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Unit Conversion

By Bill Bergmann

Under the Geodesy menu in the Hypack Shell is a handy little program called Unit Conversion. As the name implies it converts values from one system of units to the equivalent in another system. You may be familiar with common on line conversion programs, perhaps to make a quick conversion of the temperature from Celsius to Fahrenheit or visa versa. If so then you will notice that the user interface and usage of this program is very similar.

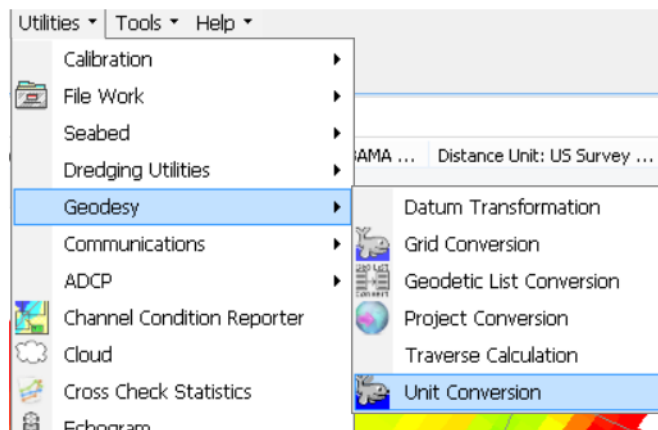
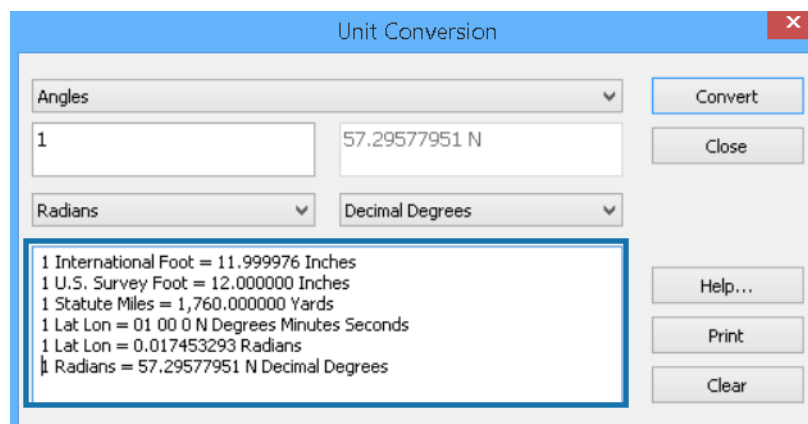


FIGURE 1. UNIT CONVERSION



The topmost drop-down box allows selection of the category with which the system of units is associated. Online converters typically have a wide range of categories. Our UNIT CONVERSION program is limited to 2 categories, Angles and Distance, which are most relevant for Hydrographic work. How much is 50 degrees Celsius on the Kelvin scale just doesn't come up often in our line of work. After selecting a category, the lower drop-down boxes will be populated with relevant units to that category. The left side is the source value, the right side the target value. Simply enter the value to convert in the left edit box and click [Convert] to see the value in the target system in the right edit box.

The results of each conversion are added to a list box, highlighted in blue in [Figure 1](#). It will contain both the value and units for the source and target systems. This is handy to have a quick reference which can be printed out (actually, sent to Notepad from which you can print if so desired). To reset the conversion list to an empty state, click [Clear].

Distance units include inches, international and u.s survey foot, meters, nautical miles, statute miles and yards. Angle units include radians, gradians and latitude/longitude. The latitude/longitude source value is very flexible and accepts input both formatted and unformatted. This makes it very handy for cut and paste operations. For instance, it happily accepts the decimal degree notation, 41.5623° N, and reformat it to the degree minutes seconds equivalent. It equally accepts 41.5623, 41.5623 N, +41.5623 etc.

If there are additional units in any category that you would find useful or additional categories even, drop us a line and we can easily work them in. By the way, to satisfy the question posed earlier, it's 323.15 Kelvin.