36th Annual Report Relating to the ACM Risks Forum

For the Period 1 July 2019 to 30 June 2020

Submitted by Peter G. Neumann

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To: The ACM Board

ACM, 1601 Broadway, 10th Floor, New York, NY 10019

The ACM Forum on Risks to the Public (`RISKS', which I began on 1 August 1985, at the request of the ACM president Adele Goldberg), and the Inside Risks series of 249 articles in the Communications of the ACM (which began in July 1990) continued in the ACM fiscal year that just ended.

In that Gabriele Kostis is the incoming ACM president, I include some relevant historical background. In addition to the ACM Risks Forum and the Inside Risks articles, I have contributed highlights from the online RISKS to each quarterly issue of the ACM SIGSOFT Software Engineering Notes (`SEN', for which I was the founding editor, in 1976). My 1995 book, Computer-Related Risks, was drew heavily on materials from SEN and subsequently RISKS. Perhaps surprisingly, many of the risks considered in the book are still with us today in one form or another, and have actually increased in frequency and impact. For example, I recently put together a summary of one-liners relating to election integrity from SEN, my book, and all of the issues of the ACM Risks Form, a URL for which is given below

During the 2019-2020 ACM reporting year, there were 78 issues (Volume 31, issues 27 through 98, Volume 31, issues 1 through 6) of the ACM Risks Digest, some much larger than in previous years (due to considerably more submissions, and my increased SRI workload, and more recently more frequent but smaller issues (due to the novel coronavirus sheltering in place).

RISKS issues are available online at [ftp.sri.com/risks/](ftp://ftp.sri.com/risks/) and at [www.risks.org](http://www.risks.org) (which redirects to a nicely formatted searchable site at the University of Newcastle in the UK, courtesy of Lindsay Marshall), as well as on USENET (via Panix); it is also mirrored elsewhere around the world. The extent of its readership is considerable, but not easy to estimate. It continues to get new subscribers, and has relatively fewer unsubscribers.

The CACM Inside Risks was initially a one-pager (on the Inside back page of the CACM, to add a pun to its identity as an Insider's view of Risks). The first 216 issues were monthly until June 2008, after which it has appeared as Viewpoint articles three times a year; the change was initiated by Moshe Vardi, who noted to me that the Inside Risks articles were the most popular in the CACM, and he wanted to use that space for other purposes. During the 2019-2020 reporting year, the three regularly scheduled columns were these:

\* Oct 2019.247. PGN, How Might We Increase System Trustworthiness?

Summarizing some of the changes that seem increasingly necessary to address known system

and network deficiencies and anticipate currently unknown vulnerabilities, CACM 0ctober 2019

<http://www.csl.sri.com/neumann/cacm247.pdf>

\* Feb 2020.248. Nancy Leveson, Are You Sure your Software Will Not Kill Anyone?

<http://www.csl.sri.com/neumann/cacm248.pdf>

\* Jun 2020.249. Connor Bolton, Kevin Fu, Josiah Hester, and Jun Han, How to Curtail Oversensing

in the Home: Limiting sensitive information leakage via smart-home sensor data

<http://www.csl.sri.com/neumann/cacm249.pdf>

These RISKS-related activities provide a highly visible public ACM activity (consistent with Adele Goldberg's original desire). They also serve vital educational roles, and provide useful resources for teachers, researchers, developers, and end-users.

Although the ACM Committee on Computers and Public Policy (CCPP) was transformed into a committee of the ACM Council by Cherri Pancake when she took over the reigns two years ago, the committee still exists for Risks Forum activities; it consists of Steve Bellovin, Peter Denning, Virgil Gligor, Kevin Fu, Nancy Leveson, David Parnas, Jerry Saltzer, Zeynep Tufekci, Lauren Weinstein, and Ben Zorn. Fortunately, they are all still present as extremely relevant and diverse advisors, primarily as a review board for potential Inside Risks articles, but also for dealing with special considerations relating to the ACM Risks Forum.

On 3 June 2020, the (Becky) Bace Cybersecurity Institute hosted a webinar, A Fireside Chat on election security/integrity/privacy in the age of Covid-19, with Peter G. Neumann and Rebecca T. Mercuri. For this, Peter updated a 16-page summary of relevant items in the ACM Risks Forum (and its earlier ACM Software Engineering Notes), spanning the early 1980s to date:

<http://www.csl.sri.com/neumann/risks-voting.pdf>

Plans Through 30 June 2021

At Gabriele Kotsis's request, I am happy to continue continue moderating the on-line ACM RISKS Forum, to commission and edit future Inside Risks columns, and to contribute quarterly to the SIGSOFT SEN, all closely related to the RISKS activity, as in the past 35 years. For example, the next CACM Inside Risks column for the October 2020 issue is currently shaping up as an anlysis of some lessons that might be common to biological pandemics and computer-related systemic fiascos. This will be the 250th Inside Risks column in the CACM.

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