

Field-Map synchronization



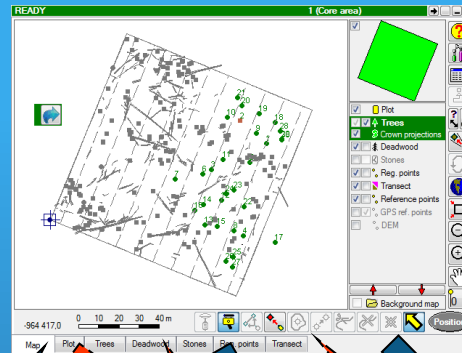
IFER - Monitoring and Mapping Solutions Ltd. <http://www.field-map.com>

Synchronization

- Tool for fast and effective sharing of database structure and dataset
- Principle - management of central (server) database storing all the data and the template of database structure
 - Different users have different rights to connect this database, manage it and upload/download data
 - Admins/Powerusers set the structure of server database and assign its individual parts (i.e., plots) to Users + download data from server after their finalization to analyze them
 - Users/Others get the structure of server database, receive assigned plots + save data collected in the field to server

1) Admin creates project structure with lookup lists and plots and uploads it to the server. Simultaneously, he/she assigns individual plots to different users.

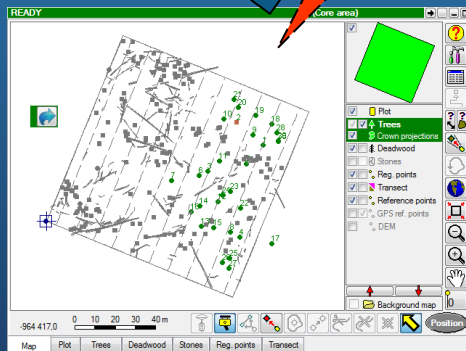
Server



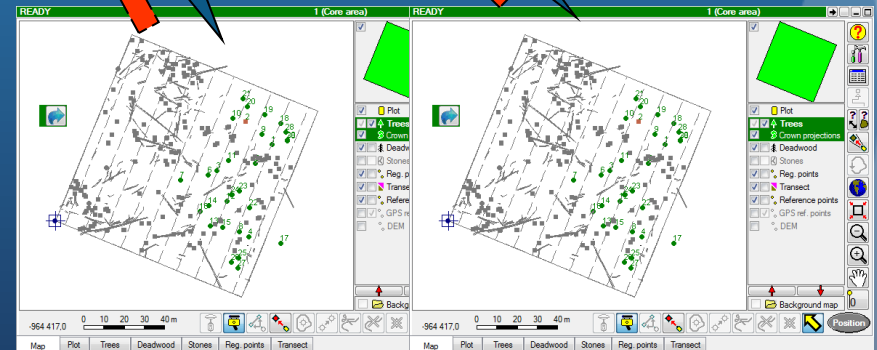
2) Users synchronize their projects with server, which means they load server project structure and plots assigned to them.

3) Users „do their job in the field“ and upload collected data to server database.

4) Admin can download completed dataset to his/her project to analyse the data.



Admin/Poweruser



User1

User2

Advantages

- All workers of the project have the same project structure and lookup lists
 - Especially useful when working on projects with large spatial extent (e.g., NFI)
- Only the team leader can manage the structure of database (i.e., the structure of data collected in the field)
- Admins cannot only to add but even to remove, plots from User projects via synchronization
- Projects of individual field teams comprise only those plots, which are under their area of interest

How does it work?

- Synchro Journal
 - Binary Large Object (Blob) format
 - Principle component of synchronization procedure ensuring the same structure of server, admins and users databases
 - Stores commands from admins and powerusers concerning:
 - Uploading changes in database structure to the server
 - Uploading changes in lookup lists structure to the server
 - Assigning/Removing of plots to individual users
 - Messages send to individual users via synchronization procedure (*even Users and Others are able to use this option*)
- Current time is recorded after successfull synchronization into SynchroDate attribute; new synchronization will be started based on its relation to EditDate attribute

Setting of synchronization parameters

The screenshot shows the 'Field-Map Project Manager' application window. The 'Synchronization' menu is highlighted in red. The 'Layers' panel on the left shows a tree view with 'Plots (Plot)' selected. The main window displays the 'Layer attributes' tab for 'Plots (Plot)'. Below this is a table of attributes:

Attribute name	Attribute type	Required	Visible	Label
<Area_m2>	<Number>	No	Visible	Area, m2
<Perimeter_m>	<Number>	No	Non-visible	Perimeter, m
Magnetic_decl_deg	Number	No	Visible	Magn. decl.
Name	String	Yes	Visible	

Below the table is a 'Numeric attribute definition' section with the following fields:

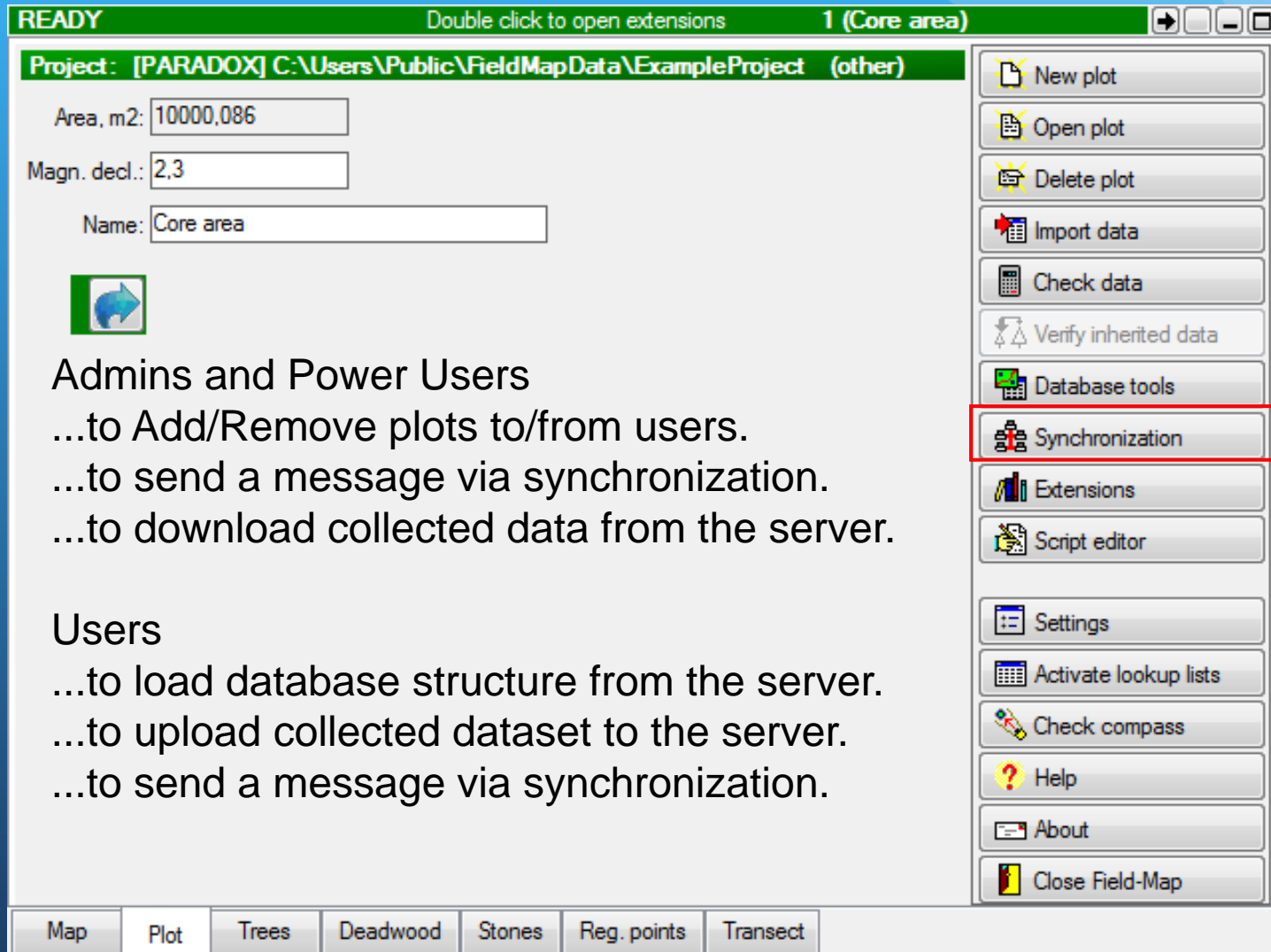
- Size:
- Min value:
- Decimal places:
- Max value:

Example: 99999999,999

Admins

...to add changes in database structure and lookup lists to Synchro Journal.

Setting of synchronization parameters



The screenshot shows the Field-Map software interface. The title bar indicates the window is titled "1 (Core area)" and is in a "READY" state. The main window displays the following information:

- Project: [PARADOX] C:\Users\Public\FieldMapData\ExampleProject (other)
- Area, m2: 10000,086
- Magn. decl.: 2,3
- Name: Core area

Below the project information is a green button with a blue circular arrow icon. To the right of the main window is a vertical menu with the following options:

- New plot
- Open plot
- Delete plot
- Import data
- Check data
- Verify inherited data
- Database tools
- Synchronization** (highlighted with a red box)
- Extensions
- Script editor
- Settings
- Activate lookup lists
- Check compass
- Help
- About
- Close Field-Map

At the bottom of the window, there is a tabbed interface with the following tabs: Map, Plot, Trees, Deadwood, Stones, Reg. points, and Transect.

Admins and Power Users

- ...to Add/Remove plots to/from users.
- ...to send a message via synchronization.
- ...to download collected data from the server.

Users

- ...to load database structure from the server.
- ...to upload collected dataset to the server.
- ...to send a message via synchronization.

Synchronization in steps

1. Create server project (MSSQL_SERVER)
2. Add current plot via synchronization
3. Send the plot to the server
4. Create new project from Existing (FMPPM)
5. Add script to run synchronization after open project
6. Open new project in FMDC and run synchronization

Thank you for your attention