

What's New in Version 9?

(Information updated 2/22/11)

CMT PC-Series software Version 9 is shipping now. Please review the enhancements listed below to see if you would like to upgrade your CMT GPS/GIS/Timber Cruising software to Version 9.

Please note that PC-Series Version 9 and PC-MAPPER AI 4.0 software will be validated via a software key. Hard keys will no longer be provided.

I. CMT PC-GPS Series Application Software Version 9 Enhancements

1. The "Undo" and "Redo" Functions

The **Edit/Undo** function is available for many of the commands and actions you perform in PC-GPS 9. This function works to reverse the last command or action that you have executed. If you have executed a sequence of commands or actions, then Edit/Undo will reverse them sequentially, one at a time.

After undoing an action, you may use **Edit/Redo** to reinstate that action.

2. WGS84 and NAD83

Background Information

1. Up to 1994, WGS84 and NAD83 were the same. We will refer to these old datums as **WGS84(Original)** and **NAD83(Original)**. Then NGS realigned WGS84 with ITRF to become WGS84(G710).

In 1996, WGS84 was realigned again with ITRF to become WGS84(G873). In 2002, NGS re-aligned the WGS 84 datum with the ITRF 2000 datum to become WGS84(G1150). The current **WGS 84 (G1150)** and **ITRF2000** reference frames are essentially identical. They are millimeters apart.

2. **NAD83** also evolved during 2002 and 2003. The control points of **NAD83(original)** were measured by using the Doppler method; they have meter-accuracy. The readjusted **NAD83(CORS96)** has cm-accuracy. The resultant shift is about 1.5 m.

The GPS data recorded on the CMT GPS field data collectors between 1994 and the Version 9 release date were treated as if they were still in the WGS84(Original) datum. The GPS position converted from one realization of WGS 84 to another realization of 84 differ by only a few centimeters. However, you may have experienced a position discrepancy of 1 - 2 meters in some places when using the NAD83 datum in the CMT software prior to Version 9 because it sets the NAD83 datum to be the same as the old WGS84 datum.

Relevant Functions in PC-GPS 9

Map/Coordinate System

If your GPS job file is dated before the 1994 realignment then it is referred to WGS84(Original), and the CMT software has interpreted it as such. You may use **Map/Coordinate System** to convert it from WGS84(Original) to WGS84(G1150)/ITRF 2000, or any other available coordinate system, such as NAD83(CORS96).

When you collect GPS job data using the CMT Version 9 **Field software**, the CMT software will interpret it as being in WGS84(G1150)/ITRF 2000. You may use **Map/Coordinate System** to convert it from WGS84(G1150)/ITRF 2000 to any other available coordinate system, such as NAD83(CORS96).

The CMT Version 9 software uses the NGS grid files to perform the coordinate system transformation between NAD83(Original) and NAD83(CORS96).

Map/Assign Coordinate System

For the GPS data collected **between the 1994 realignment and the release date of the CMT Version 9 software**, you should use **Map/Assign Coordinate System** to reassign the WGS84(G1150)/ITRF 2000 datum to it. Please note that this reassignment is different from the transformation from one coordinate system to another. **Map/Assign Coordinate System** does not perform any transformation but will interpret the data based on the WGS84(G1150)/ITRF 2000 datum.

Canada

In Canada, NAD83(CSRS98) is used, which is the same as NAD83(CORS96). A number of the Provincial survey agencies have produced regional grid shift files to transform positions from NAD83(Original) to NAD83(CSRS98). Not all Provinces have the grid shift files available at this time.

If you are working in the bordering states/provinces of USA and Canada, please select the appropriate **Region** in the Coordinate System Information screen so the corresponding grid file will be used for conversion between NAD83(original) and NAD83(CORS96/CSRS98).

Enhancement to the Activate GPS Receiver Function

You may now select the Datum used for the GPS data.

User-Defined datum, select "14-Parameters" option

3. Added 14-Parameters option to User-defined Datum.

4. Accepts ECW Image Format when loading Photo/Image into a Map

To work with ECW image files, you must download the required plug-ins from the ERDAS website. You will need these files: NCSNET.DLL, NCESUTIL.DLL and NCSECW.DLL.

**5. Convert tiled TIFF files when loading the map.
(under Load Photo/Image into a Map)**

PC-GPS 9 does not support tiled TIFF image formats. When you attempt to load a tiled TIFF image into PC-GPS 9, you will be given the option to convert the image into a format that PC-GPS 9 can load. It is advisable to save the converted file with a new file name so your original image file is left intact.

6. Save Plot Preview to PDF format.

7. Plot Preview - Plot Setup - Scale page

PC-GPS 9 provides a **Lock Scale** option to make the Last Layout keep the last frame saved with map.

8. Click on the map in Plot Preview then right-click to access the option to **align-left, **align-right** or **center** the map in the plot.**

9. Save a click by automatically detecting the type of new Feature to be added by mouse from the type of the currently active Topic.

10. For the Line Labels, PC-GPS 9 and later versions provide the additional **At both ends option to label both ends of the line.**

11. Geoid 2009 files and Japan geoid 2003 files implemented.

12. Sheet/Import from CSV File

PC-GPS 9 will let you import Sheet View (Feature) data that you previously exported in CSV format.

13. Statistical Summary for Numeric Fields in Sheet View

The **Topic/Statistic** menu function will display the statistics for the specified *numeric* Attribute of the currently active Topic. You may also select this function from the menu that pops up when you right-click in Sheet View.

By default, the statistics for the selected numeric Attribute are computed for all the Features in the Topic. If you mark the "**Selected only**" checkbox then the statistics will be computed only for the selected Features.

14. Supplemental Database Management

PC-Cruise 9 lets you easily store multiple user-defined data tables with the currently active Topic. Whereas with the Sheet View, you may store one record for each Feature in the active Topic, the Supplemental Database facility lets you maintain multiple data tables containing multiple entries for the same Feature. You may incorporate any number of data fields that are not limited to the Attributes for the active Topic. Query and grouping facilities are provided to make this a valuable tool in managing the supplemental data. Date and Object Linking field types are provided. Therefore, you may maintain complete planning and history records for any Feature. In addition, you may add a heading to the report and specify the column titles to be shown in the report instead of the data field names.

15. Import/Export in GPX format

Starting with PC-GPS 09, you may also Import/Export Feature data in the GPX format (GPS Exchange format).

16. Added a "Goto" function for Sheet View

Use this function to quickly go to a record that meets the conditions that you specify for either the Feature ID or some other Attributes of the currently active Topic.

17. Added the "Zone" field as built-in Attribute

18. Added the support of the .prj file for importing/exporting jobs in Shapefile format.

Please note: This function will not work with the NEZ coordinate system. If you are using a local NEZ coordinate system, you must specify the correct coordinate system for importing an ArcView Shape file. Otherwise, the imported data will have meaningless coordinate values.

19. Added Dynamic (by Distance Interval) option for logging GPS data for Line/Area. This option is only available for PC-MAPPER 09, PC-MAPPER AI 09 and CMT-Forester 10.

II. Additional Functions included with CMT-Forester Version 10

CMT-Forester Version 10 includes GPS/GIS Mapping functions, Timber Cruising functions, as well as Forest Data Management functions. It also provides an interface

with the USFS Vegetation Simulator (**FVS**), which is a growth model that can predict inventory statistics resulting from alternative timber management activities. Using FVS, you could design an optimal treatment and harvest scheme for your timber stands. You could enter your planned treatments into the Forest Data Management module and check them off as they are completed.

The CMT-Forester Version 10 includes all the functions in PC-Cruise EX 07, the above-listed enhancements to the PC-GPS Series, as well as the following:

1. Price List Table, Sort Table and Cost Table

CMT-Forester Version 10 provides the option to set up log sorts based on log dimensions and shipping destinations. It lets you define the sorts based on the sawmills' specifications. While you are entering the cruise data, you may assign the appropriate sort to each tree or each log segment measured.

A Price Table has been added for you to set up log pricing based on sorts and log dimensions.

You may also use a simple Cost Table enter the expenditures incurred for managing and/or harvesting the timber stand. These costs will be used in figuring out the net income shown in the "Stand Revenue and Cost" report.

The "Destination Test" function will help you answer the question: "What will I get by shipping to this mill rather than that mill."

2. FVS Interface

The USFS Forest Vegetation Simulator (**FVS**) is a growth model that can be used to summarize current stand conditions, predict future stand conditions under various timber management alternatives, and update inventory statistics. **Variants** of the equations for tree growth, mortality, and volume are available for various specific geographic areas across the United States.

CMT-Forester Version 10 provides an interface to the USFS FVS/Suppose program suite. You may enter such information as FVS Variant, Location Code and other stand-level parameters in the Stand Information screen. CMT-Forester Version 10 will let you export your cruise data to **Suppose** and/or to **FVS**, and generate the files required by **Suppose** and/or **FVS**. Since you will not likely be using **FVS** directly but will be using the **Suppose** interface, we recommend that you export your cruise data to both **Suppose** and **FVS**. This way, you will have the files required by **Suppose**, as well as the keyword file generated by CMT-Forester Version 10 that **Suppose** can also use.

3. Compute Site Index

When the FVS data fields are included in the cruise data, the program can calculate the site index based on the site trees you have measured for the stand.

4. Species List

The Species are now listed with both alphabetic and numeric codes. A "FVS FC" field is also available.

5. Compute Tree Form Coefficient

You may enter the tree form measurements for a number of sample trees, from which the program can compute the tree form coefficients and automatically generate a taper equation.

6. Compute SDI (Cruise Report)

The **SDI** (Stand Density Index) will be automatically computed and displayed in the **Stand Information** screen. The computed SDI is also shown for each Species in a Cruise Report .