

Local access and transport areas essay sample

[Technology](#), [Internet](#)



Local Access and Transport Areas – Local Access and Transport Area is a U. S. term that refers to a geographic region assigned to one or more telephone companies for providing communication services. A connection between two telephone companies within the same region is referred to as intraLATA. A connection between two local exchange carriers in different regions is called interLATA, which is the same as long-distance service. Long Distance – Calling anywhere out of your local area or zip code area that you live in can be long distance calling. Although land lines only bill to the person starting the call, Cell phone carriers bill both the person calling and the person receiving the call. This is why many people don't do long distance calling because the other person may not want to receive the charge for the call.

Local Loop – In telephony, a local loop is the wired connection from a telephone company's central office in a locality to its customers' telephones at homes and businesses. This connection is usually on a pair of copper wires called twisted pair. The system was originally designed for voice transmission only using analog transmission technology on a single voice channel. Today, your computer's modem makes the conversion between analog signals and digital signals Data Over Telephone Lines – Telephone was originally invented to transfer voice. However, now you can transmit data over the telephone. The fixed-line telephone is on analog systems capable of transmitting only a narrow range of audio frequencies. Because it only transmits a small portion of the audio spectrum, it may not seem like a good choice for transmitting data.

Explore Activity 3

Access Networks – It is part of the network that connects the individual consumer or business to the telecommunications system. It is basically a way for the client to get telephone communications, internet/data, and video from the telecommunications service providers. It is an important network because it reaches the end users. **Regional Networks** – This is a bit larger than a metro network, it basically carries information from metro area to metro area. The regional network is typically the last point before information traffic is put onto the core network. In many cases, the regional network provides communication between banks, schools, and large corporations having operations within the area. **Metro Networks** – It is responsible for aggregating information from the local exchanges of a specific service provider, as well as information from other independent service providers, and sending the information to the regional and long haul/core network.

The networks are usually owned by incumbent service providers. These usually cover metropolitan areas. **Core/Long Haul Networks** – This network is responsible for transporting large amounts of information from the metro and regional networks in one part of the geography over very long distances to the regional metro networks of another part of the geography. It is designed as a mesh network so that way there is more than one way for information to transfer. These are usually owned by competing telecommunications service providers due to the infrastructure of the long distance covered. **Ocean Networks** – These have become the most demanding and technically advanced networks in existence. Most people think that information to other continents is transferred over satellite but it's

actually transferred through the oceans. Because of the distance and difficulty of installing these networks the costs are very high.

Practice Activity 1

Cell phones - Are phones that can be taken anywhere due to wireless capabilities. In the beginning it was used to transfer voice but evolved in to using data transfers also. Today, cell phones have almost all the capabilities that a computer has. Landline Phones - Can be used to transfer data and voice. Landlines are becoming used less due to cellphones and other devices thanks to the rise in wireless and Ethernet. Landline was originally used to transfer voice. SMS/Text Messaging - In the beginning a customer would be charged by minutes but as technology grew it has become measured in megabytes or turned into data plans. It involves data and voice networks also. SMS/Text Messaging has become a top topic between top carriers to get people to use their services.

Fax Machines - Fax machines are a great way to send documents, especially between businesses. They provide confidentiality that may be necessary for legal and medical documents, among other industries. Although Internet document transmission is equally as convenient, computers and the internet can be hacked, allowing those without permission to access private documents, while fax machines cannot. Pagers - Pagers are electronic communications devices that are used to notify or alert a user about an event.

They beep, vibrate, flash, display text, and use other alerts or methods of notification. Pagers and beepers are often used in restaurants, supermarkets, factories, service centers, hospitals, and other commercial and industrial settings. Because of their group-messaging capabilities, they are also used by emergency services personnel, medical staff, and information technology teams. VOIP – VOIP is an acronym for Voice Over Internet Protocol, or in more common terms phone service over the Internet. If you have a reasonable quality Internet connection you can get phone service delivered through your Internet connection instead of from your local phone company. A way is required to turn analog phone signals into digital signals that can be sent over the Internet.

Practice Activity 2

When playing a game such as Call of Duty or world of Warcraft you are playing with thousands of other players from across the world at the same time. This is possible thanks to the internet. The internet has helped take gaming to the next level by allowing the accessibility to play with your friends across the world.

The first few things needed to play on the internet is having an Ethernet cable, router, and an ISP or internet service provider. Ethernet cable allows you to hook it to your gaming console or computer, and plug it into a router. The Ethernet cable that is used is usually a Cat5, with transfer speeds used by most people at speeds from 10-100Mbps. The router then is hooked up to your ISP. Your ISP is the most important part because without an ISP you will not be able to play online.

From here your ISP takes care of everything. They have built the MAN's and WAN's that are needed to transfer your data over long distances. The MAN's are mostly made up of multiple routers and many Ethernet cables and such to connect everything together. These WAN's and MAN's are connected to Long Haul Networks that connect the MAN's and WAN's together over long land distances. The final network the Ocean network is the network that connects the world together. This is the final piece that allows you to game with someone from Europe or Asia.

Apply Activity

In the last decade the use of cellular networks has increased greatly. They have become the main use of telecommunications, especially in the most advance industrial nations. In the US everyone is beginning to use cells phone at any age from 10 to 100. Not only can you use cell phones to call people, but now you can email, IM, text, and even play games or connect to the internet with adequate speed. This turn into the abundant use of cell phones has made it a must have for everyone. Today, people are constantly on their phones and most people can't live without them anymore. However, some disadvantages of a cellular phone are when the network goes down. When this happens you can't use the internet or call people.

With the increase of cell phone use and capabilities of using it anywhere, land phones are starting to become obsolete. With the cell phone you can take it with you anywhere and call someone as compared to with land line you can call people from only a certain radius from the landline. Also, landlines are very limited in what they can do compared to cell phones. With

landlines you can only call people. With cell phones you can do all the things mentioned before in the previous paragraph.

I have read somewhere where landlines had one advantage that cellular networks didn't have. After the last hurricane that hit the northeast this past month, many antennas and cellular towers were taken out by the storm's powerful winds and floods. This caused everyone in that area to be unable to use cell phones because they were getting no signals to call. However, since landlines are underground they were still able to use pay phones to call other people. So for national disasters such as the aftermath of a hurricane, landlines still have an advantage over cellular networks in that area.