APPENDIX

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"ARTISTIC ANALYSIS"

WRITE MUSIC TO IMAGES WITHOUT IMAGES. CREATE AN ALPHABET.
MY PLAN FIRST WAS TO A RESEARCH ABOUT COMMUNICATION IN ART.

MOVIE DIRECTOR

AFTER READING A LITTLE ABOUT MUSIC IN ENVIRONMENT WE WOULD BE ABLE TO DETERMINE ALL THE COMPONENTS.

ANALYSIS OF A SEQUENCE WITH A PLUGIN, PERHAPS WITH TRACK MOTION.

EXAMPLES OF TRACK PLAYED ONLY BASED ON TRACK MOTION SCHEMES.

WHAT WOULD THE TRACK MOTION DO?

AFTER STUDY THE CONNECTION BETWEEN MUSIC AND MOTION.
WE COULD ANALYZE SCENES MOTION AND ADD THEM TO OUR ALPHABET.

TRACK MOTION IS THE ANALYSIS OF WHAT THE CAMERA DOES COMPARED TO A SUBJECT.
ONE OTHER THING THAT COULD BE ANALYZED IS THE LIGHT.

THE THEORY OF RANDOMNESS
MOVIE SCENE

WHAT CAN BE TECHNICALLY ANALYZED?

IMAGE DATA

MOTION TRANSITION

INTERVALS

LIGHT COLOR
DARKNESS
SOFTNESS
SHARPNESS
ETC.

TRACK MOTION

CHANGE OF SCENE
INTRO
OUTRO
BREAK

Audio Wave

SPEAKER ENVIRONMENT
DIALOG
SILENCE

HOW DO WE ANALYZE???

VECTROSCOPE
VARIOUS DATA

TRACK MOTION
PARAGRAPHS CLAWS

A DEEP ANALYSIS AND RESEARCH WILL EVENTUALLY MODIFY, CHANGE, REPLACE THE COMPONENTS.
So now let’s take a short commercial of 30 seconds.

The video editor has edited the video and instead of giving us references, he gives us this.

Figure 1

What do we do with it?

The next step is to find an alphabet that would interpretate these signals artistically. It’s how a TV works, but backwards.

So the next question is, what is musically for us image, motion, change and silence, and what other aspects could be extrapolated from an image to be able...
We could do a fast example:

Input data: Light → Light could mean (high) happiness
Dark → (medium) could mean suspense
Soft → (low) could mean horror
Bright → (very high) could mean morning.

The most interesting fact is that during this process there’s gonna be also a different interpretation of each value of an image for each individual tested.

For this experiment though we would need to create our own alphabet as if it would be the “standard”,

Let's keep going.

Track Motion: Motion
- Tridimensional-to-analyze
- Vertical = what reveals a vertical shot
- Horizontal = what reveals an horizontal shot
- Panning = what effect does camera give
- Randomness = what effect
- Steadiness = stuck in time
- Curve = coming from somewhere
- Past = running
- Slow = slow motion
- Stress = fast movements
- Walking = epic moment

Dare to add:

Figure 2
At this moment, a deeper analysis urges to be done. We need to understand what movement and non-movement means for real in an image, and how do we take it and how can the music can affect it. So let us recapitulate and re-analyze.

1. **Vertical Movement**
   - Up to Down
   - Down to Up

   **Meaning:** Reaviling where we are? Looking up to the sky and the movie is finished.

   Translate it, a scale that happily would show us an early morning in an small town.

   Typically, music sold out...

   Music changes into an epic final.

   Vertical movement on our graphic would be presented like this in a scene of 3 seconds (25fps)

   ![Diagram showing vertical movement](image)

   In the track motion actual tracking it will probably look like this.
2. HORIZONTAL MOVEMENT

- LEFT TO RIGHT
- RIGHT TO LEFT

GIROTTONO CIRCLE

SCENE EXAMPLE
- FOLLOW A PERSON WALKING ON THE SEASHORE, BENDING Hayward Branch looking who's behind the wall

DANCING AROUND THE CAMERA
- (A couple look into their eyes and dance)

MUSIC = TRANSLATION
- Here we could play along what we started, it's usually a middle moment scene, therefore middle invariant, music, a verse for example.

A SCENE WITH THIS TYPE OF MOVEMENT COULD BE TRANSLATED INTO SOMETHING RATHER JOYFUL, MOVING AROUND BUT BEING AT THE SAME PLACE, AN ARPEGGIO FOR EXAMPLE.

HORIZONTAL MOVEMENT ON OUR GRAPHIC WOULD LOOK LIKE THIS

![Graph showing horizontal movement](image)

Figure 4
RANDOM NOTION.

LET’S SAY THE VIDEO EDITOR TOLD US THAT THE VIDEO IS ABOUT A GUY WALKING IN A FOREST. OR EVEN IF WE DON’T KNOW THAT. ANY WE GET THIS:

IN A 3 SECONDS SCENE WE WOULD KNOW DIRECTLY THAT EITHER THE CAMERAMAN HAS HIS CAMERA ON THE FLOOR, OR NOT PROBABLY THERE IS SOME KIND OF STRESS IN THE IMAGE MUSICALLY WE WOULD TRANSLATE INTO AN INTERLUDE FOR EXAMPLE, A FAST CHANGE OF CHORDS, A RIFF, A MOMENT OF FAST MOVEMENT.

NOW LET’S SAY OUR GRAPHIC LOOKED LIKE THIS:

THE RANDOM MOVEMENT OF MOTION OVER A LONGER PERIOD OF TIME WOULD INDICATE US THAT THERE’S DEFINITELY DYNAMIC IN THE SHOT BUT NOT AS STRESSY AS BEFORE.
Figure 6

- STABILITY

Our graphic looks like this:

1 25 50 75 100 125 150

- These are single dot would indicate a steady scene. A beautiful view, an empty street. A beginning of something else.

- Musically it could be translated into a lot we could have our main theme coming in. We could have a soft pad playing long chorus. It also depends where in the structure these moments will be. It could also be silence for example.

What there is also to analyze further is how we would unfold in our graphic the movement of the track motion. Since the track motion is analyzed in time referring to a point zero in the image, we have to find a way to unfold the track on a timeline.

How it would look on the last frame of 3 secs shut.
UNFOLDING
THIS:

THE MOTION TRACK WE GET SOMETHING LIKE

THIS IS BECAUSE WE NEED OUR TRACK TO BE VISIBLE
IN TIME BUT DOING LIKE THIS WE LOSE OUR
THREE DIMENSIONALITY FOR THIS REASON WE HAVE
TO REAPPROACH AND UNFOLD IN OTHER WAYS.

THIS MOVEMENT COULD BE VERTICAL OR FORWARD AND
OPPOSITE

THAT WE CONNECT

A CUT OF THE MOTION WILL INDICATE
AN OVER CROSS OF ITSELF.
- TRANSITION -

The transition would not be something of musical interest but something of guiding line because it will tell us when something starts and ends and how fast or slow our scenes will change.

**Figure 7**

Eventually the diagonal line will be substituted with the track motion data. It could then look like this: (taking away seconds bar)

**Figure 8**

What do we have here? Movie starts - HShot-HShot-Steady - Vertical - what?

Music translation:

Next page
IN A ¼ SECONDS SCENE THIS HAPPENED

START — HORIZONTAL SHOT — H SHOT — STEADY — VERTICAL

DIRECTLY WE CAN SEE THAT THERE IS A PRESENTATION OF DIFFERENT ANGLES OF SOMETHING AND THEN THERE IS DYNAMIC.

MUSICAL TRANSLATION

IF OUR MUSIC WAS DOING: G - E m - B m
WE CAN EVEN TAKE HARMONIC CHOICES, WHICH IN THIS CASE WOULD BE:

(EXAMPLES)

\[
\text{CHORDS = H SHOT \rightarrow H SHOT \rightarrow STEADY \rightarrow VERTICAL \rightarrow B m}
\]

\[
\text{G \rightarrow G} \quad \text{Em} \quad \text{D \left( \text{OPEN CHORD} \right)} \quad \text{B m \rightarrow G}
\]

TRAVELLING MOVING CHORDS

(GOING FROM Em TO D WHICH THEN OPENS FOR A HAPPENING. A CHANGE IN MOTION IN THE IMAGERY.)

STYLE OF =

PLAY (MOVING) STRUMMING STRUMMING SINGLE OPEN HIT STRUMMING DOUBLE SPEED

FINGER PICKING

ONCE AGAIN TESTS WILL BE NEEDED FOR TO BE ABLE TO UNDERSTAND AND CREATE MUSICAL PROPERTIES FOR EACH KIND OF MOVEMENT, SINCE AS SAID THIS COULD ALSO BE SOMETHING RATHER SUBJECTIVE.
Another property that could be analysed in video, not in still image, is the audio data. Why? Because if an image has been captured by a videographer and he thinks that the background sound of the waterfall is part of the shot, we, as music composers, need to be aware of that.

If we record a video shot that has a speaker voice that talks about love, then we need to be aware of that.

Remember that we're trying to use a sense through another sense, and we don't want to watch the image, we want to rather experience it alternatively.

We don't want though be influenced from what we see, but rather guided and we don't want to hear the birds of an image that we cannot see.

We want signs, guides and lights that tell us to try to see something, the whole research is about that moment of human interpretation of senses.
IS ABOUT FINDING THE THIN LINE THAT DIVIDES WHAT WE SEE, HEAR, TOUCH ETC., FROM WHAT WE INTERPRET, PERCEIVE, AND THEN LET OUR INTERPRETATION GO FREELY WITH.

FOTO TAKEN BY A PHOTOGRAPHER

FROM THE MOMENT THE FOTO HAS BEEN TAKEN, AN INTERPRETATION WAS JUST IN ACT, AND IS DONE. THE FOTO, FROM THE MOMENT IS LOOKED AT, IT BECOMES SURFACE - IT STARTS A FURTHER ACT OF INTERPRETATION.

- THE CONTENT OF IMAGE DATA OF A PICTURE IS SOMETHING RATHER SIMPLER THAN THE IMAGE DATA OF A VIDEO SHOT.

IN THE NEXT PAGES I'M GOING TO ANALYZE IF STILL IMAGE IN THIS CASE ITS SOMETHING WE WANT TO USE FOR OUR ANALYSIS.

GETTING IMAGE DATA INSTEAD OF THE IMAGE ITSELF WOULD GIVE US IMPORTANT INFORMATION ABOUT WHAT THE PHOTOGRAPHER CONSCIOUSLY HAS EXPERIENCED, WE WOULD BE ABLE TO INTERPRET THE IMAGE IN A MUCH DEEPER SUBCONSCIOUS WAY AND WRITE MUSIC MORE DEEPLY.
Going back to the audio wave of a video, the data on a graphic would be shown as a simple wave form.

Once the waveform gets integrated in our graphic system, we could get something like this:

- Now, remember we have transition:
- On transition we have motion:
- Here we add audio data: Now

For this result: (Example)

We have combined eventual audio data into motion and transition. We are still in the process of writing our alphabet. Once things will be more clear we will add all the graphic components.
Let's go back into actual image data. Histograms, vectorscope, etc. We have the possibility, and this will be taken into further research. To maybe add a property to our set of image data properties. This element could be the "LUT" of an image. (Look up table)

Basically a "LUT" is the modifier between two images, the original image and the displayed image, based on a math formula. They include contrast, saturation, curves, and all the type of image data that can be modified. Probably a "LUT" could be at the center of this research because they represent and contain exactly the simplification of data we're looking for.

So for example, we could get the "LUT" data image of a video and have already a big guide to how contrast the image would be, for example, or how cold or warm is the image, and from there, interpretate musically.
In deeper analysis, the histogram of a dark picture looks like this:

Comparing the low end to the audio frequency to the darkness of the lower part of this data, tells us already that we have a dark image, maybe night, maybe shadowed.

Since histogram changes in time, in a video, we will have to analyze the peaks and lows of a whole video and create statistics.

Another way that this could be done, so that this parameter will be actually visible on our futuristic pentagram, is to add the histogram in the vertical section of our pentagram.

The only thing we would have left to include in our pentagram, is the parameter of color, we will take that in the next chapter.
So let's try to add histogram.

(We take the example shot from 2 pages ago.

1. Notes the first transition is in the lower spectrum of light and the next transition is a little higher. This won't really tell us much in a 2 sec scene analysis, but on a bigger look at the final composition will at least tell us the general "light" image data of the whole shot.

Example

80 secs

Immediate zoomed out 200%

The transitions show us that this shot is pretty dark for the whole 80 secs. We will transform light data into music.
THE MOST INTERESTING TWIST I HAVE ENCOUNTERED SINCE I STARTED THIS RESEARCH IS THE THOUGHT OF THIS FINAL POSSIBLE DATA, TRANSLATED INTO THE MIDI SCORE OF LOGIC.

THE WHOLE IDEA AND COME OUT OF THE RESEARCH COULD EVEN END UP IN SIMPLY FINDING A VIDEO SCORE THAT COULD BE PASTED INTO A MIDI SCORE.

EVEN FURTHER, THE ANALYSIS OF IMAGE DATA COULD ALSO BE RESEARCHED AND TRANSLATED INTO ACTUAL AUDIO EFFECTS, MORE THAN THE MUSIC ITSELF, OR PERHAPS, FORGET THE COMPOSITION AND FOCUS ON: INTERPRETATION OF IMAGE DATA, TRANSLATED INTO MIXING CHOICES AND TECHNIQUES.
Figure 9

Figure 10 & 11
Figure 12. Screenshot from attached video "Luma Scope".