Requirements Specification

IP-516vt – SPECCHIO Webinterface

**Client**

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# 1. Goal & Vision

## Actual condition

SPECCHIO is a spectral information system designed to hold reference spectra and spectral campaign data. SPECCHIO is a Java application that needs to be installed on a computer.

## Goal

The SPECCHIO web interface provides a user-friendly search for the SPECCHIO-Database over a web browser. This database is available for public use.

## Vision

The SPECCHIO web interface is the world number one for searching in a spectral database.

The website that needs to be excelled is <https://ecosis.org/#home>.

# 2. Use Cases

## Use case diagram

UML_specchio_webinterface_20161010.png

## Use case scenarios

|  |  |
| --- | --- |
| UC no. | #1 |
| UC name | Search for spectral data |
| Author | Christian Schibli, Remo Rossi |
| Priority (1, 2, 3) | 1 |
| Trigger | User wants to know if any specific data already exists in the SPECCHIO database. |
| Actor | Unregistered User |
| Precondition | User has an internet connection. User is located on the homepage. |
| Main scenario | 1. User puts keywords into search field. 2. User starts search. 3. SPECCHIO web interface checks for matching data. |
| Alternative scenario | 1. User chooses from the given pictograms for search query:  * Athmosphere * Hydrosphere * Geosphere * Cryosphere * Biosphere  1. User chooses from a list of attributes to isolate the range of the search query. 2. User searches over map mode by putting the coordinates or location into the search field. |
| Result | A list of search results is displayed or a feedback is given that no such data exists on SPECCHIO database. |
| Postcondition |  |

|  |  |
| --- | --- |
| UC no. | #2 |
| UC name | Show detail view. |
| Author | Christian Schibli, Remo Rossi |
| Priority (1, 2, 3) | 1 |
| Trigger | User has a list of search results and wants to show a detail view from one or multiple results. |
| Actor | Unregistered User |
| Precondition | User has an internet connection. User has already done a search query with some results. |
| Main scenario | 1. User chooses an item from the list. |
| Alternative scenario | 1. User chooses multiple items from the list. |
| Result | A detailed view of the chosen search result is displayed. |
| Postcondition |  |

|  |  |
| --- | --- |
| UC no. | #3 |
| UC name | Export spectral data |
| Author | Christian Schibli, Remo Rossi |
| Priority (1, 2, 3) | 2 |
| Trigger | User wants to use spectral data from the chosen result for research purpose. |
| Actor | Unregistered User |
| Precondition | User has an internet connection. User is located on a detail view. Enough free space for export at desired location. |
| Main scenario | 1. User presses the export spectral data button. 2. User chooses location to save spectral data. 3. User gives a filename. 4. User presses save button. |
| Alternative scenario |  |
| Result | Spectral data from the current detail view is saved at desired location. |
| Postcondition |  |

|  |  |
| --- | --- |
| UC no. | #4 |
| UC name | Export detail view |
| Author | Christian Schibli, Remo Rossi |
| Priority (1, 2, 3) | 2 |
| Trigger | User wants to save or print the detail view. |
| Actor | Unregistered User |
| Precondition | User has an internet connection. User is located on a detail view. Enough free space for export at desired location. |
| Main scenario | 1. User presses the export detail view button 2. User chooses location to save detail view file. 3. User gives a filename. 4. User presses save button. |
| Alternative scenario |  |
| Result | Detail view is saved as file at desired location. |
| Postcondition |  |

# 3. Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Requirement** | **Grouping** | **Prio (1, 2, 3)** | **Use Case** |
| 1 | The user must be able to search by keyword. | search | 1 | 1 |
| 2 | The user must be able to search by clicking the given pictograms:  – Athmosphere  – Hydrosphere  – Geosphere  – Cryosphere  – Biosphere | search | 3 | 1 |
| 3 | The user must be able to search by the SPECCHIO attributes (prefix search). | search | 2 | 1 |
| 3,1 | The user must be able to search by the SPECCHIO attributes (e.g. over dropdown menu). | search | 2 | 1 |
| 3,2 | Initially the total amount of spectra in database has to be displayed on the search view. | search | 2 | 1 |
| 3,3 | Searching for spectral data will update the total amount of found spectra displayed on the search view. | search | 2 | 1 |
| 3,4 | The user must be able to display the found spectral data for his search criteria. | search | 1 | 1 |
| 4 | The user should be able to search by map. | map search | 3 | 1 |
| 5 | Input for map search are coordinates. | map search | 3 | 1 |
| 6 | Input for map search is location name. | map search | 3 | 1 |
| 7 | The system will notify about no results if the area in km2 exceeds a specific value. | map search | 3 | 1 |
| 8 | The system is able to list the found spectra in a table. | result list | 1 | 1 |
| 9 | Results are initially sorted by date. | result list | 1 | 1 |
| 10 | The table of results should contain following information:  – date – campaign – owner – name – filename – institute | result list | 1 | 1 |
| 10,1 | The table of result show the first 10 results and provides paging for the rest. | result list | 1 | 1 |
| 11 | The system should be able to show a map snippet in the list of results if the mouse pointer is located over an enabled map icon. | result list | 3 | 1 |
| 12 | The user must be able to view 1 spectral data set (simplified). | detail view, map search | 3 | 2 |
| 13 | The user must be able to view 1 spectral data set (fullview –> diagram & metaparameter). | detail view | 1 | 2 |
| 14 | The user should be able to view multiple spectral data sets (fullview –> diagram & metaparameter). | diagram | 2 | 2 |
| 15 | The user must be able to view detail information about diagram curve from the position where the mouse cursor is currently located. | diagram | 2 | 2 |
| 16 | The user should be able to zoom in into diagram. | diagram | 2 | 2 |
| 17 | Only existing categories should be shown. Categories without content must be fade out. | detail view | 1 | 2 |
| 18 | Spectral data from different types should be separated in different tabs. | detail view | 2 | 2 |
| 19 | File format of spectral data export must be csv (comma-separated values). | data export | 1 | 3 |
| 20 | Multiple data sets from same type must be packed into one csv file. | data export | 1 | 3 |
| 21 | All generated csv files (data sets from different type) must be packed to ZIP. | data export | 2 | 3 |
| 22 | The user must be able to export detail view as PDF. | view export | 2 | 4 |
| 23 | The detail view must contain a map displaying the locations of the spectral data per space. | detail view | 3 | 2 |
| 24 | The result list displays the found spectra with latitude and longitude in a map. | result list | 3 | 1 |
| 24,1 | Clicking on a marker on the result map displays the detail view for the chosen spectrum. | result list | 3 | 1 |
| 25 | Only the first 5 attributes per category should displayed initially on the detail view. | detail view | 2 | 2 |
| 25,1 | There has to be a button to show/hide the attributes after the first 5. | detail view | 2 | 2 |
| 26 | The WAR-File must be able to read a db\_config.txt file to access the database. | deployment | 2 | – |

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