# UNIT 13

## Communication systems

# WHAT IS AN ICT SYSTEM?

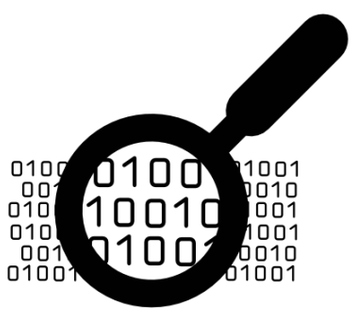

People

Hardware

ICT system

Software

Data





Call centre
Digital radio
Digital TV
Fax
GPS
Teletext
Wearable computer



# C Complete these sentences with words and phrases from B

1. Digital Audio Broadcasting, or DAB, is the technology behind _digital radio_____. DAB is intended to replace FM in the near future.
2. wearable computer___ are designed to be worn on the body or integrated into the user's clothing.
3. Most existing TV sets can be upgraded to __digital TV__ by connecting a digital decoder.
4. My grandfather is 75 and he still watches ____teletext____ on TV to find out share prices, weather forecasts and sports results.
5. I work in a ___call center____ I receive incoming calls with information inguiries. I also make outgoing calls for telemarketing.
6. Please complete this form and send it by ___Fax_____.
7. I have a ___GPS_____ navigation system in my car but I don't use it very often. My town is small and I know it well.

# Channels of communication

**What are telecommunications?**

**Telecommunications** refers to the transmission of signals over a distance for the purpose of communication. Information is transmitted by devices such as the telephone, radio, television, satellite, or computer networks. Examples could be two people speaking on their **mobile phone**, a sales department sending a **fax** to a client, or even someone reading the **teletext** pages on TV. But in the modern world, telecommunications mainly means transferring information across the **Internet**, via modem, phone lines or wireless networks.

Because of telecommunications, people can now work at home and communicate with their office by computer and telephone. This is called **teleworking**. It has been predicted that about one third of all work could eventually be performed outside the workplace. In **call centres**, assistance or support is given to customers using the telephone, email or online chats. They are also used for **telemarketing**, the process of selling goods and services over the phone.

# Channels of communication

## Digital TV and radio

In recent years, TV and radio broadcasting has been revolutionized by developments in satellite and digital transmission. **Digital TV** is a way of transmitting pictures by means of digital signals, in contrast to the analogue signals used by traditional TV. Digital TV offers interactive services and **pay multimedia** - that is, it can transmit movies and shows to TV sets or PCs on a pay-per-view basis. It is also **widescreen**, meaning programmes are broadcast in a native 16:9 format instead of the old 4:3 format. Digital TV provides a better quality of picture and sound and allows broadcasters to deliver more channels.

Digital Terrestrial TV is received via a **set-top box**, a device that decodes the signal received through the aerial. New technologies are being devised to allow you to watch TV on your mobile. For example, **DMB** (**D**igital **M**ultimedia **B**roadcasting) and **DVB-H** (**D**igital **V**ideo **B**roadcast-**H**andheld) can send multimedia (radio, TV and data) to mobile devices.

Audio programs (music, news, sports, etc.) are also transmitted in a digital radio format called **DAB** (**D**igital **A**udio **B**roadcasting).

# Channels of communication

**Mobile communications**

Thanks to wireless connectivity, mobile phones and **BlackBerrys** now let you check your email, browse the Web and connect with home or company intranets, all without wires.

The use of **GPS** in cars and PDAs is widespread, so you can easily navigate in a foreign city or find the nearest petrol station. In the next few years, GPS chips will be incorporated into most mobile phones.

Another trend is **wearable computers**. Can you imagine wearing a PC on your belt and getting email on your sunglasses? Some devices are equipped with a wireless modem, a keypad and a small screen; others are activated by voice. The users of wearable technology are sometimes even called cyborgs'. The term was invented by Manfred Clynes and Nathan Kline in 1960 to describe cybernetic organisms - beings that are part robot, part human.

# **D** Read the text again and find the following.

1. the device that allows PCs to communicate over telephone lines
2. the practice of working at home and communicating with the office by phone and computer
3. the term that refers to the transmission of audio signals (radio) or audiovisual signals (television)
4. five advantages of digital TV over traditional analogue TV
5. two systems that let you receive multimedia on your mobile phone
6. the term that means without wires
7. devices that deliver email and phone services to users on the move
8. the meaning of the term cyborg

# CYBORG

# BỊ ĐỘNG - PASSIVE

*Cú pháp:*

**be + past participle + (by)...**

| | |
|---|---|
| Present simple passive | **is/are + P2** |
| Present continuous passive | |
| Past simple passive | |
| Past continuous passive | |
| Present perfect passive | |
| Past perfect passive | |
| Future simple passive | |
| Modal verbs in the passive | |

# **B** Read the article and underline all the examples of the passive. What tenses are they?

A HACKER has been sent to jail for fraudulent use of credit card numbers. Nicholas Cook, 26, was arrested by police officers near a bank cashpoint last month.

Eight months earlier, he had been caught copying hundreds of computer programs illegally. After an official inquiry, he was accused of software piracy and fined £5,000.

It is reported that in the last few years Cook has been sending malware (malicious software) to phone operators and attacking mobile phones to steal business and personal information. Cook has now been sentenced to three years in prison for stealing passwords and obtaining money by credit card fraud.

Government officials say that new anti-hacking legislation will be introduced in the EU next year.

**C** Complete these sentences with the passive form of the verbs in brackets.

1. Microprocessors (make) _____are made_____ of silicon.
2. Call centres (use) ____are used_____ to deal with telephone enquiries.
3. In recent years, most mobile phones (equip) __have been equipped___ with Bluetooth.
4. GPS (develop) ____was developed___ in the 1970s as a military navigation system.
5. Sorry about the mess - the computers (replace) __are being replaced___ at the moment.
6. In the near future, the Internet (access)__will be accessed__ more frequently from PDAs and mobile phones than from desktop computers.
7. Networks (can connect) __can be connected__ via satellite.
8. I had to use my laptop this morning while my PC (fix) _was being fixed_

# Listen and answer these questions.

1. What exactly is VoIP?
2. Does the recipient need any special equipment?
3. What is an ATA? What is its function?
4. *What* is *the advantage of Wi-Fi phones over mobile phones?*
5. Do you need to have a VoIP service provider?
6. What is *spit*?


Computer
Computer
INTERNET
Telephone
ATA
Telephone
ATA
Cable/DSL
modem
Wireless access
point
Wi-Fi phone
Wi-Fi phone

# 4 Mobile phones

**A Label the mobile phone with features from the box.**

LCD screen  Brand  Built-in camera
Changeable faceplate
SIM card (Subscriber Identity Module)
Wireless support  Keypad  Ringtone

a Wireless support

b LCD screen

c Ringtone

d Changeable faceplate

e Keypad

f SIM card (Subscriber Identity Module)

g Built-in camera

h Brand

# In pairs, discuss these questions.

1. How much money do you spend on your mobile?
2. Can you send MMS (multimedia messages) from your mobile?
3. Do you access the Internet from your mobile? Which sites do you visit?
4. Can you listen to music and watch TV on your mobile?
5. Do you use your mobile phone for business? Do you think it is secure to carry out financial transactions via mobile phones?
6. Have you ever had to use your phone in an emergency?
7. Do you think that prolonged use of mobile phones can affect our health (for example cause fatigue and headaches, emit radiation, excite brain cells, etc.)?

Nanotechnology

Artificial Intelligence (AI)

Smart home

Data mining

Facial recognition

- ✓ What it is?
- ✓ How does it work?
- ✓ Benefits/Challenges?
- ✓ Application?