

**USER INTERFACE DESIGN & IMPLEMENTATION**

**INSTRUCTORS**  
Hyowon Lee  
Prof Larry Young

	Monday (11:30am – 1pm)	Tuesday (4:30 – 6pm)	Thursday (11am – 1pm)
Week 1 (23 Jan)	Introduction/ background	User classification	Project overview, team up
Week 2 (30 Jan)	CNY holiday	UI design concepts	Project - scoping
Week 3 (6 Feb)	UI design concepts	UI design concepts	Project - scoping
Week 4 (13 Feb)	UI design concepts	Understanding Users (Industry)	Project - scoping
Week 5 (20 Feb)	UI concepts / Impact	Evaluation	Project
Week 6 (27 Feb)	Evaluation	Evaluation	Mid-term report/presentation
Week 7 (6 Mar)	Recess Week		
Week 8 (13 Mar)	Project	Project	Project
Week 9 (20 Mar)	Project	Project	Project
Week 10 (27 Mar)	Prof Young Special Lec 1	Prof Young Special Lec 2	Project
Week 11 (3 Apr)	Prof Young Special Lec 3	Prof Young Special Lec 4	Project
Week 12 (10 Apr)	Project	Project	Project
Week 13 (17 Apr)	Project	Project	End-term report/presentation
Week 14	Final Exam		

## Measurable Outcomes

- **Apply design principles, guidelines and heuristics** to create a user-interaction strategy that solves a real-world problem
- **Design a usable and compelling user-interface** given a set of requirements and available technologies
- **Communicate effectively the designed user-interface** to relevant stakeholders using design rationale and a sketching/presentation tool in an informed, reasonable and persuasive way
- **Conduct an evaluation of a user-interface** by employing a series of evaluation methods available in usability engineering

**DISCUSSION**

# YouTube

Discuss good/bad, and how it might be improved

**Guideline 2:** Simple and natural dialogue

- Minimise the artefacts

Simplicity?

“Perfection is achieved not when there is nothing more to add, but when there is nothing left to take away.”  
*- Antoine de St-Exupery*

“Simplicity does not mean the absence of any décor... It only means that the décor should belong intimately to the design proper, and that anything foreign to it should be taken away.”  
*- Paul Jacques Grillo*

“Less is more.”

“When in doubt, leave it out.”

“It's not that simple.”

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### Techniques for Simplicity:

#### **Reduction**

- Remove inessential elements and features
- Push down (secondary page, under the cover, make smaller, etc.) infrequently-used elements/features



Techniques for Simplicity:

### Double-duty

Scroll bar

Xerox Star 1981   Apple Lisa 1983   Macintosh 1984   Windows 1985   NeXTstep 1989   Win 3.0 1990

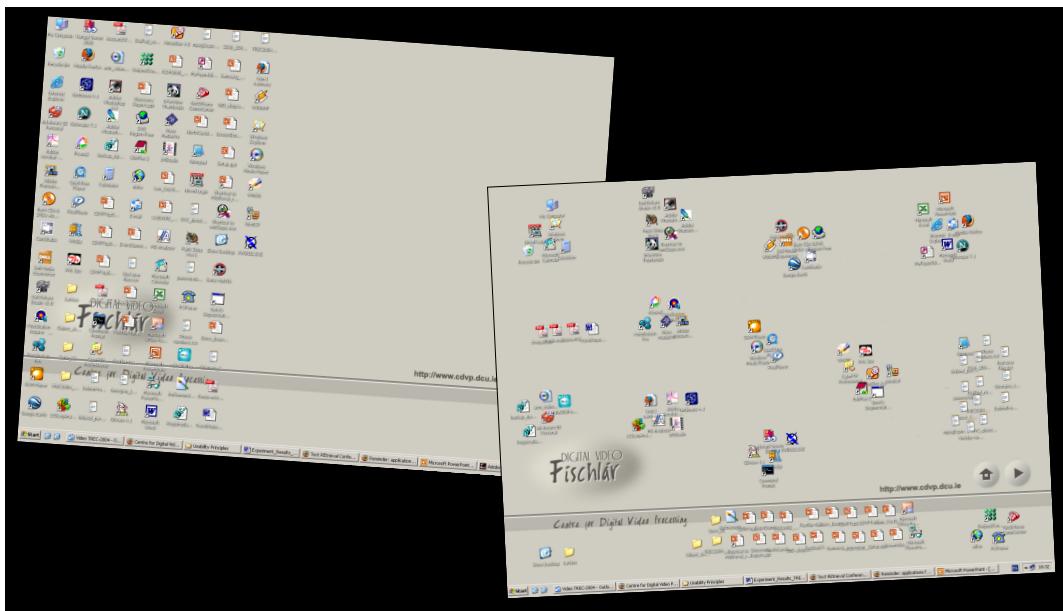
**Breadcrumbs**

Fifth Row is what we call co-curricular activities because it is the fifth activity students do every term in addition to their four academic subjects. Hours are put aside for Fifth Row so that you can pursue your passions.

From: <http://www.estetica-design-forum.com/showthread.php?44676-20>

**Guideline 2:  
Simple and natural dialogue**

- Minimise the artefacts
- Grouping – Separating - Prioritising - Sharpening



**Gestalt Theory**

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- Developed in 1920s
- Describes the processes by which individual elements are grouped into gestalts (wholes) during early visual perception
- Basic building blocks of how to group, relate, put together the items of information

**Principle 2:** Grouping

**Proximity** – elements that are nearer with each other look belong as a group

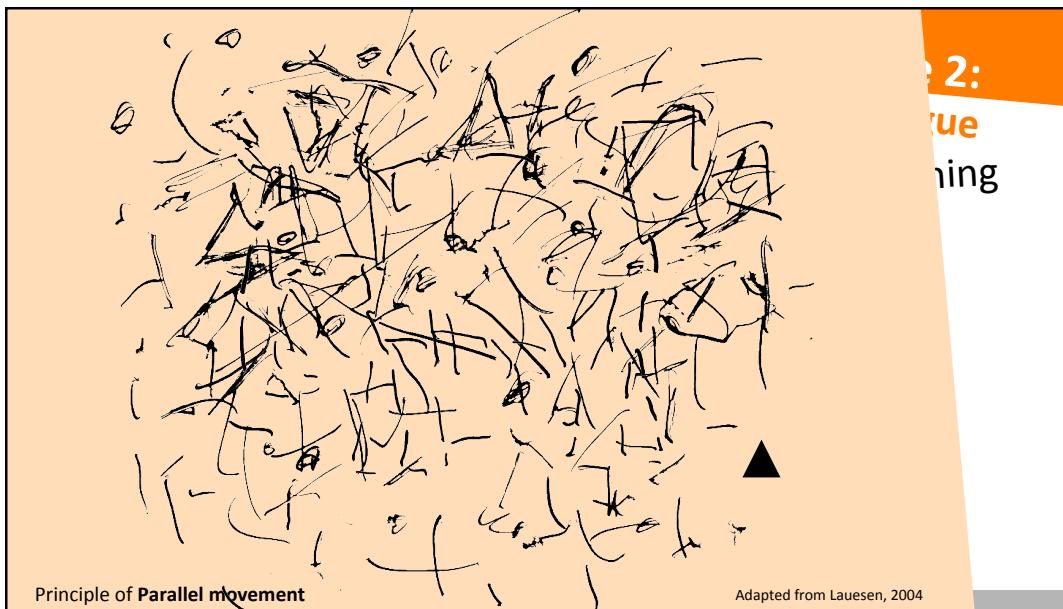
**Similarity** – elements similar in visual characteristics (in this case colour) look grouped more strongly

**Continuity** – simpler explanation works better (i.e. instead of 4 short bars, it looks like 2 long bars crossing)

**Closure** – human eye tries to see complete figure (in this case triangle) even if some essential contour information is missing

**Principle of Parallel movement**

Adapted from Lauesen, 2004



### Guideline 2: Simple and natural dialogue

- Minimise the artefacts
- Grouping – Separating - Prioritising - Sharpening

Group related items, each group forming unique, characteristic properties

**Refine Search**

Make... Model... Seller Type... Location Year From... Year To... Price Min... Price Max... Mileage Min... Mileage Max... Engine Size... Fuel... Transmission... Body Type... No. Doors... Colour...

**Search** [Reset](#)

Peugeot Model... Engine Size... Fuel Type... Transmission... Body Type... Number of Doors... Colour... Year From... Year To... Mileage Min... Mileage Max... Seller Type... Location... Price Min... Price Max...

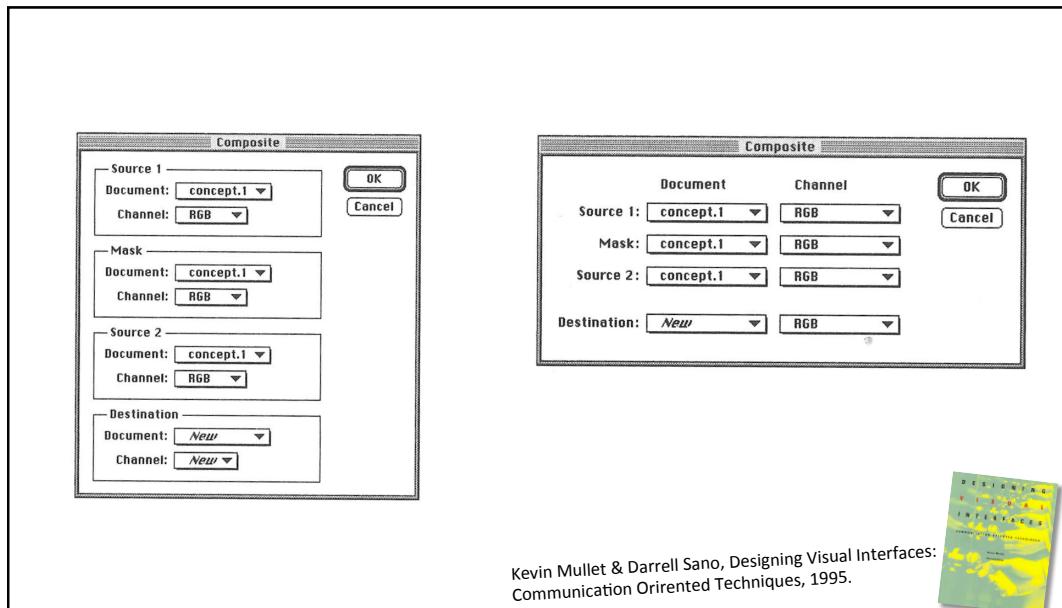
Filtered to : 1,516 Cars [reset](#) [go](#)

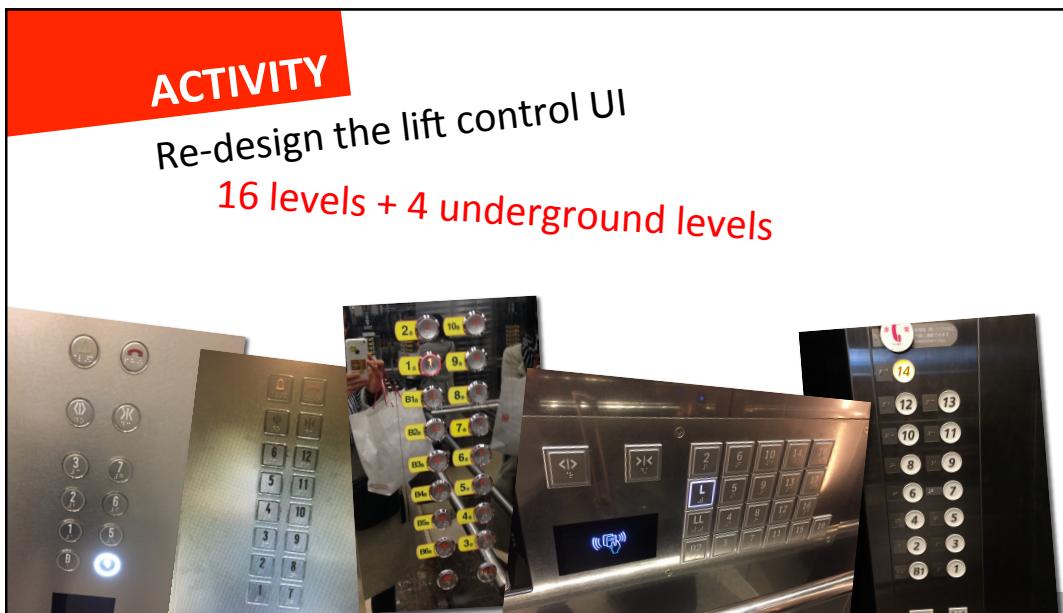
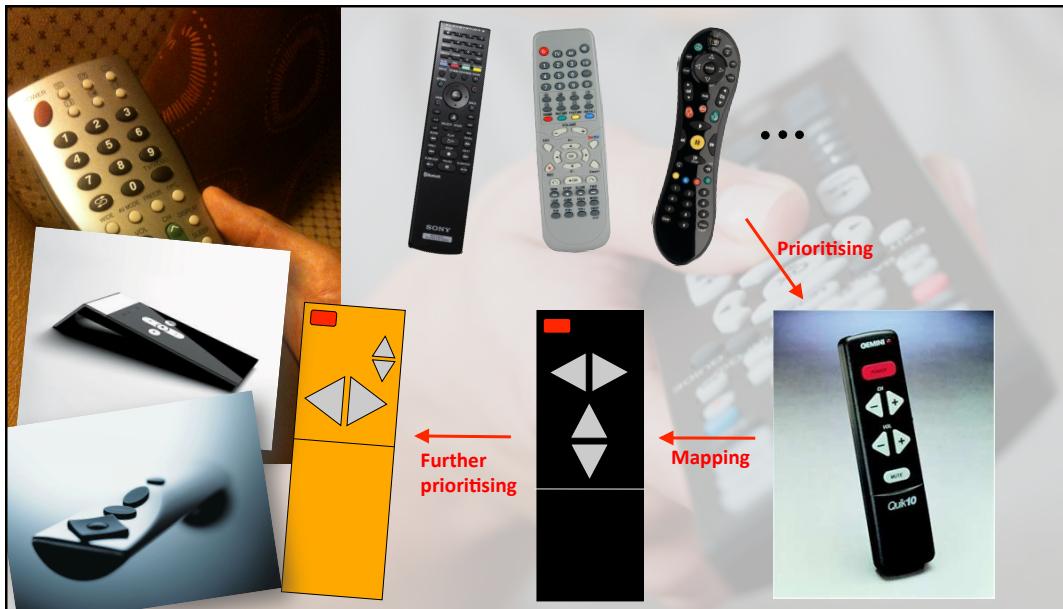
**Car information**

**Usage info**

**Seller info**

**Price**





**Guideline 2:**  
**Simple and natural dialogue**

- Minimise the *artefacts*
- Grouping – Separating - Prioritising - Sharpening
- Readable fonts

*What is your  
favourite font?*



**Serif family**

Usability is very important	... Times New Roman
Usability is very important	... Cambria
Usability is very important	... Georgia
Usability is very important	... Century
Usability is very important	... Palatino
⋮	

**Guideline 2:**  
**Simple and natural dialogue**

**Sans-Serif family**

Usability is very important ... Arial

Usability is very important ... Calibri

Usability is very important ... Helvetica

Usability is very important ... Tribuchet MS

Usability is very important ... Century Gothic

⋮

Usability is very important ... Times New Roman (Serif)

Usability is very important ... Arial (Sans-Serif)

# USABILITY

# USABILITY

## 2: True thing

from Harry Potter and the Sorcerer's Stone, Chapter 1

Times New Roman (Serif)

Mr. and Mrs. Dursley, of number four, Privet Drive, were proud to say that they were perfectly normal, thank you very much. They were the last people you'd expect to be involved in anything strange or mysterious, because they just didn't hold with such nonsense.

Mr. Dursley was the director of a firm called Grunnings, which made drills. He was a big, beefy man with hardly any neck, although he did have a very large mustache. Mrs. Dursley was thin and blonde and had nearly twice the usual amount of neck, which came in very useful as she spent so much of her time craning over garden fences, spying on the neighbors. The Dursleys had a small son called Dudley and in their opinion there was no finer boy anywhere.

The Dursleys had everything they wanted, but they also had a secret, and their greatest fear was that somebody would discover it. They didn't think they could bear it if anyone found out about the Potters. Mrs. Potter was Mrs. Dursley's sister, but they hadn't met for several years; in fact, Mrs. Dursley pretended she didn't have a sister, because her sister and her good-for-nothing husband were as

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Arial (Sans-Serif) All Caps

