Principles of User Interface Design

These visual design principles will help you to create a user interface with consistent and practical user experience.

**Integrity**
User interface must be both visually and logically consistent all the way.

**Alignment**
Follow rules when positioning elements. Don't let elements float around.

**Reduction**
Always think: “Is this necessary?” when designing user interface.
General Layout

Map window consists of two main elements: main navigation and map view

Main Navigation
Main navigation contains links to main features of the service. Links are ordered on base of the principle that most used functionalities are shown first.

Map View
Map view displays the map layers selected by the user. The amount of selected layers is displayed with yellow box in “Selected Layers” field of main navigation.

Features opened from main navigation are shown on top of the map view with Flyout boxes. Features defined as “separate” prevent the use of other features and they are opened on top of both map view and main navigation. Such features are e.g. “Map Publishing” and “Analysis”.

The structure of map window

Main navigation
Map view
Main Navigation Layout

Main navigation contains links to main features of the service. Links are ordered so that they produce a **logical list**. Clear **feature groups are separated with a divider line**.

Links are ordered on base of the principle that most used functionalities are shown first. Features are named using nouns and there should be no verbs e.g. “Make Analysis”.

If feature needs state indicators they are displayed with own symbols. “Selected Layers” feature shows the amount of user selected layers as number.

Main navigation contains only main features. As short list as possible.
Expand / Reduce View
Map view can be expanded by hiding the main navigation.

Navigation
Navigation elements consist of map moving arrows, returning arrow and zoom slider. Location box under navigation elements contains information about cursor's current and previous position on map.

Map Scale Indicator
Map scale indicator displays actual length of a line in Metric and British system of measurement.

Terms of Use and Data Sources
Open service provider's terms of use to a separate window or display a list of data sources for selected map layers.

Background Map Selection
Select which style of background map is shown. Selection is shown as white box.

Map Layer Settings
Menu for showing settings specific to selected map layer. This is used e.g. in “Thematic Maps” feature.
Layouts of Different Box Types

**Flyouts** are content boxes that open from left side main navigation.

**Pop-up dialogs** are used for showing additional information and options. Pop-up dialog must be placed close to the button or link used to open it but they shouldn't be touching each other. Dialog shouldn't contain a caret or arrow for pointing the target which it is connected to. Modal pop-up dialogs differ from other boxes by preventing the usage of the rest of the service with a **darkened full-screen background**. They must be dismissed first to continue.

**Feature data boxes** contain additional information or choices related to the selected target.

With all boxes it is recommended to fill the whole width of box with content up to left and right paddings. This will make the layout look more aligned and clear.

You should use only these three types of boxes.
Form Layout

Layout for components and texts in a form. Margins of the surrounding box differ with box types (see Layouts of Different Box Types).

Components need to have 6px gap when placed to same row.
Features and tools which require special attention or much space from screen (e.g. Map Publishing, Analysis and Thematic Maps) can be implemented as a separate view. Separate view means that map view won’t be visible on the background.

The appearance of a separate view is close to a pop-up dialog.
Layout of Separate View 2/2

Example: Map Publishing

- Lorem ipsum
- Lorem ipsum
- Lorem ipsum
- Lorem ipsum
- Lorem ipsum
- Lorem ipsum
- Lorem ipsum
- Lorem ipsum
- Lorem ipsum
- Lorem ipsum
- Lorem ipsum
Components

Buttons and Text Links

**Buttons** should be used in boxes to confirm or cancel actions. Buttons arouse the user's attention. Buttons should be aligned to the right bottom corner of the box or to the text row right end of the content.

Primary button should always be on the right and secondary button on the left.

**Text links** can be used in situations where actions shouldn't catch the user's attention too much. E.g. in table same action may be duplicated from row to row.

Radio Button and Check-box

It is important that selection in radio buttons and check-boxes can be made also by clicking the label and not just the icon. Taking mouse cursor over the label will activate the hover effect.

Info-icon

Info-icon should be on the same row as component or text and adjacent to it.
Components

Notifications
There are four types of notifications:

- Tip
- Generic notification
- Error
- Success

Success notification is shown on the screen only for 3 seconds. Error, tip and generic notifications must be dismissed with the OK-button. All notifications have pop-up style boxes (see “Layouts of Different Box Types”).

Error and success notifications have also an icon in the box title area.

More information about creating notification texts can be found from “Naming and Messages” section.
Components

Tabs
Tabs should only be used in Flyout boxes or Separate views.

Tab title style:
Font: 14px (active title bolded)
Background: #fafafa
Border: #999999

Map layer titles
Font: 16px
Background: #f3f3f3
Border: #999999
Components

Tables
Here are defined some attributes of tables. Tables should only be used in Flyout boxes or Separate views.

Table row height must be 28px for all rows unless the text is taking multiple lines.
Colors and Typography

Typography

Map window uses Open Sans for all content. Here’s the hierarchy of text types:

- H2, Open Sans light 24px, color #3c3c3c
- H3 Open Sans light 18px, color #3c3c3c
- H3 white, Open Sans regular 18px, color #ffffff
- Map Layer Title, Open Sans light 16px, color #3c3c3c
- Strong, Open Sans bold 14px, color #3c3c3c
- Italic, Open Sans italic 14px, color #3c3c3c
- Normal, Open Sans regular 14px, color #3c3c3c
- Table, Open Sans regular 12px, color #3c3c3c
- Text Link, Open Sans light 14px, color #0091ff

Line height should be 1.5 times the height of the letter in normal text paragraphs to keep the text easily readable.

Titles should have line height of 1.2 times the height of the letter. Title should always be closer to the paragraph below it.

Värit

Ohessa käytöjärjestelmän värit.

Map window uses only these font variations to keep the content as readable as possible and to keep the user interface intact.

- #ffe400: Used as highlight color in e.g. icons
- #df8d9: Used as background color in flyouts and pop-ups
- #0091ff: Used to indicate action in text links and primary button backgrounds
- #fafafa: Background color for frames in content boxes (e.g. My Data and Map Layers)
- #3f3f3f: Background color for the accordion element in Map Layers
- #e6e6e6: Border color in tables and similar line elements
- #3c3c3c: Main font color and background color of feature data box title bar
Interaction

Selecting Features
Features are selected with a single mouse click. Selected feature is shown with white background in Main Navigation.

Interaction in Map View
By default the map view is in a state where you can move the map around with mouse cursor.

You can zoom in/out the map with mouse wheel.

All actions in map view are started by selecting a desired feature from tool-icons. You can stop action from the pop-up dialog it opened or by double-clicking.

Map Tools
Map Tools in the Main Navigation start different actions. User can see the name of the action in a tooltip text which appears with mouse hover. Chosen tool is shown with a darker background color.

Removing Selection
Different selections like chosen map layers, information to be analyzed etc. are displayed as lists in user interface. You can remove the selection by clicking the x-icon.
Interaction

Loading Indicator
Some functionalities take more time to execute. If an action takes more than one second before anything is shown then a loading spinner should be shown with text “One moment...”.

Indicator should be placed inside the box element from which the action was initiated. Indicator is centered both vertically and horizontally. Behind the indicator there should be semi-transparent gray layer.
Naming and Messages

Features
Features in Main Navigation and lower in hierarchy are named with the word's basic form like Search, Map Layers, User Guide.

Buttons
Button names use imperative verbs like Open, Save, Cancel.

Messages
User feedback should always be given in the form of a story: What happened? What were the results? What you should do next?

Example:
- No search results could be found. Please check the search term.
- Analysis could not be done. No content or parameters have been chosen. Make choices and start analysis again.
Information Texts

Linguistic Style
Information texts strive for clear and readable style with simple syntax and structure. Reader should be able to find needed information from any text with a glance. Lists and tables should be used when needed to clarify the appearance of list formed text.

User Guide
User guide has been divided to tabs by using most important features as titles:
- First tab holds general information about Map Window and a list of contents
- Second tab contains presentation of main features of the service
- Rest of the tabs contain information about different features

Content of a single tab is tended to be kept compact. Special care should be taken to keep the layout of guide text as readable as possible. Readability can be maintained with unified and uncluttered look and feel. There should be two empty lines before main titles. Yellow high light arrows should only be used when special attention is needed.

The text structure of user guide should support printing. User can print the whole user guide if desiring so. Printed user guide is divided to paged and contains a list of contents.

The most important feature of user guide is search. With free text search user can seek help for any specific feature.