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The development of communication systems has enabled individuals, organisations and society to operate on a global basis. Discuss this statement.

Around the world at this very moment millions of people are using communication systems to send information, speech and video to locations thousands of miles away from themselves. But what are communication systems? They can be almost anything involving communication. There are of course the most obvious forms such as telephones, email and generally the Internet as a whole. Chat lines, bulletin boards, telecommuting and user groups are also classed as communication systems. Teletext is available to most people with television sets, it is delivered through the TV Ariel entwined with the picture signal, it offers users constantly updated, non-interactive pages of information, it could be described as an electronic magazine. Video conferencing is a vital form of communication for many businesses, it allows face-to-face meetings to take place without the participants being in the same room. For this you would need highly efficient computers, sound cards, cameras, compression cards, specialist software and modem connection, unless all these components are present it is extremely difficult to transmit such large amounts of data. Businesses are also using Electronic Data Interchange (EDI), which is the electronic exchange of routine business transactions, EDI permits hundreds of unrelated companies to communicate and process business transactions electronically. A communication system that is used not only in businesses but also in schools is intranet. It is the same as Internet but instead of being connected to World Wide Web you are networked with a group of computers that can communicate with each other.

The main income for businesses on the Internet is e-commerce, this is when they offer their products/services to the consumer in exchange for money. This is one use of a communication system, people increasingly use the mentioned channels for commercial use, the Internet for example is saturated with a vast amount of advertisements on every web page you go on, as are Teletext pages. Also research is carried out on these communication systems as well, companies find online surveys to be very fruitful.

There are a number of applications that communication systems are vital for. Businesses in are most affected. Finance can be dealt with efficiently through EDI, faxes and electronic mail. Marketing can take place on the Internet, with advertisements and online surveys, not to forget the actual sale of their products online (e-commerce). Supplies and paperwork needed for manufacturing can be obtained via e-mails, e-commerce and faxes. Business meetings in general can be conducted through video conferencing and telecommuting, offices could be intranet connected. It is not only businesses that benefit from communication systems, the rest of society can use these facilities also. You can check the weather on an Internet site or on teletext. You can chat with friends over the Internet or send them electronic mail. You can order products over the Internet, not having to leave your house. For all these uses however you do require modern technology. The bare minimum is to have telephone line, for Internet you will also need a fairly modern computer and

modem that is connected to an Integrated Services Digital Network (ISDN) line. ISDN runs at 64Kbs, to ensure you have the quickest possible connection that reduces download and website transfer times by a tenth, you will be using a broadband connection instead. You will find many users are switching to cable modems and Digital Subscriber Lines (DSL's) to increase their bandwidth. There are two types of network that are used, Local Area Networks (LAN's) and Wide Area Networks (WAN's). LAN's are normally used for networks required in the same building, where as WAN's are used for much larger networks. All communication systems need Improved Protocol, two pieces of equipment must be able to speak to each other and communicate and the same applies to the user, TCP is also very important. When you are transferring money over the Internet you must be using a secure line, this is very important in e-commerce.

There are however many problems with communication systems. There is obviously an extensive amount of equipment and planning needed to successfully carry out some of the applications described and if there is only one component missing, everything can go disastrously wrong. Sending data over secure links is not always safe, it can at times be intercepted. Also, as just mentioned, protocol between equipment must be established, otherwise incompatibility could cause problems. Viruses are an enormous problem this modern era, they infect computer files by 'piggybacking' them in order to get executed. There is an even greater threat from hackers, there are people on the Internet who are capable of entering any secure, heavily guarded site that they wish to. They are highly skilled and can invade the computers of others, inspecting or tampering with programs or data stored on them. There have been many laws put into place to try and deter such people, the Data Protection & Computer Misuse Act are the most applicable, but copyright laws are also affected, especially when there are files available on the internet that are their illegally, e.g. music and video files.

After studying all the various communication systems, their uses and their usefulness, it would seem fair to say that they have enabled businesses, individuals and society to operate on a global basis. With the continuous advancement of all things technological, it's evident that they are fast becoming the most convenient, cost efficient and effective option for any scenario.

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