February 1996

inv_init - Initializes inverse projection transformation parameters

SYNTAX

FUNCTION inv_init (insys, inzone, inparm, indatum, fn27, fn83, iflg, inv_trans)

```
long        insys;
long        inzone;
double      inparm[15];
long        indatum;
char        fn27[];
char        fn83[];
long       *iflg;
long       (*inv_trans[MAXPROJ + 1])();
```

PARAMETERS

insys (input, long)

Defines the input projection system. Refer to GCTP for valid codes.

inzone (input, long)

Input zone for UTM and State Plane projection systems. For Southern Hemisphere UTM, use a negative zone code. *Inzone* will be ignored for all other projections.

inparm (input, double, length(15))

Array of fifteen projection parameters. These parameters are required to define each map projection. (See Appendix A)

indatum (input, long)

Input spheroid. This identifies the semi-major axis and eccentricity that is to be used in the transformation process. Refer to GCTP for valid spheroid codes. If a negative code is entered, elements 1 and 2 of *inparm* will be used for the semi-major and semi-minor axis (See Appendix A).

fn27 (input, character, length(*))

Name of the NAD 1927 parameter files for State Plane zone parameters.

fn83 (input, character, length(*))

Name of the NAD 1983 parameter files for State Plane zone parameters.

iflg (output, long)

Error flag after transformation. The error number returned will correspond to the specific error.

inv_trans (output, long, length(MAXPROJ + 1))

Function pointer. The pointer to the appropriate inverse transformation function is returned in the array *inv_trans* at location *insys*. For example, if *insys* = TM (see GCTP), then the pointer to the function *tminv()* would be returned in *inv_trans*[TM]. This can be used to call *tmfor()* in the following manner:

```
inv_trans[TM](x, y, &lon, &lat);.
```

DESCRIPTION

inv_init() is used to initialize the proper inverse projection and to return the pointer to the proper inverse transformation routine.

RETURN VALUE

inv_init() has no return value.