# Brief 3: Impetus

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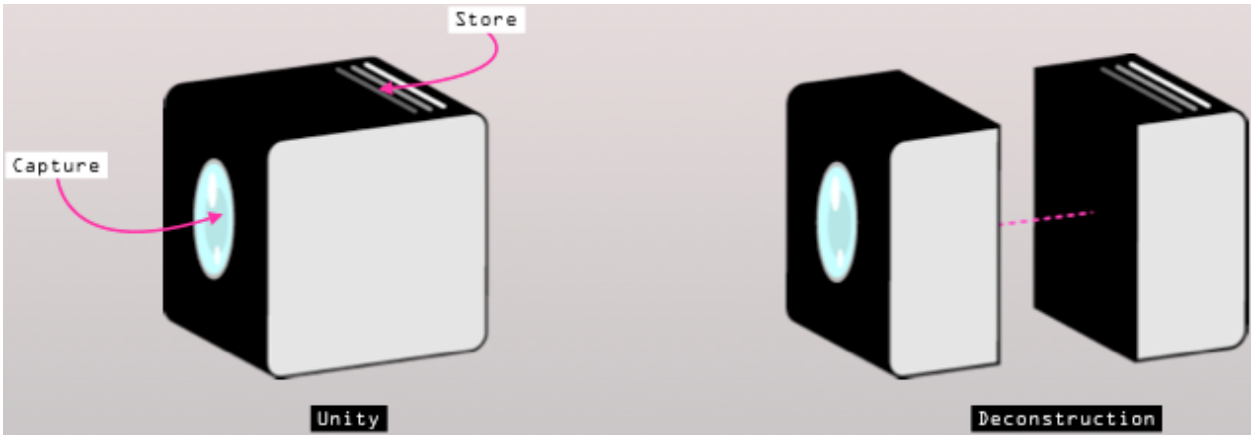
## I. Idea

The device I'm envisioning will be formed starting with the deconstruction of the fundamental conceptual basis that has always existed in photography, that of the unity of the element which captures the image and the element which stores the image. The camera I'm going to create will exist in the form of a divided object, split into two halves, each one able to perform just one specific function of either capture and transmit a visual memory or retrieve and play back a visual memory. While the two halves will be displaced in both time and space they will be inherently connected to each other in remote. Until the two fragments are physically separated, some constrains will limit both the capture and playback processes: for example the person who holds the capture device won't have at its disposal an unlimited amount of captures, but a limit will exist, regulating the proportion of the memories captured and their effective output on the receiver device. From the receiver side certain conditions will have to be met in order to retrieve and enjoy the visual memories intimately shared by the "capturer" such as silence, darkness and the presence of the person who owns the receiver half. These constrains will be present until the moment when the two two halves will be finally physically reunited as  in that precise moment the two parts will recognize each other, opening themselves up to letting the two persons freely enjoy the intimate sharing moment. It is interesting to notice that in a possible scenario of usage this system enables a powerful interaction, that of the complementarity of experiences over the shared memories; the person who captured the visual memories will know everything about their context but has never seen them before, while the person who receives the visual memories has already seen them all, but knows nothing about their context. This way the sharing event will be empowered by the common need of each person to complete their "half" memory with that of the other.

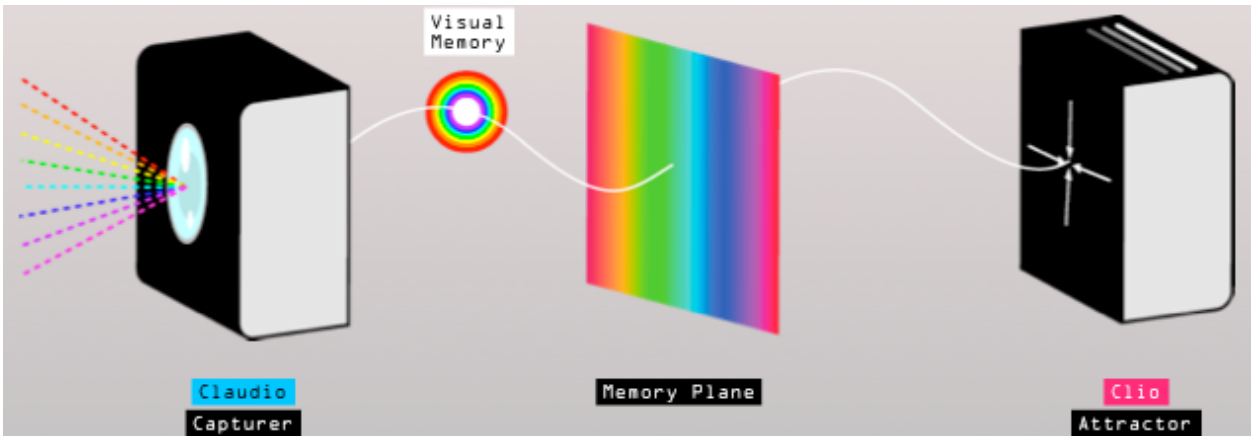
The visual memory itself will be an artifact similar to a photograph, it will live as light on a physical medium but won't be a print, it will seem to be still while instead will move over time. In reality it will be a high speed high resolution short video, played back in a specific way exploiting both its spatial and temporal qualities. Two immediate effects will be those of adding a sense of motion and the enhancement of the curiosity a single shot will be able to excite, as each visual memory will have much more moving details than a still photograph The look and feel of the interface will be almost "magical" to encourage a suspension of disbelief to let the users focus on the experience itself and not on the actual technology that make it happen. The final goal will be the restoration and enhancement of digital visual memories emotional value, ultimately suggesting a different perspective over the relationship with digital consumer tools, not in the direction of production, guided by the elements of speed, quality and conveniency but in that of humanity grounded on emotion and meaningfulness.

## II. Form

The following diagrams illustrate the system I'm creating, from a logical point of view. I'm going to provide the possible technical solution to achieve the completion of each step.

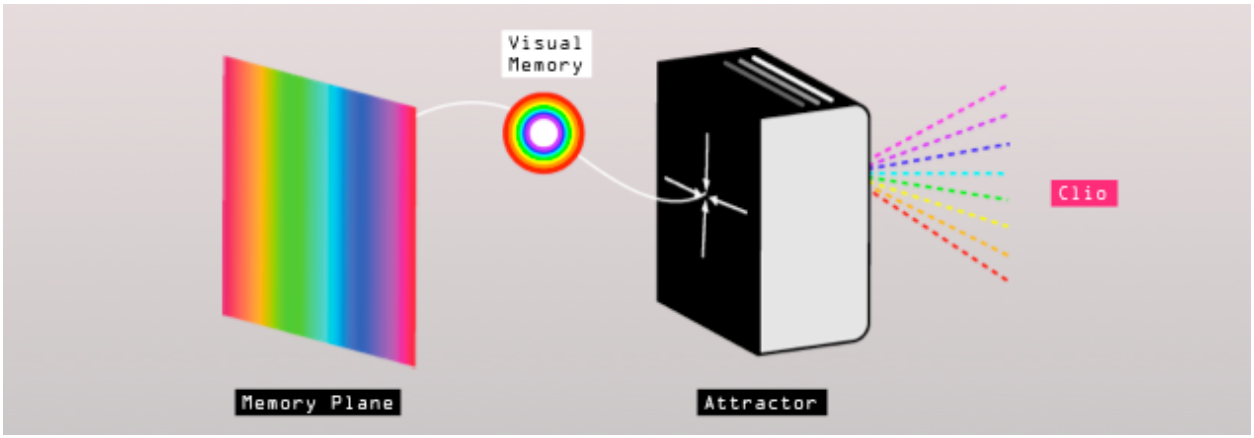



The system will start to be built upon the conceptual and physical deconstruction of the unity of any photo camera, the unity of the part which captures the image and and that which stores it. I will physically build these two halves in order to let them meet a very precise behavior, illustrated in the next diagram.



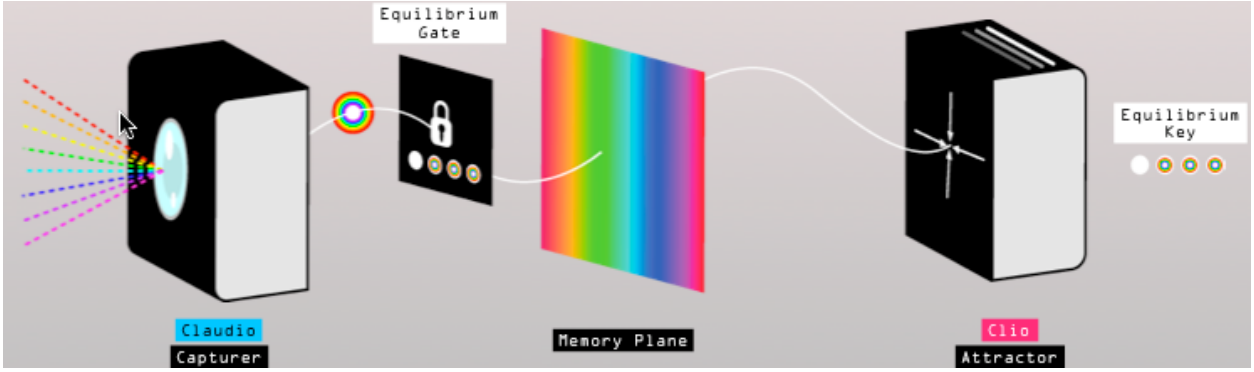

One half, the Capturer, will just be able to capture visual memories. It will achieve this using a dedicated computing platform, the Aigo P8860 and an industrial grade hi speed, high resolution camera such as the Silicon Imaging SI-1280F- M & RGB MegaCamera. This process will be controlled by a custom c++ application.

Each visual memory after being captured will not be displayed back to the user of the Capturer device but will be immediately transferred to the Memory Plane, a middle dimension where all the memories shared by the two person using the device are stored, waiting to be attracted by the other half of the interface, the Attractor. A wireless internet connection will enable this communication system to work in conjunction with an HTTP server and a Database application, the two elements which enable the Memory Plane to work.



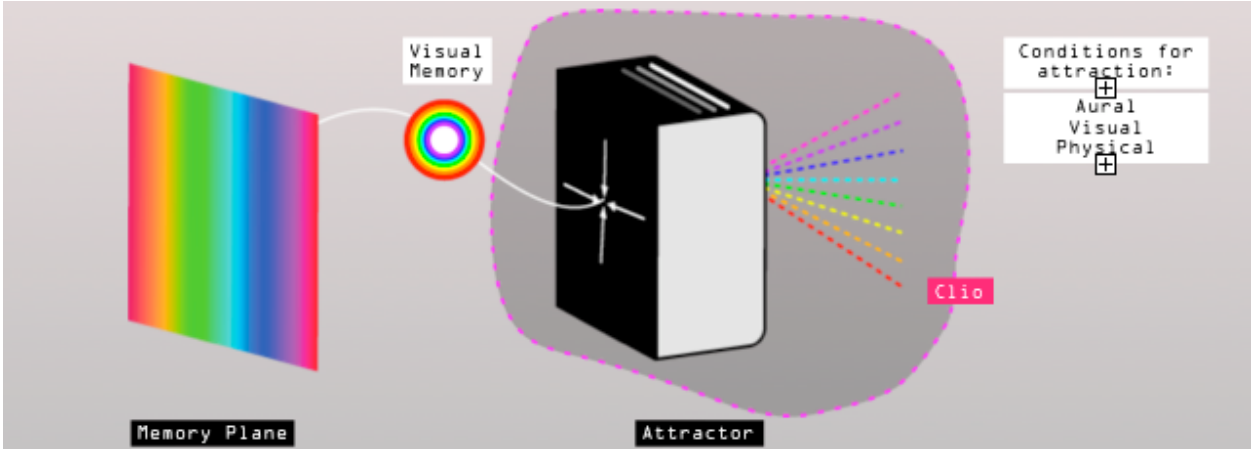
The Attractor half will rely on the wireless internet connection, either 3G or WLAN to receive the attracted visual memories from the memory plane, which will be then displayed using the Aigo P8860 LCD touchscreen.

Some rules will regulate the system, each one targeted specifically at one phase. In relation to the capture phase an equilibrium will have to exist between the activity of the holder of the capturer and that of the holder of the attractor. If the person who holds the attractor hasn't seen the last *n* memories the capturer has reserved for him, then the capturer won't be able to catch other visual memories, until the other person gives him attention again watching the memories that were previously recorded for him, finally giving the capturer the ability to capture again.




This will be achieved using an internet connection from the capturer which will connect to the Memory Plane which stores the most current status of the activity of the Attractor. The memory plane will return the number of new memories waiting to be seen by the holder of the Attractor, if the number is greater than a given limit, then the Equilibrium Gate will be closed and the Capturer device will inform the use with a feedback that at that time he cannot capture anything as the other person is probably not ready to give the attention his memory deserves at that moment in his live. This feedback will be available before the capturer actually tries to capture a memory, in order to prevent the excess of frustration which would be generated if he tries to capture a beautiful moment just to later know that it wasn't recorded because of the equilibrium rule.

This rule just to propose a solution to the inflation of the memories captured in a visual form.

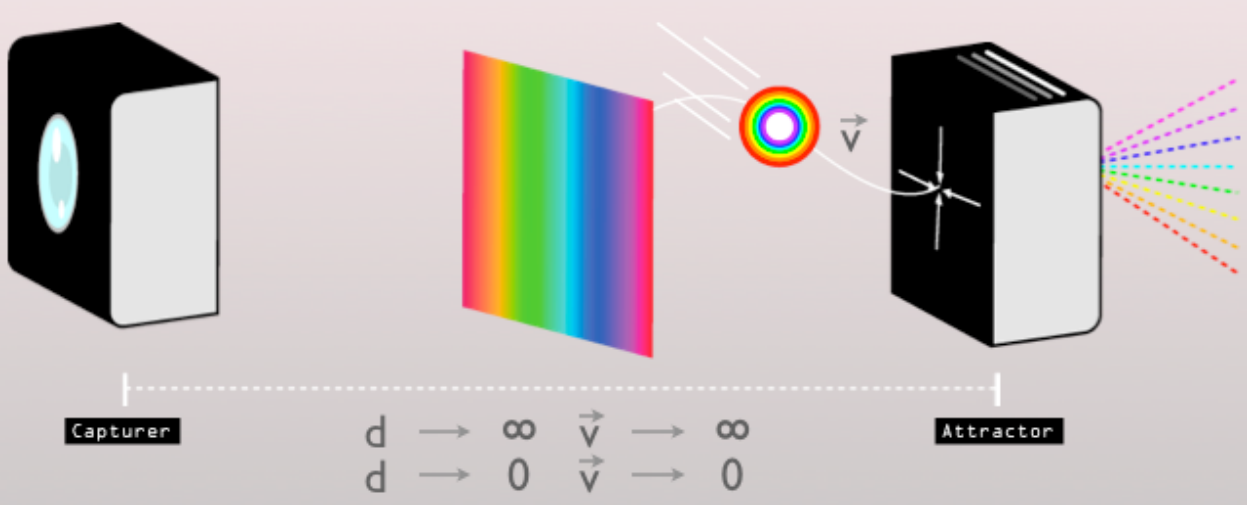



Another rule will exist, this time related to the attraction phase. Certain conditions will have to be met by the holder of the attractor to successfully initiate the attraction process of visual memories from the memory plane.

One condition will be of aural nature as the need of silence or quiet in the environment where the attraction is going to happen. This will be achieved by using a microphone and a simple volume analysis of the environmental aural setting.

Another condition will be physical as that the person who wishes to see a memory actually picks the attractor in its hands and looks through the lens placed in the center of the interface. This will be achieved by using pressure sensors on the sides of the device and a small, low quality, cheap camera which will perform a simple shape recognition algorithm in order to detect a pupil looking through the glass.

The motivation for this is easily understandable from this example. If a person is telling you an important personal memory you want to look him in his eyes and listen carefully to his words and not look at your mobile phone screen or listening to your Ipod, you need to give the other person you attention.



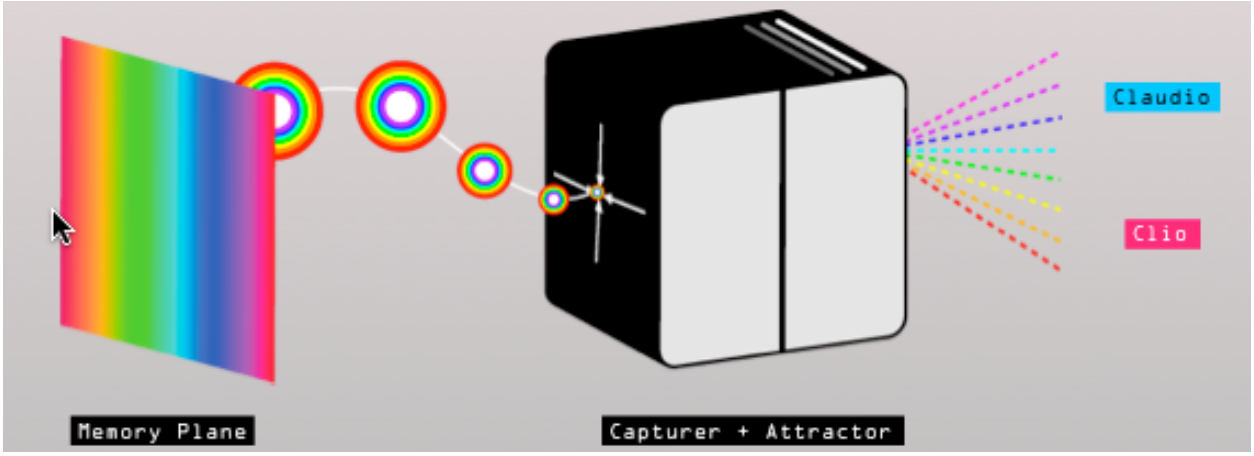

A third rule will control the way the visual memories are attracted. It works on the concept of direct proportionality between the actual physical distance over the surface of the earth of the two halves of the device and the speed by which the visual memories will be attracted.

In order to better understand this concept the following example can be clarifying. Two people emotionally close to each other live very far away one from the other. Using the device I'm creating the attractor would receive the memories of the capturer in a very short time. This is understandable as when two persons who love each other are separated from great physical distance they want to know about the other person as soon as possible. The opposite scenario would be two persons who, again, are emotionally linked, but lives in the same house. The attractor will attract the visual memories of the other person with a very slow pace, receiving them at a much later time than they were actually captured. This is very human too as when you live 24-24/7-7 with another person, even if you love him/her, you are always updated on what's going on in his life, thus receiving immediately something so quotidian would just diminish its true value, while receiving it at a later time would enhance it.

This will be technically achieved using a mix of GPS and internet technologies. Both the devices will always keep the Memory Plane updated with their most current position on the surface of the Earth. The Memory Plane will inform then one half of the position of the second half and will calculate the physical distance between them. Based on that value it will set the speed of the attraction accordingly. In case the GPS is not working an IP trace-route will give the raw

geographic position of the ISP server each device is connected to. This way the mechanism will work everywhere an internet connection is present.

The motivation for this rule is to enhance curiosity and novelty towards the memories a person has reserved for another person, through digital means.




Lastly when the two halves will be finally reunited, they will first recognize each other, opening themselves up letting the user to physically join them together recreating the original unity. In that moment all the previous rules will cease to govern the system letting the users freely control the visual memories attraction and playback process, until the two halves will be divided again.

This will be achieved using RFID tag and reader on the devices, so they can recognize each other if put at a small distance. Magnets will be used on both devices to damp the opening of the interface. In addition to that the attractor will have an electronically controlled locking mechanism. After the two halves have recognized each other via RFID the lock on the attractor will unlock, revealing the magnets put on the side of the frontal aperture which will exactly match in shape and position the other two magnets put on the frontal aperture of the capturer. When the magnets in the first half touch those on the second half they will link the two halves together, reconstituting the original unity. Technically wise this will be achieved checking through a mini Arduino board inside the attractor if there is current flowing through the magnets.

## III. Next steps

I'm actually waiting for the Aigo computer to arrive. Sven has agreed to sponsor the Aigo devices and that's great! In the mean time I will start to create the system logic on my laptop computer just scaling it down in order to simulate the behavior on a smaller, weaker machine. I've asked Sven where I can work with wood and he pointed me to the fine art department, where a wood shop exists and Chris Hennelly works, I will contact him very soon. As the device I'm creating deals with emotions I want it to be shaped out of a warm material such as wood. In addition to being warm it is also easier to work with than plastic and metal and... I've always wanted to learn to work with it so, what a better chance?

The ILog (http://www.owlproject.com/) interface is really what is inspiring me and guiding me for the look and feel I want to achieve. It is quite cryptic and obscure, but very stimulating from a curiosity point of view.


*Lumière Cinématographe [1895]*

Besides that the first motion picture cameras were made out of wood, so I want to follow the tradition of those giants!

(Actually looking at this Lumière camera it is astonishingly similar to the image I have in my mind about how the final look of my device will be!).