## 5.4 Design exercise: the Gestalt laws of grouping

### Objectives
This exercise shows how to use grouping to reduce information overload and speed up users' decision-making and action.

### Background
On most TV remote controllers, buttons are grouped on the basis of the higher level functionality they belong to (Fig. 5.4a). For example, if you're watching a movie, it's helpful to have the forward, backward, fast forward, fast backward, pause and stop commands all in the same location at your fingertips. In addition, some commands, (which tend to execute opposite actions, such as start and stop), use only one button.



Fig. 5.4a - Remote controllers

Grouping is much more sophisticated than it may appear at first glance. It must take into account functional groups and the typical flow of events that users execute in a sequence. For example, if the player is already in play mode, the Play function is not usable, so the designer can use the same key for the Stop function. The careful analysis of user choices can help designers to organize effective functional groups, avoiding misplaced functions, duplication, and unnecessary controls.

### Instructions

Select three remote controls, from the ones you have at home, or from the internet and then answering the following questions:
1. How many functional groups can you identify?
2. How are they differentiated? (colour, size, arrangement, shape, etc.)
3. Are there any keys that perform multiple functions?
4. Is there any duplication or redundancy in the design?

After completing the visual analysis, use Gestalt principles to continue the analysis of the design as follows:

1. Verify which of the following Gestalt laws have been used or violated in the remote controller layout.

2. Propose how to reorganize the functional groups to facilitate recognition of commands without adequate lighting in the room.
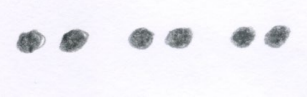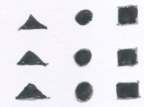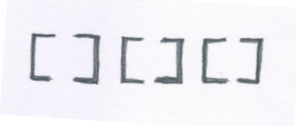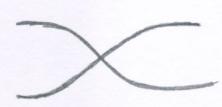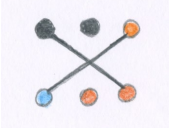
| Law | Objects, concepts, and ideas tend to be grouped together when… | Example |
|---|---|---|
| Proximity | They are close to one another: we see three groups of dots. |  |
| Similarity | Are considered to be similar based on certain criteria: we see three groups of triangles, circles and squares. |  |
| Closure | They seem to connect them to fill the gaps and create closed forms: we see three boxes. |  |
| Continuation | They overlap and intersect: we see the continuity of two lines and reject other possible patterns. |  |
| Common fate | They seem to have to or want to move or in a same direction or evolve in a same state: we see G,S,A,T moving upwards and E, T. L moving downwards. |  |
| Connectedness | Are explicitly connected: we see the dots connected by a cross as members of the same group. |  |

Fig. 5.4b - Examples of Gestalt laws