

ADVANCES IN COMMUNICATIONS TECHNOLOGY

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Recent advances in communications technology, which is the fastest growing field now-a-days, have made life more easier and comfortable than any one could have made some years ago. And it is not just a dream that in the near future people, with the help of combination of various forms of communications, will be able to sit at home and perform some of the hectic chores as shopping and banking, that take a large part of their day. But these communication devices, if on one hand are providing easy going to a person, on the other and have some drawbacks too.

We have to make a lot of advances in this world so that we could enter the 21st century with full confidence and keep our development at par with other countries. But people should adopt this technology to make advances for their development and should not be at the back benches on their moral front. Here is a short description of the advances being made in the world today and to be made in the near future, with a brief warning for their users to adopt a careful attitude towards them.

Communication satellites

Communication satellites and giant antennas to which they beam information help ordinary people in having the world right at their fingertips. Radio and television programmes, which are using the communication satellite, are able to transmit signals to distant places. These transmissions provide latest information about happenings around the world. But there is also a negative side of this exposure. The electronic media which is now working through satellite is also presenting the culture of other countries. The young generation inspired of this cultural boom, started becoming a part of this culture, thus forgetting its own values. This diffused culture is the outcome of following the latest trends. The result is that our culture is neither totally western nor eastern. It has affected our younger generation. In the electronic media, no doubt, this exposure has helped in improving the standard of our own programmes telecast on Radio and TV, but these transmissions have also played a role in presenting a deteriorated picture of the recent turmoil in our political situation in front of the whole world, thus affecting our political relations with the neighbouring countries.

Cellular communication

system allows a person with a mobile phone to make and receive calls from anywhere — in a car, building, or a busy street — to any local or overseas phone. But mobile phones have limited the choice of a person for receiving calls. If your mobile phone is switched on and a person that you hate to talk to calls, then you have no other option but to receive his call and respond to him.

Computer communication

Computer communication is another giant step in this direction. Computers send and receive data in the form of digital signals. Digital signals are on-and-off. Computers can communicate over telephone lines. A modem changes the computer's digital signals into continuous analogue waves, so that they can be sent over telephone lines. The receiving modem changes the signal back into its digital form. Now, through modem, not only can the information be sent to distant stations but wire pictures can also be received by connecting a photocopy system with the receiving modem. These wire photos have helped in receiving the picture in as much time as the news reaches its destination.

Electronic Navigation System

Electronic navigation system helps in locating and directing ships and aeroplanes. Contrary to the early electronic navigation system, which used radio waves, modern systems use different types of signals. More advances are expected in this field.

Direct Broadcast

Through the direct broadcast system, we are able to watch live television programmes on our TV sets. Either it is the first step of human being on the moon or a recent hockey, cricket or squash match, being played in another country, this type of broadcast always has its interest for its viewers and listeners.

Facsimile

Facsimile has long been used by newspapers to transmit photographs, both colour and black & white. As the technology improves, publishers of newspapers and magazines are able to transmit an entire edition of text and photographs through special facsimiles machines and communication satellites to printers many miles away, or even across oceans, making it possible for several regional editions to be published within a few hours of the original publication. Facsimile is also used to send updated weather and navigational maps and charts to ships at sea. In the near future, broad-

possible to transmit facsimile messages to many places simultaneously.

Optic Fibre

Optical fibre cables can send 100 times as much data, but are half as wide and weigh 10 per cent of a telephone cable wire. Through optic fibre, digital signals travel many times farther than the conventional signals before being amplified in devices called repeaters. Pakistan has acquired this cable network for providing better facilities to its phone subscribers.

High Definition Television (HDTV)

High definition television or HDTV is envisioned as the future broadcast television standard.

Originally conceived in Japan, HDTV offers a clearer picture, improved (digital) sound and the use of a wider, larger screen. At present there is no world standard for HDTV production. Though it is not available as yet, but HDTV is the trend for the future television.

Integrated Service Digital Network (ISDN)

Integrated service digital network or ISDN is an advanced digital transmission network being developed in Japan. ISDN will provide a wide variety of services such as voice, text, data, music, facsimile, videotex and video. ISDN can transmit over regular telephone wire, coaxial cable, fibre optic cable, microwaves radio and satellite.

Radar and Sonar

Radar determines the distance of an object by measuring the reflection of pulsed radar waves. A radar antenna transmits the wave beam and then receives the reflected waves. Sonar works on the order of radar, but it makes use of sound instead of pulsed radar waves. Sonar can also be used to communicate.

Telephony

Telephony is the transmission of speech by means of electrical signals. A telephone changes sound waves into electricity when one is speaking and from electricity back into sound waves when one is listening. Telegraphy is communication at a distance by means of coded signals sent by wires or radio. The telegraph receiver transforms these coded signals into cellular typed letters or other forms of information.