Data transmission

IGCSE Computer Science · Vocabulary in context

Word	Example
data transmission /ˈdeɪtə trænˈsmɪʃn/	**Data transmission** sends data from one device to another.
packets /ˈpækɪts/	The file is sent as many **packets**.
packet header /ˈpækɪt ˈhedə/	The **packet header** holds the sender's and receiver's addresses.
payload /ˈpeɪləʊd/	The **payload** is the actual data inside a packet.
trailer /ˈtreɪlə/	The **trailer** marks the end of the packet and helps check for errors.
address /əˈdres/	&x gives the **address** of x in memory. &x x
packet switching /ˈpækɪt ˈswɪtʃɪŋ/	In **packet switching**, each packet can take a different route.
routers /ˈruːtəz/	**Routers** pass packets across the internet.
serial /ˈsɪərɪəl/	**Serial** transmission sends one bit at a time down one wire.
parallel /ˈpærəlel/	In **parallel** processing, tasks run at the same time.
simplex /ˈsɪmpleks/	**Simplex** sends data in one direction only.
half-duplex /hɑːf ˈdjuːpleks/	**Half-duplex** sends data both ways, but not at the same time.
full-duplex /fʊl ˈdjuːpleks/	A **full-duplex** link sends and receives at the same time.

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universal serial bus /ˌjuːnɪˈvɜːsl ˈsɪərɪəl bʌs/	You plug a keyboard into a **universal serial bus** port.
interface /ˈɪntəfeɪs/	The **interface** lists the methods other code can use.
interference /ˌɪntəˈfɪərəns/	**Interference** from other cables can change some bits.
parity check /ˈpærɪti tʃek/	A **parity check** counts the number of 1s. 1
parity bit /ˈpærɪti bɪt/	A **parity bit** is added to make the number of 1s even or odd. 1
parity block /ˈpærɪti blɒk/	A **parity block** checks every row and column of bits.
parity byte /ˈpærɪti baɪt/	The **parity byte** holds a parity bit for each column of the block.
checksum /ˈtʃeksəm/	The **checksum** shows if the data changed on the way.
echo check /ˈekəʊ tʃek/	In an **echo check**, the receiver sends the data back to be compared.
automatic repeat request /ˌɔːtəˈmætɪk rɪˈpiːt rɪˈkwest/	**Automatic repeat request** resends data that did not arrive correctly.
acknowledgements /əkˈnɒlɪdʒmənts/	The receiver sends **acknowledgements** to say the data arrived.
timeout /ˈtaɪmaʊt/	If no reply comes before the **timeout**, the data is sent again.
check digit /tʃek ˈdɪdʒɪt/	The last number in a barcode is a **check digit**.

Word	Example
transposition error /trænspəˈzɪʃn ˈerə/	Typing 54 instead of 45 is a **transposition error**. 45 54
barcodes /ˈbɑːkəʊdz/	Shops scan **barcodes** to find the price of each item.
encryption /enˈkrɪpʃn/	**Encryption** makes the message unreadable to others.
intercepted /ˌɪntəˈseptɪd/	Data sent without encryption can be **intercepted** and read.
plaintext /ˈpleɪntekst/	The message before encryption is **plaintext**.
ciphertext /ˈsaɪfətekst/	The encrypted message is **ciphertext**.
symmetric encryption /sɪˈmetrɪk enˈkrɪpʃn/	**Symmetric encryption** uses one key for both sides.
key /kiː/	You need the **key** to decrypt the message.
asymmetric encryption /ˌeɪsɪˈmetrɪk enˈkrɪpʃn/	**Asymmetric encryption** uses a public key and a private key.
public key /ˈpʌblɪk kiː/	Anyone can use your **public key**.
private key /ˈpraɪvət kiː/	Keep your **private key** secret.

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