

Name and affiliation David J. Farber (Distinguished Career Professor of Computer Science and Public Policy, Carnegie Mellon University)	
CV in Brief 1956 ME, Stevens Institute of Technology 1956 Bell Telephone Laboratories 1967 RAND Corporation 1969 Xerox Data Systems 1971 Professor of Computer Science, University of California, Irvine 1981 Professor of EE, University of Delaware 1990 Alfred Fitler Moore Professor of Telecommunications, University of Pennsylvania 1996 Honorary Doctorate, Stevens Institute of Technology 1999 Chief Technologist, Federal Communications Commission (1 and 1/2 years) 2004 Emeritus Professor, University of Pennsylvania 2004 Distinguished Career Professor of Computer Science and Public Policy, Carnegie Mellon University	Category: B C F G Research Interests <ul style="list-style-type: none"> ● Distributed Systems ● Networking Architecture ● Secure/Trusted Computer Systems ● Wireless Technology and Mobile Applications
Theme of the program Applications/services that utilize the increasing speed of wired and wireless Internets with particular emphasis on their ability to enrich the human experience.	
Program description The advent of high speed networks, both wired and wireless, has offered the possibility of fulfilling the notions of bringing the power of distributed computing and distributed data storage to the offices and homes of the users of computers and mobile devices. While to date, the applications have been focused largely on searching and media distribution, there are other directions to explore in particular directions which help develop human capabilities and to better utilize the capabilities of individuals and groups working together. . For example, it has been proposed that "agents"/"avatars" to represent a user in gathering information etc would dramatically re-define the environment. Also ideas for applications, which allow interaction between groups of people and these computer based intelligence would radically change the nature of human/computer interaction . We are about to enter the next phase in networking technology which will require dramatic changes in our approach to network software and protocols. End to end all optical networking in conjunction with a continuation of Moore's law in computer hardware will augmented by the increased use of "cloud computing" and other forms of distributed processing. I am especially interested in new approaches to how to use such changes to enhance the ability of people to fulfill their potential both individually and in society. The combination of these events combined with the future wireless technology will bring increased access to information and computer power everywhere and every time.	
Unauthorized translation (Applications must be submitted in English.) 【参考和訳（応募時の提案書類は全て英語で記述してください）】	
テーマ 有線・無線のインターネットの加速性を利用した、人間の経験を豊かにするための能力に重点をおいたアプリケーションやサービス	
概要 有線および無線の高速ネットワークの出現は、コンピュータやモバイル機器の利用者がオフィスや自宅で分散コンピューティングと分散データストレージを利用するとという考え方を実現す	

る可能性を生み出してきた。これまでのアプリケーションは、主に検索とメディア配布を行なうことに主眼を置いているが、ほかの方向性も探求すべきである。たとえば、「エージェント（代理人）」や「アバター（化身）」が、情報収集等の場においてユーザーの代理を務めることができれば、環境を劇的に再定義することになるだろうと言われているし、また、アプリケーションに関するアイデアとしては、人間のグループとこれらコンピュータベースの知能との間の相互作用が、人間／コンピュータの相互作用の性質を急進的に変えることができると考えられている。

我々は、ネットワーク技術における新しい時代に突入しようとしており、そこではネットワークのソフトウェアとプロトコルについてこれまでと異なる全く新しいアプローチが求められることになるだろう。ムーアの法則によってコンピュータのハードウェアが引き続き高性能化・低価格化することと相まって、エンド・ツー・エンドの光ネットワークはクラウド・コンピューティングの利用の増大や、その他の分散処理技術によって増強されるだろう。本テーマでは、新しいアプローチによってこれらの変化を活用し、人間が、個人として、社会としてその潜在力を発揮する能力を向上させることに結びつくような提案を特に歓迎する。これらの変化と未来の無線技術の組み合わせによって、情報とコンピューティング資源への時間と場所を問わないアクセス環境は、さらに向上されることになるだろう。

Proposal preparation

Provide a proposal no longer than 10 pages in Form 3. The proposal should include:

1. Title and abstract of proposal
2. Background and purpose of project including the past work and accomplishments of the individuals or group involved in the project (i.e., other software projects, published papers or books, etc.)
3. A project summary, which may include pictures or diagrams including the novelty of the project or what, makes this project unique.
4. Describe the project milestones, task allotment among the project members, and a description of the project schedule.
5. Project expenses and budget estimates.
6. Describe the impact your project will have upon completion and how it might be commercialized.

Selection process

Applicants will first be reviewed based upon their paper applications. Selected applicants may be asked to interview with David Farber via telephone or teleconference prior to a decision on the final awards.

Contact Person: Janice Kusmierk <janicek@cs.cmu.edu>

Estimated number of awarded projects (Anticipated funding amount: 40M yen)	Maximum of six (throughout FY 2008)
Eligibility for applicants	No special qualifications are required as long as recipients can carry out their project.
Methods for progress management	Submission of periodic progress reports via email, hearing (if necessary), mid-term or final meetings are required to manage the projects and promote the results.
Project management policy	Developing human resource Nurturing business mind