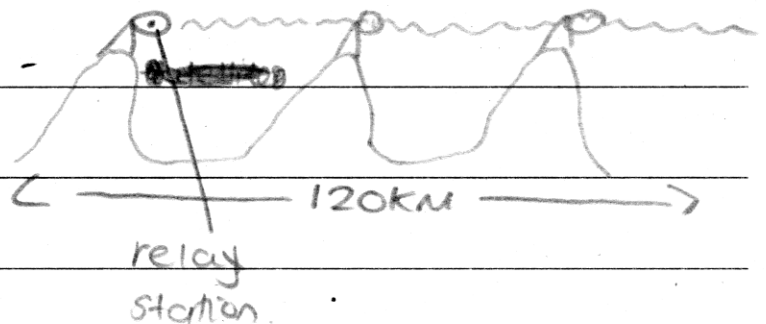


## Question 22

(a). SEGMENT 1 - Jill has to use microwaves in this segment because she is using her mobile phone to connect from her laptop to her head office network. Mobile phones use microwaves to send and receive information.

SEGMENT 2 - Again Jill would need the use of the wireless transmission microwaves which are high frequency radio waves that don't have much interference. The microwaves would need relaying stations on top of certain mountains to strengthen the signal eg -



## Segment 3 -

Jill would need an inexpensive transmission medium as the distance is so far. She could use coaxial cable for this segment. Coaxial cable is fairly cheap and versatile and has a fast enough speed in her case.



Question 22 (continued).

Segment 4 - This segment could use fibre optic technology which is located under the ground. Fibre optics is very fast and reliable method of transmission. Hackers cannot tap into fibre optics that is why it is a good choice in the city.

(b) one advantage of using mobile technology is that she can take her work everywhere she goes because it is portable and she doesn't need a dedicated connection, she can use a wireless transmission medium. Another reason is that mobiles use microwaves which are a very fast and reliable method for transferring information. A further reason is that microwaves do not receive very much interference, only from certain weather conditions do they lose some signal quality. Jill can connect to the web whenever she needs to, this is very convenient for a business like this one. Jill is a travelling representative this is

Why this choice of technology suits her so much.

(c) A data dictionary contains information about every field in the ~~the~~ company database.

A data dictionary contains details such as field, type, size & description. Jill could easily look at the data dictionary for information to carry out her standard query language queries.

Jill could read the data dictionary and do the queries easily. A query needs these important factors. SELECT, FROM, WHERE and ORDER BY. If Jill had a data dictionary she could look at it and get the information straight off it. This would save time as she wouldn't have to keep viewing the ~~the~~ whole database. This method is efficient for finding and viewing data for the customers of her business.