BACKGROUND INFORMATION FOR DATA TRAINEES

WHAT IS A DATA CENTRE?

A data centre is a building full of computers which are used to store data and are connected up to the internet so that the data can be accessed from anywhere.

Ever heard of data being stored in “the cloud”? It isn’t stored up in the air, but in physical data centres around the world. It just means that the data can be accessed from anywhere via the internet, rather than being stored locally on someone’s personal computer.

Lots of organisations, from your local authority to Instagram and Netflix, use data centres to store data such as videos, photos, as well as private data about you. Therefore, data centres need to be kept really safe and secure, both from accidental damage and intentional sabotage!

WHAT ARE SUBMARINE CABLES?

The first submarine cables were used to carry telegram signals across the Atlantic Ocean. Now, subsea fibre optic cables are able to carry huge amounts of data rapidly between continents, allowing data stored in data centres to be accessible from anywhere in the world via the internet, and thus forming the basis of our modern globally interconnected world.

HISTORY OF SUBTERFUGE

Because of their importance, and the fact they can’t be constantly monitored, underwater cables have long been a tempting target for sabotage. In World War I, the British and German forces both cut submarine cables to try to destroy the others’ worldwide communication systems. During the cold war, the US Navy succeeded in wire-tapping Soviet submarine cables to spy on their communications! Nowadays, the widespread use of end-to-end encryption means wire-tapping poses less of a threat.

DID YOU KNOW...?

Our wireless world depends on just a **few hundred** fibre optic cables laid on the ocean floor! The only continent not yet reached by a subsea fibre optic cable is Antarctica.

END-TO-END ENCRYPTION

End-to-end encryption is a way of encoding information between a sender and a receiver so that only they hold the keys to decode the message—anyone who intercepts the message along the way will see nothing but garbled code!