

MobileMapper

*Tech Note:
ESRI Shapefile Components*

Components of a shapefile: SHP, DBF, SHX and PRJ

It is common to refer to an ESRI shapefile as “SHP files.” However, shapefiles actually comprise more than just files with the .shp file extension. For each SHP file there also is a DBF, a SHX and (sometimes) a PRJ file. For example a shapefile for a map’s road layer will contain road.shp, road.dbf, road.shx and road.prj. Files with the .shp extension contain information on feature geometry and geographic position. DBF files store feature and attribute information in a database format. SHX files link the SHP file’s feature geometries and positions with the DBF file’s feature and attribute information.

PRJ projection files

In addition to SHP, DBF and SHX files many shapefiles now contain a fourth component: a PRJ file. PRJ files store spatial reference information, i.e., the coordinate system information for the shapefile. A PRJ file with each shapefile will ensure that when you share your shapefiles, you will be letting everyone know what coordinate system is associated with your data. Not all shapefiles include PRJ files, however.

MobileMapper Office support for shapefiles

MobileMapper Office both imports and exports SHP, SHX, DBF and PRJ files. When you import a shapefile, MobileMapper Office converts the information contained in the shapefile’s SHP, SHX, DBF and PRJ files into the MobileMapper job file format (an “MMJ” file). Files with all four extensions must be present in the same directory for MobileMapper to complete the conversion to MMJ format. After updating this file in the field with the MobileMapper receiver, MobileMapper Office converts the job file into SHP, SHX, DBF and PRJ files and exports them to a target directory using a browsing window. To keep things simple, the browsing window lists just SHP as the file type for export. However, MobileMapper Office also generates the SHX, DBF and PRJ files automatically and stores them in the same directory selected for the SHP file.

MobileMapper Office support for PRJ files

When you import a shapefile into a MobileMapper job or background map, MobileMapper Office automatically reads the PRJ file. So you do not need to know the shapefile’s coordinate system prior to import. Similarly, the coordinate system you are using for a MobileMapper job is written into the PRJ file when you export the job to shapefile format.