Assignment 3

Antonio Tällberg Ilestad (Antta839), Viktor Larsson (Vikla566)

Task 1:

What is the difference between Overview+Details and Focus+Context? Try to describe the pros and cons of each approach

Overview+details uses a high level summarized view of the whole dataset so it gives a broad view over the information. Also allows the user to interact with the data in order to get more details on specific elememts.

Pro
- Quick understanding of the structure and data patterns.
- Effective navigation, often a top-down approach which lets the user to zoom in on the areas of interest.

Cons
- Limited details because of focus on overview
- Information overload, much data is shown at the same time which can overwhelm the user

Focus+context focuses on regions or subsets of the data and provides more detailed information in these areas. The surrounding information is displayed but with less focus compared to the focused area.

Pro
- Detailed examination, let the user inspect data with a high level av details
- Offers a balance between focused exploration and maintaining the understanding of the context

Cons
- Loss of information because not all data is used
- Harder to create a simple and clear interface

What is the difference between the Graphic Fish-eye and Logic Fish-eye views? Can they be combined? If yes, how (give an example)?

Graphic Fish-eye uses the approach of distorting the graphical representation of data in a way that magnifies the area around the user's current point of focus while simultaneously compressing the surrounding areas.

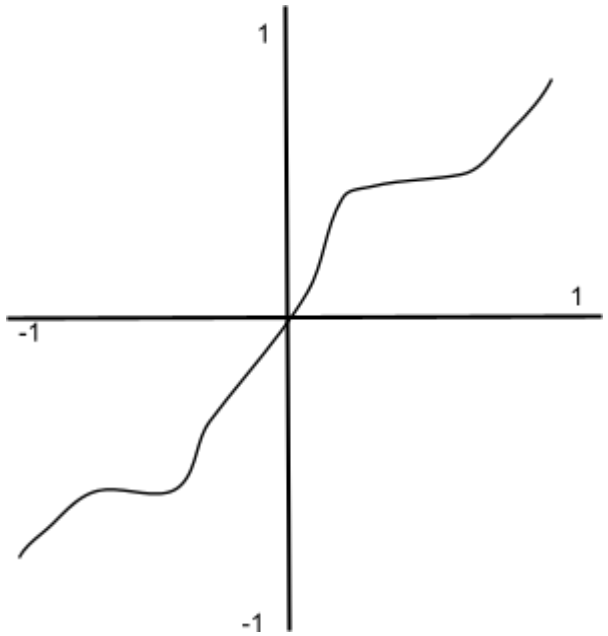
Logic Fish-eye focuses on selectively presenting more detailed information about specific elements or regions based on user interaction or predefined rules.

A combined use of graphic and logic fish-eye can be used when showing geographical data. When a user hovers or clicks on a specific region of the map, a graphic fish-eye effect is applied to magnify the details of that area, making it easier to see street-level details. Then the user can trigger Logic Fish-eye by selecting specific map layers or categories (e.g. points of interest, transportation networks). This logical zoom provides more detailed information about the selected category without distorting the entire map.

What are Polyfocal Displays? What are they used for? Draw the transformation function for Polyfocal Displays.

Polyfocal display is an approach to display multiple planes of information and where the information is dynamically adjusted to the focus of the user. An example is for trees that make it possible to show different information at the same time that is connected in different ways. They are used to show different information that can be connected in different ways.

Transformation function:



Describe the idea behind Magic Lenses. Can you provide an example of a magic lens not discussed in the lectures together with a short description?

An example of magic lens could be that the users can dynamically adjust the color representation of specific data points in a visualization. The functionality can place the Color Lens over a chart or graph, and by interacting with the lens, they can choose a specific color or range of colors. The lens then filters the visualization, highlighting or de-emphasizing data points based on their color attributes.

This example illustrates how a Magic Lens, in this case, the Color Lens, enables users to interactively modify the visual representation of data. Magic Lenses empower users to explore information in a more intuitive and tailored manner, enhancing their ability to gain insights and make informed decisions.