

9900166

Doug Hamilton

From: David_Benigni%NC_HQ@ccmail.rdc.noaa.gov
Sent: Wednesday, September 22, 1999 4:04 PM
To: Freud.Park@noaa.gov
Cc: dhamilton@nodc.noaa.gov; Dennis_Shields%NC_HQ@ccmail.rdc.noaa.gov
Subject: Re:Lat/Lon Values in nodc_nav1_XXX.elg file

Freud,

Hmmmm.... We specified that the ships log the lat/lon values as decimal degrees. I guess you're getting some that are NOT in this format? Most likely then they are in the standard NMEA format that originally came off the GPS (i.e. Degrees Minutes format):
4109.1094,-6743.5488

For the above example, the latitude would be:
41 degrees North, 9.1094 minutes
OR
41.15182333 decimal degrees $(41 + (9.1094 / 60))$

And the latitude would be:
67 degrees West, 43.5488 minutes
OR
-7.72581333 decimal degrees $-1 * (67 + (43.5488 / 60))$

The following is a C routine we use for conversion:

```
double NmeaToDecimal(char value[25])
{
    double num, degrees, minutes, sum;
    int isum;

    sscanf(value, "%le", &num);

    isum = floor(num/100);
    sum = isum;
    minutes = num - (sum * 100);
    minutes = minutes / 60;
    degrees = sum + minutes;

    return (degrees);
}
```

If you are getting another format than the one described above, please let me know. Either way, they're supposed to be logging all lat/lon values as decimal degrees, so I'll have to send out a reminder to all stem managers so they are sure of this!

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Reply Separator

Subject: Lat/Lon Values in nodc_nav1_XXX.elg file
Author: Freud.Park@noaa.gov (Freud Park)
Date: 9/22/99 3:07 PM

Guys,

I keep getting strange numbers for Lat and Lon values (third and fourth column) in "NODC_nav1_XXX.elg" file. How do I convert them into real values?

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