Broadband Varieties (Instructor Version)

Instructor Note: Red font color or Gray highlights indicate text that appears in the instructor copy only.

Objective

Select broadband solutions to support remote connectivity in a small- to medium-sized business network.

Instructor Note:

- This activity can be completed individually or in small groups.
- The three major types of broadband transmission as specified in the chapter content are the focus of this activity.

Scenario

Telework employment opportunities are expanding in your local area every day. You have been offered employment as a teleworker for a major corporation. The new employer requires teleworkers to have access the Internet to fulfill their job responsibilities.

Research the following broadband Internet connection types that are available in your geographic area:

- DSL
- Cable
- Satellite

Consider the advantages and disadvantages of each broadband variation as you notate your research, which may include cost, speed, security, and ease of implementation or installation.

Resources

- World Wide Web access
- Word processing software

Step 1: Research three major types of broadband Internet connections:

- DSL
- Cable
- Satellite

Step 2: Decide which broadband options would be important to you as a teleworker in your small or home office:

- Cost
- Speed
- Security
- Ease of implementation
- Reliability

Step 3: Using the options from Step 2, create a matrix that lists the advantages and disadvantages of each broadband type.

Step 4: Share your research with the class or another group.

Suggested Activity Examples:

Broadband Variations*

Broadband Type	Advantages	Disadvantages
DSL	High-speed downloads of up to 1.5 Mb/s, which can be more or less depending on the ISP. Business-level DSL service offers guaranteed data rates. Uses existing telephone wiring, but allows Internet use and land-line telephone use at the same time.	Not every telephone line will work; the ISP may need to perform an analysis. Speed drops as you get further from telephone company central office. May not be as widely available as cable.
Cable	Speeds are not dependent on distance from central office. Faster maximum speeds (2 Mb/s+) than DSL, which depends upon ISP. May be cheaper than DSL, especially when bundled with TV.	May require professional installation. Line shared with others in neighborhood; speeds can vary. May place limits on data downloads and uploads determined by the ISP.
Satellite	Gives a broadband option to rural areas or non-traditional locations, although there are virtually no geographic restrictions. Download speeds are comparable to DSL and Cable, with 1 Mb/s download.	Can experience disruptions due to weather. May be more expensive than DSL or cable due to equipment required (satellite dish). Lower speeds can result due to latency of satellite signals.
*http://reviews.cnet.com/4520-6536_7-726601-5.html (DSL and Cable information) *http://www.fcc.gov/guides/getting-broadband (Satellite information)		

Identify elements of the model that map to IT-related content:

- Broadband types
- DSL
- Cable
- Satellite
- Options available to broadband types
- Broadband advantages and disadvantages