CivilCAD 2000 Version 7
Newsletter

Finally, after more than half a year, Version 7 is out, with many new exciting features. As always, we welcome you to enter our web-site and download the new version. After exploring it, I am sure you will see it was worth waiting for…

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Announcements

We welcome our two new distributors**, Bil Trading Pvt. Ltd (India)** and **PrimWare (Portugal)**, for joining our distribution network. We wish for a mutual success.

What's new/Fixed problems

ROADS

The new Version 7 places the CivilCAD 2000 as one of the leading software for roads design world wide. In this version we have added 3 main new features: (1) New environment for the vertical alignment, (2) 3D road driving simulation and (3) retaining walls design. Along with this features you can find many more improvement that will make your roads design easier, better and faster.

1. **New environment in the Vertical alignment**- For our skilled users, we have developed a total new design environment for the vertical alignment. This environment uses the AutoCAD (and only works with AutoCAD 2000 and up) as its drawing desktop and enables the user more flexibility in designing the road's profile. The user will be able to choose either to continue working in the old environment or to use the new one. To choose between the environments, go to "File – Configuration", press "Back", and choose "Drawing environment interface" in the "Vertical alignment mode". Press "OK" and reopen the vertical alignment*.
   How to use:
   - Draw your profile in the "VerEdit" layer (the software automatically set it to the current layer), and press OK to redraw the drawing, and update the lower design table.
   - Change data in the lower table and press OK to change the drawing.
   - Use the "Define designed slope" button to design the profile in a specific slope. Press F8 (ortho on) in the AutoCAD to use that slope.

- Use the "Arc thru point" button to set a vertical curve to go through a specific point. To use this option, mark the vertical IP (row) in the design table, press the button, and choose the point in the drawing. The length of the curve will be determined to fit to this point.
- Mark the "Unlock datum" to enable datum changes, automatically according to your design.
- Control the scales of the drawing while designing by changing the height and long and pressing OK.

* To define this option as the default for your entire projects, either use the installation wizard or open the prototype project and do the process as described.

2. **Automatic change in datum in the vertical alignment drawings**- When creating a plot of the vertical alignment, either using the DXF option or with the Frames maker, the software will check that the height of the drawing do not exceed the paper size that the user has chosen. In cases that the drawing is higher then the paper size, the software will automatically create a new datum, and continue the drawing according to it.

3. **New features in the vertical alignment** (valid for both the new and old environments)- In the status button of the vertical alignment you can change the following settings:
   - Control the data intervals display- choose the display of distance between cross sections along with the background grid steps.
   - Show partial slopes in curves- this will display partial slopes in curves, in the profile's slopes row.
   - Force writing all data on drawing- In cases that data overwrites another data on the drawing, CivilCAD 2000 removes the less important information to avoid misunderstanding. You can now, cancel this option and force appearance of all data.

4. **Side ditches design in the vertical alignment**- After defining side ditches in the cross sections, you can now go to the vertical alignment and change the ditches' I.L. To do so, change the CenterLine (in the vertical alignment window) into Left/Right ditch. In the lower window you will see a new button that enables to bring the designed I.L information from the cross sections into the ditches profile table. Now you can change this information according to the real drainage needs. To project the changes back to the cross sections, return to the cross sections and remove the depth (cut/fill/in between) for all the ditches (enter 0, right-click and send to all sections). Press Interpolate button. The software will adjust the ditches I.L according to the ditches profile.

5. **3D roads driving simulation**- After a long period of development, we have finally decided to release the first version of 3D roads design simulation. There is a long way to go, and much more to explore in this field, but in Version 7 we are taking the first step into this world. To view the simulation, go to "Roads – Road3DView" (after finishing designing your road). In this window, use the play, pause, backward etc. buttons to play the movie.

6. **Retaining walls**- We have completely changed the concept of retaining walls design by adding a new separated menu, especially for this need. The new module enables to define a wall alignment, connected/not connected to a road, receive and design its profile and dimensions and project the design to the cross sections. Enclosed to this NewsLetter, we have attached the new chapter that explains how to use the new feature.

7. **Land development in cross sections -**To the cross sections tables, we have added a new table that enables the user to show, on the cross sections, the levels of new developments on the roads sides. To use this feature, go to the "Land development" table. In the table, enter the elevations of the development and press OK. You can enter up to 2 levels of development, along with parcel number, if needed.

8. **Roads edges (side-sticks) in cross sections-** In the drawings of the cross sections (design format), we have added a new bar showing the accumulative distances of the roads edges from the C.L to left and right.

9. **Changing slopes-** You can now choose to define a change (a break) in the side slopes of the cross sections according to the filling height above the existing G.L or the height difference from the top of the Designed G.L. To do so, enter the first slope (main slope) in the regular way (Slp. Right/Slp. Left- Cut and Fill or use the Var. Slopes). Then go to the "Berms" table. In the "Berms" table, leave the width column empty, and enter the second slope (in percentage) in the slope column (use the "fill" row only). In the height column, enter the height interval in which you want to create the change in the slope- enter a positive value for defining an height interval from the top of the designed G.L, or negative value for defining an height interval above the existing G.L. Press OK to see the result.

10. **Beside road**- This option enables to add an additional design after the roads edges, such as protection ditch or small ramp. To use this option, go to the "Beside road" table in the cross section, and enter the distance of the ramp/ditch from the road's edge, the width of the ramp's top/ditch's bottom, the height of the ramp (positive number)/the ditch depth (negative number) and the side slopes of the ramp/ditch. Press OK to see the result.

11. **Reorder all roads-** One of the main problems that face a roads designer that uses the software to design a project with many roads, is to arrange the IPs' numbers and names of the entire project. In the Horizontal Alignment window, we have added a new button to reorder all roads. After pressing it, the software will present a window that enables the user to reorder all the IPs of the project, change their name according to the road's name/number and remove unused IPs from the designed coordinates list.

12. **Layout's status**- In the Horizontal alignment window we have added many features to control the layout display. By pressing the status button you can now control the following displays:

    - The content of the IP boxes.
    - Show slopes on roads edges ("""""").
    - Display of sections names parallel or in perpendicular to the C.L.
    - Display side slopes- this option controls the entire display of the cross sections on the layout. You can choose to display the cross sections either near the C.L or with a line from the section outside the layout. If displaying the information with lines, the software will also include side slopes (if cross sections exist).
    - Definition of the distance between cross sections and the name of first section on the layout (Now you can define it without entering the cross sections window).

13. **Roads description**- By double clicking the road's name in the roads list window, you can now add description/remarks to each road.

14. We have adjusted the software to read horizontal alignments and cross sections files that have been created in CIVIL/LDD software (AutoDesk).

GENERAL

The release of Version 7 holds many background improvements, in terms of speed and software's capabilities. We are constantly working to improve our product, making it better, stronger and faster.

1. **Setup completion wizard**- To ease the process of the software/upgrade installation, we have added a new setup completion wizard to the setup process. When the setup process will finish, it will check either this is the first installation of the software on the computer, or there is already an existing copy on the hard-disk. According to the check, the setup will prompt to keep the existing configuration, change to the default configuration, or launch the setup completion wizard. Launching the setup completion wizard will lead you, step by step, toward a successful installation, including all the settings needed for your use. Default distance between cross sections, language, drawing environment etc, are all included in this installation process. We advice our customers to use the installation wizard to avoid future problems.

2. **Blocks mode**- We have finally overcome the problems in working in blocks mode, especially with large files. We recommend our customers to work in blocks mode for all kind of jobs, mapping and roads design.

3. **General earthworks improvements**- In the general earthworks window, we have added a new volumes calculations method. If the user chooses to create full grid in the calculations, a new field "use accurate system" will appear. Marking this check-box, will change the calculations in a way that each square in the grid will be calculated in an accurate method, and not as a sum of the four square's corners.

4. **Radiuses in the topography planes-** You can now add radiuses to the topography planes vertexes. In the topography planes window, enter either the radius between two points or mark "3 point" to create radius from three following points.

5. **Scales**- We have changed the entire scales table in all of the software texts. The following table shows the relations between the scale in the software and the text size in the drawing:
   - 1:100 - 0.1
   - 1:250 - 0.5
   - 1:500 - 0.7
   - 1:1000 - 1.2
   - 1:1250 - 1.5
   - 1:5000 - 5
   - 1:10000 - 10
   - There are few exceptions to the table above which are related to cases where emphasizing a certain text is needed. The road's sections names, is one example of this exception.

6. **Global scale**- As known, each text in the software's features has its own scale settings. You can now change the scale for the entire project at once. Go to "File – Configuration" and press "Back" in the right window. Choose the global scale and press OK.

The Future

With each new development, we define a new level of design, mapping, constructing and surveying. Each week, we learn new ideas, especially from our customers, on how to do our CivilCAD 2000 better. We are looking at the future with a new product - CivilCAD 2004, that will include a complete new outlook, yet fitting to our traditional software concept. Our near new developments will include:

- Multiple roads' cross sections.
- GAS pipelines design.
- New developments in building the Horizontal alignment.
- New layers in the cross sections.

And much more…