Foreword

The EDUCAUSE Center for Applied Research (ECAR) was launched on January 1, 2002, to create a body of research and analysis on important issues at the intersection of higher education and information technology (IT). ECAR is fulfilling its mission through a program of symposia and through the publication of biweekly research bulletins, detailed research studies, occasional papers, executive roadmaps, and case studies. These publications are designed to highlight effective practices, lessons learned, and other insights from the practical experience of campus leaders. Since ECAR’s inception, 13 symposia have been held, and more than 400 research publications have been issued.

Messaging and Communications in Higher Education

On October 29, 1967, UCLA’s SDS Sigma 7 host computer transmitted a one-word message to an SDS 940 host computer at the Stanford Research Institute (SRI). The message sent was “lo.” This message had been transmitted over the ARPANET, the packet switching network of the U.S. Department of Defense’s Advanced Research Projects Agency. At 10:30 p.m., Leonard Kleinrock and Charley Kline of UCLA’s Network Measurement Center tried to send a message with the word “login” to SRI’s Augmentation Research Center. SRI programmers had received the letters “lo” when the ARPANET connection crashed. About an hour later, a second attempt at sending the word “login” was successful.

The following year, HAL, the precocious and fictional computer in Stanley Kubrick’s 2001: A Space Odyssey, tells other crew members aboard the spaceship Discovery, “I am putting myself to the fullest possible use, which is all I think that any conscious entity can ever hope to do.” While computers have yet to become sentient, human–machine interactions have become commonplace and complex, and today, more than 1.5 billion humans are transmitting and receiving billions of textual, visual, musical, and vocal messages daily.

It is generally understood that the second wave of the information revolution began with the creation of the ARPANET. With the transmission of messages between computers across networks, it became clear that computers were not only computing machines. They were communicating machines. This was—and remains—a very powerful idea. Kleinrock himself speculated in the earliest days that “we will probably see the spread of ‘computer utilities’ which, like present electric and telephone utilities, will service individual homes and offices across the country.”

©2009 EDUCAUSE. Reproduction by permission only.
To early Internet pioneers like Kleinrock and J. C. R. Licklider, it soon became obvious that the ARPANET was likely to become a human communication medium with very important advantages over normal U.S. mail and telephone calls. Early net workers discovered that a network message could be written tersely and typed imperfectly without upsetting the applecart. The formality and perfection that most people expect in a typed letter did not become associated with network messages, probably because the network was so much faster, so much more like the telephone.

The rest, of course, is history. The Internet—successor to the ARPANET—has indeed become a mass communication medium of amazing power. It is the connective fabric that links evolving computer utilities and messaging and communications, and it has not only exploded in popularity but has also supplemented and, in many contexts, supplanted both the telephone and the U.S. mail in usage. This history is rich, and the story of messaging and communications told by ECAR Fellow Mark Sheehan captures this unfolding drama as it stands in 2008–2009 in higher education. The story of messaging and communications is especially poignant and important in the context of higher education. First, university information technologists can and should take pride in a story about technologies that were in large measure “invented here.” While the Internet was certainly promoted and funded by visionary leaders in the federal government, it was surely invented, developed, improved, tested, and assimilated by university researchers in university environments. Second, as scholarship is an inherently interdisciplinary and interinstitutional activity, the evolution of messaging and communications is completely interwoven with scholarship, as both have evolved in the past 40 years. Most would argue that scholarly research—particularly scientific research—has changed more in the past 40 years than in the preceding 200 years!

The topic of messaging and communications is not only a touchstone to the past but also a topic that can launch IT practitioners from the relentless demands of today to breathtaking views of tomorrow. One could even say that this is a story that begins with “Lo” and ends in “and behold.” Today we are witnessing the full convergence of voice, data, and video on a variety of dazzling platforms. More than one-fifth of all the people in the world communicate via messages across an ever-growing array of communication channels—e-mail, text messaging, cellular networks, social networks, blogs, podcasts, and so forth. Hours of new video content are added to YouTube every minute. In many ways, we swim in a sea of messages—messages that we syndicate and messages that others (human or not!) send to us.

In 2009, to message is to be. As Marshall McLuhan observed, “We become what we behold. We shape our tools and then our tools shape us.”

Mark Sheehan’s study of messaging and communications in higher education builds on a thorough review of the literature of this field, discussions with leaders in our community, an analysis of survey responses from 351 colleges and universities, and interviews with more than 30 IT leaders. Like all ECAR studies, this study of messaging and communications strives to document the state of current practice, including

- the robustness of higher education’s communications infrastructure and service,
- CIO perceptions of the effectiveness of digital communications in higher education,
- the nature of technologies in use and the extent of their deployment,
- higher education’s uptake and socialization of rapidly evolving web-enabled handheld devices, and
higher education’s capacity to blend and leverage multiple communication channels to deliver critical messages under emergency conditions.

Many Contributors to the Study

As with all ECAR studies, our ability to produce these analyses depends on contributions of time and expertise from many. Mark Sheehan led the ECAR team that included Judy Pirani, Ron Yanosky, Gail Salaway, Shannon Smith, Bob Albrecht, Susan Foster, and myself. The work of the ECAR fellows is meticulous, and it is checked and rechecked for accuracy. Gregory Dobbin, Bob Carlson, Dixie Cheek, Nancy Hays, Susan Gollnick, Anita Kocourek, Stephen Larghi, and orchestra leader Toby Sitko make up that part of the talented team of EDUCAUSE staff and contractors who translate great research and writing into the tangible resources that make it possible for our readers to gain insights and to make effective cases for action to their stakeholders. Providing tools that promote actionable insight lies at the heart of the ECAR mission.

As is often said, the real team in any ECAR study is the EDUCAUSE community. Our ability to ascertain the state of the practice in any sphere of IT activity in higher education depends on the goodwill of our friends in the community. Literally hundreds of busy CIOs and other senior information professionals share their time and expertise with us. For this study and for three case studies that look at messaging and communications at the Louisiana State University and A&M College (LSU), the University of Louisville (UofL), and the Massachusetts Institute of Technology (MIT), we are particularly grateful to Brian Voss of LSU; Priscilla Hancock and Thomas M. Sawyer of the UofL; and Jerry Grochow, Wilson D’Souza, and Andrew Yu of MIT. Too many members of our community to list here made contributions to this study. Their contributions are deeply appreciated and are acknowledged in Appendix B.

At ECAR and at EDUCAUSE we are constantly reminded that we are amazingly lucky to serve a professional community that is generous, insightful, and kind. To the extent that ECAR and EDUCAUSE live up to the expectations, standards, and example of this community, it is because we are its creation, and one of its reflections.

Lo, and behold.

Richard N. Katz
Boulder, Colorado

Endnotes