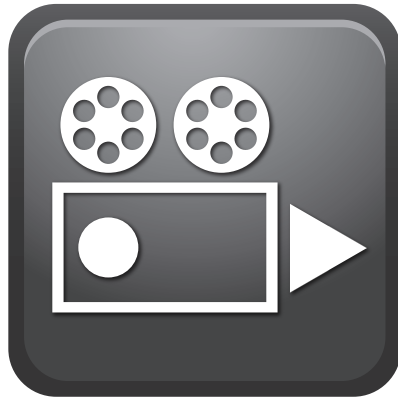


# Management Information Systems 16e

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## CHAPTER 7 TELECOMMUNICATIONS, THE INTERNET, AND WIRELESS TECHNOLOGY

### CASE 1 Telepresence Moves Out of the Boardroom and Into the Field



#### (a) Cisco TelePresence IX5000 - Collaboration Beyond the Boardroom

**URL** <https://www.youtube.com/watch?v=kG9Uia-QwtY>; L=2:13

#### (b) Cisco TelePresence Redefines Hollywood Collaboration

**URL** <https://www.youtube.com/watch?v=4xGMH95sAgo>; L=3:17

**SUMMARY** Telepresence is one of the fastest growing business-technology applications. It combines the power of global, high-speed, broadband Internet networks with local video, audio, and processing power to create effective meeting and decision-making environments for managers at a fraction of the cost of face-to-face, in-person meetings. As the cost of telepresence declines, it is being deployed more deeply and broadly into business firms, involving a much wider range of employees and decision-making situations.

**CASE** Telepresence is the effort to create a digital environment using video and audio technologies which mimic key features of real-world interactions with people and objects. Telepresence is not the same as virtual reality because the actors involved in telepresence are human beings, not avatars. Telepresence is more than just video conferencing because it has a more immersive quality. The primary use of telepresence today is to support group meetings that allow participants to be physically in different places but to interact in a realistic environment as if they were all in the same meeting room. Other uses include the use of telepresence to control and manipulate robots and objects in manufacturing and field

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settings where the use of humans would be dangerous. Military uses include control over robotic “drone” aircraft, and inspection of nuclear submarine reactors.

Telepresence, once thought to be the stuff of a distant future, has definitively arrived. First discussed as a technical possibility in the 1960s, and earlier in some novels, telepresence today is thriving thanks to broadband Internet service that has continental and global reach, field-of-view cameras that can capture a 360 degree visual experience; multiple large monitors to display the experience; realistic wraparound sound systems; and increased computing power in the form of servers and client PCs. Telepresence systems that used to cost millions of dollars and needed a truck to transport, now cost thousands of dollars, and can be moved about like ordinary desk top computers. Originally conceived as a tool for senior management because of its expense, telepresence technology is today moving from the boardroom to the field, where collaboration is very important.

Business firms invest in telepresence systems and technologies for a variety of reasons including reduction of travel time and expenses, reduction in carbon emissions caused by unnecessary travel, improvements in worker productivity that result from lowered meeting and collaboration costs, and not least, improvements in employee quality of life. With telepresence technologies, employees do not waste time standing in lines at airports or spending hours on flights or being away from their families for extended periods.

While earlier high-quality telepresence systems were so expensive that only Fortune 500 firms could afford them, today systems are affordable for hospitals, school districts, and universities, all places where collaboration is extremely important. High speed Internet connections have also enabled high definition video and audio elements, making the appearance of people collaborating in the same room quite realistic, even though participants are thousands of miles away. Schools such as the Fontana United school district in California, which has 41,000 students at 40 school sites spread out over 40 miles and split over two major freeways, are benefiting from the introduction of telepresence technologies via a pilot program with Cisco.

Telepresence systems aimed at corporate customers are sold by Cisco, AT&T, Digital Video Enterprises (DVE), Polycom, HP, Telanetix, Tandberg, BrightCom, LifeSize, and Teliris. Prices range from tens to hundreds of thousands of dollars. These systems include multiple microphones, speakers, high-definition monitors, cameras, and often dedicated networks and custom-made studios. They strive to be as transparent to users as possible by providing high-definition videos, imperceptible transmission delays, and user-friendly interfaces.

## Telepresence in the Film Industry

Jerry Bruckheimer is one of the most successful producers of all time having produced over 40 films and television series including the CSI (crime scene investigation) family of television crime series, and films such as The Lone Ranger, Pirates of the Caribbean, Bad

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Boys II, Black Hawk Down, Pearl Harbor, Enemy of the State, Top Gun, Flashdance, and Beverly Hills Cop. His films have grossed over \$13 billion. In film circles, Bruckheimer is referred to as “Mr. Blockbuster.” For his latest films, Bruckheimer’s production company has adopted telepresence technology to speed up production and raise production values.

Film and television production requires a small village of specialists and contributors in order to produce quality content. It’s the producer’s job to bring together the actors, director, set design, costume, audio, and video specialists needed to shoot a film. Often these specialists are located in different places but need to collaborate in the same time frame. The film site often is hundreds or thousands of miles away from a home office, and yet, to keep budgets down and the film on schedule, there needs to be a high level of communication among all involved. In the past, it may take days or even weeks for daily film takes to be reviewed by corporate executives, editors and producers in the home office. Today, modern telepresence tools can bring on-set and remote directors, editors, and talent together to produce award winning films. According to Bruckheimer, the entire process of film making accelerates, and the quality of films is enhanced because of higher levels of collaboration and communication.

### VIDEO CASE QUESTIONS

1. List and discuss briefly the benefits claimed by Cisco for its IX5000 telepresence technology.
2. Why did Jerry Bruckheimer’s production firm adopt telepresence technology?
3. What are the business benefits to Bruckheimer’s production company of using telepresence technology?
4. In the past, work was organized into central buildings located in central locations (like cities) in order to facilitate face-to-face interactions. What impacts might telepresence have on the organization of work? How could you use these tools to organize work on a global scale even when employees are in different physical locations?

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