

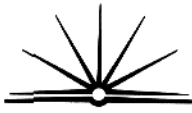


22a)

Segment 1 — the laptop, connected to a mobile phone would use ^{wireless} radio waves as it's transmission medium. ~~Radio~~ Mobiles are wireless and send radio waves to a grid of cellular stations that would then go to the country telephone exchange.

Segment 2 — would use ^{wireless} microwave transmission between the antennae on the 2 country telephone exchange and ~~represents~~ the towers. Microwave would have to be used as ~~building~~ wouldn't be on ^{mountains} mountains and ~~there's~~ are high so allow for clear transmission of microwave waves.

Segment 3 — would use wire transmission, either coaxial or fibre optic. due to the distance being 260km fibre optic would be best as it is not susceptible to signal loss over long distances and or affected by interference



Segment 4 - would use wire transmission,
~~either twisted pair or fibre optic~~ probably
twisted pair as ~~twisted pair~~ Sydney's telephone
lines are twisted-pair cable. Twisted pair
permits high data rates over short distances
and as it is twisted, ~~it is less~~ ^{is} it is less
~~likely to be~~ inclined to signal interference.

b) ~~through~~ Jill using mobile technology to undertake
her work has many advantages —

* reduces costs of travelling to and from office
every day

* she is able to get in contact with office
easily, anywhere, anytime without having to look
for a phone box or wait until she is with a
land line phone connection

* doesn't have to be at a hotel to connect
to landline

* allows her to see her customers and
work more efficiently as a "travelling"

Sales representatives.

* orders can be immediately processed in real time, not having to wait until she returns to office.

* She can receive confirmation of orders that day and access any vital information from head office that may otherwise be unknown to her without this mobile technology.

A data dictionary ~~shows~~ would show Jill the data type of each field, allowing her to enter the correct data type into her SQL query. The ~~the~~ field size is also shown so Jill would know how to enter the data ^{in the SQL} she is searching for. ~~the data~~

A data dictionary is a complete table on the nature of the database. By knowing the field name, size, type and description she would ~~be able to~~ increase the integrity and



Accuracy of the data she enters into the SQL.
She would know ^{the correct names of fields} ~~that~~ ~~table~~ to SELECT
~~from the~~ The ^{file} ~~table~~ name would ~~help~~ let
her correctly select WHERE the SQL is
searching.

By knowing the type of data, eg. numeric for cost
her SQL would be more accurate. For eg. entering
the word "fifty dollars" ~~under~~ under the cost
field, which is numeric would give her an
incorrect result. It should be \$50.

Knowing the field size also helps. Eg. If the
wine type field is Boolean to either ~~red or~~ R or
W (red or white) and Jill enters wine type = "red"
she won't receive the results she is looking
for.