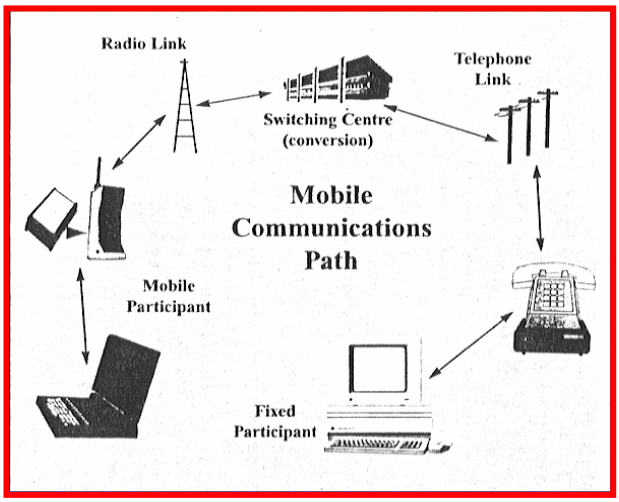
Unit 16 Assignment 1

Task 1 (P1):

Write the first part of the article, which is on the subject of mobile communication technologies, standards, licensing and wireless networking. You should describe the various technologies and standards, explaining their typical uses, transfer rates and ranges.

Mobile Communications:



Generations Of Mobile Communication:

First Generation (1G): Original analog mobile phone technology

Second Generation (2G): Voice-centric digital systems with increased coverage and capacity and messaging

Third Generation Transitional (2.5G): Stepping stone to 3G with always-on network connections and bandwidths up to 170 Kbps allowing better Internet browsing, email, and some audio and video; GPRS has been the dominant technology

Third Generation (3G)/Fourth Generation (4G): Bandwidths up to 2Mbps and 200 Mbps respectively for high-end services such as video teleconferencing.

Mobile telecommunications is the assisted transmission of signals over a distance for the purpose of communication to or from a mobile device or user.[1] Mobile telecommunication is a technology that allows the user to be connected while on the move, from home, office, and car or even from the sea.

In 2008 there were 4.1 billion mobile cellular subscriptions in the world.

Mobile Standard	Description	Typical use	Transfer rates	Ranges
GSM	Global System for Mobile Communications is a 2G digital cell phone technology	Voice and data. This European system uses the 900MHz and 1.8GHz frequencies. In the United States it operates in the 1.9GHz PCS band Up to 9.6kbps	56-144kbits	Usually Global
GPRS	General packet radio service (GPRS) is a packet oriented mobile data service available to users of the 2G cellular communication systems global system for mobile communications (GSM), as well as in the 3G systems.	Data Up to 115kbps; the AT&T Wireless GPRS network will transmit data at 40kbps to 60kbps	Instant.	Can vary a single country to global.
3G	International Mobile Telecommunications-2000 (IMT-2000), better known as 3G or 3rd Generation, is a family of standards for mobile telecommunications defined by the International Telecommunication Union	• Mobile Technology • Video calling	14.0 megabytes on down link and 5.8 on the up link.	Usually Global.
WAP	The multimedia messaging system (MMS) uses both the SMS text messaging and WAP protocols to transmit graphics, audio and video to cell phones.	• Mobile Internet	56kbps	Little as 50ft in a diameter to with extra amplification as much as a thousand ft (using hotspots)
SMS	The multimedia messaging system (MMS) uses both the SMS text messaging and WAP protocols to transmit graphics, audio and video to cell phones.	▪ Text ▪ Messages ▪ Instant messages	30kbps	Only in your continent

Short range wireless technologies:

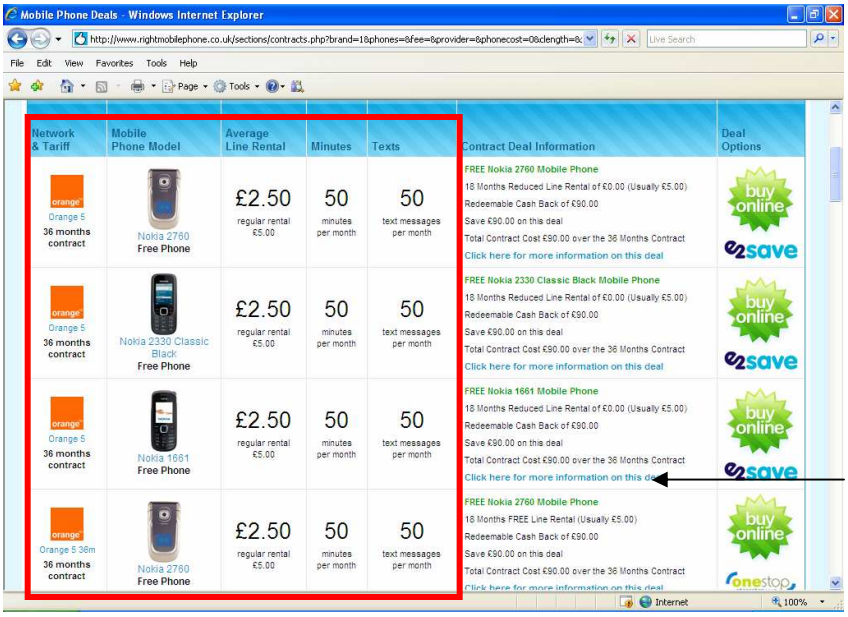
Dedicated short-range communications (DSRC) are one-way or two-way short- to medium-range wireless communication channels specifically designed for automotive use and a corresponding set of protocols and standards. These are thing like

- Infrared, Bluetooth.

Ref: http://en.wikipedia.org/wiki/Dedicated_short-range_communications

Licensing:

The verb license or grant license means to give permission. The noun license refers to that permission as well as to the document memorializing that permission.
Ref: http://en.wikipedia.org/wiki/License



This comparison chart is comparing different licensing of mobile phones and their different prices. This comparison chart is showing the different licensing agreement. Ref.: http://www.rightmobilephone.co.uk/sections/contracts.php?brand=1&phones=&fee=&provider=&phonecost=0&clength=&xnet=&sms=&gifts=&cashback=&email=&submit=Search+Phones&opmins

Task 2

The application that I am going to use for my comparison is downloading photographs I have taken with my mobile phone camera to my desktop PC. Firstly I could e-mail the photos, one by one from my phone to my e-mail account, and then when I open the e-mail on my computer, I could save the photographs on my computer. The other method is to send them by Bluetooth.

A comparison of these two methods is shown in the table below:

Issue	E-mailing photographs	Sending via Bluetooth
Hardware & software required	• No software is required • I need an internet connection and a email account set up.	• I may need to buy a Bluetooth adapter for my computer • Some laptops/comps have built in Bluetooth
Transfer speed	• Depends on the method that you use.	• . Bluetooth has a transfer rate of up to 2Mb/sec.
Range	• An email can be sent anywhere in the world that has a mobile signal.	• It depends on the Bluetooth device that you have it can vary. • My Bluetooth device would be between 15m of the pc.
Cost	• Emailing is from 17p through mobile net.	• Once paid for the Bluetooth adapter and the software there will be no further cost. • Or maybe free.
Security	• Well a hacker can hack in to my hotmail account and my emails can contain private data	• There are many issues with Bluetooth but to hack in to my account the person has to be within 10m of the Bluetooth and the pc.
Convenience	• Sending pictures one by one can be very time consuming.	• Once the Bluetooth device and the PC are connected it is very easy to send pictures.

The application that I am going to use for my comparison is emailing using a mobile and emailing from a comp/laptop

A comparison of these two methods is shown in the table below:

Issue	Sending email using mobile	Sending email on comp/laptop
Hardware & software required	• Email account (which is free) • Internet on your mobile which ranges from £10-17 for every month at 1-3GB or pay as you go for £9.99	• Need an email account • Internet
Speed	• Depends on what company you are with and how much GB you have.	• How fast your internet is or how your connection is • More MB the better • http://top10.com/broadband/compare/fast_broadband/
Range	• An email can be sent anywhere in the world. • You need a net connection	• You can send an email to anywhere in the world however you need an internet connection
Cost	• Emailing is from 20p through mobile net. • Email account is free	• Email account is free • Emailing is free • Only the internet connection will cost you
Security	• Well a hacker can hack in to my hotmail account and my emails can contain private data	• Well a hacker can hack in to my hotmail account and my emails can contain private data.
Convenience	• Emailing can take from 1-10mins	• Emailing can take from 1-10mins