Communication Technology in Finishing God's Work

By Gerald Coy

Technology development has followed the predictions of Bible prophecy. Daniel 12:4 foretold the last days when man would run to and fro and knowledge would be increased. Technology development has certainly been instrumental in the fulfillment of that prophecy. A time line of the major technological developments shows how the megacrisis, which requires human beings to cope with rapid change, is building, directed toward the fulfillment of the last-day prophecy of Daniel 12. Cornish refers to this crisis as "the rushing vortex of social and technological change that has engulfed civilization during the latter half of the twentieth century."[1]

The increasing speed of technological change forces society to adjust socially and economically. For thousands of years society was agrarian with extended family units, but within a relatively short time, it changed to an urban society built around the nuclear family unit. The nuclear family, which has existed for only a few decades, is again being challenged due to the global concepts of the new information age.

Examining the phenomenon of the various clusters of technology helps show how this crisis is building. A review of the communications cluster illustrates how dramatically the time gap has shortened between major technological developments. Other clusters such as transportation, production, power and energy, or construction would likewise illustrate a history of phenomenal growth and change.

Communication

While Adam and Eve lived in the Garden of Eden, they were allowed to communicate directly with God, the angels, and all creation. After sin entered, however, communication became limited to this earth. God confounded human language during the building of the Tower of Babel and communication became so difficult that people were forced to live and work with those they could understand.

For thousands of years, vocal messages and occasionally a picture painted on walls of stone were the only means of communicating information from person to person and generation to generation. Historians conclude that around 3000 B.C. man began to use a written symbolic language for communication.[2] Although this facilitated long-term communication, some 4,000 years passed before Johann Gutenberg developed uniform printing type and modified the printing press in 1450 A.D.[3] His innovation facilitated the spread of information rapidly over large areas.

As presses improved, communication between people, countries, and continents became well established. The major drawback was transportation—it often took

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months for written or printed messages to be delivered and to receive a response.

In 1937, approximately 400 years after Gutenberg's innovation, an American named Samuel F. B. Morse, with the assistance of Joseph Henry, patented an electrical signaling device known as the telegraph.[4] Morse's equipment, however, was not the critical part of the invention—rather it was the coding system he developed that assured the widespread popularity of sending messages. In Europe, inventors Gus, Weber, Jocobi, Wheatstone, and Cooke had also worked on telegraph equipment but lacked a coding system that made theirs practical.

In 1876, almost 40 years after Morse's invention, Alexander Graham Bell invented the first practical telephone.[5] This new communication tool allowed people to talk together over long distances without the need of a coding system. An even greater boost to the communication networks was the first transatlantic cable between America and England, which occurred in 1858.[6] For the first time two continents were as close as next-door neighbors. Because of its international capability and personal applications, the telephone may be considered to be one of the most used —and useful—pieces of equipment ever invented.

Faraday's discovery of magnetic lines of force, with the work of Maxwell and Hertz, and their application by Marconi, show a progression of discoveries and applications that allowed people to send messages hundreds of miles without the use of wires. Less than 20 years after the beginning of commercial radio in America, the medium had become an important part of the new society.[7]

Within a few years, technologists moved forward from spoken to visual communication. In 1936 the first television station was inaugurated in London. It had taken less than six years to make the commercial application of the mechanical-optical transmitter developed by Vladimir Zworykin in 1928 at the Westinghouse labs.[8]

Following World War II the need for improved communications received renewed emphasis. In 1947, at Bell Telelphone Laboratories, the experimental team of Shockley, Bardeen, and Brattain produced the first transistor.[9] With smaller solid state electronics and the development of rocketry during the 1950s, communication via satellite was drawing closer.

In 1962 Telstar introduced a global communication system to the world and heralded the beginning of telecommunication.

Instant Communication

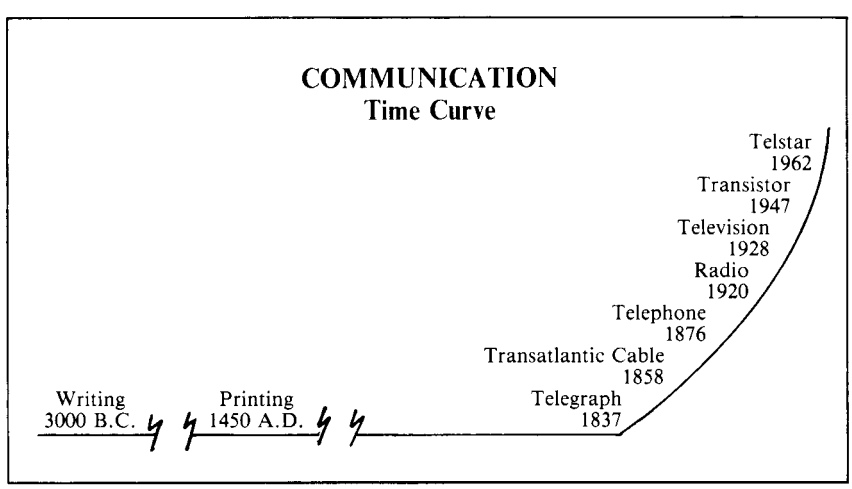
The communication time lapse has been dramatically reduced within the past century. When President Lincoln was shot in 1865 it took days for the news to spread throughout Europe. When President Reagan was shot, however, the London office of a European news service phoned their correspondent in Washington, D.C., to inform him of the situation and asked him to cover the story while it was still developing.

Today major developments in communications include the use of computers, fiber optics, and lasers. Networks are being designed to allow for verbal and visual communication anywhere on the globe as well as in space. Plotting these developments on a time line, as shown in the accompanying illustration, shows that the time gap between inventions has shortened dramatically, requiring ever faster and more profound societal adjustments.

God commanded that the good news of His salvation should be preached to every nation, kindred, tongue, and people. This can indeed be a reality today because of the knowledge God has provided to assist human beings in improving their communications abilities. With this increased knowledge comes responsibility. For educators this responsibility is twofold: to God and to students.

One of the greatest needs within the Adventist educational system is training workers who can combine basic communication skills with the latest in technology, such as computers, telecommunication systems, audio-visual equipment, and production techniques, to address the challenge of world-wide

(To page 36)



added are not in the areas being recommended or developed by the industrial arts profession.

In general, industrial arts was perceived to be closely allied with the general-education curriculum, to be an important component in the educational program of college-bound students, and was seen as necessary for all students.

Few significant differences can be detected between the SDA and the public school industrial arts programs.

Neither SDA principals nor chairmen seem to be content with the current emphasis given to the purposes of industrial arts.

Seventh-day Adventist chairmen do not sense strong administrative support for their programs. The situation is the opposite for public school industrial arts chairmen. —P. John Williams. □

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Technology in Finishing God's Work

(Continued from page 25)

evangelism. Educators must make sure that the young people under their tutelage receive good reading, writing, and speaking skills as well as the ability to use new methods of communication technology.

Conclusion

Despite the amazing advances in communication technology, unanswered questions still challenge and fascinate us. What will the future hold? As teachers, how can we prepare our students to meet the challenges that will confront them? The training of Adventist young people for the future must include an awareness of the impact of technology on their lives, and how and where they can use their skills to help finish God's work.

If the Lord sees fit to allow time to continue before His return, major changes are coming in the future of technology—changes for which we must prepare ourselves and our students. □

FOOTNOTES

[1] Edward Cornish, *The Study of the Future* (Washington, DC: World Future Society, 1977), p. 3.
[2] T. K. Derry and T. I. Williams, *A Short History of Technology* (New York: Oxford University Press, 1960), p. 216.
[3] M. Kranzberg and C. W. Pursell, Jr., *Technology in Western Civilization* (New York: Oxford University Press, 1967), vol. 1, p. 85.
[4] C. Singer, E. J. Holmyard, A. R. Hall, and T. I. Williams, *A History of Technology* (Oxford: Oxford University Press, 1958), vol 4, p. 660.
[5] D. S. L. Cardwell, *Turning Points in Western Technology* (New York: Science History Publications, 1972), p. 173.
J. Gregory and K. Mulligan, *The Patent Book* (New York: A & W Publishers, 1979), p. 71.
[6] J. W. Oliver, *History of American Technology* (New York: The Ronald Press Co., 1956), p. 433.
[7] T. I. Williams, *A History of Technology* (Oxford: Oxford University Press, 1978), vol. 7, p. 1255.
[8] M. Kranzberg and C. W. Pursell, Jr., *Technology in Western Civilization* (New York: Oxford University Press, 1967), vol. 2, p. 304.
[9] *Ibid.*, p. 307.

Technology for Elementary Students

(Continued from page 10)

Local church members are usually glad to contribute items. An announcement in the church bulletin or school newsletter will often bring good results.

Conclusion

To ensure that each technology education activity yields maximum benefit to the learner, the following steps are recommended:

1. Select the activity in terms of students' capabilities, readiness, and interest as well as its potential value to the unit being studied.

2. See that the activity is adequately planned.

3. Instruct and direct the students through successful completion of the project.

4. Conduct such summarizing activities as necessary to ensure effective learning.[8]

Christian educators have the responsibility of providing a complete education for every student. Technology education activities in the elementary school can enhance basic learning experiences in a number of ways. By introducing technology education into the classroom, a teacher can offer an exciting, stimulating, and more effective educational experience. □

FOOTNOTES

[1] W. R. Miller, and Gardner Boyd, *Teaching Elementary Industrial Arts* (South Holland, IL: The Goodheart-Willcox Company, Inc., 1970), p. 11.
[2] Ginger Ketting, "The Benefits of Technology Education in the Elementary Classroom" (Unpublished paper prepared for a handiwork activity class at Walla Walla College, College Place, WA, 1985), p. 5.
[3] Miller and Boyd, p. 16.
[4] Mary Margaret Scobey, *Teaching Children About Technology* (Bloomington, IL: McKnight and McKnight Publishing Co., 1968), p. 12.
[5] Miller and Boyd, p. 10.
[6] Scobey, p. 11.
[7] *Ibid.*
[8] Miller and Boyd, p. 34.

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Technology—New Approaches

(Continued from page 23)

training in all areas. This would be economically impossible. Each college offers some areas at varying levels of experience. For example, a person interested in studying