

VSMN15, Integrated design, structures and architecture
AAHN10, Integrated design, architecture and structures

TASK A

Instructions

Select task A1 or A2, described on the following pages. Note that the tasks involve three subtasks.

The group has *until 15:30* to work with the task chosen.

1. Prepare a presentation on 3 sheets of paper (one sheet for each of the subtasks, each sheet approximately the size of an A1). Use sketches and/or photos and text (50-200 words). Note that each group member should be prepared to give a 1-2 minutes presentation of any part of the group's work. Include in your presentation also any ideas that you abandoned during your work, if any.
2. Each group will be given ca *5 minutes* time slot for presentation+discussion.

A1: HONESTY – LOAD BEARING OR NOT?

Background

In everyday life we sometimes find objects (on any scale) that are easily understood in terms of their load bearing performance. Other objects are perceived as being designed to primarily fulfill other tasks, such as providing shelter, light or rest. Whatever the perception people might have, the intended design might in turn be that of leading or misleading people (to a conclusion about the load bearing performance of the object).

Task description

Your task is to choose an existing object (furniture, building) and analyze it based on the following perspectives.

1. Explain, in general terms, how you perceive the object. What is its context (i.e. time and place), who designed it (architect, engineer, contractor), what kind of experience is the user likely to have when using it?
2. Explain how you regard the architectural ambitions. Discuss these including references and relations to other objects and to your perception as given in subtask 1. Discuss e.g. if the structure is perceived as an important or maybe an integral part of the architecture and if the construction technology has influenced the design.
3. Sketch on the structural performance of the object, i.e. sketch and discuss how loads are transferred through the object by illustrative drawings indicating deformation and tension/compression/bending -diagrams. What is the main structural action (beam, arch, cable, truss, etc)? Do the structural sketches in any way correlate to the form of the object? Does the detailing say anything about the boundary conditions?



Peter Jakubik



Marcel Wanders

A2: SHAPE AND MATERIAL

Background

The form chosen when designing an object has often consequences for the material choice to be made, or for the combination of materials to use. At the same time, the material(s) chosen can be in synch with the shape, or in contrast (honesty!).

Task description

Your task is to select an object where the materials involved are clear consequences of the object's shape. State the connection between the shape and the materials involved. Analyze the object from the following perspectives.

1. Explain, in general terms, how you perceive the object. What is its context (i.e. time and place), who designed it (architect, engineer, contractor), what kind of experience is the user likely to have when using it?
2. Explain how you regard the architectural ambitions. Discuss these including references and relations to other objects and to your perception as given in subtask 1. Discuss if the structure is perceived as an important or maybe an integral part of the architecture and if the construction technology has influenced the design.
3. Make some sketches on the structural performance of the object and discuss how loads are transferred through the object by e.g. illustrative drawings indicating deformation and tension/compression/bending-diagrams. What is the main structural action (beam, arch, cable, truss, etc)? Do the structural sketches in any way correlate to the form of the object? Does the detailing say anything about the boundary conditions?

