LASER LIGHT IN VIDEO SPACE   By Willard Van De Bogart

This article attempts to bring insight into the nature of electromagnetic fields which exist within the universe. Particular attention will be made to show the associations of electromagnetic fields within the brain and with laser beams, video tape, and a brief interfacing of liquid crystals.

Video reality, in video space, is the ability to create a media environment which will enable a person to translate the interruption of space and time of physical reality, in universe space.

The loop that is presently being formed around the planet earth must be intersected by an information system which travels at the present universal constant of light energy. With laser technology it is now possible for man to control photons by putting them in a collimated beam. This photon control system of lasers can be interjected into other objects in the 3-dimensional world to see light defraction and interference patterns. These patterns can then be joined or "transduced" into video space. This will then allow a person to be the observer of the experiences of one's own creations. This is because the neuronal delay system will be forestalled temporarily while we adjust to comprehending patterns at the speed of light.

Keeping in mind all of the brain's inherent delay systems it is important to set up immediately new electromagnetic coding systems and information systems which will be able to recall and retrieve at a rate in a system commensurate with the function of all the electromagnetic fields within the universe. Therefore, by itself video space is of an entropic nature and mind is of an anti-entropic nature. It is important that light information bits be channeled into a man-machine language for instant retrieval.

Magnetic fields effect liquid crystals in the same way they effect the visual cortex neurons. The amplitude variation of the visual cortex neurons depends on many input frequency modulations as a result of stimulation and activation of all the nerve endings. The eye with its ganglion nerve endings only requires less than one percent activation to effect retained coding that exists in the DNA/RNA system. When the visual cortex neurons are activated they transmit light information bits to the neuronal coding system within the brain. This process occurs so fast the visual coding takes place before conscious recognition of external objects are ever seen. This delay system is identical to video delay systems now in operation. As a result of this delay system occuring with neuronal activity the external world can only be interpreted as a result of activated electromagnetic fields in the brain. The brain's delay system occurs so fast that it triggers our responses before we actually see. This has been referred to as the brain's second sight unit. When we do see we are only seeing externality as a result of activated neuronal activity by photons. No longer does man see his world as a result of the medium of nature, but instead only by constant activation of the medium of our technologically induced electromagnetic systems.

Information is now being received, and stored by a man-machine interface system. The cybernetic man is actually a walking video computer system. The brain's delay system enables one to enjoy intellectual activity within universal electromagnetic fields. The electromagnetic fields also contain free electrons. These free electrons potentially enable another evolutionary bonding to take place for man. Now man can bring together, as Robert Mallary refers to it, the "Transduciveness" of one medium into another. Recent EEG testing has validated McLuhan's philosophy that the medium is in fact the message. It is now possible to interpret reality as electromagnetic force fields. Buckminster Fuller states that when two elements are bonded to form a new element the combination is stronger than the separate elements, i.e. . . . synergy.

Solid state electronics enabled the development of the transistor. When the transistor's internal structure is analysed we find it to be PNP/NPN. The transistor, therefore, is also a manifestation of our human physiological system of coding of the DNA/RNA system. Our brain functioning is a universal constant as the transistor has universal electromagnetic fields. Therefore, in our striyings to understand our extensions we must now realize that the video technology will soon be the loop of communication on the videosphere. Gene Youngblood, devotee of video extensions on earth, might also look deeply into video space which is surrounding the video sphere. Fuller recognizes that the eyes are electromagnetic senders as well as receivers. Our sending of electromagnetic fields is a result of our neuronal activity constantly being effected by photon emission systems. McLuhan also feels that there is a "big kinetic component which is non-visual." Nam June Paik feels that video systems should "imitate the function of eyes."

Video space, however, is universal space since all space is composed of electromagnetic spectrums, and since the TV tube is an electromagnetic system or photon emission system we have to recognize that is a regenerative mechanism which we build our intellect on. We are in fact transistors. The fact that since PNP and NPN are the source system for photon emission systems one can clearly see that the universal electromagnetic spectrum is now creating video space which is a brain delay system manifested in the electronic extended state.

The above being the case all thought functions by man must, in order for him to transcend his extensions and his ability to create more anti-environments in which to understand more environments in which we live, be done in a 4th dimensional mental framework. Work must now be done in linguistics to transfer random thought patterns into neuronal activity of light information bits which need a minimal amount of activation to create holographic thought systems within the DNA/RNA coding system which is similar to electromagnetic field activation of liquid crystals. The ideal state of course will be to function on one neuron which we can allot for free choice or creative intellect on our own volition. All other neuronal activity must be coded into a feedback system which functions by the law of conservation of energy When we do this we will then be able to penetrate into the smallest of sub-atomic particles constantly using our free neuron which is the electron extension of the free electron. When we reach this state we will then be ready for the next evolutionary bonding. Sub-atomic interactions is the secret to particles which go faster than light. As Gerald Feinberg states "the existence of these particles is not inconsistent with the theory of relativity."

Editor's Note

PPN/NPN coding refers to the negative and positive properties of the materials used in the construction of the trilamelar structure of transistors.

The DNA/RNA (Deoxyribonucleic Acid and Ribonucleic Acid) System has a coding based on the four letter language of nucleotides and the twenty letter amino acid language (proteins). DNA is the stuff of genes which acts as the primary information source directing the production of proteins via a code of three necleotides or submolecules within the DNA molecule. A sequential transference of information from DNA to a series of RNA molecules and finally the placing of amino acids (the building blocks of proteins) in a growing polypeptide chain to form a protein.

The DNA/RNA system is a web of interacting energy and molecule exchanges which require proteins to affect the information carried by DNA. Biological systems have no actual primary molecules. All molecules involved in the web of interactions are important for the web to continue as each step must take place. Of course, there are many routes to keep the web flowing but once the flow occurs each step has become as important as the last.

Video space is a space which is man's extended neuronal activity. Man must now realize that the communication he is surrounding the planet with is demanding that it be penetrated by new information. It is now necessary to be able to visualize wave formations in photon emission systems that are induced creatively. Frequency variations are interfaced to interrupt video space. Sound and light will take on new dimensions. Brain wave formations if interfaced would also result in patterns which could be regulated by intellectual activation. The next interfacing will be brain wave formations with liquid crystals. It will only then require an optical computer to induce those electronic light information bits which will activate the holographic mental image coding system. It has been shown that information bits or dot patterns is sufficient to discriminate various associative patterns or information in the "real world". Each light information bit pattern will have stored in it all the light interference patterns which will be reconstructed by laser beam transmission to a receiver in a brain wave machine. The images will occur in the brain the same as on a liquid crystal screen. The next evolution will be thought patterns generated by the optical computer utilizing lasers and video play back systems.

However, since the extensions of video is an extension of man no further developments will take place unless an information system is devised which is beyond the present 3-dimensional system. The video loop is a loop which the electronic extension demands in order for it to function. Man must interject into these video space patterns via light information and via the best utilization and control of electromagnetic particles. This can now be done with laser beam technology. The new realm of the laser is therefore to use its collimated beams of light for creative purposes. The video system must utilize lasers to understand video linguistics within a 4th dimensional state. The mechanism or linguistics we can utilize to observe the 4th dimensional system may be the third eye which has been found to exist in certain life forms. Perhaps the use of 4 video cameras suggested by Nam June Paik is the best beginning. 3-dimensional video is merely the video loop. The oscillations of all electromagnetic fields between lasers and video systems creates an interfacing which is presently the most dynamic system for a man-machine interface. The next system will be lasers communicating information bit patterns to the brain and the brain in turn activating liquid crystal walls. The manual changing of electromagnetic fields to see images induced on liquid crystals is in the near future.

All communication systems now enter a new realm of things that seemingly exist but do not exist. Sounds heard but not heard. Images seen but not seen. Man now has to enter new dimensions of consciousness with his media and the mediums of his media if he is to survive with continual creative intellectual activity on the planet earth. Video space is a space which demands penetration by universal systems. Light is a universal system. The quanta of all energies must now be understood and used if we are to survive as a species with intellect. We are at the dawn of a self generating machine culture which will perpetuate itself at the expense of human extinction. We as a race must realize our potential to understand our electronic communication systems and the space in which they function. The complete understanding of all electromagnetic systems is the only answer to continual creative intellect.

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DIAL ACCESS
INFORMATION RETRIEVAL SYSTEMS

By Van Ftergiotis

By the dialing of a mere three digits, a student listens to the Kennedy-Nixon Debates, an elementary teacher views a biological phenomenon with the class, an English Department Head presents a videotape on micro-teaching techniques during his departmental meeting, a high school Social Studies class views video segments on the urban crisis, an avid physics student listens to present-day scientists discuss the impact of ovonic devices, a junior high student learns how to operate the calculator before him while viewing instructional segments on calculator operation, the newest teacher watch a commercial telecast of an Apollo Mission.

Unusual? In this day and age of media-inundated educational institutions? Not particularly. But what if the media activities just described can happen simultaneously throughout a school system via a single media system?

I'm referring to Dial Access Information Retrieval Systems (DAIRS)—vastly underrated systems of audio and video transmission.

Dial Access affords the educator a flexible media library, one that easily adapts to individualized instruction and modular scheduling, and that at the same time is operationally more economical, effective and efficient in its design than the hundreds of pieces of classroom and library media devices that it would take to even approximate the most minimal playback function of Dial access.

Hence, these systems contain the seeds of a technology that is destined to revolutionize accessibility to audio and video information for all learners wherever and whoever they may be.

The need for the incorporation of modes of communication such as Dial Access in our schools is now not only feasible, but necessary, if we are to perpetuate the "individualized instruction" ethic in an environment with an over-abundance of both information and people.

How does Dial Access work?

When a user dials for a program from a remote location, (carrel or classroom) the switching/transmission complex relays the dialing to the program center, starting the videotape recorder or the audiotape deck that was dialed. When the user is finished with the program or breaks the signal for any number of reasons by switching to OFF, the tape deck in the center rewinds back to the beginning of the tape and awaits the next signal to start. Cues imposed at the beginning and end of program segments instruct the machine as to the length of the program. It is conceivable that all the users of the system could be watching and listening to the same program throughout the network, or to a variety of programs at the same time. Many efforts have been made to date to allow students to have access to the beginning of any program, rather than to dial in while a program is "in progress". But many of these experiments have proven costly and not feasible. However, trends in the present Dial Access market show developments that will greatly reduce the cost of buffer systems to allow their incorporation into the smallest of Retrieval Systems.

The number of audio and/or video program sources depends on the requirements of the particular learning environment as does the number of student positions (carrels) and large group instruction areas that would have large TV monitors and sound systems.

Because these systems can handle numerous segments of audio and video information, many systems are now abandoning the use of program channels and printed program sheets in favor of computer managed systems that can automatically display for users the programs available. Intercom capability between user and control center allows for instant attention to technical problems and program requests.

Utilization

The flexibility and adaptability of Dial Access lends itself to just about every conceivable learning situation—with instant access to one or more segments upon request. Now you don't have to stop that great discussion because the program is going to start at 11 am sharp—*you* decide when the program is to start. If you as a teacher perform best and prefer the lecture method, fine, we'll have the 5 minute segments ready when you want to present the charismatic figures of Martin Luther King, Ghandi, Hitler, and the Beatles. And the elementary student who lags behind in cursive writing, how marvelous that he can work in a carrel with a videotape whenever he chooses, and deliver a complete paper to his teacher when he's finished without having to feel the frustration of not being able to keep up.

Large group, small group, lab groups, individualized study, elementary and secondary levels, all can use Dial Access in a different way—the way in which it will best fit the learning situation.

Software Development

The search for software in a Dial System continues at a pace that is surely unfamiliar to even the most avid AV Director. When you consider a video capacity alone, let's say twenty channels, each can handle from one to roughly twenty (20) programmed segments in a single day . . . 400 video segments . . . and then there are audio channels to consider . . . !

The capacity of the system could easily frighten anyone responsible for software to quickly dub lengthy films, entire LP recordings, 2 hour seminar sessions, and endless slide trays—anything, just to feed the monster *something!* And I regret to say that many systems have done just that. But how can we provide at least a respectable amount of software of both fine quality, and relevance?

The local production of both audio and video materials is of course the ideal, but many facilities are limited in what they can do both in audio and video because of lack of funds and high-level personnel. In addition to local production of materials there are other avenues that can be explored.

To achieve concise, well-defined segments, materials need to be edited, segmented, altered by additional or multiple soundtracks, etc. There is no longer the need for a teacher to show a 60 minute film if what he really needs are two 8 minute segments from that film. 16mm film, 35mm slides, filmstrips, educational and commercial broadcasts, studio productions, recordings all are potential sources for Dial Access banks.*

All users should constantly be tapped for information on the up-dating of materials. Recommendations for purchase, previewing, editing, segmenting, dubbing and discarding of materials can easily be accomplished by students, teachers, in short, any system users. This kind of information is invaluable to those responsible for the accumulation of software and its use.

Today and Tomorrow

Dial Access Systems have recently become even more highly sophisticated in concept and design. Manufacturers have now designed computer-managed systems that have brought Dial Access out of its infancy. A few years ago "expandability" was the key word—being able to expand the number of programs available, expand the number of receiving stations, add video, convert to color, etc. Now "flexibility" has been added accommodating changes of educational philosophy in the system environment, access to the beginning of a program, archival retrieval, student response systems, providing diagnostic information, time-shared student recording, exclusive access and control, and dedicated program access.

The new computer-managed systems permit trunkage, thereby eliminating the need to buy equipment based on 100% usage as educators have been forced to do up until now. (This cost-effective feature will undoubtedly silence certain nervous types who are constantly comparing the cost and effectiveness of single item A-V equipment in carrels to Dial Access equipment.)

Diagnostic information through computer programming now can provide printouts on student usage, program usage, peak periods, total program access computed against program time, etc., that will provide for proper evaluation of the system and all its functions. The computer will also help solve the problems of programming in an ever-growing software system.

New systems for program sources, buffering capabilities, archival storage, etc., have led manufacturers to explore the videodisc, video and audio cartridge and cassette, EVR, and high speed duplication devices. Dial Access will continue to flourish because existing and aforementioned capabilities are becoming inherent design features of these systems.

The future is bright; the technology solid. The content and instructional designers must *absorb* and then *interpret* the technology that is altering the learning environment. Only then can we design systems of software development and utilization that are meaningful to the learner—whoever and wherever he may be.

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*Consult ERIC Newsletter No. 1, Summer, 1968 for current and proposed legislation on copyrights.

As I was putting this together, I thought that it would be a good idea to have a question/answer section in the RS where I could answer questions from readers of RS, users of DAIRS, or those contemplating the use. There always seems to be so many questions from people at various levels of learning, and other type institutions on software, utilization, program development, feasibility, technical advances, etc. that a question corner or some such would provide continuity of information to the readers. It's just a thought. I would be very interested in tackling that sort of thing. And if I felt incapable of answering some of the questions, I could tap people in various fields that could shed some light on answers to questions.

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