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1 Introduction

In this chapter the thesis will be presented with a background of the Internet applications in the field of Public Relations. This will lead to the problem discussion which will be the base for stating an overall purpose and research questions.

1.1 Background

Internet is influencing the life of everyone. Internet today is used to communicate audiences and offer information, entertainment, etc. Its existing capability to transport data, promote products and services, enable marketing functions, offers knowledge acquisition and management and is quite capable of remotely activating computers and machines.

Internet is a range of enabling technologies. It combines the largest resource of information ever, it is also more than a communication medium. Its unique properties of reach and richness have transformed the quality of communication. Internet’s capability to make available data, information and knowledge is prodigious. Internet’s audiences are huge with easy Internet applications to use and fun. This is why over a quarter of the population use Internet technologies and why it is so important to Public Relations. Ease of communication makes business relationships much more efficient, cuts time and cost and speeds trade. Internet has the potential to hold immense power over relationships and reputations for every organization. According to Tracylaquey and Jeanne C. Ryer Internet is a loose amalgam of thousands of computer networks reaching millions of people all over the world. Although its original purpose was to provide researchers with access to hardware resources,
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Internet has demonstrated such speed and effectiveness as a communication medium that it has transcended the original mission. Today it's being used by all sorts of people: educators, librarians, hobbyists, and businessmen for a variety of purposes, from communicating with each other, to accessing valuable information and resources (Tracylaquey & Jeanne, 1993: p.1).

Internet has been ushered in by new and powerful methods of communication. Gutenberg's invention of the printing press took books out of the ecclesiastical libraries and put them into the hands of the people. Then, the telephone system emerged to allow people instantaneous communication with one another. Now Internet merges both these technologies, bringing people and information together without the middleman necessitated by books or the primarily one-to-one synchronous limitations of the telephone system.

This is a new dimension an electronic, virtual world where time and space have almost no meaning. People in geographically distant lands communicate across time zones without ever seeing each other and information is available 24 hours a day from thousands of places. The implications of this new global communication and information system are staggering.

Internet has put communication tools and techniques, once the unique advantage of a few professions, into the hands of everyone with a modem and computer. Internet fill a critical need in many Public Relations programs by providing the ability to respond to queries and by providing a potentially endless amount of information about an organization and its product and services, candidates, or causes. Internet also can enhance involvement with an organization through education and entertainment made possible by the Internet applications. Via the Internet can be updated by organizations
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instantaneously and accessed by users 24 hours a day, 7 days a week from anywhere in the world where Internet access is available. In addition, information can be personalized to the inquirer using cookies, user profiling, and database technologies.

Internet also makes organizations less dependent on controlled media. Web sites, for example, have reduced the direct and incremental costs of distributing printed matter. These materials otherwise must be given out through literature racks, personal visits, postal mail, or package delivery services. Interactive media are not likely to replace these communication tools, however. Similar to public media, controlled media will continue to use in situations when it is necessary to push information into the hands of audiences instead of waiting for audiences to be pulled into a Web site, discussion group, or online chat.

Millions of people upload and download pictures and video every day to the delight of admiring grandparents, friends, relatives and the world at large. Internet applications can replace some events by creating opportunities for people in remote locations to come together online. These include webcasts, seminars and workshops, bulletin boards, discussion groups, online chats, and Web conferencing (two-way video and audio online exchanges between participants). Such applications are not yet fully developed.

Internet provides additional options for one-on-one communication between organizational representatives and audiences. In particular, personal e-mails can complement personal meetings, telephone calls and postal mail to facilitate and speed
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up exchanges. This might be especially important as more people adopt wireless phones and personal data appliances that can deliver Internet content.

People are turning to Internet to communicate with each other and they do this to maintain interpersonal relationships. Internet does bring people together because their lives are actively shaped by this emerging technology. Internet is actually a place for people to create relationships on a deeper basis such as shared values and beliefs, and personal desires and goals. Internet brought together the people of the community and encouraged them to meet.

For area of Public Relations and Internet is one of the greatest innovations of all time. Internet facilitates nearly every imaginable form of communication. With the ever-changing world of technology, audiences can be reached through more and more media. These opportunities are only possible if the Public Relations department follow their audiences and understand how to reach them effectively.

"The Internet represents one of the most important tools ever employed in communication history" (Koch, 1991: p.3). In addition to quickly becoming the world's largest information source, Internet has rapidly developed into an important medium for the distribution of Public Relations messages. New technologies have transformed the way Public Relations works by "providing new and more efficient ways in which communication messages can be produced, distributed, displayed, and stored" (Cultrip, et. al., 2000: p.217). Cultrip said that "the Internet represents the leading edge of a major communication revolution. The digital world has changed communication within organizations and between organizations and their public."
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It will help in discussing the beginnings of the Internet to define what the Internet is? The simple description is a "worldwide system of interconnected networks and computers" is pretty good and adequate. But when people get more technical, they tend to add to the definition terms such as "a network that uses the Transmission Control Protocol - Internet protocol (TCP/IP)" (Lan, 2004a. URL: http://www.nethistory.info/). Or Internet is "a global collection of high-powered computers that are connected to each other with network cables, telephone lines, microwave dishes, satellite etc. It is a network of networks. It is a place where you can talk to your friends and family around the globe, a place to do research for your thesis. It is the collection of hundreds of libraries and archives that will be open to you. Digital Multimedia has become very popular all over the world as it is a very powerful interactive communication environment of text, graphics, sound, video and animation (Janardan, et. al. 2003: p.iii).

According to Janardan (2003: p.1) Internet is become more popular among computer users. It is the technology that has made the concept of global village a reality. Technically when you connect two or more computers together that's called a network. Internet is not really one network. It is a network of networks and it is really big. Internet user can easily access his information requirements.

It may not be our aim to make a study of the definition of the Internet, but it will be really fruitful to have the above definitions and descriptions of the Internet, can possibly be very comprehensive. The quality and future of the profession, however,
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will largely depends on a clearly defined professional practice based on knowledge, ability, skill and understanding.

A more realistic working definition of the Internet, the researcher defines Internet as "An electronic global communication device that connects and links system computer networks with no single point of failure. That allows facilitating data transmission or sharing or networking of information at remote sites".

- **An electronic**: mean that Internet not working without electronic power and it' needs some electronic machines like a computer.

- **Global**: mean's anyone who can use a computer or mobile.. and Internet's software to access Internet anytime and anywhere in the global.

- **Communication Device**: that means it's channel for sending message to receiver and have feedback (Communication Process)

- **System Computer Networks**: that means there are many computer networks with systems (software, protocols, packet-switching networks, routers, computers, mobiles, etc.) to connect and transfer data.

- **With no single point of failure**: that means there's no center or control of the Internet. If some networks not working than there are many other networks will work well. It's like the web.

All those for one important goal it's to display and broadcast the information (commercial, Academic, private, public, government, personal, etc) that sender want others know or read it from anywhere in the world and at anytime.

Internet's speed, vast resources, and its ability to directly communicate with others are its greatest benefits. Because Internet uses the quickness of computers to
transmit its data, information can travel at tremendous speeds. Speed is not the only benefit. Internet uses thousands of thousands of computers all connected to each other to store vast amounts of information. Also, because Internet allows for individuals to have specific electronic mail addresses, people can easily communicate with one another.

Internet is considered by many to be superior to the best and biggest libraries in the world. This superiority exists primarily due to the thousands of organizations, companies and individuals publishing on the Internet. With such ease of publishing and the wide variety of publishers, there is almost no subject left off Internet. Internet's ability to deliver this vast amount of information has drawn even more users. Not having to wait for a book, newspaper, or magazine publisher to review and send an author's manuscript to a printing press to be bound or printed eliminates the time it would normally take to publish something. Instead of reading a medical breakthrough in next month's journal, it can be published on the Internet instantly. A breaking news event can be published almost immediately after the event occurs. People don't have to wait until the morning paper to read about an event. This part of the Internet alone has helped make Internet a technological breakthrough.

Even finding not so current information can be a breeze using Internet. Driving to a library and searching for possibly hours just to find some specific information is a task many of us have experienced. With Internet you can sit in the convenience of your home and search (surf) to find information faster than going to a library.
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Theoretically, the information on the Internet can travel at the speed of light (186,000 miles/sec.). Realistically, we know that this speed is nearly impossible due mainly to the large number of people using Internet, and the limitation of the phone system. However Internet's speed is much faster than traditional means of gathering news and reporting information.

Communication is a huge benefit of the Internet. Many people use Internet to simple send messages and nothing else. Whether it be by news groups, chat rooms, or the most popular method E-mail, communicating over the Internet has developed vast appeal and usage. Millions of people around the globe use E-mail to communicate every day. They all place great value on the convenience of sending and receiving E-mail. E-mail can be sent and retrieved by its recipient almost instantly. The message never has to be printed or physically mailed to get to its destination.

With the invention of the Internet phone, some people can now even talk across Internet just like on a voice phone but without paying long distance charges. It is just a fact; the time it takes to send a letter or reply to a phone message is no match for E-mail's speed and convenience.

According to Cyveillance "Internet is one of the youngest and fastest growing media in today's world. Internet growth is still accelerating, which indicates that Internet has not yet reached its highest expansion period" (Cyveillance, Sizing the Internet. URL: http://www.cyveillance.com/resources/library.asp).

It should be noted, however, that while Internet is a completely new kind of medium, by separating it into a distinct category, we are allowing for a certain amount
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of double counting, because all Internet-based stock of information is already accounted for under "magnetic" or "tape" categories. Furthermore, we should make clear the distinction between the stock and the flow of information. While web sites and some portion of e-mail messages are being stored and accounted for under different storage categories, there are other "components" of what we know as "Internet," such as the Internet Relay Chat (IRC) or Telnet, which exist only as a flow of communication. What makes Internet extremely successful is that it is one of a handful of media (such as radio and TV), where one unit of storage might generate terabytes of flow, as opposed to books and newspapers, where one exemplar is usually read by one or two people, and the flow of information is relatively low.

Internet as such couldn’t have existed without the big inventions of the 19th century - electricity and the telegraph. And, to a lesser degree, there was unlikely to be an Internet as we know it before there were the standard electronic broadcast media of radio and television. So the building blocks were the existing communication and broadcasting technologies. We’re not going to go into all of that - there are lots of other sources of information on Marconi, Alexander Graeme Bell, Tesla, and the other pioneers whose inventions Internet rode on. But let’s focus on the development of electronic networks and computer because here we begin to see the future shape of the Internet.

According to Tim (2002; URL: http://www.w3.org/2002/04/Japan/Lecture.html) multimedia is stands for an important dimension of variety the palette of technologies available to human creativity. Even the early demos of the web included sounds and music. What has changed since then is that the capacity of
typical computers to handle graphics and sound has increased, and for some, the bandwidth even allows video to be sent. Because many things can still be done with plain text, the exotic and the mundane will always coexist on the Web.

What really caused Internet's tremendous growth spurt was the invention of something that made Internet both easy to use and easy to transmit multimedia (graphics, sound, and video). The invention was a software product now known as a browser.

In 1991 in an European physics lab, an invention was made that enabled words in a sentence to be clicked on and an action then performed. This invention today is known as hypertext. Hypertext is when words or pictures are clicked on that takes the place of typing commands into the computer. This single feature made Internet easier to use. With this invention came new users from small kids to senior adults who felt comfortable riding the information super highway. This has forever changed the way average people use Internet.

Today we find people reading magazines, buying products, listening to radio stations, talking to friends, writing messages, playing games, even watching video all through the use of the Internet.

"Electronic networks" began with the telephone or telegraph system as it was known in the beginning. Here the origins are pretty clear – the first line was built in 1844 from Washington to Baltimore. By 1858 a transatlantic cable was in place, and by 1861 - a mere seventeen years after the first connection - telegraph wires covered
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the United State of America (USA).” (Lan, 2004a. URL: http://www.nethistory.info/History%20of%20the%20Internet/prehistory.html).


“...In 1858 the Atlantic cable was established to carry instantaneous communication across the ocean for the first time. Although the laying of this first cable was seen as a landmark event in society, it was a technical failure. It only remained in service for a few days. Subsequent cables laid in 1866 were completely successful and compared to events like the moon landing of a century later... the cable... remained in use for almost 100 years”.

As Marshall McLuhan notes in his 1960s classic, "Understanding Media": "It is instructive to follow the embryonic stages of any new growth, for during this period of development it is much misunderstood, whether it be printing or the motor car or TV".

For instance, the early motor car was called the horseless carriage - and most people of that day saw only that the motor vehicle would do what the horse and carriage had done before it. No-one was envisaging aeroplanes, long distance trucks, high speed highways and cars, intercontinental travel and the other advances that came from this base discovery - people just looked at this as a way to get to town to go shopping.

We see something similar in the case of the telephone system. In the early days, Alexander Graeme Bell thought it would be good for broadcasting music. So we
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envisaged the early uses as being of a "broadcast" nature one way communication. Then people thought it would be good for sending Morse code messages.

However, even back then in 1863 we can see the very beginnings of thinking about how this new infrastructure might be used one day. In that year futurist Jules Verne, without a doubt the king of science fiction writing, told us of a future world where "photo-telegraphy allowed any writing, signature or illustration to be sent faraway every house was wired".

Now that's as good a description of what was to come as you can get! Jules Verne also anticipated the first trip to the moon, so he often talked of events and inventions well before they happened.

It was some time before people thought the telegraph system would be good for people talking to each other, and the word "telephone" evolved. That idea stuck for quite some time as the dominant purpose of these networks, but by the 1980s we were beginning to see some other uses for networks emerge.

Within 150 years of its first beginnings, the telegraph network infrastructure had become the biggest single connected construction on the planet and off the planet as well! Just think of it: it wields its way across continents and under oceans in a massive encircling web of fibre, cables, wires, satellititure and wireless connections. These connections carrying our profound thoughts, our wildest fantasies, our financial transactions, news, music and just about anything we can express in words or written language.
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This is the physical infrastructure on which the Internet was built and on which it relies. This infrastructure also explains the historical role of telecommunication companies in the Internet (Lan, 2004a).

If one were to suggest one single occurrence which led to the creation of the Internet, it would be the Soviet Union's launch of the Sputnik, first artificial earth satellite in 1957. This seminal incident in space exploration caused then American President Dwight David Eisenhower to appoint Massachusetts Institute Technology (MIT) President James A. Killian as a presidential assistant for science and subsequently sparked the creation of a new department within the Department of Defense (DoD), named the Advanced Research Projects Agency (ARPA) (Norberg, 1996: P.41) to establish USA lead in science and technology applicable to the military (Robert, 2006. URL: http://www.zakon.org/robert/Internet/timeline).

Richard (2002a. URL: http://www.Internethistory.leidenuniv.nl) stresses that Internet is a system for allowing computers to communicate with each other. It goes without saying, that before we get Internet we have to have computers. Much of the information for this section was derived from “The Virtual Computing History Museum”.

The real beginnings of computers as we know them today, however, “lay with an English mathematics professor, Charles Babbage (1791-1871). In 1822 he proposed a machine to perform differential equations, called a Difference Engine.
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Powered by steam and large as a locomotive, the machine would have a stored program and could perform calculations and print the results automatically. After working on the Difference Engine for 10 years, Babbage was suddenly inspired to begin work on the first general-purpose computer, which he called the Analytical Engine.

Babbage's assistant, Augusta Ada King, Countess of Lovelace (1815-1842) and daughter of English poet Lord Byron, was instrumental in the machine's design. One of the few people who understood the Engine's design was well Babbage, she helped revise plans, secure funding from the British government and communicate the specifics of the Analytical Engine to the public. Also, Lady Lovelace's fine understanding of the machine allowed her to create the instruction routines to be fed into the computer, making her the first female computer programmer.” (Gregory, 2006. URL: http://www.netvalley.com/intval_intr.html).

Also according to Gregory (2006) the first really large scale practically implementation of the computer was done by an American inventor, Herman Hollerith (1860-1929). His task was to find a faster way to compute the USA census. The previous census in 1880 had taken nearly seven years to count and with an expanding population, the bureau feared it would take 10 years to count the latest census. Unlike Babbage's idea of using perforated cards to instruct the machine, Hollerith's method used cards to store data information which he fed into a machine that compiled the results.
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The first step towards the modern computer was Samuel Morse's invention in 1844 of communication using electronic impulses, a key and a special code that sequences of pulses to letters of the alphabet.

The next step is to link this particular invention to another of man's perennial strivings, the creation of a calculating machine. Although calculators have existed since the wire and bead abacus was first discovered in Egypt around 500 BC, one could say that the first main step towards the modern computer was Charles Babbage's experiments in the 1820s-1840s to build a "Difference Engine".

The Science Museum in Kensington built a copy of the Difference Engine in 1991 to celebrate the bi-centenary of his birth.

The idea of digital calculation was taken a step further by Herman Hollerith who developed digital processing machines to assist in compiling the 1890 US Census. Hollerith went on to found the Calculating Tabulating Recording (CTC) company in 1914, a company renamed International Business Machines (IBM) in 1924. Babbage's and Hollerith's ideas for digital computing, however, seemed to have led to a dead-end, with most scientists preferring to develop techniques for analog devices based on slide-rule principles.

These, too, could get pretty big as this Differential Analyser built at MIT in the 1930s reveals. But machines of this size were also running up against the frontiers of their capabilities and, on the eve of the 1930s, new interest was being shown in digital devices. By now a whole host of devices associated with the development of the telephone (switches, relays etc) and radio (cathode tubes) would extend the
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possibilities of any solution. But what accelerated developments was the outbreak of World War II.

The war produced two major bottlenecks that were solved by digital machines. In the USA, the need for gun-firing tables, navigational tables and tracking and aiming devices for anti-aircraft guns resulted in 1944 in the development of the first large scale automatic electromechanical calculator, the Harvard Mark I built by IBM. Note that it did not have an inbuilt program; the operating instructions were driven by a paper tape. A second crying need was to break the German (and Japanese) codes quickly enough to be useful. This work was undertaken by British scientists at Bletchley, and it culminated in the construction of the Colossus which became operational in 1944. This was more advanced than the Harvard Mark I, but its subsequent impact was limited by the fact that its very existence was a classified secret until 1970.

The War had produced a considerable advance in design technology, but basically we were still at the stage of large and complex calculating machines. The challenge was to produce a device with an internal stored memory, a leap that would take us from calculators to computers proper. The war had also created a pool of scientists with experience in digital computing and work in advancing technology proceeded rapidly on both sides of the Atlantic. If we are looking for the first modern computer, the credit should go to the Manchester University whose prototype, Baby, became operational in June 1948, and followed soon by a full scale operational model, Manchester Mark I. The next major step, the incorporation of a Random
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Access Memory (RAM) came three years later with the Whirlwind constructed at MIT.

...Until now computer advances had been developed either for various branches of government or as prototype units within universities. In 1951 Remington-Rand entered the market with the Universal Automatic Computer (UNIVAC), largely in an effort to recoup the cost over-run in its contract with the US government which had originally ordered the device for the census. A year later, it started producing ready-made software (although the term did not come into use until a decade later). IBM, which had previously specialised in punch-card systems, entered the market with its 700 series in 1953. Offering 60 per cent discount for educational uses, IBM quickly came to dominate the university market. Computers were now spreading quickly through the business and scientific communities, becoming ever faster and ever more user-friendly. They were also becoming smaller. By the end of the 1950s, transistors were beginning to oust cumbersome vacuum tubes and in 1958/59, the first 'integrated circuit' on a piece of silicon produced - five components on a piece 1 cm long. The 'chip' is born and entered into commercial production in 1961.

In 1961 IBM introduced a 'Compatible Time Sharing System' into its 7090/94 series which allowed separate terminals in different offices to access the same hardware. The concept of "remote access" to a "host" computer had become reality. Meanwhile, if you could link to one computer from a desktop terminal, why not to another.... why not to all? (Richard, 2002b).
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With no doubt, the USA-led project of Advanced Research Projects Agency Network (ARPANET), which had been planned and carried out in the fifties of 20th century, was regarded to be the technical tool into reach the scientific influence over the world by getting the supreme capacities of Information Technology (IT) field.

Richard (2002b) explain that to understand this theory, we have to go back in time to 1957 that was the International Geophysical Year, a year dedicated to gathering information about the upper atmosphere during a period of intense solar activity. Eisenhower announced in 1955 that, as part of the activities, the USA hoped to launch a small Earth orbiting satellite. The Kremlin announced that it hoped to do likewise. Planning in America focused on a sophisticated three stage rocket, but in Russia they took a more direct approach. “Strapping four military rockets together, on 4 October 1957 the USSR launched Sputnik I (a 70 kgs bleeping sphere the size of a medicine ball) into Earth orbit.

In accordance with Richard (2002b. URL: http://www.Internethistory.leidenuniv.nl/) the effect in the United States was electrifying, since it seemed overnight to wipe out the feeling on invulnerability the country had enjoyed since the explosion of the first nuclear bomb thirteen years before. One of the immediate reactions was the creation of ARPA within the Ministry of Defense. Its mission was to apply state-of-the-art technology to USA defense and to avoid being delayed by technological advances of the enemy. It was also given interim control of the USA satellite program until the creation of National Aeronautics and Space Administration (NASA) in October 1958.
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ARPA became the technological think-tank of the American defense effort, employing directly a couple of hundred top scientists and with a budget sufficient for sub-contracting research to other top American institutions. Although the advanced computing would come to dominate its work, the initial focuses of ARPA’s activities were on space, ballistic missiles and nuclear test monitoring. Even so, from the start ARPA was interested in communicating between its operational base and its subcontractors, preferably through direct links between its various computers.

In the 1960s, researches began experimenting with linking a hodgepodge of different computer types to each other through telephone hook-ups using funds from the USA Defense Department's (ARPA). The intent of this network, called Advanced Research projects Agency Network (ARPANET), was to facilitate the exchange of information between the military and its subcontractors on various government projects (James, 1998; P.6).

In 1962, ARPA opened a computer research program and appointed to its head an MIT scientist John Licklider to lead it (Richard, 2002b). Dr. J. C. R. Licklider had just published his first memorandum on the "Galactic Network" concept... a futuristic vision where computers would be networked together and would be accessible to everyone. Within ARPA, Leonard Kleinrock was already developing ideas for sending information by breaking a message up into 'packages', sending them separately to their destination and reassembling them at the other end. This would give more flexibility than opening one line and sending the information through that alone. For example, the system would not be reliant on a single routing and, if files were broken-up before transfer, it would be more difficult to eavesdrop... both useful
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security advantages. The inadequacy of the telephone network for running programs and transferring data was revealed in 1965 when, as an experiment, computers in Berkeley and MIT were linked over a low speed dial-up telephone-line to become the first Wide Area Network (WAN) ever created. (Richard, 2002b)

J.C.R. Licklider of MIT, first proposed a global network of computers in 1962, and moved over to the Defense Advanced Research Projects Agency (DARPA) in late 1962 to head the work to develop it. Leonard Kleinrock of MIT and later University of California, Los Angeles (UCLA) developed the theory of packet switching, which was to form the basis of the Internet connections. Lawrence Roberts of MIT connected a Massachusetts computer with a California computer in 1965 over dial-up telephone lines. It showed the feasibility of wide area networking, but also showed that the telephone line's circuit switching was inadequate. Kleinrock's packet switching theory was confirmed. Roberts moved over to DARPA in 1966 and developed his plan for ARPANET. These visionaries and many more left unnamed here are the real founders of the Internet. (Walt, 2005. URL: http://www.walthowe.com/navnet/history.html)

By 1966/67 research had developed sufficiently for the new head of computer research, Leonard Roberts, to publish a plan for computer network system called ARPANET. When these plans were published, it became clear that independently of each other, and in ignorance of each other's work, teams at MIT, the National Physics Laboratory (NPL) United Kingdom (UK) and by Research ANd Development Corporation (RAND) had all been working on the feasibility of wide area networks, and their best ideas were incorporated into the ARPANET design. The final
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requirement was to design a protocol to allow the computers to send and receive messages and data, known as an Interface Message processor (IMP) work on this was completed in 1968, and the time was ready to put the theory to the test.

In October 1969, IMPS installed in computers at both UCLA and Stanford Research Institute (SRI). UCLA students would 'login' to Stanford's computer, access its databases and try to send data. The experiment was successful and the fledgling network had come into being. By December 1969 APRANET comprised four host computers as with the addition of research centers in Santa Barbara and Utah. In the months that followed, scientists worked on refining the software that would expand the network's capabilities. At the same time, ever more computers were linked to the net. By December 1971 ARPANET linked 23 host computers to each other (Richard, 2002b).

Here was the first true computer network. Since it is all still fairly basic, it is worth considering the underlying principles have basically remained the same (even if they, mercifully, operate far faster and look much prettier). Start off with a passive terminal and an active host, a keyboard and a computer. They are linked together by a cable. By typing in commands recognized by a computer, you can use the programs stored in its computer, access its files (and modify them and print them out as desired). Most people can envisage this arrangement within a single building, or complex of buildings.
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In order to access another computer, at a completely different facility, have first to reach it. This was usually done in these times over a (high speed) telephone line (or lines). Once you arrive at the new 'host' you have to convince it to treat you in the same way as someone behind a terminal within its own system. Hence the need of IMP and for the same IMP to be installed in both computers! Now you can access its files. Of course, order to preserve confidentiality, all computers differentiated between 'open' files and those that were password protected.

Richard (2002b) explain that if you wanted to transfer a file or program to your own computer, the host computer uses a program to break it down into 'packages' attaching to each the address and its original position. It then sends them to your 'home' computer where a mirror program reassembles the message in the original order. In future, you could then access them from your home base. When dealing with a 'simple' network like ARPANET it is difficult to see what the real advantage of this process was. But this would soon change...

In October 1972 ARPANET went 'public'. At the First International Conference on Computers and Communication, held in Washington DC, ARPANET scientists demonstrated the system in operation, linking computers together from 40 different locations. This stimulated further research in scientific community throughout the Western World. Soon other networks would appear. The Washington conference also set up an Internetworking Working Group (IWG) to coordinate the research taking place. (Richard, 2002b)
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With the end of 1972, they successfully employed a new program to allow the sending of messages over the net, allowing direct person-to-person communication that we now refer to as e-mail. This development we will deal with at length in the next section.

Gradually, scientists worked on refining the software that would expand the network's capabilities. At the same time, ever more computers were linked to the net. By December 1972, ARPANET linked 23 host computers to each other. (Richard, 2002b) Also, in the early 70s, scientists developed host-to-host protocols. Before then, the system only allowed a 'remote terminal' to access the files of each separate host. The new protocols allowed access to host's programs (effectively merging the two host computers into one, for the duration of the link) (Richard, 2002b).

In 1974, ARPANET scientists, working closely with experts in Stanford, developed a common language that would allow different networks to communicate with each other. This was known as a transmission control protocol/Internet protocol (TCP/IP).

The development of TCP/IP marked a crucial stage in networking development, and it is important to reflect on the implications inherent in the design concepts... since it could all have turned out very differently. One crucial concept was that the system should have an 'open architecture', in fact implementing Licklider's original idea of a "Galactic Network": (Richard, 2002b):

"Each network should be able to work on its own, developing its own applications without restraint and requiring no modification to
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participate in the Internet. Within each network, there would be a 'gateway', which would link it to the 'outside world'. This would be a larger computer (in order to handle the volume of traffic) with the necessary software to transmit and redirect any 'packages'."

This gateway software would retain no information about the traffic passing through. This was designed to cut-down workload and to speed up the traffic, but it also remove a possible means of censorship and control.

Packages would be routed through the fastest available route. If one computer was blocked or slow, the packages would be rerouted through the new until they eventually reached their destination.

The gateways between the networks would always be open, and they would route the traffic without discrimination.

Also according to Richard (2002b) it is worth remembering, at this stage, that we are still in a World where we are talking almost exclusively about large mainframe computers (owned only by large corporations, government institutions and universities). The system was therefore designed with the expectation that it would work through a limited number of national (sub-) networks. Although 1974 marked the beginning of TCP/IP, it would take several years of modification and redesign before it was competed and universally adopted. One adaptation, for example, was that already in mid-1970s, a stripped-down version was designed that could be incorporated into the new micro-computers that were being developed. A second
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design challenge was to develop a version of the software that was compatible with each of the computer networks (including that of ARPANET itself).

Meanwhile computer networking developed apace. In 1974 Stanford opened up Telenet, the first openly accessible public ‘packet data service’ (a commercial version of ARPANET). In the 1970s the USA Department of Energy established MFENet for researchers into Magnetic Fusion Energy, which spawned High-Energy Physics Network (HEPNet) devoted to High Energy Physics. This inspired NASA physicists to establish Space Physics Analysis Network (SPAN) for space physicists. In 1976 a Unix-to-Unix protocol was developed by American Telephone and Telegraph Company (AT&T) Bell laboratories and was freely distributed to all Unix computer users (since Unix was the main operating system employed by universities, this opened up networking to the broader academic community). (Richard, 2002b).

In 1979 Usenet was established, an open system focusing on e-mail communication and devoted to ‘newsgroups’ is opened, and still thriving today. In 1981 BITNET (Because It’s Time Network) was developed City University New York (CUNY) to link university scientists using IBM computers, regardless of discipline, in the Eastern USA. Computer Science Network (CSNET), funded by the USA national Science Foundation was established to facilitate communication for Computer Scientists in universities, industry and government.

According to Richard (2002b) in 1982 a European version of the Unix network, (EUNET), was established, linking networks in the UK, Scandinavia and the
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Netherlands, followed in 1984 by a European version of BITNET, known as European Academic and Research Network (EARN).

Many of the top computer scientists in industry and academia gained access to this network through CSNET, a project created by the National Science Foundation (NSF), another USA government agency. All USA military sites were soon connected to the ARPANET, marking its transition to a practical, rather than an experimental, network.

James (James, 1998: P.7) stresses that as ARPANET grew, enterprising students developed a way to use it to conduct online conferences. These conferences started as science-oriented discussions, but they soon branched out into virtually every other field as people recognized the power of being able to "talk" to hundreds, or even thousands, of people around the country who were introduced over this electronic wire.

In the 1970s, ARPA helped support the development of rules, or protocols, for transferring data between different types of computer networks. These "Internet" (which was coined from the term "Internet-working") protocols made it possible to develop the worldwide Internet. The "Net," as we know it today, links all sorts of computers across national and international boundaries using a common protocol called (TCP/IP) Transmission Control Protocol/ Internet Protocol. By the close of the 1970s' links developed between ARPANET and counterparts in other countries. The world was now tied together in a computer "mesh," or Web (James, 1998: P.8).
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Throughout this period, the world is still fairly chaotic, with a plethora of competing techniques and protocols. ARPANET is still the backbone to the entire system. When, in 1982 it finally adopts the TCP/IP Internet's born... a connected set of networks using the TCP/IP standard (Richard, 2002b).

Also according to Richard (Richard, 2002c. URL: http://www.Internethistory.leidenuniv.nl/) ARPANET developers had always considered information and resource sharing as one of their primary goals. Indeed the construction of ARPANET had been undertaken to that very end, but it would be fair to say that their horizons were limited to the exchange of scholarly, technical papers and programs via File Transfer Protocol (FTP). For example, direct human-human contact had little place in Licklider's original concept of a 'galactic network'... probably because it appeared too trivial an application in a world where machines still occupied whole rooms rather than the tops of desks. Yet, like the Internet itself, it was invention waiting to happen. Almost as soon as terminals in different rooms could be linked to the same 'host' computer through 'time-share' operating systems, it became possible to leave messages for one another within the same system. Such applications began to appear from 1961 onwards and immediately proved popular among users. However their limitation was that their use was restricted to the users of a single computer. So why not between different computers in different locations? So, once ARPANET came into being (linking four centers in 1969, 15 by 1971) scientists began to consider sending direct messages over the same medium.

In 1971 Ray Tomlinson of ARPANET sent the World's first e-mail, by adapting an existing, popular, time-share internal mail program and linking it to the new network file transfer technology that underpinned ARPANET's further activities. The
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first message was simply addressed to himself, sent from one computer to another, with the text 'Testing 1-2-3'. The next thing he did was to address a message to all ARPANET users explaining the availability of 'electronic mail' and giving instructions on how to address mail to another user using the convention - users' log-in name @ host computer name - which is still the basis of e-mail today (Richard, 2002c).

That was a start, but it was still unbelievably crude. The only way to know what was in a message was to open it in its entirety. The messages had to be read in the order they were received. They read as pieces of continuous text (rather like a teletext message today). The reading process and sending process took place via two completely separate programs. What was needed was a system to make the entire operation more user-friendly... a piece-of-cake given the computer expertise concentrated around ARPANET. Innovations followed thick and fast. More or less in chronological order there was developed: (Richard, 2002c)

- A listing of messages, indexed by subject and date.
- The ability to selectively delete messages.
- The ability to receive and send mail from the same program.
- The ability to forward messages, to automatically include (sender) address with the message.
- The ability to file and save messages.
- A standard protocol to allow the exchange of messages between programs.
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As a result of these developments, by the summer of 1972 (within twelve months of the first message) most of the facilities that we recognize in current e-mail programs were already in place.

It did not take long for e-mail to establish its own particular style. It was more like a post-card than a letter, or perhaps more accurately, more like an office memorandum (with its headings "To:", "From:”, "Subject:" and "cc:". Anyway, whatever the analogy chosen, e-mail offered: (Richard, 2002c)

- A high level of informality (possible aided by the fact that all the original users were already in a 'community', albeit a scientific one).
- A tolerance of spelling mistakes and typo's (that would be totally unacceptable in a formal letter).
- A terseness of expression and relative brevity of message (because, all said and done, its still no joy to read screen after screen of message... and because the ability to give each message a 'subject' description, which could be read and replied to separately, made it logic to send several short messages instead of one long one).

The style of e-mail communication was one reason behind the success of the new medium. We are in the 1970s, when the stuffiness and hierarchy associated with society in the 1950s had already been swept away. The 'bluntness' of the medium was no longer seen as threatening but, instead conveyed a feeling of intimacy and immediacy. But there were other advantages. For example, as long as the cost of keeping computer links open was carried by the computing centre, it was a much cheaper medium than the telephone. Moreover, unlike a telephone, one could always
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keep a copy of the communication. And although communication was virtually simultaneous, the recipient did not actually have to be present to receive the message (Richard, 2002c).

E-mail was an instant success.... although, for the first five years, its development was largely ignored, and left unrecognized, by the ARPANET administration. By that time various discussion groups devoted to specific topics (whereby you put yourself on a mailing-list to receive all posts on a particular topic) had sprung into existence... and electronic mail was set to overtake file transfer in the volume of traffic over ARPANET.

In accordance with Richard (Richard, 2002c) by the end of the 70s there were 17 groups in existence, by 1982 there were 44. The most popular among the subjects of these early lists were science fiction and Human-nets. The latter, which appeared around 1975, was devoted to the social implications of the e-mail medium itself, and it helps define the moment when the e-mail users began to realize the full implications of the communication tool they were using. But ironically, while ARPANET scientists were beginning to philosophize about the brave new world they were about to enter, they were the only ones with access to it.... a group of elite defense and communication scientists in institutes whose membership of the net was dependent their role as ARPA (sub-) contractors. Before it could reach the broader public, e-mail itself had to be re-invented.

By the early 1980s, when the Internet proper started operation, it was already beginning to face problems created by its own success. First, there were more
computer 'hosts' linked to the net than had originally been envisaged (in 1984 the number of hosts topped 1000 for the first time) and, second, the volume of traffic per host was much larger (mainly because of the phenomenal success of e-mail). Increasingly predictions were voiced that the entire system would eventually grind to a halt. (Richard, 2002a)

One early, and essential development, was the introduction in 1984 of Domain Name Servers (DNS). Until then each host computer had been assigned a name, and there was a single integrated list of names and addresses that could easily be consulted. The new system introduced some tiring into USA Internet addresses such as edu. (educational), com. (commercial), gov. (governmental) in addition to org. (organization) and a series of country codes. (Richard, 2002a) This made the names of host computers easier to remember (eg. www.yahoo.co.in), but the system is even cleverer because when we type in these addresses, the computer is sending/receiving a coded sequence of numbers as 132.229.XX.XX (which the address of yahoo in India).

![Diagram of Domain Name Servers](image)

Figure 1:1 Domain Name Servers
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Internet base protocols and systems were mainly devised in the 1970s and 1980s. Many were established initially as a means to connect mainframe computer systems for timesharing purposes. The system introduced for this fairly trivial purpose has expanded to become a global multimedia information and communication system, connecting PCs, phones, and tens of millions rather than the few devices foreseen by the original inventors.

For now let's look at the core systems and how they evolved. And we should start with the mother of all systems, the world's largest database, the DNS.

But on another level, DNS in its current state is proving unsuitable for multilingual domain names. Now as the Internet spreads, the 80% of people on Planet Earth who don't use English as their primary language want to use the Internet to communicate. It currently works well for some similar European languages, but when we start to use Japanese and Arabic character sets, for instance, a whole lot of problems emerge (Lan, 2004b. URL: http://www.nethistory.info/).

This is because the DNS uses a system called ASCII, or the American Standard Code for Information Interchange. ASCII doesn't accommodate these other languages well, thus one of today's current Internet problems emerges. It will be interesting to see how it is resolved (Lan, 2004b).

In other hand, commercial exploitation of the net had started, the expansion of the Internet continued to be driven by the government and academic communities. It was also becoming ever more international. By 1989 the number of hosts surpassed
100,000 for the first time and had climbed to 300,000 a year later. The end of the 1980s and the start of the 1990s provide a convenient cut-off point for several reasons: (Richard, 2002a)

- In 1990 ARPANET became a victim of its own success. The network had been reduced to a pale shadow of its former self and was wound up.
- In 1990, the first Internet search-engine for finding and retrieving computer files, Archie, was developed at McGill University, Montreal. The development of search-engines will be dealt with in the last lecture.
- "Information superhighway" project came into being. This was the name given to popularize Al Gore's High Performance Computing Act (Najmi, 2002). URL:


  which provided funds for further research into computing and improving the infrastructure of the Internet (US) structure.
- And in 1991 the World Wide Web (WWW) was released to the public.

The WWW concept was designed in 1989 by Tim Berners-Lee and scientists at CERN (Geneva), the European centre for High Energy Physics (one of Europe's largest research laboratories) in Switzerland, who were interested in making easier to retrieve research documentation (Richard, 2002a). The World Wide Web is a network of sites that can be searched and retrieved by a special protocol known as a Hypertext Transfer protocol (http). The protocol simplified the writing of addresses and automatically searched Internet for the address indicated and automatically called up the document for viewing (Richard, 2002a).
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Before the World Wide Web the Internet really only provided screens full of text (and usually only in one font and font size). So although it was pretty good for exchanging information, and indeed for accessing information such as the Catalogue of the US Library of Congress, it was visually very boring (Lan, 2004b).

The First World Wide Web Conference was held at CERN in May 1994 and was largely a coming together of the people who had been influential in getting the Web off the ground and meeting together for the first time (Oxford Brookes University, 2002: P.28). In an attempt to make this more aesthetic (Lan, 2004b).

Probably the World Wide Web saved the net. Not only did it change its appearance, it made it possible for pictures and sound to be displayed and exchanged (Lan, 2004b).

Douglas Engelbart invented the mouse, which was to later become a very important part of personal computers. So the idea of clicking on a word or a picture to take you somewhere else was a basic foundation of the web (Lan, 2004b).

Another important building block was the Uniform Resource Locator (URL). This allowed you a further option to find your way around by naming a site. Every site on the worldwide web has a unique URL (Lan, 2004b) such as http://www.yahoo.co.in.

The other feature was Hypertext Markup Language (html), the language that allowed pages to display different fonts and sizes, pictures, colours etc. (Lan, 2004b).
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World Wide Web is a highly used tool by the Internet users. It is a collection of "Web pages" created by (html) and viewed by Web Browsers. Web pages contain anything from personal information to broad topics of interest (Vonda, 1996. URL: http://ei.cs.vt.edu/~wwwbth/book/chap3/searching.html).

Web pages provide a means for companies or organizations to advertise their products, ideas, post available job positions, and furnish information on the latest technical developments. Web pages supply researchers with another method to inform the public of breaking research topics. They enable doctors to share medical cures with other doctors. Political candidates advertise their views to inform the voters. Teachers supply students with numerous amounts of resources that help them to better understand any subject. There is something for everyone on a Web page (Vonda, 1996).

Figure 1.2 How Internet works
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It is even easy for the novice computer users because there exists Web pages that allow Internet user to create Web pages with just a click of a button. There are several Web sites where Web page editors are available for downloading. With most Web browsers, user have an option of viewing or saving a Web page source file; this is also a good assistant when developing a Web page. Although some of the more advanced applications of the Web may require a little more technical skill, those that are ambitious can create a Web page with a variety of features (Vonda, 1996).

There is a lot more to the World Wide Web than just surfing through hypertext information. It has the capability to transform the way in which we carry out our computing tasks as well as our daily business. Let's look at some scenarios that can become possible in future if the WWW and Object technology successfully merge together: (Ashish, 1996. URL:


- The Web will be an electronic market of planetary proportions. There will be boutiques, departmental stores, bookstores, banks, and travel agencies on the Web. Electronic currency and round the clock shopping will become a common thing.

- Electronic agents will be roaming around the networks looking for bargains, and conducting negotiations with other agents. There will be sniffer agents which will collect information and statistics, and do system management.

- Massive amounts of multimedia data will be stored in digital libraries, and will be moved and stored on the network. People will be able to
watch movies on the web and pay-per-view will become common for material on the web.

- The desktop metaphor will have changed entirely to subsume the facilities provided by WWW.

All these might seem to be wishful thinking at present, but if Web technology moves at the same pace at it is now, creating the above scenarios will not take much time.

The WWW should be a place in which everyone can speak for him or herself without the boundaries that are set by traditional media.” (Wijnia, 2007. URL: http://elmine.wijnia.com/weblog/archives/wijnia_understandingweblogs.pdf. P. 1).

By the end of the 20th century the Internet embraced some 300,000 networks stretching across the planet. Its fare traveled on optical fibers, cable television lines, and radio waves as well as telephone lines and the traffic was doubling annually. Cell phones and other communication devices were joining computers in the vast weave. Some data are now being tagged in ways that allow Web sites to interact. What the future will bring is anyone's guess, but no one can fail to be amazed at the dynamism of networking. Vinton Cerf, one of the Internet principal designers, says simply: "Revolutions like this don't come along very often." (National Academy of Engineering, 2007. URL: http://www.greatachievements.org/?id=3745).

Different features of a Web page are used to enhance the page or to entertain the visitors to that page. Images are usually visual aids to help explain a subject or give a
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creative edge. Sound files and animation available for downloading, are used to help with reading or explaining a Web page. These features should be used to enhance Web pages, but are often abused. The abuse of Web technology can make journeys on the World Wide Web time consuming and less productive. There are several ongoing discussions throughout Internet community concerning Web page design. The debates provide suggestions and even solutions, but there is no true way to regulate a Web page's content (Vonda, 1996).

Recent years have seen the advent of the Internet applications such as numerous websites, Internet mailing lists, and electronic newsletters devoted to improving the practice of Public Relations. Practitioners and Audiences can find a wide variety of resources for their own knowledge development, and professional networking. Today, more organizations are investing in Web sites, as the number of people with online access in the population grows.
<table>
<thead>
<tr>
<th>Year</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969</td>
<td>Distant computers first communicate with each other when Arpanet is set up, linking computers at four USA universities</td>
</tr>
<tr>
<td>1971</td>
<td>The first e-mail message is sent between computers</td>
</tr>
<tr>
<td>1983</td>
<td>A new computer language called TCP/IP allows all computers on the network to communicate with each other. The network is called the Internet and governments and universities begin to use it.</td>
</tr>
<tr>
<td>1991</td>
<td>The World Wide Web is created, giving people a simple way to navigate through the information on the Internet</td>
</tr>
<tr>
<td>1/2012</td>
<td>There are more than 888,239,420 Hosts and 2,280 millions users</td>
</tr>
</tbody>
</table>

Figure 1:3 1969 to 2012, stages in the process of Communication through Internet

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E-mail newsletters, listserves and other applications can also be ways to distribute your message and to get feedback from your public. These e-publications can be identified, pitched, and tracked much like traditional publications are, although again, it's a good idea to do some preliminary research on basic These online publications also offer advertising opportunities if your communication plan includes advertising and your public can be reached through online sources.

Direct e-mail advertising, much like direct mail, can be accomplished on the web. Several services offer mailing lists for purchase, and the important factor to consider is whether the e-mail recipients have signed up and agreed to receive the advertisements or massages.
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Although, it is important to realize that a web site has become more than a marketing, sales or communication tool. It’s not a huge brochure, a super toll-free line, a product catalog, or a virtual help desk. With all the possibilities technology offers today, a company’s web site is the actual company, only on the Internet (Newsom, et al. 2004. URL: http://www.lordoftheweb.com/communication/thisisPr.pdf p.1).

![Diagram of Internet terms]

Figure 1.5 The Various forms of Internet invented

It is often much easier for a customer to choose and buy products or services, for a reporter to get information, for a public leader to inquire about the company’s stance on various issues, for an investor to get financial data, and for a college graduate to apply for a job on the company’s web site. For the company, providing all these possibilities online is usually cheaper and more efficient. A web site can “replicate the full, complex personality of a business, in all its details and areas.” (Fane-Sanders, 2000. URL: http://www.publicrelations.about.com). Therefore,
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whatever interactions the organization has with its audiences – they all should be implemented online, whenever possible.

Nevertheless, communication, being a vitally important function of any organization, remains just as important on the Web, especially – on the organization’s web site.

Today the web site has become a multi-channel communication tool, offering a discussion forum (message board), several e-mail lists, hundreds of pages with useful information and news archives going back several decades. However, the most significant breakthrough is a content management system which offers the possibility to instantly post information to the web site from any computer connected to Internet – which is something a corporate brochure could never do. Each chapter can instantly post their own news releases or announcements to the web site, as well as maintain their own web pages with detailed information in the chapter directory. Members have 24/7 access to their online resumes, employers maintain their job and internship listings, while the staff post news and announcements and have full control over the web site’s content.

As a result, the organization web site has become its primary communication tool, providing its members, leadership and online visitors not only with an online newsroom and information archive, but also with a community, which goes far beyond a simple message board or e-mail list.
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Website is an essential part of the Internet applications for any organization, from global corporations to non-profit associations and from government agencies to small businesses. Some of the ways an organization can use a website are: (Robin, 2007. URI: http://www.hieran.com/netpr/netpr.pdf P.6)

- Communicating with your members, donors, or other important audiences.
- Promoting a product or service that lends itself well to being sold via the Internet.
- Promoting or selling data that your industry collects, via a searchable online database.
- Membership recruitment.
- Industry promotion.
- Providing legislative and regulatory information.
- Soliciting donations.
- Showcasing your calendar of upcoming events.
- Calling for submissions to your magazine or journal and providing submission guidelines.
- Promoting advertising in your other publications (consider bundling online advertising with print advertising to add value).
- Providing general information that is useful to your members (links to other helpful industry sites).
- Providing a job bank.
- Allowing members to register for meetings and other special events online.
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A technological global society can retain very few secrets, just as there were no secrets in the American villages of the 1800s. (Starck, 2004: p.52) Such a statement, arguably, implies the existence of a global community, which has to exist through communication, since it has been shown that community and communication are, to a certain extent, inseparable.

In this context, can be understood in terms of the media being the gatekeepers of not information, but conversation. The best venue for conversation on the Internet today is, arguably, the blogosphere - a term referring to the collective network of blogs. A blog is a type of website, usually frequently updated, with its content arranged chronologically. The conversation carried out through blogs is facilitated by blog authors referring to each other’s posts through contextual links and discussing them directly through comments. The blogs “could contribute to a new form of democracy in which consensus is no longer built by the mass media through broadcasting, but a process of conversations between people to reach consensus” (Wijnia, 2007: p.1). “blogging in many ways has returned to individuals and small groups the power to affect public discourse.” (Hendrickson, 2007: p.188).

Discussing the blogosphere’s phenomenon and its relation to traditional media is beyond the scope of this research. However, new communication technologies, represented by the blogosphere, through facilitating a public forum for people from different groups, communities and nations, who previously could not have discussed matters of common interest due to location constraints, have given the public the means for conversation in a way proving (Dewey, 1927). The general public is ready to be heard and cause significant consequences for organizations who choose to focus
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their Public Relations efforts on their perceived strategic public and disregard the presence and significance of the public at large. (Dewey, 1927)

Weblogs “are very easy-to-manage websites,” according to Cook and Hopkins “This ease of use allows you to post your ideas and opinions often and without using up too much time.” (Cook, 2006. URL: http://leehopkins.net/downloads/CookHopkins-SocialMediaWhitePaper.pdf). Blogs allow authors to link to other media content almost effortlessly, including video, audio, and other content (Flatley, 2005: p.78). There are many kinds of blogs, including personal, political, corporate, and mainstream media blogs (Spannerworks, 2006. URL: http://www.spannerworks.com/fileadmin/uploads/eBooks/What_is_Social_Media.pdf). Blogs can also be topical, as in the more than 600 that focus on Public Relations and communication (Basturea, 2007. URL: http://blog.basturea.com/pr-blogs-list/). On any blog, each post has its own URL, so individual items can be easily located by search engines, and anyone can subscribe to a blog’s Really Simple Syndication (RSS) feed so that new posts are automatically sent to interested readers. Blogs are just one landmark on a broader social media landscape: wikis, podcasting, Second Life, and social bookmarking sites, for example, are also changing the ways that people communicate.

However, this essay focuses on ways that Public Relations can use the most popular format, blogs, to inform their public.
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Although many blogs operate as private journals, social media can foster participation, openness, conversation, community, and connectedness (Spannerworks, 2006). By encouraging participation from everyone who is interested, blogs can make anyone a content producer. They encourage participation by asking for comments and votes, and they encourage information-sharing by linking to content produced by others. Communication is not one- or even two-way, but can move in many directions. Communities build around shared interests, and communication is expected to be transparent and authentic. This means, for example, that after an item is posted it should never be deleted (although additions and corrections are welcome if identified as such), and a Public Relations person should always reveal a connection to a audiences when posting or commenting on a blog (Word of Mouth Marketing Association, 2007. URL: http://www.womma.org/blogger/read/).

Public Relations in this environment is so different that some have designated it “PR 2.0”, which implies that a new or second-generation practice has emerged. Others dispute this claim, arguing that at most social media create opportunities for a more mature, rather than entirely new, public relations. Regardless, the implications of social media for Public Relations practice are astounding. What once seemed like idealistic concepts to teach our students, such as “symmetrical communication” (Gogoi, 2006. URL: http://www.businessweek.com/bwdaily/dnflash/content/oct2006/db20061018_445917.html) and “collaborative decision-making” (Heath et. al., 2006: p.397), suddenly become far more realistic. As Michael Ryan points out, Web technology can be used to facilitate dialogic communication, including “allowing users to ask questions, express concerns, pass along opinions, and praise or complain about
products and services” (Ryan, 2003: p.336). Blogs, and other social media, allow individuals to do all of these things without waiting for an organization to request it.

This essay examines three areas in public relations.

- First, Public Relations practitioner must learn about blogging in order to prepare for careers in Public Relations.
- Second, blogs can be used as resources to help and faculty engage in dialogue about current issues for the organization.
- Finally, blogs can be a topic of research for anyone interested on organizations subjects, from public.

Public Relations have identified several benefits of corporate blogging, including building an organization’s profile, revealing expertise, and networking (Cook, 2006).

Blogs are becoming an important topic for research on Public Relations. “By allowing unprecedented access to corporate information, technology bestows on researchers or audiences interested in the field of corporate communication a rich vein of information to mine on virtually any subject” (Argenti, 2005: p.366). The same can be true of political communication, social movements, and other areas of Public Relations practice.

Peter Smudde wrote in Public Relations Quarterly, “From a Public Relations standpoint, blogs can be a blessing and a curse” (Smudde, 2005. p.35). Participating in the conversation requires an individual or organization to cede at least some control to the audience a term that is problematic given that anyone can be a producer or
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consumer on the Internet. Some people will disagree with an individual’s opinion or a
organization’s products or services of action, and the blogosphere can bring a harsh
spotlight of criticism onto a client, agency or individual (Gogoi, 2006).

Anonymity can cause another problem. More than half of the bloggers in one
survey report writing under a pseudonym (Lenhart, 2006. URL:
http://www.pewinternet.org/pdfs/PIP%20Bloggers%20Report%20July%2019%202006
6.pdf). Anonymity can be used for good, but more frequently it is used for ill. “Trolls”
are people who intentionally try to disrupt a community by posting inflammatory and
insulting comments; within the Public Relations community, the anonymous author(s)
of the blog (Kurtz, 2006. URL:
http://www.washingtonpost.com/wp-dyn/content/blog/2006/07/19/
BL2006071900447.html?nav=rss_opinion/columns).
Such episodes offer opportunities to discuss credibility, transparency, and authenticity
in the classroom.

Blogs and other social media have created exciting opportunities for Public
Relations. Using blogs for communicate audiences and also allows audiences and
practitioners to engage in dialogue about the field. In addition, social media provide a
rich new area for Public Relations research as we learn more about the possibilities
and problems of symmetrical communication and collaborative decision-making via
the World Wide Web.

According to Kruckebgerg and Starck the role of new communication
technologies in restoring the sense of community (Kruckebgerg, & Starck, 1988). The
new communication technology was of equal importance to face-to-face relationships;
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(Dewey, 1927) that it was “a phenomenon which overcame the limits of geography, multiplied the frequency and variety of contacts, and gave access to a nearly endless supply of information and opinion.” (Quandt, 1970: p.51) The technological advances which were the underlying reasons for these ideas, included: "the telegraph of the 1840s which speeded up newspaper reporting; the rotary press of the 1870s which accelerated the printing of newspapers; the improvements of papermaking and bookbinding which made possible the production of inexpensive books in the 1840s; the telephone, patented in 1876; and finally, the motion picture, launched as a commercial enterprise in 1906; and the radio, given its first commercial station in 1920" (Quandt, 1970: p.20).

According to Quandt The Internet concludes that for communitarians these inventions contained “the unprecedented promise of making the nation a neighbourhood.” (Quandt, 1970).

In the other hand, Internet serves Public Relations is by providing a boundless source for research information. To find out more about a competitor, look into a potential client, and generally find information on almost any topic imaginable.

The number of actual websites out there for research is literally countless; no organization has a reliable count of how many websites exist, and thousands of sites are born or die every day. However, the following sites represent a good selection of places for Public Relations people to start (Robin, 2007. p.2).
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One area of the web that is commonly overlooked by many researchers is the Usenet, also known as “newsgroups.” Separate from the World Wide Web, the Usenet is a network of thousands upon thousands of individual message forums each devoted to a very specific topic. For example, in the alt.tv hierarchy of newsgroups, there is a group devoted to just about every television show ever created, including older shows, cancelled shows, and sometimes multiple groups for current hit programs.

Why is the Usenet important? It offers quotable sources on any topic you can imagine, and is also a good place to ask self-styled experts for additional sources for your research. If you use Netscape Navigator or Internet Explorer for web browsing, you can access the Usenet through a menu item on your browser, or you can use one of two popular websites for newsgroup searching: Google Groups. As an aside, you can explore the Usenet for professional development purposes as well.

A relatively new technology that has gained rapid acceptance is RSS, which stands for Really Simple Syndication and offers an easy way to access Internet-based news. Public Relations practitioners can download and install a small software program on any type of computer and subscribe to news feeds from almost uncountable sources ranging from e-mail newsletters to websites to Usenet groups. (Robin, 2007: p.3)

In a similar way, Public Relations practitioners will shift their focus from influencing public opinion to applying their professional communication skills and new communication technologies to the process of restoring community in modern society (Kruckeberg, & Starck, 1988). A logically flawless assumption: community exists through communication, Public Relations practitioners are professional
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communicators, therefore, Public Relations can and should help restore community. However, this assumption implies, to a certain extent, that community members are not capable (or are less capable) of restoring community through communication on their own, without the help of communication professionals (Sergei, 2007. URL: http://www.lordofthewwebs.com/thesisma/ma_thesis.pdf).

Internet is a wonderful tool for individuals and organizations that want to reach large numbers of people. It is also a great resource for finding information on current events. However, the lack of traditional gate keeping that print material has used to filter information, such as editors and peer reviewing, is for the most part missing on the Internet. This puts the users of the Internet in the position of having to be their own gatekeepers of information.

It is widely accepted that, Internet has been instrumental in creating the new global community. Bell, (as cited in Sergei) summarized this opinion by observing that “globalization [has] opened up the whole world as a potential source of community” (Sergei, 2007) with Internet being key to this global community through providing members with new ways to belong. However, Bell also believes that communication is not the cornerstone of the new global community. For example, discussing the contemporary meaning of community, Sergei argues that the new “imagined community” is held together by its members believing in it and sharing cultural practice rather than face-to-face interaction (Sergei, 2007). Nevertheless, other scholars emphasize the unique communication possibilities offered by the Internet. Rheingold (as cited in Sergei) elaborating on the type of activities individuals carry out online, demonstrates, beyond any doubt, the communicative
nature of these activities: " In cyberspace we chat and argue, engage in intellectual intercourse, perform acts of commerce, exchange knowledge, share emotional support, make plans, brainstorm, gossip, feud, fall in love, find friends and lose them, play games and metagames, flirt, create a little high art and a lot of idle talk. We do everything people do when they get together, but we do it with words on computer screens, leaving our bodies behind (Sergei, 2007).

In other hand one of the most important applications of the Internet is Electronic mail (e-mail). It is certainly effective for moving information in a speedy, silent, affordable way. There is little necessity today (beyond habit) for distributing hard copy correspondence and materials. You can almost certainly distribute the exact same information, looking just as good or better, in an instant over the Internet, and all at virtually no cost. Digital information is also easily stored, filed and searched. Large file cabinets are on their way out. Setting up an effective directory structure for client documents and a mail box for each case makes case management and accessing documents easy (James, 2008. URL:


Electronic mail satisfies the desire to communicate the fastest way possible, besides normal conversation (Kehoe, 1996. URL:

http://www.ou.edu/research/electron/internet/zen.htm). This allows users to send plain text or even file attachments for viewing by one or more end users. Electronic mail is commonly referred to as e-mail and can decrease the amount of time for pertinent personal information to be transferred through Internet community.
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E-mail has the same concept as postal mail because an e-mail address provides all of the information to get a message from you to anyone else in the world (Vonda, 1996).

Figure 1.6 How Email works

* (MDA) message delivery agent, (MTA) Mail Transport Agent, (MUA) Mail User Agent
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E-mail addresses contain significant information that allows a message to travel from its sender to the intended receiver. An e-mail address usually contains the form of user@somewhere.domain. The user portion of the e-mail address is the person's account name or identity on the system. The somewhere portion of the e-mail address tells you the name of the system and the location. The domain portion tells what kind of organization. The domain implies the organization type - commercial institution (com), educational institution (edu), government site (gov), a military site (mil), an administrative host (net), or a organization (org). Other countries represent domains in different ways, for example Australia (au), Canada (ca), and United Kingdom (uk) (Kehoe, 1996). Let's use my e-mail as an example, maeen7@y.net.ye. The user information is maeen7. The somewhere portion of the address is y.net.ye, which tells us that I am a user on a machine called Y.net (Yemen Internet company) a Yemen administrative host. The last part of the e-mail address is that indicates that (ye) it is mean Yemen.

Despite what the world wide web offers, e-mail remains the most important application of the Internet and the most widely used facility it has.

As Ray Tomlinson observed some years later about e-mail, "any single development is stepping on the heels of the previous one and is so closely followed by the next that most advances are obscured. I think that few individuals will be remembered." (Lan, 2004a) That's true - to catalogue all the developments would be a huge task.
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One of the first new developments when personal computers came on the scene was "offline readers". Offline readers allowed e-mail users to store their e-mail on their own personal computers, and then read it and prepare replies without actually being connected to the network - sort of like Microsoft Outlook can do it.

This was particularly useful in parts of the world where telephone costs to the nearest e-mail system were expensive. (often this involved international calls in the early days) With connection charges of many dollars a minute, it mattered to be able to prepare a reply without being connected to a telephone, and then get on the network to send it. It was also useful because the "offline" mode allowed for more friendly interfaces. Being connected direct to the host e-mail system in this era of very few standards often resulted in delete keys and backspace keys not working, no capacity for text to "wrap around" on the screen of the users computer, and other such annoyances. Offline readers helped a lot.

With the World Wide Web, e-mail started to be made available with friendly web interfaces by providers such as Yahoo and Hotmail. Usually this was without charge. Now that e-mail was affordable, everyone wanted at least one e-mail address, and the medium was adopted by not just millions, but hundreds of millions of people. (Lan, 2004a)

One of other Internet application is Usenet. It is the set of machines that exchange articles tagged with one or more universally-recognized labels called newsgroups." (Kehoe, 1996) Usenet groups are used by governmental agencies,
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universities, businesses, and even some home computers. A Usenet group is managed by the system administrator and the system owner.

A Usenet group are created through a "vote" to determine popular support for the proposed newsgroup. If the guidelines are followed, the group will normally be created. Due to the nature of the vote, the newsgroup originator has no way to enforce the results of the vote.

Usenet groups are not an organization, a democracy, a right, or a software. Usenet groups are not a central authority on any one subject, they are just discussion tools. Newsgroups are not a democracy because of the lack of organization and there is no way to enforce any one person's wishes. When participating in a Usenet newsgroup you do not have the right to freedom of speech because you are an authorized user by the owner of the machine, and it is up the owner's discretion to allow any publications on their machine. Lastly, Usenet is not a software because there are several software applications that allow the use of Usenet newsgroups (Kehoe, 1996).

The transmission of a Usenet article is centered around the unique message identification. When a site offers an article to a neighbor, it looks to see if it has received the article, if the article is not already received, the site accepts the news article. The unique message identification prevents the possibility of identical articles being accepted (Vonda, 1996).
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In other hands search engines is one of the most important Internet application. The first search engines began to appear in the mid 1990s (Lan, 2004b). The search module contains two parts:

- A search language.
- A search engine.

The search language takes query from the user and transforms query into formal representation that can be applied to the index. Then the search engine applies the query representation to the index and derives a set of records that meet the criteria specified by the query (Aixiang, 1996. URL: http://ei.cs.vt.edu/~wwwbtb/book/chap15/searching.html).

The capabilities of the search language are reliant on the index generated. The more sophisticated the technology used to create the index, the higher the level of sophistication is for the search language. There are two basic types of search languages on the Web: keyword matching (also called associative search) and Boolean search:

- Keyword matching (associative search) is one type of search languages that can accept "keyword" from the user as a search query. It is the most common search capability and is supported by almost all search systems for the World Wide Web. If a search system supports keyword matching, the user could input any word, or a document title, or event part of a word to do the search. Keyword matching is really pattern matching of characters in the text (Aixiang, 1996).
- Boolean search is a more sophisticated search language that serves to narrow and refine keyword matching searches. Boolean search language allows the user to use Boolean operations on the keywords. The Boolean
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operators are: AND, OR, and NOT. They are used to build the search query, and can be used in combinations (Aixiang, 1996).

Search engines operate by selecting individual web-pages or documents. Although some give you the option of selecting sites, their coverage is far smaller than the main directories. Many search engines use the same 'spiders' to compile their indices, so the difference lies in the way they interpret the data and how they allow you to manipulate the results (Richard, 2002. URL:

http://www.Internethistory.leidenuniv.nl/).

Search engine takes the formal query transformed by the search language, applies the query to the index, and then returns matched records to the user. In other words, the objective of search engine is to apply the query to the index (database), to find matches between the value of attributes in the stored records in the database and the attribute specified by the search query. If a match is found, then that record is retrieved. As a result of search query, the set of retrieved records (called result set) is transferred to the user (Aixiang, 1996):

- Wide Area Information Server (WAIS) is the most popular indexing and searching method currently used on the Web. WAIS is a client-server Internet service and was developed independently of the Web. WAIS offers a sophisticated searching language and search mechanism. It uses keyword search with optional use of Boolean operators. WAIS provides most of the components of a search system: an indexer, a searcher, and retrieval, thought it doesn't have a gatherer. When combined WAIS with robot, which fills the role of gatherer, it makes up a complete search
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system. Traditional databases are also very popular tools for indexing and searching Web resources (Aixiang, 1996).

One of the other Internet applications is File transfer. It is the "ability to copy files from one computer to another" (Lynch & Marshall, 1993) using file transfer protocol. Although the name of the program that implements the protocol may be different, it is often called after File Transfer Protocol (FTP).

A computer file can be e-mailed to customers, colleagues and friends as an attachment. It can be uploaded to a Web site or FTP server for easy download by others. It can be put into a "shared location" or onto a file server for instant use by colleagues. The load of bulk downloads to many users can be eased by the use of "mirror" servers or peer-to-peer networks. In any of these cases, access to the file may be controlled by user authentication; the transit of the file over the Internet may be obscured by encryption and money may change hands before or after access to the file is given. The price can be paid by the remote charging of funds from, for example a credit card whose details are also passed -hopefully fully encrypted- across Internet. The origin and authenticity of the file received may be checked by digital signatures or other message digests (Wikipedia contributors, 2007. URL: http://www.en.wikipedia.org/wiki/Internet).

Electronic Fax (e-fax) also is one of the Internet applications. It is a helpful augmentation to our communicational options. With e-fax, you can send and receive faxes as e-mail attachments. This saves lots of paper and allows for easy filing in your case e-mail mailbox (James, 2008).
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These simple features of the Internet, over a worldwide basis, are changing the basis for the production, sale, ideas and distribution of anything that can be reduced to a computer file for transmission. This includes all manner of office documents, publications, software products, music, photography, video, animations, graphics and the other arts (Wikipedia contributors, 2007).

With the invention of the Internet phone, some people can now even talk across Internet just like on a voice phone but without paying long distance charges. It is just a fact; the time it takes to send a letter or reply to a phone message is no match for e-mail's speed and convenience (Cyveillance, 2007).

Voice mail has come to be accepted and utilized. The reasons are clear: saved labor costs, 24 hour service, worldwide access and full confidentiality. "I am convinced that clients like it when I say that I am the only one who checks my voicemail and that they can leave confidential messages. Even in offices that have a real live person answering the phones, there is typically a voice mail back up. Many prefer voicemail for speedy and certain communication" (James, 2008).

VoIP stands for Voice over IP, where IP refers to the Internet Protocol that underlies all Internet communication. This phenomenon began as an optional two-way voice extension to some of the Instant Messaging systems that took off around the year 2000. In recent years many VoIP systems have become as easy to use and as convenient as a normal telephone. The benefit is that, as the Internet carries the actual voice traffic, VoIP can be free or cost much less than a normal telephone call,
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especially over long distances and especially for those with always on Asymmetric digital subscriber line (ADSL) or Digital subscriber line (DSL) Internet connections (Wikipedia contributors, 2007).

Thus VoIP is maturing into a viable alternative to traditional telephones. Interoperability between different providers has improved and the ability to call or receive a call from a traditional telephone is available. Simple inexpensive VoIP modems are now available that eliminate the need for a PC (Wikipedia contributors, 2007).

Voice quality can still vary from call to call but is often equal to and can even exceed that of traditional calls (Wikipedia contributors, 2007).

Most VoIP providers offer unlimited national calling but the direction in VoIP is clearly toward global coverage with unlimited minutes for a low monthly fee (Wikipedia contributors, 2007).

VoIP has also become increasingly popular within the gaming world, as a form of communication between players. Popular gaming VoIP clients include Ventrilo and Teamspeak, and there are others available also (Wikipedia contributors, 2007).

Internet allows computer users to connect to other computers and information stores easily, wherever they may be across the world. They may do this with or without the use of security, authentication and encryption technologies, depending on the requirements (Wikipedia contributors, 2007).
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Internet "provides users with the opportunity to be on one computer system and do work on another, which may be across the street or thousands of miles away" (Kehoe, 1996). This is encouraging new ways of working from home, collaboration and information sharing in many industries or organizations. An accountant sitting at home can audit the books of the organization based in another country, on a server situated in a third country that is remotely maintained by IT specialists in a fourth. These accounts could have been created by home-working book-keepers, in other remote locations, based on information e-mailed to them from offices all over the world. Some of these things were possible before the widespread use of the Internet, but the cost of private, leased lines would have made many of them infeasible in practice (Wikipedia contributors, 2007).

Internet allows users to have an interactive terminal to a remote location as if the terminal was the host computer (Lynch & Marshall, 1993).

An office worker away from his desk, perhaps the other side of the world on a business trip or a holiday, can open a remote desktop session into their normal office PC using a secure Virtual Private Network (VPN) connection via the Internet. This gives the worker complete access to all of their normal files and data, including e-mail and other applications, while away from the office (Wikipedia contributors, 2007).

This concept is also referred to by some network security people as the Virtual Private Nightmare, because it extends the secure perimeter of a corporate network into its employees' homes; this has been the source of some notable security breaches, but also provides security for the workers (Wikipedia contributors, 2007).
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Most libraries today are converting to public accessible libraries that no longer use the convention of card catalogs, but computer library catalogs. The electronic catalogs provide users with information about the books available in the library. These libraries often allow users to check the status of books and magazines (Vonda, 1996).

The low cost and nearly instantaneous sharing of ideas, knowledge, and skills has made collaborative work dramatically easier. Not only can a group cheaply communicate and test, but the wide reach of the Internet allows such groups to easily form in the first place, even among niche interests (Wikipedia contributors, 2007).

In the 1970s, Multics was used to create an extremely useful on-line meeting facility, which was used as another means of electronic communication. (Vleck, 2001. URL: http://www.multicians.org/mgu.html)

Internet chat, whether in the form of IRC 'chat rooms' or channels, or via instant messaging systems allow colleagues to stay in touch in a very convenient way when working at their computers during the day. Messages can be sent and viewed even more quickly and conveniently than via e-mail. Extension to these systems may allow files to be exchanged, 'whiteboard' drawings to be shared as well as voice and video contact between team members. (Wikipedia contributors, 2007).

Instant messaging, allows you and agreeable others to be connected in a real time direct communication link. I can look at my instant messaging menu and see
which of my work partners are presently on line and, if on line, I can directly and immediately communicate with them (James, 2008).

Version control systems allow collaborating teams to work on shared sets of documents without either accidentally overwriting each other's work or having members wait until they get 'sent' documents to be able to add their thoughts and changes (Wikipedia contributors, 2007).

Many existing radio and television broadcasters provide Internet 'feeds' of their live audio and video streams (for example, the BBC and Rush Limbaugh). They may also allow time-shift viewing or listening such as preview, classic clips and listen again features. These providers have been joined by a range of pure Internet 'broadcasters' who never had on-air licenses. This means that an Internet connected device, such as a computer or something more specific, can be used to access on-line media in much the same way as was previously possible only with a television or radio receiver. The range of material is much wider, from pornography to highly specialized technical Web-casts. Podcasting is a variation on this theme, where usually audio material is first downloaded in full and then may be played back on a computer or shifted to a digital audio player to be listened to on the move. These techniques using simple equipment allow anybody, with little censorship or licensing control, to broadcast audio visual material on a worldwide basis (Wikipedia contributors, 2007).

Webcams can be seen as an even lower budget extension of this phenomenon. While some webcams can give full frame rate video, the picture is usually either small
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or updates slowly. Internet users can watch animals around an African waterhole, the
traffic at a local roundabout or their own premises, live and in real time. Video chat
rooms, video conferencing and remote controllable webcams are also popular. Many
uses can be found for personal webcams in and around the home, with and without
two-way sound (Wikipedia contributors, 2007).

Some governments restrict what people in their countries can access on the
Internet, especially political and religious content. This is accomplished through
software that filters domains and content so that they may not be easily accessed or
obtained without elaborate circumvention (Wikipedia contributors, 2007).

Many countries have enacted laws making the possession or distribution of
certain material, such as child pornography, illegal, but do not use filtering software
(Wikipedia contributors, 2007).

There are many free and commercially available software programs with which
a user can choose to block offensive Web sites on individual computers or networks,
such as to limit a child's access to pornography or violence (Wikipedia contributors,
2007).

Internet has a great effect on our communities also. It enables us to access and
share information with the click of a button. It provides the academic community with
items such as lesson plans, topics of research, and a host of other educational ideas
from across the world. Students benefit because the Internet provides a resource to
supplemental information for any subject. Educators benefit because the Internet provides a vast knowledge base to prepare for topics.

Although, Internet is a contribution to our communities, is it an equal distribution for all? If we lived in a society without any poverty or economic imbalance the answer to the question would be yes. (Marchingsou, 2007. URL: http://know-the-web.blogspot.com/2007/11/34-internet-and-our-communities.html).

Given this trend to use the Internet for Public Relations, it is important to examine how Public Relations practitioners perceive Internet applications as a communication medium. This study will examine Internet applications as Public Relations tool within Republic of Yemen. And focusing on how Public Relations practitioners in Yemen used the Internet as Public Relations tool. This paper will add to the small body of knowledge that exists about the relationships of Public Relations and the Internet in Yemen.

1.2 Problem Discussion

For several years, a revolution in communication has been developing that is dramatically altering this traditional view of Public Relations and communication media. This revolution is Internet, the massive global network of interconnected packet-switched computer network, which as a new communication medium has potential to radically change the way organizations do business with their audiences. Internet is firmly established as a new Public Relations communication tool.

Nowadays, media means the more traditional media as well as new media such as the Internet. "Internet is by far the fastest growing communication medium"
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(Turban, et. al., 2004: p.23). Hence, "Internet is a medium for communication whose time has come" (Strauss & Frost, 1999: p.9). Hoffman & Novak observe the traditional media follow "a passive one-to-many communication model, whereby organizations provide content via a medium to a mass audiences with limited forms of feedback from the audiences. Now, Internet facilitates an interactive multimedia and many-to-many communication network, thus radically altering the way in which organizations can do business with audiences and suppliers. In many-to-many communication, Internet support discussion groups, multi-players games, chat, file transfer, e-mail and global information access and retrieval systems" (Hoffman & Novak, 1996: p.52). Therefore, "the Internet has become established as a global channel through which both existing and potential audiences can be targeted" (Melewar & Smith, 2003: p.363).

Internet reviews new ways of applying each of the elements of the communication mix. Today, Internet as a Public Relations tool is something that organizations must consider because it's the least expensive communication tool as well as the most cost effective. Internet offers a new additional applications to inform audiences of benefits of a product or service with full color virtual catalogues, provide on screen, offer online support and to elicit audience feedback. "Public Relations tactics permeate most Websites and many e-mail communication programs (Strauss & Frost, 1999: p.9)". That is to say, Internet applications become extremely important avenues for organizations to interact with their audiences.

On other hand, Present Public Relations an emerging science discipline and argue that research is in need of developing concrete measurement tools which will
allow empirical evaluation and clearly identify its driving forces (Lages & Simkin, 2003: p.298-328).

1.3 Purpose

In view of the above the purpose of this study is:

Study the current use of the Internet within the field of Public Relations departments in Non-Government Organizations in Yemen.

1.4 Research Questions

To be able to answer the purpose of the study we shall address the following research questions:

1. How is the Internet currently applied & utilized by the field of Public Relations in Non-Government Organizations within the Republic of Yemen?
2. How is the field of Public Relation defined with respect to use of the Internet in Non-Government Organizations in the Republic of Yemen?

1.5 Delimitations

Since Public Relations and Internet are such a vast area. It is not possible to cover all of their aspects in this study. The concept of Public Relations and Internet as discussed in this study includes the elements possible to observe. The aim of this thesis is to focus on the current use of the Internet within the field of Public Relations departments in Non-Government Organizations in Yemen.
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1.6 Disposition of the thesis

The thesis is divided into five chapters. In the first chapter is where the reader has received an introduction and to get an insight to the field of this study followed by the problem discussion, the overall purpose and research questions to investigated, and the demarcations of the study. The second chapter the reader is provided with the literature reviewed on previous research conducted within the area of the overall purpose. The chapter three describes and motivates the methodology used in this thesis. In chapter four researcher present the data collected for this study and empirical data will be analyzed. In the fifth and final chapter, findings conclusions and recommendations are drawn based on the findings of the research conducted. At the end of the final chapter, implications for further research are presented.