# 3 Data communication

- describe browser problems
- define network concepts
- explain advantages of mobile devices
- specify information about em

## Internet browsing

**Speaking** **1** Work in pairs. Discuss these questions.

1 Which websites do you visit most often?
2 Which browsers do you use? Which is your favourite? Why?
3 What kind(s) of device(s) do you use to access the internet?

**Vocabulary** **2** Match these words to A–F in the screenshot of a browser below.

URL (uniform resource locator) = web address
favourites = bookmarks

1 web address ___
2 bookmarks bar ___
3 'back' button ___
4 tab ___
5 link ___
6 'refresh' button ___


**3** Match verbs 1–8 to nouns a–h to make collocations for things you can do on the internet. For some items, there may be more than one possible answer.

1 follow
2 take part in
3 stream
4 update
5 post
6 download
7 browse
8 enter

a) video
b) a password
c) your status
d) a webinar
e) photos
f) web pages
g) a comment
h) a link

**Speaking** **4** Work in pairs. What do you do on the internet? Tell your partner. Use the collocations in 3.

**Listening** **5** 12 Listen to an admin assistant telephoning an IT specialist about a new browser. Does the IT specialist solve his problem? What does the admin assistant like about the new browser?

**6** Listen again. What three things does the admin assistant need help with?

## Language

**Present simple vs present continuous, stative verbs**

| | |
|---|---|
| We use the **present simple** to talk about something we do regularly. We use the **present continuous** to talk about an action happening now or a temporary situation. | *I **work** in an IT Department. This week I'**m managing** the department because my manager is away.* |
| **Stative verbs** (e.g. *like, know, understand*) describe states rather than actions. We don't usually use the present continuous with stative verbs. | *I **know** how to use HTML.* |

**7** Underline the present simple and circle the present continuous verbs in these sentences from 5. Why did the speaker use the tense in each case?

1 I'm having trouble with the new browser we're using on our PCs.
2 I understand that now. But something else is confusing me.

**8** Complete this telephone conversation between an IT help desk assistant and an employee. Use the correct present simple or present continuous form of the verbs in the box.

check know not work open type in

A: There's a problem with this browser. I usually just (1) _____ my user ID and password and a new window (2) _____. But it (3) _____ now!
B: OK, I think I (4) _____ what the problem is. Probably your pop-up blocker is on.
A: Hmm ... I (5) _____ it now. Yep, you're right. It's OK now. Thanks!

**Speaking** **9** Roleplay telephone conversations for these situations. Take turns being the IT help desk assistant and the caller. Use the conversation in 8 as a model.

1 problem: video streaming/usually no problem/now not work
solution: internet connection problem/check the connection
2 problem: website images/usually all appear/now no pictures
solution: leave 'Automatically load images' unchecked
3 problem: often visit this website/now error message
solution: enter 'www' in the web address, not 'wwww'

**Listening** **10** 13 Listen to part of a telephone conversation. Complete 1–5 with the correct symbols from the web address the speaker dictates.

forward slash = slash = stroke

www.d-o-socialwork.gov.ae/schools_2.html?72

1 dash ___ 3 slash ___ 5 question mark ___
2 dot ___ 4 underscore ___

**11** 14 Listen to part of a telephone conversation. Which web address does the speaker dictate?

1 www.agamy.com/search/results_78.aspx?p
2 www.agamy.com/search/results/78.aspx-p
3 www.agamy.com/search/results_78.aspx-p

**Speaking** **12** Work in pairs. Student A, look at the information on page 68. Student B, look at the information on page 70. Follow the instructions.

# Networks

**Speaking**

PIN = personal identification number

**1** Work in pairs. Ask and answer these questions.

1 What computing devices do you use in your daily life (e.g. ATMs)?
2 Do you think they are on a network? Is it wired or wireless?
3 Are these devices secure? What security features do they have (e.g. a PIN)?

**Reading**

**2** Read this web page. Match the paragraphs (1–3) to these points.

a) types of software and devices on networks ___
b) the main types of networks ___
c) the arrangements of computers in networks ___

## What is a network?

A network is a group of linked computers or other devices. There are two kinds of networks that are in common use. In Local Area Networks (LANs) computers are close together – perhaps in the same building. They might be connected directly to each other by cable or through a wireless network such as wi-fi. In contrast, wide area networks (WANs) cover a larger area and usually use telephone lines or a mobile phone system to connect. A LAN can be a part of a WAN.

There are different types of wired networks. One is a star system. In this, each computer (or other device) is connected to a central server. Another type is a ring system. This is a network that has each computer linked to two others. In a bus system there is a central cable which is called a bus, and each computer is linked to it. Some large networks use a mesh. In this, each computer is linked to several others. This has one big advantage: if one connection breaks, the data can use other connections. Therefore, it is difficult to break a mesh network.

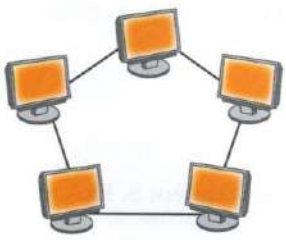
Many networks work on a client–server system. In this, servers are special computers that store data, serve websites and have other similar functions. Generally, a client program will ask the server for data and the server will then send the data back to the client. For example, when you type a web address into a browser, the browser (the client) will ask the server for a web page, which then sends the web page back.

**3** Read the web page in 2 again. What do these words refer to?

They (line 5) *computers*

1 One (line 11) _____
2 this (line 12) _____
3 Another type (line 13) _____
4 it (line 17) _____
5 this (line 17) _____
6 This (line 18) _____

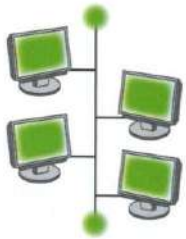
**4** Read the text in 2 again and label these types of network.



1 _____

2 _____

3 _____



4 _____

**Speaking** **5** Work in pairs. Use the information in the web page in 2 to answer these questions.

1 Do you think these use a LAN or a WAN?
   a) home network  b) ATMs  c) computers in police cars
2 Which of these types of software are usually clients?
   a) word processor (not web-based)
   b) web browser
   c) email program
   d) presentation software (e.g. PowerPoint)
   e) instant messaging software

**Language**

**Relative clauses**

| | |
|---|---|
| We can use **relative clauses** as part of a definition, to give important information about something or someone (e.g. to explain the function of something or to say who does something). We use the relative pronouns ***which/that*** for things and ***who/that*** for people. | *She's the person **who/that** looks after networks.*<br>*The internet is a network **which/that** covers the world.* |

**6** Underline the relative pronouns in the web page in 2. Then draw an arrow to the word each pronoun refers to.

**Speaking** **7** Work in pairs. Take turns to explain items 1–6 from Units 1–3 to your partner. Use the nouns and verbs in the box and relative pronouns. Then choose some more words from Units 1–3 to explain.

| | | | |
|---|---|---|---|
| cable/links | chip/controls | network/uses | part of a browser/helps |
| (peripheral) device/prints | | program/shows | type of network/covers |

*A: What's a CPU?*  *B: It's a chip that controls a computer.*

1 browser  3 bus  5 wired network
2 search bar  4 WAN  6 printer

**Listening** **8** 15 Listen to a sales representative explaining a new service to a client. Answer these questions.

1 How secure is the current system?
2 How secure is a VPN?
3 Compared with the current system, how easy is a VPN to use?

**9** Listen again and take notes on these items. Then write a definition for each item. Use the nouns in the box in 7 to help you.

1 dongle  2 wi-fi  3 VPN

**10** Work in pairs. Take turns to read your definitions from 9 to your partner. Can your partner guess the correct word?

**11** In the conversation in 8, the salesperson says that with a VPN, you don't have to worry at all about security. Do you agree? Think about passwords, laptop computers, etc.

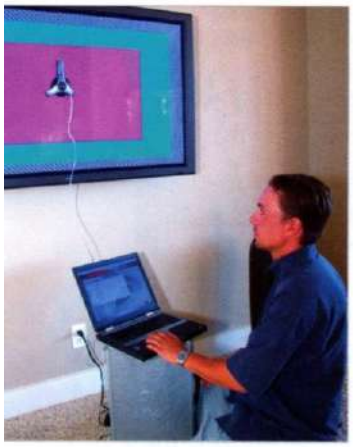
**Writing** **12** Look at the web page in 2. Which sentence in each paragraph shows the paragraph's topic clearly?

a) the first sentence
b) a sentence in the middle
c) the last sentence

**13** Write a paragraph for an internal website about how a VPN works. Make sure that you introduce the topic of the paragraph clearly.

# Mobile computing

**Speaking**



**1** Work in small groups. What features do you use on a mobile device (e.g. GPS, maps, camera)? What do you use them for?

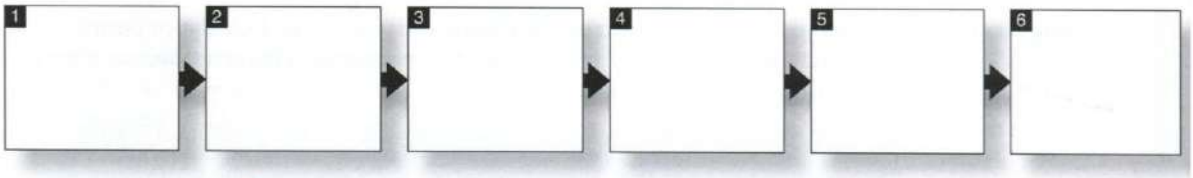
**2** Work in pairs. Think about people in these jobs. How might a mobile device be useful to them?

1 a company sales person who visits many client companies
2 a delivery driver for a parcel delivery company
3 a technician who installs entertainment systems in people's homes

**3** Complete the flowchart with steps a–f in the correct order.

a) admin staff print out work instructions
b) admin staff send invoice asking for payment
c) client signs paperwork
d) technician finds client and installs system
e) technician picks up instructions
f) technician takes paperwork back to office

**Entertainment systems installation workflow**




**4** Work in pairs. How do you think the workflow in 3 will change if the technician has a mobile device? Draw a new flowchart and complete the stages.

**Listening**

**5** 16 Listen to an IT specialist talking to a high-level manager, explaining how their entertainment system installation technicians can use new tablet computers. Check your answers in 3 and 4.

**Language**

**Zero and first conditionals**

| | |
|---|---|
| We use the **zero conditional** to talk about something that usually or always happens as a result of an action or situation. | ***If** you **drop** a tablet, it **breaks**.*<br>***If** you **use** a tablet, you **can send** documents easily.* |
| We use the **first conditional** to talk about the result of a future action or situation. | ***If** we **have** a problem, we'll **send** a message.* |
| We use a comma between the two clauses when the *if*-clause comes first but not when it comes last. | *If we buy tablets, we'll save money.*<br>*We'll save money if we buy tablets.* |

**6** The company in 5 is now using the tablets. Complete these zero conditional sentences.

1 With the tablets, if the technician _____ (not know) the way to a job, he or she _____ (use) GPS to find the best way there.
2 If the customer _____ (be) happy with the job, he or she _____ (sign) using the tablet's screen.
3 If a customer _____ (change) their order, the system _____ (update) the details on the tablet.
4 If a technician _____ (need) to order a new part, he or she _____ (send) a message electronically.

**Speaking** **7** Work in pairs. Look at the flowcharts in 3 and 4. Describe how efficiency and flexibility will improve if the company uses tablets. Then look at audio script 16 on pages 74–75 to check your answers.

**8** Work in pairs. How are these mobile device features and functions useful?

calculator calendar camera e-book reader GPS
long battery life torch USB recharger

*If the phone has a GPS, we can use it to find places. If the battery life is long, ...*

**9** Work in pairs. What is the person in the photo doing? What is her job? How might a mobile device help her in her job?

**Vocabulary** **10** Read the advertisement and find words in the text that match these definitions.

1 change something to make it suit a special purpose _____
2 add electronic information to something, e.g. a photo _____
3 the position of something _____
4 changing written or printed words to data that a computer can understand _____
5 give information _____
6 a word used to show that something is completely correct and true _____
7 stored information, e.g. on a computer _____
8 a small part inside smartphones and other devices that measures change of speed, e.g. if someone drops it _____

## Your mobile workers can be more productive!

With our fabulous new hand-held devices, your mobile workers can be safer and more productive at the same time! Have no more paperwork that takes up workers' time and that can get lost! Know where your workers are at any time!

We can customise devices for any situation. As an example, let's look at devices that we've customised for traffic wardens:

- The devices have cameras and GPS so the warden can take photographs of illegally parked cars. The device automatically tags the photographs with location and time. Then optical character recognition (OCR) technology can read the car's registration number from the photograph and transmit it wirelessly to a central database. The warden saves time because there is no data entry.
- The devices continuously report the warden's location back to the control centre. So if there is a problem, the control centre knows exactly where the warden is and who to contact.
- Because most of the data is kept electronically, record keeping costs are lower.
- Being a traffic warden can be dangerous. The accelerometer in the device automatically sends a message if it falls, unless the user presses the 'Cancel' button immediately. Then the control centre can call the police.

**Speaking** **11** Work in small groups. You are technicians in the mobile device company in 10. Suggest how and why you could customise mobile devices for these jobs.

1 delivery driver 2 salesperson 3 nurse

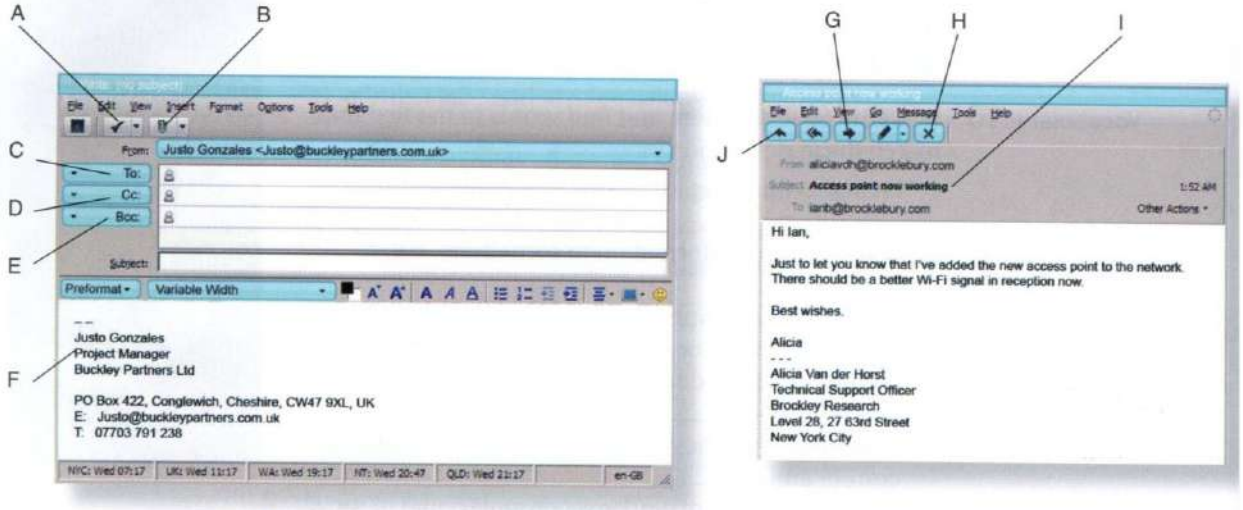
*A GPS will be very useful for a delivery driver. If he or she gets lost, it'll help him or her to find his or her customers.*

# Email

**Speaking** **1** Work in small groups. How often do you use email? When do you choose email instead of instant messaging, face-to-face or telephone communication? Discuss.

**Vocabulary** **2** Match these words to A–J in the screenshots of email clients below.

1 subject line ___
2 recipient's address ___
3 email signature ___
4 attachment button ___
5 spell checker ___
6 forward ___
7 blind copy address ___
8 reply button ___
9 copy address ___
10 delete ___




**3** Note down the steps in sending an email. Then compare your notes with a partner's. Are they the same?

## Language

### Articles

| | |
|---|---|
| We use ***a/an*** when we mention an item for the first time. | *Please send me **a** message.*<br>*Could you send me **an** email to remind me?* |
| • We use ***the*** when the listener already knows which item we're talking about.<br>• We also use ***the*** when the item is the only one of its kind. | *Could you forward **the** email that Jack sent?*<br>***The** internet is down.* |

**4** Complete this intranet post about email guidelines with *a*, *an* or *the*.

Here are some guidelines for using email at RML Digital:

- Think carefully about what you write – emails can be permanent records. Even if you delete (1) _____ email, (2) _____ recipient could keep their copy. He or she might also forward (3) _____ email to other people.
- Make (4) _____ subject line clear and short.
- If you receive (5) _____ important email, try to send (6) _____ quick 'thanks' message in reply. It only takes a few seconds and it may stop someone worrying that the email didn't get through.
- If you are copying emails to people who don't know each other, use (7) _____ 'Bcc' line so that they can't see each other's email addresses.
- Check attachment size before sending! Some email systems limit attachments to 10 MB or less.
- (8) _____ standard RML Digital signature should be on all emails sent from the company.

# Business matters

**Speaking** **1** Work in small groups. You work for an IT consultant and have been asked to prepare a proposal to upgrade a company's electronic communications systems.

1. Read the company profile and the requests from staff members. Make lists of the equipment and software that they're using now, and what works well and what doesn't work well.
2. Discuss and decide the hardware and software needed to meet all the requirements. Think about ways of sending video through browsers, internet security, features of mobile devices and alternatives to email. Give reasons for your choices.
3. Prepare your proposal and present it to the class. Your proposal should have these parts:
   - Introduction: Explain the problem.
   - Body: Present your proposal.
   - Conclusion: Say how much your proposal will help.

**Company profile: Beneflex Architects**

Beneflex Architects is an architecture company with a difference: our sales team are fully qualified architects who talk with you and visit the place where you want to build your house. We ask lots of questions, show you lots of ideas and work with you through every step in the process. In this way, we design your perfect home.

Technology is important to us. It helps us work more efficiently and also helps to give you the best solutions. In addition, we use it to keep you up-to-date all the way through the process.

A


My problem is this: at the moment it's hard to know where the sales team are. If a new enquiry comes in, I'd like to be able to send someone to the customer straight away.

*Sales manager*

B


It would be great to see everyone's appointments all at the same time, on the same screen. That way I'd know when to call sales people without interrupting a meeting with a customer.

*Sales support administrator*

C


We really need to make the system more secure. Our IT person tells me that anyone can read the information from the sales people's tablets. That's a big problem.'

*General manager*

D


We really need to improve the customer experience. Customers tell us that they want to see the plans and images of their new home in much greater detail. They also want video, not just images.

*Marketing manager*

E


I get too many emails. I seem to spend more time dealing with emails than with customers! There must be a better way to communicate!

*Sales representative*

F


Currently, we take a lot of photographs with cameras of sites, buildings and things like that. If we can upload them to somewhere – somewhere that we can access easily – that will save a lot of time. We won't have to move photos from one program to another or one device to another.

*Sales representative*