel Processing** (Matt Wolf, Georgia Tech, Paul Steinberg, Intel Software College, Co-Chairs) Tech Packs will be included. The following Tech Packs will be developed over the next few months:

- Globalization/Localization
- Mobility
- Software as a Service

Other Tech Packs being explored include:
- Security
- Business Intelligence & Data Mining
- Collaboration Domain Knowledge
- Storage Systems
- Green Computing
- Open Source
- Interactive Graphics
- Gaming

Certification and Licensing

Certification and licensing have been discussed in various forums within and without ACM. In particular the WEB Sites for the IEEE Computer Society and for the British Computer Society emphasize that certification is the way to turn software engineering from "something" into a profession. And of course they each offer a path to becoming certified.

While ACM has been a long time sponsor for ICCP, Institute for the Certification of Computer Professionals, ACM's stance on the subject has largely been passive. Several points need to be discussed:

a. Is certification and or licensing on a steam-roller headed our way?
b. Is ICCP one of the vehicles that ACM will push as our entry into this race?
    a. Do we nominate our current ACM representatives for another 2 years?

      b. Do we augment these 2 with more
  c. Does ACM have an alternative to propose?
  d. Do our positions and actions in this space serve our members?

The PD committee has casually discussed certification and licensing during the past year. Now it seems that our discussions should become more focused.

Distinguished Speaker's Program

For the Period: July 1, 2009 - June 30, 2010
Submitted by: Annie Archbold

1. BASIC INFORMATION

The DSP Committee is responsible for the oversight of the DSP, including reviewing its scope, procedures, and policies to improve the effectiveness of the program.

- Annie Archbold (Committee Chair), Centers for Disease Control and Prevention
- Barrett Bryant, University of Alabama at Birmingham
- Bill Curtis-Davidson, IBM
- Robert Jones, Intel
- David Kasik, Boeing
- Laura Parker, Mentor Graphics
- Gabby Silberman, Computer Associates
- Molly Stevens, Google
- Michael Jenkin, York University
- Prerana Vyas, Optimus BT
- Rodolfo Castello, ITESM

2. PROJECT SUMMARY

The DSP Committee put in place a rating scale used by ACM's Fellows Committee to rank all speaker nominations. Each DSP Committee member will rate the nominee on a 1-to-5 scale. Any candidate that is given a rating of "3" or better is accepted as a speaker, while a rating of "1" or "2" indicated the nominee is not accepted into the program. Molly Stevens created a Google app to assist in the tracking of the committee votes and comments made on the nominated speaker.

The DSP Committee created DSP Procedures, Guidelines and Tips for the following categories:
1. DSP Nomination Procedures
2. Travel Guidelines for Speakers
3. Guidelines on International Travel for Chapters and Speakers
4. Guidelines and Tips for Speakers
5. Guidelines and Tips for Hosting a Speaker.

There where 40 lectures given in FY 2010.
There where 6 new speakers added to the program, bringing the total to 89 speakers.

3. PLANS
The Committee will be working with the new Councils (India, China and Europe) to expand the DSP in their respective areas. This will include new speakers, new topics, as well as expanding the number of lecture requests. Monies have been secured from Microsoft to expand the DSP in Europe.

4. COMMENTS
Gabby Silberman will serve as the Chair beginning in fiscal year 2011. He will take a strategic view of the DSP to fit into other ACM activities.