

## **Surveying and Engineering Environment (S.E.E.) data base Data Base Concepts**

The data base is topologically structured and geographically indexed. The topological structure ensures that object relationships are maintained. For example, moving a point which is defined in a line will modify the shape of the line. If that line is defined in a polygon, the shape and area of that polygon will also be modified. This concept applies throughout the system.

The geographical indexing maximizes the speed of operation allowing rapid screen regeneration and the ability to find objects efficiently. It also permits three dimensional models of virtually unlimited size to be processed, subject to hardware limitations.

### **Data Base Objects**

The data base may contain the following object types.

Points  
Lines  
Polygons

By definition, polygons consist of lines and lines consist of points. The following objects are special types of line objects

Arcs  
Circles  
Splines

Miters  
Ties  
Offsets

Each of these object types may have particular attributes associated with them.

### **LISCAD Plus Files**

Numerous files are created and/or used by the data base. Below is a list of the various files.

#### **System Files**

LCPLUS.CFG System configuration file used to store system configuration parameters (e.g. color configuration, unit configuration, etc.) If this file is deleted, the system will recreate it the next time the program is run using default values.

LCPLUS.INI System generated file used to store various system settings.

PROJECT.LCP System file to store the projections supported by LISCAD.

LCPUSER.PRO System generated file to store installed user projections.

- \*.FON System files which store fonts used by LISCAD.
- \*.LIB System files which store the symbols used by LISCAD.
- LOGO.BM\_ System file used to store the front screen bitmap.

Each group of files refers to a particular data base. Not all of the files will necessarily be present for any particular data base.

- .see Stores the particular data base.
- .-se Stores the last backup of the data base.

### Field Transfer Files

These files are not part of the data base but are used or created by the system when transferring data from the field using the Field Transfer Task.

.RAW Raw File: A file which is created when data is transferred to the system from an electronic data recorder. It contains the raw survey information as transferred as well as a header record identifying the type of data recorder used.

.FLD Field File: A file which is created from a RAW file, or generated via keyboard entry, containing field observations, and which may be used to generate new objects in the data base.

.ADJ Control File: A file which is created from a FIELD file, or generated via keyboard entry, containing control point observations, and which may be used to generate adjusted coordinates in the data base.

.TRV Traverse File: A file which is created from a FIELD file, or generated via keyboard entry, containing traverse observations, and which may be used to generate adjusted coordinates in the data base.

.TRF Transformation File: A file which is generated via keyboard entry, containing points and coordinates on different coordinate systems, and which may be used to compute transformation parameters between the coordinate systems.

Table Files  
These files are not part of the data base but are used to store the settings of code tables and look up tables which may be used when transferring data to or from the system.

.CTB Code Table File: A file which stores the settings for a particular code table which may be used when transferring data to the system in the Field Transfer task, or to and from the system in the data conversions task.

.LUT Look Up Table File: A file which stores the settings for a particular look up table which may be used when transferring data to and from the system in the data conversions task.

CAD Output Files  
These files are not part of the data base but are created via the CAD Output task for transfer to a CAD system.

.CPF A CAD Output parameter file which stores the CAD Output settings used by the system to create a CAD file. Refer also to the Concepts/ CAD Output topic and the CAD Output Settings commands.

.Gnn A binary LISCAD CAD file where nn is two numbers between 01 and 99

.DXF AutoCad DXF exchange file

.DGN MicroStation Design file (PC version)

### **Data Conversions Files**

Numerous exchange files are used or created by the system in the Data Conversions task when transferring data to and from other systems. Refer to the particular Import or Export commands for further information about the associated files.

