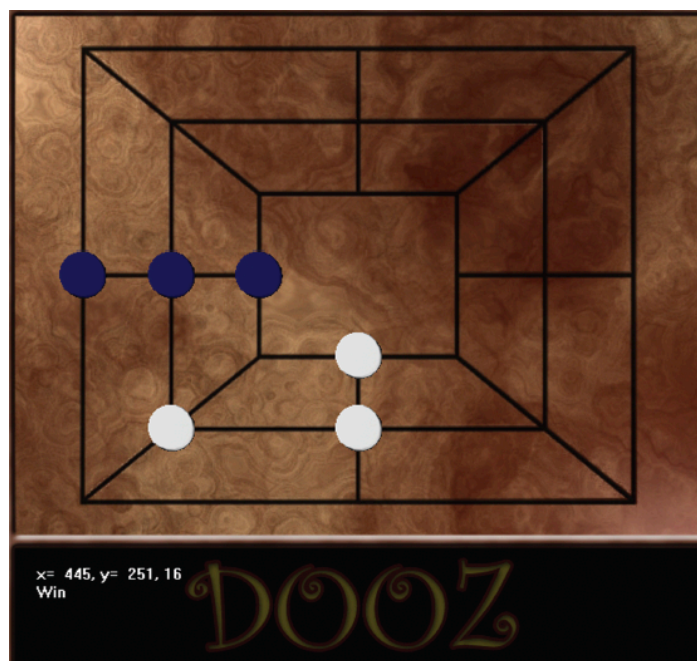


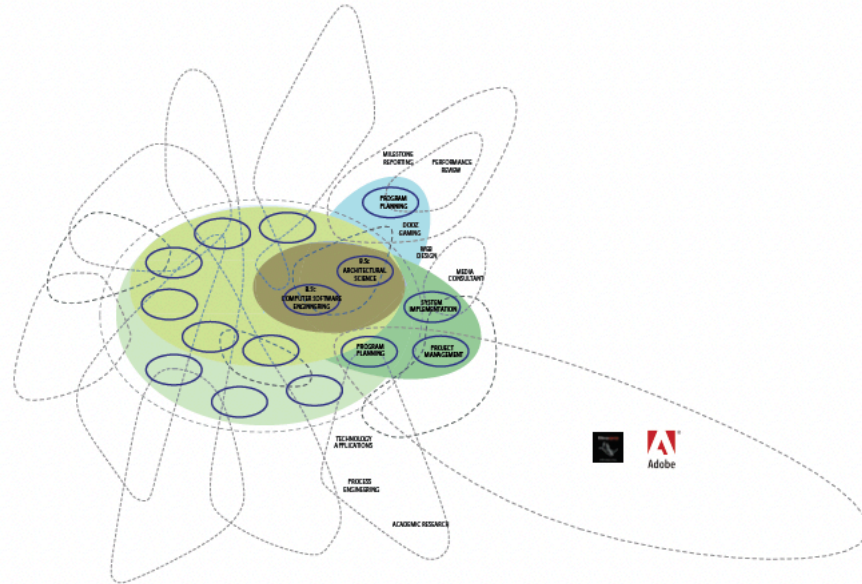
# Gaming in architecture

## Introduction

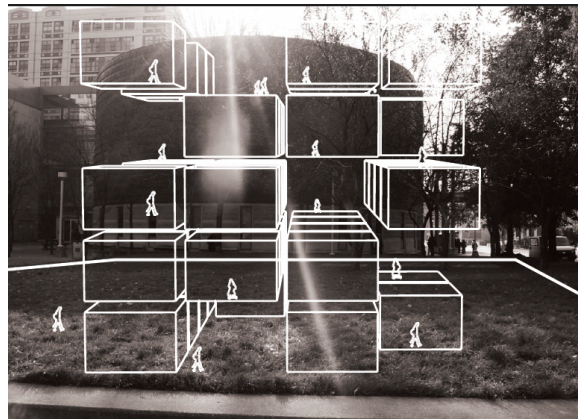
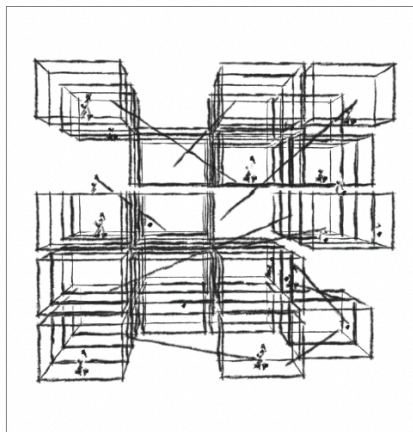
In this paper I start my discussion on left over sketches , drawings and illustrations in which each drives a consistent notion in subject matter . I collected four essays in total with subjects as such ; Gaming , Object oriented transit , object oriented land -lot , and project mapping. Each article would expand the subject around feasibly of essence in theories , design practice , and form of imagination. In other words these Illustrations drive a critical thinking in architecture semantic and form finding.

Figure 1 . is my desertion cover page in computer software engineering . The process of creating this cover photo is a discussion of this essay and its relationship to gaming in architecture of building and spatial planning . This theory in computer science develop a moving algorithm which define in my dissertation thesis as an alpha - beta tree algorithm . This algorithm uses a script and a programming language in computational design name C++. With scripting in C++ the game named DOOZ founded the interface look in figure 1. Flowchart, tree algorithm , assembly language , and scripting in C ++ are the important parts writing the thesis of this game .



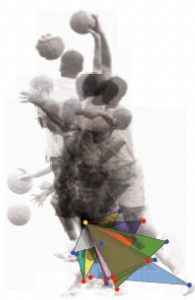


Designing this game focuses on merging two fields of computer science and architecture. Form finding, ease of functional programming in science of building and city planning are most important terms in this concept of gaming in architecture. The static architecture versus more dynamic thinking and imagination in attributes of programming create the functionality in space and get meaning to interactive design. This image is the actual interface of a game named DOOZ. In this game there are two players which move the disks to get and collect them in the linear placement. who find the line on this interface planner configuration is the winner. Planner interface configuration shows in figure 1.



My argument is the possibility of adopting this script and programming to bring it to the architecture of spatial planning. The following figure 2 is the initial sketch of a flowchart taking the design of critical thinking in mapping the program and functions of space in a building. These flowchart design method can happen in early stage in schematic design either or in design development stage.

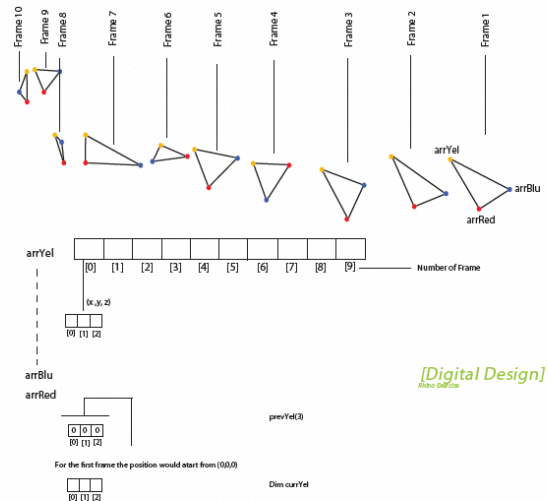
Another project as an example of this adaptation of script is in the library design. The function of spatial planning in library design took the similar strategies in moving algorithm. The perspective in figure 3. Shows the diagram of move in which the visitor in the building create different and distinctive views regards to program requirement of the design scheme. The two diagram in figure 4 together with 3 shows how a person create internal views in the building diagram. This move create the final design scheme of the library. The proposal is to build up the final form use the same methods in gaming and architecture of spatial planning and view creation.



**[Acknowledgement]**  
In System Stalker 2 set of rules from preliminary motion study (Basketball player) had been extracted. In this phase by using some of those sets of rules a sequential transformation will be defined. The sequential transformation will be generated based on wildcard iteration.

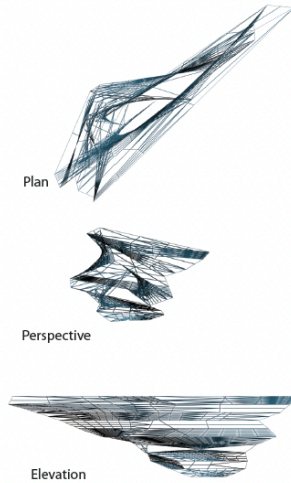


**[Wildcard]**  
In the above image highlight different variation of a triangular shape that formed based on points or vertices of legs and left ankle of the player. The strategy that has been considered in guiding how to design the transformation algorithm is transforming Component strategy. According to project outline this strategy is a sequential transformation where the actual component changes over the series. In this case The shape/component is a triangle that translated and then transformed in each frame by redefining the positions of its vertices.



### [Translation to Geometry]

The rules that govern how this component (triangle) transforms will be based on range rules. (define(vertices) data max (vertices)). Creating this shape(triangle) has been achieved by using point markers as vertices. As series progresses the vertices will move and the polygon transforms. By storing the vertices (x, y, z) in an array of 3 and then storing all frames of vertices in array of 10, data storing for scripting would be achieved. Now, for transforming from one frame to the other frame, still we need to define two other variables which stores the current position and previous position of each vertices.



### [Observation]

After experiencing scripting, one of the best strategies to come up with an appropriate geometry transformation is to choose good numeric rules. For instance, in this case by having the generic rules of Min and Max, the transformation from one frame to another frame is not completely accurate. Another try in scripting to illustrate this transformation in a better accurate way was to associate rules of surface of the geometry (triangle). The written code is not executable in rhino 3, which is the selected version of rhino to script in this project. The Surfcurve function is not acceptable in Rhino 3. Following Pages are the code for the last try.

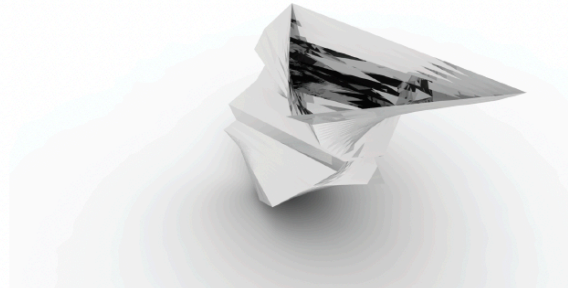


Figure 5 and 6 are sketches of a given project in form finding taking the the same concept of gaming in move algorithm . In this particular project the actual moving part is the human body which create the language of form finding to in shaping points and planar surfaces in three dimensional recording softwares . The basketball player move create the triangular shape for that its been rendered to create one free standing object in figure 6.