*for_init - Initializes forward projection transformation parameters*

# SYNTAX

FUNCTION for_init (outsys, outzone, outparm, outdatum, fn27, fn83, iflg, for_trans)

```
long          outsys;
long          outzone;
double        outparm[15];
long          outdatum;
char          fn27[];
char          fn83[];
long         *iflg;
long         (*for_trans[MAXPROJ + 1])();
```

# PARAMETERS

## outsys (input, long)

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

## outzone (input, long)

Output zone for UTM and State Plane projection systems. For Southern Hemisphere UTM, use a negative zone code. *Outzone* is ignored for all other projections.

## outparm (input, double, length(15))

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

## outdatum (input, long)

Output 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 *outparm* will be used for the semi-major and semi-minor axis (See Appendix A).

## fn27 (input, character, length(*))

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

## fn83 (input, character, length(*))

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

## iflg (output, long)

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

## for_trans (output, long, length(MAXPROJ + 1))

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

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

# DESCRIPTION

*for_init()* is used to initialize the proper forward projection and to return the pointer to the proper forward transformation routine.

# RETURN VALUE

*for_init()* has no return value.