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Harry's Boppers & Dynamic Visual Art

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I'm going to present a concept I've been thinking about for many years. I plan to spend about 25 minutes doing this. After the presentation I will be open to discussion, questions and attacks. My experience is that some see my concept as nothing new, something that is already fairly far along in emerging. Though in some ways this is true, I believe I am describing something that will be a new part of human culture, far more significant than it is now.

By the way, a text copy of this talk, and other related material will be available at this URL: boppers.net/mitboppers. This will not include the links to the youtube videos – unless someone asks me to add them.

The basic idea is that digital technology has created the opportunity to develop a new art form. My belief is that this art form will eventually be as important to human culture as the current art forms like music, painting and literature.

This art form will use digital technology to create and display something like animated videos showing shapes, colors, and motion. There are many examples of this art form on Youtube and I will show you a few. Here is the first:

[1] fire on the mountain

As you will see in these videos, many people are already creating this kind of art. Until the advent of digital technology creating anything like this kind of animated art required absurd amounts of time. And prior to motion pictures there was no way to display it.

I believe this art form will include a wide range of genres and I will mention a few. However, my interest has been in a particular focus.

That focus is on the possibility of creating a software construction set that would allow creating animated videos to accompany pre-recorded music. A user would use this construction set to create a video to accompany a particular chosen

recording. One of the first songs I would work with is sixteen tons by Tennessee Ernie Ford.

[2 play the first verse] ready sixteen tons

Someone else might choose a recorded Bach piano concerto.

I called this yet to be created software construction set “Harry’s Boppers” and will refer to in this talk as “Boppers”.

The closest thing humans had to this kind of art prior to recent times were things like dance presentations and ballet. Watching musicians create live music (think Taylor Swift or The Beatles) also had aspects of a visual experience complementing a piece of music.

[3 play ballet video – Ana Luisa] ready

My original conception of this focused on the possibility of construction set software that would allow home users to create videos to accompany a favorite piece of music. My guess is that this will be one of the first mass market software products to emerge as this art form evolves. Again, I call this particular kind of software “Boppers”. My guess is that there will eventually be a popular art form that will consist of dynamic videos that will be shown with silence. There will also be an art form where artists create music to complement a dynamic video that was created without music.

Though my focus today will be on the boppers concept, that is the creation and evolution of a software construction set used to create videos to accompany previous recorded music, I think this is only a part of the range of possibilities related to this new art form.

If we think of a dynamic art video as piece of music, we might call it visual music. However, I think this artform will evolve to have its own structure somewhat independent of music. I think rhythm and repeated sequences will be common in dynamic visual art as it is in music. My guess is that there will significant dynamic visual art that does not use rhythm and repetition

Consider this question: What concept might evolve in dynamic visual art that would in any way parallel to chords in music. Will there be major and minor “keys”? What parts of the structure will evolve in dynamic art that has no parallel in audial music.

My guess is that the initial growth industry part of this artform will be creating art videos to accompany previously recorded music. In my image of the Boppers technology I think of the video as another instrument in a piece of music. With pop music the lead instrument is often the human voice. With human voice song the video can be important in the same way that backup singers are.

Eventually, the video could be the lead instrument. Eventually a part of this field will include creating music to accompany previously created videos rather than vice versa.

My view is that this will not become a major art form until the means of making such videos is as available and widely used as things like a piano, or the MS Word application. I believe that such software could be created now and that the goal of the process would be to create construction set software (boppers software) that would be as cheap as, and as widely used as MS Word, or pianos. My guess is that this will happen. Something like Boppers software will eventually be used as much, or more, than pianos are used today

[4 ink in water show] **ready**

Though I have been using the term video, it could be virtual reality. The visual instrument added to pre-recorded piece of music could be a virtual reality dynamic experience. . The VR environment would be pulsing in accompaniment of the music

This opens lots of possibilities. The VR environment could be such that one or more participants could share the experience and move around in the 3D space of the VR environment while the VR experience is pulsing with the music. Let’s take it one step further. What if the person, or team, experiencing the virtual environment had, in that environment, access to an interface that would allow them change what was happening in the environment.

This leads me to think of having an experience something like what Jason Laneer called “Shared lucid dreaming”. Think about that for a minute. **Share lucid dreaming.** The individual or team could be shaping a VR reality cooperatively. In the boppers line of thought it would be accompanying a piece of music. However I find the concept interesting with out without music. It would be another part of the new art form I envision.

[5 pipe dreams] video

I want to take a few minutes to discuss my experience of presenting this concept to others over the years. Today is the first time I have tried to explain it to more than one person. The number of possibilities related to my failing to convey what I consider the basics of the main idea are many. I will cover a few.

What boppers is NOT. My concept of the software construction set is that it will be used to construct a video in much the same way that a musician composes music. There would usually be a lot of trial and error. When creating a video to accompany a particular song the creator could spend as much time as they want. Some users might spend hours working on a particular segment of a song. Most would spend at least 30 minutes, and sometimes many hours, creating a video to accompany a song.

So, boppers, my concept, is not an automatic video creator that a user would use to create a video with only some initial settings, or even with some guidance. I assume that this is another potential part of this new art form, especially with the advent of generative AI. However, my current interest is on allowing a human to use their imagination to create a video step by step.

Secondly, this is not intended to be a software device to be used to accompany a live piece of music. Boppers would not be used to create video live with the music. A boppers program would not allow a user to create a dynamic visual experience at the same time the music is being played. This is another field with great potential, but not my focus in this talk.

[6 magic fluids] video

Another thing that is important to me that this software should be no harder to use than something like Microsoft Word, or a piano. As you have seen in the videos, artists are already doing what boppers software could do. The key difference is that the creators of this art form are a very small number of people compared to the number of people who play the piano. My concept is that the software would evolve to where new users can make something interesting in minutes, just like a person sitting down at a piano for the first time can learn to pick out simple melodies.

I cannot emphasize enough how important to my concept it is to have a mass market of users. As I see it only then can the art form evolve to be as important, and popular, as music, painting, literature and other art forms.

Some argue that my idea is not possible because it would be impossible to create a user interface accessible enough to be adopted by a mass market of non-technical users. I disagree and will discuss this shortly.

[7 graphics – unknow language]

Can the user interface of the boppers software be easy enough that beginners can enjoy using it. Can it do that and still permit those who master the interface to create works of genius? I believe it can.

MS Word is a good example. The number of settings and functions, and whatever other things a user can use to change how something is done, or what is created is enormous. This is a very complex interface. Only experts use things like macros, .net and VBA .

However, most of us use only a small subset of word's features most of the time. It took years to evolve this interface, hundreds of millions of users, and thousands of programming man years. I believe the same kind of evolution and growth will occur for boppers type software.

[video]

How might the software be steadily enhanced year after year. My vision is that most boppers type software will have a very welcoming API so that users who

come up with enhancements they would like can either create them or have someone else create them and make them available to users of that software. There might be some generic standards that would different versions of boppers software to share a library of enhancement.

Some of these enhancements would add additional functionality. For example, some creators will have human like figures in their videos. Someone might develop an enhancement that would allow human figures built with specific controls to do a dance step, like waltz. Another developer might add a more general enhancement allowing many different dances (Waltz, Tango, Rumba etc.) Each enhancement would have strong bias toward having an interface that would work allow new users to easily do simple things, and advanced users to do more complex things- such as having a couple dancing as partners.

[do canned heat demo – first just the music, then the music and the video]
Play from itunes – test first
then play video

In my dreams I thought of the boppers software enhancement market to be like the market for iPhone apps. I Googled “how many iphone apps are there?”. Wow. At last count there were around 1.8 million apps. Ok, so boppers software wont have that many enhancements, but a few thousand would be a good start.

We humans tend to be human centric. Many paintings and books deal mainly with humans. Music is interesting in the instrumental music has no visible focus on humans, and yet can pluck some emotional heart strings, and have some other impacts that are hard to label.

My original boppers concept was that the first construction set would allow robots to march and move around a stage area. The robots would look kind of like the rockem-sockem robots

This was because I was human-centric and these robots had fewer moving parts than more complex figures and would be easier to program.

However, my current thinking is that many boppers videos accompanying recorded music would be more like dynamic abstract art.

So what have I done about this concept of mine in all the years since it came to me. Not much. A lot of talking, writing, proselytizing, and dreaming. Only recently have I actually started doing some work to actually create a program that would allow an ultra-simplistic version of boppers software.

My goal is to work entirely with cubes, as many as I want. Each cube would follow a path in 3D space. There could be groups of cubes doing the same things (like flying teams of fighters). Each cube would follow a path and could experience changes in its color, its size, and its orientation about it's inner x, y, and z axis. For example, during a segment of the path it could grow or shrink and could rotate at any speed about any axis through its center (not just x, y, and z). The goal was to keep the video as simple as possible so that I could program it.

I have not gotten far. About a month ago I began using software called "THREE.js". It's an enhancement to Javascript and I am making progress.

[show moving robot ... could show my cube]

The books I am using, one of which I got last night, will be listed at the website I mentioned earlier: boppers.net/mitboppers.

So what do you think? How's my senility? I am open to both positive and negative reactions to anything I have covered here.