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インターネットとその応用について

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The Internet and What It Entails

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This essay is a sequel to what I have just finished writing. The topic is once again the aspects of the Internet that bring those who are interested in the new technology, particularly those who are holding their breaths to see how it will affect their daily lives, to thrust into the strange fluid world, in which everything seems to change daily. But overall, I intend to address, as I did before, all the relevant issues that impinge on the way the Internet is broadening our scope of communication. I may become distracted with topics that may not strike you even tangentially pertinent to the subject I am delineating here. But since the technologies that support the Internet are changing so rapidly while affecting the way we live our lives, I had better not refrain from taking byways that at first seem completely distracting to the readers. After all the subject of the Internet is complicated and the understanding the ramifications of the comminations system enabled by the Internet is so compounded by other seemingly unrelated parameters such as personal, geographical, and even policy issues that I may be easily excused for being digressive. As for the sources of my study of the subject I will extensively move over the vast network of the Web. That is of course almost expected of an essay of this kind. In order to get at the bottom of the issues I will be dealing with, nothing works better than plunging in the midst of the fray where all the real actions are taking place. So, if inconsistencies stick out, that is almost concomitant of the project I have in mind. I hope you will not be spurned by flippant and facile comments I make in this essay. After all they are the marks of democracy as long as they are made in an attempt to come up with the answers to the question I posit in the title. Just as in the previous essay I will scour through the web of sites in search of instructive suggestions. In that sense, you may as well expect to encounter rambling observations. But they are meant to elucidate the central thematic that hopefully emerges from the whole jumble of remarks I make in this essay. It is up to you to pick up the clue and make any constructive sense out of the whole. I hope you enjoy accompanying me.

I will pick up then where I left off. The article is from CMC Magazine at http://www.december.com/cmc/mag/1999/jan/elmer.html. In this article Greg Elmer points out the promise the Internet held out for the newly awakened intellectuals and those who were keen on the new technology. The promise was that the new cut-edge

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technology would certainly promise dialogic communications between the sender of information and the receiver of information. This simple observation made me ponder on the role of the Internet anew. The truth of the matter is that I had never though of the Internet as a truly dialogic medium, which opened up a wide scope of interfacing opportunities between a multiple number of parties simultaneously. Not that I had not been aware of the opportunities that had existed for interactions between the parties online. But not in terms of strictly dialogic encounters. But what does it mean to have a dialogic communication anyway? That needs to be commented on extensively if you want to arrive at adequate answers to the function and purpose of the Internet as it exists today. How does it differ, for instance, from the telephone conversations people have using the network of phone lines? There certainly seem to be dialogic interactions taking place when two parties, or sometimes more than two nowadays, talk to each other. How doubt radio or television? They seem to attain a certain amount of dialogically situational encounters between two parties or more, although the point of contact seems more elusive than in the case of the telephone conversations? These are indeed fascinating jumping off points where I start my deliberation on the issues involving the Internet. Let us compare the communications that take place on the Internet and on the telephone.

As Elmer points out when the Internet was beginning to take the present shape as the popular means of communion, it was conceived as a text-based alternative to other means of exchanging information over the distance. Since data online have to navigate through the narrow channel that is not used by other services, the text-based communication was only expected. But how about now, this year of the expanding cyberspace? Is the Internet technology still hampered by the bandwidth limitations? Or has any drastic change taken place on the technological front that could shift the trend from the text to other context orientated means of distributing information? Yes and no. As for the bandwidth limitation, that is still a overwhelming restriction placed on those who are trying to expand the window of opportunities using the Internet. For instance, the sound files intended for distribution through the Internet cannot be uploaded or downloaded as quickly as the creators of them wish. Therefore, the truth of the matter at this moment is to clip audio files relatively small, so that the people who download them can hear them within a tolerable space of time. But that is not even guaranteed. If someone who clicks a button to download a sound file it is all too often common to wait for unbearably a long time before he can actually access the file in its entirety and hear it. Especially so if he uses a slow modem. Even if he uses a fast modem the traffic on the line could slow down the speed at which the data are streamed

down into his computer. Ironically the expansion of the Internet is exacerbating the problem. As with the conventional motor vehicle traffic, the more drivers use a given segment of a highway during a given period of time, the slower the traffic is bound to move. The same is true on the Internet. Of course, many developers have come up with numerous technologies to address the bandwidth issue. Or it is more like circumventing the bandwidth limitation. One company has developed a technology, which enables to send sound data in packets rather than sending the data in one bulk. Since transmitting data in their entirely means a proportionately long download at the receiving end, this packet technology is mean to alleviate the agony of viewers who are chronically short of time. But despite its merits there are drawbacks to it. Not the least of which is the complex developing process and logistical issues involved in delivering the data in question. While the conventional files that play by default once they are on the local computer take a long time to download but need no more complex preparations than any other audio files, the files that are to be transmitted in packets demand disproportionately meticulous and strategic considerations which may or may not justify the time that goes into developing them. Of course, no long distance delivery of data is free of extra preparations and considerations. But considering that the information delivered via the Internet is consumed and forgotten just as any other data delivered through conventional means, excessively long time demanded to develop files may not justify the raison d'être of the technology. But just as any other phases of the Internet many new technologies are cropping up daily to address the bandwidth problem. Some day all sorts of files may be transmitted as freely and quickly as the developers of the web pages intend. Until then the web seems to remain more or less text-based interface between the transmitters of information and its recipient.

Now let me go back to where I started. Elmer mentions that the Internet has been text oriented since its inception. Four years later, he continues, its essential orientation remains the same. Only that its scope seems to have magnified by the web of networks it helped to create. In other words, the web has truly become a source and means to interact with and influence others. In his words, "the Internet has become a much more complex, commercialized, politicized and increasingly networked environment" (http://www.december.com/cmc/mag/1999/jan/elmer.html). Especially, the proliferation of web pages has helped to enrich and multiply the sources of information available online. With the dominance of two major browsers, the cyber community is now truly at a click away. And once you are online the vast linkage of networked pages are virtually before you. Only you click on your way until you reach your destination. Or for lack of it, you click along and become immersed in the

immense array of virtual data. Elmer points out that was indeed the phase the Internet had entered after its propitious start less than a decade ago. The chaotic expansion of the sites created a world in which a surfer could all too easily get lost and wander aimlessly without retrieving anything except the skills he unconsciously learned to navigate through the meandering network of sites. Thus the emergence of big portals where surfers can start their joinery through the uncharted territory. These portals, such as Yahoo, Excite, Lycos and others, offer navigational tools by which surfers can plan and locate their prospective visiting sites. But planning and actually locating sites the surfers really want to visit are two completely different things. If the user enter a certain key word or a number of key words, he may be surprised to find a gamut of candidates that may or may not be relevant to his search. That is the technological frontier the current search engines are facing right now. Although ingenious ideas have cropped up to limit the number of hits the users can more readily sift through, the list is as yet still random. After spending an excessively long time, they are likely to locate only a handful of useable sites out of a couple of hundred. It is true that there are other ways to search the target sites by string phrases or words, even that method is not completely reliable. The result may not only mislead the users but also completely miss the target. That is a situation most serious users of the cyber information encounter. Considering that the web has become the vast storage space for valuable and useful data, as Elmer points out, ordering categorization of the contents is much desired. Quick access to the relevant data is what utilitarian users of the web really want. In this light, what Elmer introduces as a subject oriented search engine, initially developed by a high school student, is quite intriguing. The site noted is supposed to offer the familiar looking search engine but all the entries are divided into rings of categorically differentiated groups, each consisting of 500,000 individual web sites or so. If an individual in search of a certain subject needs to visit the relevant sites, then all he has to do is to click on the ring that contains all the topics related to the particular subject he is interested in. Once he arrives at the top of the category, then the rest seems quite easy. But I had better visit the site to see how the site Elmer refers to is actually managed. The individual who had developed the original site later sold the idea to an Oregon based company. So, I expect a portal that is comparable to those maintained by other giant online establishments.

　　　Well, I did not exactly spend a long time on the site. But my verdict is that the site is as challenging as any other. One link leads to another and it in its turn sends you somewhere else. You are constantly greeted with a list of candidates you have to strain your eyes to narrow down the target entries. But even after that

strenuous effort there is no guarantee that you will safely land at a site that offers the right kind of information.   I know I need to spend more time on the site to hand down a fair judgement but at this moment I am inclined to the opinion I already expressed. But according to Elmer, a single web master manages each web ring, which constitutes the entire network of rings.   He is responsible for exclusion or inclusion of a certain page applied for the ring.   If he judge the new page is inappropriate for the ring then he keeps the right to refuse its membership.   Therein lies the potential order and uniformity the entire ring preserves.   But of course the reverse may be true.   If the judgment is too arbitrarily handed down, the essence of the democratically driven atmosphere in which web thrives may be jeopardized.   How to maintain the balance between the free spirit that seems to be the fundamental ethos of the cyber community and the controlling order that renders the sites in that community more readily available to users?   That seems to be the crucial issue.   Without addressing all the philosophical issues that underlie the existence of the Internet, no prosperous information age would be attainable.   That may be easier said than done.   After all one man's liberty is other man's anarchy.   Despite all the concomitant contradictions and complexities the ring concept of the web site categorization, Elmer concludes his essay with an optimistic note as he adds, "As a form of computer-mediated communication, web rings nevertheless provide a platform to challenge the registration driven commercial and indexical interest on the web."

Rather than concentrating on the way Internet users can locate the sites they want to visit, let me surf the Internet myself and find sites that deal with the way the new technology is transforming the world.   I opted for an academic site located at http://www.ilt.columbia.edu/ilt/.   The site is maintained by the Institute for Learning Technologies at Teachers College, Columbia University.   The institute, according to the preamble listed at the top of the page, was founded to promote and experiment various educational methods with the help and application of the Internet related technologies. First I shifted my attention to the section that addresses the difficult conditions many disadvantaged districts are experiencing.   The first agenda that is brought to the foreground is how to utilize the networking technology that makes it possible for those students who reside in the educationally handicapped areas to overcome the hurdles that lie between them and the possible level of achievement they can attain only if they are given the opportunities.   At this juncture the author introduces the now trite concept of Information Superhighway.   (I have to add this article happens to be posted two years ago.)   The concept is to connect American schools with high-speed networks and accelerate the speed at which each institution along with the students in them with

each other.　Although the full fruition of the concept is still to be awaited, its implementation has already been seen two years ago, although in an experimental form. Well, at least that is the concept.　But how are the high-speed networks to be utilized to actually improve the quality of education and increase the opportunities students will have?　What are the more concrete procedural and methodological tenets that are to underlie the vast project expressed by the author?　The author responds in the clearest language.　The concept is to minimize the isolation economically handicapped children, teachers and schools are forced to undergo.　That is to open up opportunities by making all the resources available thorough the Internet.　Since the amount of information that is accessible via the Internet is almost unlimited that, at least theoretically, the networking technologies will bring the level of opportunities the disadvantaged children have to the par with the rest of the children in the country.　Secondly, the Superhighway will be utilized to expand the opportunity for the children to develop practical skills necessary to play major roles in the next century.　In other words, the new networking is expected to deliver materials that will supplement, if not substitute, conventional teaching.　Although I mentioned practical skills, the author actually uses the phrasing "skills for work and civic life."　I admit my interpretation swerves a little from the original intent.　But if you look closely at the way the author reiterates the purpose for which the whole project should be directed, the fundamental similarity between my point and the author's become apparent.　Both the author and I focus on the manner by which the Internet is to be utilized to produce socially responsible adults. The reason why the author involves the economically disadvantaged, especially those residing in inner cities, seem to corroborate this pint.　By offering more opportunities to those students who otherwise may not benefit from the modern technologies, the project organizers are hoping to divert the students' attention from those which normally grip the majority of them.　The Internet in this sense is dovetailed with the measures which educators usually come up with to cope with difficult situations they face.　Although there is no guarantee that the new communications technology could solve all, or even some of the complicated issues the educationally challenged groups face daily, the Internet at least bring the educational battleground to the par with the rest of the country.　In that sense, the introduction of the Internet to school environment at least exonerates the authorities from being negligent of the concerns socially disadvantaged population are having.　In this context, the next item listed as an objective of the project fits seamlessly into the preamble that has already preceded. The author mentions that incorporation of the Internet into school environment is intended to strengthen "schools as centers of communication" and help "coordinate

initiatives in education, health, housing, employment, and community development."
It is obvious then that the author and the initiators of the project have the schools
closely positioned as a hub of community development.   The learning environment is
not only to be restricted to the traditional walls of schools but the concept of learning is,
according to the project organizers, inseparably tied to the rejuvenation and reeducation
of the whole community.   Wiring up the schools is only contingent upon the renaissance
and reorganization of the communities in which those schools are located.   Since young
more malleable layers of community gather to learning institutions defined by
traditional schools, targeting the students will eventually impact the rest of the
population.   If not immediately, but eventually when those students get older and have
influence on the way the communities are urn.   The last item included in the objectives
is that the funding will come from all sources.   Especially in a project like this, which
tends to cost in the millions, all the funds that become available will enable the
planners to institute a better system, thus contributing more to the population in the
target community.   All the sources include private sector, foundations and government.
That is, tautologically speaking, all conceivable sources possible.   As for the private
sector, contributions to improve the living conditions of the poor communities will result
in, in the long run, more social recognition and increased patronage.   In that sense,
corporations that are deliberating on the wisdom of giving away money do not have to
brace themselves for an eternally lost funding.   As has long been recognized and as has
been repeatedly practiced by major corporations, financial contributions for a
philanthropic purpose are rarely confined in their effects within the realm for which
they were originally intended.   so, there is something go gain (oftentimes a lot if the
parties concerned are patient enough to wait for the full effects to manifest).   Of
course, the sources of funding are likely to arise from those corporations which has some
entrenched interest in wiring up inner city schools, there should be plenty of candidates
in this age of computers.   After all, creating computer literate population of the future
by educating and introducing students at early stages of their life will surely have a
symbiotic effect for all parties concerned.   for those who are administering the project,
including those who are ultimately overseeing a number of them from the strategic
point of view such as the State and Federal officials, the success of attuning the
students in poorer sections in the country will certainly contribute to the well being of
the nation in the long run.   Actually the effects may come sooner than most people
think.   Since the technologies related to the communications are advancing at such a
mesmerizing rate, no one can tell what the mastery of today's skills result tomorrow as
the students who have those skills at their fingertips apply them to the new phase of the

evolving technologies.　The outcome of the project may be far greater tan the organizers have ever dreamed of.　As for the students themselves, their involvement in the project could bring about a result that is definitely advantageous to their future. The Internet in that sense is a channel through which they can transform their adverse conditions into something more promising.　In essence, it is not only the means to access the infinite amount of information but also to cultivate themselves in such a manner that they can seize the opportunities when they arrive.　What is interesting in this context is that they do not have to simply wait until those opportunities roll along in their way but using the Internet they can aggressively seek them whenever they so wish.　The Internet has brought those in challenged conditions a long way from where they used to be.　It is until just a few years ago when they barely had any choice but resign to their born environment and plod along the prescribed path their mothers and fathers had traced.　Although I would not say they have completely left those desolate foredoomed conditions and have opportunities laid out before them, there are channels through which they can pull themselves out of their adverse conditions if they are persistent and determined enough to seek information to their advantage.　That is why the author of the site mentions that schools wired to the Internet are the schools of the next century.　Putting the whole project in a larger perspective, he goes as far as saying that the concept of connecting schools via the Internet has revolutionary significance. That may be an exaggeration. But when we consider the opportunity the Internet offers schools to go out the conventional murals to gather and exchange ideas with the global population, well then the point made by the author does not after all sound too far fetched.

　　　　So far I have talked about the educational opportunities the Internet opens up for anyone connected to it.　Now it may be time to shift my stance a little and view how the industry is dealing with the expanding demand for digitized medium to exchange and distribute information.　As usual I clicked my way into a site linked to Yahoo and found one, which contains workshops conducted through the auspices of a major Internet networking company in Europe (http://iir.co.uk/tel-inet/).　One of the agendas taken up there is how the new medium of communication to meet the demands of the Internet users to satisfy their ever increasing and diversifying needs to process high quality content.　Since the bandwidth used for the internet traffic is quite limited at the moment, the data that are transmitted through the conventional telephone circuitry are restricted in their mode and speed.　One of the urgent issues the Internet related companies facing today is how to address the bandwidth limitations.　Needless to say, the strategies to cope with the existing problems are all centered on winning out the

corporate battle that is engulfing the industry. In that sense, the topics discussed here may be inherently different from the issues treated above. But when we consider the development of the Internet and related technologies we cannot avoid the largest sector that will benefit from the new channel of communication. After all the driving principle that has engendered the current proliferation of the unforeseen opportunities in schools and other places is no other than self-promotion through technological breakthroughs. What made Microsoft of today is indeed merchandising of ideas people can use to their advantage. Without creating that meeting place between the two parties profits would not have arisen at the enormous rate seen today from the merely ingenious operating system and other applications that run on it. Then let us reconcile ourselves with the objective that is set forth in the preamble to the workshop document that the participants in the conference need to make the online shopping more attractive to the cyberspace residents to survive through the next century. That may sound rather mundane. But when we consider that the health of the Internet depends on the success of enterprising technology oriented companies the achievement of that objective can be seen as tantamount to increased opportunities for anyone connected to the Internet.

Now, let us take a peek at what is happening on the commercial front as the industry tries to survive in the twenty-first century. First thing that the reader is reminded of as he surveys the site is that the Internet technology has already reached a point where the service providers have to come up with more diversified and efficient menus to satisfy the consumers. The author summarizes the current condition of the telecommunications industry as characterized by overlapping and ever murkier boundaries that used to and still to a certain degree separate between "ISPs, telcos, and cable operators." In fact, what used to be the text only means of communication on the Internet is lately becoming more like true multimedia based. As anyone who has surfed randomly on the net may have realized, it is rather difficult to avoid the intrusion of graphics, sounds and other content that incorporate the interrelated jumble of all the three kinds of content on any site he visits on the web. In that sense, the point the author here makes about the convergence of the nature of the services all three entities provide is not that surprising. When the convergence of the kind happens and happens so rapidly, there naturally arises the redrawing of business strategies for all companies deeply involved in the fray. The survival of their business depends clearly on either by bringing to the front the distinct nature and quality of their services as opposed to others or for that matter inclusive nature of their content that, at least implicitly, will make the services offered by other competitors redundant. When

the consumers realize the superb quality of the services provided by one company and see that the content offered by that particular service provider could easily supplant and excel those offered by others then the natural law of laissez-faire competition will dictate the outcome. For each company in the fray then foregrounding their distinctness, at least for the moment, becomes the prime objective to survive. In the author's words, the choice for those companies is quite limited and the only course they can take is either retain or gain the customer base through "new and differentiated value added services." Although the fears of being obliterated amid the fiercest competition any companies have experienced may be greater than ever, the trophy that hangs before their eyes is hard to resist. According to the prediction cited on the page, the amount of business conducted online is expected to triple by the end of the millenium. That is indeed a staggering rate of growth. Cine the inception of the online commerce in the early nineties, the businesses transacted online have been steadily growing. That is a fact. But the rate by which the dealings are growing would even have surprised the optimists who announced the bright and rosy future for the Internet commerce in those early years. According to another source, the transactions conducted online is going to increase geometrically in the next century. No wonder online providers are hurrying to stake out their distinct territories to absorb even at least a fraction of the online traffic.

The author then enters into the discussion of how concretely service providers can assert their distinctness. He points out the need for the providers to invest in the ever-upgrading technologies so that they are constantly positioned to deliver the best services available. The author comments that the ever-expanding horizons the new technologies are opening up for both the consumers and service providers are making the new investment move crucial for the providers. Unless they do not mind being left behind in the technological war, the providers essentially have no choice but spend a percentage of their revenue on upgrading. The underlying logic to justify the investment seems self-evident. Unless they upgrade the hardware and software needed to interface with the consumers, service providers cannot package more values to their services. That leaves only one future for them. That is, watch their customers go somewhere else. In a world in which the networking technologies are ever becoming complex and each communications technology invading the border of the other, which was traditionally considered belonging to a completely heterogeneous domain, then the only way to survive is to expand the horizon of services and seek opportunities that lie even in the margins. As the author notes, "the line separating LANs, WANs, intranets, extranets, public, private, and virtual private networks" is

quickly disappearing. What does that entail? Well, for one thing the service providers must come up with comprehensive ways to meet the demands of the consumers. That, of course, brings my discussion back to the point I have been making above. In other words, service providers must be well equipped with the pat and adequate technologies to cope with the demands of the consumers. In order to offer all the services the consumers demand, then the companies need to have made the appropriate investments required to satisfy their customers. The argument goes on and on tautologically. But what the author emphasizes is not the pressure the service providers are facing now. Rather the expanding envelope of opportunities the new technologies are bringing about. He comments that the center that used to be defined by the giant corporations that provided services the consumers mostly demanded (i.e., telephone communications) is shifting, or rather disappearing. That in a way creates a chaotic condition in which a congery of new technologies can grow. But in other words that kind of condition is rife for new opportunities for upstart companies as long as they are well informed and ready to pounce on the chances that drop in their way. In an age of diversity consumers are resorting to all sorts of communications devices to contact other parties. It is not only the means of communication that is changing rapidly, however. As a platform from which the whole communications technologies have been launched, the computers themselves are being transformed from mere receptors and processors of information that flows into them to transmitters of information, the role that used to be exclusively performed by mainframes running on Unix. With the new phase of the ever-expanding medium computers are making inroads into the traditionally different domains that are essentially allocated exclusively for telephones. The result is the state I have already mentioned. The merging of the borders between traditionally heterogeneous telecommunications networks. The exclusivity of one medium is constantly eroded. Their unique status as the sole or exclusive channel of one kind of service is becoming ever murkier. It is in these overlapping borders where the author insists the great opportunities reside for new technologies and the providers of those technologies. We are now in a phase in which anything on the technological front could go a long way as long as it satisfies the needs of the consumers. In a sense, the apparent chaos the competition to come up on top is creating is for the better because that will guarantee that only the best will survive and become the standard of tomorrow when the ultimate judges are the fickle consumers.

What the convergence of the multiple of network services means is that data that used to remain within a particular areas of the network domain now crisscross the web of networks. That in its turn translates into the demand on the part of the

consumers to have their data being optimally transmitted and distributed via the services available at their fingertips. Indeed data that circulate need to be carried along through the Internet and other channels of communication in order for all the parties interested in them to take advantage of the packet released into the whole cyber domain. If the data are constrained into one limited form, all the available networking platforms that can carry and interact with the data will be nullified as their values are minimized by the limitations imposed by the service providers. As I mentioned, today is the time of restless technological development. In order to cope with the needs of the day providers must keep up their upgrading and satisfy the demands of the consumers. That is why the author of the page (http://iir.co.uk/tel-inet/program/workshp.htm) cannot emphasize enough the inevitability of the competition to bring about the tomorrow of the telecommunications industry. Along with the term competition the author strings together another keyword adaptability. Actually they go inseparably together. In order to survive the stiff competition the industry has to adapt to the reality. But just following on the heels of the trend is not enough if service providers aim to stay ahead of the rest. They need to set the standards which the rest, including the consumers, will follow. As the immediate goals, the author cites several concepts. These include "virtual private networks, virtual applications, multicasting." The author sounds definitely high-spirited. If the Workshop sponsored by Europe's largest networking consortiums is any indication, the next century holds great promises of diversified and well-developed means of communication. That is not only a bonanza for the providers but also augurs potential opportunities for consumers as well. Human kind has never been inundated with so many alternative means of communication that transmogrify themselves at such a staggering rate. Anyone who has a modicum of interest in the development of telecommunications may as well feel thankful for being able to witness what is developing right before his eyes.

Now its is time to move on to another site that gives us insight into the developing world of the Internet. As the author of the previous site repeatedly mentioned, the web related business is expected to expand. With that prophetic resonance still lingering in my ears, I chanced upon a site maintained by DCI at http://www.dci.com/brochure/ebwchi/pages/overview.html. It is a site dedicated to promoting conferences to discuss business strategies to succeed online. As a commercially oriented site, it immediately tackles the bottom line issues that have been nagging business entities since the inception of e-commerce. The page immediately foregrounds the need for businesses to make money. The site does not mince words. The author of the page phrases the urgency thus:

How do you turn your intranet or extranet into a profitable resource for collaborative computing?

How do you get eCommerce and supply chain automation moving in your company— and truly making money?

And how do you get business and technical people working together to build a smooth-running eBusines enterprise—on-time and on-budget?

As already predicted in the previous argument, the business entities cannot wait for some magic technology to arrive to solve all the technological problems today's networking contains.   They must maintain the ongoing system in order to build the financial springboard to launch them into the next century.   For their optimum growth, that is, they must satisfy the customers and hopefully their stockholders with the current resources available while constantly preparing for the ever challenging tomorrow, both in the technological and financial senses.   In order to meet the requirements to smoothly shift into the next phase of the technological development, the business entities need to streamline their services by adopting the most efficient networking system appropriate for their industry.   At the same time, the author of the preamble notes, the seamless integration of the technical staff who maintain the system and the people who actually initiate transactions must take place in order to bring about the successful business venture.   The concept is rather new, relatively speaking. But in the next century it is expected to mature and, according to many predications made by experts on the filed, expected to explode into a full blown alternative to the conventional transactions mode.   Until that happens and the twosome concept go overdrive, careful coordination of the two layers of the workers in a business must be implemented with a proper oversight from someone who are well versed in the two roles.

It is interesting that the conferences promised on the site also address the issues that are dealt with by the organization I have treated above.   The topics the site announces to be concerned are security, technology and programming language that will be used to implement the whole concept adumbrated on the site.   The focus reiterated here may not be purely coincidental.   At this stage of the Internet technology implementation of the ebusiness envisioned and advertised must necessarily entail the building of the surrounding technologies that at least launch the enterprises to the next stage of cyber commerce.   Security, as in the other instance, becomes the foremost concern.   Without guaranteeing the safest transactions possible online to the prospective customers, no large-scale commerce will be possible.   Since the use of credit cards becomes the common practice under the envisioned framework of the ecommerce,

no traffic will be initiated that involves large volumes of money without safeguarding the pathways that enable the information flow. In this regard, the encryption technology is the most promising development and certainly one of the crucial fields of the Internet technology that interests everyone involved in online business. The more sophisticated the encryption technology becomes the more difficult for potential hackers to break the code and threaten the safe transfer of cash. Along with the security technology as a whole becomes the utmost concern of the people involved in ebusiness. Understandably so because without the promised upgrading of technologies no expansion of ecommerce will be possible. No one wants to be circumscribed by the current limitations on the envelope of potential development that the passing technologies impose. In order for the industry to constantly expand innovative, and preferably revolutionary, technologies are needed. So the commercial aspects and the technological aspects are combined in a way that has never been seen in human history. Not that the past did not integrate the two to evolve transactional potential that cropped up now and then. That is true. But what the current trend is foregrouding is unique in that all the integration between the technology and commerce is taking place at such a breakneck speed that commercial conceptualization is almost inseparable from technological reciprocation. Or even more appropriately the twosome development and evolution that is manifested in cyberspace is bringing about the symbiotic revolution that has never surfaced on the planet since the inception of civilization in such a compressed mode. Nothing stays the same on the technological front and that is synchronically reciprocated in the other field. Indeed there is an explosion of new conceptualizations that are immediately translated into reality and affect our lives one way or another. The conceptualizations in one field elicit responses from the other field real-time and vice versa, I do not know what surprises await us in a year, or even month that will radically transform the way we conceive the world. That in itself is a reason why we should keep our eyes fixed on the development of the cyber technologies. The next item on the list given on the site is definitely a biased direction the author of the page is giving to the potential attendees of the conferences. It touts specifically Java out of many programming languages that are common today. Since the dominance of the C and related programming languages is being eroded today, the desire for the quest and focusing on an alternative language is understandable. But there is no guarantee that Java will become the best option for the programmers in the foreseeable future. The selection of it then must be considered with a grain of salt and seen as merely reflecting the predilection of the organizers. But I must concede that Java is becoming a preferred choice of many programmers who want to maximize highly

developed browser functions that are upgraded on a regular basis. In that sense, the focus demonstrated here is not wide of the mark and is indeed indicative of the trend being manifested on the mainstream technological front. Initiation into Java will certainly benefit the attendees as long as they understand the risks and limitations reliance on one particular language entails for the cooperation they represent.

Now let us take a look at what each lecture planned on the sessions consists of. Although the site actually gives only a bare summary of the content of each lecture, we can surmise what it s going to be like. In the subsection entitled "Best Practices in eBusiness" (http://www.dci.com/brochure./ebwchi/pages/best_practices.htm) the visitor is immediately greeted by an inset which includes the picture of the speaker Steven Rabin, Vice President of Development Interworld Corporation. The title of the speaker may or may not impress anyone but what at this moment concerns me is the topic he addresses. What he focuses is the opportunities the current development in the Internet field grants anyone interested in ebusiness. As already pointed out, the traffic using the narrow bandwidth currently used by the Internet is expected to grow exponentially to $300 billion by the year 2002. That is a staggering rate by anyone's standard. What the present speaker tries to convey to the visitors to the site is the ramifications of that growth. Not only the business online is expected to expand but do so at a rate that has never been seen in human history. Discounting some catastrophic events that thwart the current development in the Internet technology, all the figures associated with the Internet will only surprise the forecasters of growth by their gross underestimation. Like a juggernaut the industry will never stumble. That is the message the speaker both explicitly and implicitly spreads. Needless to say, he is giving the overview of the whole industry when he refers to the unstoppable growth. On a micro scale individual companies come and go and some thrive and some fail. But on a macro level the trend is there for anyone with a modicum of insight into the potential and the reality of the industry. Rabin emphasizes the brighter side to the development of the industry when he says that the only way to join the bandwagon of the successful companies is to learn how to "implement best practices" and stay on the cutting edge of technology. That is quite optimistic. But after all his function as a pitchman of the series of lectures planned and announced on the site is to stress the inevitable presence of the Internet in everyday life. If the growth rate is indeed as high as mentioned here, then ecommerce could threaten many traditional businesses that have been practiced for years since the inception of the industrial revolution. Unless aspiring entrepreneurs and businessmen and women seize the opportunities they could be left stuck with primitive business practices that might become fossilized

remnants of the bygone days even before the next century goes into high gear.　I may have exaggerated the implicit points the speaker makes.　But he seems too offhandedly optimistic.　His suggestion about the proper and full implementation of new modus of commerce has to be diges6ted with a pinch of salt.　Any technology that promised to supplant and transform the prevailing modes of conducting business and day-to-day activities failed to deliver on their exaggerated promises.　If one is to surrender to the overoptimistic trend the new technology is expected to set, according to the words of the speaker here, then I have to say that involves too much facile willingness to be deceived and misled.　But of course there is some truth to what Rabin claims.　Without that he would not have made the announcement on the site.　That is for granted.　What is crucial then for those who are culling real information from the message is to read between the lines and not to swallow the promises that are dangled before their eyes as they fix their attention on the online site.　But how difficult it is!　For the moment it may as well be better if they just carried along and hear what the rest of the speakers have to say about the strategies they recommend to survive and thrive in the immediate future.

　　　　Despite, or rather because of, the gun-ho spirit that comes to the fore, Rabin's message seems to contain the shadowy side to it that potentially puts the readers on guard.　In comparison, Jack Shaw, president of Electronic Commerce Strategies, provides a healthy counterpoint to Rabin by his warning against facile application of technologies to the road of business success.　Although the summary of the lecture supposed to be delivered by Shaw is extremely sketchy, he seems to be stressing the importance of total integration of the new with the existing system when it comes to successful business operation that is based on the latest technology.　The first line that catches the visitor's attention is that no amount of technological application to the newly fledgling business online is adequate unless it is securely anchored by the concept of total integration.　In a way he is taking a pragmatic approach to the introduction of the latest technological advancement.　Unlike many pitchmen who tout the marvelous wonders the day to day technological development could bring to the business entities, Shaw appeals to visitors to adopt a more selective approach that takes into account the need for a more conservative stance to stay fanatically afloat. Being occupied with the merely technological cat and mouse race would indeed be, according to his words, "a recipe for failure."　But what keeps businesses from catastrophic failures after investing heavily in technologies is after all, Shaw admits the latest technologies. That may sound rather paradoxical.　But his point is that the successful path to the next phase of ebusiness is to adopt the kind of steps that are proven to be safe.　All the

visitors to the site need to do is attend the conference and hear what he has to say. He is ready to lay out the proper steps and foolproof integrative modes to prepare for the next millenium. The advertisement, as expected, is full of promises and claims. But the visitors have been already warned. They need to tread carefully before taking any concrete action. Especially so if any move they make eventually impinges disproportionately upon the fate of the business they represent. The gist of the message fortunately is not so difficult to pick up. The new technologies will arise and are expected to supplant the old ones. Those who are in commerce, especially those who are hoping to get in the fray and stake out the cyber market, must adopt some technologies that seamlessly dovetail into the current system. That far seems to be an incontrovertible fact.

Just as the previous summary of the lecture ends with an optimistic yet cautious note, the next one starts with a downright aggressive wishful thinking. The lecture I am referring to is again a mere summary. But as the reader surveys the message he immediately catches the tone that is almost infective. Without the precaution I cited above that is necessary to sift through the plethora of infomercials that fill cyberspace, it will be difficult to resist the temptation to get carried away by the join-the-melee-now-or-never tone that is inherent in the message. Just as the other speaker I introduced above, the present speaker, Steven Foote, Chairman and CEO of Hurwitz Group, intones the great promises the Internet holds for everyone who are willing to take the risk to jump in ecommerce. He proudly announces in the beginning of the summary (vicariously, that is by someone who is actually writing the script for the web) that online traffic is "doubling every 100 days" (http://www.dci.com/brochure/ebwchi/pages/best_practices.htm). That may be a fact. But the implication the mere reference to the piece of statistical information is not so difficult to surmise. If, let us read between the lines by allowing free reins to our imaginations, the traffic increases in volume at the current rate as Foote so pointedly announces is the case, then the Internet could easily substitute other means of communication in a very short time as the most dominant and convenient modus of interacting with others and distributing information. If the Internet would become so ubiquitous and dominant in such a near future then the commercial sector should not let the great opportunity pass without trying to advantage of it. That of course would be foolish and contrary to the go-getting laissez-faire spirit of capitalism. The time is not only ripe but begging for brave trail blazers to invest in ebusiness. All it takes is gumption and proper guidance. That is where the lecture of the kind becomes useful. Anyone who comes upon the site and reads the message may easily be struck with the

upcoming lecture takes on either one of the two tones I just mentioned. As the introductions to the upcoming lecture run their course and the surfer scrolls down to the end of the page, the content of the announcements becomes less clear-cut, however. At this stage, each seems to contain both nuances of optimism and cautious pragmatism. Probably the organizers, or at least the author of the page, realized the merit of incorporating the synthesized elements to conclude the overall message the entire conference needs to send to the prospective participants. That is for the better. Since no unadulterated strain of either approach dominates the industry today, dovetailing the two approaches sounds quite acceptable as well as plausible. Without wasting the space too much I will summarize the implications the next overview of the lecture foregrounds. The next summary essentially warns the prospective investors in the next generation technology against the danger of being "robbed" by their targeted customers. As is well known, there are few major enterprises that are actually making money through online business as of 1999. Even that well-established online book retailer amazon.com has not been able to come even financially despite the large volume of transactions they conduct every day. Although there may be complicated reasons why that is the case, those who are venturing into the new territory or considering to expand their already existing pilot venture may as well heed the words of cautious advice from the experts by attending the lecture announced here. But what comes out of the summary if you read and listen to it carefully is the importance of considering all the possible perspectives on one subject before arriving at any conclusions, if that is absolutely required at all. As the ambivalent, or more accurately bivalent, views testify, there is no absolute view on any subject. The surfers are strongly encouraged to sift through the chaffs of half-baked ideas, as it were, and come up with the best practical approach possible. Although the views presented at the present site may present an impression that could be construed as one and only view, the sheer evidence of multiple and contradictory observations here presented is enough to urge consumers of information to take the online infomercials with a grain of salt. I may sound completely off the mark, but what I would like to emphasize is the importance of digestive consumption of data posted online. Nothing is as it seems to be, if you want to go extreme. All the consequences of adopting any ideas delivered online and acting on them pertain to you. You are, in other words, the sole depository of responsibilities that arise from following upon the information generated in cyberspace. This is what the list of lecture summaries demonstrates to the surfers. But as I repeatedly pointed out, the message is regularly lost on them as the surfers hurry on from one site to another without giving much thought to the implications of swallowing infomercials

that unbeknownst to them and more often than not infect them.

I seem to have drawn different lessons than what I had presumed to draw initially. But that is part of the strategy I have surreptitiously using. What is most important to learn from the whole phenomenon of the online site explosion is the need to cull the kind of information rather than getting carried away by the sheer volume of it. After all, the volume is increasing exponentially by the day or hour and most of the data delivered through the Internet is not fixable in the traditional sense. They are ephemeral by the conventional standard, rather. Drawing the conclusion which I had done just above I am sure will prove to be one of the most precious lessons you will encounter online. Be selective and on guard as you gather and cull the seemingly valuable data. Who knows but most of them will turn out more chaff than kernels? With this warning in mine let us go on to the next site in search of more elucidating information.

I chanced upon a site hosted by an ex-technical university student in the Netherlands (http://huizen.dds.nl/~inki/). The site is unique for its simplicity. It for that matter clearly explains the uses and purposes to which the Internet has been employed. Although the data incorporated to support her argument tend to be dated, the essential point about the multi-faceted nature of the cyber-communication is well taken. Ingrid Ebbelink, the author, starts with a rather cliched summary of the computer-mediated communications. Although the information contained in the initial summary of the computer mediated communication sounds rather trite, the author's comment on the synchronous and asynchronous exchanges of information sounds rather insightful and curiously refreshing. Out of the "systems for computer-mediated communication," which include needless to say E-mail, WWW, Newsgroups, computer conferencing, audio conferencing, video conferencing, voice mail systems, IRC, and Mud, I noticed several system that sounded either unfamiliar or interesting. But more than my curiosity, what intrigued me most was the potential each system held for distance communication and learning. Then with that agenda in purview I attempt to parse my comment into the overall subject of the Internet possibilities. First of all, what are some of the major consequences of the chat rooms or newsgroups that seem to be sprouting each day? Are they going to influence the way global opinions sway the world politics, or at least the flow of ideas that are current in any particular field a particular chat group is engaged in? Ingrid cites that as of 1995 there were more than 10,000 discussions groups dedicated to multifarious subjects. If the number is so indefinitely large at that point of time, then who knows the number has multiplied tremendously during the intervening years? But what grips my attention is how

serious are the participants in each discussion that is conducted online? Since they are not palpably responsible for the consequences that result from the message they post onsite they may be tempted to put in something they do not take so much time to ponder and cogitate. How about the process itself? Could it become really truly democratic in which everyone who has something useful to contribute can post ideas when they see fit and timely? Does not the bandwidth limitations come in between to hamper the free exchange of ideas? If each news group attracts as many people as it is made out to attract then posting ideas becomes a battle of a sort in itself to make one's presence established. Because timeliness seems to decide who gets to be heard, or read, by the maximum number of people concerned with the subject, and not the intrinsic value of the message, then there is always an entropic tendency for the site to become unruly and chaotic. As the natural law dictates then such environment easily deteriorates and becomes extinct. If that is the cycle most chat rooms go through, then formation of a unified ideology cannot establish through the exchange of ideas online. No amount of brainstorming through the Internet would result in anything tangible that could change the way people conduct real-life business, or for that matter, simple daily lives.

How about the implications of other conferencing modi noted by the author at the site? Needless to say, whatever is preceded by the term computer such as computer conferencing, (computer) audio conferencing, (computer) video conferencing etc. aim to facilitate the way the two parties or more on different ends of the Internet interact with each other. Preferably the interactions take place real-time and without temporal hiatuses in between. Ingrid suggests that real-time communications were becoming possible as of the time the sources of each of the computer mediated conferencing methods were published. (Belatedly, the books our author refers to were mostly written in the period between 1995-1996). In computer time, the intervening years brought about cataclysmic transformations to the industry. But the question arises in the attentive reader's mind if the conferences cited as possible using the computers had really become as widespread as implied and predicted by these pioneering authors half a decade ago. Seeing that some of the breakthroughs reported daily online concerning the means to chat with the parties located at the other end are so sensational and newsworthy at all indicates that the predictions have not materialized quite as fully as those pioneers anticipated. It is still rare to see average people engaged in real-time chat online. We are more likely rather to see people using email and communicating over a long distance by that now primitive yet time-honored means. If instantaneous vocal communications turned out quite as ubiquitous as those pioneers had anticipated, I would like to ask, why is such a scene so common? Well, for one thing, the reality is

too limited for the Internet.　Since it has to use the narrow bandwidth to transfer and receive information and data left barely open by other means of communication, the Internet is inherently a limited highway for a large volume transfer of data.　The technology as of today has not fully addressed that very physical limitation.　How the predictions made in the mid-nineties will be fulfilled is something no one can tell at this point.　Of course, large-scale conferences have been taking advantage of all the modi mentioned by Ingrid.　Look at all the gatherings sponsored by computer companies that sport a big screen and live simultaneous animated clips to go with the lecture. Those have been quite successful in incorporating all the interactive functions the technology here referred to enables.　The lecturer, usually drawing all the attention not only of the audience but also people outside the conference hall, can enhance his delivery and make his points extra clear and effective by connecting himself as well as the live audience with the outside world via the Internet.　The horizon of influence expands exponentially as the audience becomes merely a part of the massive global audience.　Such instances are not hard to find indeed.　I do not deny that.　But what I observed above as to the state of live, real-time communication via the Internet is meant to reflect the usage of computers in daily setup, in which average individuals exchange information through the narrow bandwidth allocated for the Internet.　Is it indeed practical to transmit information and expect to receive and interact with the other parties on the spot and come up with constructive and fruitful outcomes? Unfortunately, if anyone were to enter into such an activity, he would be most likely tormented with endless delays and technical glitches.　He would be easily forgiven for thinking he might as well give up the enterprise and the sooner the better.　It is simply that modern technology has not yet reached that point yet where one could proudly declare that computers have superceded other means of communication.

　　Besides the ones I have already cited, Ingrid lists a few more modi to communicate with people in the distant lands.　Some of them sound familiar but other not so common.　Mud/Moo seems to fall in the latter category.　Ingrid summarizes it as "a synchronous system in which users can interact n real time by typing text."　That does not seem to distinguish it from other means of electronic communication.　Email does exactly that and other modes of conferencing she referred to similarly establish the two way exchange of information.　Then what is the one and only characteristic that sets this apart from the others?　Ingrid follows the preceding summary with the following: "It is virtually reality because it describes (in text) objects like rooms or buildings　and　users　that　are　in　the　same　place　that　you　are (wysiwyg://37/http://huizen.dds.n./~inki/)."　The author sounds rather cryptic here.

The reader is well advised to read into the summary before making any sense of what it implies. Is Mud/Moo something that allows the communicants to exchange information through a specialized mode other than the conventional text-based repartees? Or is it something that simply makes use of the textual communication and achieves more than the sum of it? Rather than wasting time on guessing the exact meaning of the author's cryptic summary, let us finish off what we have started. Ingrid adds, "You are a character in this environment that can take actions by typing commands like walk, whisper, kick etc." So, is it a means of communication through the intermediary of animated sequences that in their turn have to be manipulated by strings of command? Does Ingrid indicate a mode of communication that is essentially apart from the kind that heavily relies on text like email? If that is the case, then, what is the purpose to which such a mode of transferring data can be utilized. If Mud/Moo is inherently animation based, then how can it overcome the bandwidth issue and produce a satisfactory result for the two parties concerned? Frankly, Ingrid's explanation engenders more questions than it answers them. My unfamiliarity with the mode of electronic communication named Mud/Moo by Ingrid may mean either that Mud/Moo did not prove so successful or it remains restricted in its applicability to this date. I of course may be just blatantly ignorant of this particular modus of compunction. But unfortunately, Ingrid does not make Mud/Moo as clear as the readers want when she appends her cryptic summary that you become "a character this environment that can take actions by typing commands like walk, whisper, kick etc." I understand she did not have enough time to go into details about the mode in question but she could at least have expanded a little more so that readers who are completely unfamiliar with Mud/Moo could have at least an inkling of what it was like. But the other side of the coin would be that she assumed the level of knowledge about this modus of electronic communication that was shared by common surfers. If her assumption is based on her extensive work online and foray into cyber world, then I might have to concede my ignorance about the development that has been taking place in this filed.

Instead of wasting precious space and repeating the same apology endlessly, le us go on to the next modus listed on the site. Ingrid cites Whiteboard environments as a bi-directional bulletin board that can handle both graphics and textual messages. It is a kind of conference modus that is well represented by Netscape Communicator and Microsoft Internet Explorer. As the two parties are connected online (and real-time), the parties on both ends exchange messages as well as drawings. Obviously the strength and use of the whiteboards come when the text based messages alone prove

deficient.　As anyone who have communicated online may well know, messages which are solely based on text often not only mislead others but also offend them.　That is when drawings, even of a simple kind, come handy.　If one desires to go beyond the ordinary, that is perfunctory, exchanges of information on the Internet Whiteboard here referred to may come quite useful.　But who would have time enough to expend on drawing pictures is another matter.　Perhaps not many.　Those who are more likely to utilize the drawing board would be those who are curious about expanding the horizons of communication.　Particularly the aspect of language those who specialize in linguistics used to call the phatic side of speech.　That is, the part conventional text-dominated linguistic operation cannot completely dominate.　But whether the whiteboard can actually insert itself into that linguistic interstice is not quite certain. In order for someone to capture the subtle nuances in graphic images, he has to be quite advanced in the skill.　Lacking that expertise, he may on the contrary exacerbate the communication that had started off as a comprehensible, albeit lackadaisical, attempt at establishing a bi-directional informational bridge.　Whichever may be the case, Whiteboard as an option to communicate with others is preferable to having none at all. If I have not found any concrete, practical use for it, someone will.　Or for that matter, many people may already have.

　　　So, there are essentially text, graphics, images, audio and video —mediated dsitributional methods over the distance.　Considering the diversity I just mentioned and mentioned by Ingrid, it is not too much to say that modern technology has come a long way to providing more choices to prospective communicants, who intend to reach out a maximum number of people both simultaneously and over a period. Interestingly enough, Ingrid attempts to minutely define each mode before proceeding to grasp their synchronous and asynchronous nature.　Although defining text, graphics, images, audio and video in the context given on the site may sound a little trite, seeing that they have been already assumed in daily conversations on digital operations, the maneuver taken here may have been necessary before expanding her topic to the real-time responses each mode elicits from the communicants engaged in online distribution and gathering of information.　In fact Ingrid shifts her focus to the educational consequences digital media have on learners.　Injecting the concepts of synchronous and asynchronous modi into the learning environment, she considers the merits each has to maximize the memory intake of learners connected to the Internet.　First she defines the characteristics of synchronous learning.　Grasping it as transitory flow of ever changing information, she emphasizes the need for the students to go along with the flow and respond and react appropriately to digest the information on the spot.　In

her words, in "synchronous communication the student is heavily dependent on understanding the presentation and discussions as they happen" (wysiwyg://37/http://huizen.dds.nl/inki/). Therefore, this kind of medium is suited for instantaneous learning. As the information flows, the learner who is staring at the monitor or listening to the audio stream barely has time to ponder and carefully consider cons and pros on the issue at hand. Rather he needs to quickly grasp and respond to the given data and situation. In that sense, the synchronous environment requires spontaneity more than anything else. Considering that creative seeds arise in this kind of extemporary milieu, it can be said that students in such circumstances are favorably situated to fully release their creative energy. But synchronous flow of information could leave the learners puzzled, as it may not go along with the mental grasp the learners are used to. That is, the synchronicity here referred to may not give enough time for learners to digest and pick up appropriate gist and respond properly. For that kind of exercises what Ingrid terms asynchronous media may be better suited. Asynchronicity not only provides students ample time to ponder on the subjects in question but also digest and come up with ideas based on the raw material initially presented. Since careful deliberation goes into this kind of interaction, asynchronous mode may result in better-organized ideas in the long run. But that is not to say synchronous mode is inferior to the latter. It is merely that the two modes have merits of their own. One can enhance the skills to spontaneously help form ideas on moment's notice and the other inclines one to form a habit to consider deep and thorough before reaching a conclusion based on the information initially given online. The two in a sense complement each other rather than excluding each other. Therefore the key to successful compunction via Internet is to employ the two modes effectively. Since some media could be used both synchronously and asynchronously the ultimate arbitrator of the media falls on the person who are engaged in the actual communication. It is up to the students, or for that matter anyone intent on absorbing and transforming data to their own end, to choose the modes to interact with the raw materials and parties residing in cyberspace. It is only then possible that optimum results can be achieved.

The issue of synchronicity and asynchronicity is not raised just merely to enumerate the possibilities using the Internet. But rather the author of the site is more interested in the scope of interactions students can attain by taking advantage of the variegated media through the digital channel. That is why she brings out the question of the optimum learning environment next. First of all, she reminds the audience that her objective is to overcome, or rather take advantage of the distance that exists between the students or even students and providers of information.

Overcoming the distance has not been possible before the advent of the computers and the networking system now for a long while being termed as the Internet. That is, strictly speaking. It is true that other media had existed that helped learners to get access to the database they needed to accumulate the knowledge they wanted. But such modes of access were not exactly interactive and the use of those data depended entirely on the initiatives of the users who had very special knowledge of what to make of those data in the first place. That is, only those who already had an advanced knowledge of the data in question beforehand could mold and utilize them to get to the next stage of research. The situation had changed all of a sudden when the Internet became securely entrenched and became a reliable channel to distribute and receive all kinds of textual, graphic and audio data. That is only then when the distance as it had been defined presented itself as something not totally undesirable, not a sheer obstacle those who had been engaged in interactions of some sort over the geographical hiatus had to simply endure, but something susceptible to desirable modulations. For one thing students can not only put themselves in the same, or more strictly speaking similar, environment to the conventional leaning milieu. If they so choose, they can share their ideas and responses with others online. But unlike the conventional environment they can distribute their ideas simultaneously in a visible form. That is a definite advantage over the conventional method. On the negative side, students of course cannot have the physical presence of other students. That means they may have to forego the kind of pressure the visible presence of other students could produce. But even the physical presence of others may need to be redefined in the digitized leaning environment. As students interact with others and initiate some actions, they may indeed feel the presence of others all the more vividly than in a conventional milieu. In a nutshell, advantages and disadvantages of the two environments are not so clear-cut and easy to pinpoint. They in fact become a concept that needs to be reconsidered when they are introduced to the cyber space. But the complementality of each environment is hard to deny. That is why the author of the present site deliberately blurs the border between the two learning environments when Ingrid specifically points out that in digitized environment "the students can ask questions either to other students or the teacher, they can answer questions from students or teachers, they can work on assignments alone or with other students and they can discuss certain subjects with other students or the teacher." Which in other words is no different than the students-teacher reactions in conventional learning environment.

　　Despite the blurring of the border between the two learning environments, however, the author has to concede that the digitized modus cannot offer everything for

all users. She is specific on this point. According to her, CMC (computer mediated communication) "is not a technology that suits all types of learning, courses or learners." She emphasizes the status of the digitized media as an auxiliary tool that enables certain activities. But by itself it does not becomes a creative means to achieve the goal learners are working toward. Ingrid notes that CMC "is usually best used in conjunction with other technologies, particularly when there is a need for information transmission as well as discussion." By other technologies she is referring to the other various choices the Internet and other technologies allow. But by taking my cue form her comment it is not difficult to surmise that the digitized environment in its isolated entirety may not prove as a successful milieu to accomplish the learning goal users of computers set initially. The important agenda here may be that students must define the role computers play in the process of achieving the goal, be it gathering data, merely communicating with others, or working cooperatively through the net. Once the proper function of the computer as a device is grasped, then the next step would be to link them to other conventional modes by which students work toward the set goal. In other words, the need for proper integration of various modes of leaning becomes essential. But another issue arises when they try to place each mode in their proper role. No matter how skilful a logistical plan they hatch, they cannot succeed in their project unless they have an adequate knowledge of the computer, especially its function as a terminus on the Internet. When a learner work out a plan to gather information and process it and communicate with others, he must be ready to take advantage of all the features that are available through the Network. But unless he has already mastered the programs that work online or even locally on his computer no amount of good logistical planning could compensate for that deficiency. So, in the end good mastery of computers takes precedence over the clever integration of the digitized with the conventional mode of learning. In the end it may be safe to say that despite the blurring of the border between the two environments, emphasis must be placed on the former, that is digitized environment, if a student wants to achieve the optimum result in the newly developing learning milieu.

In this context, the next section on the advantages and disadvantages of "CMC Systems" seems an appropriate recurrence to deepen the understandings of how to once again take advantage of the digitized environment. Ingrid enumerates pros and cons of each modus already introduced above. First, she gives two angles on Email. Since email can both function as synchronously and asynchronously, it could be a powerful tool to reach out the maximum number of people. And since it is a method that encourages a response of some kind email could be an effective alternative to both the

telephone and snail mail.　But as Ingrid cites, it does not exactly force the other party to respond to the mail initiated at some end.　That is because, as she quotes Mason, it does not palpably pressure the other party to respond in the same manner as the initiator of the mail.　When the psychical presence of the initiators of the mail is not felt, for instance as in a telephone conversation, the parties involved cannot truly exude the kind of influence some other conventional means of communications do.　That cannot be helped.　But to substitute that "defect" email can create an atmosphere in which every participant in a discussion can have his or her own say.　That is, because the physical presence does not amount to so much as in other kind of setup, the digitized environment flattens out the inequality that may exists between the parties.　In turn that kind of attitude tends to induce the democratic platform on which all the participants can truly share their ideas and express their opinions.　Any intimidation and oftentimes inhibitions one may feel in a conventional setup could become minimized as each can meet on a equal turf that is the one cyber world that exists somewhere in the virtual space encircled by computer terminals users are sitting at at a given moment.　Of course, since email allows users to asynchronously respond to others, the space just mentioned does not have to be circumscribed by the temporal window that user simultaneously forms.　It can be completely temporal and aspatial. How fitting it is that the virtual space hypostatized by such amorphous concepts can exist on a level where all the reality-bound limitations are at least temporarily lifted.

　　　　Ingrid notes similar features under the item specified as WWW.　By WWW she of course means the World Wide Web.　More specifically the sites that are integrated into the network of homepages.　As in the case of the former, the advantages of this particular means to communicate with others it hat this environment tends to equalize the terrain on which each participant meet vicariously through the Internet. Since the actual physical presence is not felt by each communicant in this environment, they are not compelled to respond in a manner that is usually prescribed in other conventional milieu.　That entails an air that is much more democratic and spontaneous.　But on the other side of the coin is that since the pressure, which exists in the other environment does not exist, the communicants do not necessarily respond in the expected manner.　Even worse, they do not often respond at all.　Also there is a danger of the given discussion going haywire and the topic initially brought about being dissipated in a torrent of private talks.　When that happens, then the objective that may have exited at the beginning can forever remain elusive.　Whatever result the discussion achieves may be far different than the organizers of the discussion had ever dreamed of.　In that sense, as in the other media such as email, WWW can be a

centrifugal modus to come to a consensus. That is it could completely defeat the purpose for which each participant starts his discussion with. but its potential pitfall does not disqualify it as a means to contact and talk on certain topics online. Since it tends to create a democratic atmosphere, a even random assortment of private talks could contribute to a new level of consensus, on which all the participants later on starts a new ideational building blocks and eventually reach a higher level of agreement and concepts even. As Ingrid cited as one of the bivalent characteristics of the present modus, WWW can be both synchronous and asynchronous. That means that all the participants not only contribute their ideas on the spot but also, if they are inclined to wait and ponder on the topic a longer, respond more deliberately than the initiators of the subject had imagined. In that sense, the virtual forum delineated by the terminals each discussant is sitting at, could be always infused with multi-layered and multivalent ideas, which could also generate surprising new results. Both email and www are then truly a new means to generate fluent concepts first online and then being translated into reality, in day-to-day world.

Compared to email and www, the other means listed by Ingrid are almost exclusively synchronous. In that sense they are more towards generating the on-the-spot responses and reactions. Since synchronicity is not necessarily conducive to deep and deliberate cogitation, the modes such as Computer conferencing, audio conferencing, Video conferencing etc. are limited in their functionality and proclivity. But that limitation is not to be taken as a complete defect of those means in every single aspect of cyber communication. They have their own strengths. Since, for instance, video conferencing allows the communicants to view each other while they are online, it promises to supplement the nuances and other phatic aspects of language that can easily slip away from email and www. Buttressed by that virtual presence each feels about the other, the discussion held through these means can achieve a result that may be more substantial than the one arrived at by asynchronous means. However, if these synchronous modes enable the on-the-spot responses, what distinguishes them from other conventional means of synchronous communication? What if the discussants conducted the audio conferencing over the telephone line instead of via the Internet? Would that be more productive or not? Besides telephone conversations rarely encounter the bandwidth problems the computer networks are constantly plagued with. then frankly, what are the distinguishing features between the two? At this stage, it is hard to tell. Even Ingrid's enumeration of the strengths and weaknesses of each modus does not completely succeed in clearly delineating the separating line. Except that the Internet is the frontier and the expected channel through which the door to the

future swings wide open when the time ripens. But until that time comes the demarcation will remain as murky and undefined as the next phase of computer development.

The technological aspect aside, what interests me most about the site Ingrid maintains is the final comments she adds before rounding up her short summary on the CMC learning environment. For one thing she brings out the issue of the human factors who actually operate the system of networks that may or may not be amiable at a given moment. Since no amount of technological development is going to fully compensate for the volitional operations and commands of the users at the network terminals, the points she makes cannot be ignored. Or rather they may outweigh the importance of the technological issues she already has raised. Ingrid asks if writing skill is essential to conduct a smooth transfer of information. That is a subject which is so fundamental that I personally have overlooked up until this moment. This sudden intercalation of a trite remark suddenly jerks me out of my futuristic reverie, if that is the term which describes my contemplation upon the future digitized learning environment, and thrusts me brutally back to the basics of CMC. What is after all the digitized environment expected to accomplish on the learning front? Is it going to bring in completely new factors that will smoothly introduce the students into a learning environment that is so awash with precious information that no average students would ever regret they had ever launched into the brave new world where the plethora of that valuable information is located? Or are there other important considerations that need to be made before even taking one step toward digitizing the learning environment? The comment I just cited is like a crack of thunder that forces me to ever reconsider the entire subject I have been dealing with. Is digitizing the learning environment to unduly disadvantage those who are not competent in written communications skills? But what if a student is competent in writing yet nevertheless disinclined to the digitized environment? As Ingrid says, "New technologies can motivate certain people, but can also provoke strong negative reactions from others (http://huizen.dds.nl/)." This brings out another possibly difficult issue. Granted that the computer mediated networking environment is a future alternative to the traditional learning environment. But that fact does not necessarily exclude the conventional as well as time-honored learning and data gathering modes. Neither do the development of the new technologies automatically make the conventional modes completely obsolete. Then if al the very basic factual factors into the total picture, recommending the digitized environment to the expulsion of the other conventional means seems a little too drastic. The fact that there are people who are inherently

averse to technologies exists, as Ingrid suggests.　By assigning them to an obsolete class may be taking things too far.　If the digitized environment encourages a democratic learning milieu then we must accept the fact and reconcile ourselves with those who are determined to take the conventional course.

　　That is enough of my observations on Ingrid's site.　Now let us move onto another site.　This time I chanced upon an article on the relationship between television and the Internet.　The title more specifically is named "Life after Television." Just as I anyone who had come across on the article may be stuck by the idea that how far the computers had come.　But, they wonder, are computers really ready to supercede televisions?　Hoping that the essay will answer that and many other questions that had been generated, I proceed with the article.　The essay in question is written by George Gilder and posted at http://www.seas.upenn.edu/~gaj1.tvgg.html. Judging from the style it is meant to be a kind of dissertation on the ever-prominent role computers are playing recently.　But one thing nevertheless strikes me quite sensational.　Does the author seriously mean that the computers are just about to overtake other mediums of entertainment and distributing information?　But again I am getting ahead of my essay and committing the sin of tautology.　Gilder starts his essay semi-rhetorically, leaving an ample room for doubt.

> Will life after television mean the dissolution of the American hearth into a cornucopia of 900-number videos, full-color cold calls from sultry sisters at Lehman Brothers and real-crime performances in multimedia by superstar serial killers? Or will the new technologies uplift the culture and empower the people, as Life After Television predicted?

That is to say, the one-directional stream of information and entertainment that is current today will be at least partially shifted and the consumers have plenty of latitudes to choose the kind of materials they want to consume.　In itself is a revolutionary concept.　After all the bi-directional exchange of calls and services did not take place even with the rapid development in the technological sector until only recently.　But back to the rhetorical quiescent the author throws at the readers.　Is the revolutionary renovation in communications technology going to dramatically transform the way information is delivered so that the old ways of unidirectional receiving information, a situation in which the audiences sit in comfortable chairs and simply take in all that flickers on the screen for instance, is completely replaced by the on-demand consumption of entertainment materials?　Or is the rhetorical question to be simply taken as something that is not at all likely to happen in a long time to come? But in case the situation adumbrated by Gilder even partially to arise, then the

lifestyles as we know today at the very end of the millenium will be radically transformed.　That every reader has to grant. After all nothing satisfies the consumer more than the kind of pleasure that is exactly zeroed in on the exact taste of that particular individual.　This is by the by but it is not difficult to find people who are satiated by the contemporary rush of uniformly produced entertainment contents such as aired on TV.　If that satiety is mitigated by the consumer-selected contents, then the on-demand concept that is enabled by the proliferation of the new technology is ideal. Well, I might have swerved from the context of the essay a little too much.　It is time to trace the mental flow of Gilder and proceed with the online dissertation.

　　　The rhetorical question aside, the author does see the heterogeneity that the computer technology is arrogating to itself.　In fact, Gilder points out, there are already multi-channel satellite TV services, on-demand movie services though the cable network and other media contents that are flying criss-cross invisibly through the air.

A Hughes Aircraft Corp. rocket's red glare in French Guiana, bombs bursting in air on 500 channels, give proof through the night that something is going on out there: 150 choices of DirecTv broadcast satellite images; up to one billion hertz of cable TV bandwidth; star-spangled malls of infomercials; CD radio with fidelity beyond the ken of the human ear; high-resolution wrestlemania; 3,000 films on-demand; interactive personals and impulse pay-per-view playmates; Yellow Pages blooming into home-shopping bonanzas; and videogames galore on compact discs and cartridges.　All zooming through the air, blasting through cable and pulsing through fiber at the speed of light.　(http://www.seas.upenn.edu/~gaj1/tvgg.html)

The choice is already there.　One does not have to stand in a line to get what he wants, as long as that something s the kind of material that can be transmitted through the network.　But what the author now is interested in is the way the computer technology dovetail with those multimedia contents that are already available to the public.　He asks, "In such a phantasmagoria, what could be missing?"　The answer obviously is the subtle and not so subtle roles computers are playing toward the end of the second millenium.　He sees that computer technology is virtually invading homes and marketplaces on every conceivable level.　So, the most pressing issue at the moment, the author reiterates, is that how the developmental leaps and bounds with which computers are advancing into the next millenium will affect our daily lives.　What are the implicit and explicit effects of the technology?　The future, which the author defines as a "telefuture," will arrive faster than anyone can think.　In order to prevision the social and economic consequences of the technology and prepare for any surprising turn of events, the author now considers the factors that are presumed to influence the

course of the computer development.

The observation that strikes me most as a prophetic comment on the future of the computer technology is that according to Gilder it is the symbiotic relationship between the consumers of the technology and the producers and providers of the computer products. That is to say, the two roles are not exactly antithetical in nature as the former stimulates and generates a momentum to go forward and onto another level of the technological development when consumers digest the digitized information and create new demand based on it. As Gilder points out, nothing is static in the computer environment. That is what propels the whole wave of the new technology culture. Gilder summarizes the reciprocal relationship I mentioned above as "positive feedback loops," in which the customers of the PC culture are also its creators and protagonists" (http://www.seas.upenn.edu/gaj1/tvgg.html). In the dynamic context of the PC culture then his observation can be very connotatively interpreted. That is where I find the key to foreseeing the future of the computer technology. The explosive growth the computer industry has achieved in the late twentieth century is not simply a phenomenon that fortuitously rose out of the stagnant culture, which happened to have found itself in doldrums. But rather the technological development occurred because the consumers unbeknownst to themselves (and possibly even without the foresight of many of the industry leaders) put themselves in the position of expanding the industry itself. That may sound a little too good for the industry as a whole. But that has what really happened, or so Gilder perceives the entire evolution of the PC culture. Considering the potential and the ineffable charm computers and the networks on which they are placed hold for PC users, Gilder's observation does not ring so hollow as it might if his comment were not at all supported by the daily phenomenon we observe in the world. Indeed computers have come to occupy so much of our conscious space. It is high time that we along with Gilder started delving into the true nature of the relationships between us, that is the consumers, and the computers and their related environment including the industry that produces hardware and software. But that issue will be dealt with in another essay.

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インターネットとその応用について

インターネットはいまや情報交換に欠かせない手段の一つなってきている。単に、テキスト重視の情報交換をはじめとしてマルティメディアをふんだんに使用したエンターテインメント的コンテンツのデリバリなどその用途は多岐にわたっている。情報技術が進歩すればするほどその多様性は増すばかりであることはいうまでもない。そこで、この論文ではこのような情報の伝達、保存(storage)手段であるインターネットが今日どのように利用されているかということを調べ、インターネットの存在がいかにわれわれの conscious horizon に、直接的にせよ間接的にせよ、当然のものとして入り込んできているかということを論じてみた。