To: The Cornell Community

Re: Computing and Information Science at Peer Institutions

From: Task Force on Computing and Information Science

Date: September 22, 1999

The issue of how Cornell's peer institutions are reacting to rapid changes in computing and information science has been raised in the on-going campus discussions of our initial report. While there are different interpretations of the data, we want to make widely available some of the raw facts, as there appears to be some confusion as to what the situation is at other institutions. Our final report, due in November, will more fully address interpretations of this data and other information about national trends.

We first consider Computer Science (CS) departments, as that has been specifically raised in the campus discussions. We note that there are several different structures for CS, none of which is really dominant. For instance, among the top ten CS departments in the current US News & World Report rankings, two are joint EE/CS departments in Engineering Colleges (MIT and UC-Berkeley), one is a CS department in an Engineering College (Stanford), one is a separate College of Computing (Carnegie-Mellon), and six are departments that offer programs through both the equivalent of the Arts & Sciences College and the Engineering College (Cornell, Illinois, Washington, Princeton, Texas-Austin, and Wisconsin-Madison). Some of these six departments are in one of the two colleges that they serve, and others are joint in two colleges. Overall, the majority of these CS departments are organizationally part of Engineering colleges, but at the same time, the majority have programs of teaching and research that fall in Arts & Science.

If we instead consider the CS programs at universities with top ranked Engineering Colleges, we see a similar diversity (in fact many of the institutions are the same as above). Again using the US News rankings, three schools have joint EE/CS departments (MIT, UC-Berkeley and Michigan), two have CS departments in an Engineering College (Stanford and Caltech), two have separate Colleges of Computing (Carnegie-Mellon and Georgia Tech), and four have departments that offer programs through both Arts & Science and Engineering (Illinois, Cornell, Michigan and Texas-Austin). (Note that Michigan appears twice here because it is both a joint EE/CS department and offers its CS degree through the Literature, Science and Arts College rather than through Engineering).

Going beyond CS departments, there are significant initiatives in computing and information science at several institutions - notably the Media Lab at MIT, SIMS at UC-Berkeley, the School of Information at Michigan, and the College of Computing at Georgia Tech. The first three of these efforts have largely grown up in competition with, or separate from, activities in Computer Science departments. This is a situation that the task force finds particularly worrisome, as it tends to produce duplicate efforts, competing programs, and a lack of cross-unit collaboration. While correlation does not necessarily imply causality, we note that these three institutions are precisely those with joint EE/CS departments.

In closing, we wish to stress that the activities at other institutions exhibit a broad range of possible structures - with considerable opportunity for breadth that reaches a substantial number of people outside of departments such as Computer Science. These activities also illustrate some of the dangers that we can and should avoid at Cornell. Each institution must evaluate its own strengths to determine how to best respond to the challenge of teaching and advancing knowledge in computing and information. One of Cornell's historical strengths has been its extraordinary breadth, something that we believe will be a real asset in this arena.