Approved by the Regents
May 20, 2010

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
SCHOOL OF INFORMATION

Paul N. Edwards, associate professor of information, with tenure, School of Information, is recommended for promotion to professor of information, with tenure, School of Information.

Academic Degrees:

Ph.D.	1988	University of California at Santa Cruz, Santa Cruz, CA
B.A.	1980	Wesleyan University, Middletown, CT

Professional Record:

1999 – present	Associate Professor, with tenure, School of Information, University of Michigan
1999 – 2004	Associate Professor, with tenure, Residential College, College of Literature, Science, and the Arts, University of Michigan
1997 – 1998	Senior Research Scholar, Program in Science, Technology and Society, Stanford University
1994 – 1997	Lecturer, Program in Science, Technology and Society and Department of Computer Science, Stanford University
1992 – 1994	Visiting Assistant Professor, Department of Computer Science and Program in Science, Technology and Society, Stanford University
1990 – 1992	Visiting Assistant Professor, Department of Science and Technology Studies, Cornell University

Summary of Evaluation:

Teaching: Professor Edwards has made major contributions to the instructional mission of the School of Information. He has taught in two required master's degree courses in four of the last five years (Social Systems and Collections; Collections, Flows, and Processes). He also has taught two required Ph.D. courses (Doctoral Foundations; Research Methods). Throughout, he provided high-quality educational foundations for the School's graduate students.

Professor Edwards has also taught a series of master's level and undergraduate courses that use a historical perspective to examine the development of technology and information-related policy, including "History of Computers and Networks," "InfoCulture: Theory and Methods in the History and Sociology of Information Technology," and "Systems, Networks, and Webs." In these courses, Professor Edwards emphasizes understanding the fundamental role of information infrastructure in societies.

In all his teaching, Professor Edwards strives to achieve three goals: to build historical awareness, to encourage international and global contexts and comparisons, and to link technology, politics, and culture through interdisciplinary analysis.

Professor Edwards serves as chair for two current Ph.D. students. He has served, or currently serves, as a committee member for eight additional School of Information doctoral committees.

In addition, he has been heavily involved in curriculum design, and has served as chair of the School's Curriculum Committee for the past two years.

Research: Professor Edwards' research exemplifies the interdisciplinary scholarship that is central to our School's mission. His research concerns the historical evolution, political importance, and social and cultural meanings of computers and global information infrastructures. One of his major recent results is the interpretation of climate *science* as a global knowledge *infrastructure*. Rather than the traditional focus which takes science as given and studies its uptake into politics and public understanding, he demonstrates that there are social, technical, and political arrangements that make knowledge creation possible in the first place. This insight generated the observation that global climate change knowledge is always co-produced by models and data: neither can exist without the other. For example, in some cases, modeling techniques allowed scientists to replace poor quality field data, which supported a crucial advance in knowledge. Another conclusion he documents is that the climate information infrastructure developed over the past 150 years produces trustworthy, stable knowledge, so long as the nature of contemporary scientific knowledge is correctly understood.

His external reviewers report that his work demonstrates careful and extensive preparation and results from the effective integration of a vast array of resources seldom considered by a single scholar. For example, to address the climate change problem that has engaged him since the early 1990s, Professor Edwards developed substantial technical knowledge and understanding of fields ranging from physics to chemistry to ecology. He approached this daunting task by applying a variety of techniques including extensive interviews and oral histories, archival research, analysis of gray literature, manuscripts and published journal articles in relevant fields, and extensive observation at climate laboratories in Europe and North America. As a result, his scholarship exhibits an intricate intertwining of multiple kinds of data and skillful application of multiple methods, both ethnographic and historical.

The most recent examples of his work are a stream of influential articles and book chapters, culminating in his forthcoming (March 2010) MIT monograph, *A Vast Machine.* In this book Professor Edwards focuses on what many consider to be the key problem of this century: climate change. Reviews of page proofs suggest that this forthcoming book will have an even greater impact than his influential *The Closed World* (1996).

Recently Professor Edwards has had excellent success as co-PI in obtaining $3.6 million in National Science Foundation funding for ambitious, team-centered, interdisciplinary projects that seek to enhance the cyberinfrastructure needed by climate and earth system scientists. For this new series of projects, he has assembled a team of leading interdisciplinary socio-technical scholars across several universities.

Professor Edwards' influence is evident in the international nature of his scholarship, his frequent contributions to international journals and invitations to discuss his scholarship at prestigious venues around the world. His reviewers represent the international leadership in the history of science and technology. Among these peers he is seen as "a wonderfully imaginative historian, with an eye for big problems and the talent and determination to tackle them" (Leslie, Johns Hopkins).

Recent and Significant Publications:

Edwards, P.N. (In Press). *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming.* Cambridge, MA: MIT Press.

Bowker, G.C., Edwards, P.N., Jackson S.J., and Knobel, C. (In Press). "The Long Now of Cyberinfrastructure." In W.H. Dutton and P.W. Jeffreys (Eds.), *World Wide Research: Reshaping the Sciences and Humanities.* Cambridge, MA: MIT Press.

Edwards, P. N. (In Press). "Some Say the Internet Shouldn't Have Happened." In W.R. Neuman (Ed.), *Media, Technology and Society: Theories of Media Evolution.* Ann Arbor: University of Michigan Press.

Garrett, R.K. and Edwards, P.N. (2007). "Revolutionary Secrets: Technology's Role in the South African Anti-Apartheid Movement," *Social Science Computer Review* 25:1, pp. 13-26.

Edwards, P.N. (2006). "Meteorology as Infrastructural Globalism." In J. Krige and K.H. Barth (Eds.), *Global Power Knowledge: Science and Technology in International Affairs.* Chicago, IL: University of Chicago Press, pp. 229-250.

Edwards, P.N. (2004). "'A Vast Machine': Standards as Social Technology", *Science* 304:5672, pp. 827-828.

Edwards, P. N. (1996). *The Closed World: Computers and the Politics of Discourse in Cold War America.* Cambridge, MA: MIT Press.

Service: Professor Edwards has been an active participant in the School, University, and broader scholarly community. Professor Edwards' most recent notable contribution to the University and to the School was his leading role in developing the program and building plan for the new North Quad living-learning environment in which the School, four other academic units, and nearly 500 students will be living next year.

Professor Edwards was also central in establishing the University's program on Science, Technology & Society. His effort began in 1999 with the establishment of the Residential College Science, Technology & Society Program. As he led and shaped that program, it evolved into the current all-University program. It exemplifies the creation of an academic interdisciplinary program engaging faculty and students from across the University.

Professor Edwards was the founding chair of our School's Undergraduate Committee which presided over our participation in the launch of the undergraduate Informatics concentration. He is the current chair of the School's Curriculum Committee, and either is serving or has served on essentially all of the School's standing committees.

Professor Edwards has also provided leadership to the profession. He organized a conference on "History and Theory of Infrastructure: Distilling Lessons for New Scientific Infrastructures," which provided advice to the National Science Foundation and defined social science research

opportunities in the field. He has also organized and/or participated in several important European conferences on technology infrastructure and its effect on Europe. He serves as a referee for several journals and University presses. He has played an important role in assisting professional organization develop their archives and historical record.

Much of Professor Edwards' scholarship has implications for public policy. Recognizing this, he has participated in panels recommending public policy responses to climate change and critical infrastructure protection. As an expert on the history of information technology, he has also participated in public policy discussions in South Africa. He also makes himself available to communicate about his work to a broad range of journalists. He has assisted technology museums in exhibit planning, and has supervised graduate student work in assessing the impact of information and telecommunication technologies on the health and social condition of the society.

External Reviewers:
Reviewer A: "I have no hesitation to recommend that Edwards be promoted to full professor. On all usual dimensions (international scholarly standing, publication record, and capacity to raise research funding) he performs excellently. …I think that in the person of Dr. Paul Edwards you have one of the '…kings' of the field of STS (Science, Technology and Society studies) within your institute, and I advise you to 'use' and 'publicize' him in that way – by promoting him to full professor."

Reviewer B: "…[Y]ou ask if he would have been considered to meet the requirements for Full Professor at my institution. Let me put on three institutional hats here - I have served on committees for full professorships at [three institutions] (where I was Chair of the Department of Communication) and soon will at [another institution]. I have not a shred of doubt that he would receive promotion to full at any of these institutions on the basis of this package."

Reviewer C: "…[Y]ou ask whether Edwards meets the standards to advance to full professorship. I can only respond that if he does not, I cannot imagine who does."

Reviewer D: "If he had been one of those 240 cases I voted on over the past six years, the vote would have been a unanimous yes. We would love to have a scholar of his reputation and imagination at [my institution]. He sits at the top of the class of computer historians, and certainly in the front row of historians of technology at any stage of their careers."

Reviewer E: "…[I]n Edwards you have a world-class scholar, one for example who would have no difficulty in obtaining a full professorship at [my institution]."

Reviewer F: "Paul is one of the leading figures in S&TS and history of computing. He has opened up for investigation the field of global information infrastructures. He has a national and international reputation for his scholarship."

Reviewer G: "…[It is] very clear that Paul Edwards' work is well respected and considered excellent. …To my mind there is no doubt that his work meets the requirements for a full professor at my institution."

Internal Review: The promotion and tenure subcommittee that produced Professor Edwards' casebook concluded that his "accomplishments ... clearly establish him as an international research leader, as a teacher with high impact, and as an engine of progress in both the School of Information and the University," and they unanimously recommended him promotion. The full promotion and tenure committee of the School, consisting of all governing faculty at the rank of professor, also voted unanimously for promotion.

Summary of Recommendation: Professor Edwards has a strong international reputation for his scholarship and contributions to public policy. He is a dedicated teacher who takes on classroom challenges and provides respected curriculum leadership. He provides service leadership to the School and University. It is with the unanimous support of the promotion and tenure committee of the School of Information that I enthusiastically recommend he be promoted to professor of information, with tenure, School of Information.

Martha E. Pollack
Dean, School of Information

May 2010