

Databases in Field-Map ver. X4 (X5)



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

Currently available in Field-Map

- **Local databases:**
 - **Paradox**
 - **Access**
 - **Firebird embedded**
 - **Microsoft SQL Server localDB**
- **Server-side databases:**
 - **Firebird**
 - **Microsoft SQL Server**

Paradox

- Old fashioned database, but still very fast
- No improvements since 2002
- May cause problems on newer operating systems
- Requires Borland Database Engine
- Not Unicode

MS Access

- Widely used database
- Data can be easily viewed and modified using MS Access
- Users are often familiar with access databases
- Field-Map X4 uses newer access database version (ACCDB)
- Requires Microsoft Access database engine

Firebird embedded

- Default database in Field-Map since the version X4
- Lightweight embedded database
- Unicode
- Easy to distribute
- Forked (2000) from InterBase (1984)
- Open source
- More info at <http://www.firebirdsql.org/>
- Is built in Field-Map installation - no additional drivers are required

MS SQL localDB

- Minimal version of MS SQL Server
- Uses the same database engine as MS SQL Server and can be managed using the same tools
- Takes up more space compared to other databases (~140 mb after installation)
- Runs as separate process
- Available for Windows 7 or newer

Simple structure of projects using MSSQL, Access and Firebird database ...

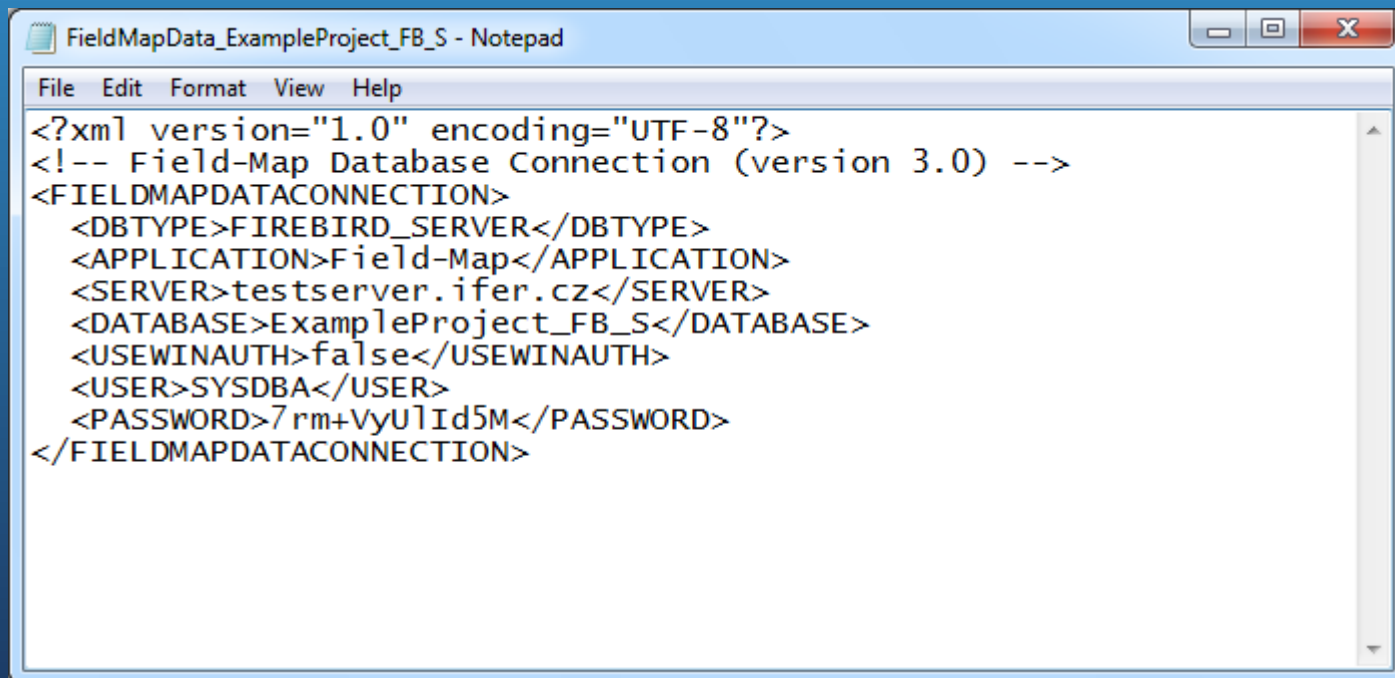
Name / Ext	Size	Date	Time	Attr
..		DIR 23.9.2014	16:46:25	
LookupTables		DIR 23.9.2014	16:46:17	
MapLayers		DIR 23.9.2014	16:46:17	
Maps		DIR 23.9.2014	16:46:17	
Misc		DIR 23.9.2014	16:46:33	
Pictures		DIR 23.9.2014	16:46:17	
Videos		DIR 23.9.2014	16:46:17	
Voice		DIR 23.9.2014	16:46:17	
FieldMapData_FieldMapProject1.ldf	1 048 576	23.9.2014	16:46:33	A
FieldMapData_FieldMapProject1.mdf	4 259 840	23.9.2014	16:46:33	A
StemAnalyst		DIR 23.9.2014	9:05:38	
Videos		DIR 23.9.2014	9:05:36	
Voice		DIR 23.9.2014	9:05:46	
FieldMapData_ExampleProject_Acc.accdb	1 458 176	23.9.2014	9:05:48	A
StemAnalyst		DIR 23.9.2014	8:57:50	
Videos		DIR 23.9.2014	8:57:48	
Voice		DIR 23.9.2014	8:57:56	
FIELDMAPDATA_EXAMPLEPROEJCT_FB_LDB.FDB	2 514 944	23.9.2014	9:24:34	A

...comparing projects using Paradox

Name / Ext	Size	Date	Time	Attr
...		DIR	23.9.2014	9:32:56
Export		DIR	23.9.2014	9:32:06
LookupTables		DIR	23.9.2014	8:55:46
MapLayers		DIR	23.9.2014	8:51:52
Maps		DIR	23.9.2014	8:51:52
Misc		DIR	23.9.2014	8:51:52
Pictures		DIR	23.9.2014	8:51:52
StemAnalyst		DIR	23.9.2014	8:51:52
Videos		DIR	23.9.2014	8:51:52
Voice		DIR	23.9.2014	8:51:52
lock	75	21.2.2013	8:36:30	A
Data.DB	34 816	12.8.2014	16:07:30	A
Data.PX	4 096	12.8.2014	16:07:30	A
Data.VAL	892	12.8.2014	16:07:30	A
Deadwood.DB	92 160	23.9.2014	8:55:44	A
Deadwood.MB	4 096	23.9.2014	8:55:44	A
Deadwood.PX	4 096	23.9.2014	8:55:44	A
Deadwood.VAL	718	23.9.2014	8:55:44	A
Deadwood_Diameters.DB	14 336	23.9.2014	8:55:46	A
Deadwood_Diameters.PX	4 096	23.9.2014	8:55:46	A
Deadwood_Diameters.VAL	462	23.9.2014	8:55:44	A
DEM.DB	169 984	25.7.2012	10:45:10	A
DEM.PX	8 192	25.7.2012	10:45:10	A
DEM.VAL	384	25.7.2012	10:45:10	A
GpsReferencePoints.DB	4 096	25.7.2012	10:45:10	A
GpsReferencePoints.PX	4 096	25.7.2012	10:45:10	A
GpsReferencePoints.VAL	458	25.7.2012	10:45:10	A
Plots.DB	8 192	23.9.2014	8:55:44	A
Plots.MB	4 096	23.9.2014	8:55:44	A
Plots.PX	4 096	23.9.2014	8:55:44	A
Plots.VAL	1 577	23.9.2014	8:55:44	A
ReferencePoints.DB	4 096	25.7.2012	10:45:10	A
ReferencePoints.PX	4 096	25.7.2012	10:45:10	A
ReferencePoints.VAL	460	25.7.2012	10:45:10	A
RegPoints.DB	40 960	23.9.2014	8:55:46	A
RegPoints.MB	4 096	23.9.2014	8:55:46	A
RegPoints.PX	4 096	23.9.2014	8:55:46	A
RegPoints.VAL	720	23.9.2014	8:55:46	A
RegPoints.XG0	16 384	23.9.2014	8:55:46	A
RegPoints.YG0	4 096	23.9.2014	8:55:46	A
Stones.DB	88 064	23.9.2014	8:55:46	A
Stones.MB	4 096	23.9.2014	8:55:46	A
Stones.PX	4 096	23.9.2014	8:55:46	A
Stones.VAL	715	23.9.2014	8:55:46	A
SysTab_DeletedRecords.DB	2 048	14.8.2014	9:36:24	A
SysTab_DeletedRecords.PX	2 048	14.8.2014	9:36:24	A
SysTab_DeletedRecords.VAL	497	14.8.2014	9:36:24	A
SysTab_DeletedRecordsLog.DB	2 048	23.9.2014	8:55:46	A
SysTab_DeletedRecordsLog.PX	2 048	23.9.2014	8:55:46	A

MS SQL server and Firebird server

- When connecting to server, Field-Map creates XML file with server connection details and stores it instead of database in the folder of the project
- XML file has a very simple structure and can be shared



```
FieldMapData_ExampleProject_FB_S - Notepad
File Edit Format View Help
<?xml version="1.0" encoding="UTF-8"?>
<!-- Field-Map Database Connection (version 3.0) -->
<FIELDMAPDATACONNECTION>
  <DBTYPE>FIREBIRD_SERVER</DBTYPE>
  <APPLICATION>Field-Map</APPLICATION>
  <SERVER>testserver.ifer.cz</SERVER>
  <DATABASE>ExampleProject_FB_S</DATABASE>
  <USEWINAUTH>>false</USEWINAUTH>
  <USER>SYSDBA</USER>
  <PASSWORD>7rm+VyU1Id5M</PASSWORD>
</FIELDMAPDATACONNECTION>
```

Microsoft SQL Server

- Popular and database server
- Easy setup and administration
- Standard edition of MS SQL Server comes with tools, that let you easily:
 - Manage databases and user accounts
 - Backup and restore databases (manually or automatically)
 - Export, import and replicate data
 - Create and deliver reports
 - Integrate data from various sources
- Can run only on Windows operating system
- Additional licensing costs
- Commercial product

Firebird Server

- Open source and multi-platform database server
- Runs on Windows, Linux and Unix operating systems
- More difficult to set up than MS SQL Server – provides only command line utilities
- Other administration tools are available as third party applications (free and commercial)

Conclusion

- We would like to encourage Field-Map users to prepare their projects using Firebird
 - Supports both local and server storing of database content
 - It is for free
 - It records very good parameters comparing other available databases
 - Firebird community is very opened and provides many utilities improving work with Firebird database for free on their web page (<http://www.firebirdsql.org/>)
 - Field-Map instalation pack is for free equiped with FirebirdViewer.exe tool, which enables to simly open, browse and modify records of this database

Thank you for your attention