Homework

## IT's About Business 6.1

### The Least Connected Country on Earth

MIS

Eritrea, a nation of six million people, is located in eastern Africa, surrounded by Sudan, Ethiopia, and Djibouti. The country has been ruled by a dictatorship since it achieved independence in 1993. Since 2009, Reporters Without Borders (**www.rsf.org**) has placed Eritrea at the bottom of its press freedom index.

Eritrea is also the world's most isolated country when it comes to telecommunications access, according to the United Nations International Telecommunication Union (ITU; **www.itu.int**). Eritreans are allowed to place international phone calls and to use the Internet. However, according to the ITU, only 1 out of 100 Eritreans have a landline, and only 7 in 100 have a cell phone. Both of these proportions are among the lowest around the globe.

The country's only telecommunications provider, Eritrea Telecommunication Services (EriTel; **www.eritel.com.er**), is controlled by the government. Customers must receive approval from local authorities to own a cell phone, and it costs 200 nakfa ($13.29) to request permission. Citizens who are performing mandatory military service aren't given permission to have a cell phone. To activate their phone, customers pay EriTel the equivalent of $33.60. When they add minutes to their phone, that costs a minimum of $3.65 every time. Because the average Eritrean earns roughly $500 a year, this expense is prohibitive to most.

Robert Van Buskirk, a Fulbright scholar from the United States, launched Eritrea's first informal e-mail service in the mid-1990s. He used international phone calls to send data messages between a computer at the University of Asmara—Eritrea's capital city—and a computer in California. For a short time, he singlehandedly operated the entire country's e-mail service.

As of September 2016, less than 1 percent of Eritreans are online, according to the ITU. Access is available in just a few places. Internet connections are also almost exclusively through dial-up modem, and they are extremely slow. Eritrea was also the last African nation to establish a satellite connection to the Internet. Furthermore, the country is one of only two African coastal nations with no fiber-optic network. Only about 150 landline broadband connections exist, and only a smattering of homes have Internet access, mostly dial-up connections costing about $200 a month.

Eritreans can get public Internet access in about 100 Internet cafes throughout the country. There is often a wait to use one of about 10 computers in each cafe. Users pay roughly $1.34 to be online for an hour, which costs about the same as seven loaves of bread. Some Internet cafés show American movies and TV shows in the evenings and charge customers to watch.

In October 2016, the government ordered Internet service providers to maintain detailed information on their customers. Other than that, there seems to be little censorship of the Internet. One likely reason is that high costs and long download times have marginalized the use of the Internet as a protest vehicle. Another possible reason is that the country is experiencing severe economic difficulties, and the government may recognize that strengthening the country's telecommunications would help improve the economy. The government also wants to improve tourism. This goal would require a greatly improved telecommunications infrastructure as well.

**Sources:** Compiled from A. Harnet, "Eritrea Orders Internet Service Providers to Keep Detailed Records of Their Customers," *Eritreabeligerance.com,* October 6, 2016; B. Bruton, "It's Bad in Eritrea, But Not That Bad," *New York Times*, June 23, 2016; "Areas the Eritrean Government Should Improve Upon," *Madote.com*, February 2, 2016; "Eritrea—Telecoms, Mobile, and Broadband—Statistics and Analyses," *budde.com.au*, June 4, 2015; Y. Abselom, "Eritrea Blossoming Beautifully at 24," *Geeska Afrika Online,* May 10, 2015; "Sadly, Eritrea Remains at Tail of All World Indexes," *harnnet.org*, January 12, 2015; "Eritrea Telecommunication Report 2015," *Business Monitor International*, December 24, 2014; "Eritrea: Stronger Private Sector, Qualified Workforce, International Integration Needed, Says AFDB," *Caperi.com*, October 8, 2014; C. Winter and B. Haile, "The World . . . Eritrea," *Bloomberg BusinessWeek*, June 30–July 6, 2014; C. Winter, "Eritrea's Communications Disconnect," *Bloomberg Business Week*, June 26, 2014; R. Atkinson and L. Stewart, "The Economic Benefits of Information and Communications Technology," *Information Technology & Innovation Foundation,* May 14, 2013.

**Questions**

1. **Describe the impacts of a lack of telecommunications infrastructure on Eritrea.**
2. **Besides improving the economy, what other areas of Eritrean life would be impacted by a greatly improved telecommunications infrastructure?**
3. **Can the government of Eritrea allow an improved telecommunications infrastructure while maintaining strict control over communications and information? Why or why not? Support your answer.**

Interestingly, some FCC commissioners feel that the definition of broadband should be 100 Mbps for download. The definition of broadband remains fluid, however, and it will undoubtedly continue to change to reflect greater transmission capacities in the future.

You are likely familiar with certain types of broadband connections such as *digital subscriber line (DSL)* and cable to your homes and dorms. DSL and cable fall within the range of transmission capacity mentioned here and are thus defined as broadband connections.

The various types of computer networks range from small to worldwide. They include (from smallest to largest) personal area networks (PANs), local area networks (LANs), metropolitan area networks (MANs), wide area networks (WANs), and the ultimate WAN, the Internet. PANs are short-range networks—typically a few meters—that are used for communication among devices close to one person. They can be wired or wireless. (You will learn about wireless PANs in