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It would be hard for us to imagine what type of consciousness the moving ~~image~~ image history - film - has encountered in its beginnings, if in fact such a need for moving image was predicted, through photography, and expected and widely received. Or if it came total^{as a}ly ~~by~~ ~~4~~ surprise, indeed there must be some written word about that, but I don't have the slightest idea what the milieu was. Compared to what we are encountering nowⁱⁿ which kind of a literary futurism or all sorts of cinematic futurism in fact have all been through a total prescription of imaging. Today we have a demand on moving image. We know what it should be like. I mean people who specialize in imaging have certain ideas how to structure or go towards a particular syntax, a particular structure and of course also ~~see~~ see the particular limitations which the contemporary systems, in spite of glamorization, have produced. So what I would like to say is that today we have a set of demands on ~~an~~ image. For example third dimension. Why we don't have ~~third~~^{three -} dimensional images already. Why do we have to wait until the industries develop such a thing? Since we have in our own mind been there and we somehow have predicted that as a necessity. We have also demands on the computer. Why don't they in fact compute living actors? Because it exists. It has been done in some small amount, plus the third dimension we already can ^{fore-}see, not foresee, we are frustrated and disappointed that we have not encountered al^{ready} ~~as~~ of this type of imaging. So we can apply that of course, this imaging is kind of heavy-handed all the time because we encounter material - actually we have to make the image. In the sense of literature, the concept of futurism has been extremely explored. And whole new societies and galactic concepts have been pioneered and they in fact live in our own consciousness. So that is probably a little different state of imaging or need for imaging that we as group people had at the beginning of moving image through cinema. Now in some ways - let me first make an attempt to define^{what} electronic imaging ^{is} ~~as~~ compared to traditional imaging based on photography. What I call electronic image is of course related to television, but it existed pre-television as a cathode-ray-tube events. ~~the~~ Certain symbols like wave-forms have been displayed on cathode-ray-tubes before the cultural ~~concept~~^{cept} of television as electronic

image came. It was mostly to examine events of time and energy way below the perceptual threshold. And gave the sciences, for example, and also the biologists a certain tool for examination of ^{inner} processes within the matter - physics and also bio matter. Later, like twenties, the concept of electronic imaging has been developed as a cultural necessity. Suddenly people wanted to transmit motion picture. So the film was the basic already structured frame or structure that was to be transmitted. So that the concepts ^{then} came not first of all of the content, the cinematic content in the sense of dynamics ~~or~~ and syntax. It was ^{the} pure possibility. How to construct a frame out of time and energy. So this necessity of constructing a frame which then would become a carrier ^{of} the content in the sense of an image, became the breakthrough or the leading necessity for electronic imaging. And that's how ~~the~~ simple television was born. Now today these concepts are much broader. Especially with the computers we still refer ^{generally} generically to electronic imaging as television because we many times use cathode-ray-tube as ~~a~~ the display. But ~~we~~ generally the problem has become much more centered around the organization of image. About the principle under which in fact images are organized, and on the principle or basic question what image is. How it originates, how it's prepared, as program and eventually retrieved. So the origin of image or imaging has become the most problematical. Industry solves these things very simply. They ~~say~~ say we need to simulate ~~a~~ particular events like a moon landing or any other industrial tasks and then they develop systems around it. Art so to speak, or let's say utility of image in a highly cultural milieu has much more ambiguous demands. We have a certain freedom of decision and we don't have particular structured goals. We don't know in fact how the image should look like and in fact we don't want to know. And we are trying to work in a territory which is not defined. We just have certain tools to image, to make ~~image~~ images. But we don't want to follow existing models. When I say we, again it represents a particular group of interests. Like Hollywood again has a very clear goal: It's called soft imaging, or soft set design in which the demand is to simulate

landscapes, for example, with the textures with the tree structures, from palm tree to apple tree and then imaging. We all as objects have three-dimensionality so that the move towards duplication of ~~reality~~ what we call reality is the very ~~straight~~ straightforward goal. And that's one direction in which electronic imaging has a clear way. Other one, which is mostly based on the tradition of film as a form or personalized ~~art~~ ^{art} form which some way is trans~~iding~~ iding now between the people working in cinema - people like Brakhage, Frampton and Sharits - this seems to be the problematic area in which ~~the~~ image is not as ~~predictable~~ ^{predictable} and is not as defined and in a way should not be, according to people that work in that area be. But what it should be, now the question reminds and then of course we can trace many concepts in that territory. One, some of them are moral which is ~~the~~ to reject existing models and try to find the total definition of the image through the material or through the system in which they are ~~one~~ created. That means the questions of mathematically generated images or textures or ~~signification~~ ^{simplification} of image through certain symbolic meaning contrary to a reality in three-dimensional complete surface identification. So then of course there's a whole different moral context which is the relationship of ~~the~~ ^{an} individual towards the tools. As you know, regularly we think of technology being in the hands of institutions or government or military. The situation has changed tremendously. Suddenly individuals like in this case we, working with image ^{on} ~~is~~ a personal base ^{-is} can even purchase small systems that are as free to us as the pencil or the brush is to the painter or th the writer. It's not ~~that~~ ^{as} simple, indeed. But there are tendencies towards that possibility. And in fact under these happy coincidences of our time we could create, we as a couple, the Vasulkas can in fact create this imaginary environment which is our home in which we have those tools. It became even a reality for us for a ce~~rtain~~ ertain time that we could have this controlled environment of what we call high technology. Again what we call high technology is a whole - I don't want to go further and further - Let's just simplify. Today all the processes of technology can be personalized and can be worked on a conceptual level from a view point of an individual.

Of course the complexity of the product so to speak is in many cases...
 First of all it's what we call complexity, and then what is ^{to} compared
 them to existing models of reality. I mean if we go towards the
 complex photographic image then it's almost a forbidden area to us.
 Because that means the whole of industrial organization of huge systems
 to represent that. But if we want to go into different areas which
 are defined in art, like minimal art - in the past it operated with
 a very small amount of elements. We know that music could be reduced
 into silences, and it became a very powerful form. The sculpture,
 you know the ^{minimal} sculpture of recent years could be simplified to a ^{very} small
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 Of course the institutional approach will always for some people
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 we ^{then} can elaborate what is the position of the individual towards that,
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 Going back to the original problem of modelling the image; I'd like
 to indicate two directions, just to show what I'm talking about.
 In fact I should have ^{had} some slides but there was no time to do them
 so I'll try to feed on your imagination. Ordinarily, or regularly,
 traditionally we work with imaging in the sense of examining the space
 - ~~light~~ light space - in which we usually put what we call a pinhole,
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space - light space through the pin holes of the eyes. So it's the God-made ~~but~~ evolutionary instrument which happened to coincide with this development of camera obscura which then was the basis of photography as you know - before painting photography - and then also cinematic imaging. And of course television as well because television cameras as you know in most cases have the lens ^{with} which they examine the reality in the front of the lens through the same principle. Of course there is certain difference between imaging of photographic or light-sensitive emulsion imaging, but both in electronic - like ~~imaging~~ rescan through electronic system, or coding into a photographic grain, these events are a energy events. They are in an order of quantum changes and then they go through processes of amplification. That applies to photography as well. Because as we know the whole process of change or grouping of silver halides in all photography is a process of amplification. With this product, which we usually confine in a frame, this is maybe what we call the reality. Photography has first suggested this possibility it became overwhelming towards other arts - painting - that this for a certain time, maybe still, represents certain very close understanding of reality. Cinema has in fact terrorized my generation by this insistence on the reality. As a child I grew up through the Second War newsreels. Every day or every week we ~~can~~ get the newsreels from the Russian front in which the Germans ~~who~~ would depict the victories. So it was week by week that we would grow into this understanding of this world through the newsreels and it was totally obvious that that was the reality because my everyday life was uncomparable, totally meaningless ~~next~~ ^{this particular} to ~~that~~ event. And every generation gets caught into this accepting film as a reality. And I found out even now when I'm preoccupied by other subjects a new generation of people of course ~~read events~~ re-invents this particular level of reality. It's fascinating that photography - camera obscura as an instrument has imprinted such an important idea about the light space, about reality and about the instrument that captures that. In the sense of possibility, alternate possibility, there is something which exists regardless of camera obscura principles. There is something that we

call internal electronic imaging, or something which does not require externalized space to model it's image from or by. It is something that is expressed through a system. That is expressed through instruments that do generate in fact certain coincidences of time and energy. In music, ⁱⁿ electronic music we call them let's say oscillator or waveform generators. It's a program, ^{certain} usually cyclical within their own material, then we generate those and then they provide us with particular sound structures. If we apply these on imaging we can build dense interference patterns for example which are very much close to what light does in light space. But of course the competition of the event is very much a different order. Light has in fact the finest, to us, known modulation, the density or band-width of light is enormous, and that's what photography inherited for free. We, in internal imaging, have to make a particular effort to build dense interference patterns that would in fact model some order of reality in our own imagination. Because after all these talks about purity and opposition towards reality, we all work, inevitably, we all are working against the camera obscura which has been constructed in our own consciousness. We are continuously working with the frame even if there is no frame any more. So there is continuous modelling of even this internally organized and obtained imaging towards the camera obscura principle which is embedded very deeply within our own consciousnesses. But again, the eye is the original camera obscura, or if the camera used a cinematic or television is that real, foreseeing those tendencies...these are the questions I haven't found any answers to. So just to summarize it, I see electronic imaging as not bound to it's not based on photography, it's not based on cinema, it is not based on video or television, it's not bound to the computer. It's a basic transition of moving image as a system of thought. It is a particular organizing principle of imaging which is in fact transitory over those media and its location or its residence is only temporary. As we know, at the end imaging is not any more movement-based like tape, ^{or film-based,} it's being more and more memory-based which is in a way a rather static state. And it's ^{its} storing and processing and retrieval are continuously changing its physicalities. And that's

I guess that would be the opening...

(This is later - from question/answer section)

I think technology truly generat^{es}~~ions~~ imaging. The last concept I saw that somehow altered my idea about moving image was a piece of film I saw that was made in Salt Lake City, the famous laboratory there. What it does is deal with three-dimensional objects. The whole tendency towards generating _____ ^{two} ~~three~~ dimensional ~~objects~~ images makes changing them from objects. This is a very obvious tendency. It changes totally the position of the audience. Suddenly the scene, ~~is generated~~ if the three-dimensional scene is generated it becomes relatively static and the whole movement, moving in fact is up to viewing. Truly the audience mind will have to start moving within that space. Many times when you see generated three-dimensional object which you enter, that's one of the privileges of non-camera obscura imaging, when you can enter the image there's no wall. You can stay inside and look from inside outside, any object... your own head. So this special film dealt with this problem. It was a _____ generated three-dimensional object, relatively static to the space, but allowed a worker to approach this object and model, physically.

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