TTTCube

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TTTCube version 4.4 is a game of three-dimensional tic tac toe, you against your computer.

TTTCube is Copyright ©2017, 2010, 2009, 2005 by Ron Charlton. TTTSetup.exe may be distributed per its freeware license. For changes in this TTTCube version see History.

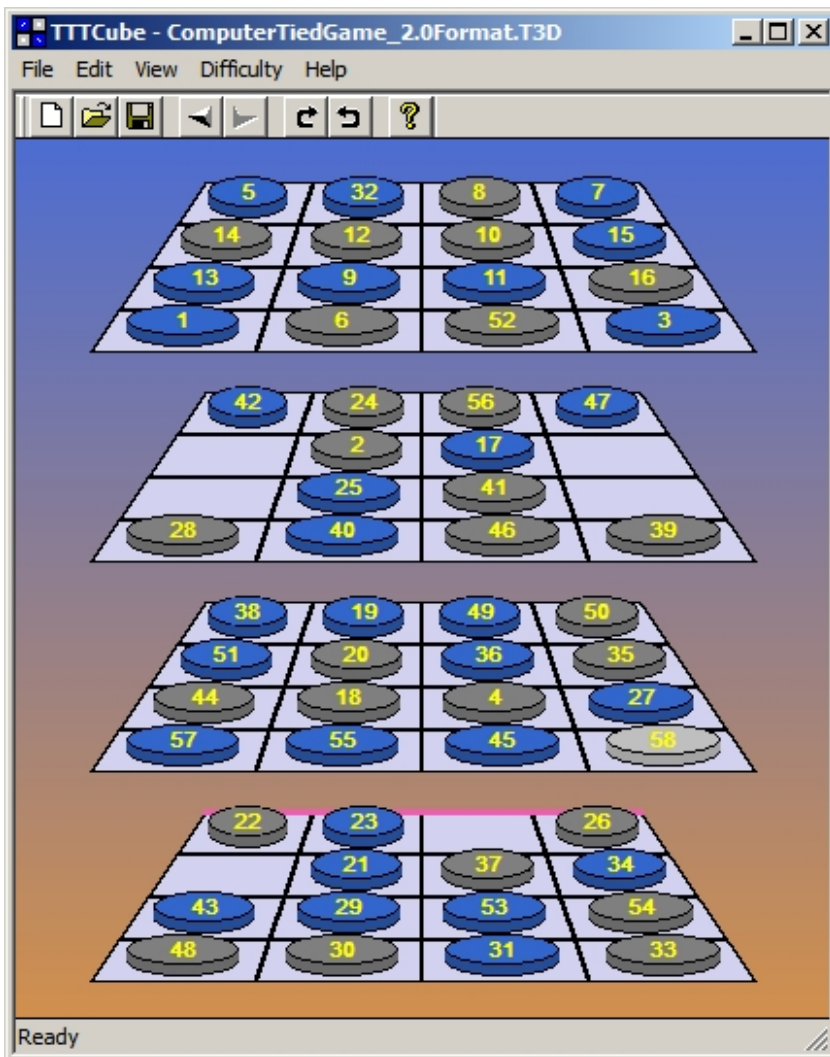**Figure 1** - a tie game

How To Play

How To Play 3D Tic Tac Toe

Three-dimensional tic tac toe is played on a board with four levels, see Figure 2. Each level has sixteen squares, arranged as four by four. The object of the game is to get four of your pieces in a straight line before your opponent does. Four winning pieces may be in any straight line, e.g., left-to-right, up-and-down, front-to-back, diagonally in two dimensions or diagonally in three dimensions. In Figure 2 the grey player (Computer) has blocked a possible four in a row by the blue player (human) with the highlighted piece.
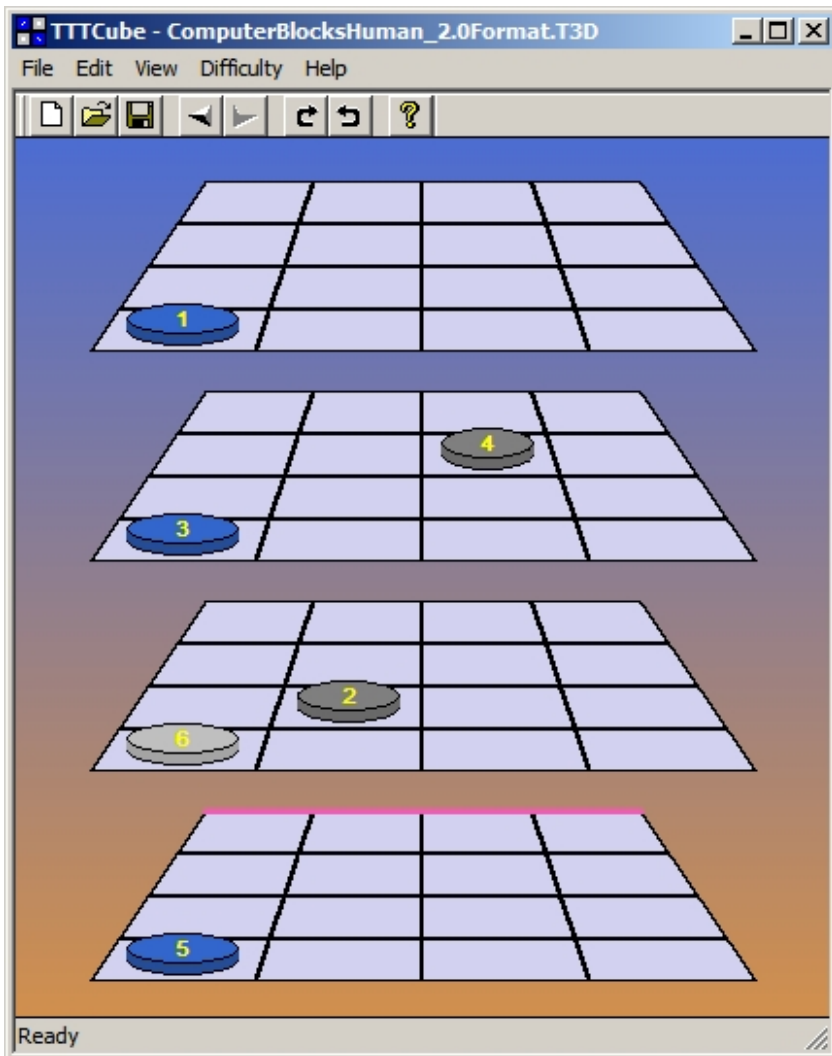

Figure 2 - A TTTCube game in progress

Playing 3D Tic Tac Toe with TTTCube

To start TTTCube, click Start»Programs»TTTCube»TTTCube. This assumes you accepted the default installation setup. Alternatively you can click the TTTCube icon on your desktop.

At the beginning of a game you can select **Easy**, **Medium** or **Hard** play in the **Difficulty** submenu. When you start TTTCube the difficulty is **Hard**. If you change the difficulty it will remain in effect until you change it again or until you close (**Exit**) TTTCube.

Click the mouse button in a square to move. A blue game piece will mark your move. The computer will respond with its move in grey. The computer will move first if you select the **Edit** submenu's **Move** item. You and the computer alternate moves until one of you wins by getting four pieces in a row or a tie is reached. The computer will highlight a winning row. You can save a game at any point during it.

The latest move in a game is highlighted in bright grey or bright blue. Also, four winning pieces are highlighted in bright grey or bright blue.

You can **Undo** or 'take back' your latest move in the **Edit** menu; the computer's move that followed yours will be taken back also. Two moves will always be taken back with an Undo: the computer's move and your move.

Use the **View** submenu's **Rotate Clockwise** and **Rotate Counterclockwise** items to rotate the TTTCube board 90° at a time. A fluorescent red line on the bottom level's border shows the orientation of the board.

You can copy a game's moves to the clipboard as numeric coordinates with the **Edit** submenu's **Copy** item. A three-digit number (XYZ) represents each move. No matter how the board is turned, copying the game always writes the coordinates as if the board's fluorescent red were at the back. Each digit ranges from 1 to 4. Assuming the fluorescent red line is at the back, X increases left-to-right, Y increases front-to-back, and Z increases bottom-to-top.

You can paste a game's moves from the clipboard (as numeric values in the format described in the previous paragraph) with the **Edit** submenu's **Paste** item. Pasting always orients the board so the fluorescent red line is at the back of the board.

TTTCube Menus

TTTCube has five menus:

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File->New                  Ctrl+N - start a new game
File->Open...              Ctrl+O - open a game that was saved earlier
File->Save                 Ctrl+S - save the current game
File->Save As...                  - save the current game with a new name
File->[saved games]               - a list of recently saved games
File->Exit                        - exit the game (with prompt to save it)

Edit->Copy                 Ctrl+C - copy numeric XYZ coordinates as text
Edit->Paste                Ctrl+P - Paste a game on the clipboard as a new game
Edit->Undo                 Ctrl+Z - undo the last move (can be repeated)
Edit->Move                 Ctrl+M - computer moves first

View->Rotate Clockwise        Ctrl+R - turn the board 90° clockwise
View->Rotate Counterclockwise Ctrl+L - turn the board 90° counterclockwise
View->Background->Solid            - show a solid color background
View->Background->Gradient         - show a color-graduated background
View->Background->Image            - show one of four pictures as the background
View->Transparent Board    Ctrl+T - make the board squares transparent
View->Toolbar                      - show or hide the toolbar
View->Tool Tips                    - show or hide tool tips
View->Status Bar                   - show or hide the Status bar

Difficulty->Easy           Ctrl+1 - the computer is easy to defeat
Difficulty->Medium         Ctrl+2 - the computer has medium skill
Difficulty->Hard           Ctrl+3 - the computer is hard to defeat

Help->Help Contents...     Ctrl+H - show TTTCube Help Contents
Help->About TTTCube...            - about version, copyright and author information
Help->License...                  - show TTTCube's license and re-distribution
requirements
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TTTCube Toolbar

The TTTCube tool bar has four special buttons as shown in figure 3. Besides the typical buttons--New, Open, Save and Help--æ¦^Áà˘cc[}•Ác[

- W}å[Ác@^Á|æc^•cÁ{[ç^
- Cause the computer to move first
- Rotate the board 90° clockwise
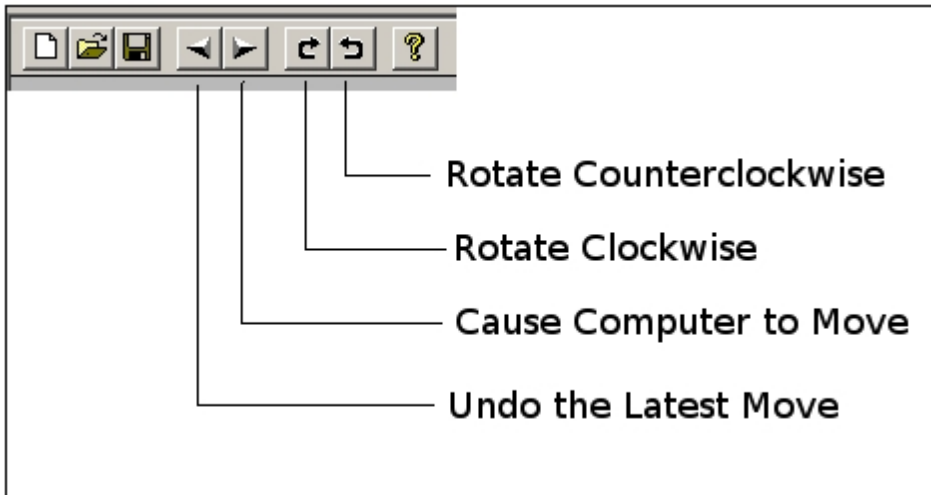- Rotate the board 90° counterclockwise

Figure 3 - TTTCube's tool bar

Uninstalling TTTCube

Be sure to close TTTCube and its help before uninstalling TTTCube so all TTTCube files can be removed from your computer.

You may uninstall TTTCube by using the *Uninstall TTTCube* item in the TTTCube program group (Start»Programs»TTTCube»Uninstall TTTCube). Or you may use **Add or Remove Programs** in the Windows Control Panel.

License

TTTCube is copyright © 2017, 2010, 2009, 2005 by Ron Charlton. You may freely distribute its unmodified setup file, TTTSetup.exe. You shall not distribute TTTCube or any of its component files by any means other than its provided setup file.

You shall not charge anything, other than a nominal media fee, for distributing TTTCube's setup file.

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Credits

- TTTCube's help was built with HelpNDoc (free for personal use) by iBE-Software.
- TTTCube was built with Microsoft Visual Studio 2010.

History

- v4.4 (2015-07-26) -
  - Corrected accelerator label on menu item Edit-Paste to Ctrl+V

- v4.3 (2015-07-25) -
  - Added Pasting a game from the clipboard onto the board

- v4.2 (2015-07-10) -
  - Changed game piece color from red and green to grey and blue
  - Added the move number to game pieces
  - Added menu item Help-License... to show TTTCube's license
  - Minor corrections to TTTCube Help

- v3.4 (2010-11-24) -
  - Added selectable window backgrounds: solid, gradient and images
  - Maximized window changes size to prevent image distortion
  - Board can be made transparent

- v3.3 (2010-11-09) -
  - You can no longer move out of order.
  - An hourglass cursor appears during the computer's move.

- v3.2 (2010-11-03) -
  - Added a Difficulty menu: Easy, Medium, Hard.
  - Added an About item to the system menu.
  - Restored the custom Winner and Tie Game dialogs.

- v3.1 (2010-10-26) - Double buffer the TTTCube window to eliminate flickering.

- v3.0 (2010-10-21) -
  - Ported TTTCube from Visual C++ 6.0 to Visual C++ 2005.
  - Message boxes appear over the TTTCube window now.
  - Using the F1 button for help works now.

- v2.0 (2010-10-14) -
  - Allow resizing the TTTCube window and remember its position between runs.
  - Empty squares are light blue for better contrast.
  - Pieces are circular and shown in perspective.
  - Board rotates 90° at a time on request.
  - When a move is deleted the most recent remaining move is highlighted.
  - Moves in a game may be copied to the clipboard as text in XYZ format.
  - A new file format is used for saving games; it is forward and backward compatible.

- v1.3 (2009-06-07) - Help file could not be displayed after opening or saving a game

- v1.2 (2005-03-06) - Added Windows Help

- v1.1 (2004-01-29) - first public release of Windows version

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