

**Annual Report of the
ACM Committee on Computers and Public Policy (CCPP)
For the Period 1 July 2004 to 30 June 2005
Submitted by Peter G. Neumann, Chairman**

PERSONNEL

The Chairman of the ACM Committee on Computers and Public Policy is Peter G. Neumann. Participants in CCPP include Peter Denning, Sy Goodman, Jim Horning, Nancy Leveson, David Parnas, Jerry Saltzer, Barbara Simons, and Lauren Weinstein. Interactions generally involve e-mail, with occasional telephone calls and in-person discussions. Many constructive interchanges have occurred during the year. I am extraordinarily grateful to the committee members for their continued long-standing participation and their incisive reviewing of CACM Inside Risks columns. Their oversight efforts are generally anonymous, but the intellectual thoughtfulness that they have consistently contributed and the expertise that they represent have greatly improved the quality of the Inside Risks content.

There is some overlap with other ACM committees. For example, Horning, Neumann, and Simons are active members of both CCPP and USACM. On the other hand, the charters of CCPP and USACM are quite different. Although there is some commonality of problem areas, CCPP considers these problems globally, whereas USACM of course has a US-centric focus.

The ACM Risks Forum activity involves many tens (hundreds?) of thousands of people around the world, some of whom are contributing to the CCPP effort through their RISKS submissions.

PURPOSE OF CCPP

CCPP seeks (1) to aid the ACM with respect to a variety of internationally relevant issues pertaining to computers and public policy, and (2) to help make the ACM more visible worldwide. The most visible project is the ACM Forum on Risks to the Public in Computers and Related Systems, established according to Adele Goldberg's President's message in the February 1985 issue of the *Communications of the ACM*.

CCPP has several manifestations, including

- * RISKS: The ACM Forum on Risks to the Public in Computers as a newsgroup (a digest by e-mail, and distributed as comp.risks via USENET)
- * RISKS: The ACM Software Engineering Notes highlights, usually four times a year
- * The CACM Inside Risks monthly column, and
- * RISKS: The Book (see below)

Neumann has been highly visible in those efforts, but other CCPP members have also been active participants. Additionally, some other efforts have been undertaken, and CCPP members have

continued to be active in ACM advisory roles and in computer policy issues, either directly related to CCPP or otherwise.

CCPP represents an extraordinary collection of creative thinking ability and resources for ACM, and its members are invoked as appropriate.

RELEVANT ACTIVITIES DURING THE REPORTING YEAR

Following is a list of activities involving CCPP members related to CCPP, RISKS, and ACM. Most of the items have specific relevance to the CCPP charter, although many were not done directly under CCPP auspices. Almost all were done essentially pro-bono, and in my case with the considerable blessing of the SRI International Computer Science Lab -- for which I am hugely grateful.

ITEMS OF IMMEDIATE RELEVANCE to CCPP

1. The on-line ACM Forum on Risks to the Public in Computers and Related Systems. In addition to various unofficial mirrored sites on the Internet, the official archives are available by anonymous ftp in the U.S. at <ftp://ftp.sri.com/risks/>, and in a nicely formatted searchable site in the U.K., courtesy of Lindsay Marshall: <http://catless.ncl.ac.uk/Risks/> which is also accessible as <http://www.risks.org>

The ACM Risks Forum continues as an institution. Since its first issue on August 1, 1985, its readership continues to expand, with a steady flow of new direct subscribers, in every country that supports the Internet, via USENET newsgroup as comp.risks, or through redistribution centers and websites throughout the Internet. (We suspect there are well over 200,000 readers worldwide.) I presume we will have to have a retrospective 20th anniversary issue on August 1, 2005 -- perhaps just revisiting what has happened since the first issue!

Neumann contributes many pro bono hours each week, moderating RISKS, responding to queries, engaging in individual dialogues with readers, and distilling the RISKS highlights for SIGSOFT's Software Engineering Notes (SEN). From the feedback we receive, RISKS appears to be one of the most widely read and most useful of the moderated on-line digests. Despite its high profile and the sometimes controversial nature of some of the material, RISKS has been a relatively noninflammatory operation; this reflects the fact that Neumann takes his moderator's role quite seriously. (The advisory members of CCPP are invoked as informal reviewers whenever a potentially controversial contribution must be considered. In addition, each member of the committee has typically played an important advisory role during the year on various sensitive issues.)

2. Highlights from the on-line RISKS Forum continue to appear four times each year in the ACM SIGSOFT Software Engineering Notes. Neumann, the founding editor in 1976, continues as Associate Editor for the RISKS section, after Will Tracz took over as Editor in 1995. SEN's circulation is one of the larger among SIGs. Will is now in the process of making current and back issues available online in the ACM Digital Archive.

3. PGN's Illustrative Risks document provides a topical index for *SEN* and *RISKS*. It is updated regularly and is available online as

<http://www.CSL.sri.com/neumann/illustrative.html>

as well as

<http://www.CSL.sri.com/neumann/illustrative.pdf>

and

<http://www.CSL.sri.com/neumann/illustrative.ps>

4. The "Inside Risks" series inside the back cover of each CACM issue highlights particular topics with a broad perspective. CCPP members have been very helpful in reviewing prospective columns, and in contributing columns on occasion. Guest columns are solicited as appropriate, and proposals are always considered. The following columns either appeared or were written within the reporting year. We continue to expand the range of authors.

P.G. Neumann (ed). Inside Risks. *Communications of the ACM* (inside back cover), which began monthly in the July 1990 issue of CACM:

169: Jul 2004. Insider Risks in Elections, Paul Kocher and Bruce Schneier

170: Aug 2004. Close Exposures of the Digital Kind, Lauren Weinstein

171: Oct 2004. The Non-Security of Secrecy, Bruce Schneier

172: Nov 2004. Evaluation of Voting Systems,

Poorvi L. Vora, Benjamin Adida, Ren Bucholz, David Chaum,

David L. Dill, David Jefferson, Douglas W. Jones, William Lattin,

Aviel D. Rubin, Michael I. Shamos, and Moti Yung

173: Dec 2004. Spamming, Phishing, Authentication, and Privacy, Steve Bellovin

174: Jan 2005. Not Teaching Viruses and Worms Is Harmful, George Ledin Jr

175: Feb 2005. Responsibilities of Technologists, PGN

177: Mar 2005. Anticipating Disasters, PGN

178: Apr 2005. Two-Factor Authentication: Too Little, Too Late, Bruce Schneier

179: May 2005. Risks of Third-Party Data, Bruce Schneier

180: Jun 2005. What Lessons Are We Teaching? Susan Landau

181: Jul 2005. DRM and Public Policy, Edward W. Felten

182: Aug 2005. Disability-Related Risks, PGN and Michael D. Byrne

These columns are available online at

<http://www.CSL.sri.com/neumann/insiderisks.html>

For speed of access, the 2004 and 2005 columns are in separate files

<http://www.CSL.sri.com/neumann/insiderisks04.html>

<http://www.CSL.sri.com/neumann/insiderisks05.html>

respectively. (The prefatory integers above are the indexes into the Web site for specific columns.)

5. Neumann's *RISKS BOOK* ("Computer-Related Risks", (ACM Press, Addison-Wesley), having transcended its fifth printing, is now being printed on demand. It is also available in a Japanese translation. Extensive recent source material is online in the Risks Forum <http://www.risks.org>

6. Neumann was the guest editor for the October 2004 special issue of the CACM on election systems, with particular attention to electronic voting machines, and wrote the introduction, The Problems and Potentials of Voting Systems. The integrity of elections has been a long-running RISKS issue.

7. Numerous additional activities of PGN are enumerated in Appendix I below.

8. Lauren Weinstein continues his moderation of the PRIVACY Forum Digest under the partial aegis of CCPP. PRIVACY FORUM: <http://www.vortex.com/privacy>

The Privacy Forum and related services continue to provide discussions, information, and other services that include the many areas of privacy -- which intersect virtually every aspect of our lives. The PRIVACY Forum and its archive are continually referenced from around the world, and have been listed as major network resources in the links of many private, commercial, and governmental entities globally.

As is the case with PGN, Lauren receives numerous e-mail and telephone contacts from all manner of media points, and continues to participate in newspaper and magazine articles, local and network radio and television interviews, and similar discussions on privacy topics. He also conducts PRIVACY Forum Radio interviews regarding a range of privacy-related issues, and has been a commentator on National Public Radio's "Morning Edition" regarding technology and society. In the past year, he has put out numerous Reality Reset and Factsquad pieces:

REALITY RESET: <http://www.vortex.com/reality>

FACTSQUAD: <http://www.factsquad.org/radio>

EEPI: Electronic Entertainment Policy Initiative: <http://www.eepi.org>

9. Other CCPP members have also interacted with various ACM people on ACM and CCPP-related issues, reviewed drafts, refereed papers, etc.

10. Other CCPP members wrote papers and gave talks that bear on computers and public policy.

11. This CCPP report is accessible from the acm.org pages, via a link to my CCPP Web page: THIS FILE: <http://www.CSL.sri.com/neumann/ccpp.html>

12. PGN, Book chapter in *Computer Ethics and Professional Responsibility*, edited by Terrell Ward Bynum and Simon Rogerson, Blackwell Publishing, 2004.

13. PGN, Attaining Robust Open-Source Software, Chapter 1, Perspectives on Free and Open Source Software, Joseph Feller, Brian Fitzgerald, Scott A. Hissam, and Karim R. Lakhani, editors, MIT Press, 2005.

14. PGN, Attaining Robust Open-Source Software, Chapter 7 of *Making Sense of the Bazaar: Perspectives on Open Source and Free Software*, an anthology of research and analysis edited by Joseph Feller, Brian Fitzgerald, Scott Hissam, and Karim Lakhani and published by MIT Press, 2005, pp. 123--126.

15. PGN, Risks of Computer-Related Technology, Chapter 1 in *Cyberwar, Netwar and the Revolution in Military Affairs*, edited by P.A. Trevorrow, D. Webb, E.H. Halpin, and S. Wright, Palgrave, Macmillan, 2005.

PLANS THROUGH 1 JULY 2006

16. Neumann will continue moderating the on-line RISKS Forum and contributing RISKS sections to ACM SIGSOFT's Software Engineering Notes.

17. Neumann will continue to coordinate/edit/write the CACM Inside Risks, seeking some more invited pieces on topical RISKS-related subjects written by members of CCPP and other contributors, to encourage diversity.

18. CCPP will continue to interact with USACM. We have been encouraging the submission of more Inside Risks columns from the USACM community. (The July 2005 column by Ed Felten is an example of a column that arose from extensive deliberations within USACM, although the column explicitly reflects Ed's writing.)

19. In the coming year, we will seek to add a few more CCPP members, particularly if they are willing to review and write Inside Risks columns.

BUDGET AND FUNDING

The 2004-2005 CCPP expenditures were as usual minimal, and the budget was adequate, with only modest amounts required for computing resources and communications. (SRI continues to provide free disk space for the RISKS FTP archives on <ftp.sri.com>; the CSL.SRI.COM resources are partly subsidized by SRI. In addition, Lindsay Marshall at Newcastle provides the extremely useful searchable risks.org archives on a pro bono basis.) We appreciate ACM's past support, and have been happy to stay within budget each year.

SUMMARY

The ACM RISKS Forum, the monthly CACM Inside Risks columns, Illustrative Risks, and the related efforts have continued to be successful in achieving their intended goals, as well as being highly popular. This year we have intensively renewed our long-term involvement in the risks of electronic voting systems.

We note that several related efforts are already ongoing under the aegis of the External Activities Board. For example, the scientific freedom and human rights, legal, education, and USACM committees involve issues relevant to CCPP that frequently are discussed in the ACM Risks Forum from the RISKS perspective. We are happy to interact with others in those related areas, without CCPP having to be directly in the loop, and to offer the Inside Risks space to those efforts that have a reasonable RISKS-relevant content. Overall, CCPP seems to have a well-defined niche of its own.

The ACM RISKS Forum and the PRIVACY Forum span a large gamut of CCPP issues, and involve reaching out to many thousands of people, throughout the world, quite a few of whom are actively contributing participants. RISKS is heavily involved in human safety, privacy, ethics, legal responsibility, etc., and there is no shortage of public-policy related issues!

The Inside Risks column serves as a popular CACM feature, and seeks to distill timely topics in a broadly accessible form.

Continued support of existing and possibly new CCPP activities is appropriate, and will be appreciated at essentially the same level. We are delighted to be a low-budget high-yield part of the ACM.

In general, we always seek to broaden our scope and deepen our content. We would be delighted to receive from ACM executive folks suggestions for new directions relating to computers and public policy, initiatives that we might address, suggestions for additional CCPP members who might also be willing to be active in writing and reviewing proposed Inside Risks columns, and ideas for making our efforts even more visibly attributable to ACM. The CCPP members represent a valuable cross-section of ACM interests relating to public-policy issues. As noted above, all of their efforts in helping CCPP and the ACM are greatly appreciated, even though many of those efforts are not noted here explicitly.

Respectfully submitted,

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**APPENDIX I:
CCPP-Relevant Activities of Peter G. Neumann**

2004 RELEVANT EVENTS by PGN

Jul 26-28, with Lauren Weinstein, organized and participated in a working conference on ``Preventing the Internet Meltdown" in Los Angeles.

Aug 15-20, attended the Gordon Research Conf on Science and Technology Policy in Big Sky Montana; gave an invited talk in a session on IT: Infrastructure, Info-Complexity, and Info-Security.

Aug 28, attended the first Texas Symposium on Software Engineering in Austin, Texas, and gave its keynote talk: A RISKS-Oriented View of Software Development (An Analysis of Common Risks in Software Development: Trends and Predictions); also participated in a panel on Disasters in Software Engineering.

Sep 3, participated in a conference call on voting integrity with various rights organizations. (Howard Dean was among the participants.)

Sep 9-10, attended the TechNation Summit in San Francisco.

Sep 22, had a breakfast meeting in Washington DC with DeForest Soaries, Jr., Chair of the U.S. Election Assistance Commission.

Sep 27, gave a talk for a lecture series at the Santa Clara Library:
Security and Privacy for Life, Libraries, and the Pursuit of Democracy.

Sep 27, interviewed by Danny Bradbury for RadioArthur.org.

Oct 6-7, attended a meeting of the new National Research Council Cyber Security study group, Washington DC.

Oct 13, taped a segment for a community television program on risks in voting.

Oct 28-29, attended the NSTAC conference in Monterey on cyber security.

Nov 3, participated in a press conference on the election, sponsored by the National Committee on Voting Integrity (of which I am the chairman) at the National Press Club in Washington DC.

Nov 9, gave a talk, When Can Formal Methods Make A Real Difference? (A RISKS-Oriented View of Software Development), at Microsoft Research, Redmond WA, in their new Software Engineering Speaker Series.

Nov 10, gave a keynote speech for the International Conference on Formal Engineering Methods Seattle WA (with a talk similar to the Redmond talk on November 9):

<http://www.csl.sri.com/neumann/icfem.pdf>

Nov 11, taught a class at Stanford on cybersecurity.

Dec 9, organized and participated in a 2.5-hour video teleconference session to the National Research Council for their new study group on elections. Drew Dean, Dave Wagner, Kim Alexander, David Jefferson, and Ren Bucholz (EFF) also spoke.

Dec 14-15, attended another meeting of the National Research Council Cyber Security study group, Washington DC.

2005 RELEVANT EVENTS by PGN

Feb 21-23, Participated in the Verification Grand Challenges workshop.

Mar 4, ACM IT Global Sourcing, Palo Alto, spoke on the pros and cons of outsourcing and offshoring (see p.133 of my DARPA CHATS report)

Mar 10-11, NRC study on cybersecurity, group member

May 9, PGP Corp Author's Panel, NYC, speaker

May 10-11, GAO Executive Committee on Information Management and Technology

May 20, Hosted the first meeting of the VSPR (Voting System Performance Rating) Executive Committee, of which I am an elected member.

In addition, I am on the editorial board of the IEEE Security and Privacy journal, and on the program committees for the IEEE Information Assurance Workshops, 2004, 2005, and 2006.

**APPENDIX II:
Current Web and Internet Addresses for CCPP Members**

<http://www.CSL.sri.com/neumann> (Peter G. Neumann) Neumann@CSL.sri.com and pneumann@acm.org
<http://www.nps.edu> (Peter J. Denning) pjd@nps.edu
<http://www.leland.stanford.edu/sgoodman> (Sy Goodman) goodman@cc.gatech.edu
<http://www.horning.net> (Jim Horning) horning@acm.org
<http://sunnyday.mit.edu/leveson.html> (Nancy Leveson) leveson@mit.edu
<http://www.ul.ie/sqrl/> (David Parnas)
<http://web.mit.edu/Saltzer/> (Jerry Saltzer) saltzer@mit.edu
<http://www.acm.org/usacm/> (Barbara Simons) simons@acm.org
<http://www.vortex.com/privacy.html> (Lauren Weinstein) lauren@vortex.com