USCG Auxiliary Navigation Class Spreadsheet Conversion to OpenCPN Input

The procedure is used to convert the standard ‘Plotted Course Tracking Sheet’ Excel spreadsheet to a standard GPX file for input to OpenCPN.

Step 1

The student should fill out the spreadsheet with one line per waypoint. The longitude and latitude should be entered in degrees/minutes/seconds/direction format (ex. 43° 12’ 32” W). There is some latitude (no pun intended) in the format, but exactly following the prescribed format will minimize the effort required for the conversion.

Note: The spreadsheet has macros used to convert to the format required by the translation program. The student will get a warning and they should click ‘OK’.

Step 2

The macro inserts the converted value from the ‘Course’ sheet in the workbook into a cell in the ‘Conversion’ sheet. If the student inserts a waypoint name in the comments line of the ‘Course’ sheet, it will be part of the data sent to OpenCPN and the waypoints created will be labelled with the supplied name.

The instructor will open the submitted Excel spreadsheet click the ‘Conversion’ tab on the bottom to open the converted data. The conversion data is in the format of Latitude, Longitude, and Waypoint Name. The longitude and latitude will be displayed in degree decimal format. Latitude values in the southern hemisphere will be displayed as a negative value. The same for longitude values with a west direction. For example, if the student enters 43° 43' 10" N, the conversion value will be 43.7194444,

At this point the ‘Conversion’ sheet contains the data required by the translation program. The instructor needs to save the converted data to a file. Ensure the ‘Conversion’ sheet is the active sheet. Click ‘File > Save As in the menu. The program will prompt for a filetype to use to save the file. Select .csv which stands for Comma Separated Values. There will be a warning saying Excel will only save the active sheet to the .csv file. This is exactly what we want. After the save, we will have a file of the same name in the same location as the spreadsheet, except it will have a .csv file extension.

Note: If an entered value does not conform to the specified latitude/longitude format, the value ‘#Value’ will be displayed on the ‘Conversion’ sheet. Correcting the format of the supplied value in the ‘Course’ sheet will correct the value in the ‘Conversion’ sheet.

Step 3

The conversion program is ‘ITN Converter’. The current version is 1.94. Start the program. Select the ‘Open’ button. Select the .csv file into the conversion program. Select the .gpx filetype to create. Select ‘Garmin Zumo, GPX BaseCamp (.gpx). Save it back into the directory where the Excel file exists with the same file name except it will have a .gpx file extension.

The instructor can also use the ‘Edit’ button to view the results of the import of the generated .csv file.

Step 4

Open OpenCPN and import the generated .gpx file. OpenCPN should display the route input to the Excel sheet by the student.