Comments for NAS Task Force on The Impact of Copyright Policy on Innovation in the Digital Era
(submitted Sep5, 2010 to http://www8.nationalacademies.org/cp/projectview.aspx?key=49249)

Thank you for the opportunity to lend my thoughts to this important undertaking. I would like to encourage the Committee to include innovation in computational science in the discussion. This is an issue deserving of attention due to the current credibility crisis brought about, in part, by the application of a copyright policy divergent from longstanding scientific norms. As our stock of scientific knowledge is increasingly digital, this becomes a key issue for copyright policy, public policy, and innovation in the digital sphere.

In computational science the software and arguably many of the datasets fall under copyright by default. Science norms, on the other hand, prescribe the open sharing and communication of these aspects of research, requiring only attribution in derivative works. The intent behind these norms is three-fold: to facilitate both the transfer of scientific innovation and reproducibility of published findings; to encourage re-use of research output; and to increase our public stock of knowledge. Copyright as it applies today, is a barrier to all these goals.

I have proposed one solution to this barrier, the use of the Reproducible Research Standard in the publication of scientific research (see http://www.ijclp.net/files/ijclp_web-doc_1-13-2009.pdf) but this is an area where leadership is required. Confusion regarding copyright abounds in the release of scientific papers, code, and data, with the result that the communication of research is now departing from the scientific norms of openness to a more closed system, for the first time in hundreds of years. This is due to scientists' own misunderstandings of copyright and open licensing, to university and institutional-level lack of clarity in ownership rights in research, and funders' slow enforcement of openness in scientific publication.

As scientific evidence comes increasingly to bear on public policy, open access to science becomes a core issue for a well-functioning democracy. Access to scientific literature is necessary, but not sufficient. To avert a credibility crisis in computational science the code and data underlying the results must also be made openly available, and without the barriers imposed by copyright. This is a key issue for the future of scientific innovation.

Sincerely,
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