MiscZoneUTMCoord

Inherits From: MiscUTMCoord : MiscCoord : Object

Declared In: misckit/miscgiskit/MiscZoneUTMCoord.h

Class Description

A MiscZoneUTMCoord object contains points in the one of the 60 zones of the International Universal Transverse Mercator Projection (1924) described in   the UK Ordinance Survey document, Transverse Mercator Projection, Constants, Formula and Methods", March 1983.   All distances are in meters.

International UTM Zones are 6 degrees apart starting at 3 degrees east of Longitude 180 and   proceed East. The Greenwich meridan is bracketed by Zone 30 and 31.   Zone Numbering starts from 1 and ends at 60.

MiscZoneUTMCoords use a MiscPlanetCoordConverter object as the default convertor for **convert:to:** operations (See MiscCoord).   This related class is invisible to the user and handles conversion between the basic types discussed above.

The first time MiscZoneUTMCoord is created that is in a heretofore unused zone, a single instance of a MiscUTMConstants object is created with values particular to that zone's grid.

World coordinate of True Origin:	Latitude 0.0 N, Longitude (set according to zone number)
True origin offset from grid origin:	500000.0 meters East , 0 meters North
Spheroid:	a=6378388.000 meters, b=6356911.946 meters
Scaling at Central Meridian:	0.9996

These invisible constants objects are shared by all future instances of   MiscZoneUTMCoord that are created. They are protected against deletion.

Instance Variables

unsigned int **zoneNumber**;

zoneNumber   The UTM zone number which this coord is in.

Method Types

Initialization   - initDescription:zone:

Archiving   - write:
                                 - read:
                                 - awake

Instance Methods

awake
    - **awake**

Connect to the zone constants for the zone of the unarchived object.   You should never invoke this method directly. Returns **self**.

See also: - **write:**,   - **read:**

initDescription:zone:
    - **initDescription:**(char*)*textString* **zone***:* (unsigned int) *utmzone*

Designated initializer for the MiscZoneUTMCoord class. *textString* is copied and may be used in describing the set of points.   utmzone is a number between 1 and 60 that identifies which International UTM Zone is desired. A zone number of   zero will be set to zone 1; a zone greater than 60 will be set to zone 60. The new object will initially have space for one point.   The default conversion contractor for conversion between coordinate systems is set to be the instance of PlanetCoordConverter.

read:
    - **read:**(NXTypedStream *)*stream*

Reads the object from the typed stream *stream*.   Returns **self**.

See also: - **write:**,   - **awake**

write:

- **write:**(NXTypedStream *)*stream*

Writes the object to the typed stream *stream*.   Returns **self**.

See also: - **read:**,   - **awake**