

Hollywood and the Trimble GeoXT

In the 2004 movie *The Day After Tomorrow*, a movie about severe and rapid climate change, the hero is seen checking equipment before heading out on a rescue mission to New York City. It was this scene that first caught my attention of the Trimble unit in the movie.



Gear is loaded into a truck and the team of three starts heading north from Washington DC towards New York City. Truck radio carries a newscast warning everyone to stay inside and burn any fuel necessary to stay warm. Report states that roads are impassible in New York and as far south as Pennsylvania. At this point the hero turns and asks, “where are we?” with a response of “we are just outside Philadelphia”.

This was too much for me; I had to see if I could see what was really on the screen of the GeoXT when this conversation was going on. Viewing the DVD on the computer I was able to step through scenes and do screen captures of the GeoXT screen when it was visible. The initial screen shot in the sequence discussing their current location looked like this, showing the Trimble GeoXT trying to acquire satellites.





Figuring the GeoXT was simply being used as a prop I was quite surprised that a few frames later, the GeoXT screen showed latitude and longitude. Movies run at 24 frames per second or the equivalent of $1/24^{\text{th}}$ of a second shutter speed. Because of this slow shutter speed, most individual frames are not sharp, but this is not noticed in the movie because of the short time any individual frame is on the screen. Viewing a movie frame by frame shows the inherent unsharpness of any individual frame. Add to that the relatively low light levels in this scene, which calls for a fairly wide-open lens with little depth of field, and sharpness becomes more of an issue. The display of the GeoXT was not designed to be read in this way either. That being said, a screen capture shows a number of interesting items.

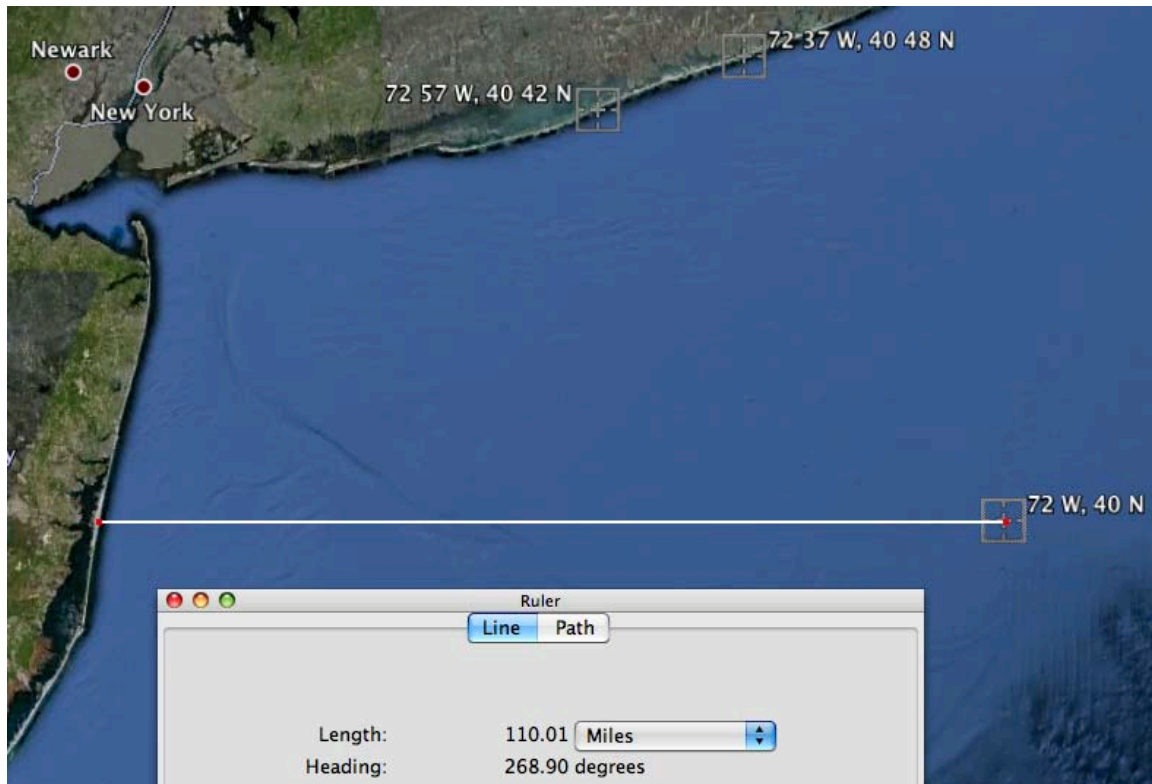


Numbers for latitude and longitude are visible along with a negative value for height above the ellipsoid, a value for positional dilution of precision and that the unit is set to WGS 1984 as the coordinate system. The Skyplot shows four satellites, but the number next to the satellite icon at the top appears to show zero. My version of TerraSync is different from the version on this unit so I am unable to correlate some of the buttons shown next to the Start button at the base of the screen.



Latitude and longitude appear to be in degrees, minutes, decimal seconds; with degree values of 40° N and 72° W legible, but the minutes and seconds are unclear. Latitude minutes appear to be 74' but this is impossible. Latitude minutes may be 37 or 57 but it is unclear.

The coordinates 40° N and 72° W plot about 110 miles off the New Jersey coast in Google Earth.



At longitude $72^{\circ} 37'$ W, latitudes above $40^{\circ} 48'$ plot on the south shore of Long Island. At longitude $72^{\circ} 57'$ W latitudes above $40^{\circ} 42'$ plot on Long Island.

The Trimble next makes a cameo appearance strapped to the back of a pack carried by one of the actors. Does not appear to be a very accessible place for the instrument.





The next appearance of the GeoXT screen is as the team is next to an ice covered sign that reveals the word Staten with a presumed reference to Staten Island. The unit is far more accessible now with the case mounted on the pack waistband.



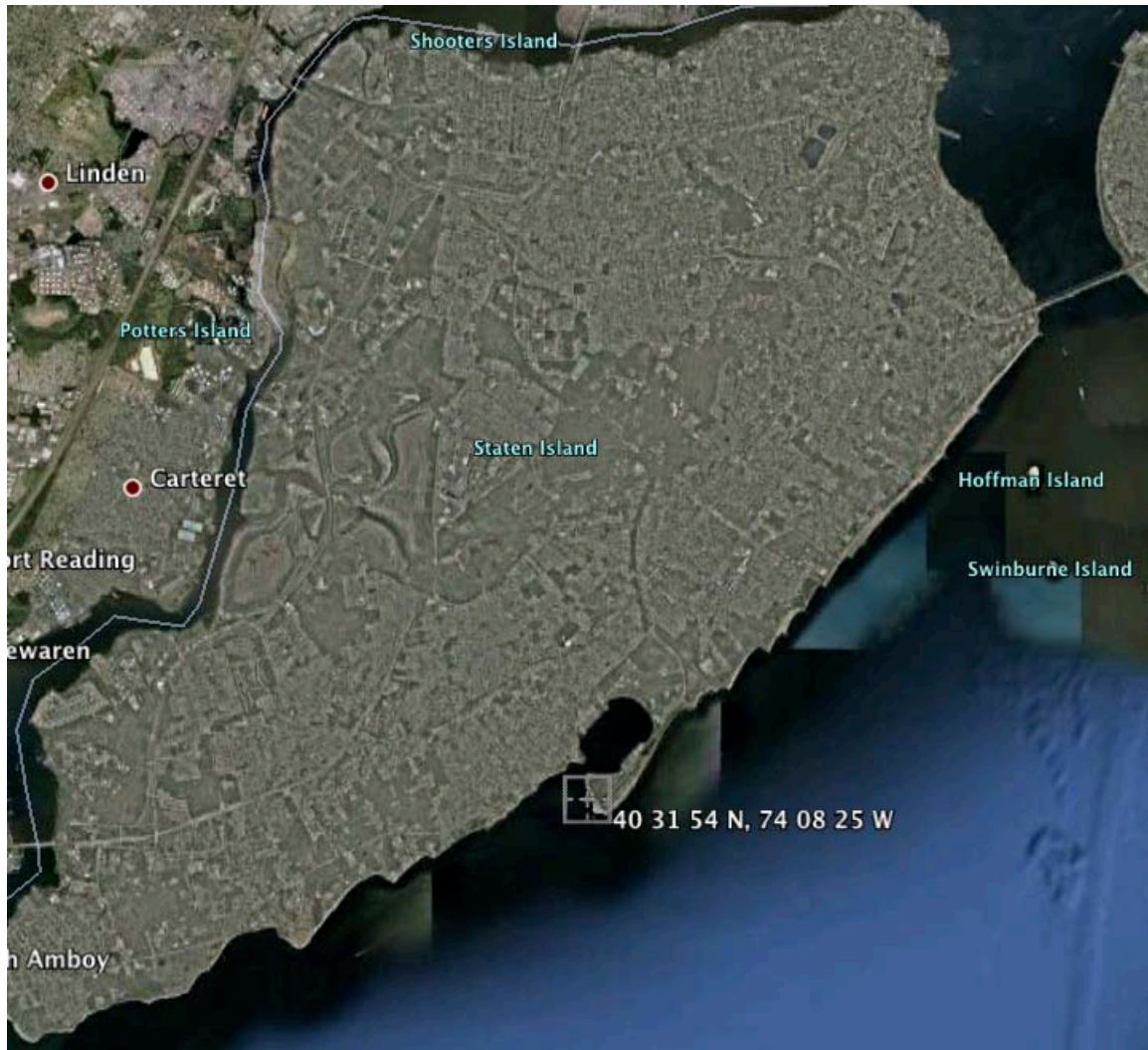
Here again the screen is included in the shot and again latitude and longitude numbers are visible.



Careful examination of the screen suggest $40^{\circ} 31' 54''$ N and $74^{\circ} 18'$ (or $28'$ or $08'$) $25''$ W. This Trimble screen is strange because instead of the top TerraSync menu bar the GPS controller is showing.

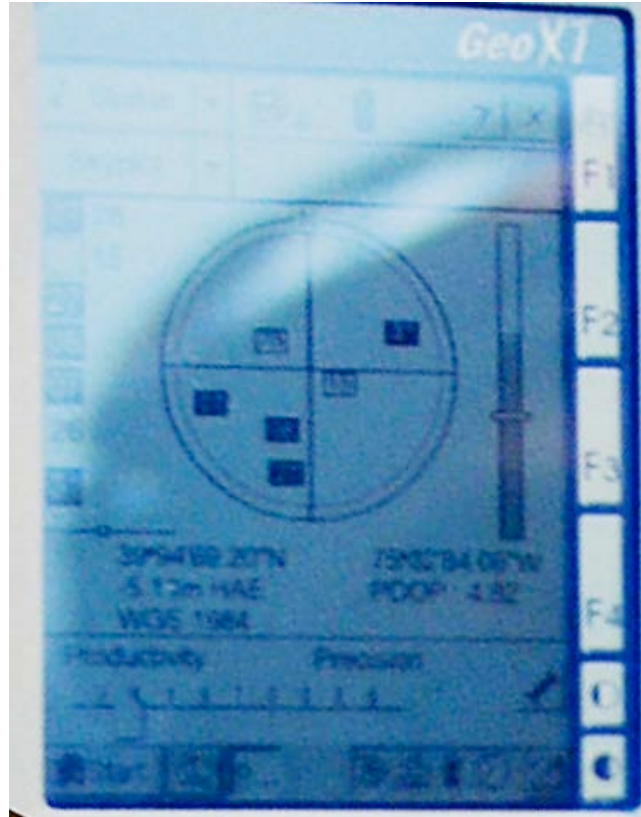


These positions plot in Google Earth in an area south and west of New York City in New York and eastern New Jersey. The 74° 18' and 74° 28' locations are both in housing developments. The 74° 08' location is just offshore of a park on the southeast shore of Staten Island.



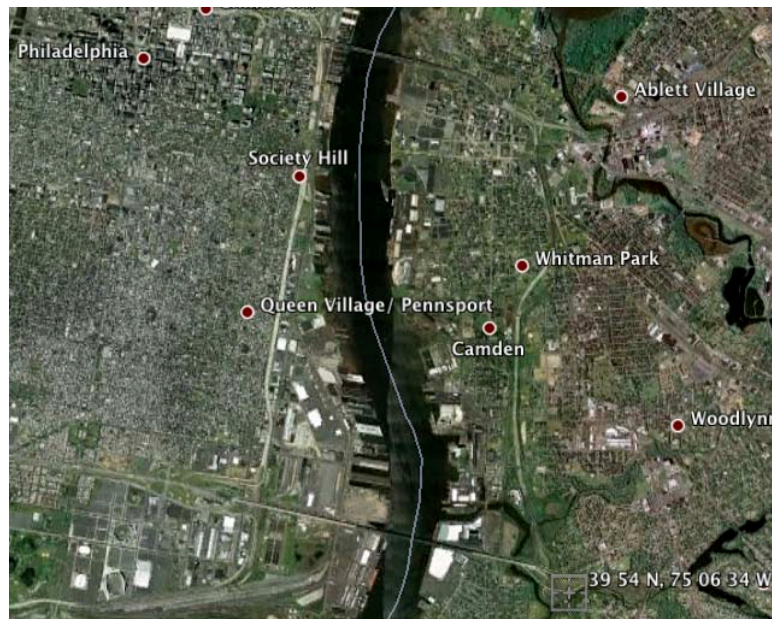
This sequence ends with the hero finding his son and friends in the New York City Public Library where they have been burning Tax Code books to stay warm. Arriving on a large snow covered mound in the canyons of New York City the question of “how far is the library” brings out the Trimble GeoXT for the last time.





The screen is difficult to read but appears to have coordinates of 39° 54' N 75° 06' 34" W. Screen also shows 4 satellites acquired and a WGS 1984 coordinate system.

These values plot in Google Earth near an interchange in western New Jersey near Philadelphia, Pennsylvania. Values other than 54' in the latitude field plot in odd areas such as swamps and housing developments.



Kind of a silly exercise and I'm not sure if it proves anything.

Oddities with the TerraSync screen make me think that there was no real attention paid to exactly how the unit was configured. However, the coordinates certainly do suggest that the filming was done in the New York, New Jersey area and not in California or Vancouver, British Columbia.

I've been told that the movie National Treasure also has a GPS unit used in it. If display screens are visible it will be interesting to see what locations are revealed in that movie as well.

Screen shots are from the 2004 movie The Day After Tomorrow Directed by Roland Emmerich