

Systems-oriented design: Information design workshop

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Nodes and connectors

- graphic syntax in visualisation of systems

Learning objectives

The objective for this workshop is to:

- Develop your sensitivity regarding systems design, eg, identification of elements in a system, their roles, interactions, and implications such as trade offs.
- Improve your understanding of the syntactic roles within a diagram.
- Explore options for presenting complementary visuals of a system.

Background

The popularity of network diagrams is partly due to the simplicity in using nodes and connectors to show complex systems. This type of visual offers an easy overview of the connections within a system. But the simple combination of graphic objects increases the need for paying attention to the nature and role of included elements, as well as their interrelations. Common ambiguities are implicit nodes, imprecise nodes, inconsistent use of visual attributes, and polysemy – when a graphic object is open to interpretation. One suggestion for reducing the complication and ambiguity is to develop a set of complementary diagrams, showing different aspects of the same system, eg, activity flow, entity relations, and process.

Brief

The focus of today is to develop a set of complementary diagrams, visualising AHO as a system of complicated interrelations. Each of you are to explore a set of min. three complementary diagrams, which will come together to form a big set.

Explore each of these arrow types suggested by Engelhardt (2002):

- Conceptual connectors, eg, transformations or cultural connections etc.
- Physical links
- Movement between objects, ie, transfers.
(we are leaving out 'movement of source objects' today)

Start exploring your immediate environment: what connections can you find?

One way is to explore how many different connections there are between a set of objects/people/places [*ie*, nodes]. For example, my laptop is plugged into the electricity socket, and to the projector [physical connections], the projector transfers light to the screen [movement between], the screen transfers light to your eyes, your eyes transfers electrons to your brain [movement

between], and, hopefully, this creates the conceptual connection of learning.

Another option is to explore where each type of connection appears. Where do you find conceptual connections within this place? Transfers? Physical networks?

Start visualising these connections in diagrams and explore how you can distinguish the different natures and roles of elements within the systems: how do you use colour, texture or labels etc?

Consider:

- The level at which you are looking at the connections:
 - a meta-level: *eg*, seeing AHO as part of the educational system.
 - macro-level: *eg*, tracing the flow of people within this building.
 - micro-level: *eg*, tracing the chemical transfers in 'soup of the day' in the canteen.
- Causal mechanisms.
- The concern with clarity, precision, and consistency.

References from my presentation and other inspiration

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