



# <繹緁









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### < PREFACE

"If that concept is the same two times, is the building the same both times?"

Cited from Architecture and Disjunction, Bernard Tschumi, April 2007



### < ABSTRACT

Re\_Fine is a compound word which means to improve, polish and carve. While the word is separated to RE Fine, it has a different meaning.

RE is a word which has a meaning of furthermore to improve something better. Architectural design is a proceeding process to finding an appropriate answer.

Although with the same issue and concept, there are still some differences which exist about how to represent the context and contents of architecture in other viewpoints. To re-start and to find a new answer achieving a new project is an important issue in my thesis statement.

Therefore, the main topic of my thesis is called RE, which means the same methodology will be used towards the persistent proceeding process of architectural creation.

RE is a starting quotation cited in every chapter, representing that research, definition, methodology, experimentation, and observation of the architectural design innovation.

RE\_Vertical distribution is a chapter which discourses how to organize a vertical distribution system from the research of the Seven-Eleven service system that strikes down the limitation of traditional floor system.

RE\_Embankment is a chapter which is liberating the urban wound by re\_defining the embankment of the Taipei city.

RE\_Combinant Complexity is a chapter which composites the programmatic organization by using the organization of Chinese thesis called The Five Elements.

RE\_Branding Stone Belief is a chapter thriving on the site of Stone religion through rejuvenation of the life cycle, of the forgotten or readily available material, skill and resources, which are relevant to the original environment.

RE\_Weaving Surface is a chapter discussing the methodology of the manufacture of surface through the adjustment in parameter of mathematical formula.

RE\_Cords of Competition is a chapter which records what I participated in competitions of design in different categories between these two years in graduate school.

Overall, this thesis of RE\_Fine, the goal which I aspire, is discussing architectural researches in my graduating works, which is in accordance with the meaning of RE.



### < READING PREFACE

".....I imagined it erased by rice field or beneath the water; I imagined it infinite, no longer composed of octagonal kiosks and returning paths, but of rivers and provinces and kingdoms... I though of a labyrinth of labyrinths, of one sinuous spreading labyrinth that would encompass the past and future And in some way involve the stars......"

Cited from The Garden of Forking Paths, Jorge Luis Borges, 1941







### < RE\_ 01





RE\_ VERTICAL DISTRIBUTION
7-|| SCATTERING OF 7-11

PROJECT < 01

DURATION < 07 2006 - 01 2007

ADVISOR (TERRANCE TAI-LAI KAN







### < RESEARCH

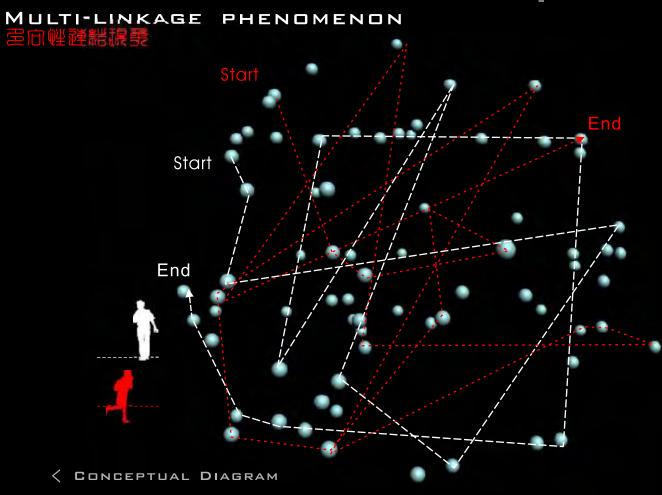
**地** 

縱用書是芝姓藍張不強珍帶稿...至 其起第主奉孙宁,包显起第四奉他還 恆强皎皎皎...

根事中配置回電船等



### RE\_ VERTICAL DISTRIBUTION



Phenomenon of daily life of citizens

### CONVENIENT SERVICE SYSTEM





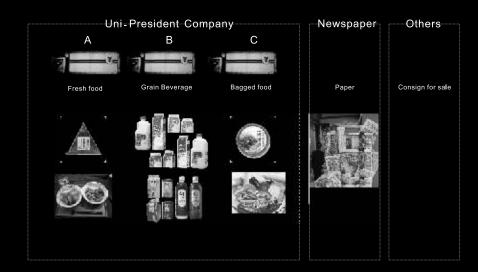
Instead of contending for business, they get more revenue while more 7-11 are opened in an area.

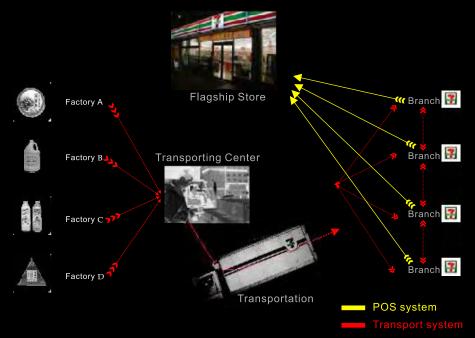
Therefore, 7-11 will begin to make a profit when the number of branches in a region is more than a constant.

Because the nearly distance of branches decline the cost of transportation, it increased the frequency and efficiency of transport.

Now, 7-11 have reached three times of routes per day.

#### <SYSTEM OF INNER TRANSPORTATION <内器動協業競





⟨ INNER TRANSPORTING SYSTEM OF 7-11



#### COMPARED WITH DIFFERENT AREA



#### 龍野庇度分開 Horizontal Distribution

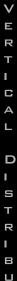
N >>>>

## >>>>

### THESIS STATEMENT









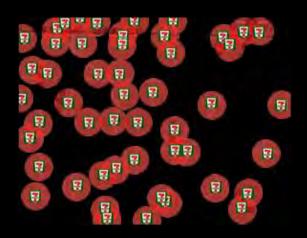


### / DEFINATION OF SERVING SYSTEM

#### Distribution condition <Taipei Hsin-yi Area >



#### Territory of service



#### THEORY OF DISTRIBUTION OF 7-11

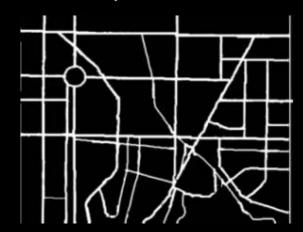
After a variety of factories transported products to the transportation center, the center distribute products to every chain system of 7-11.

According to 7-11's principle of distribution, there would be a 7-11 per 5 minutes' walk.

A five minutes' walk is about 200 meter; if there is no intervention of street system in it, 7-11's service intensity should be circular equalization.

It restarts to define 7-11's service intensity and service domain when street system interposed.

#### Infrastructural system





### ION ELEVEN

#### RE\_DEFINATION OF SERVING SYSTEM

#### 軍歌向捷頭騎票競



Distribution condition <Taipei Hsin-yi Area >

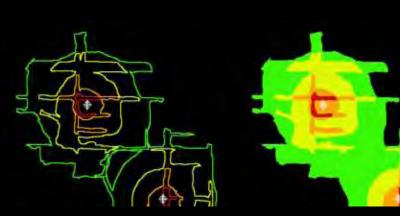
Zoom in



< Four levels in 200 meter

Strength of service

#### RE\_DEFINE THE TERRITORY OF SERVICE



Territory of serving system



1

Com AND

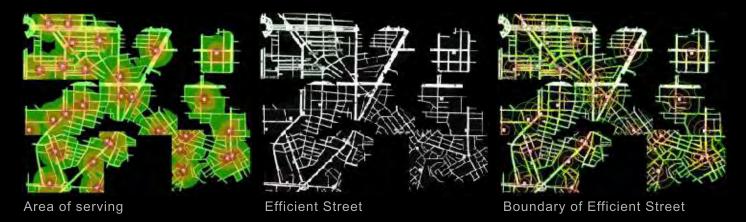


Level 3



Level 4



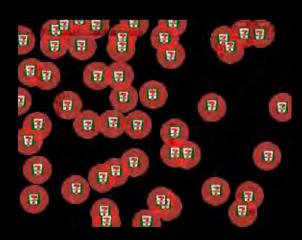


### MAPPING OF DISTRIBUTION SYSTEM

斯蘭宗聚轉爪



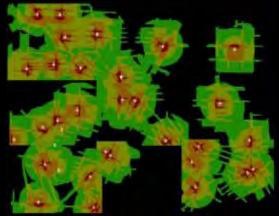
Distribution condition <Taipei Hsin-yi Area >



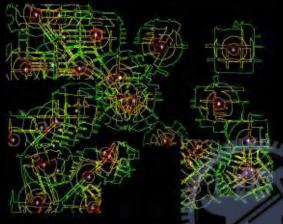
< Prototype of serving system



Re\_Define territory of serving system



New territory of serving system



Boundary of territory of serving system

MILLIAM





STRENGTH OF FOUR LEVEL

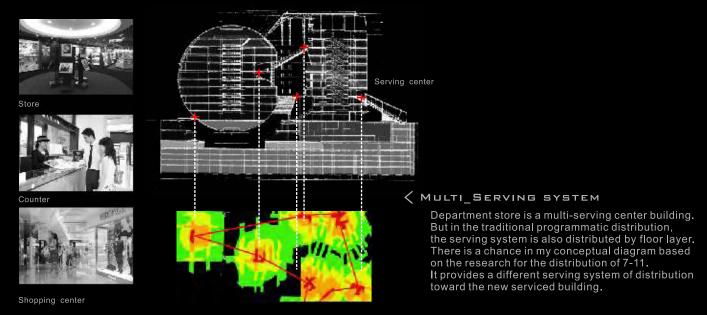
## 



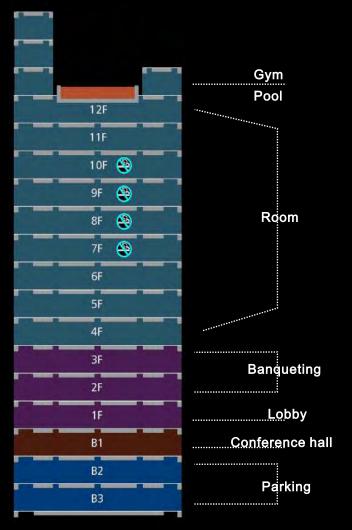
⟨ DIAGRM OF SERVING SYSTEM OF 7-11

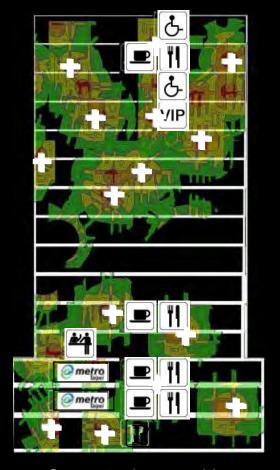
Strength of service 60% 100% 0% 20% 40% 80% Circulation of transportation





### / COMPOSITE PROGRAM OF SERVICE HOTEL > 密思内窗临组会





Traditional composition

Conceptual composition

#### ⟨ MULTI\_SERVING SYSTEM OF SERVICE HOTEL

Service Hotel is a single serving center building.
In the traditional programmatic distribution, serving system in Hotel limited by the floorslab.
Serving center not only single but also distributed by vertical floor line.
In my conceptual diagram which broke the original way of the distribution could have more chance to combine with another serving system.



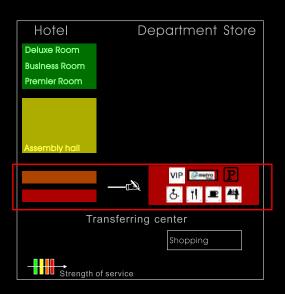
### RE\_ VERTICAL DISTRIBUTIO

### RE\_COMBINE THE PROGRAM

Service Hotel



Department Store



RE COMPOSE PROGRAM OF SERVICE HOTEL WITH DEPARTMENT STORE

To achieve the new serving system of Service Hotel which is a multi-serving center system, the distribution of serving program composition will be derived by the original department store .

Sogo department store

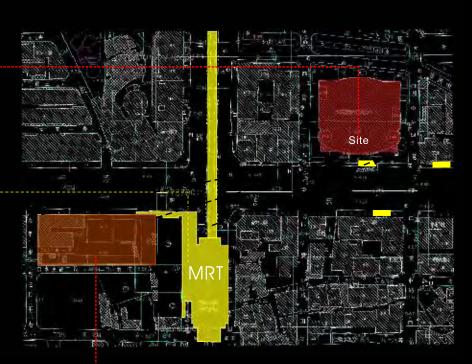


MRT Station



SogoII department store

### SITE ANALYSIS



Taiwan's SOGO Pacific Department Store, which is located on Taipei Zhong-Xiao Road, is the intersection of MRT Ban-Nan and MU-Ja.

Neighboring on Ding-Mei market area and sogoll, it is also the well-traveled hub of basement and ground.





#### $\langle$ Current classification of floor category

This is a current situation of the programmatic distribution of Sogo department store.

The classification of floor category refers that the same categorized program will be distributed by the same floor. According to the diagram of floor category, it is available to decide where sharing area should be.

#### ANALYSIS OF DISTRIBUTION OF PROGRAM

**商商人同居義分派** 

#### $\langle$ Conceptual programmatic distribution

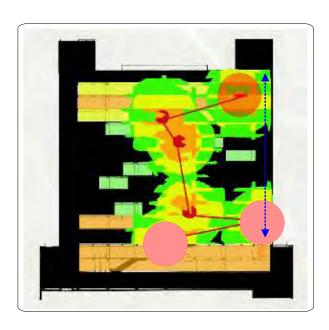
According the difference of the spacial serving function, the sharing zone will be decided by the original structure of department store. Consider with the infrastructure and circulation of different system, the distribution of serving center will be changed.

The serving center is multi-function. It could be counter, restaurant, gym.....etc.

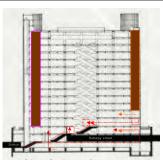
It can be connecting with the same serving system of the existent department store.

Therefore, while the location be decided where connecting with department store,

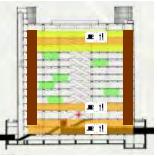
the new serving system will be efficiently operated



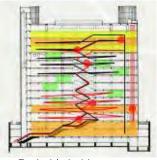




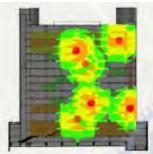
Circulation of entry



Sharing zone



Probably Lobby area



Arrivalable Service area

MILLION BOOK

### BUTION

### **EXPERIMENTATION OF VERTICAL DISTRIBUTION**≪百公配刑會驗

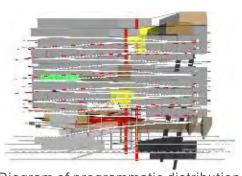
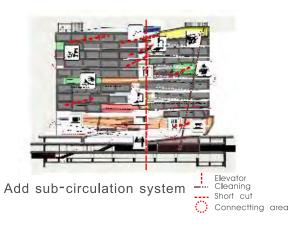


Diagram of programmatic distribution



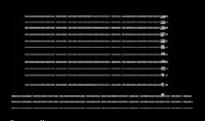
Mapping of the longitudinal section



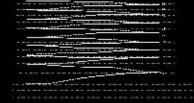


Imagination of Elevation

#### C DEVELOPING ON LONGITUDINAL SECTION



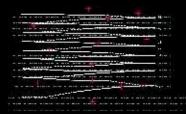
Sogo floor system



New circulation system



Programmatic distribution



Location of serving center



Efficient serving territory

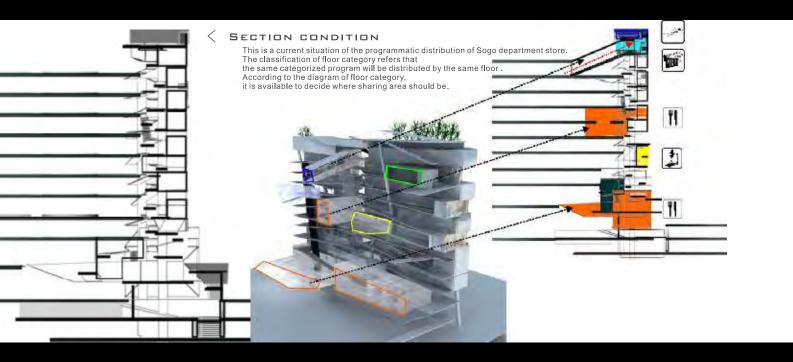


Mapping to Sogo system

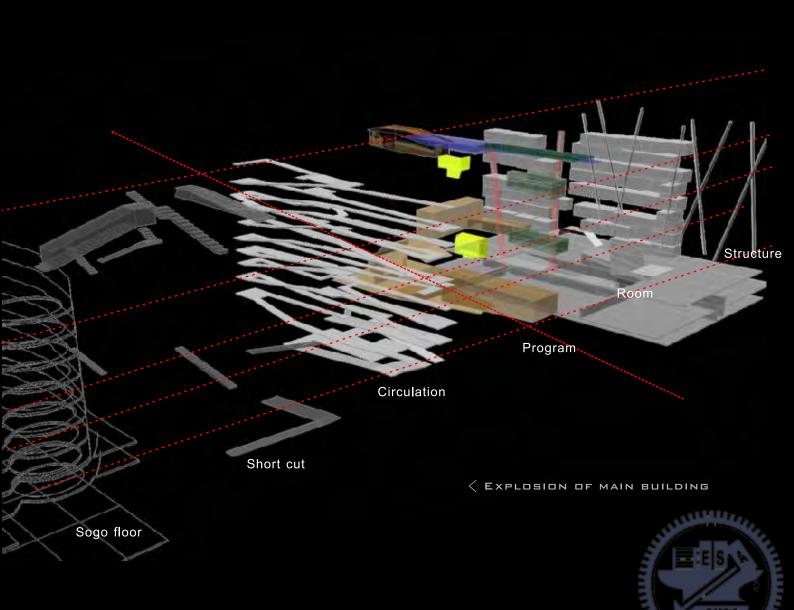


Shaping the boundary

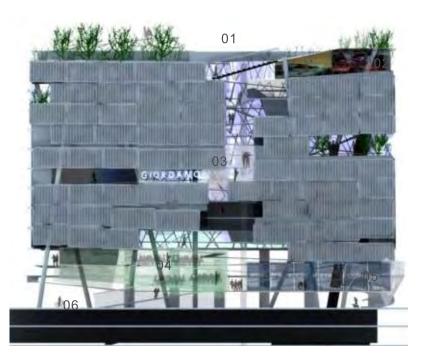




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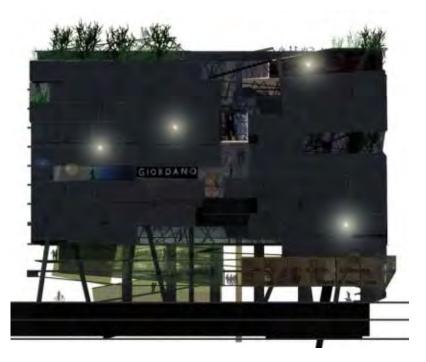


## <SPACIAL SIMULATION ⑤閻鱗蜒



Elevation of daylight

- 01 Roof garden 02 Theater 03 Gymnasium 04 Café 05 Restaurant 06 Underground square



Elevation of night



01 Roof garden



02 Theater area



03 Gymnasium



04 05 Shopping area



06 Underground square



### INTRODUCTION OF PROJECT

This project is about how to recreate an urban landscape with the consideration of flood happenings, and also allow the people within the metropolis to enjoy the natural wonders Taipei has to offer.

The purpose of this project is how to reconnect Taipei city with the river bank. In current situation, there is an embankment which is cutting the bank and the park over the boundary. Therefore, the basis of my topic will be for the people to experience and adventure the natural beauties of the embankment







< RE\_ 02





RE\_ EMBANKMENT
WANDER BETWEEN THE BANK AND THE PARK

PROJECT < 02

DURATION < 03 2007 - 07 2007

ADVISOR < LIANG-CHYAN CHEN







### ITE ISSUE



#### C ENVIRONMENT OF TAIPEI BOUNDARY

Taipei city is the capital of Taiwan.

But in this busy international city, the embankment actually acts as the Taipei boundary against the ugly images.

With the purpose to resolve the typhoon and flooding problem

Taipei city creates a boundary to protect itself from these dangerous situations Furthermore in order to facilitate the metropolis transportation system,

just above the southern border, is the overhead pass.

Together this expressway creates a boundary.

This divides Taipei's metropolis city from the outside environment.





### INTRODUCTION OF TAIPEI CITY





 $\langle$  How to get to and to enjoy the natural beauties ?

The large environmental area is just outside of the embankment.

People within the city find it difficult to get to and to enjoy this nature's wonder.

Therefore, it is necessary to create a new landscape To allow the people within the metropolis to enjoy the natural wonders Taipei has to offer.

#### ⟨ DIAGRAM OF ANALYSIS OF TAIPEI CITY



Figure ground

Green and blue



## 







CURRENT CONDITION













#### THE CUTTING BY THE EXPRESSWAY

The site is Surrounded by residential communities The main recreational attraction is the youth park with surroundings of fast paced roadways The highway overlooking the embankment with Huan-He south road There is a cut between the natural environment and the artificial Youth park



#### AERIAL VIEW OF LOCATION

Using Google Earth's aerial view we are able to view the distance relationship between Xin-Dian River,riverbank, Huan-He South Road as well as the youth park.



### INTRODUCTION OF TAIPEI CITY



Southern surroundings of Taipei city : Xin-Dian River Northern surroundings of Taipei city : Tamsui River

#### IF THERE IS NO EXPRESSWAY AND EMBANKMENT ?!

If one were to view from Taipei's Opposite shore - Xin-Dian and there is no buildings and embankment dividing Xin-Dian River. Truthfully, the view would be of Yang-Ming Mountain.

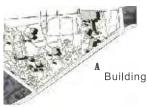
#### PERSPECTIVE VIEW FROM THE OPPOSITE SHORE

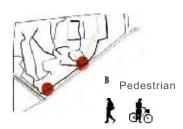


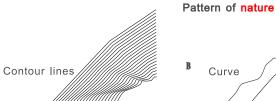
# COMPARE WITH THE CONSTITUTIONS 形式購除低較

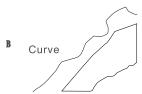








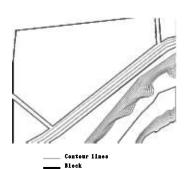




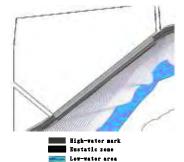
From base pattern, I discover there are mainly two kinds of elements constitutions On the side of the youth park there is a broken line On the Xin-Dian river bank is a curved line

Pattern of artificial

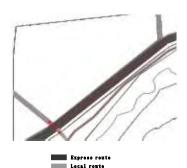
## <ANALYSIS OF SITE 臺帕分駅



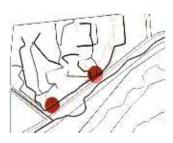
Pattern



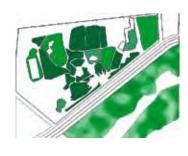
Water zone



Main vehicl circulation



Pedestrian



**Grass and Trees** 

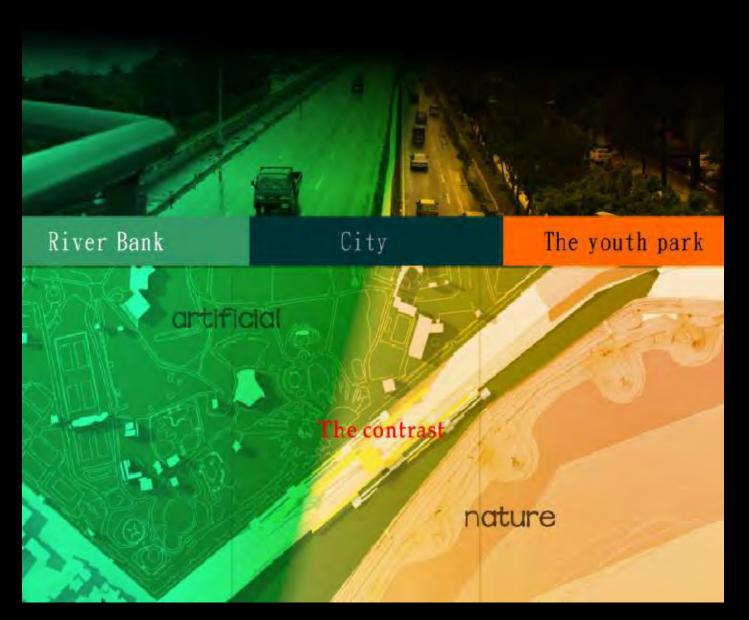


Public space Housing area

**Building area** 



### TRANSITION OF TAIPEI BOUNDARY



#### THREE UNIQUE SPACIALTIES

From these base analysis one may discover that there are three unique specialties: Artificial youth park The natural riverbank

And the city's infrastructure

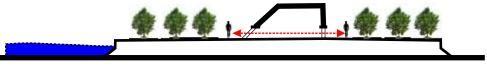


#### <STRATEGY OF THE NATURAL BANK 對当顾恨蝇够煞略



the embankment simultaneously is the expressway and a landscape

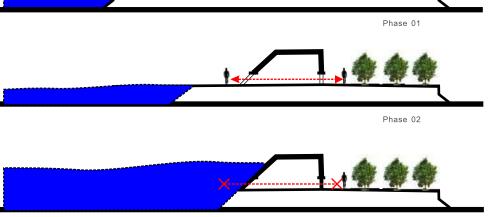




#### < INTRO OF SITE

With the consideration of flood happenings, is this projects greatest focus.

Therefore, the basis of my topic will be for the people is to experience and adventure the natural beauties of the embankment.

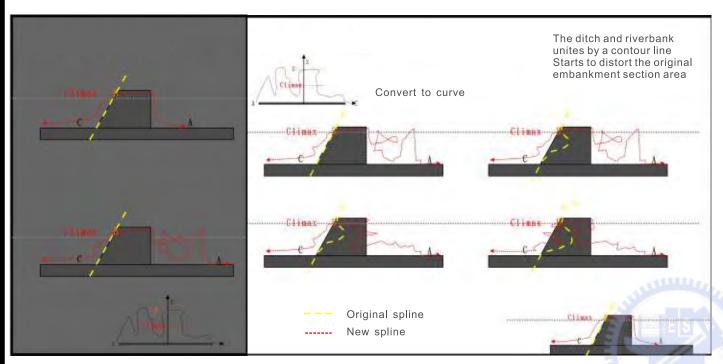


Phase 03

#### / CIRCULATION RULES / 蘇縮龜辨憩血

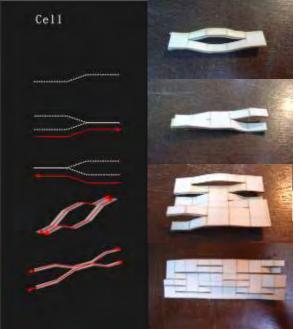
< DIAGRAM OF SECTION

The new landform also extending the riverbank and combine with the embankment





### TRATEGY OF THE ARTIFICIAL PARK

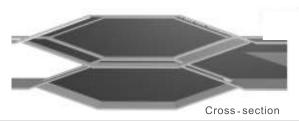


#### EXPERIMENT WITH CELLULAR SKIN SYSTEM

Experiment with cuting sheet of different cut to create a kind of landform which is composed of broken spline toward the artificial pattern It also reform a new landform to integrate the original pattern in the Youth park



Folding



CELLULAR SKIN SYSTEM

# 

Connection

#### SEQUENCE OF ANALYSIS

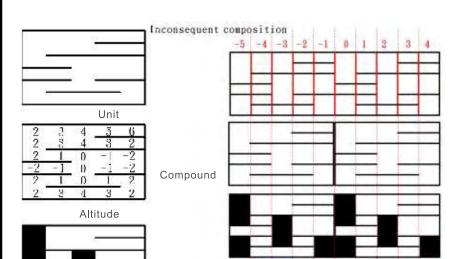
Combine the same figure in illogically way can create a new figure which broke the prototype and the original

In the variable type, it creates a new slope and also produces a new sized platform. The different slope can also provide for different activities and different character

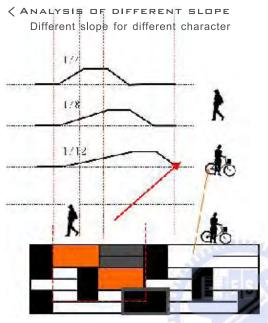
⟨ ANALYSIS OF CONSEQUENCE MODEL







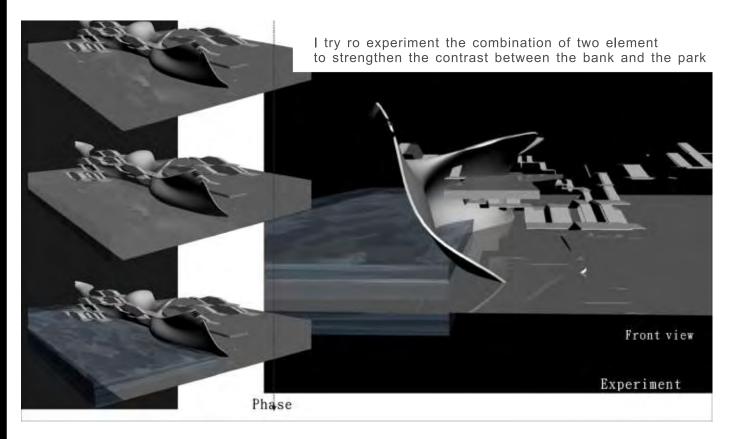
Deviant



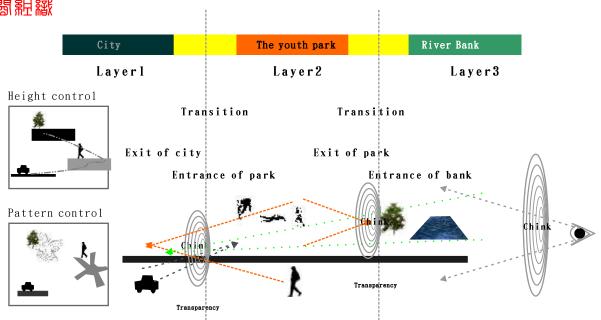
### EXPERIMENT WITH TWO ELEMENT

淵輝克籌够混合





#### <SPACE ORGANIZATION 窗間組織



# CONCEPT OF SPACIAL SEQUENCE The transition of spacial sequence strengthen contrast between the bank and the park.



Layerl

Layer2 The youth park

Layer3 River Bank



The youth park Layer2

River Bank

Layer3



nature

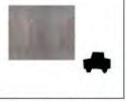


Exit of city

Exit of artificial



Transition of pattern







Transition of texture









Programmatic transition

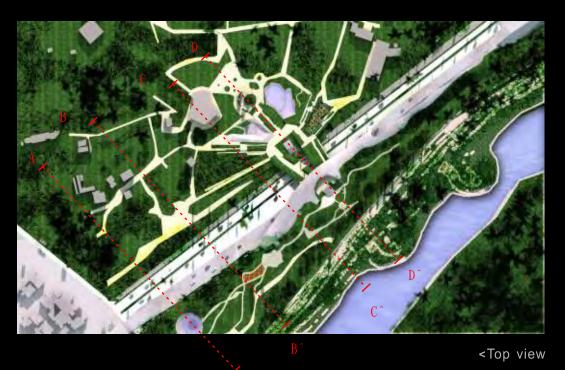
Wander between the bank and the park



## CONSEQUENCE 狀羅茨籌够混合



<Longitudinal section















Distribution of program

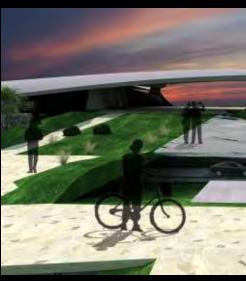








The open-aired pool



The exit of the



The open-aired bar

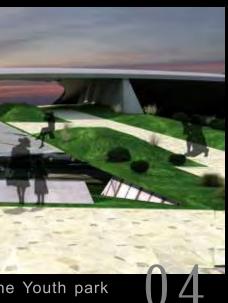


The entrance of the Youth park



< LIBERATE THE URBAN WI

Recreating the dike work place outside of the dike and nature





The entrance of the river bank



#### סאטכ

e by the mountain image to link the inside and al environment



### INTRODUCTION OF PROJECT

The concept of the five Elements is used in ancient Chinese cosmology (Include: Metal, Wood, Water, Fire, Earth)

The Five Elements can grow and decline in circulation and also composed of the Ten Heavenly Stems.

Using the system based on the Five Elements relationship can develop a Series of methodology of special recombinant complexity.

In the end, the whole building no matter from the composition by program, and configuration of spacial unit, to the circulation system even in the pattern in Elevation, are created and formed by the system from the Five Elements.

This is an exercise by the logical design process based on different research.







## < RE\_ 03





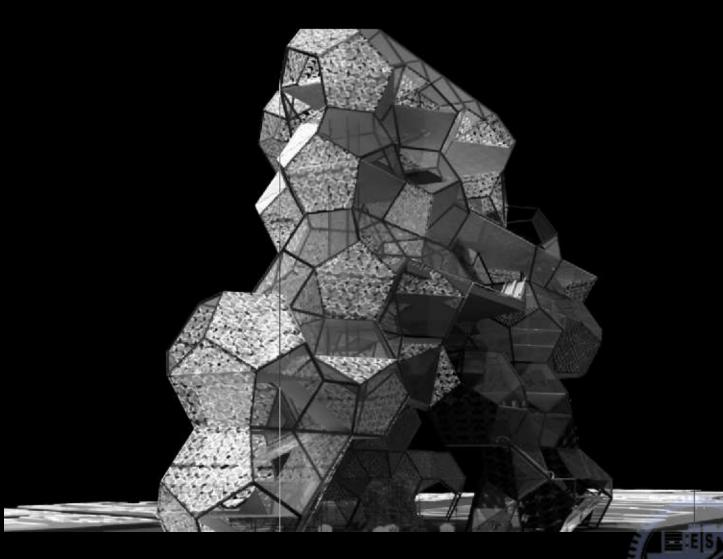
RE\_ COMBINANT COMPLEXITY

THE FIVE ELEMENTS

PROJECT < 03

DURATION < 07 2007 - 01 2008

ADVISOR < Po - TING TSENG







## 

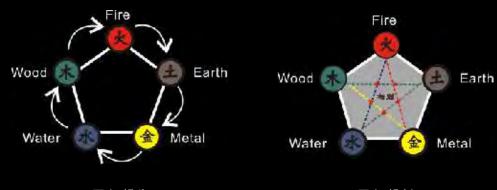
急: 金硫彈火 5所就 金麗望說,祁定金牒; 金麗宴說,龍定金謀; 金麗宴記,即定金姓;	河. 透金邊路, 電腦差, 中龍坐金,	5種烹藥. 以篇原聚. 金巴中蠶.
观: 似陆强ൻ、5床糕 似龍学中,中宫观晓; 以龍学中,中宫观晓; 火龍空金,金宝火烧; 火龍空流 "我是火火"。	1旗. 荡则强中, 金弱魂则, 能震垩则,	5火菜熵. 水浸鳞嘛. 水层翡嫩.
能: 能磁導中, 生成物能量坐线, 赤色能纖; 北西湾大水 火色花头; 水色花头; 水色花头; 北海縣等等, 杂色光源;	型。 一緒 一緒 一緒 一緒 一名 一名 一名 一名 一名 一名 一名 一名 一名 一名	写传某 螺形形成 不是 一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个
中:中味清脆、5篇碱中能学系、金色中瓣:中能学系、金色中瓣:中能多种,能多中流。	福. 孫中寶金, 北寶華中,	5颗某事. 以篇健康. 中定观哦.
流: 胡姑遠盒. "5成糊就清篷坐观。" 电电话数: "我就看这一个里流戏!" 记里流探: "我我说道里,就是我被!"		5水黑源. 水黑源. 水黑源. 品层能編.





### THEORY OF THE FIVE ELEMENTS

#### 黑向根献能区



天干相合

五行相生

五行相剋

#### DEFINATION OF THE FIVE ELEMENTS

The theory of the Five Elements is used in ancient Chinese cosmology. The Five Elements can grow and decline in circulation.

### THE FIVE ELEMENTS VS THE TEN STEMS

**日**爺vs大写

庚辛金 剋 甲乙木

丙丁火 剋 庚辛金

戊己土 剋 壬癸水

甲陽木 + 己 陰土 = 生

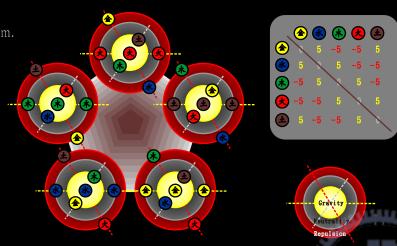
丁 陰火 + 壬 陽水 = 🖟

戊陽土 + 癸陰水 = 🚜

#### THE FIVE ELEMENTS VS THE TEN STEMS

The ten Heavenly stems stand for the Yang ("陽") and Ying("陰") in the Five Elements The Five Elements are composed of the ten Heavenly stems.

The subtractive relation between ten Heavenly stems are based on the five elements circulative system.



DEFINATION OF THE FIVE ELEMENTS PARAMETER



### PROGRAMMATIC CATEGORIZATION

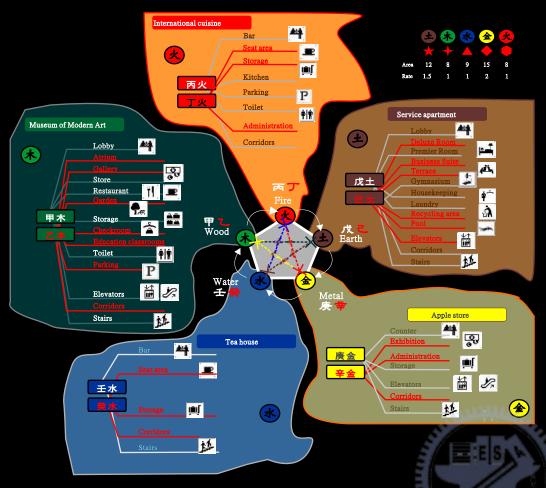
丙丁 Fire

THE FIVE ELEMENTS VS PROGRAM MATRIX

甲乙 Wood 戊 Earth Museum of Techonology
Apple Store 金 Water Metal

According to the theory of the Five Elements, different attributes of spacial contents could be corresponded to the Five Elements. In compliance with this principle of classification, we can correlate spacial contents which are in existence with the Five Elements.

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# <SITE ANALYSIS 区爺雛狲靚別禮血







Site is a parking area near the Far Eastern Mall which is a highly commercial area presents sleek and vertical structure.
This parking area located on the Duen Hua- Nan. Rd and An-Hen Rd.
This area is integrated resident and commercial character.







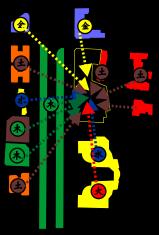
INTRODUCTION OF SITE

CURRENT SITUATION



## ANALYSIS WITH THE FIVE ELEMENTS



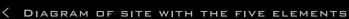




Distributiom of Program by site

The five elements classification with current program

The effect of the five elements

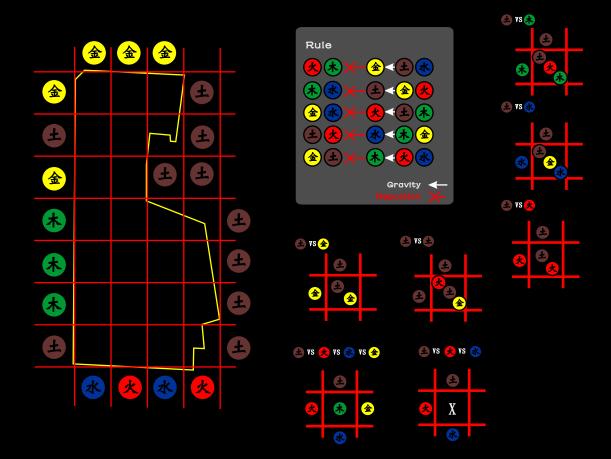






### / UNIT GENERATION SYSTEM

#### 出並單产生成第綴



#### Rule of the arrangement of the five elements

According the theory of the five elements which circulated each other, and also has the gravity and repulsion with each other, creating the rule of the nine space theory.

This rule is a composition of programmatic distribution.

In the nine space rule, each space has own character which is decided by the element of other side.

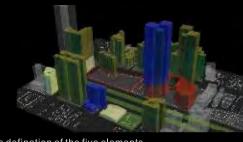


# く<mark>UNIT</mark> arrangement system 工造単茂縣渕黒線

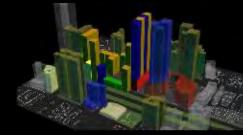
The spacial character in my building will be affected by surroundings environment.

Therefore, each area will have different program character.

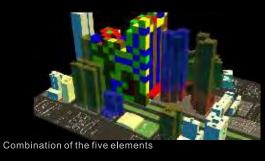
This programmatic content in whole building are composite by the methodology of the five elements.

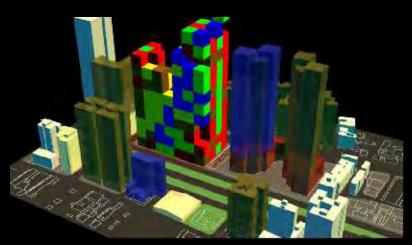


The defination of the five elements

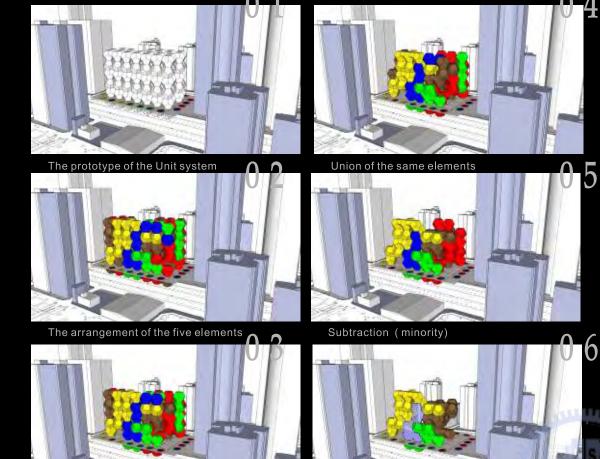


The effect of the five elements

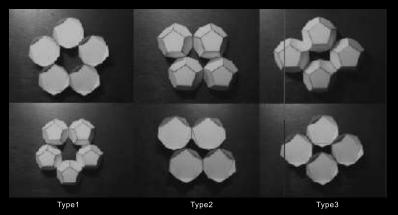




⟨ UNIT GENERATION SYSTEM WITH THE FIVE ELEMENTS

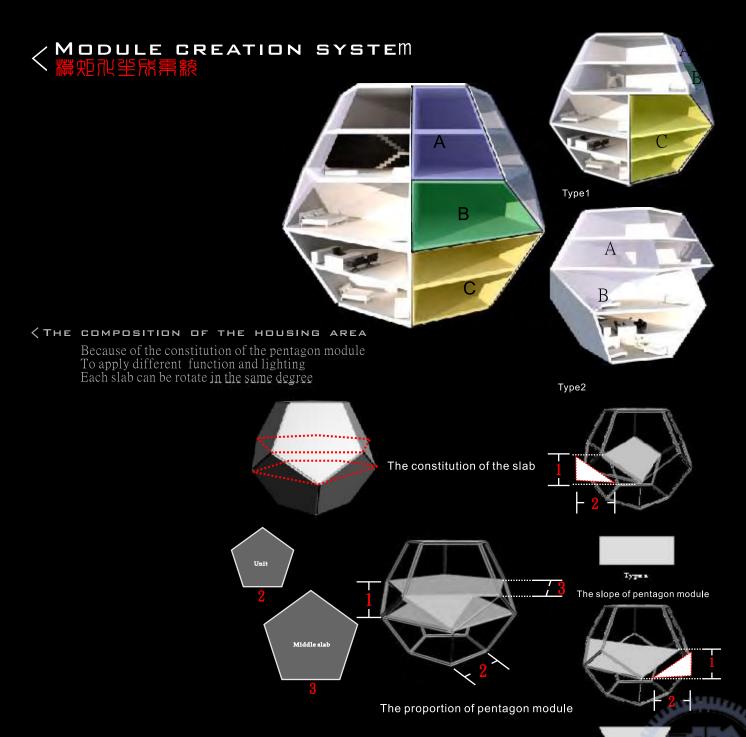


Subtraction (single element)



透過五角幾何型體的研究分析,找出斜率 比例 幾何關係,進而生成空間元素架構,空間透過五 角單元體堆疊產生新的空間形式,另外透過不 同program的分區,單元體彼此之間模矩化的數 量符合不同機能的空間需求.

重付4不问機能的空间需求。 如住宅單元的構成,即是將五角單元體在細分 ,單元體分化成三種不同住宿空間單體,透過開 口部的控制及空間動線的串聯系統,同一種住 宅單元有三種變化,以此構築而成建築內部空 問



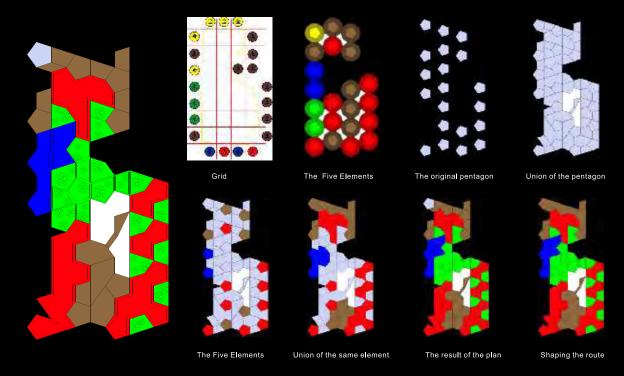
Type b

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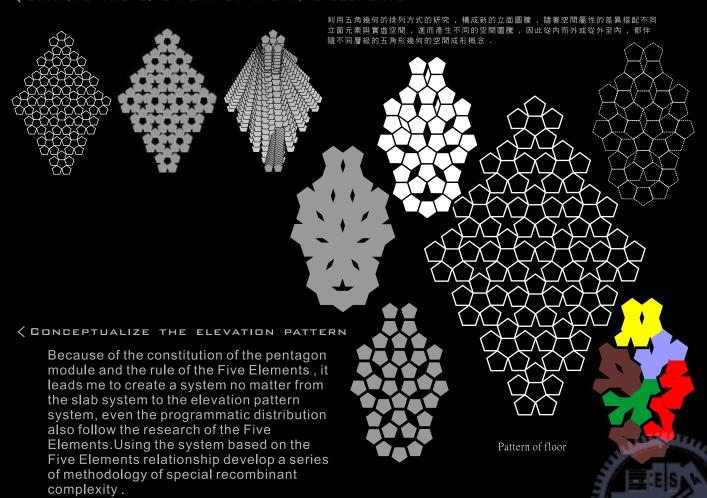
ANALYSIS OF THE CONFIGURATION OF PENTAGON MODULE



### DEVELOPMENT WITH PENTAGON SYSTEM

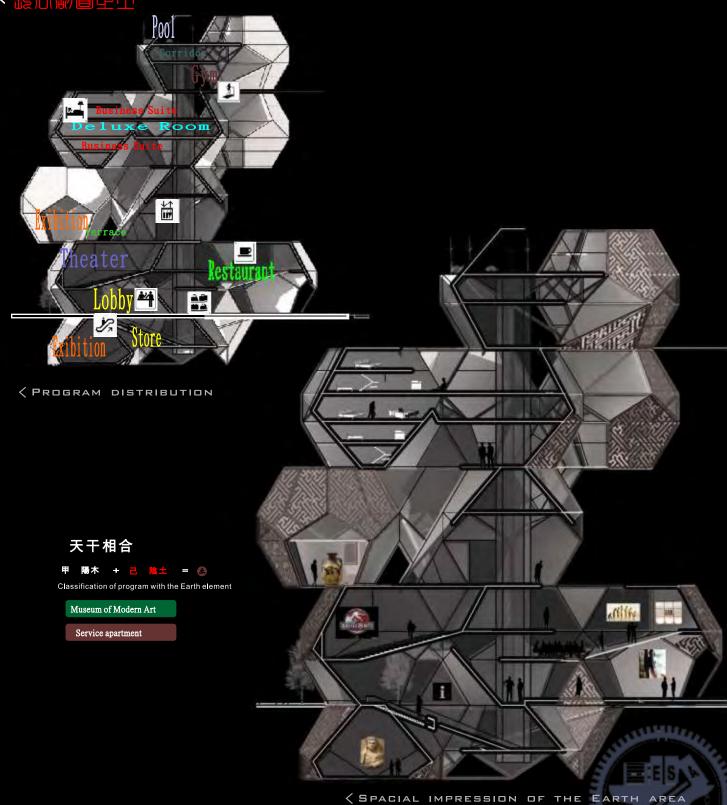


#### SHAPING THE SITE PLAN BY THE FIVE ELEMENTS



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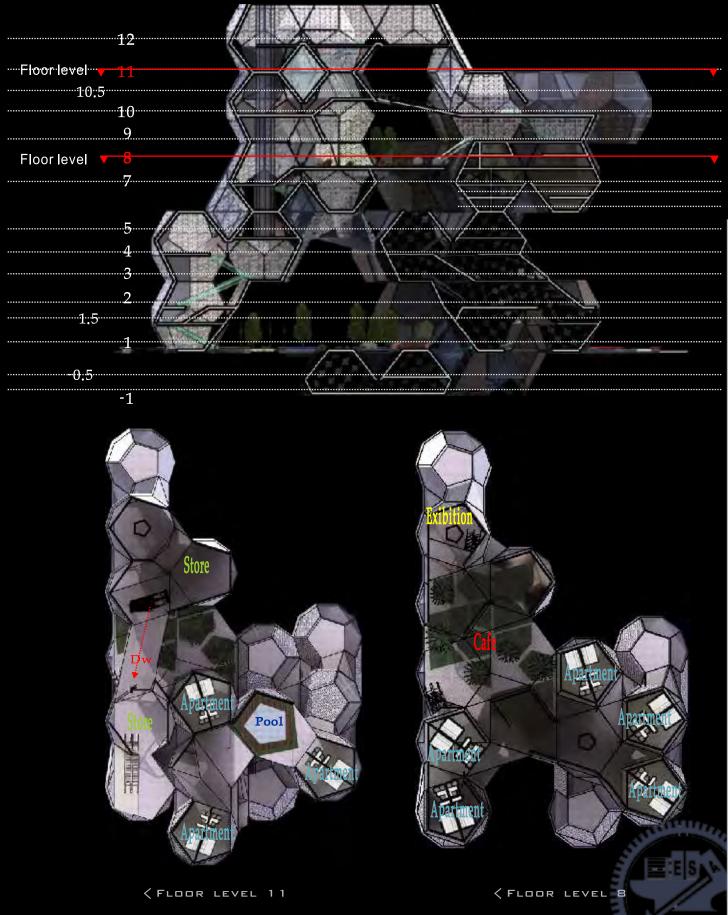
# CLONGITUDINAL SECTION OF THE EARTH AREA



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## X

## くFLOOR LEVELS OF WHOLE BUILDING

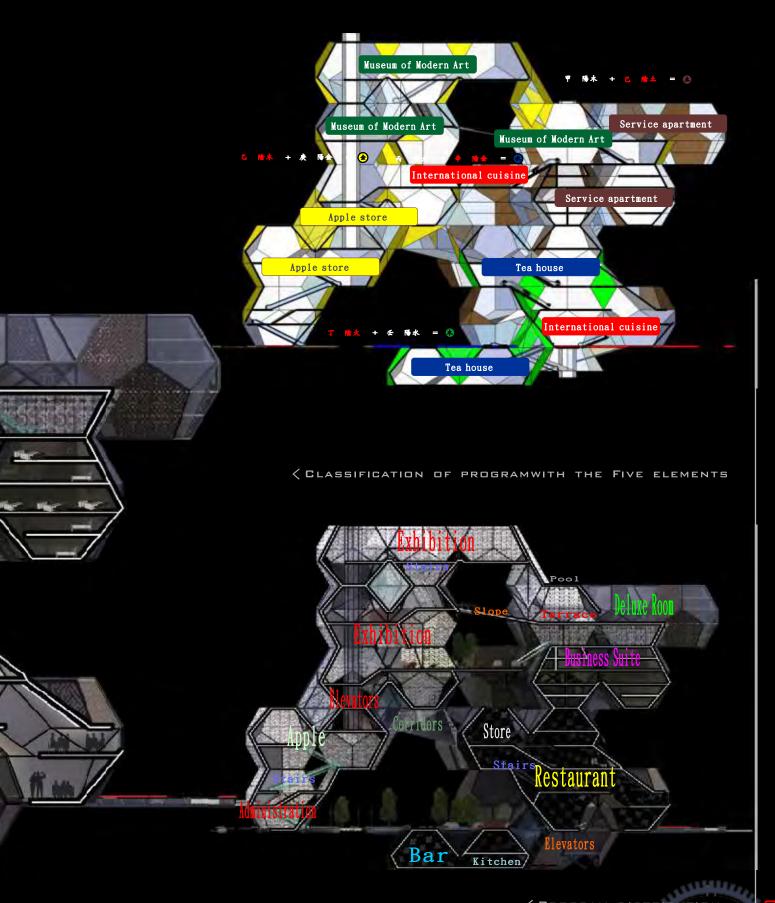


# < Longitudinal Section of Whole Building 是自動圖



⟨SPACIAL IMPRESSION

MILLIAM



PROGRAM DISTRIBUTION



MILLIAN

# 







CAPABILITY EXPERIMENT MODEL

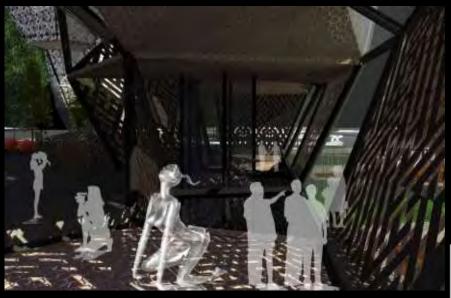




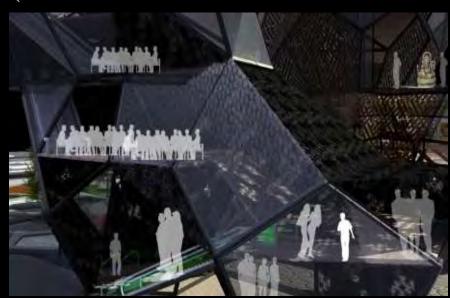




# 



< INTERIOR



< EXTERIOR



< THE HYBRID MUSEUM

In the end, the whole building no matter from the composition by program, and configuration of spacial unit, to the circulation system even in the pattern in elevation, are created and formed by the system from the

