Media Arts and Technology

[259] M259 Final Project

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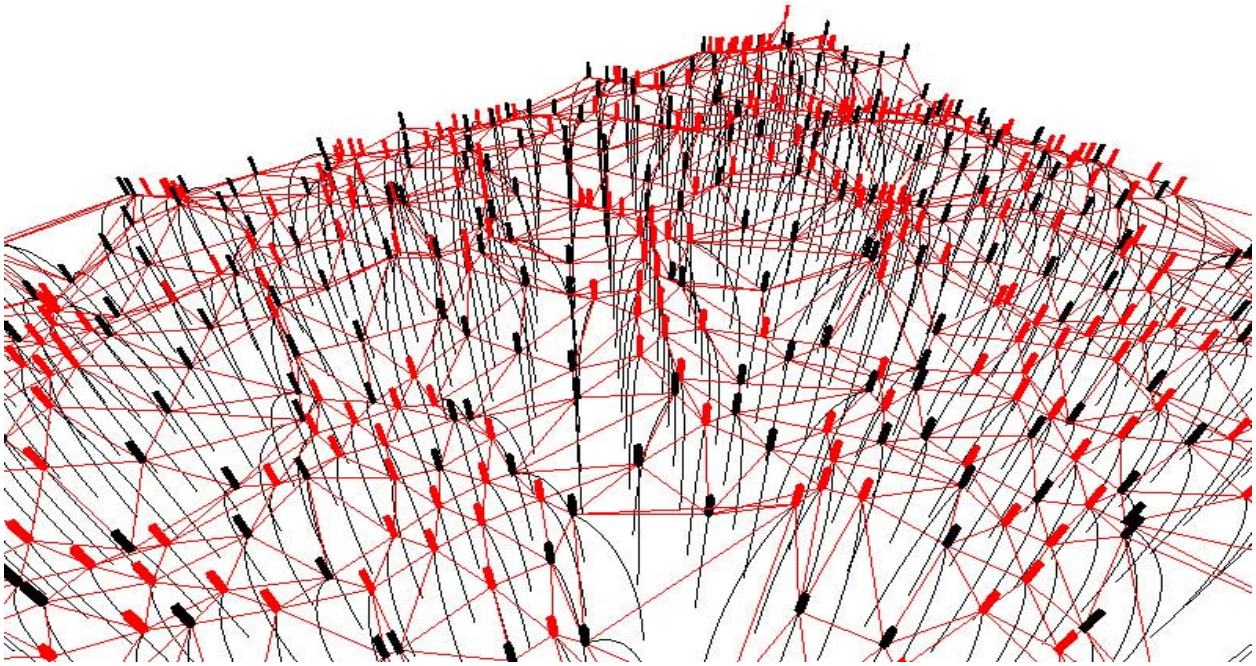
Tutor: Prof. George Legrady;

Teaching Assistantship: Charlie Roberts



(R)efrag_Disk by Frederico Fialho Teixeira

Project Brief

(R)efrag_Disk is intended to give a spatial deepness to the defragmented environments of hardisk. The visualization will provide a 4 dimensional (3 spatial plus time) way to structure elemental folder relations and constructs, according to the hardisk's environment that is used in windows. Usually this environment can be displayed in the "*defragment disk"* application, where the user's has a visual map of the computer's files and folders. In this project, instead of the fixed color scheme, these maps have correlation, either strong or weak, which by themselves are the dynamic structure of the visualization. These connection are regulated by attractions according to the field they would be inserted to, for example *Program Files* and *My Documents* have a strong weak attractions according to inserted external relational patterns.

Project Data

The database for the visualization, would be based on the scanning of my hard disk, transposing all information in to the Processing dynamic environment. In this process there are two main procedures. The first the scanning and extraction of all the hard disk data, and the second the transposition of this data into processing.
The approach taken to deflate the first step was the usage of recovery software. This application uses the raw image by examining the low-level data sectors and determining what fixes to file system structures are needed to get access to the important data. Sometimes the existing file system structures are missing so much of that data has to be extracted directly from one or more fragments of the raw image. The data recovery programs have created a full set of software tools to analyze, fix and recover data from raw images of all operating systems, as in this case we would only use the analysis method. Once a recovery has been successfully performed, file lists are created.
Subsequently and in order to tackle the second stage of the **(R)efrag Disk** visualization we would have to find an acceptable format for insertion of the extracted data. The difficulty is that the library resources provided by Processing are not intended of communicating with low level reading format, this step only would be a project by itself. Nonetheless the overcome of this point in the visualization would allow us to have an updated reading and tracing of the hard disk's dynamic contents.

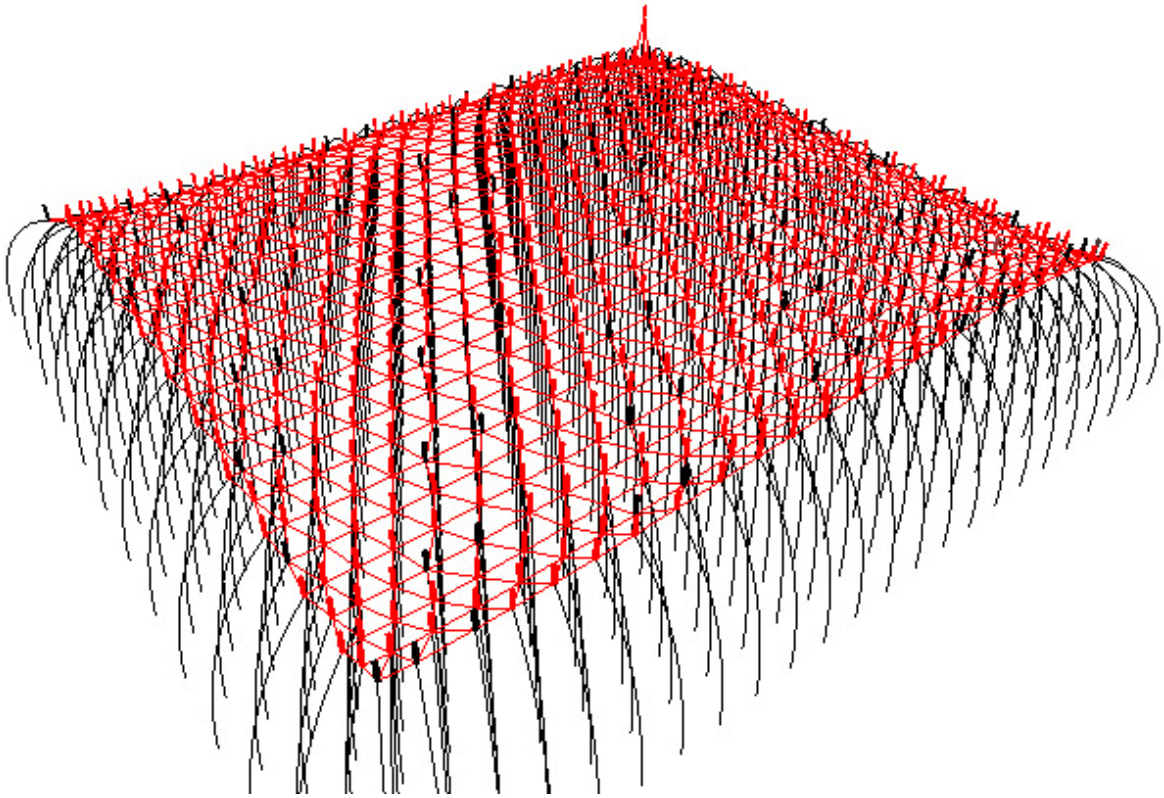


Image 01 - Hard disk's dynamic contents are *wired* to an allocated memory however there is an intertwined relation between each *folder* or in this visualization each node. The nodes relational importance is represented by their colors (i.e. black=main; red=subfolder).

Conceptual Information

The visualization is intents to act as an individual **(R)efrag Disk** space is providing a general view of personal organizational and relational interests. The data structure is organized by main categories (i.e. Program Files, My Documents, MAT, [f]Flat, Library) and subcategories (i.e. Program Files: Alias, Microsoft Office, Processing). The data can accessed by clicking the nodes directly, providing the respective links to the files or folders. The project will be implemented in Processing and the libraries use for this effect will be OpenGL.

"*Unlike classical theories based on imitation, diagrams do not map or represent already existing objects or systems but anticipate new organizations and specify yet to be realized relationships. The diagram is not a simply a reduction an existing order. Its abstraction is instrumental, and not an end itself.*

Content is not embedded or embodied, but outlined and multiplied. Simplified and highly graphic, diagrams support multiple interpretations. Diagrams are not schemas, types, formal paradigms, or other regulating devices, but simply place-holders, instructions for action, or contingent descriptions of possible formal configurations. They work as abstract machines and do not resemble what they produce." - Stan Allen

Accordingly, the visualization is a graphic representation of a dynamic process synthesized through compression, abstraction and simulation. It thus supplements other techniques of representation and calculation through the formulation of selective figures: concentrated trajectories that, as economically as possible, permit ordering, transmission and processing of information.

It is in this economic – synthetic – property that their true expressive value resides. Their being almost instantaneous reproductions of complex renders them capable – despite their high degree of reduction – of (re)producing and expressing a "suggestion of the whole". As a medium, the diagram plays a dual role. It is a manner of notation, of analysis, of recognition and reflection, but also a machine of action (generative, synthetic and productive). Diagnoses and response, map and trajectory. This projective condition alludes to the operative nature of the diagram as an abstract machine (as Gilles Deleuze would call it) in turn capable of stimulate and challenging processes and actions.

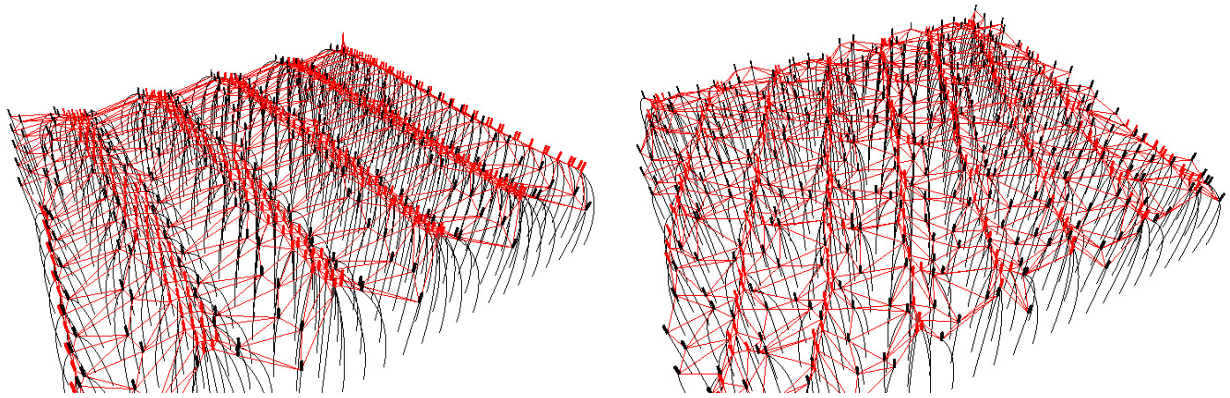


Image 02 - (R)efrag_Disk's different iterations of its dynamic contents and relation between each *folder*.

References

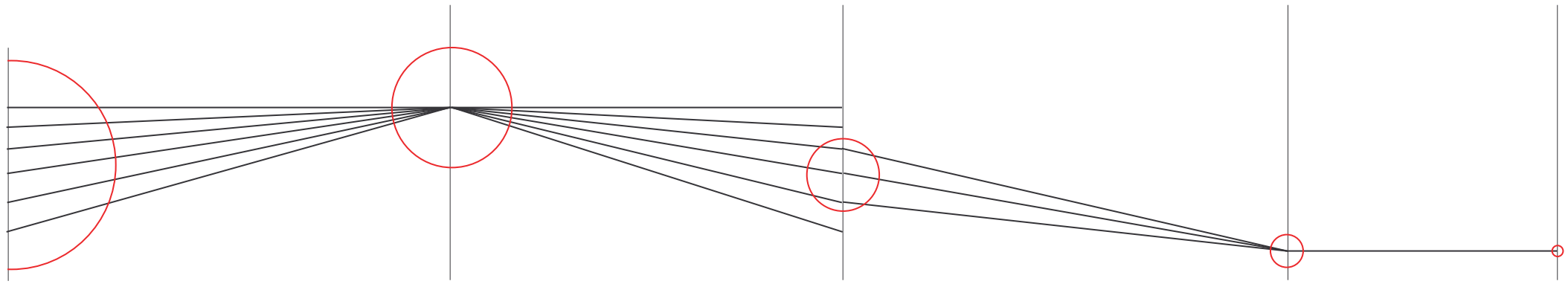
Allen, S.,1999. Points and Lines: Diagrams and Projects for the City, Princeton Architectural Press.
http://www.visualcomplexity.com/

Task Schedule

Please see attachment.

JAVA_XML Library | Visualization | Project Iterations | Project Refinements

01 **02** **03** **04** **05**



phase | direction | structure | output | **(R)efrag Disk**

2 ***ProXML***
1 ***MySQL***

5 ***3D Spatialization***
4 ***Dynamic Structures***
3 ***3D Navigation***

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1 ***Data Spaces and Navigation***