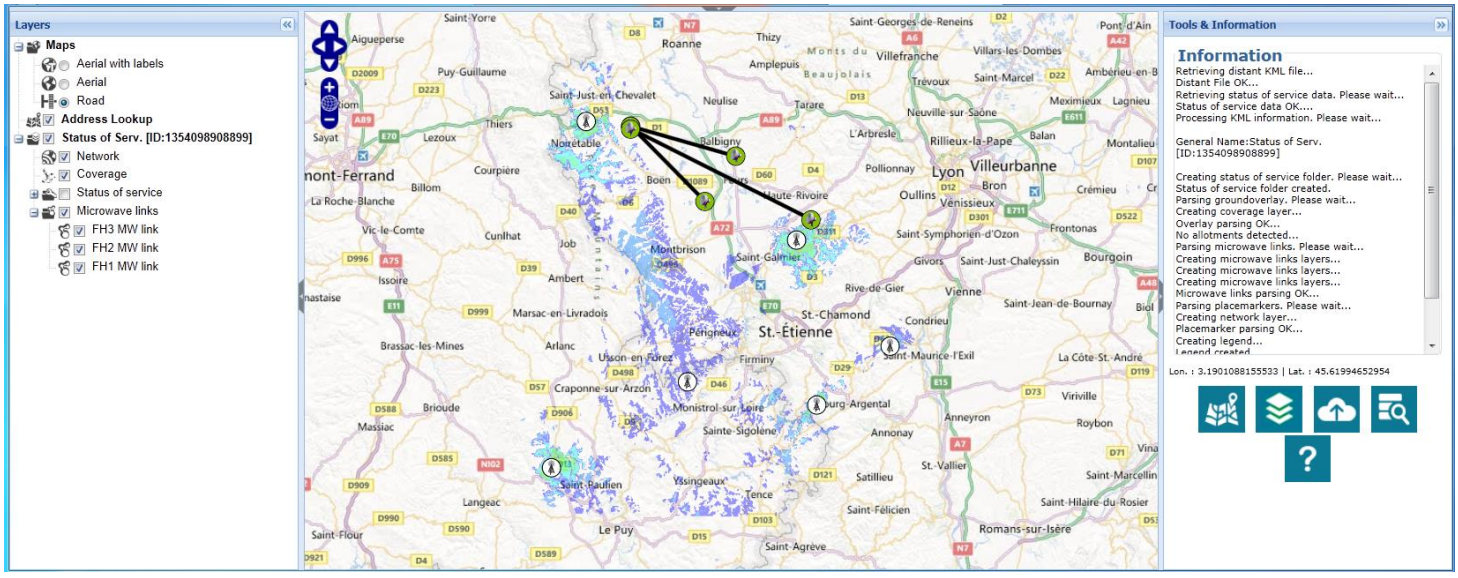
ATDI
software solutions in radiocommunications

ICS online



Contents

ICS Online overview

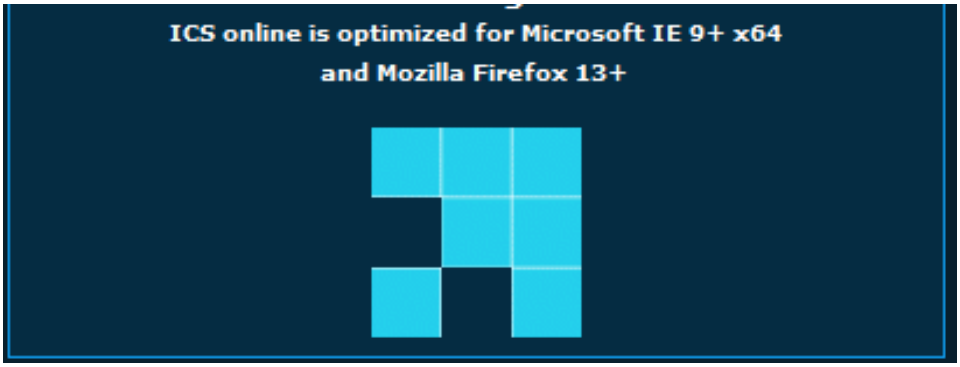
ICS online - a seamless way of sharing your network and radio planning data online

Are you looking for a solution to share heavy network and radio planning data online with your customers so that you just have to send a URL to your partners? ATDI now offers ICS online that will allow you to make your relevant data accessible anywhere, anytime to the people who need this information.

ICS online is a cloud service that allows:

- The use of a unique account and associated URL to access the data you decide to share,
- To select whether you want to share your data in a public mode or in a private mode (with a private key),
- To share radio planning data such as coverage, interference, traffic maps, etc resulting from calculations of ATDI radio planning solutions ICS telecom, ICS designer, ICS LT and HTZ warfare,
- To overlay these maps on the latest and best-in-class imagery from BING Maps embedded in the platform (see BING Maps announcement here) and Openstreetmap,
- To overlay the network information including stations and their technical characteristics,
- To upload in a seamless way results from ATDI radio planning solutions now featuring a specific export function to facilitate the process (KML, PNG, STS),
- To upload additional information in form of attachments such as pertinent and related documentation. Your ICS online account can then be used as an FTP repository account to share data with your partners.

Please, note:



ICS Online is optimized and certified for Firefox 13+ and Internet Explorer 9 + 64bits

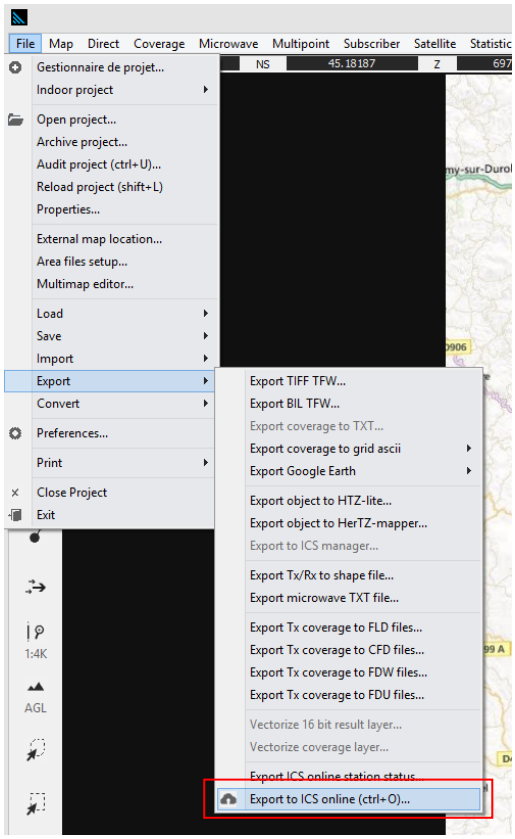
Exporting from ICS Telecom

Creating a package with ICS Telecom (ICS designer and ICS LT)

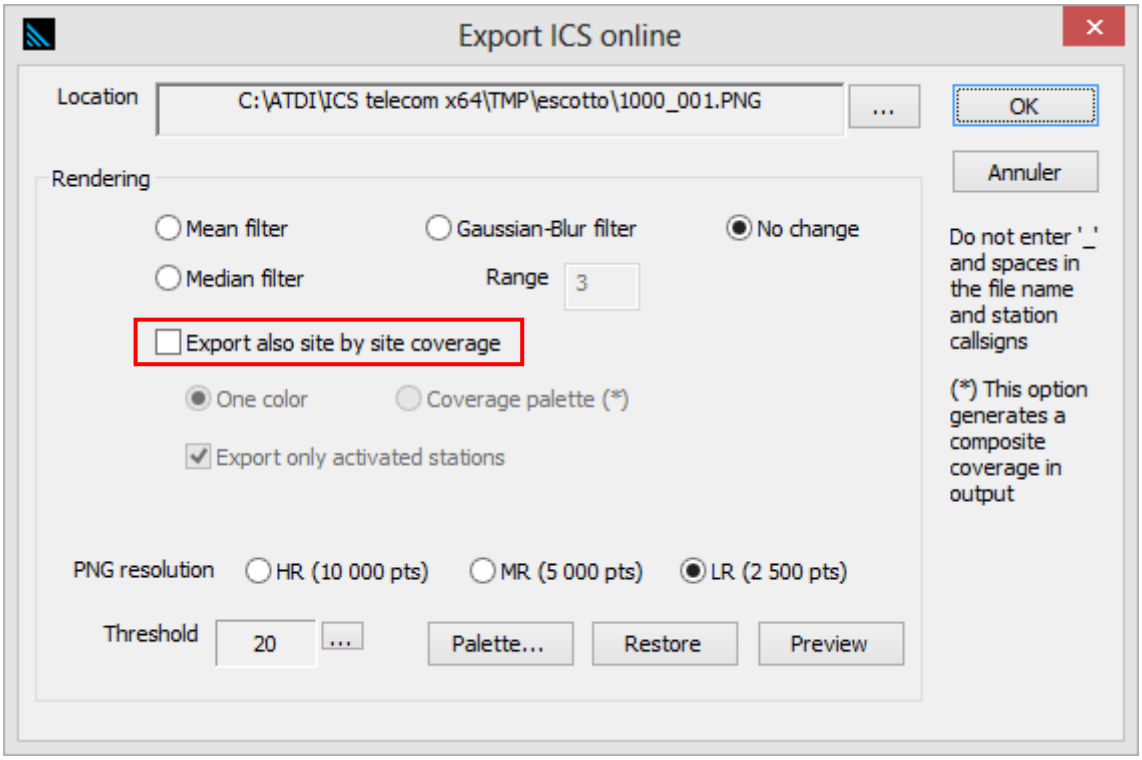
ICS telecom, ICS designer and ICS LT now provide the feature to export network and coverage information in a format that can be loaded seamlessly in ICS Online.

As a next step, the user has to create a ZIP file containing the PNG and the KML (and STS file, describing the status of service for each station) files previously created in the destination directory. Additional files such as EWF file linked to the current project can also be included in the ZIP file as well as related documentation such as equipment specifications, pictures or any relevant data to the network being considered. The created ZIP file is a “package” that can be then called in ICS online.

This function can be accessed going through File/Export/Export to ICS online as shown below or Ctrl+O.



A window then pops up allowing the definition of the destination directory where the PNG and KML files corresponding to the displayed coverage will be created. Simply name the file and the PNG and KML files are created in the selected folder.

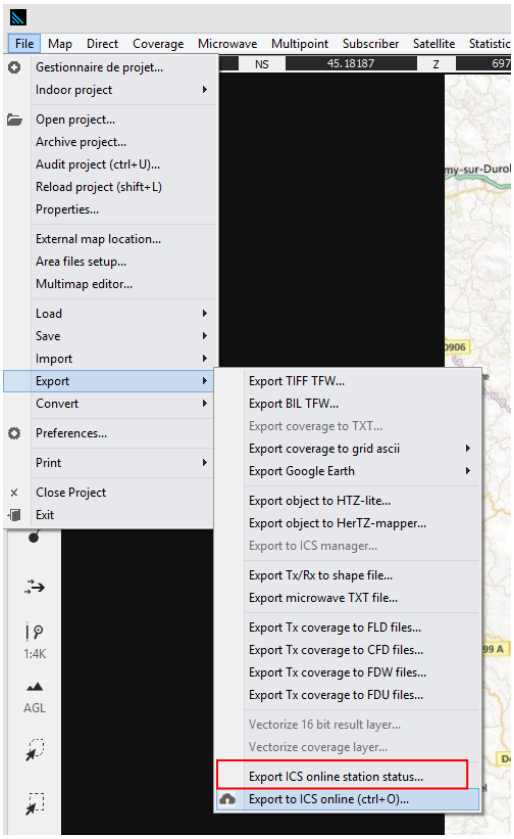


Note : you can export site by site coverage for displaying the status of service of each stations. Choosing “One color”, a site coverage will be exported in a specific color which will be defined from the “Palette” tool (in ICS Telecom, ICS Designer and ICS LT). This color will be used **if and only if** the defined threshold is reached or exceeded. If not, the site coverage area will be transparent. Choosing “Coverage palette” will generate a composite output coverage for each station

Note: the filter options (Mean filter, Median filter Gaussian-Blur filter, Range and No change) only apply for composite coverage.

Updating a STS file from ICS Telecom

This function can be accessed going through File/Export/Export ICS online station status as shown below:

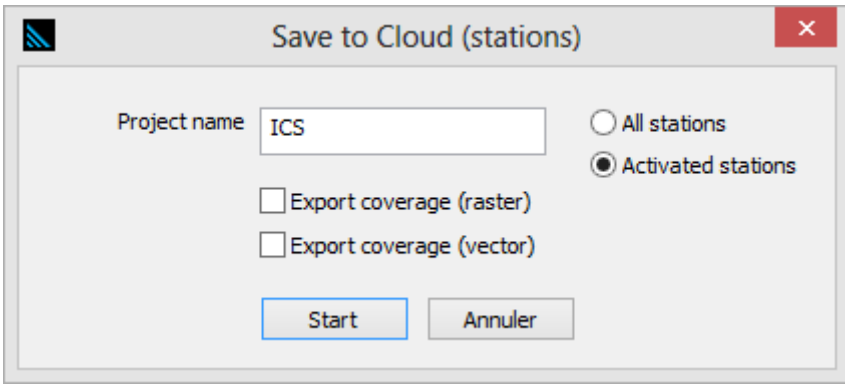


In the browse file window, save the STS file. Update it from ICS Online, see “Updating a STS file” section.

Saving a project in your X64 Cloud storage

If your X64 storage is initialized (contact your ATDI support for more information), you could store your projects into the cloud.

Click on the  icon and choose “Cloud: save stations…”.
In the following window:



- Set a name for your project in the “Project name” field.
- Choose “All stations” or “Activated stations” if you only want to keep the activated stations.

- If you want to export the raster coverage, check the “Export coverage (raster)” box. Note that the raster coverage won’t be use in ICS Online.
- If you want to export the vector coverage, check the “Export coverage (vector) box. This/those coverage(s) will be use for coverage prints and population coverage calculations

Click “Start” button.

Access in public or private modes

A customer and user of ICS online can make network and coverage information available in both public and private modes. In public mode, uploaded data can be viewed by anyone who is aware of the URL. A package data could be protected using a password/key for a private access.

Public Access

Public URL access: http://icsonline.azurewebsites.net/show/(your client account name)
Example with the ATDI demonstration page : http://icsonline.azurewebsites.net/show/atdi

In private mode, the uploaded data can be viewed by anyone who has the URL as well as the corresponding login and password.

Private Access / Administration User mode

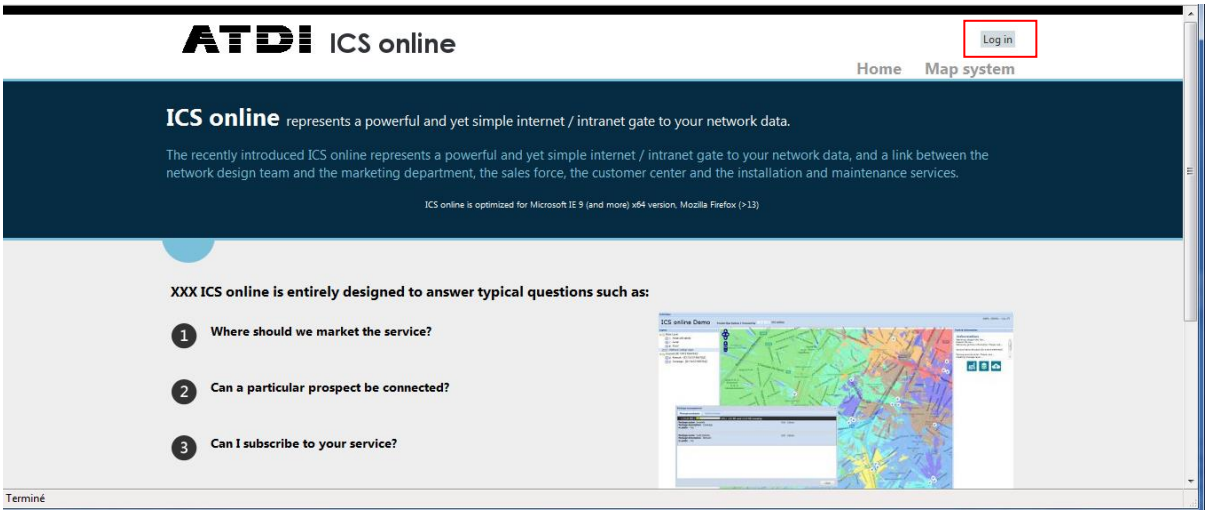
Private URL access: http://icsonline.azurewebsites.net/Account/Login

When loading coverage and network information, the user can select whether the data is accessible in public (or public protected with a key) or private mode (only accessible to admin users).

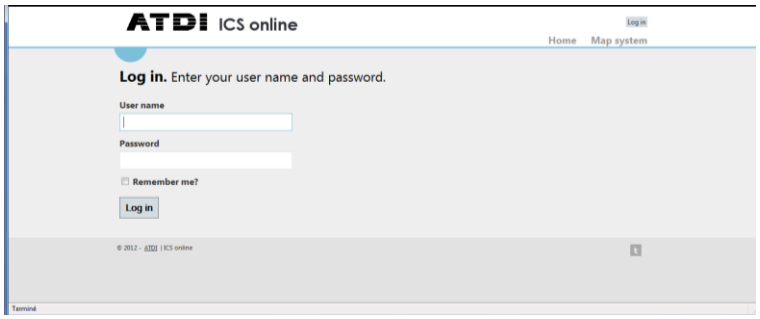
The appropriate URL's are provided to the user when subscribing to the ICS online service.

Simply click on the URL and enter login and password as follows:

1) Click on "Login" in the top-right corner of the welcome window:



2) Enter login and password:



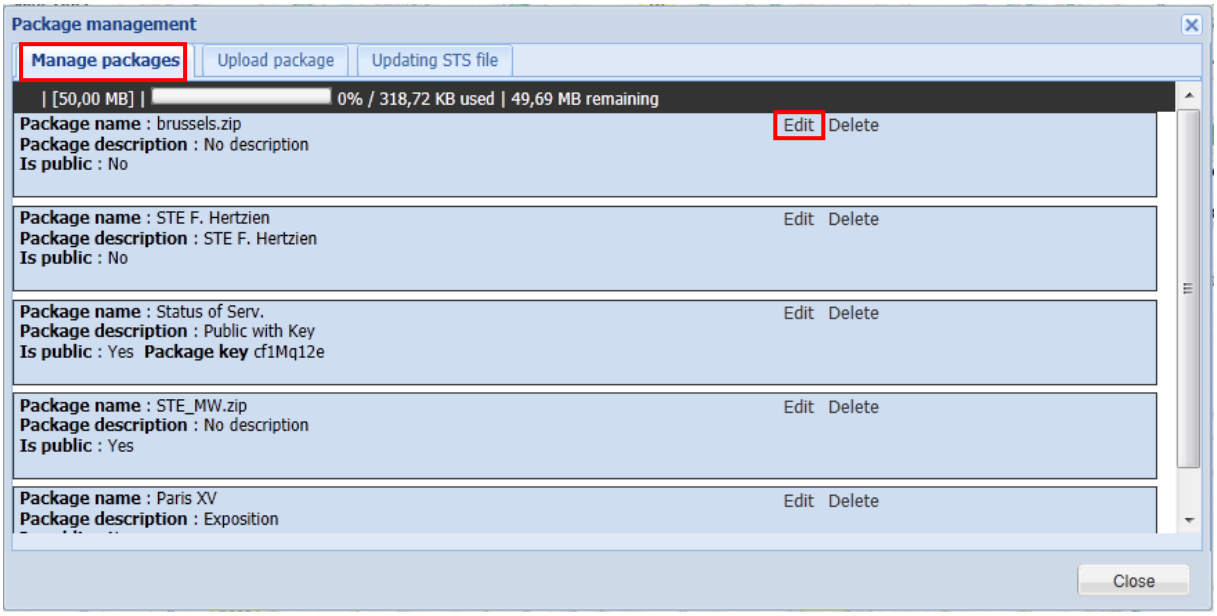
Loading a package in ICS online

Managing packages

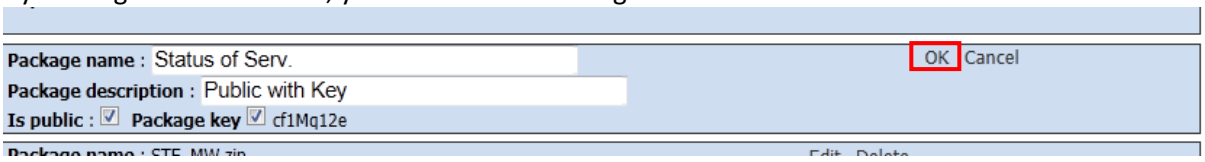
Once logged in, you are accessing ICS online:

A package can be loaded in ICS online by clicking on the “Cloud” icon in the right pane (see above); then, the package management window pops-up. The tab “Manage packages” allows the management of the various packages.
By clicking on “Edit” link, you can modify the package name, description and public/private status.

Note : you also can change the package key for protection by uncheck/check the “Package key” checkbox. A new generated key will be display.

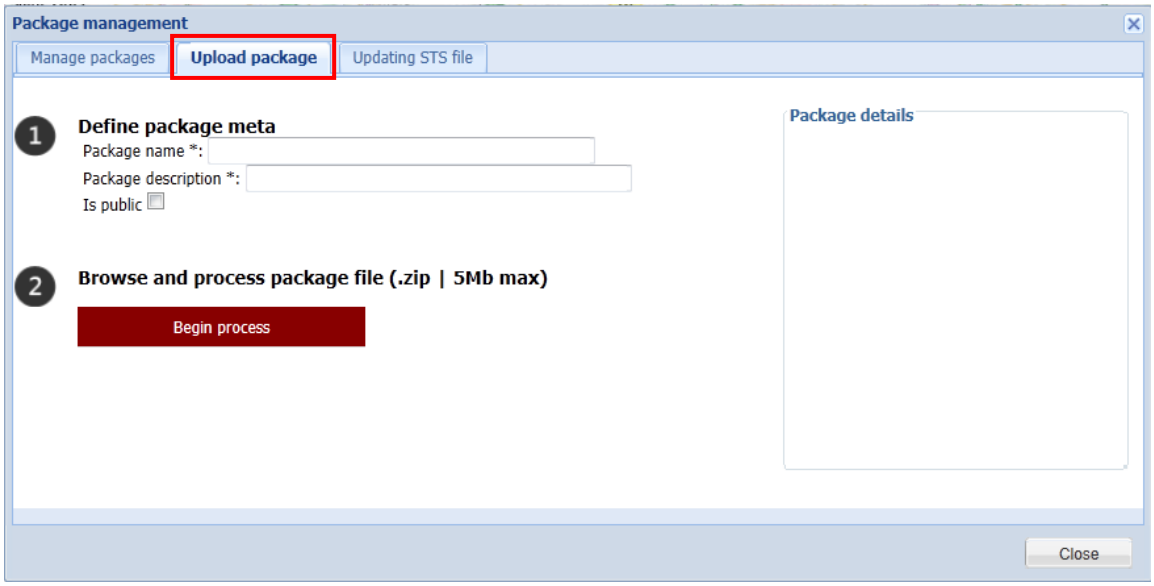


By clicking on the “OK” link, you will save the settings.

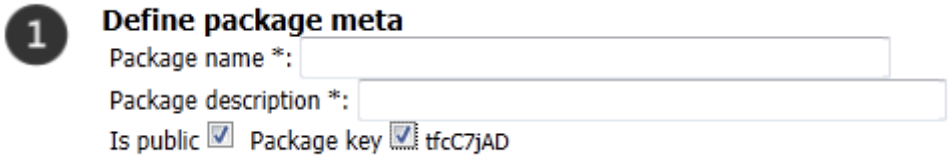


Uploading a package

The tab “Upload packages” allows the upload of the created packages.
The package (ZIP file previously created with ICS telecom, ICS designer or ICS LT) can be then loaded in ICS online. The package management window also shows the storage quota still available to the user.



When uploading a package, you can select whether you want to make the data accessible in a public by checking the “Is Public” checkbox or private mode (access restricted to admin users).
Note that you can generate a key for restricting a public package to users who have this key. For generating a key, check the “Is public” checkbox, then check the “Package key” checkbox. The key will be generated. If you uncheck/check again the “Package key” checkbox, a new key will be generated.

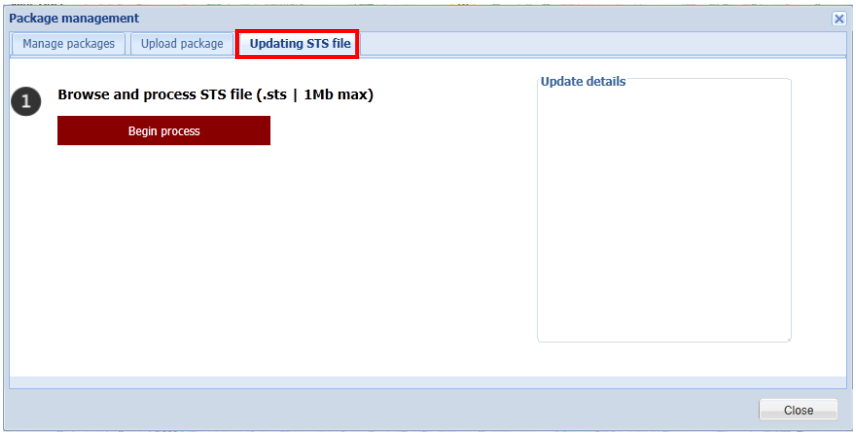


Once the package is selected, simply click on “Begin process” in order to complete the operation.

Updating a STS file

The tab “Updating STS file” allows you to update the status of service definition file in ASCII format which is a listing of the deactivated stations: callsign;comment.

The STS file will disable the display of the stations into the “Status of service” layer.



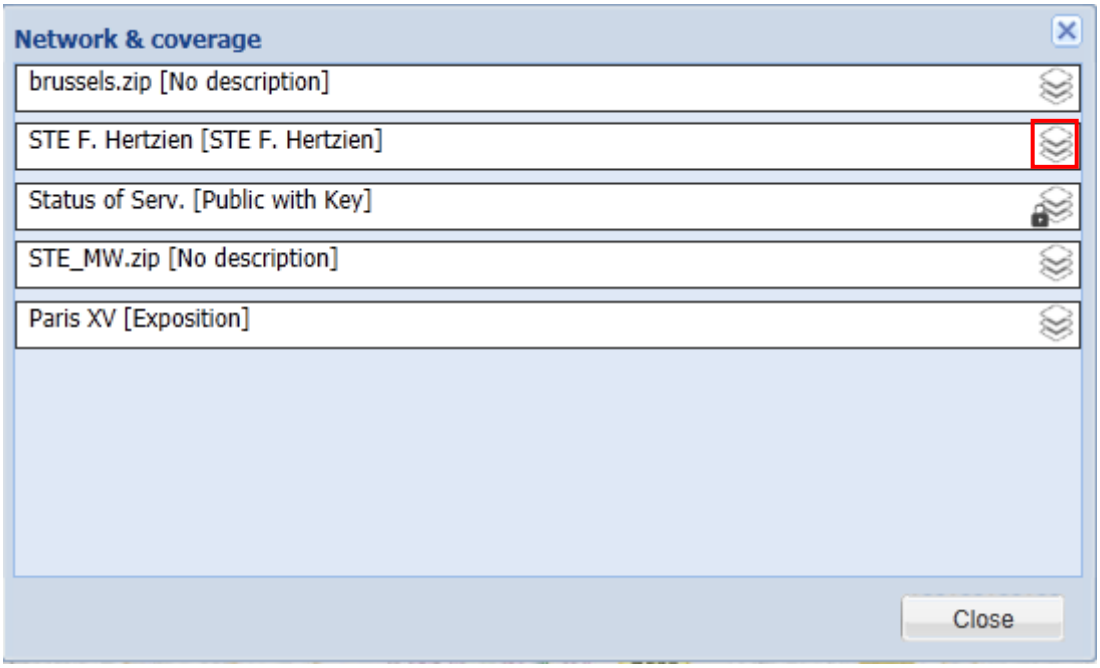
Note that you could only use this feature with a package generated from ICS Telecom with a status of service definition files (see ICS Telecom user manual for more information).

Also note that you can modify the STS file by hand. You must respect the format: callsign;comment

Displaying coverage in ICS online

A package can be viewed in ICS online by clicking the “3 layers” icon in the right pane:

The network and coverage management window is then displayed to allow the selection of a package to view:



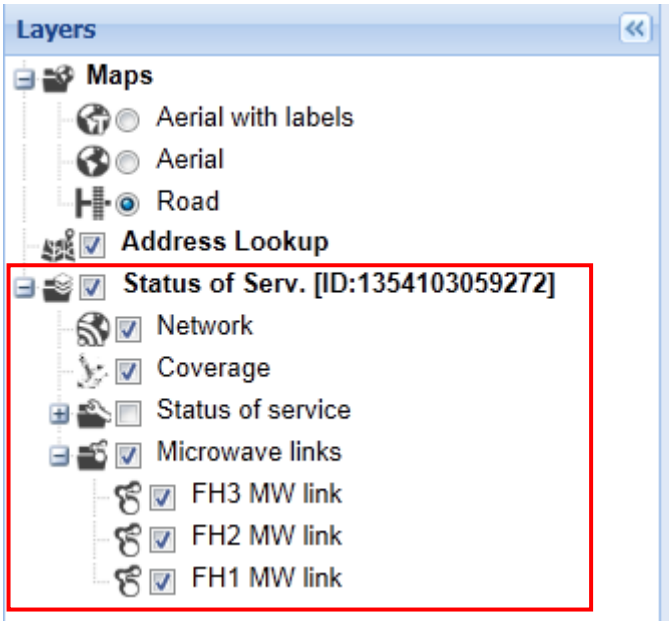
Click on the right hand side of the package you want to display (click only once).

 : Package accessible without a key.

 : Package only accessible with a key. If you click on it, a popup will be displayed asking for the package key. Fill in the field and click the “OK” button

Note that if you are connected as administrator, all the packages could be displayed, no matter if they have a restricted area or not.

The network you just loaded is now visible on the left hand side of the window.



By unfolding the considered network (click only once), the different layers you have set from ICS Telecom are displayed.

Displaying coverage information in ICS online

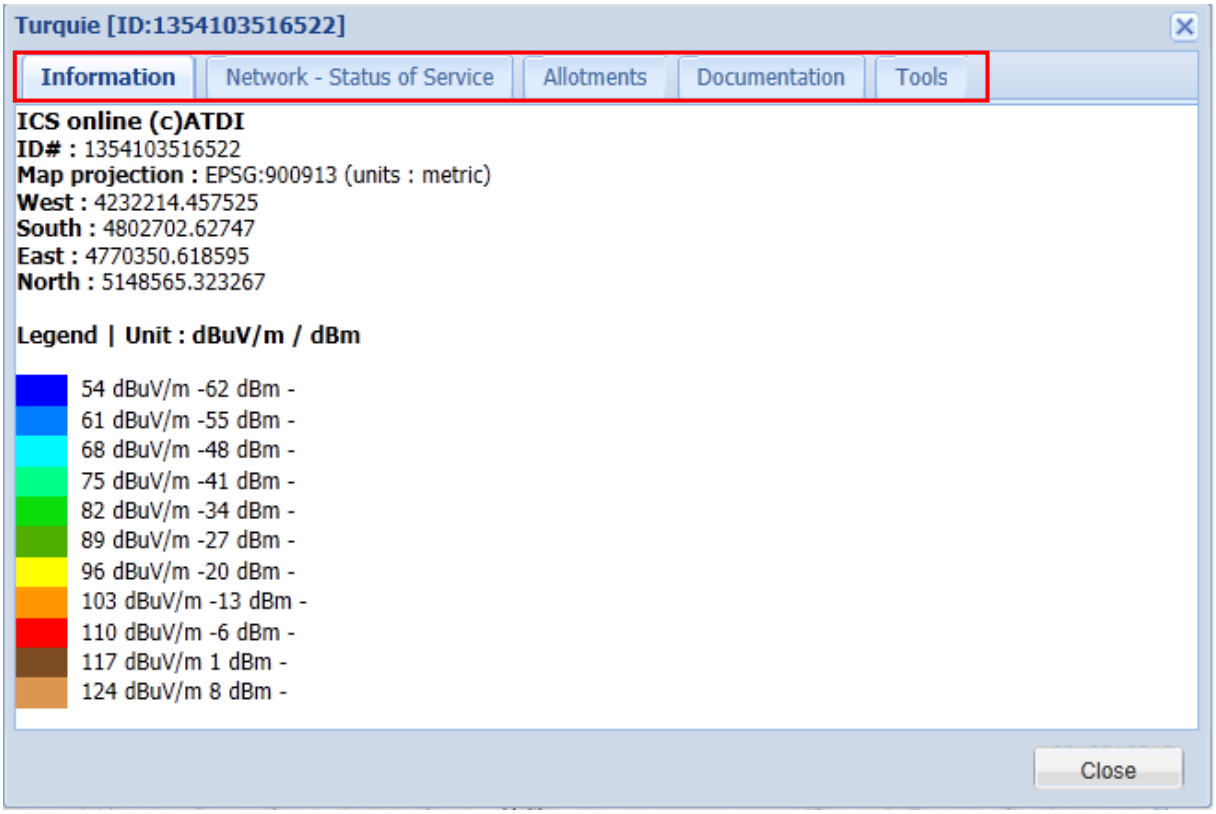
The coverage can be visualized by simply clicking on the Coverage layer in the left pane and in the considered network. The coverage is then overlaid on top of Bing or Openstreetmap bas map. Zoom functions are available in the window and also through the mouse.

Displaying network information in ICS online

The network (i.e. base stations, transmitters, etc.) can be visualized by simply clicking on the Network layer in the left pane and in the considered network.

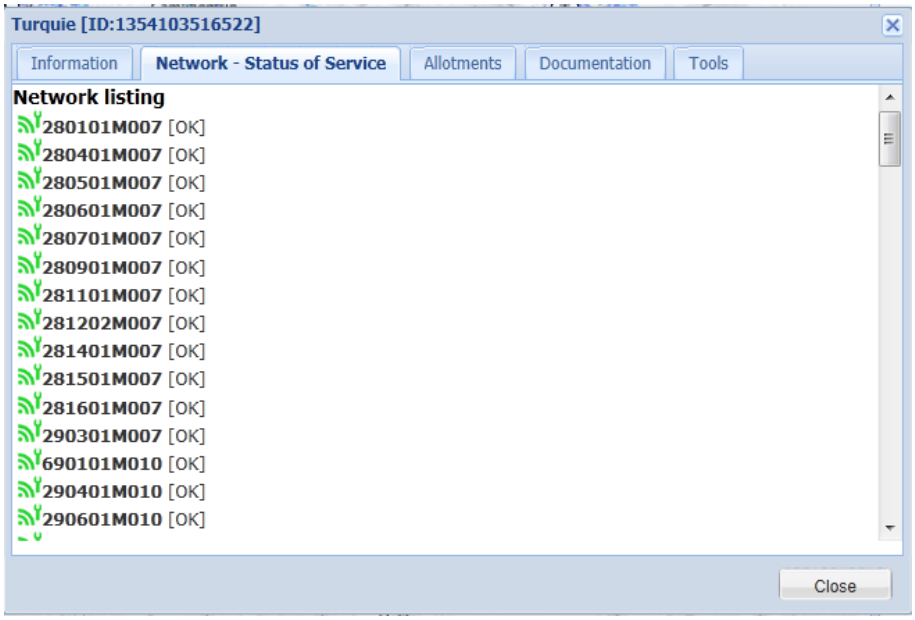
Adjusting parameters in ICS online

When clicking on the package being visualized (i.e. see the previous screenshot), a window pops-up as follows:

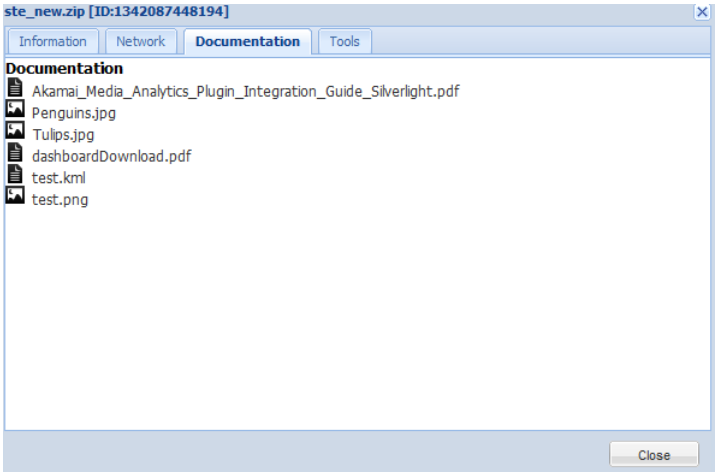


The “information” tab shows the color palette and associate scale (above).

The “network – status of service” tab lists all the elements contained in the network and the associated status of service (if defined in the package, from ICS Telecom). Up-and-running stations will be displayed with a icon. Out of order stations will be displayed with a icon. Station with an undefined status will be displayed with a icon. By clicking on an entry, the map will be relocated onto the station area and the information related to it will be displayed in the “Information” box.

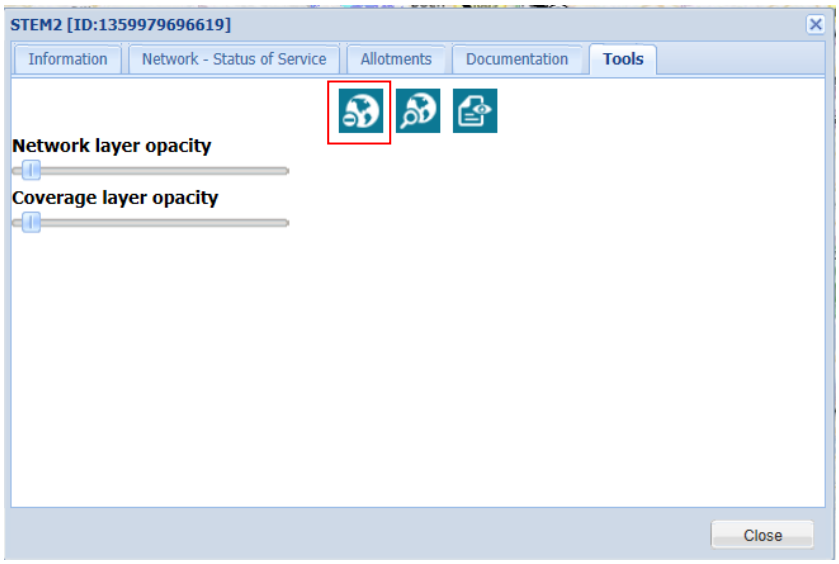


The “documentation” tab lists all the relevant documents that have been included in the “package”:



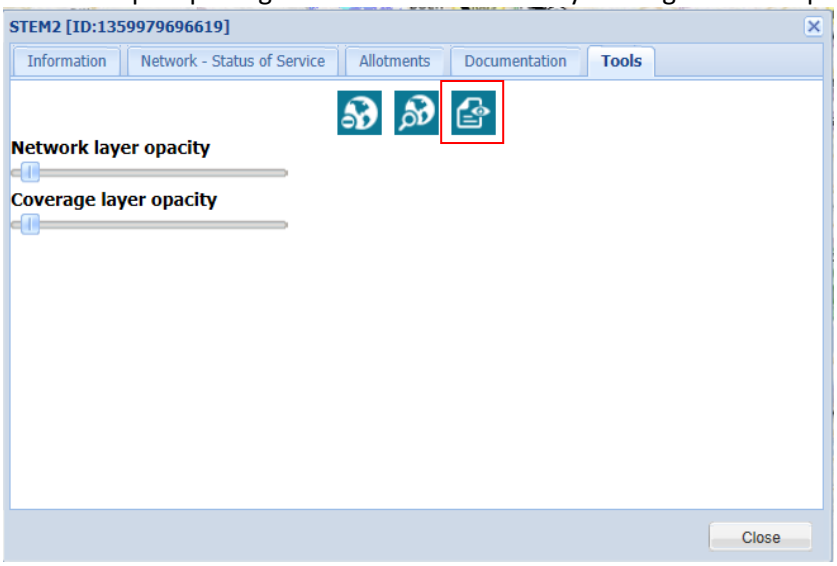
Note that this tab is only accessible to administration users.

The “tools” tab allows to adjust the transparency of the coverage and of the network elements and also allows to delete the package (red box in the screenshot below):



Producing package report

You can export package information and data by clicking on the “export” icon of the “Tools” tab.



A new window will be open displaying the package data and maps:

- General information
- Overview (Map)
- Coverage (Map)
- Network (Map and list of stations with data)
- Status of service (Map of availability and map of down stations with data)
- Microwave links (Map and microwave links map and data)
- Allotments (Map and allotment maps and data)
- Lines

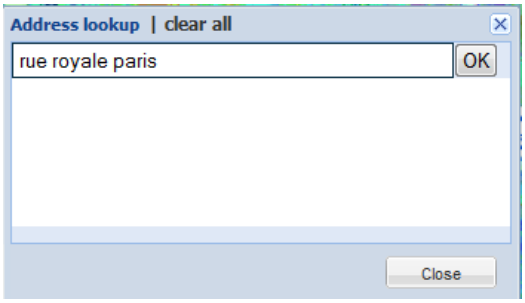
Note: all maps could be modified using zoom in or zoom out for centering content.

Use the print command of your browser for printing the report.

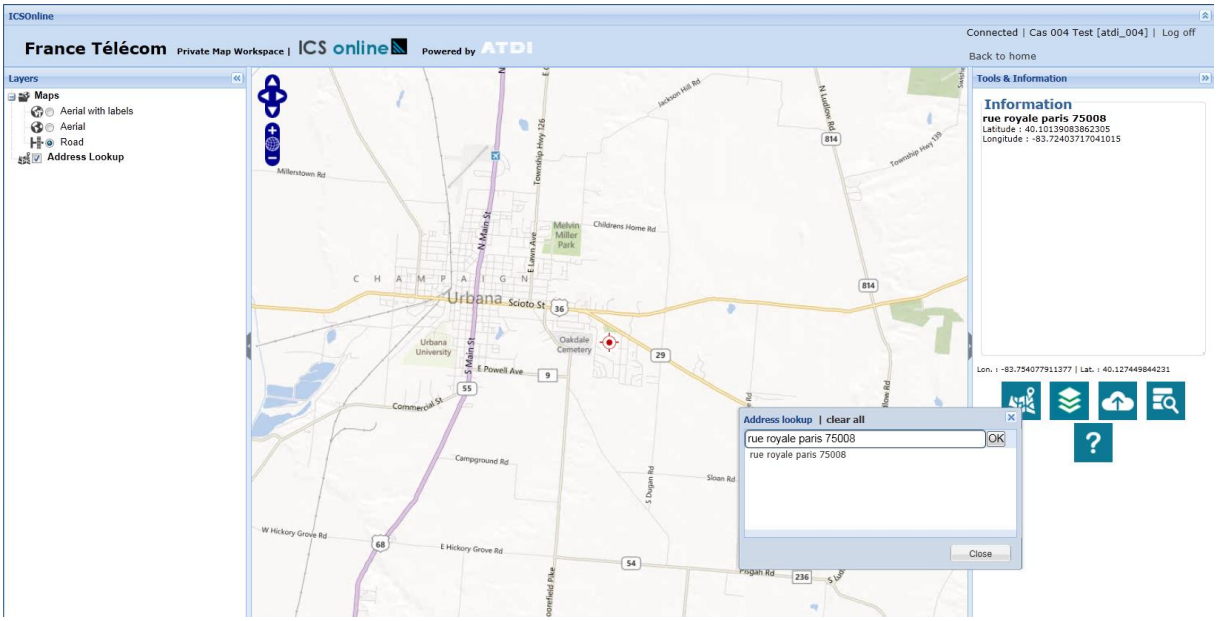
Searching for address in ICS online

A search by address in ICS online can be done by clicking on the left icon in the right pane:

Simply enter the address (anywhere in the world):



And the view will be adjusted:



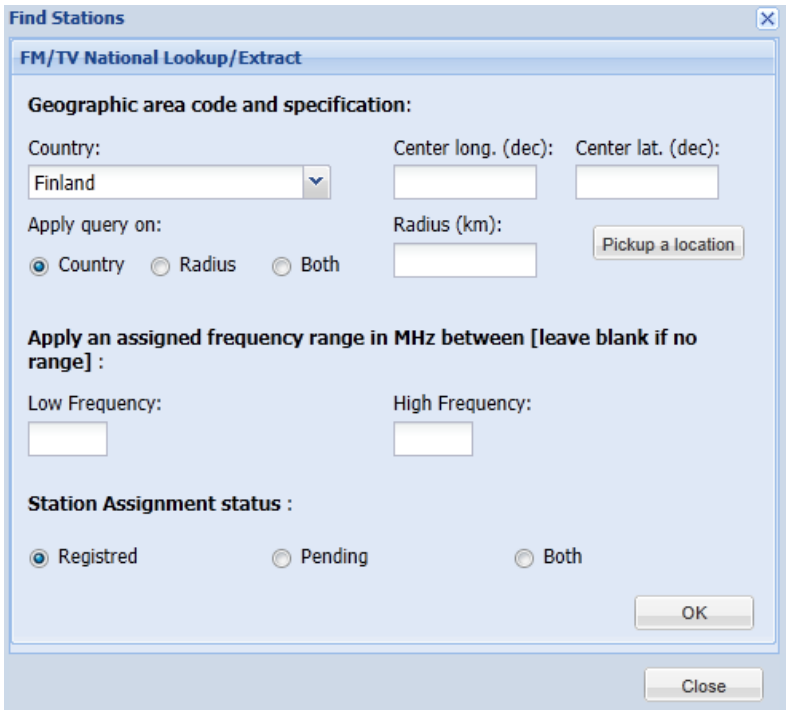
If the address is not found, ICS Online will list the five most similar addresses. The user could select the one he wants.

Finding a BR IFIC station

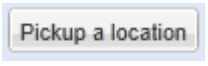
Every registered stations from BR IFIC can be viewed in ICS Online by clicking on the Find Stations icon:

The **Find Stations** window appears.

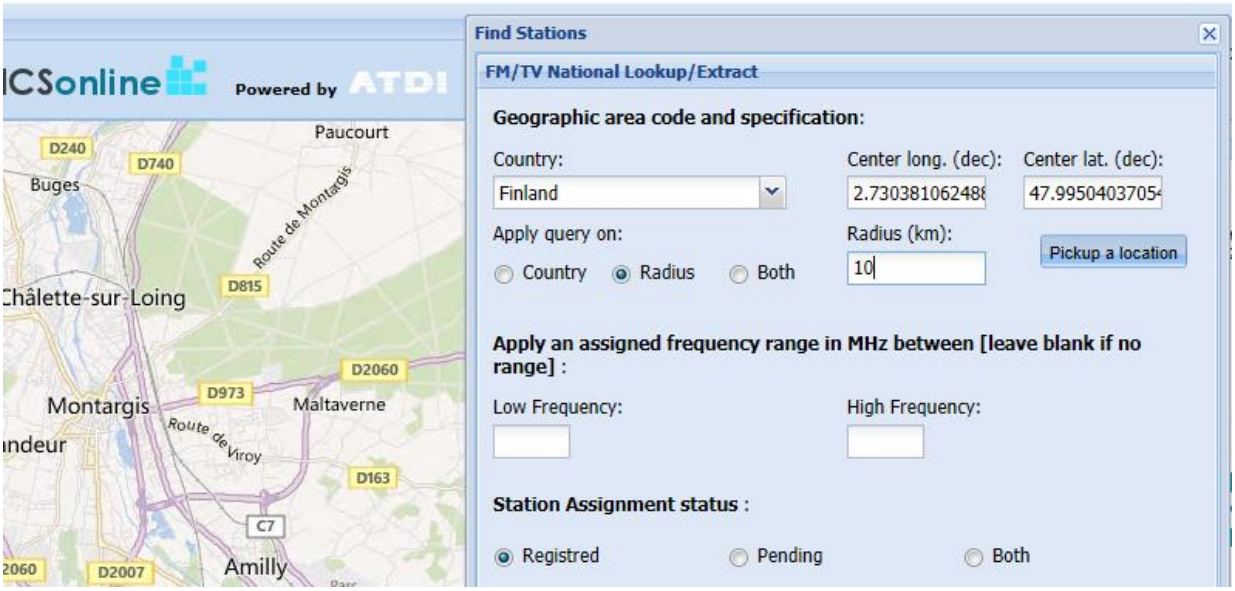
Stations can be found by country or with coordinates (dec).



You can also find a station by clicking on the map with the cross:

Click on  and choose the place you want.

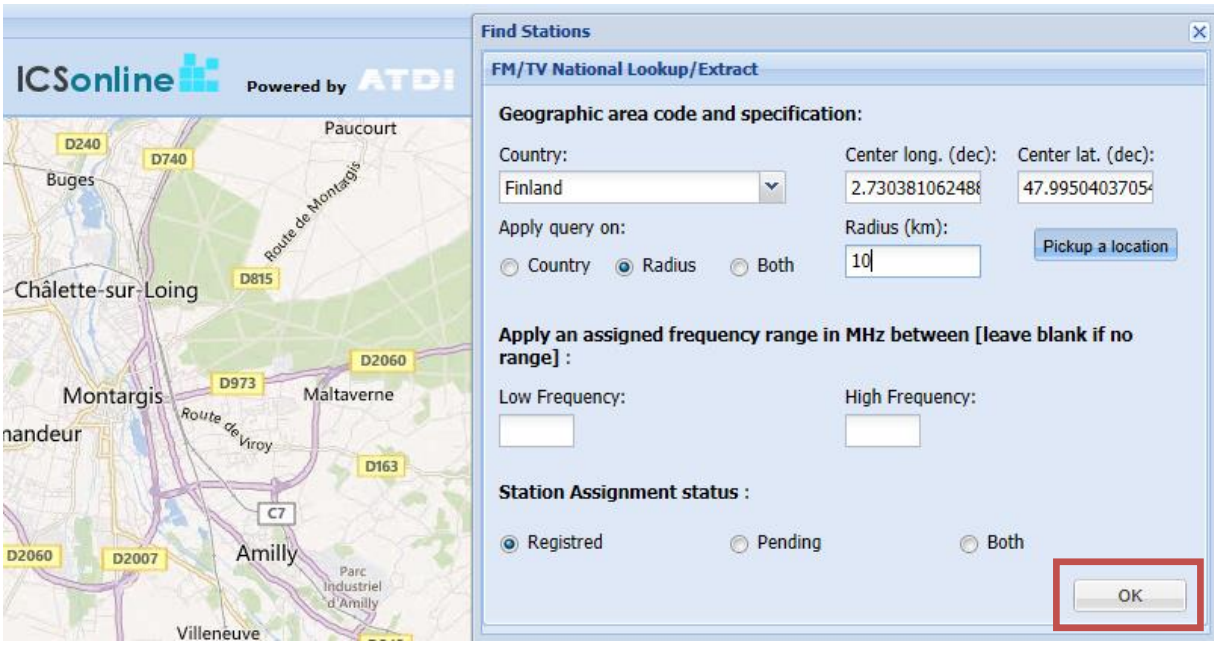
Coordinates appear in the Find Stations window:



You can enter a radius (km) and the range of the frequency.

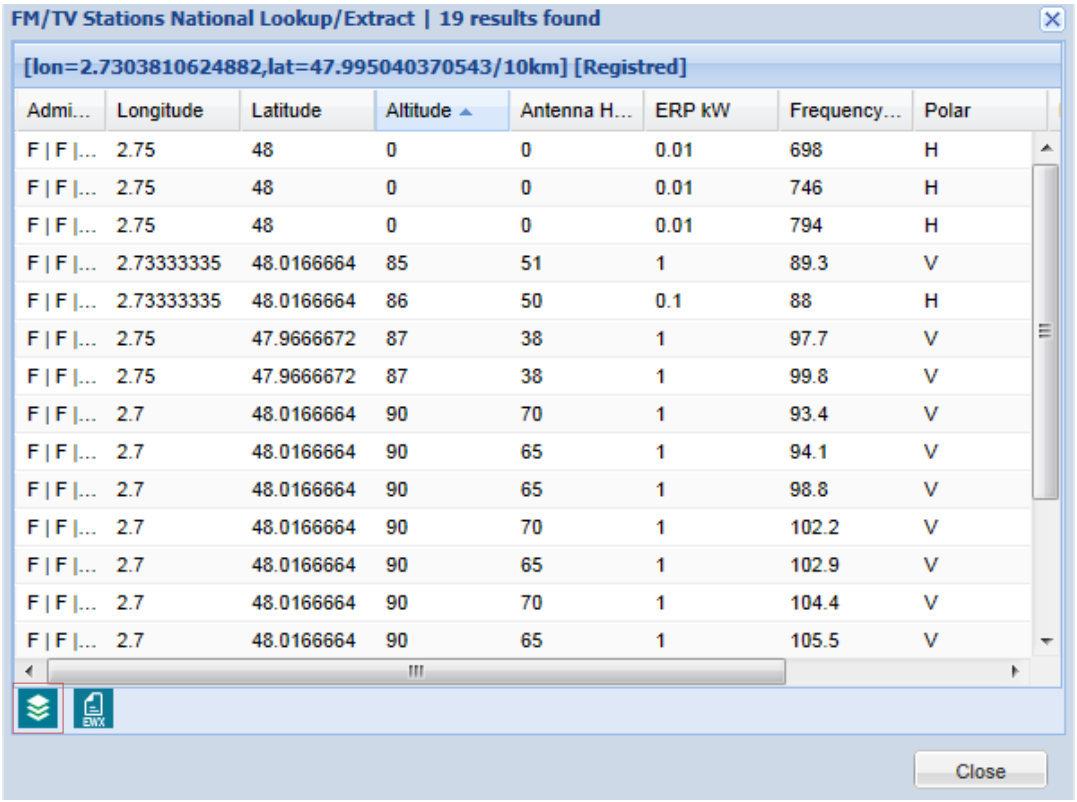
You can check the status of the station assignment.

Then, click on ok:

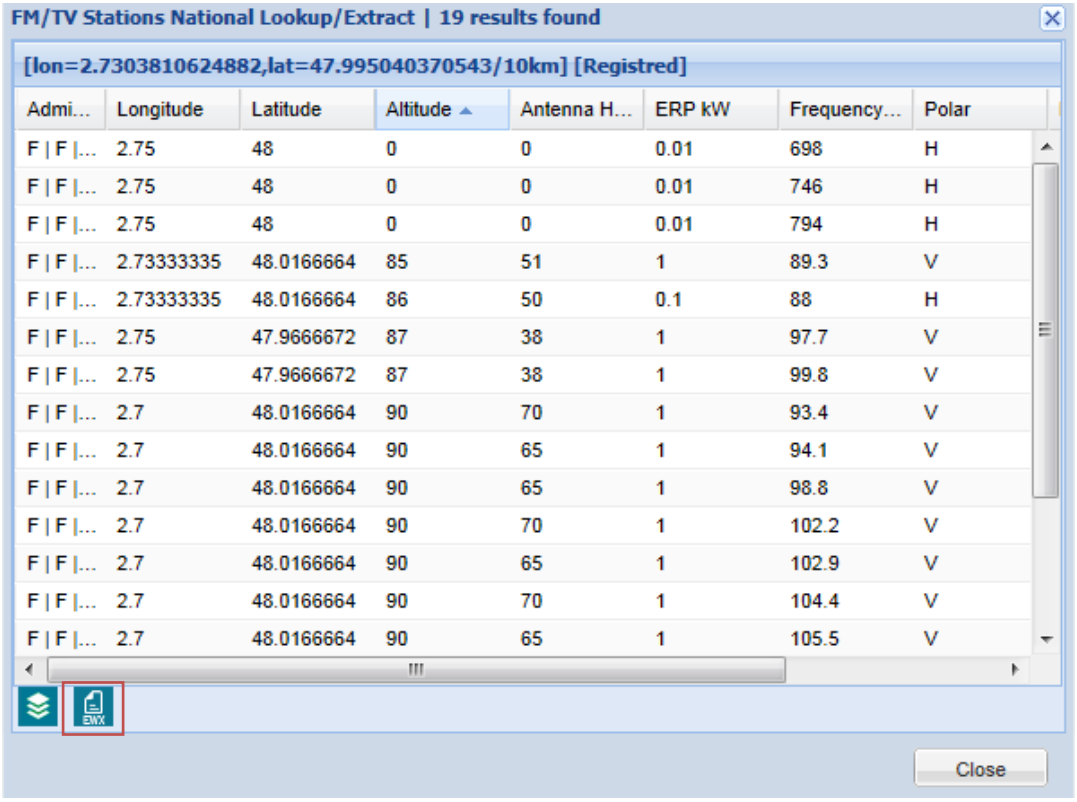


The stations list appears.

You can display query results on the map :



You can export query results on ICS Telecom:



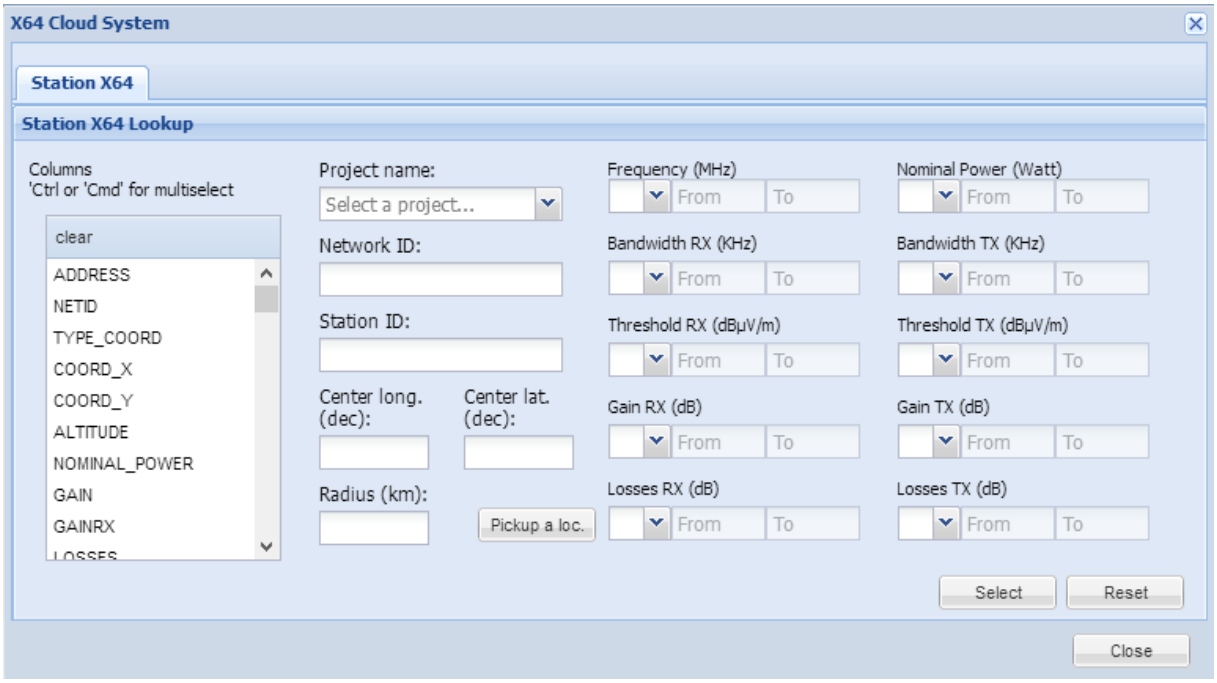
Finding stations on X64 Cloud

You can access your X64 workspace by clicking on the 

icon.

Note : you have to subscribe to the “X64” option. Contact your local ATDI representative for any information on the X64 Cloud option.

The following window pops up:



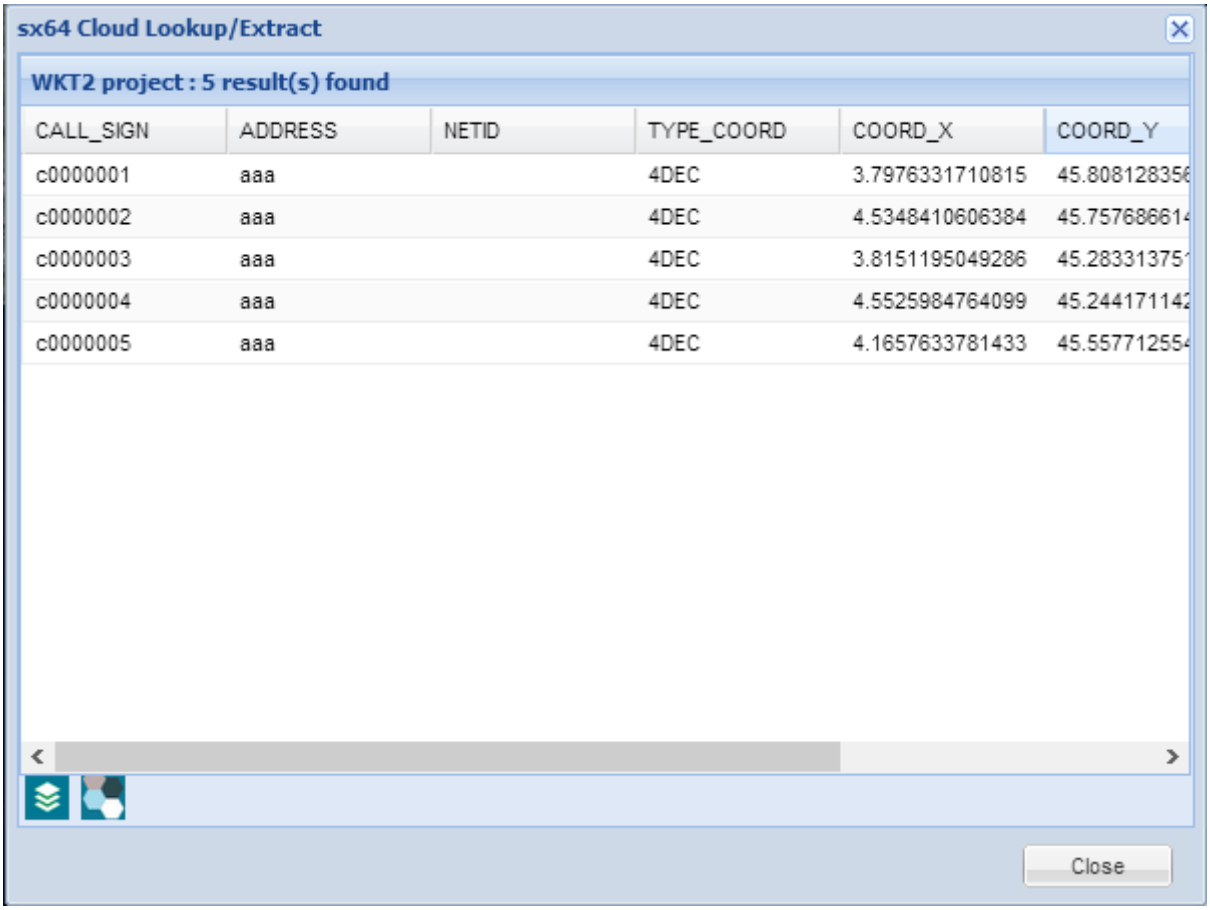
1/ Select at least one column (mandatory)

2/ Select a project (mandatory)

3/ If needed, fill in other search fields

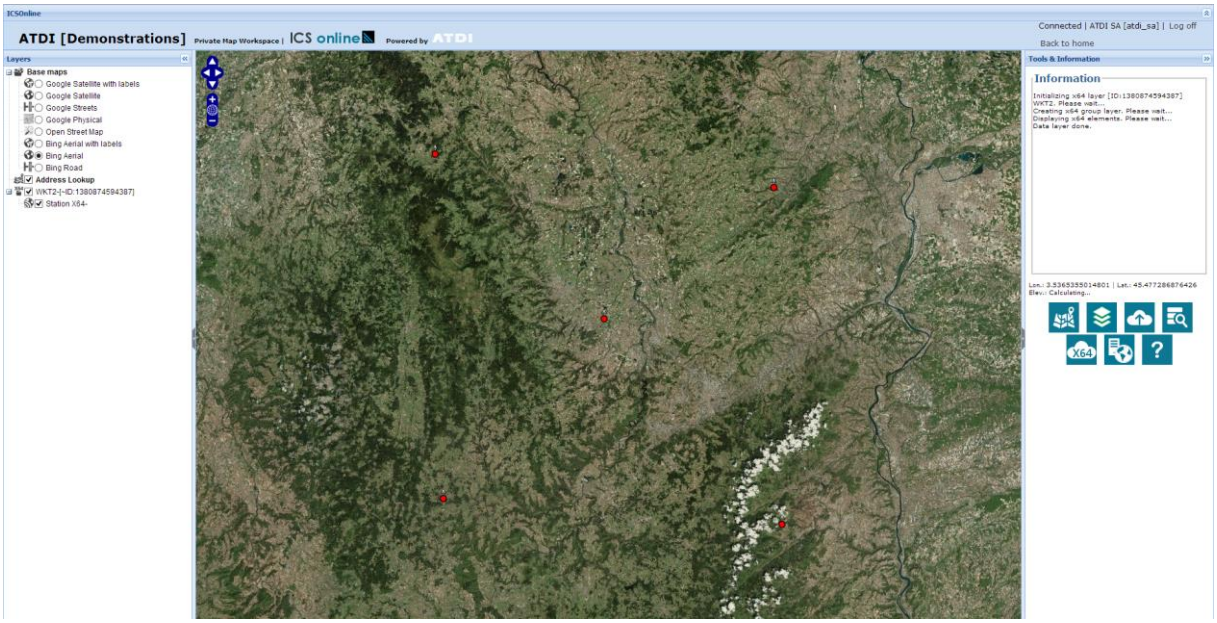
4/ Click on “Select” button

A new window with the result is displaying:

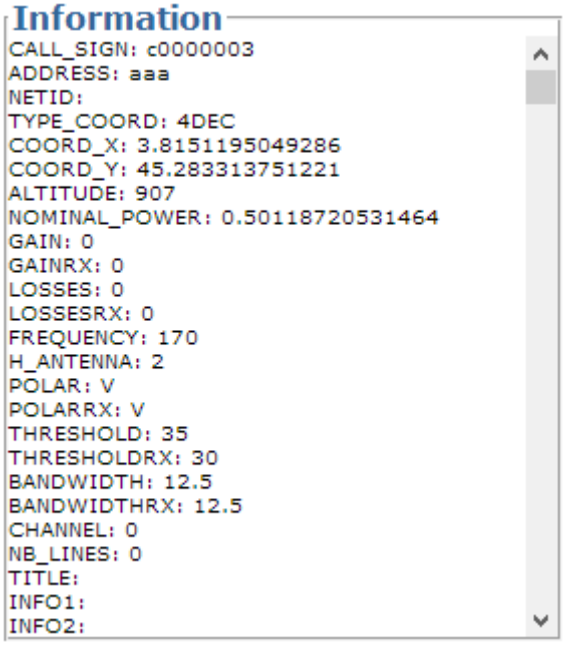


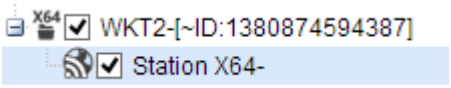
By clicking on the  icon you will display all the stations and their respective coverage prints into the map workspace.

By clicking on the  icon you will display all the stations into the map workspace.

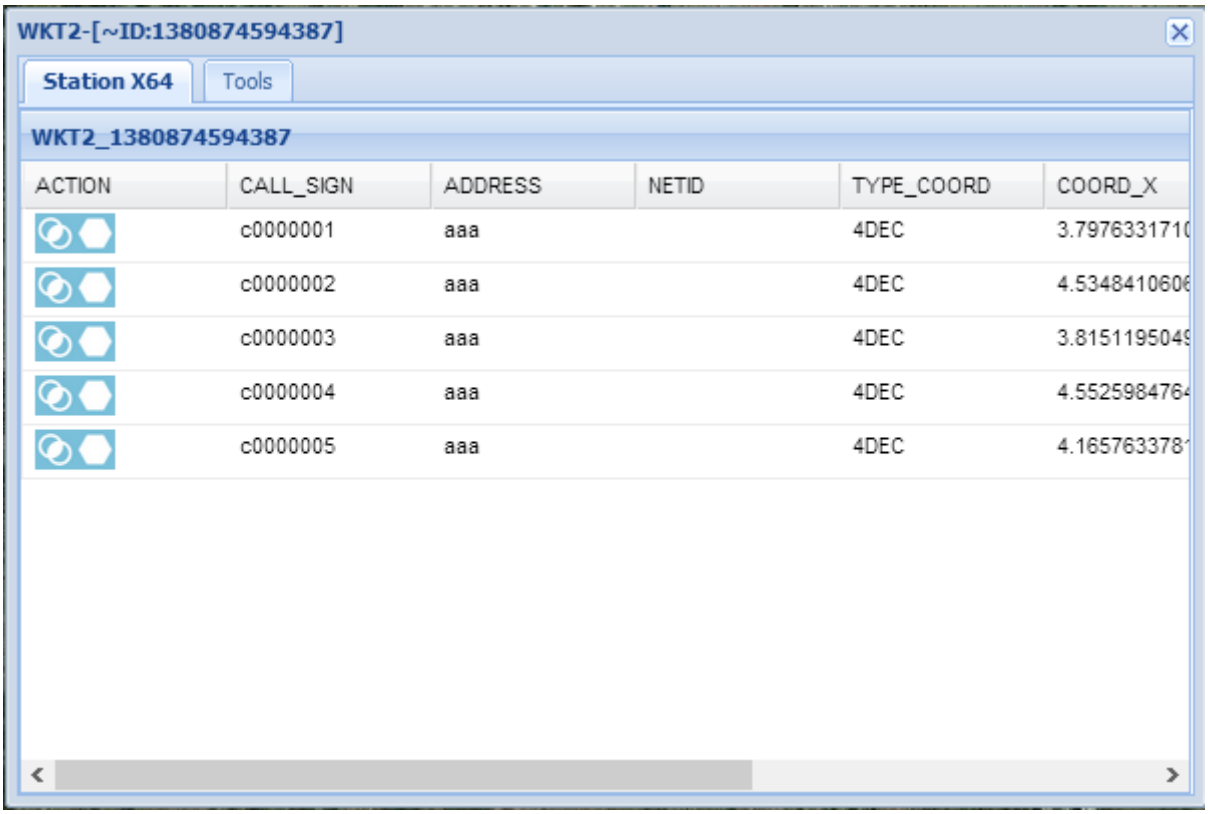


By clicking on a station on the map  , you will display its data into the “Information” area:



By clicking on the “Station X64” node, 

, you will display a new windows :

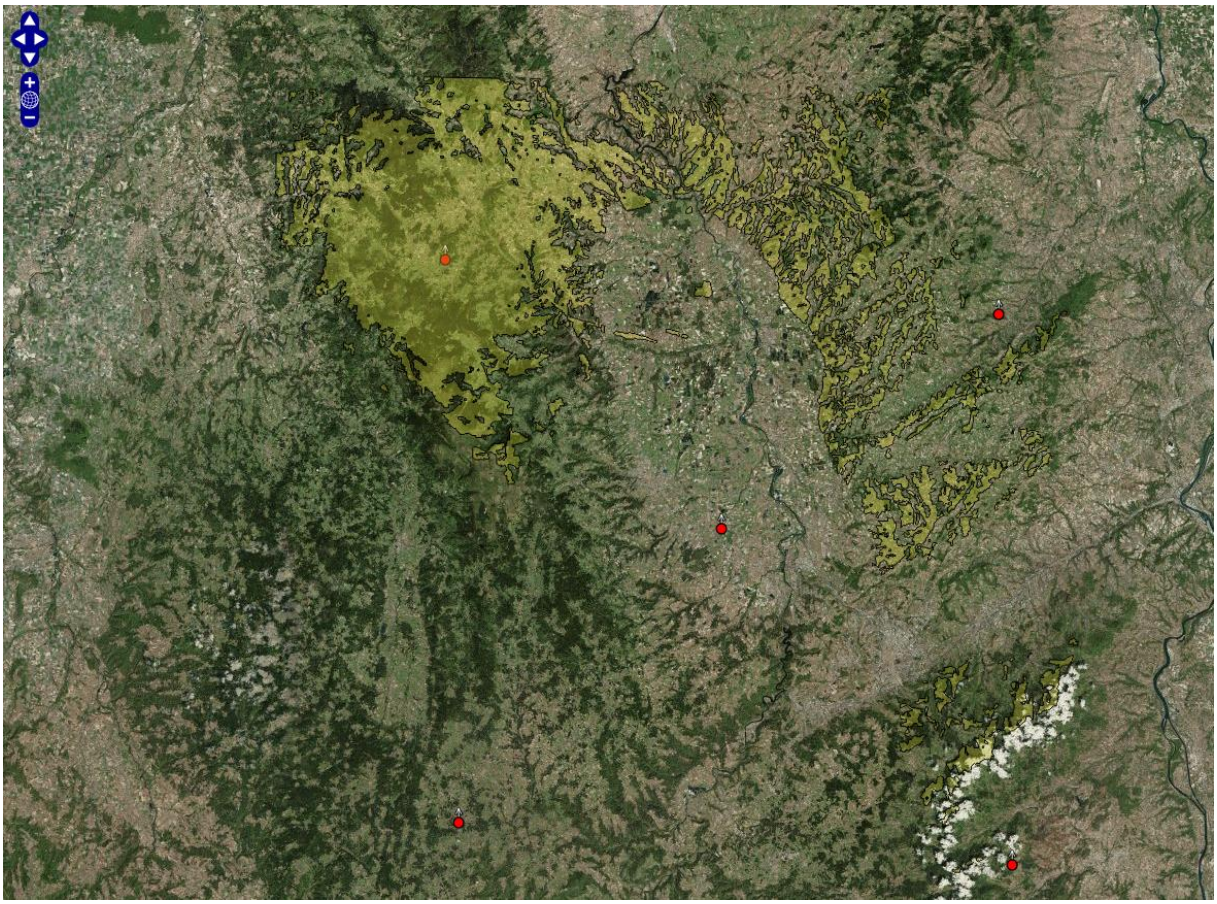


Displaying coverage prints

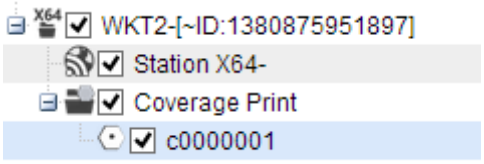
1/ Open the project node (see below)

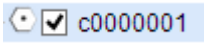
2/ Click the  icon for the selected station

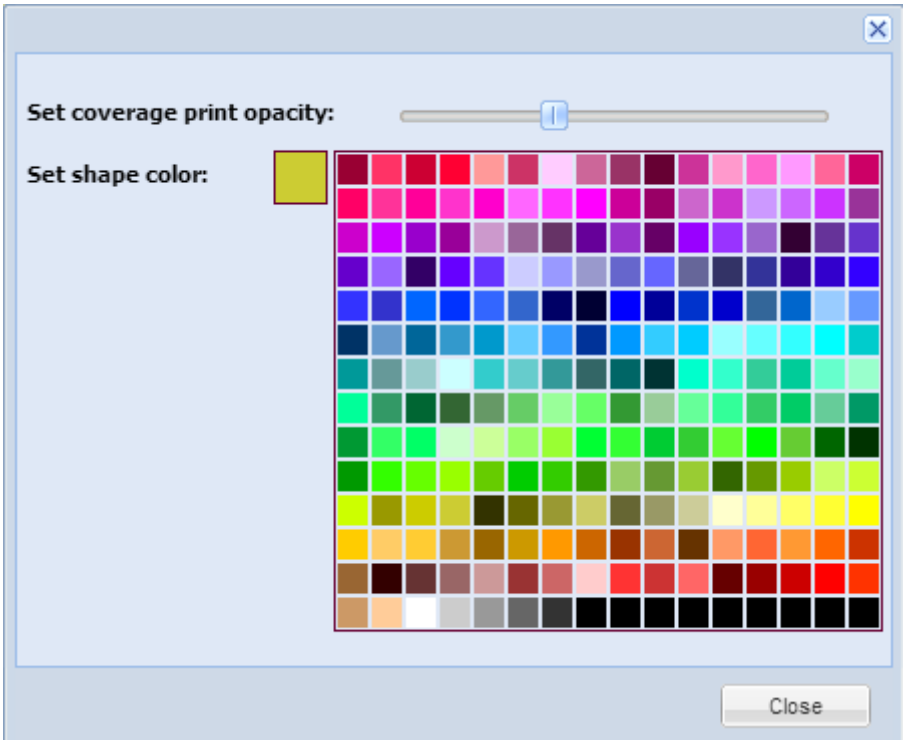
3/ The coverage print is displaying into the map.



A new node named “Coverage Print” is inserted in the tree view, with a sub node related to the station coverage:



4/ You can change the color and the opacity of the coverage print. Click on the coverage print name in the tree view  for displaying the coverage print setting window:

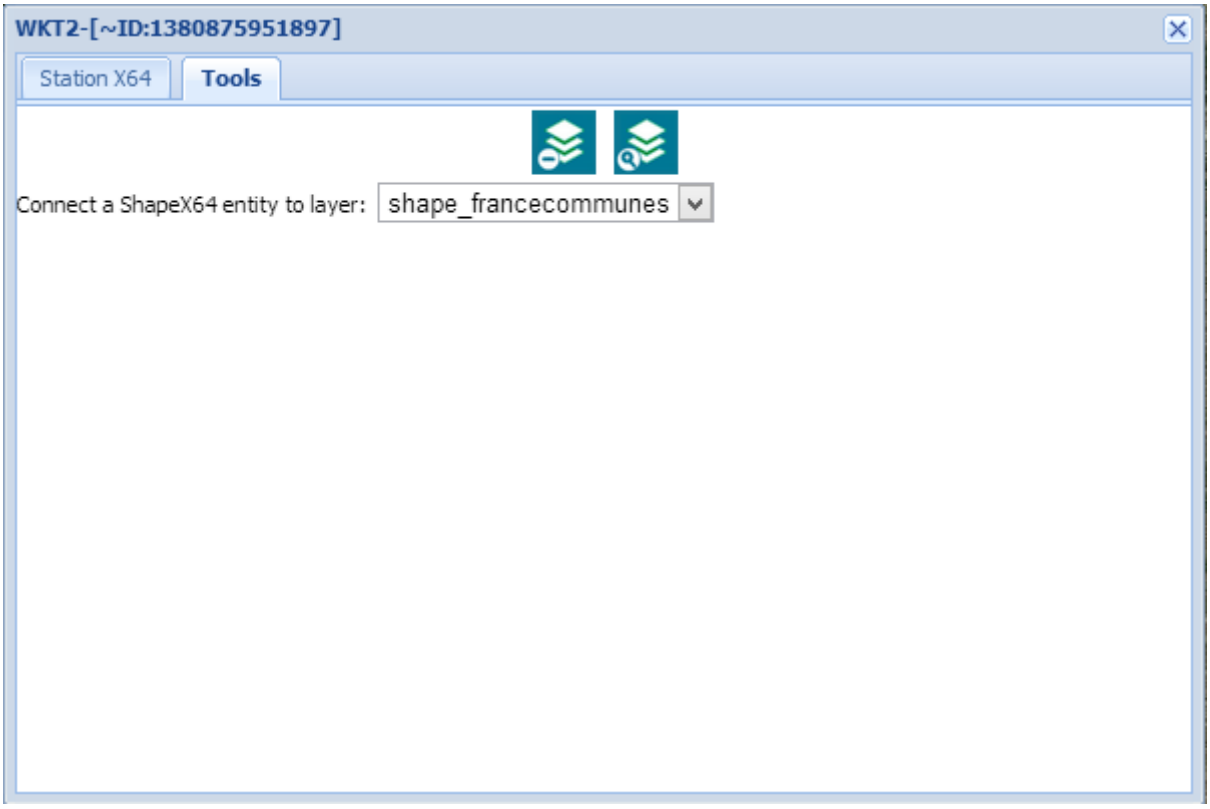


Set the coverage print opacity using the slide bar.
Set the shape color by clicking a color into the color selector grid.

Calculating population coverage

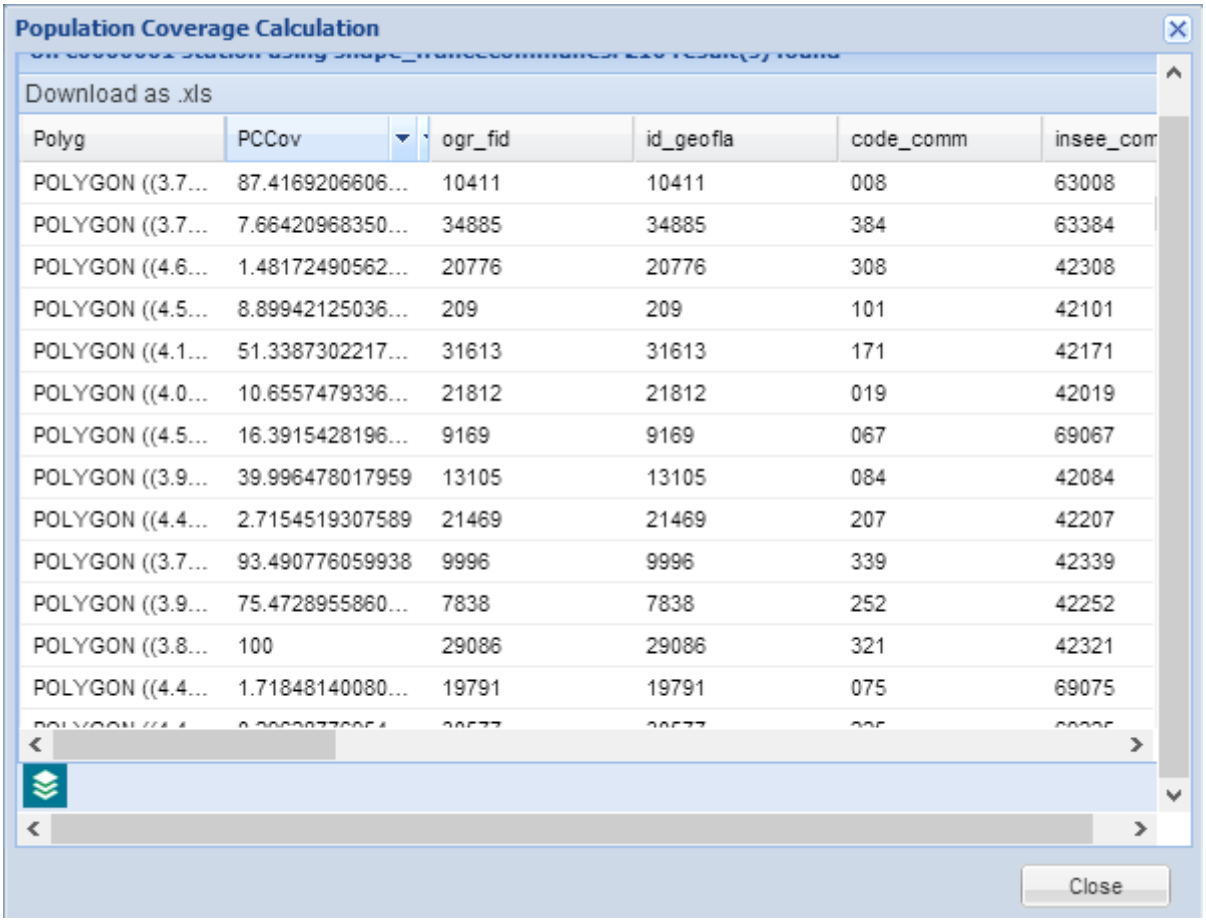
1/ Open the project node (see below)

2/ In the “Tool” tab, select the ShapeX64 entity for connecting to a station



3/ In the “Station X64” tab, click the  icon for the selected station

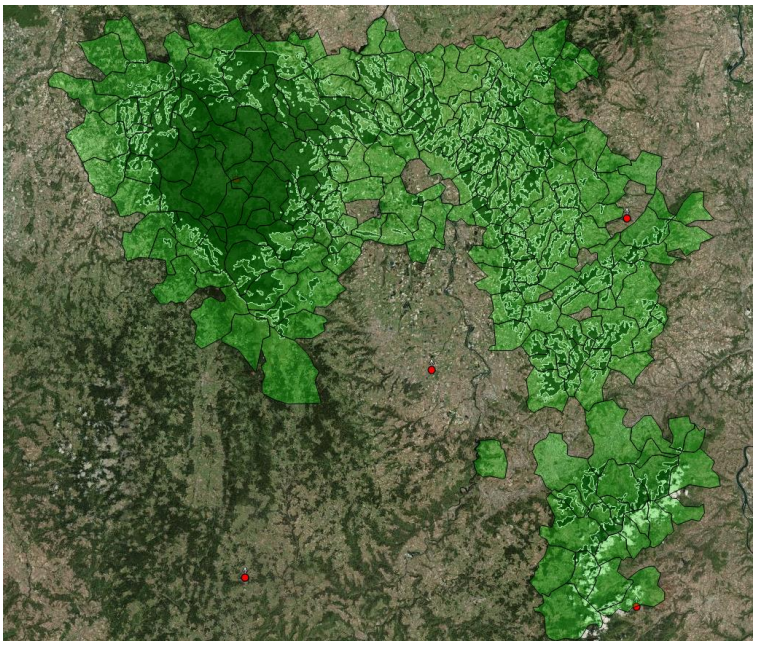
4/ The population coverage calculation is launching. After completion, the results window is displaying:



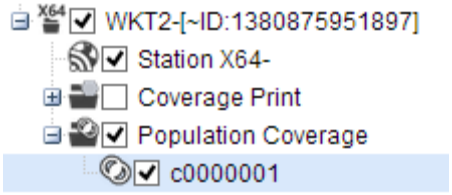
Polyg	PCCov	ogr_fid	id_geofla	code_comm	insee_com
POLYGON ((3.7...	87.4169206606...	10411	10411	008	63008
POLYGON ((3.7...	7.66420968350...	34885	34885	384	63384
POLYGON ((4.6...	1.48172490562...	20776	20776	308	42308
POLYGON ((4.5...	8.89942125036...	209	209	101	42101
POLYGON ((4.1...	51.3387302217...	31613	31613	171	42171
POLYGON ((4.0...	10.6557479336...	21812	21812	019	42019
POLYGON ((4.5...	16.3915428196...	9169	9169	067	69067
POLYGON ((3.9...	39.996478017959	13105	13105	084	42084
POLYGON ((4.4...	2.7154519307589	21469	21469	207	42207
POLYGON ((3.7...	93.490776059938	9996	9996	339	42339
POLYGON ((3.9...	75.4728955860...	7838	7838	252	42252
POLYGON ((3.8...	100	29086	29086	321	42321
POLYGON ((4.4...	1.71848140080...	19791	19791	075	69075

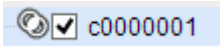
You can download the results as XLS file by clicking on the Download as .xls button.

By clicking on the icon, you will display the results into the map:



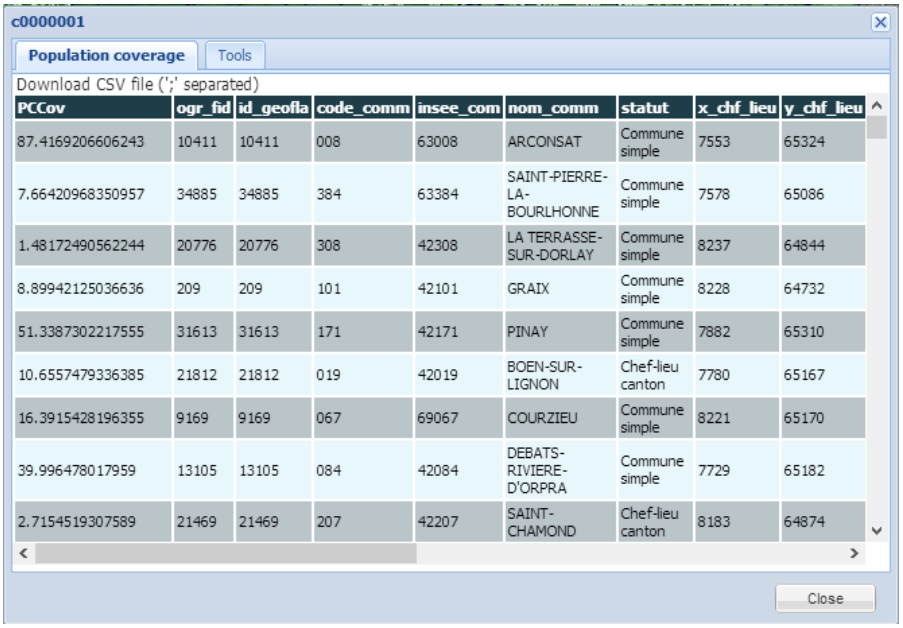
A new node named “Population Coverage” is inserted in the tree view, with a sub node related to the station:



By clicking on the 

node, the setting window is displaying:

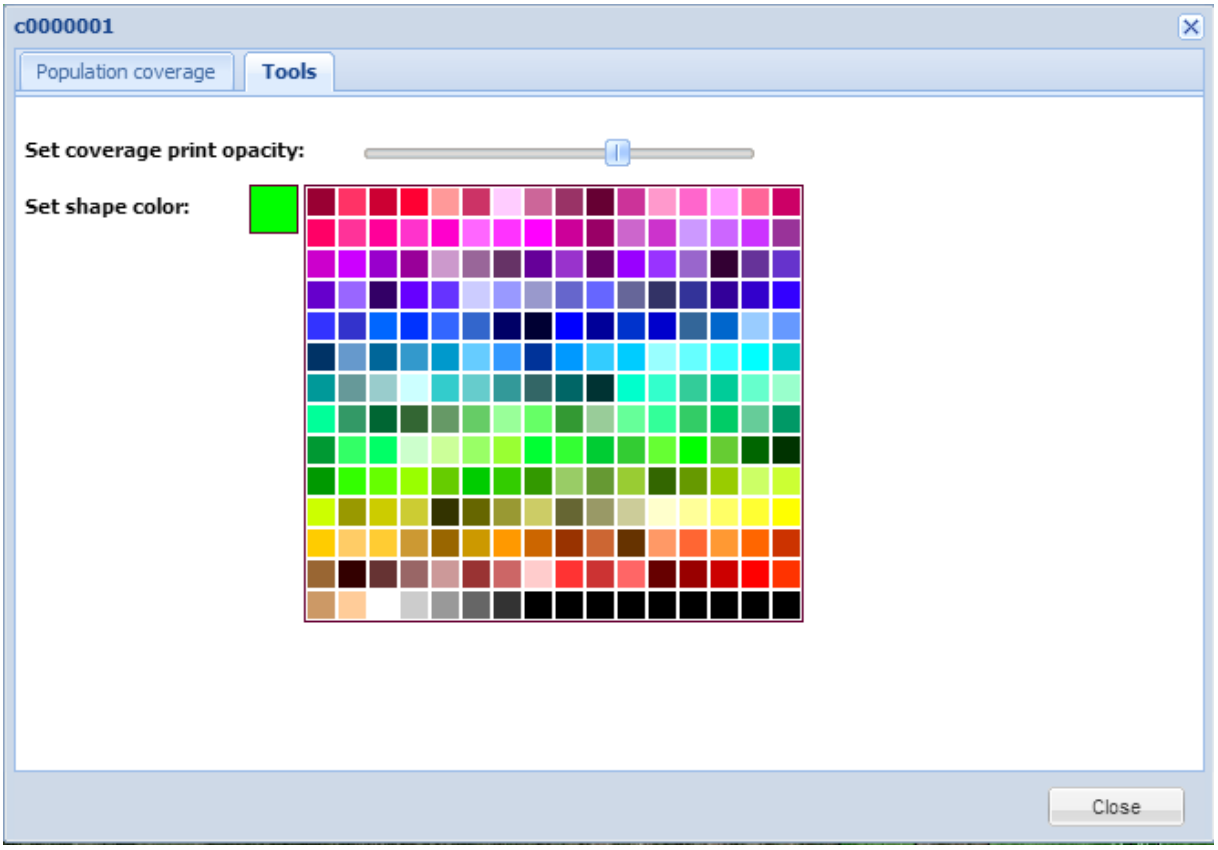
- The “Population Coverage” tab contains the results grid.



PCCov	ogr_fid	id_geofla	code_comm	insee_com	nom_comm	statut	x_chf_lieu	y_chf_lieu
87.4169206606243	10411	10411	008	63008	ARCONSAT	Commune simple	7553	65324
7.66420968350957	34885	34885	384	63384	SAINT-PIERRE-LA-BOURLHONNE	Commune simple	7578	65086
1.48172490562244	20776	20776	308	42308	LA TERRASSE-SUR-DORLAY	Commune simple	8237	64844
8.89942125036636	209	209	101	42101	GRAIX	Commune simple	8228	64732
51.3387302217555	31613	31613	171	42171	PINAY	Commune simple	7882	65310
10.6557479336385	21812	21812	019	42019	BOEN-SUR-LIGNON	Chef-lieu canton	7780	65167
16.3915428196355	9169	9169	067	69067	COURZIEU	Commune simple	8221	65170
39.996478017959	13105	13105	084	42084	DEBATS-RIVIERE-D'ORPRA	Commune simple	7729	65182
2.7154519307589	21469	21469	207	42207	SAINT-CHAMOND	Chef-lieu canton	8183	64874

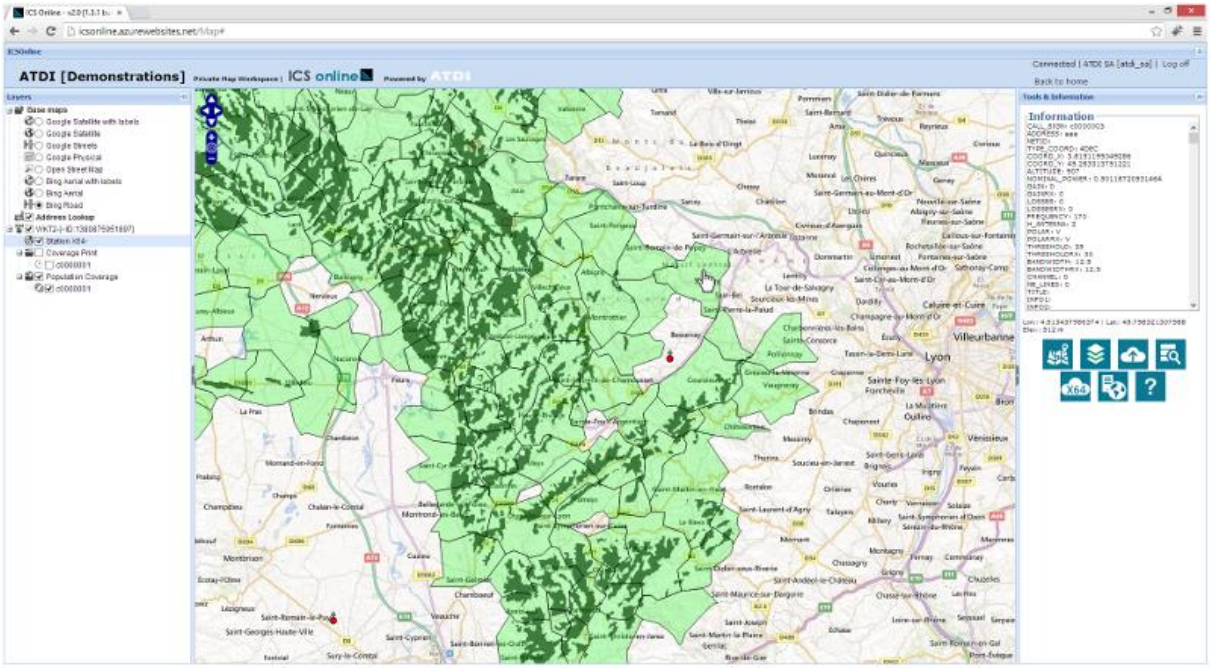
You can download the results as CSV file (";" separator) by clicking on the Download CSV file (';' separated) button.

- The "Tools" tab let you change the coverage print opacity and the shape color:



Set the coverage print opacity using the slide bar.
Set the shape color by clicking a color into the color selector grid.

By clicking on a shape area, you will get the information related to the population coverage for this area:



Information

c0000001

% of coverage: 0.00109213227603847
ogr_fid: 6622
id_geofla: 6622
code_comm: 175
insee_com: 69175
nom_comm: SAVIGNY
statut: Commune simple
x_chf_lieu: 8222
y_chf_lieu: 65252
x_centroid: 8215
y_centroid: 65257
z_moyen: 368
superficie: 2129
population: 1.9
code_cant: 03
code_arr: 1
code_dept: 69
nom_dept: RHONE
code_reg: 82
nom_region: RHONE-ALPES

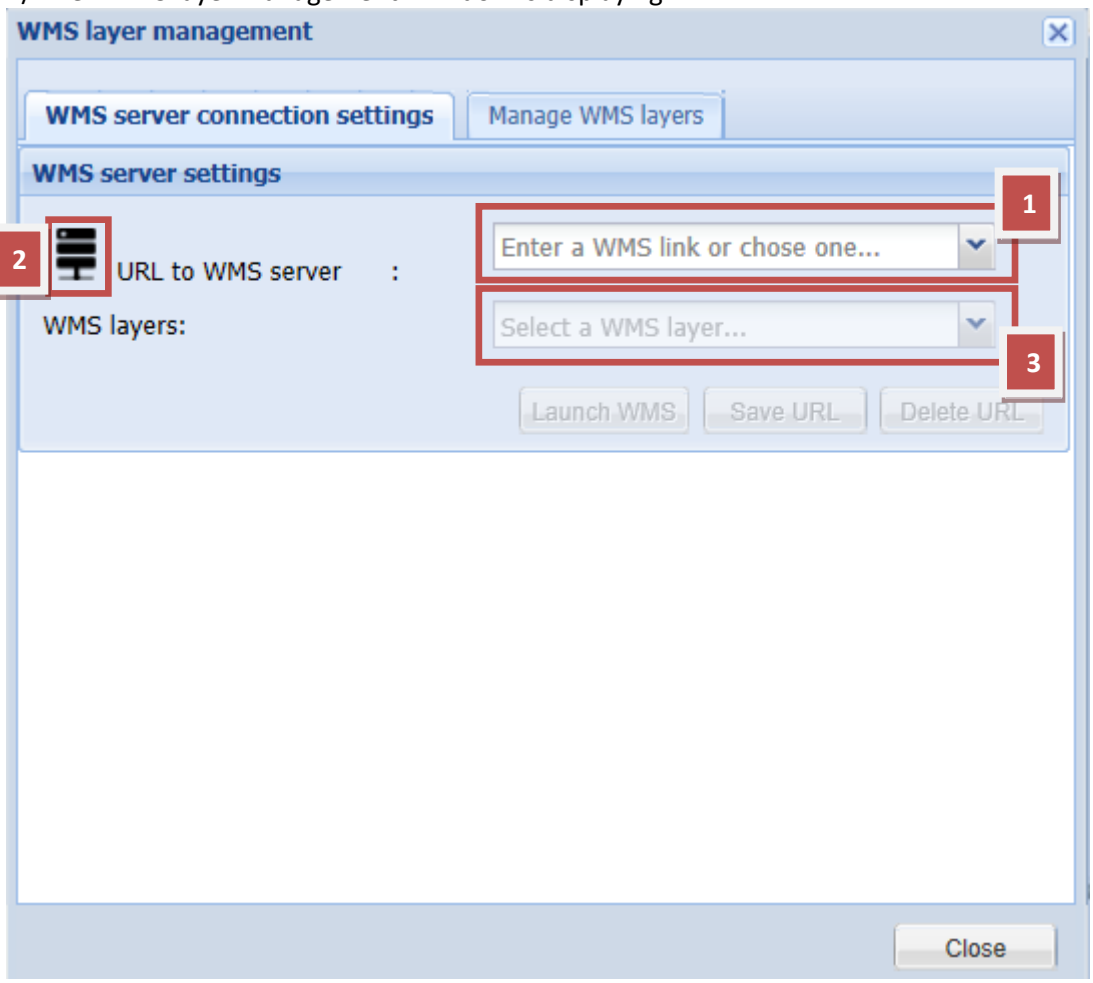
Connection to a WMS server. Displaying a WMS coverage

Connection to a WMS server

For connecting to a WMS server, please perform the following steps:

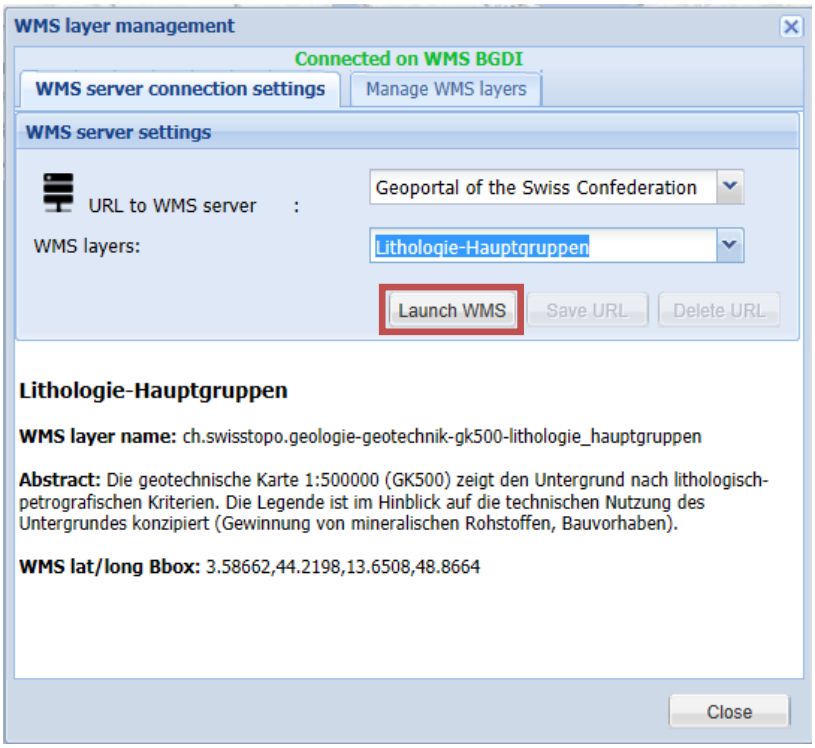
1/ Click on the “Connect to a WMS server” icon

2/ The “WMS layer management” window is displaying.

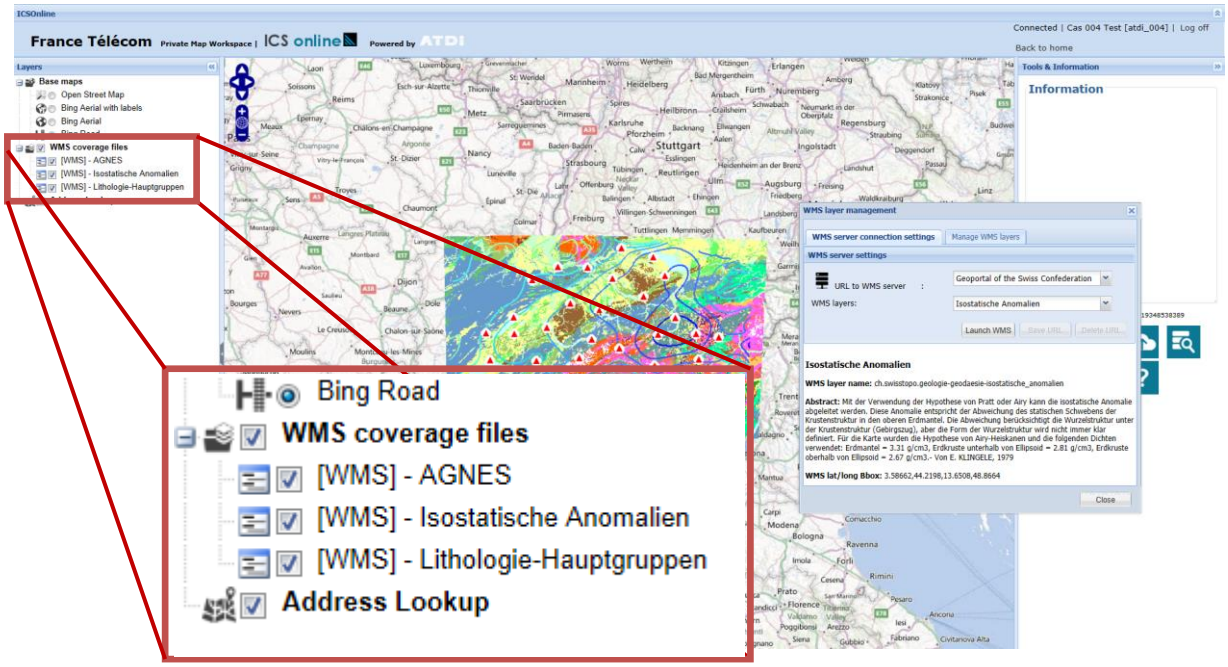


In the “WMS server connection settings” tab:

1. Chose a server in the “URL to WMS server” dropdown list or copy paste a new one
2. Click on the connection icon
3. If your server is up and running and compliant with EPSG:900913 projection, you will be connected and the “WMS layers” dropdown list will be populated with the WMS coverage files.
   Choose the layer. If available (depending on the WMS server capabilities), the technical WMS layer name, the abstract and the lat/long bbox parameters will be displayed.
   For displaying the chosen layer, click on the “Launch WMS” button.



4. By clicking on the “Launch WMS” button, the WMS coverage file will be displayed on the map and centered according to the lat/long bbox parameters.
   In the tree view, the new WMS file coverage will be located under the “WMS coverage file” folder. You can add as many WMS layers as you want.



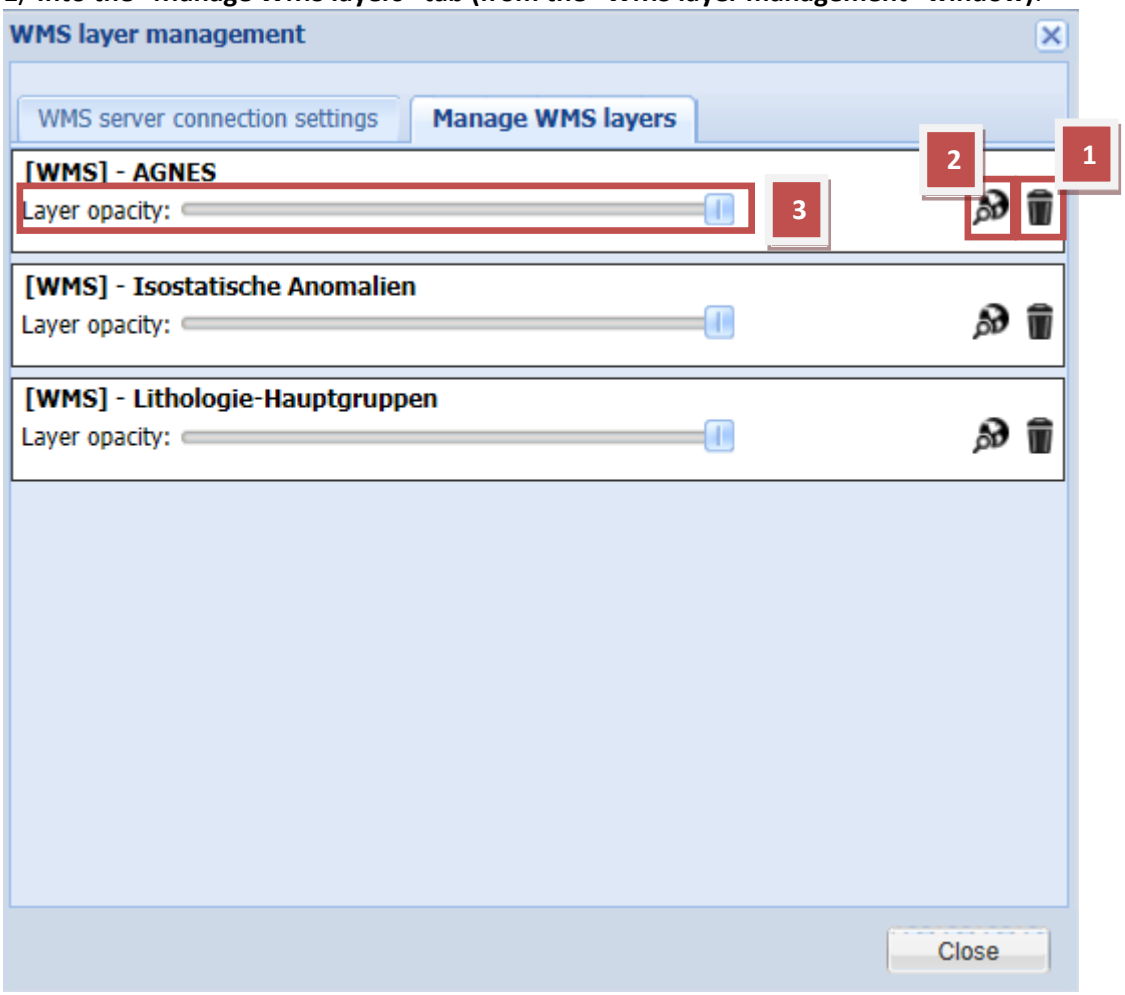
Note : if you are connected as administrator you can save and store your own connection string to a WMS server. If the server is not already stored, the “Save URL” button will be activated (after connecting to the server). By clicking on it, the URL to the WMS server will be saved.
You also can use the “Delete URL” button for deleting a stored WMS server URL by choosing it in the dropdown list.

Managing a WMS layer

You can manage the WMS layer using the following functions:

1/ **Reordering the layers by drag-and-dropping them into the "WMS coverage file" folder in the tree view**: the first layers in the list will be displayed up to the others.

2/ **Into the "Manage WMS layers" tab (from the "WMS layer management" window)**.



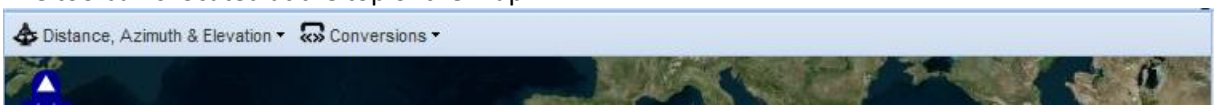
The list of the WMS layers will be displayed and you could choose one of the 3 following options:

1. **Deleting the layer**: the layer will be deleted from the tree view and the map
2. **Center to layer**: zoom and center the map onto the layer according the lat/long bbox parameters
3. **Set layer opacity**: by default, the layer opacity is set to 100%. By using the opacity slider, you can modify the value.

3/ **In the tree view**: by checking/unchecking the checkbox of a WMS layer, you will display or hide this layer. By checking/unchecking the "WMS coverage file" checkbox, you will display or hide all the WMS coverage file.

Toolbar

The toolbar is located at the top of the map

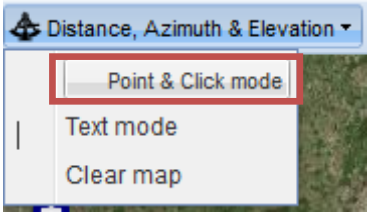


Distance, Azimuth & Elevation

Calcul the distance, azimuth and elevation profile from an origin point to a destination point.

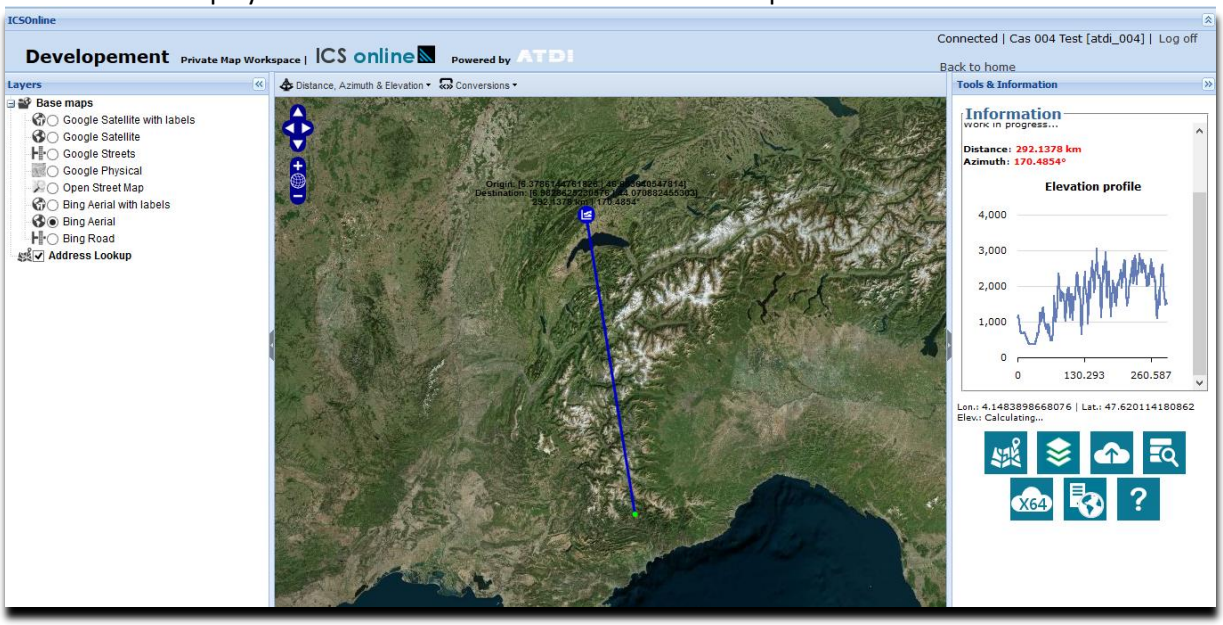
Point & click mode

- Click on the “Point & Click mode” toggle button

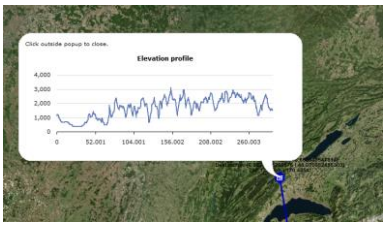


the mouse cursor is changing to a cross

- Click on the map for defining the origin point. The coordinates are displayed into the Information box.
- Click on the map for defining the destination point. The coordinates are displayed into the Information box.
- The results are displayed in the Information box and onto the map



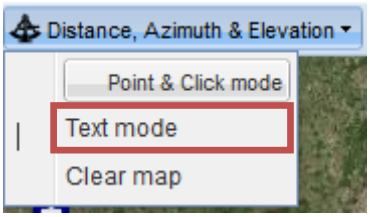
- On the map, clicking on the icon (located at the origin point) will display the elevation profile:



-

Text mode

- Click the “Text mode” button

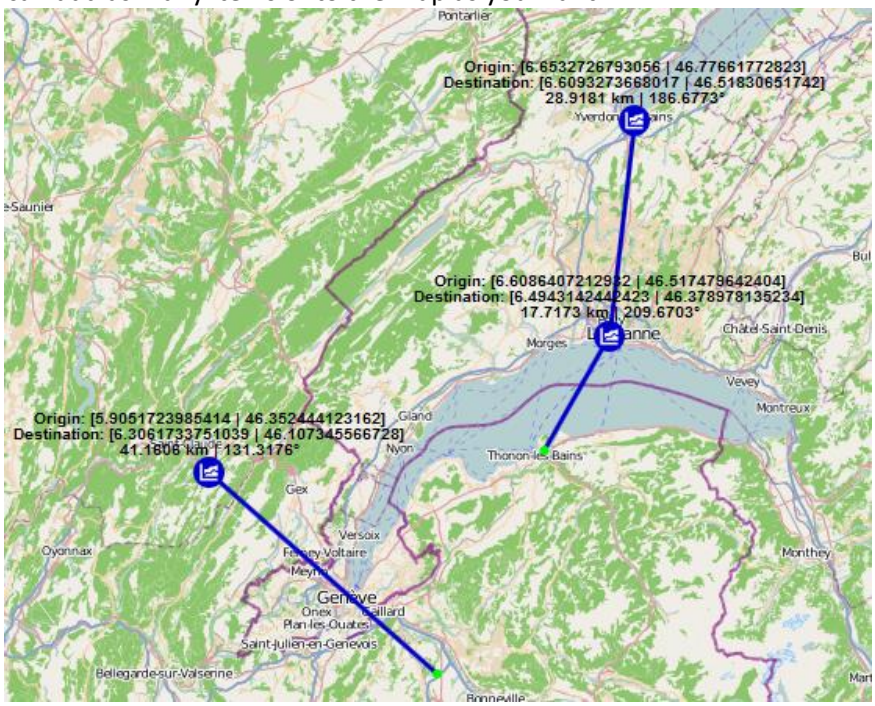


A popup window is opening.

- In the window, enter the origin and destination coordinates using the following format: [origin lon.],[origin lat.],[destination lon.],[destination lat.]
- Click « OK » button for displaying the result

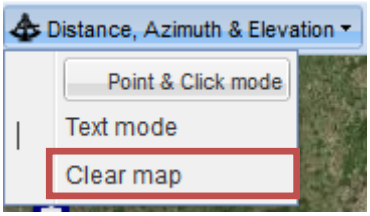
Note: If the elevation Bing API is not available when you start the process, the elevation profile won’t be displayed. Trying again later could solve the issue.

Note: you can add as many items onto the map as you want:



Clear map

- Click the “Clear map” button for deleting the items onto the map.

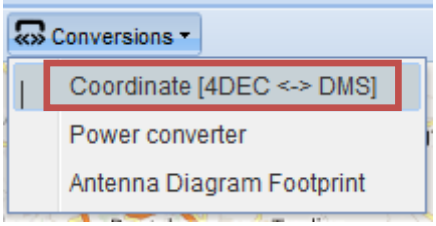


Conversions

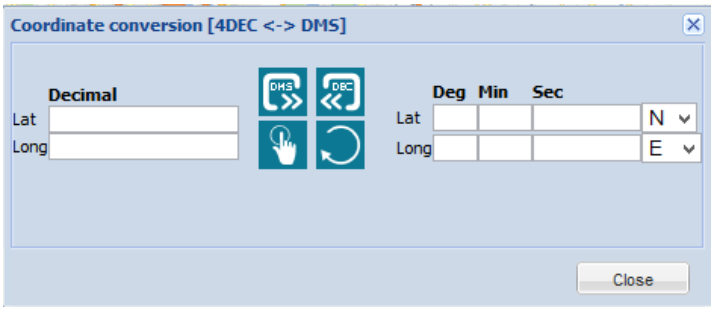
Convertion tools for coordinates, power and antenna diagram footprint

Coordinate [4DEC <-> DMS]

- Click the “Coordinate [4DEC <-> DMS]” button



- In the following window:

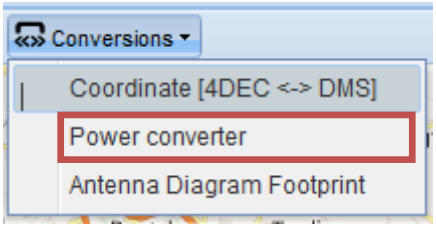


You can :

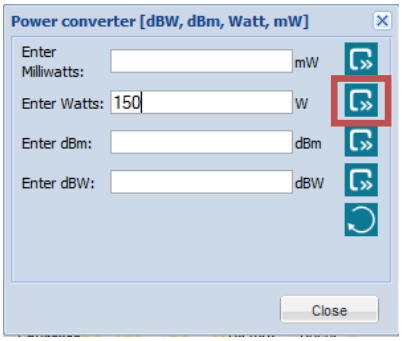
- Convert 4DEC coordinates to DMS by filling Latitude and Longitude fields, then clicking the  icon.
- Convert DMS coordinates to 4DEC by filling the Deg., Min. and Sec. fields for latitude and longitude, then clicking the  icon.
- Using the  icon, you can click a point on the map (the mouse cursor will be changed into a cross icon). The coordinates in 4DEC and DMS will be automatically calculate.
- Click the  icon for resetting all the fields.

Power converter

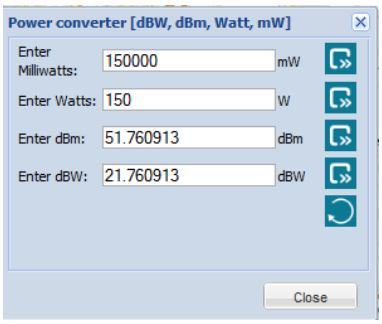
- Click the “Power converter” button



- In the following window, enter a value in one of the fields and click the  icon:



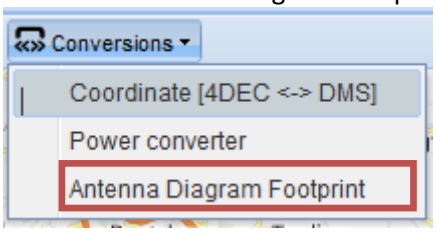
The value will be converted for all units.



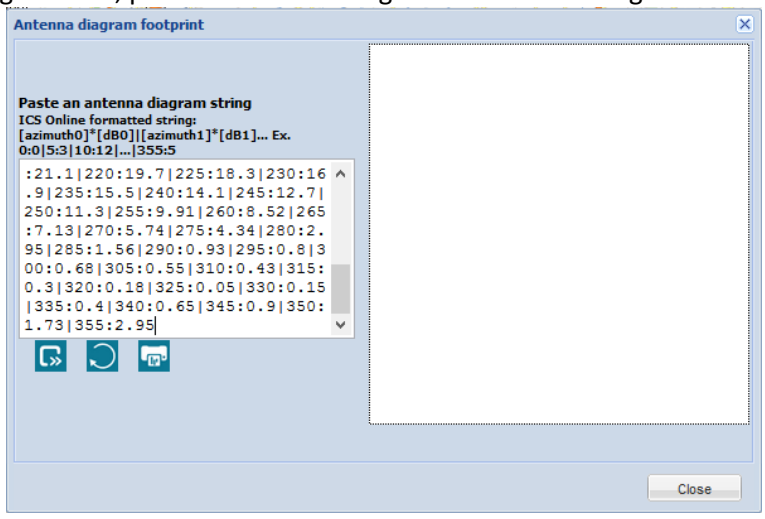
- Click the  icon for resetting all the fields.

Antenna Diagram Footprint

- Click the “Antenna Diagram Footprint” button

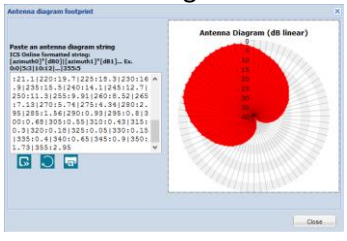


- In the following window, paste an antenna diagram formatted string:



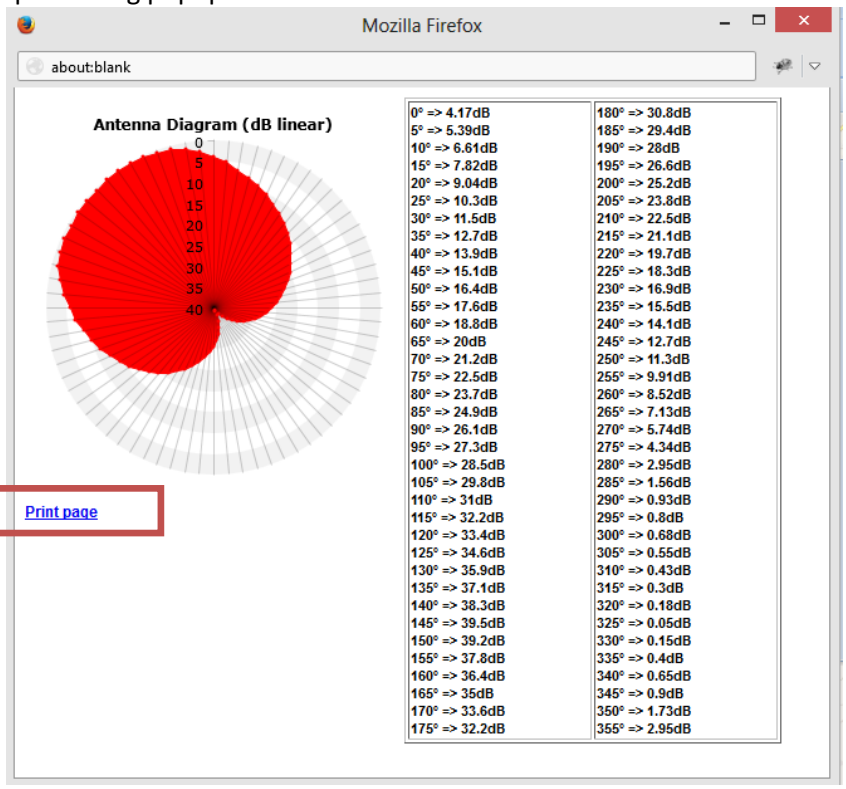
The string format must be ICS Online compliant: [azimuth0]*[dB0]|[azimuth1]*[dB1]…[azimuthN]*[dBN].
The azimuth steps must be equals.
Example, for an antenna diagram defined with a 5° step :
0:4.17|5:5.39|10:6.61|15:7.82|20:9.04|…|330:0.15|335:0.4|340:0.65|345:0.9|350:1.73|355:2.95

- Click the  icon for displaying the antenna diagram



- Click the  icon for resetting the textarea and the antenna diagram.

- Click the  icon for printing the result. A new window will be displayed. You must set your browser for permitting popup windows for ICS Online website.



Click the “Print page” link for launching the printing process.