

## >>> *Define Parallel Realities*

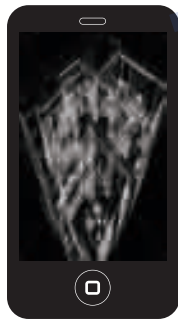
### see through

if we could see through the floor  
\wall\ceiling, like x ray. maybe  
we won't be lost in the isolated  
spaces.

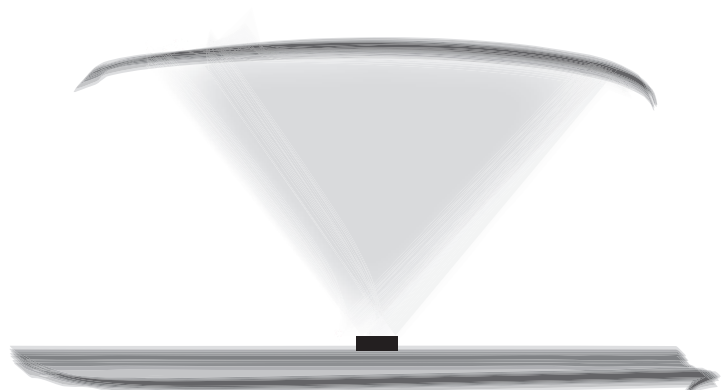


### method

AR



### Projection Mapping



>>> *Crossing Parallel Realities*



6 versions of master plan



3D model



Build up a in scale  
central space model



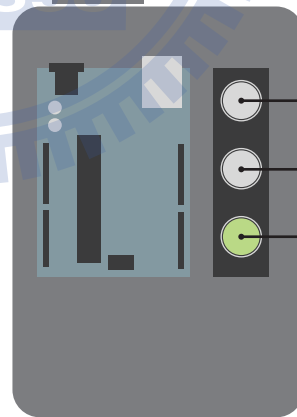
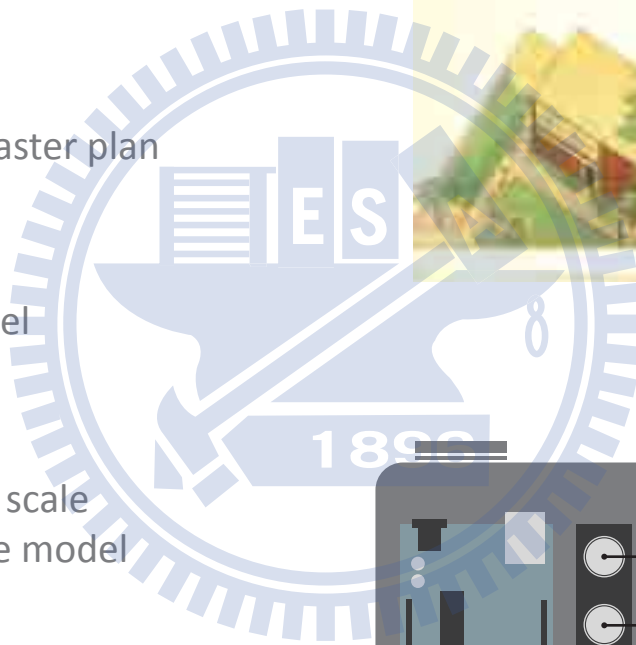
Gyroscope Projector



X-ray effect (see through  
different types)



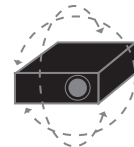
Using Building Block to  
analyze type from type



Digital Switch 01

Digital Switch 02

Analog Switch



Digital Switch 01 - action toggle

Digital Switch 02 - IC toggle

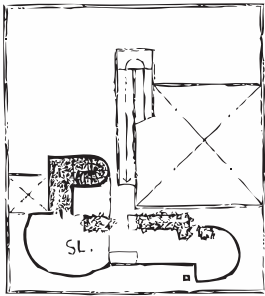
Analog Switch - camera zoom

Arduina - Campass + Gyroscope

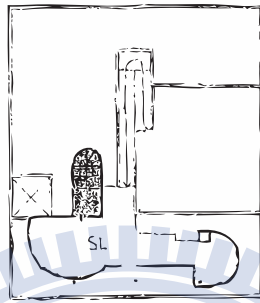
# Design Approach

## >>> Define Parallel Realities

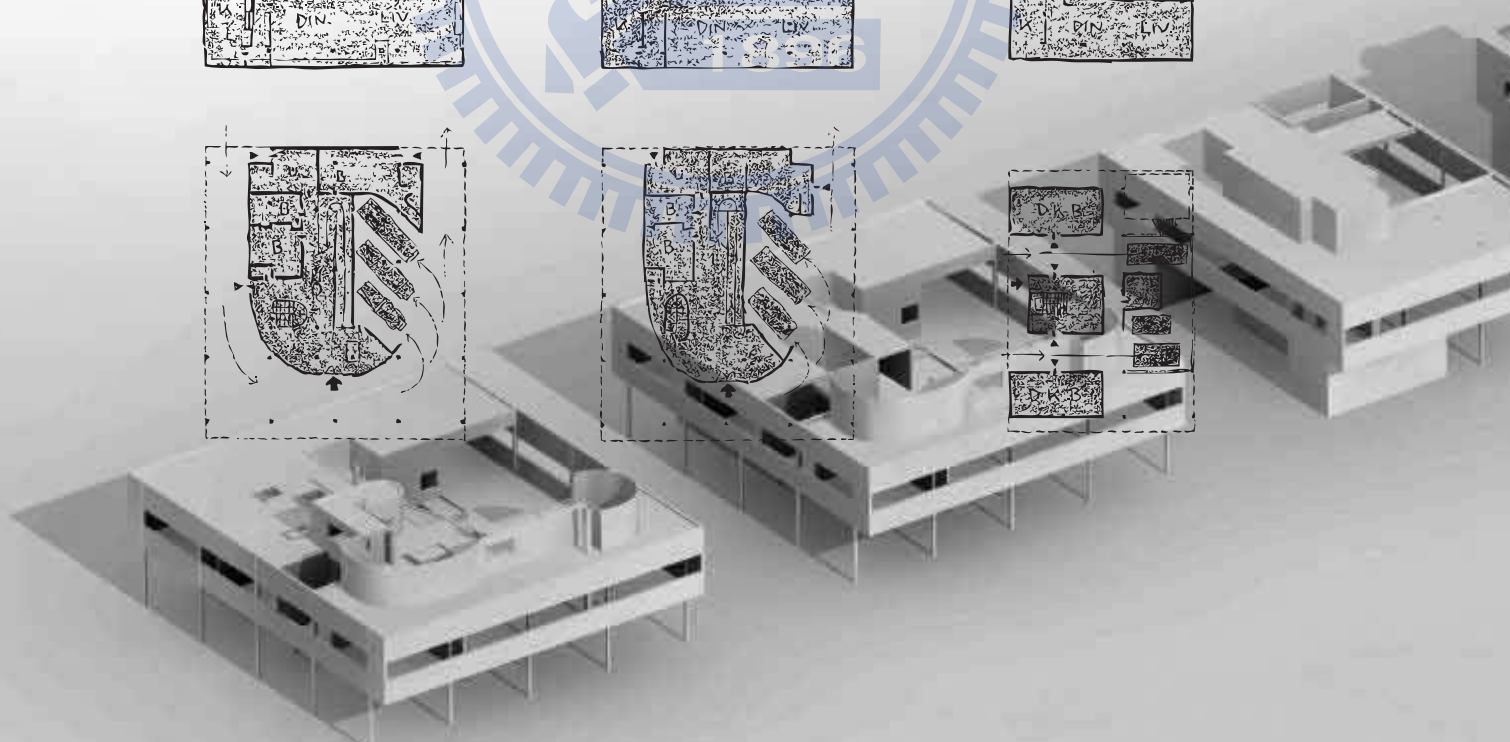
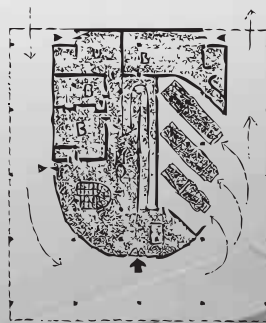
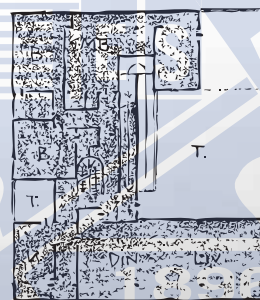
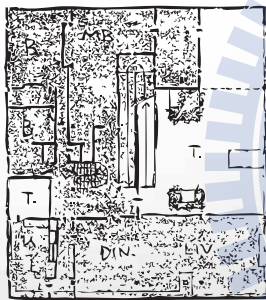
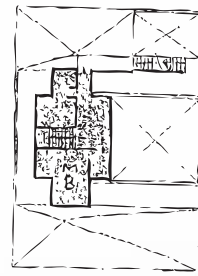
1929/4/12



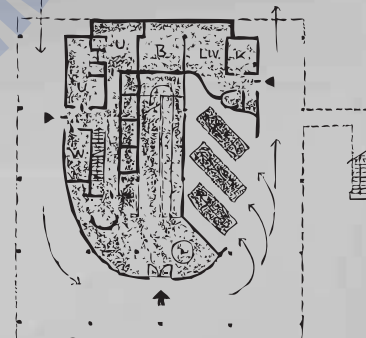
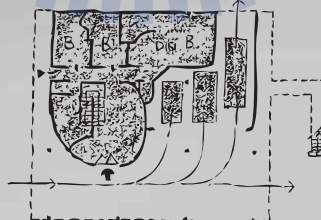
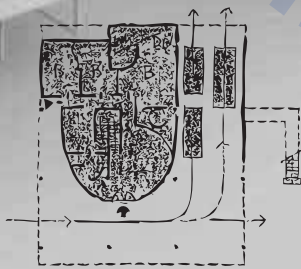
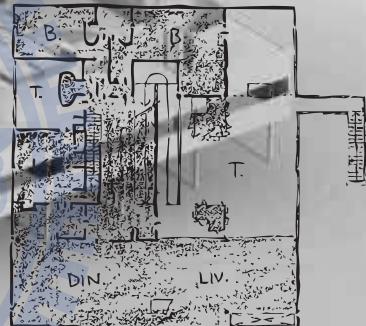
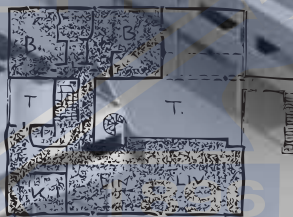
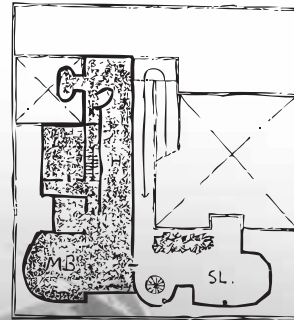
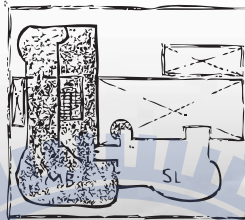
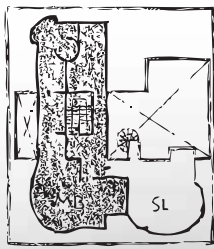
1928/12/17



1928/11/26-27



>>> *Crossing Parallel Realities*



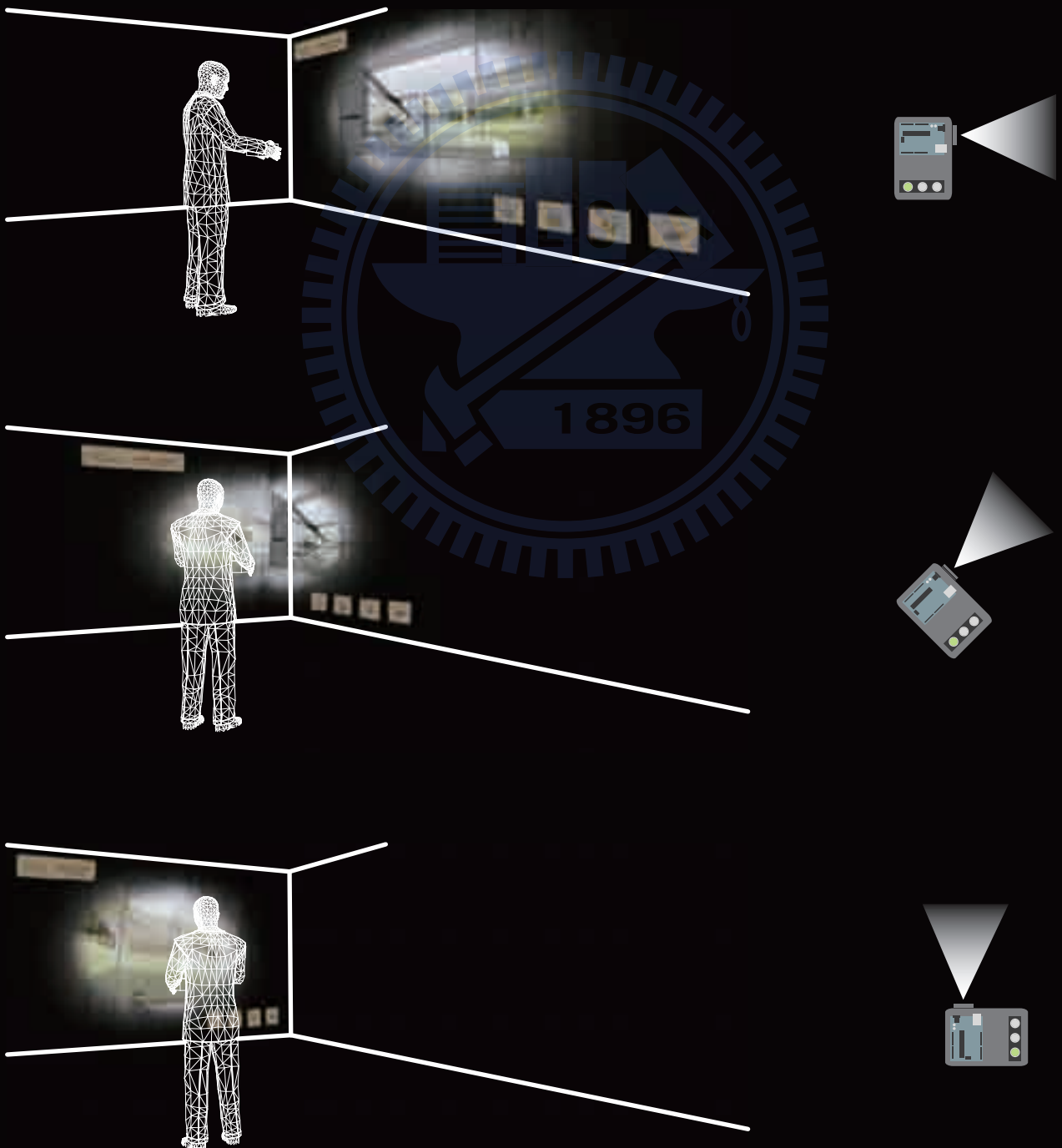
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1928/11/6

1928/10/6-10

# Design Approach

>>> *Define Parallel Realities*



>>> *Crossing Parallel Realities*



可以在地表、磚牆、天花板、人行道、或玻璃帷幕上自由漫遊的人造裝置，是什麼模樣？如果人造空間本身也會漫遊，它會帶我們到哪裡去？

動態的形式是否可視為是建築的第四維度？假定答案是肯定的，在動態諸多定義下，那一種動態可視為象徵第四維度的 " 變 " ？無論位移 (Locomotion) 或作動 (Motion)，若缺乏有驅策的機制，或是應變的能力，形成恆動，在時間上是無盡的狀態，無法定義它在時間上造成了變動。若要造成四維的 " 變 "，必須要使動態的空間或實體具有一套自組性的系統，賦予它和世界或人類行為產生互動的反應機制，至此，方能對人類感知上產生時間性。

" Gerridae " 便是在這個前提下產生的設計案，試圖透過模仿生物的漫遊機制，產生出一套得以呼應外界人事物的系統，讓這套系統在自主的狀態下能夠繼續展現它的時間性。達成這個要求必須考慮以下個要點：

1. Locomotion 移動動作是漫遊行為中最重要的動作要素，是由生物(物體)自主驅策的移動動作，藉以達到改變位置的目的。例如蒸汽機車利用蒸汽鍋爐的動力驅動活塞、連桿和曲桿，將往復運動轉換為旋轉運動，使輪子在鐵軌上轉動而帶動火車前進，這也是一種 locomotion。

2. Steering 轉向機制有了移動動作之後，需要轉向機制才能改變行進的方向。就生物而言，從草履蟲纖毛運動或翅膀肌肉微小的改變，到四足動物步法交錯原地轉向，是典型的轉向運動；就人造物的汽車來說，方向盤到轉向軸的傳動機構也是轉向機制。在轉向機制之上，還有感測和判斷機制，才能進行方向辨認、尋找目標、定位或導航。這部份牽涉智慧與決策，需仰賴感測機構、感應器、微控制器和程式邏輯。

3. Medium 移動介質特定生物(物體)的 locomotion 通常也會發生在特定的移動介質中，例如堅硬平面、鬆軟地表、崎嶇地形、沙地、有孔隙垂直面、水中、海底、氣流穩定的空中、空氣稀薄處等等。例如駱駝善於在沙地行走、馬善於各種地表的步行與奔跑、水母只能在水中飄移、蚯蚓適合在泥土中鑽爬等。如果考慮人造物的移動介質，就像火車之於鐵軌、雪上摩托車之於雪地。所以研究 roaming 與 locomotion 時也必須考慮移動介質。

## Gerridae

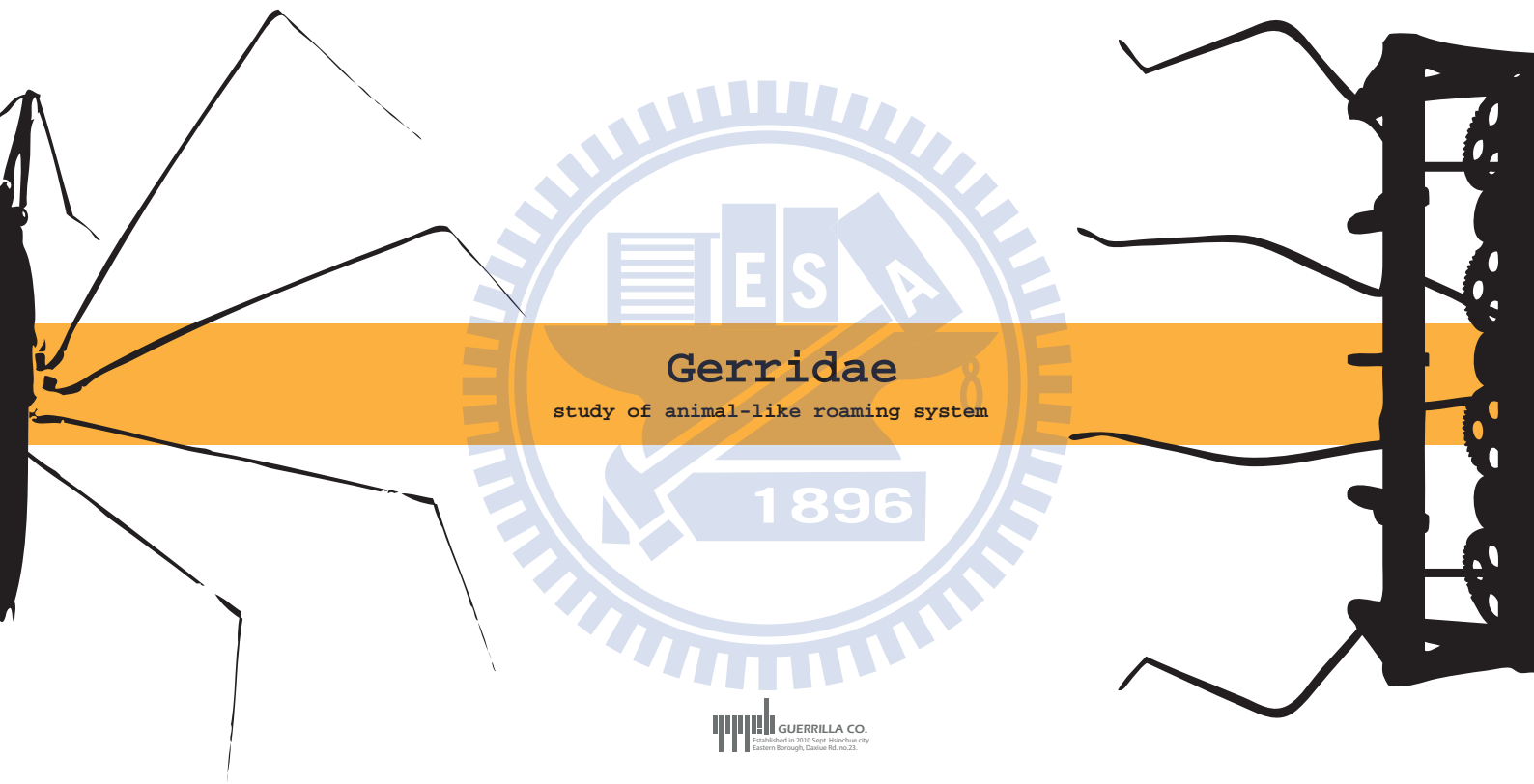


Gerridae



DIGITAL  
ARCHITECTURE  
STUDIO IV  
INTERACTIVE  
DESIGN  
2012

# Fabrication Approach



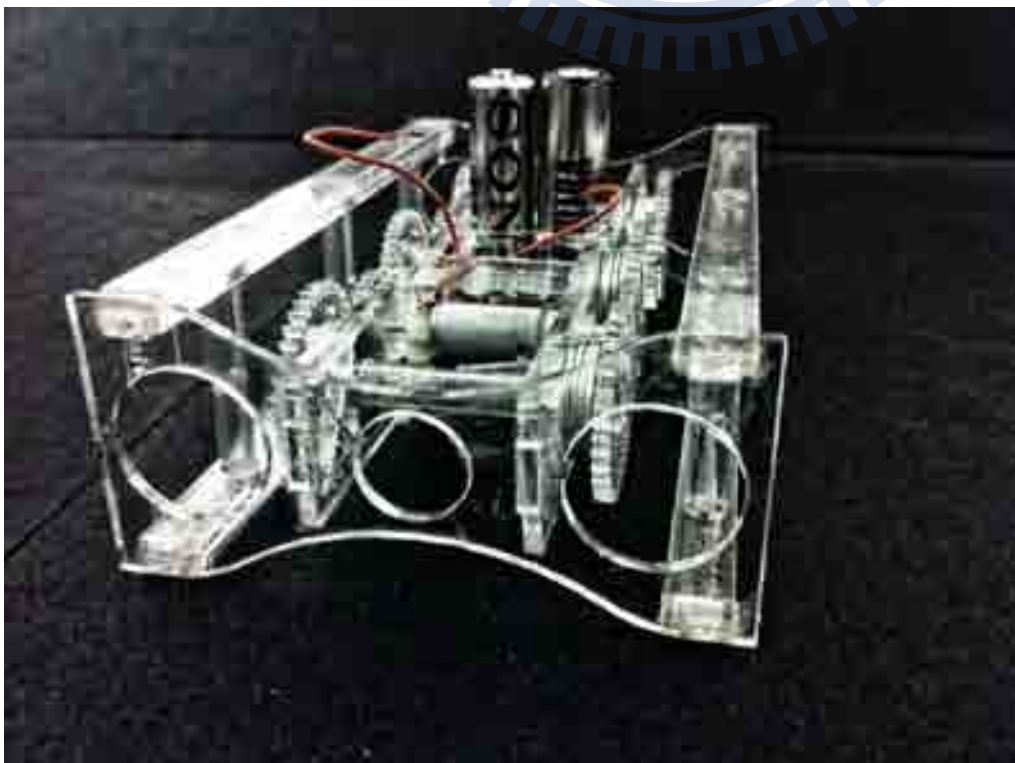
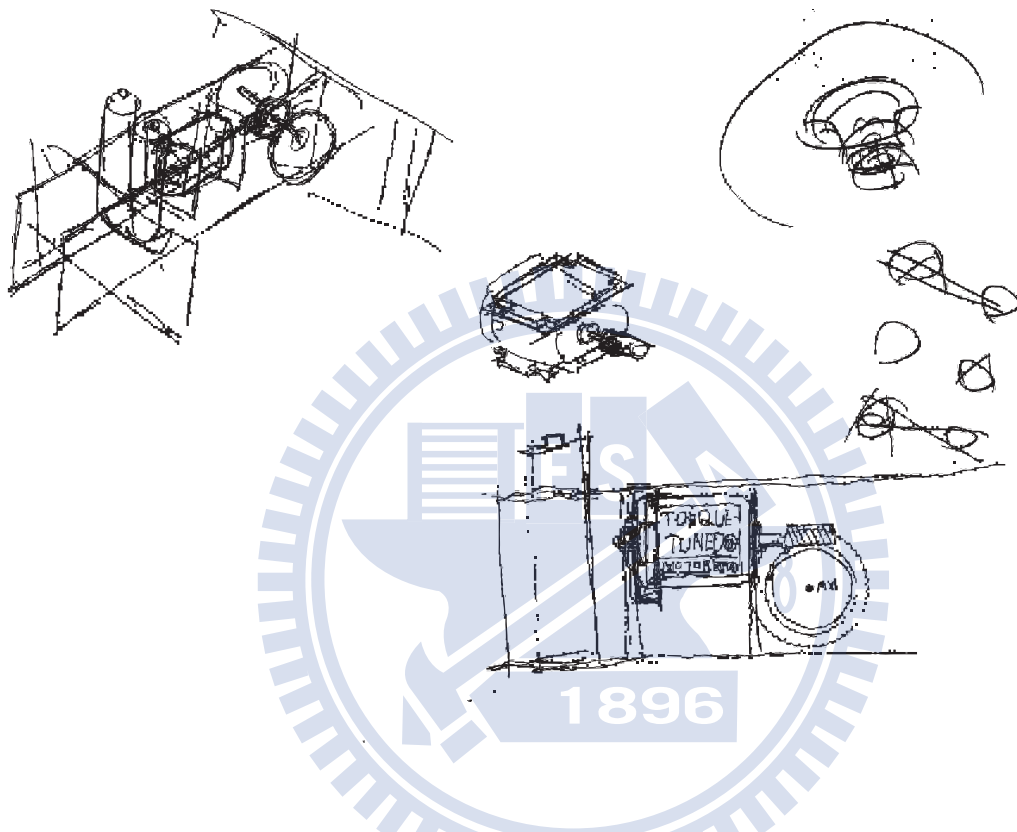
**Gerridae**

study of animal-like roaming system

1896

 **GUERRILLA CO.**  
Established in 2010 Sept. Hsinchu city  
Eastern Borough, Daxue Rd. no.23.

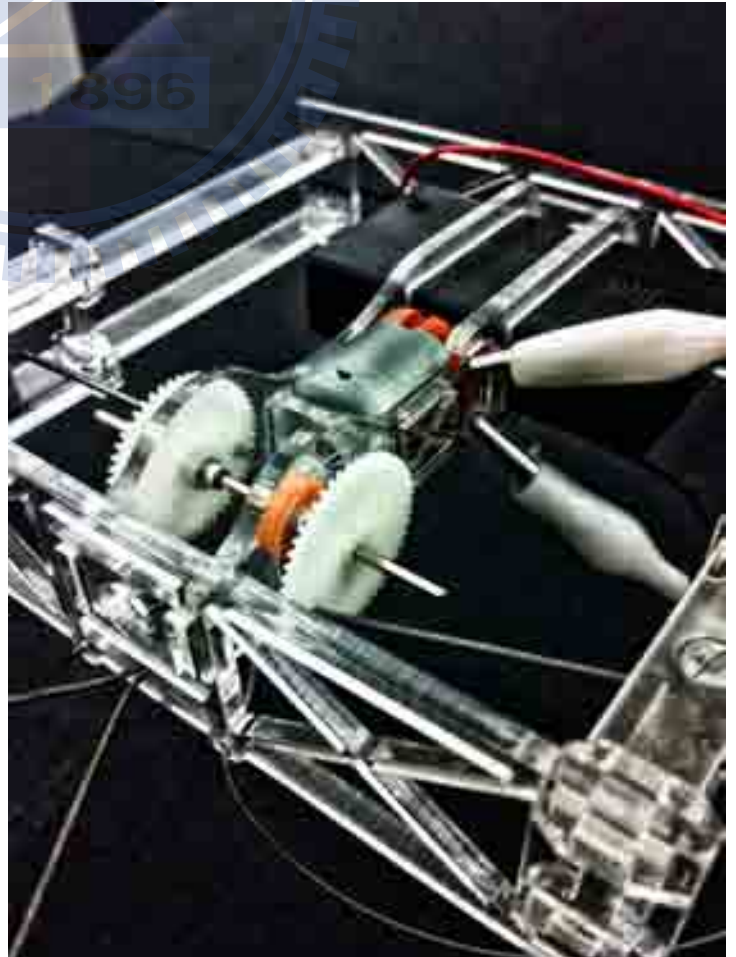
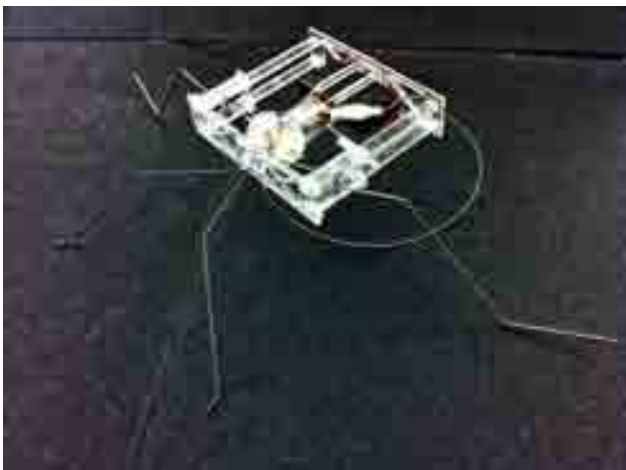
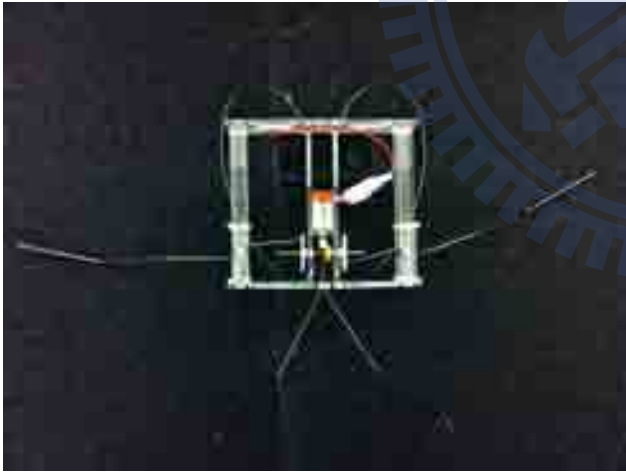
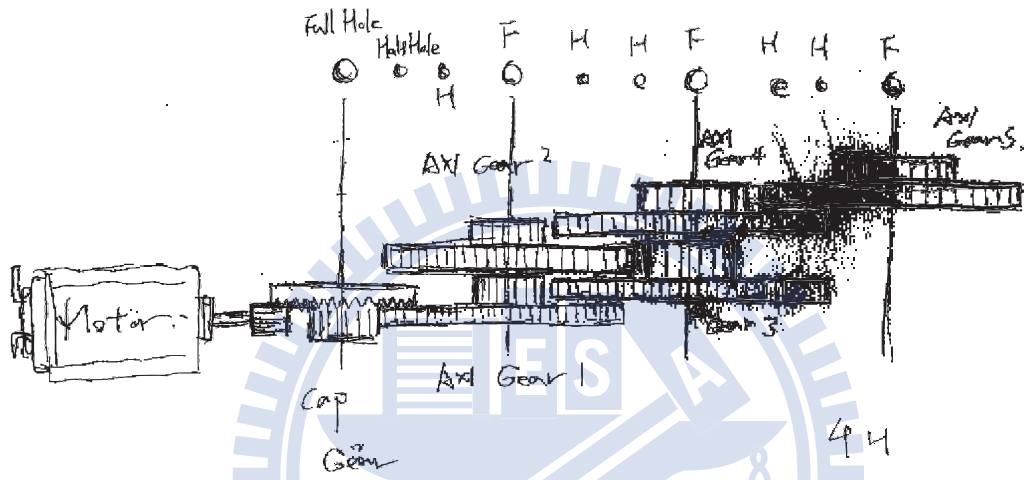
>>>frame/transmission study



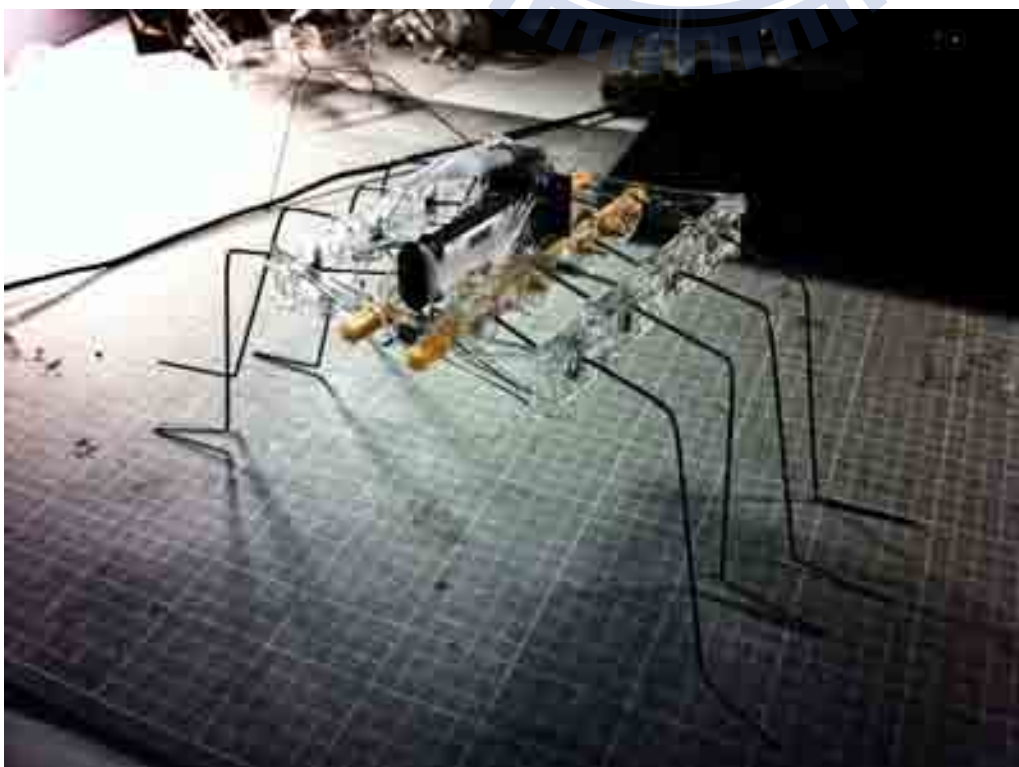
# Fabrication Approach

>>>legs/transmission study

Gear Box

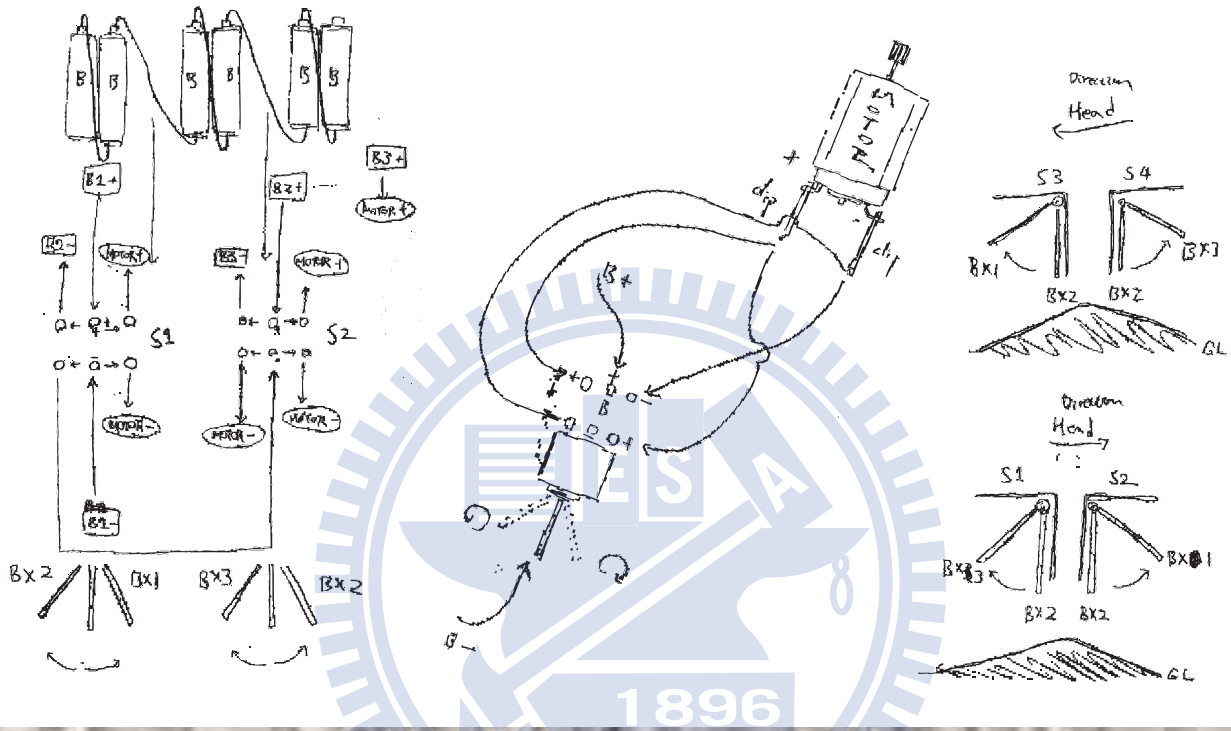


>>>frame/transmission study

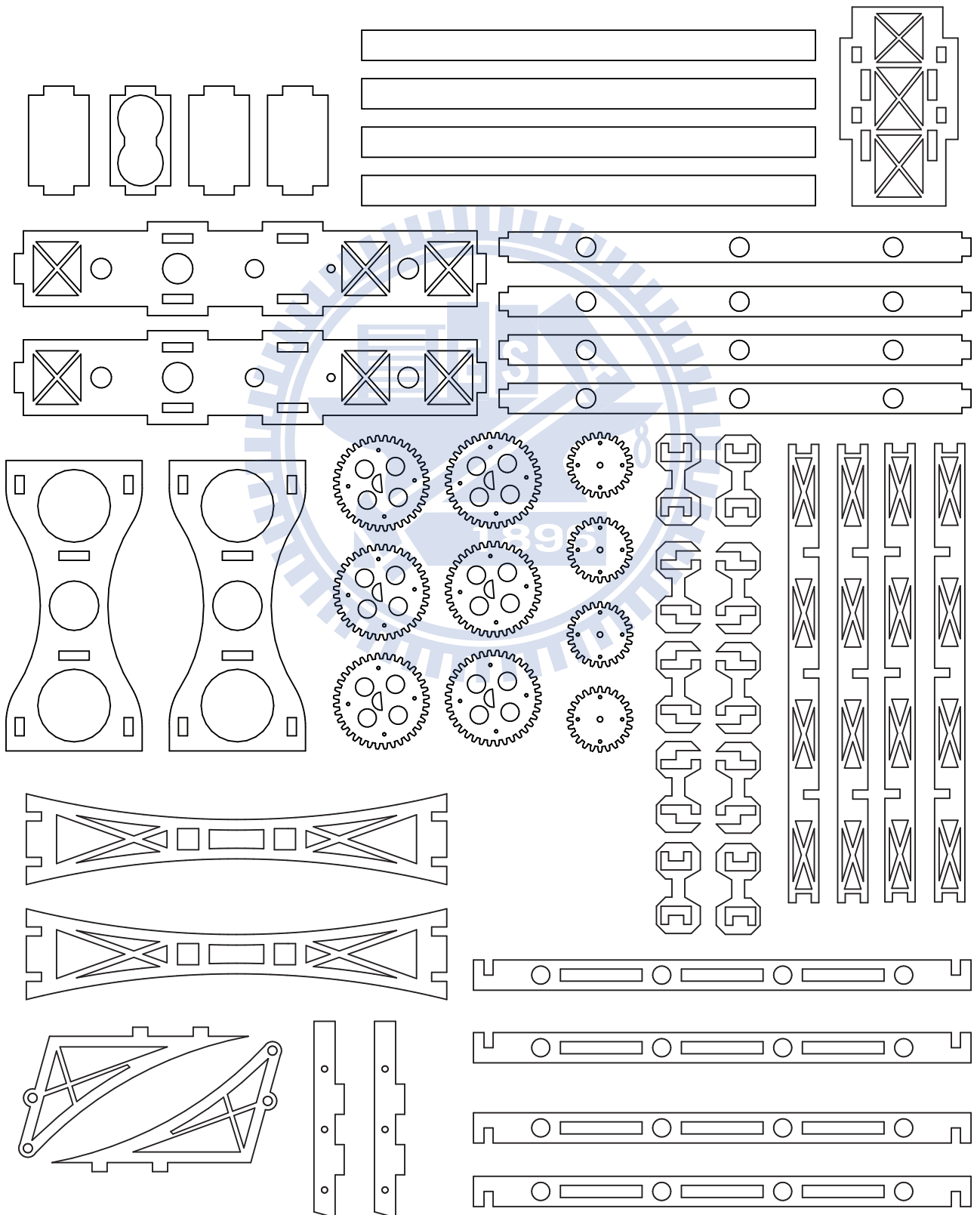


# Fabrication Approach

## >>> legs/transmission study



>>>frame/transmission study



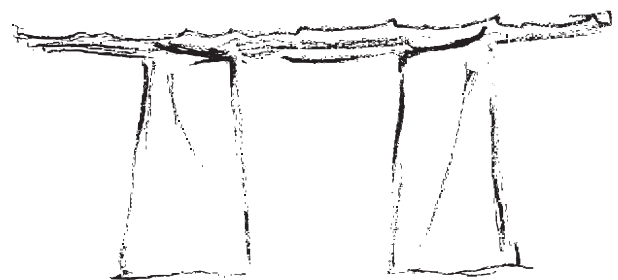
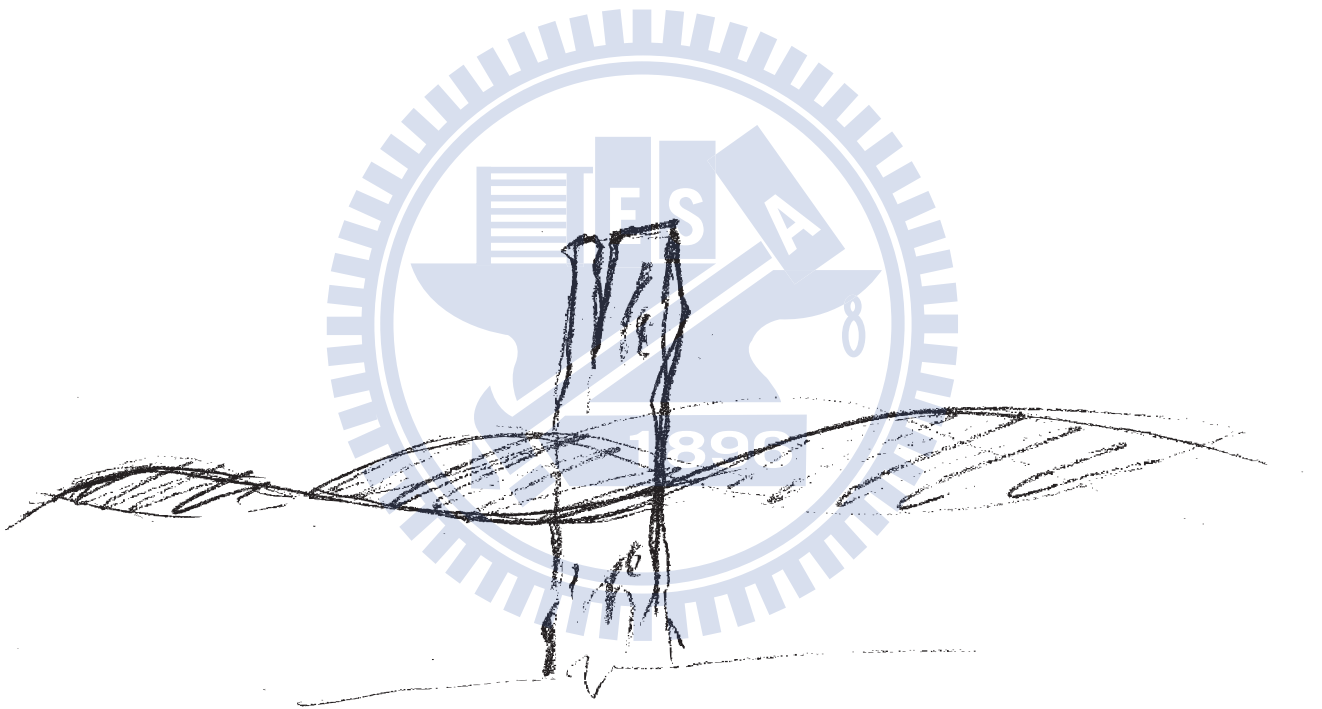






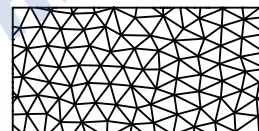
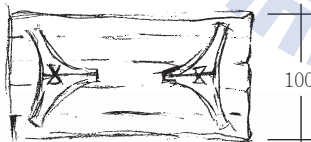
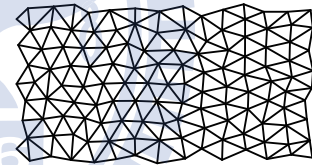
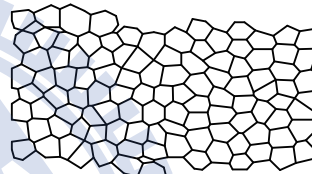
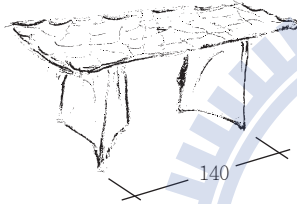
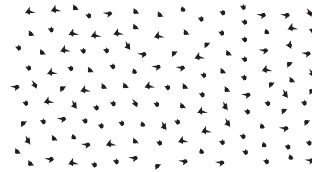
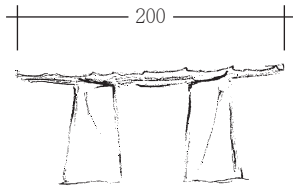
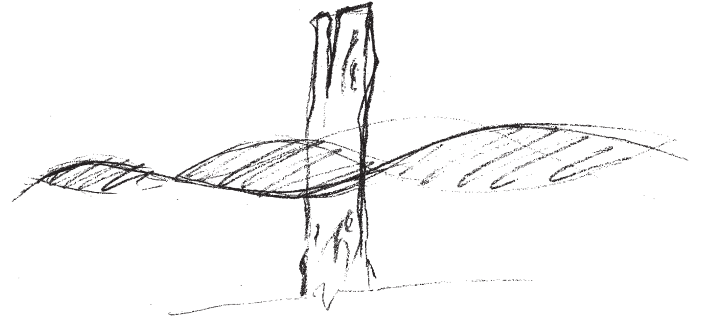
## ZOWA

The broken bricolle recorded residents's everyday lives in Venice through the erosion from sunlight, winds, as well as barnacles, and of course, especially from waves before it's been replaced. ZOWA(ZOWA is abbreviation of "zone of wave attack"), is a simple, purely bricolle wood-made table, which froze the moment when the waves patting against bricolle, then turned it into a special bumpy shape and pattern of the tabletop. By frequently being touched and used, ZOWA continues recording our daily life with bricolle. ZOWA is a purely bricolle wood-made table, assembled all parts with mortises and tenons. Five bricolle sheets were put together as a table board, leaving one face as original look of worn out bricolle, and engraving another face with a bumpy wave surface by the CNC router. One leg was made from two pieces of quadrant of bricolle log. A pair of legs connected table board with two mortises on the bottom of that, and then, the ZOWA was completed.



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Height\_73cm Wide\_100cm Length\_200cm  
Material\_bricolle wood

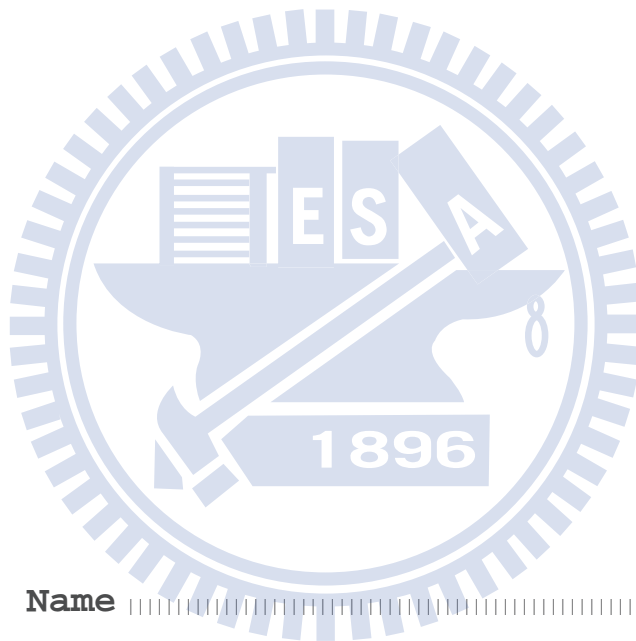
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