MiscWorldCoord

Inherits From: MiscCoord : Object

Declared In: misckit/miscgiskit/MiscWorldCoord.h

Class Description

A MiscWorldCoord object holds a set of global coordinate points, ie latitude, longitude , and altitude (distance above Mean Sea Level) values. Latitude and Longitude are stored internally as radians at all times, but may be loaded or retrieved in degrees if desired. Positive longitudes are eastwards of the Greenwich Meridian, negative ones are westwards. Positive latitudes are northwards from the equator, negative ones are southwards. Altitude should always be in meters above Mean Sea Level.

MiscWorldCoords use a MiscPlanetCoordConverter object as the default converter for **convert:to:** operations (See MiscCoord). This related class is invisible to the user and handles conversion between world coordinates and Universal Transverse Mercator Grid coordinates.

Method Types

Initialization	- initDescription:constants:
Accessing Coord values	- setCoordLatitudeDegrees:longitudeDegrees:altitude: - setCoordLatitudeRadians:longitudeRadians:altitude: - coordLatitudeDegrees:longitudeDegrees:altitude: - coordLatitudeRadians:longitudeRadians:altitude: - latitudeRadians - latitudeDegrees - longitudeRadians - longitudeDegrees - altitude

Instance Methods

altitude

- (double)**altitude**

Returns the altitude (in meters) value of the point at the current index.

See also: - **latitudeRadians**, - **latitudeDegrees**, - **longitudeRadians**, - **longitudeDegrees**

coordLatitudeDegrees: longitudeDegrees:altitude:

- **coordLatitudeDegrees:**(double*)*latitude* **longitudeDegrees:**(double*)*longitude* **altitude:**(double*)*altitude*

Gets the latitude (in decimal degrees), longitude (in decimal degrees) and altitude (in meters) values of the point at the current index. Returns **self**.

See also: - **coordLatitudeRadians longitudeRadians:altitude:**

coordLatitudeRadians: longitudeRadians:altitude:

- **coordLatitudeRadians:**(double*)*latitude* **longitudeRadians:**(double*)*longitude* **altitude:**(double*)*altitude*

Gets the latitude (in radians), longitude (in radians) and altitude (in meters) values of the point at the current index. Returns **self**.

See also: - **coordLatitudeDegrees: longitudeDegrees:altitude:**

initDescription:constants:

- **initDescription:**(char*)*textString* **constants:***anObject*

Designated initializer for the MiscWorldCoord class. *textString* is copied and may be used in describing the set of points. 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 MiscPlanetCoordConverter. *anObject* is reserved for future extensions that will describe a set of conversions and rotations of the frame of reference of a MiscWorldCoord from that of the Earth standard reference frame.

latitudeDegrees

- (double)**latitudeDegrees**

Returns the latitude value (in decimal degrees) of the point at the current index.

See also: - **altitude**, - **latitudeRadians**, - **longitudeRadians**, - **longitudeDegrees**

latitudeRadians

- (double)**latitudeRadians**

Returns the latitude value (in radians) of the point at the current index.

See also: - **altitude**, - **latitudeDegrees**, - **longitudeRadians**, - **longitudeDegrees**

longitudeDegrees

- (double)**longitudeDegrees**

Returns the longitude value (in decimal degrees) of the point at the current index.

See also: - **altitude**, - **latitudeRadians**, - **latitudeDegrees**, - **longitudeRadians**

longitudeRadians

- (double)**longitudeRadians**

Returns the longitude value (in radians) of the point at the current index.

See also: - **altitude**, - **latitudeRadians**, - **latitudeDegrees**, - **longitudeDegrees**

setCoordLatitudeDegrees: longitudeDegrees:altitude:

- **setCoordLatitudeDegrees:**(double)*latitude* **longitudeDegrees:**(double)*longitude* **altitude:**(double)*altitude*

Sets the latitude (in decimal degrees), longitude (in decimal degrees) and altitude (in meters) values of the point at the current index.

See also: **setCoordLatitudeRadians: longitudeRadians:altitude:**

setCoordLatitudeRadians: longitudeRadians:altitude:

- **setCoordLatitudeRadians:**(double)*latitude* **longitudeRadians:**(double)*longitude* **altitude:**(double)*altitude*

Sets the latitude (in radians), longitude (in radians) and altitude (in meters) values of the point at the current index.

See also: **setCoordLatitudeDegrees: longitudeDegrees:altitude:**