Computing Community Consortium
Plan of Evaluation

Prepared by SRI International

Overview

- **Objectives**

- **Design Principles**

- **Expected Limitations**

- **Linking CCC Outcomes to CCC Strategic Goals**

- **Survey Research Component**

- **Case Research Component**

- **Expected Deliverables**

Objectives

- **Capture and quantify outputs and short-term impacts of CCC on computing research community and activity**

- **Document impressions of principals & stakeholders on the launch & development of the CCC**

- **Evaluate effectiveness of CCC activities in supporting CCC's stated strategic goals, especially the visioning workshops and the CIFellows program**

- **Identify significant issues which may impede ability**

Design Principles - 1

- **This plan is for a *formative* (mid-program) evaluation**
  - The CCC has achieved fully-operational status, with an established process for selecting the CCC council and the hiring of a full-time director
  - However, this evaluation deals with the evolution of the CCC from launch until present, and therefore is best framed as a formative evaluation (evaluation of a program in the process of deployment)
  - The evaluation plan is intended to provide an analytical framework that can be extended for use in later evaluations

Design Principles - 2

- **This evaluation includes both quantitative and qualitative components**
  - Some of the CCC's inputs, outputs and outcomes can be measured through survey data and other data sources.
  - However, the CCC is designed to play a role which is unique in the computing research community and different from previous advisory groups (such as PITAC or the Federal Networking Council)
  - CCC has also evolved since its launch, and the process of CCC formation and development can be evaluated to explore the impact of that process on the CCC's operations and outcomes
  - The case research method is most appropriate for investigations of process, and for capturing non-quantitative and intangible aspects of the CCC

Expected Limitations

- **Limitations of measurement**
  - A number of the CCC's strategic goals encompass concepts that are difficult to measure precisely (e.g. "more audacious thinking")
  - The evaluation will operationalize these concepts using proxy measures which may be subjective and/or non-comprehensive

- **Limitations of scope**
  - Effect of the CCC's activities on certain populations may be so diffuse that they are beyond the scope of this project (e.g. ability to communicate to the "broader national community")
  - Surveys of those populations will collect data on a non-random sample of each population

- **Limitations of timescale**
  - A number of CCC activities have been launched relatively recently, and so it is too early to measure their full effect

Linking CCC Outcomes to CCC Strategic Goals

	CCC Participants	Computing Research Community	Computing Research Sponsors	General Public & Society
0. Establish CCC as widely-accepted voice of community	•New visioning leaders & council candidates	•Broader awareness of CCC & benefits • New visioning proposals	•Increased consultations w/CCC	
1. Bring community together on future research needs & thrusts	•Higher participation rates in CCC activities • Increased	•Interest in CCC initiatives/ideas •New visioning proposals	•Increased consultations w/CCC • Agency participation in visioning process	
2. Communicate research needs & thrusts to broader nat'l community		• More support for computing research programs	•Increased funding of computing research	•Better understanding of computing research benefits
3. Create more audacious thinking within community		•New & innovative lines of inquiry	• Receiving more innovative proposals	
4. See ideas from 1 & 3 turned into funded research programs		• New opportunities for funding	•Development of new programs/initiatives	
5. Attract diverse students to computing research careers		• More diversity among researchers		•Broader interest in computing research careers
6. Inculcate values of leadership & service into community	•Attracting new visioning leaders & council candidates	• Generating new visioning proposals	• Better candidates for program managers, etc.	

Survey Research Component

- **3 Web-based concurrent surveys**
  - Survey of CCC workshop participants
  - Survey of sample of NSF CISE grant awardees not engaged in CCC activities (proxy for broader computing research community)
  - Survey of CIFellows applicants & awardees
- **Survey design principles**
  - Combination of multiple choice, Likert & open text responses
  - Limit survey length to focus on most relevant questions/issues
  - Supervision by SRI Institutional Review Board
  - Multiple reminders to survey recipients to achieve 70% response rate
  - Collect limited demographic data on respondents for later analysis

Case Research Component*

- **Select principals & stakeholder representatives to interview**
  - Based on recommendations of CCC principals & documentation of past CCC leadership/stakeholders
  - "Snowball" selection process (based on recommendations of interviewees)
  - Attempt to include diverse viewpoints & participants in CCC development
- **Develop interview protocol based on key topical issues (see next slide)**
- **Transcribe & code interview results to topical issues**
- **Integrate interview results into narrative case study**
- **Derive findings using grounded theory**

* Based on Yin (1992), "The Case Study Method as a Tool for Evaluation," <u>Current Sociology</u>,

Expected Deliverables

- **Database for tracking CCC activities and outputs**

- **Reports on survey results**

- **Case research narrative**

- **Evaluation of CCC activities integrating quantitative and qualitative data analysis**

- **Summary of key findings and recommendations for CCC Council**