Presidential Task Force on SIG Overhead

Report to SGB
29 April, 2022

Outline

• [You already received 2 backup documents]
• Why we’re meeting
  • SIGs are doing well financially, but the overhead calculation method isn’t covering SIG-related costs
  • Other ACM groups have had to “subsidize” the SIGs
  • President charged SGB to update the calculation for FY23
• How the discussion is organized
  • Some important context
  • How we approached the task
  • What we recommend and general discussion
• After this meeting, you’ll each need to
  • Consider the impact of 2 methods on your SIG
  • Vote on which method should be used going forward
WHY WE’RE MEETING

PTF Role and Timeline

• Presidential Task Force
  • Final step in multi-year effort to improve processes so that finances are clearer for volunteers
  • Our charge: Review how SIG overhead is handled and make recommendations for adjusting the process

• Process & timeline
  • Jan-Feb: PTF formulates initial ideas
  • March-April: iterate to arrive at one or two proposed methods; involve more SIGs as needed
  • April 11: draft recommendations to EC for review & comment
  • April 29: recommendations presented to SGB for questions & discussion
  • Early May: SGB votes on new method
  • Early June: EC reports to Council as part of FY23 budget discussion
Task Force Members

- Only some SIGs, but considered impact on all (including future SIGs)
  - SIG representatives
    - Adrienne Decker (Chair, CSE)
    - Falko Dressler (Vice Chair, MOBILE)
    - Jeff Foster (Chair, PLAN)
    - Andrew Kun (Treasurer, CHI)
    - Brad Lawrence (Treasurer, GRAPH)
    - Wei Wang (Chair, KDD)
    - John West (Chair, HPC)
  - Ex oficio
    - Cherri Pancake (chair; Past President)
    - Jens Palsberg (SGB Chair)
    - Donna Cappo (SIG Services) and Pat Ryan (COO)

SOME IMPORTANT CONTEXT
The Context of SIG Finances

- SIGs and their Conferences account for roughly 1/3 of ACM’s revenues/expenses
  - Most recent complete year is FY21 (July 2020 – June 2021)

<table>
<thead>
<tr>
<th>FY21 Revenue</th>
<th>FY21 Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Operations • Governance • SIG Gov. • Conferences</td>
<td></td>
</tr>
<tr>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>58%</td>
<td>59%</td>
</tr>
</tbody>
</table>

- Historically, the picture is remarkably consistent
  - Proportions haven’t changed significantly for at least a decade

Context (2)

- SIGs may only be 1/3 of each year’s revenue/expenses – but that’s just part of the picture
- Proportions of reserve $$ (“money in the bank”) are the opposite
  - At end of FY21, SIGs control over 70% of ACM’s operating reserves
  - SIG portion currently ~$70M
- Historically, this has been changing
  - 2/3 of SIGs have a pattern of “accumulating wealth”
  - SIG fund balances grow even during lean years
  - SIGs’ proportion of overall reserves keeps growing (and at an increasing rate)

ACM’s Operating Reserves at end of FY21

- Rest of ACM • SIG-Controlled
- 71% • 29%
1-on-1’s with All 38 SIG Chairs

- In terms of your SIG, were FY21/FY22 a blip, or a new trend?
  - Unanimous that it’s a blip, not a new pattern
  - Only a handful actually lost $$, though most just “broke even”
  - All are transitioning back to in-person, though many want to keep having some virtual component

- What are biggest challenges for your SIG over next 5 years?
  - Recruiting members, esp. those who will help as volunteers
  - Becoming more inclusive, esp. people from the “global south,” or who do computing but in other disciplines

- Any concerns about your SIG’s financial situation?
  - Unanimous “no”
  - Many said they’re more concerned about how to spend (not earn)

You were right: latest FY22 financials show SIGs are well on the road to recovery already

THE PROBLEM
So What’s the Problem

- SIGs are doing very well, but that’s not the full picture
  - SIGs and their conferences spend >$13M in direct costs (expenditures with receipts)
  - There are also indirect (operational) costs (costs ACM incurs on behalf of SIGs)
    - SIG services staff and associated costs
    - Financial services, membership systems and records
    - IT infrastructure for SIGs & conferences
    - Financial and legal indemnification of volunteers, conferences, etc.
    - SGB participation in ACM-wide boards and councils
    - Elections, ethics/plagiarism/harassment violations, etc.
    - Backup document (SIG-related Cost Analysis) has more info

But not the Digital Library – that generates revenue for SIGs, not costs

SIG Operational Costs Add Up

- HQ conducted detailed analysis of SIG-related costs last Fall
  - Results are included in the backup materials

<table>
<thead>
<tr>
<th>FY21 SIG-Related Costs (indirect costs)</th>
<th>4.091M</th>
</tr>
</thead>
</table>

- To cover these indirect costs, SIGs and Conferences are charged overhead

| FY21 SIG direct costs | 13.175M |
| FY21 SIG-related indirect costs | 4.091M |
| **Total Cost of “Doing SIG & Conference Business”** | **17.266M** |
**Why Is Action Needed Now?**

- Existing overhead method hasn’t been updated since 2001
  - Doesn’t generate enough $$ to cover ACM’s SIG-related costs
- Shortfall occurred 5 times in past 10 years, with the worst case in FY21

<table>
<thead>
<tr>
<th>FY21 SIG-related costs</th>
<th>4.091M</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY21 overhead recovered using formula</td>
<td>1.633M</td>
</tr>
<tr>
<td><strong>Initial shortfall</strong></td>
<td><strong>2.458M</strong></td>
</tr>
<tr>
<td>Covered by $$ in Overhead Reserve Fund (ORF)</td>
<td>0.409M</td>
</tr>
<tr>
<td><strong>Final shortfall</strong></td>
<td><strong>2.050M</strong></td>
</tr>
</tbody>
</table>

**Task Force looked into why this is happening**

---

**What Has/Hasn’t Changed 2001-2021**

- SIG-related costs *haven’t* gone up much (less than inflation)

| Prior analysis of annual SIG-related costs (2001) | 2.586M |
| Recent analysis of annual SIG-related costs (FY21) | 4.091M |
| **20-year increase** | **1.505M** |
| Increase expressed as APR | **2.32%** |
| **Increase due to simple CPI inflation 2001-2021** | **2.36%** |

- What *has* changed is the pattern of SIG spending
  - 10% of SIGs now account for 1/2 the overall expenses of 37 SIGs
    - End up paying overhead at “effective rate” of just 7-8%
  - On the other end, 20% of SIGs have minimal expenses
    - Essentially don’t pay anything (the minimum DL distribution covers the minimum overhead of $10K)

**Net effect:** proportionately less overhead $$ collected, even as spending went up
Shortfalls Are a Trend (not a “Blip”)  
• Schembari presented latest FY22 projections at EC meeting  
  – SIGs will have a surplus again this year (despite gloomy budget)  
  
<table>
<thead>
<tr>
<th></th>
<th>FY22 Budget</th>
<th>Projected Actuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY22 SIG &amp; Conference Revenue</td>
<td>25.863M</td>
<td>24.504M</td>
</tr>
<tr>
<td>FY22 SIG &amp; Conference Expenses</td>
<td>28.050M</td>
<td>21.807M</td>
</tr>
<tr>
<td>FY22 SIG Net</td>
<td><strong>2.187M</strong></td>
<td><strong>2.697M</strong></td>
</tr>
</tbody>
</table>

  – Even so, there will be another overhead shortfall  
  
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FY22 SIG-related costs</td>
<td><strong>4.214M</strong></td>
</tr>
<tr>
<td>FY22 overhead recovered using formula</td>
<td><strong>2.088M</strong></td>
</tr>
<tr>
<td>Overhead shortfall</td>
<td><strong>2.126M</strong></td>
</tr>
</tbody>
</table>

• The problem has become urgent  
  • Once again, other ACM programs will be subsidizing >50% of the services used by SIGs  

HOW WE APPROACHED THE PROBLEM
What We Did

• First step was getting everyone at same level of understanding about SIG finances

• Brainstormed what kind of method might work
  • If we tweaked the existing method
  • If we started over again using a different approach
  • All in all, we considered 15 different methods, in 4 rounds of discussion

• Two different types of analysis
  • Retrospective ("what if this method had been in effect since FY17)
    – Actual annual expenses for 37 SIGs*
  • Forward projections ("what’s likely to happen FY23-FY27?")
    – Taking into account the need to recover after pandemic
    – Used input from SIG chairs on “the outlook for my SIG”

• Now recommending to you how SGB can solve “the overhead problem”

* ENERGY was excluded because it’s too new

Our Recommendations

Written recommendations will be sent out after this meeting

• Clarify the function of the Overhead Reserve Fund
• Improve the transparency of the overhead process
• Update the minimum overhead fee
• Update the overhead calculation method to solve the problem
  ✔️ We’ll go over the options, but you will decide by email vote
Update the Minimum Fee

- Minimum fee hasn’t been updated in 20 years
  
  RECOMMENDED CHANGE: A minimum $25,000 overhead will be assessed to each SIG annually.

- Our rationale for setting it at 25K
  
  - Financial: the 2022 equivalent of the 2001 minimum is $10K (original) + $10K (to offset min. DL distribution) + $6K (inflation) = $26K
  
  - Conceptual: the minimum fee is a call for a minimum level of SIG activity
    Setting it too low means no incentive for an inactive SIG to decide whether to increase activity or to close

CHOOSING A NEW CALCULATION METHOD
Update the Overhead Calculation Method

- After studying 15 methods, our consensus is that it's best to tweak the existing formula in one of two ways:
  - **Method 1:** keep the previous method but apply a multiplier to the rate scale, so the target overhead amount is met
  - **Method 2:** like #1, but increment changes to $250K, which reduces the multiplier needed to meet target overhead amount

<table>
<thead>
<tr>
<th>Method</th>
<th>Increment Size</th>
<th>Rate Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original (2001)</td>
<td>$125K</td>
<td>16% on first 125K; each subsequent 125K pays .08% less</td>
</tr>
<tr>
<td>Proposed method 1</td>
<td>$125K</td>
<td>1.6 * the original rate at each increment</td>
</tr>
<tr>
<td>Proposed method 2</td>
<td>$250K</td>
<td>1.26 * the original rate at each increment</td>
</tr>
</tbody>
</table>

- It's up to you to choose which is used

Caveat: “Fairness”

- Conceptually, fairness is simple
  - Each SIG should pay "a fair share" of the total SIG-related costs
- In practice, impossible to be fair to all
  - SIGs are just too heterogeneous (there's no typical SIG)
- Analyzed 37 SIGs over past 5 years (FY17-FY21)

<table>
<thead>
<tr>
<th></th>
<th>Min</th>
<th>Max</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership (prof + SIG-only)</td>
<td>85</td>
<td>2,103</td>
<td>381</td>
</tr>
<tr>
<td>Funded activities (SIG governance + conference expenses)</td>
<td>$ 5,546</td>
<td>$6,786,000</td>
<td>$262,297</td>
</tr>
<tr>
<td>Fund balance</td>
<td>$20,500</td>
<td>$5,827,000</td>
<td>$844,000</td>
</tr>
</tbody>
</table>

- Although we looked at several factors, there are no correlations
  - E.g., Membership is completely unrelated to activities or funds
  - There is no such thing as a "typical SIG" – each is unique
How We Compared Methods

- Grouped the SIGs into cohorts, based on FY17-FY21 history

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Conferences*</th>
<th>Other Activities</th>
<th># SIGs</th>
<th>SIGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>small or none</td>
<td>very few or none</td>
<td>7</td>
<td>ADA, CAS, DOC, SAM, ITE, MIS, LOG</td>
</tr>
<tr>
<td>2</td>
<td>small</td>
<td>few</td>
<td>12</td>
<td>ACCESS, ACT, AI, APP, BIO, ECOM, EVO, METRICS, MICRO, SIM, SPATIAL, UCCS</td>
</tr>
<tr>
<td>3</td>
<td>medium</td>
<td>few</td>
<td>10</td>
<td>ARCH, BED, CSE, MOBILE, MOD, MM, OPS, SAC, SOFT, WEB</td>
</tr>
<tr>
<td>4</td>
<td>medium</td>
<td>many</td>
<td>5</td>
<td>COMM, DA, IR, KDD, PLAN</td>
</tr>
<tr>
<td>also 4</td>
<td>large</td>
<td>few or some</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>large</td>
<td>many</td>
<td>3</td>
<td>CHI, GRAPH, HPC</td>
</tr>
</tbody>
</table>

* Sponsored or co-sponsored

Impact Varies under the Two Methods

<table>
<thead>
<tr>
<th>Method</th>
<th>Increment Size</th>
<th>Rate Scale</th>
<th>Who’s Affected Most</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original (2001)</td>
<td>$125K</td>
<td>16% on first 125K; each subsequent 125K pays .08% less</td>
<td>Significantly favored active SIGs (those with high expenses)</td>
</tr>
<tr>
<td>Proposed method 1</td>
<td>$125K</td>
<td>Multiplier needed = 1.6</td>
<td>Relatively even-handed</td>
</tr>
<tr>
<td>Proposed method 2</td>
<td>$250K</td>
<td>Multiplier needed = 1.26</td>
<td>Shifts burden to the 3 most active SIGs</td>
</tr>
</tbody>
</table>

Average increase under each method, by cohort

<table>
<thead>
<tr>
<th>Cohort</th>
<th># SIGs</th>
<th>Expenses, Minimum</th>
<th>Expenses, Maximum</th>
<th>Avg Increase, Method 1</th>
<th>Avg Increase, Method 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
<td>$5,546</td>
<td>$69,404</td>
<td>Unaffected by method (will pay minimum regardless)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>$83,354</td>
<td>$262,297</td>
<td>50%</td>
<td>25%</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>$304,093</td>
<td>$856,683</td>
<td>58%</td>
<td>39%</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>$487,283</td>
<td>$1,919,222</td>
<td>61%</td>
<td>56%</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>$3,445,095</td>
<td>$6,785,748</td>
<td>53%</td>
<td>77%</td>
</tr>
</tbody>
</table>

You’ll want to know what the cost differences are for your SIG – calculators will be sent after meeting
What Share Will Each Cohort Pay

- Considering total overhead $\$, which cohorts will be footing the bill?
  - Method 1: similar to past for Cohorts 1-3, but Cohort 5’s share increases substantially
  - Method 2: Cohort 5 subsidizes the services other cohorts receive
  - (Changes for Cohort 1 are due to the larger minimum fee)

What You’ll Get after Meeting

- Copy of these slides
- Calculator spreadsheet so you can compare what it would cost your SIG using each method
- Document (showing both methods for now) to be approved when method is voted on
QUESTIONS & DISCUSSION

A Big Thank-you to the PTF Members

Adrienne Decker (Chair, CSE)
Falko Dressler (Vice Chair, MOBILE)
Jeff Foster (Chair, PLAN)
Andrew Kun (Treasurer, CHI)
Brad Lawrence (Treasurer, GRAPH)
Wei Wang (Chair, KDD)
John West (Chair, HPC)
Jens Palsberg (SGB Chair)
Donna Cappo (SIG Services) and Pat Ryan (COO)