

# Daniel 的交互設計學習歷程？

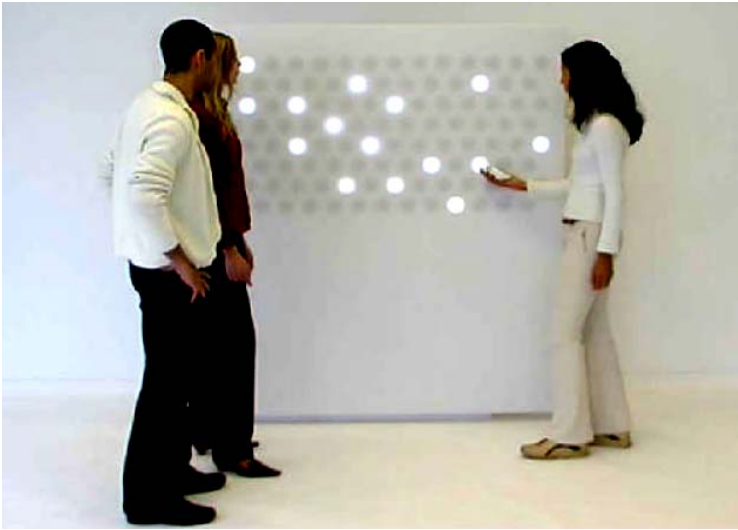
陳鼎翰

[daniel@arch.nctu.edu.tw](mailto:daniel@arch.nctu.edu.tw)

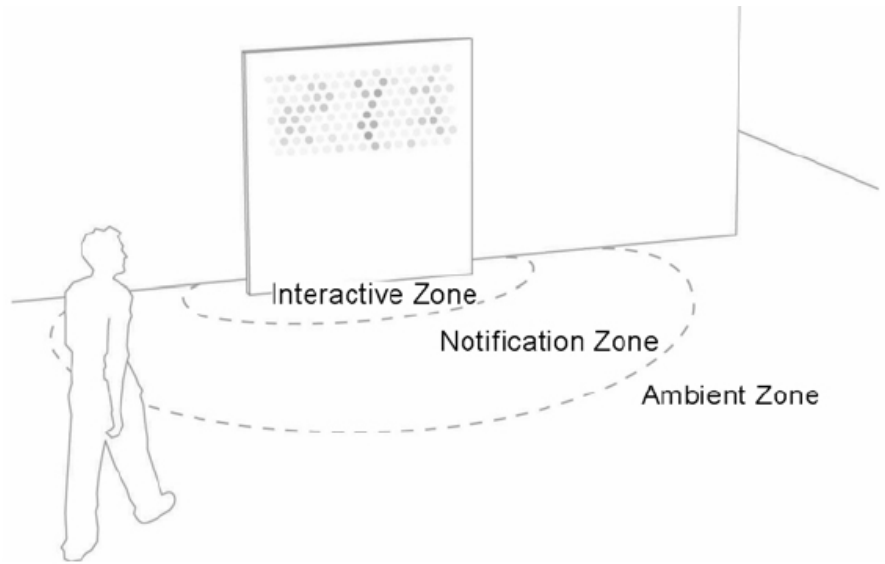
<http://danielnmc.blogspot.com>

# 簡歷

- 交通大學建築研究所延畢生（數位設計媒體組）
- 元智大學資訊傳播學系（數位媒體設計組）
- **HCI, Ambient Intelligence, Interactive Environments**



Hello.Wall (2003)



# PAST

一個邁向交互設計人的過程

# 小時候

- 幼稚園始受電腦毒害
- 電腦遊戲、應用軟體、終端機程式、程式語言 ○ ○ × ×
- 高中發現自己不會寫程式
- 藉網路尋求心靈慰藉
- 發現自己除了玩電腦外什麼都不會

## 進資傳系之後...

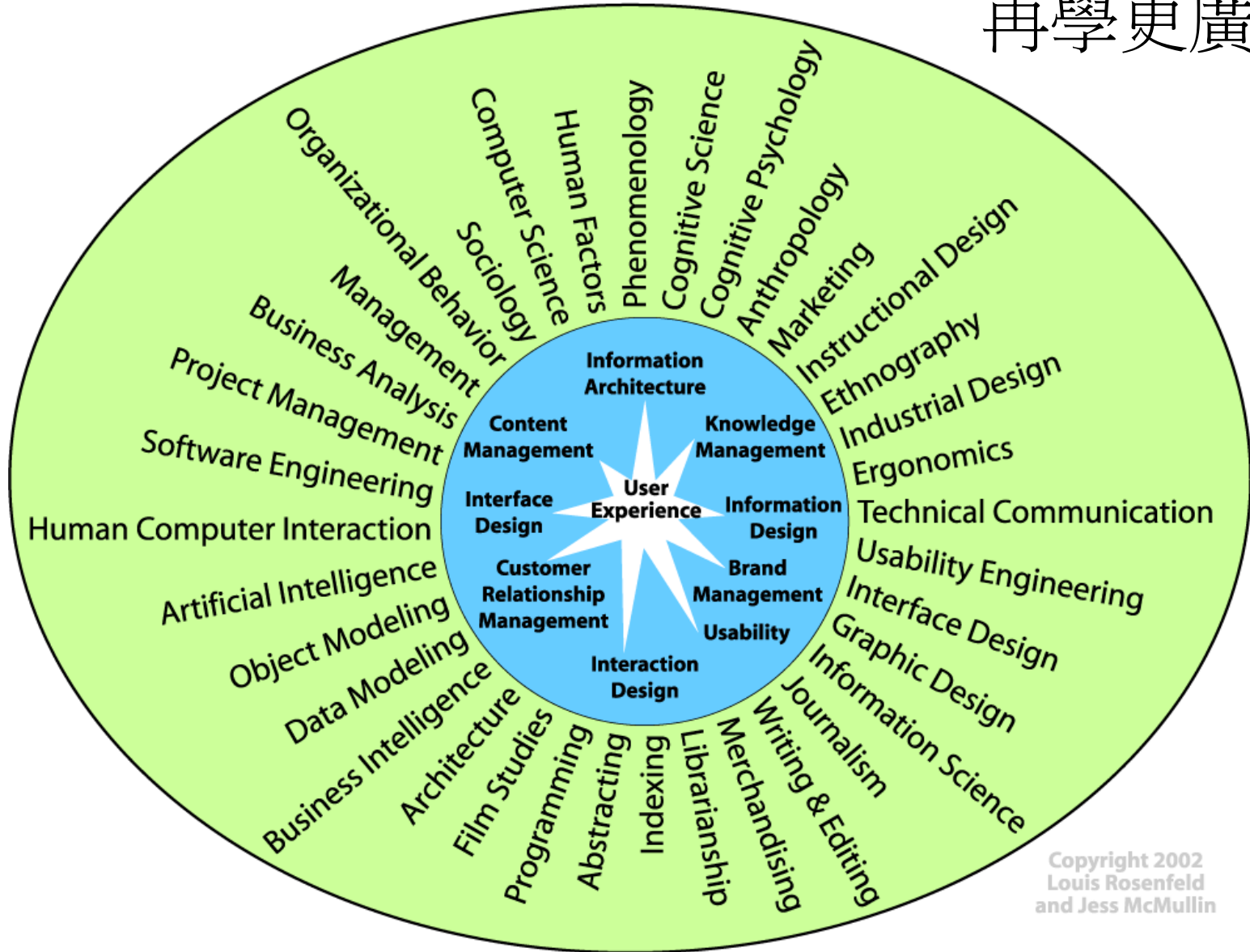
- Graphic designer?
- Web designer?
- Programmer?
- Animator?
- Film Director? / Art Director? / Creative Director? Account?...

什麼都會皮毛

什麼都會皮毛



再學更廣！



Copyright 2002  
Louis Rosenfeld  
and Jess McMullin

再學更深！

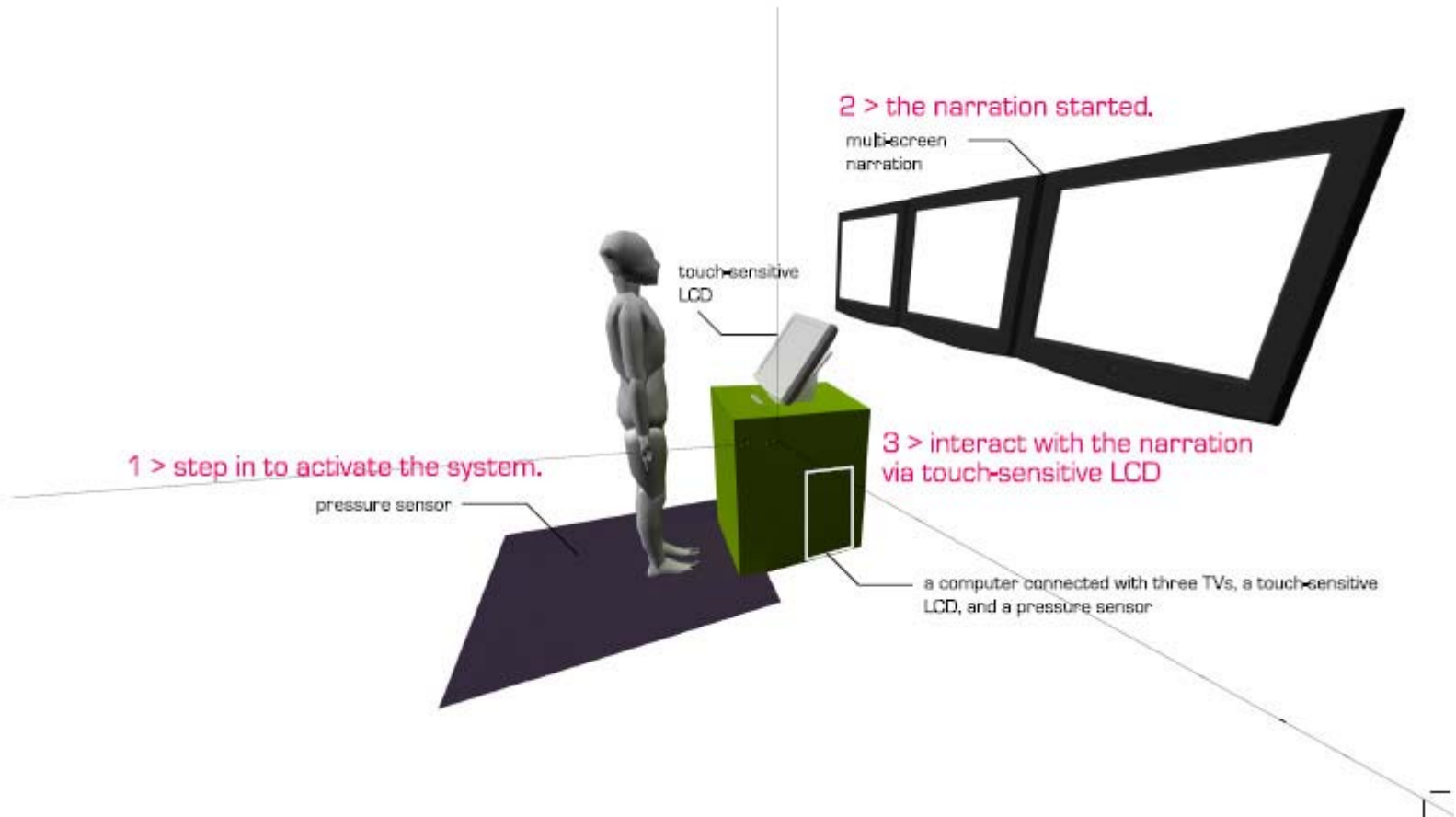
# INTERACTION DESIGN



Verplank's sketch-lecture to CCRMA HCI Technology course, Stanford University, 2000

# 交互設計初試

- 多螢幕互動電影



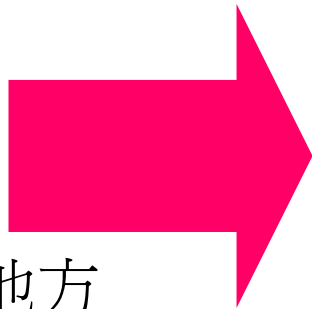


# 邁向交互設計之冒險旅程

- 老師推薦
- 成大IA LAB
- 有『玩物』的地方

# 邁向交互設計之冒險旅程

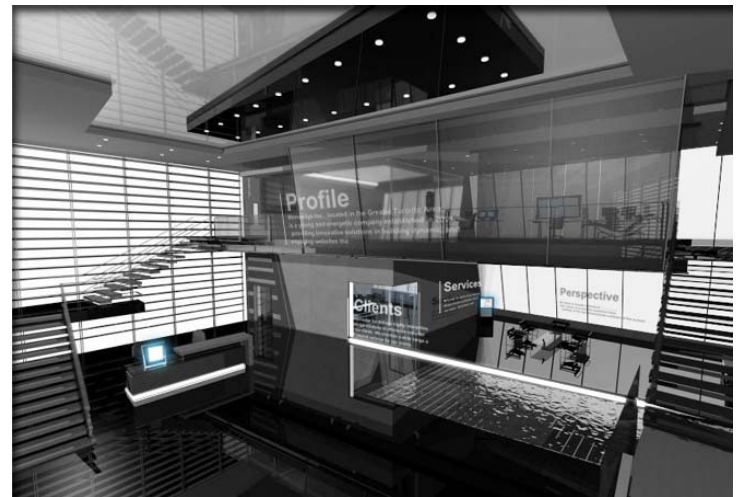
- 老師推薦
- 成大IA LAB
- 有『玩物』的地方



# 邁向交互設計之路

# 從技術到概念

- 把網站的互動事件拉出電腦之外
- 新的技術的用法／串法／兜法
- 學習交互設計的幾個面向
  - 技術
  - 設計方法
  - 觀念／理論



*after Monoedge Inc.*

# 無敵交互法寶

- 交互三寶
- 類比轉數碼／數碼轉類比工具
  - Io9624 (NT\$ 6,900.-)
  - AD/DA Card (NT\$ 3,000.-)

# IO9624

Comm port 線



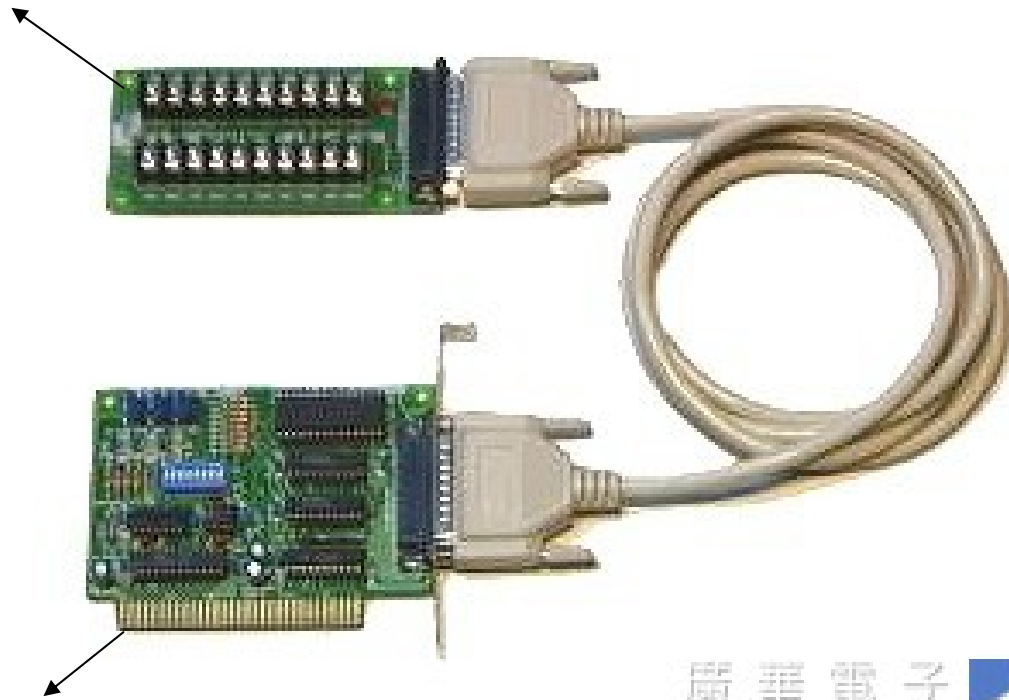
變壓器  
& Power

Input: 96 個乾接點 (on/off)

Output: 24 個繼電器 (on/off)

# AD/DA Card

8 個 input (可測 0~5V)  
2 個 output (可釋放 0~5V)



PCI 插到電腦裡面...

廣華電子

[www.cpu.com.tw](http://www.cpu.com.tw)

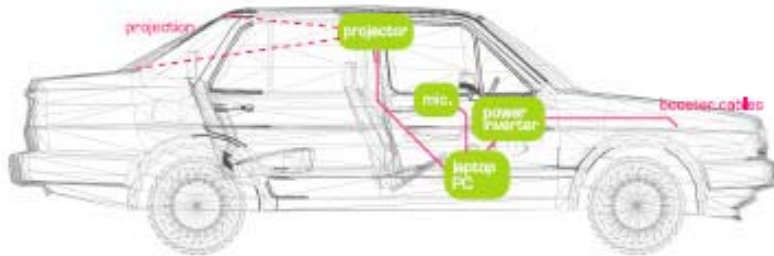


Selected IxD works (2003-2005)

# VRWD

## vehicle rear-window display

2003 | personal course work



Wiring provided by the adapter in the car was not enough for a projector, so we directly use booster cables to connect electricity to power inverter.

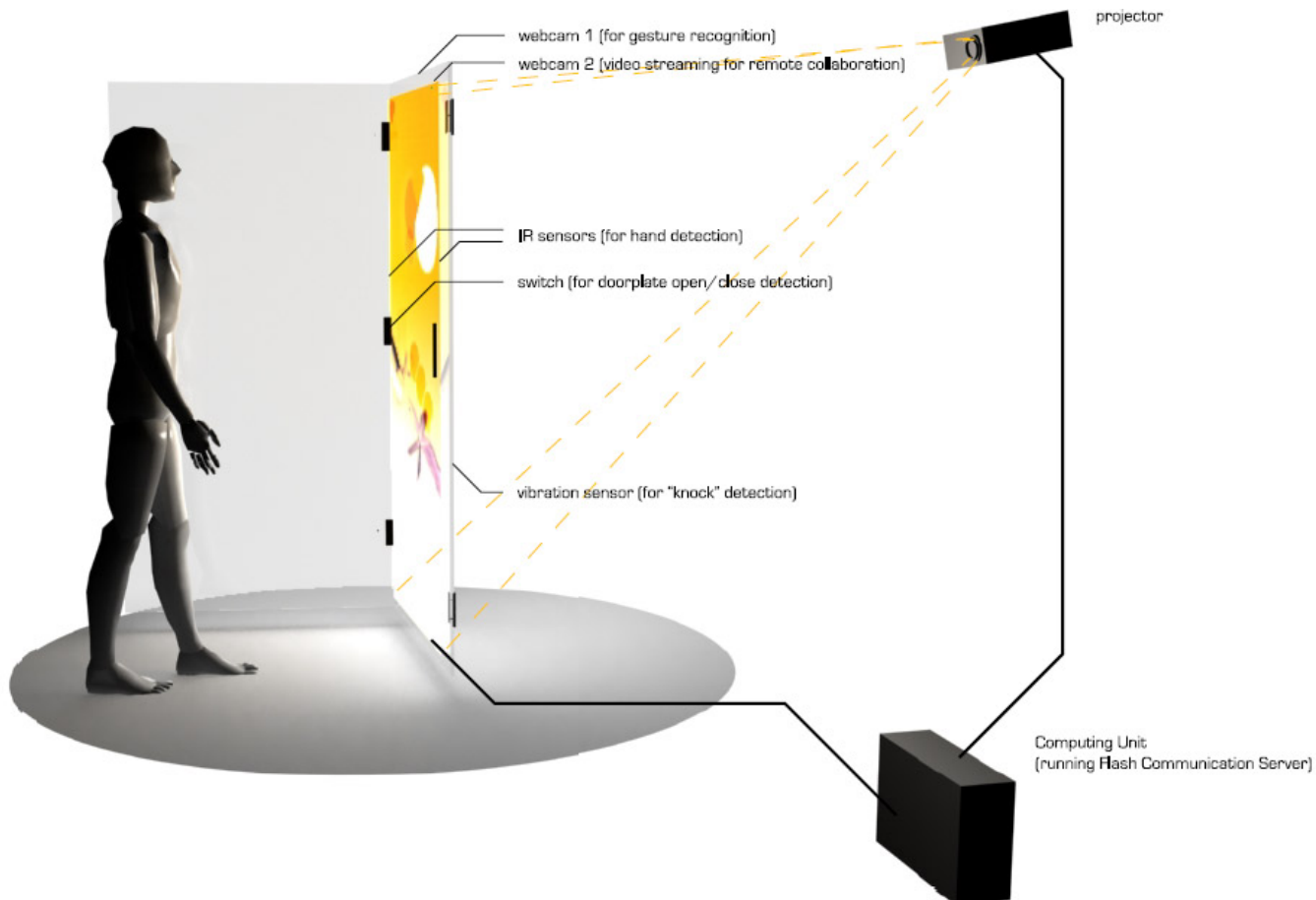


When driving, we communicate with other cars, I may horn when the car in front of mine is too slow. Or I may raise my hand to show my apology to an almost bumped car behind, while he can see my gestures through car window. Such things imply that we want to communicate with others. However, it is not allowed to do so, for current communicative interface of car design is traffic-oriented.

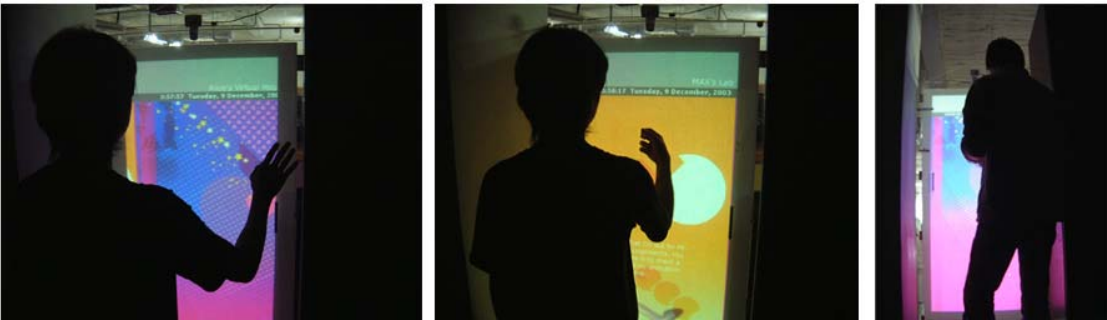
The idea of vehicle rear-window display is to transform automobile rear-window into an expressive medium that reflect driver's intention by speech. Speech is an intuitive and safe way to express, and the rear-window is a channel to communicate with cars behind, I chose such channel because drivers communicate through window in front or aside, while it is harder to communicate with cars on the back.

I have experimented with a few expressions for simple communication and navigation. For example, when you hardly crash into another car on the road, you said "Oops", the system would recognize your voice and show "SORRY" on the rear-window to apologize for you.

# i-door



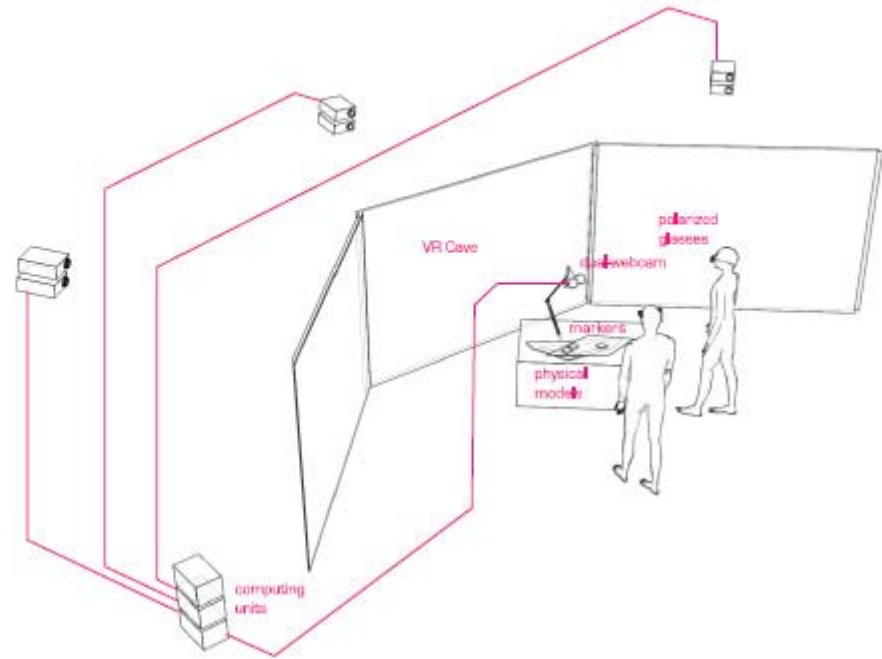
# i-door



# Oceanic Taiwan Interactive Archive



# AVR

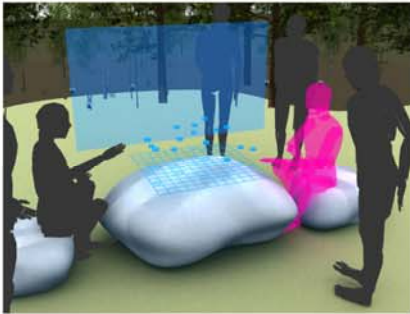


by put markers onto site model, we can see and discuss how virtual model could be integrated on the site.



# Space Carrier

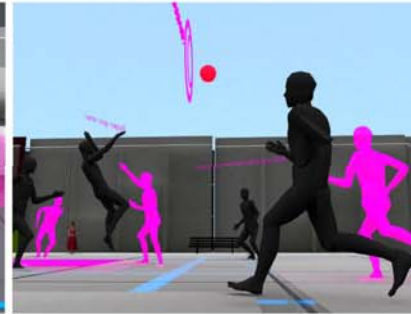
mixing tele-communicative activities with urban environment to create new life style.



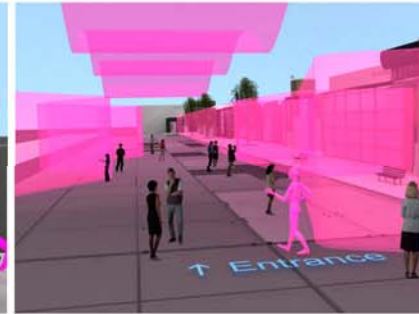
novel chess play



personalizable urban cubicle

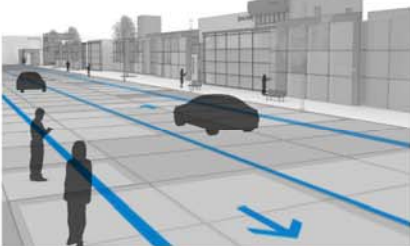


novel exercising game

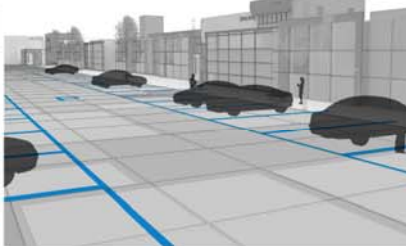


instant exposition

reconfigurable urban frame shapes different urban function at different time in the same area.



highway



parking lot

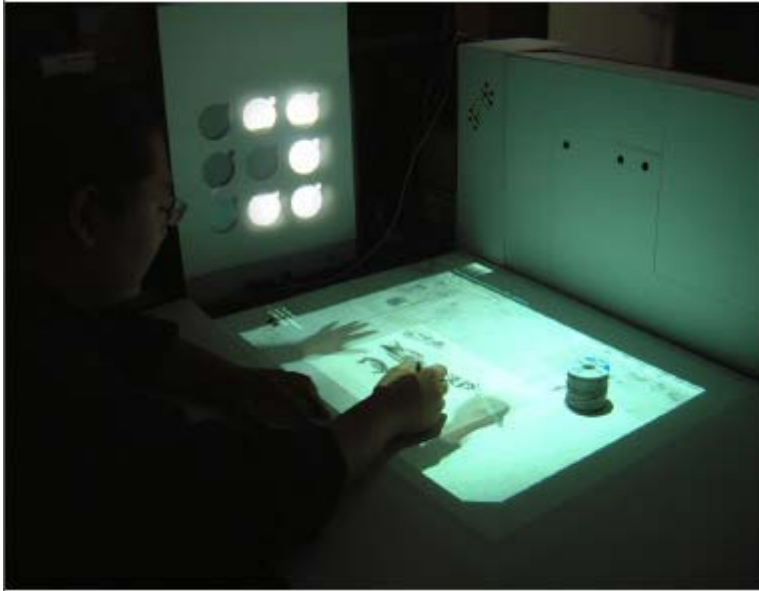


pedestrian precinct

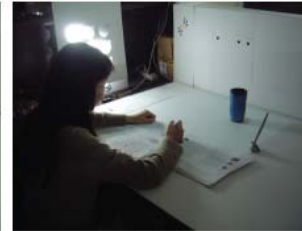
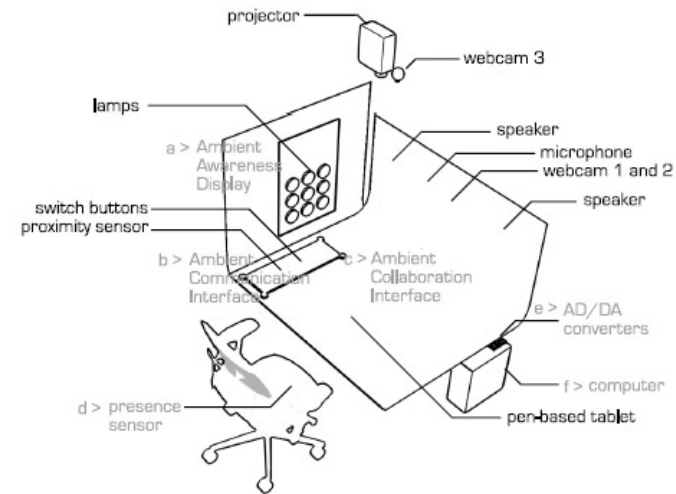


court

# Instant Collaboration Environment



# Instant Collaboration Environment



# Special Topic @ NYUST

A 3D rendered scene of a minimalist room. The room has a white wall on the left with several circular cutouts. A purple cube sits on the floor in the center, with two orange spheres nearby. A window with a purple frame is visible on the right wall.

## Ambient Intelligence Room 環境智能空間

雲林科技大學設計運算研究所  
設計運算講座(1)-情境式互動 期末成果發表會  
2005/6/29 下午 3:00

# Ambient Window



# InfoRiver



# Wall from World

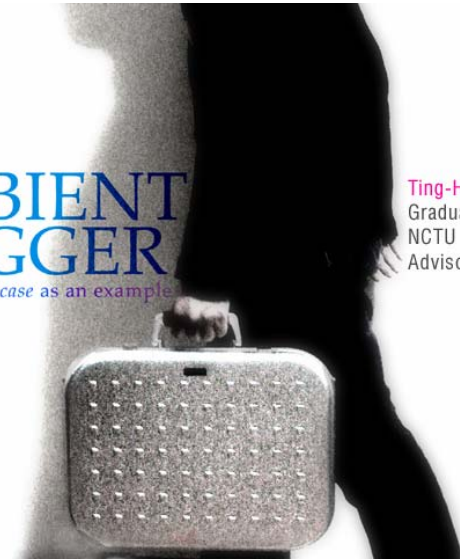


# Ambient Trigger

## AMBIENT TRIGGER

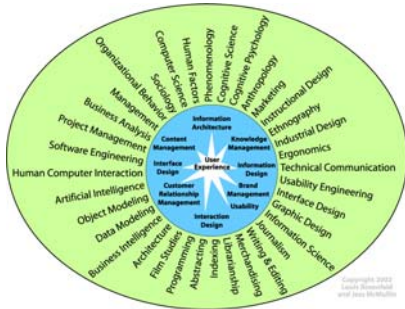
*Designer's Suitcase as an example*

Ting-Han Chen / 2005.12.13  
Graduate Institute of Architecture  
NCTU  
Advisor: Teng-Wen Chang



**More at**  
**<http://danielnmc.blogspot.com>**

# 交互設計概念之逐步成形



研究所以前	創意方法、行銷企畫、傳播理論、基本數位工具、資訊架構分析
研究所時期	<b>研究方法</b> 、劇本導引設計、實體運算技術、基本行爲分析
尚缺	社會學評估方法、心理學、統計學、哲學、美學...

- 從不同領域，整合並補齊自己做交互設計缺少的那部份

掌握交互設計最前線

# 作法 1

- 上網吸收知識
  - <http://scholar.google.com>
  - 沒事搜尋關鍵字 (e.g. “interaction design” ,etc)

## 作法 2

- 鎖定幾個國際上主要的交互設計研討會：
- CHI (Computer-Human Interaction)
- DIS (Designing Interactive Systems)
- IUI (Intelligent User Interface)
- UIST (User Interface of Software and Technology)
- MM (MultiMedia)
- UbiComp (Ubiquitous Computing)
- EUSAI (Ambient Intelligence)
- ...too many!

# 作法 3

- 比較不同國外交互設計 programme 之間的差異
  - 課程規劃上
  - 設計研究方法上

**1. Understand the users' experience...**

...how they live, what they need and want...

**2. Imagine new opportunities**

with brainstorming, opportunity mapping...

**3. 'Just-enough' prototyping:**

models to reveal the quality of the experience.

(It's not enough to see that the technology works.)

**4. Design solutions:**

. what is the **role** of the product or service in people's lives?

. what is the right **mental model** for the user?

. what is the **look and feel** of the interaction?

. what are the **technical** issues to solve?

**5. Craft the interactive experience...**

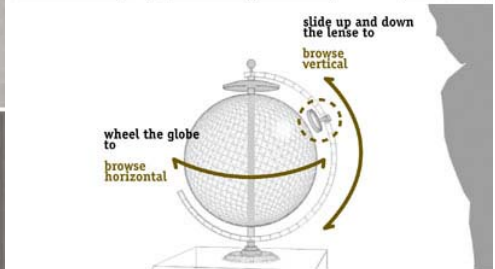
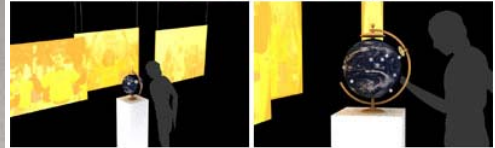
...what people will see, hear and feel.

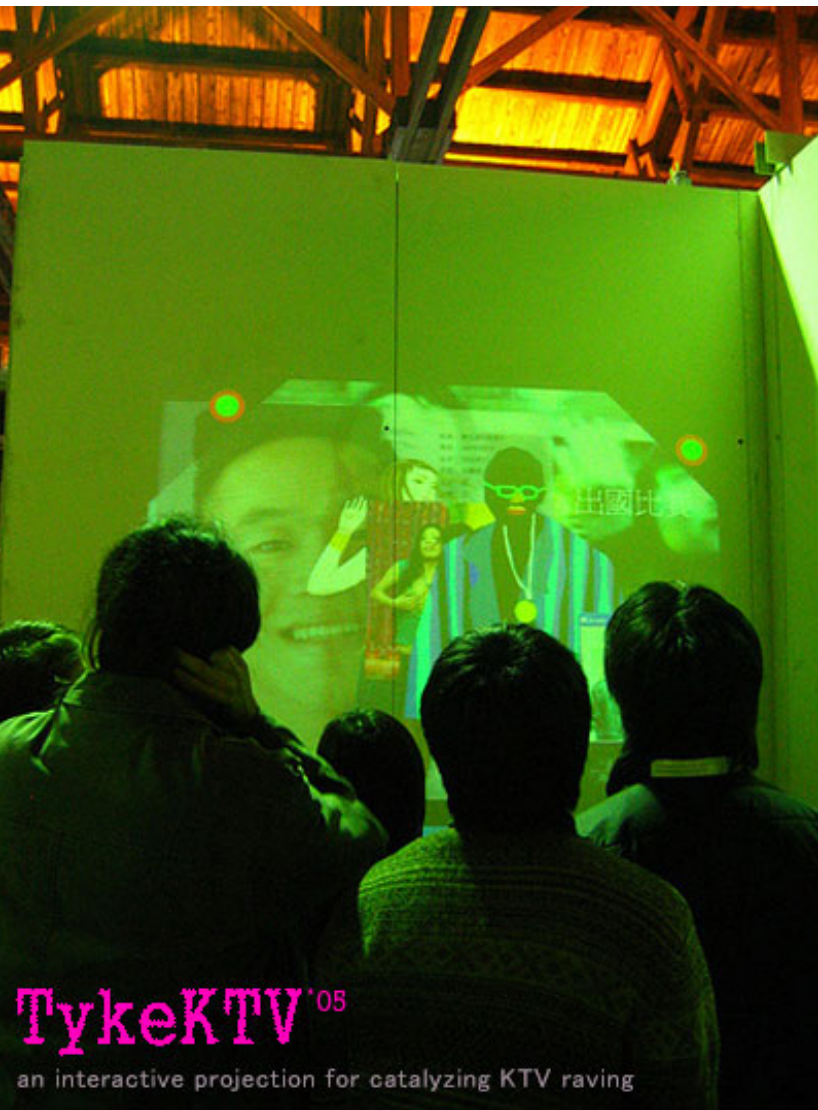
**6. Present and test the outcome**

Design process @ IDII

## 作法 4

- Learning by Blogs
- Learning by Blogging





# 交互設計學習歷程總結

# 一些發現／基本信念

- 技術沒有學會或學完的一天
- 做中學
- 找人討論 (吵架)
- 沒有人關心技術
- All about a methodological presentation

# Re-visiting 『Design』

- 過去發現，design = art
- 後來發現，design = solve your client's problem
- 現在發現，**design = research**

# FUTURE

What will I do next for IxD?

# 計畫永遠趕不上變化

- 學習更多方法、理論
- Prove more concept
- Not Graphical User Interface Dictionary
- IxD magazine

**Thanks & Happy 2006 !**

Daniel | [daniel@arch.nctu.edu.tw](mailto:daniel@arch.nctu.edu.tw)  
<http://danielnmc.blogspot.com>