Continuum Planet Editor Summary

1. Menus

FILE

 NEW GALAXY - Creates a new galaxy file. The file starts with one blank planet on it.

 OPEN GALAXY - Lets user open a different galaxy file. Until another file is opened, all playing and editing happen in this galaxy.

 PLAY CONTINUUM - Returns to the title page, from which a user may play in the current galaxy.

 QUIT - Quits to the finder.

EDIT

 CUT PLANET - Removes the current planet from the galaxy file, and places a copy of it on the clipboard. All planets after the current one are shifted down to fill the gap. If there was only one planet in the galaxy, a blank planet is added after the cut is performed.

 COPY PLANET - Places a copy of the current planet on the clipboard.

 PASTE PLANET - Inserts the planet on the clipboard into the current galaxy before the current planet. The current planet and all higher ones are shifted up by one, and the pasted planet becomes the current planet. To paste after the last planet, "Add Planet" then paste before the blank planet thus created.

 ERASE PLANET - Clears the current planet of all objects and walls, and resets the planet globals to their defaults.

 Note - To move planets from one galaxy file to another, just open the first, cut or copy the planet, open the destination file, and paste.

GAME

 The game menu is disabled during planet editing, since games cannot be played directly from the editor.

PLANET

 SET PLANET GLOBALS - Displays a dialog box allowing the user to examine and set the global characteristics of the planet: the height and width of the planet, the firing speed of the guns, the bonus awarded for completion of the planet, whether the planet "wraps around" from left to right, and the strength and direction of the wind on the planet's surface. See "Planet Globals Dialog" below for more details.

 MAP PLANET - Displays the map of the planet that the player will see when scanning the planet during a game.

 NEXT PLANET - Saves the current planet to the disk if necessary, then moves up one in the galaxy file, to allow editing the next planet.

 PREVIOUS PLANET - Saves the current planet, then moves down one in

the galaxy file, to allow editing the previous planet.

GO TO PLANET # - Saves the current planet, prompts the user for the number of a planet, and moves to the planet with that number.

ADD PLANET - Adds a blank planet to the end of the galaxy and makes it the current planet.

REVERT PLANET - Throws away all changes to the current planet since it was last saved.

SAVE PLANET - Saves changes to the current planet on the disk.

OPTIONS

CORNER ROUNDING - When checked, the starting point of any new wall will be "rounded" to connect to a nearby, already-existing corner, if there is one within about 1/4 inch. If no close corner already exists, this option has no effect. Does not round endpoints of walls. Those you need to carefully connect yourself.

SHOW FIRING ANGLES - When checked, the firing ranges of all guns are shown on the screen. To adjust these angles, the gun must still be selected by clicking on it with the arrow pointer, however. Only the currently selected gun has adjustment handles for the firing ranges (little circles at the ends of the firing ranges).

SHOW WALL TYPES - When checked, small circular tags are attached to the center of each bouncing or phantom wall, with either a "B" or a "P" to show the type of wall. Normal walls have no tags.

SHOW 3D WALLS - When checked, the screen represents the 3D extent of the walls. When unselected, only the tops of the walls are shown. This option is useful for placing wall guns so that they look right on walls.

SAFE WALLS - When checked, sets a minimum length for all new walls created, to avoid misdrawn walls once playing the game. If unchecked, some short walls, especially those with sharp corner connections with other walls, might appear incorrectly in the game.

ROTATE RIGHT - Rotates the currently selected gun 22.5 degrees in the clockwise direction, moving the firing angles along with the gun. Only guns that hang on walls may be rotated, and they rotate around the center of their connection with the wall.

ROTATE LEFT - Just like rotate right, but goes 22.5 degrees counterclockwise.

SET ATTRACTION - Lets the user set the attractive or repulsive strength of a generator. This can also be done by double-clicking on the generator.

2. Planet Globals Dialog

Wind Direction and Magnitude - Clicking in this box sets the direction and strength of the "wind" on the planet, in other words, the constant force that is applied to the ship anywhere on that planet. The box contains an arrow pointing in the direction of this force, and the length of the arrow shows the magnitude or strength of the force. To set the wind, just click in the wind box,

and the arrow will point from the center to the spot clicked. If no arrow is visible, then the force is non-existent (this can be achieved by clicking exactly on the cross in the center of the box). Most planets will have rather short arrows in the wind box, but the large box is supplied for specialty planets.

World Wrap - When this box is checked, the planet is a wrap-around planet; in other words, flying off the left side of the planet brings the player onto the right side and vice versa. The planet is like a cylinder, with edges at top and bottom but not on the sides. When this box is unchecked, the planet is flat, with left and right sides.

Planet Height - The height of the planet in screen pixels. Must be at least 400 and less than 4000. Cannot be reduced to the point that current objects on the planet will be outside the planet boundaries. It's usually best to underestimate the size of the planet you are planning, then expand if needed.

Planet Width - Width of the planet in screen pixels. Must be at least 600 and less than 4000, and must be an even number. Like Height, cannot be reduced to place objects outside bounds of planet.

Gun Firing Rate - From 0 to 100, the firing rate for the guns on this planet. At 0 the guns do not fire, at 100 they fire at top speed. Most firing rates will be around 6 for beginning planets, 12 for medium difficulty planets, and over 18 for high firing rates (obviously, a high firing rate can make an otherwise easy planet very difficult, or a difficult planet championship level). Firing rates over 40 or so are rarely seen, since the firing is almost insane at that level. The guns on the planet speed up as they are destroyed, so that the last guns on a planet always fire much faster than the first ones.

Planet Bonus - The starting value for the planet bonus. This number can be anything from 0 to 30,000. The actual bonus awarded for the planet counts down until the player clears the planet, effectively rewarding faster conquest. Thus the bonus must be tuned to the planet, and even a large bonus on a difficult or slow planet might end up ticking down to nothing by the time a reasonable player can finish.

3. Tool Palette

The tool palette is on the left of the planet editor window. On it are (top to bottom) 4 types of tools, two kinds of objects, and 3 wall types. The effects of each tool and box are described below.

Tools

ARROW TOOL - The arrow tool can be used for manipulating an object (fuel and guns) by clicking on one, then either dragging it to a new location with the mouse, or changing some attribute of a selected gun. A selected fuel cell looks like a full fuel cell in the game; all unselected fuel cells look empty in the editor. The selected wall gun is blackened in and has firing angles and firing handles (small circles at the ends of firing angles) showing on it; unselected guns do not have handles, and only have firing angles if "Show Firing Angles" is checked. The selected wall gun can be rotated using the "Rotate Left" and "Rotate Right" menu commands, or its firing angles adjusted

by clicking in and dragging its firing handles. A gun only fires within its firing angles; extra stress can be placed on one area by having the two firing angles overlap so as to cover a certain range twice, and the gun will fire more often in that area.

There is no way to select multiple objects, and there is no way to duplicate objects. To create new objects, drag them out of the object boxes (described below). To remove objects, use the eraser tool.

ERASER TOOL - The eraser tool is used to remove walls, craters, and objects from the planet. To remove an object, simply click on it with the eraser selected. The mac will beep if the eraser is clicked in open space. If the button is held down, the eraser will erase multiple objects it is waved over. Any tool can be temporarily changed to the eraser by holding down the option key; when option is released, it will return to what it was. This is very helpful when making planets.

CRATER TOOL - The crater tool is used to place craters around on the planet's surface. Craters appear underneath ground guns when they are shot, but placed craters are good for atmosphere and keeping the user aware of speed and position in large areas that have nothing else in them; they have absolutely no effect on the play of the game. A total of 25 craters can be pre-placed on any one planet; If 25 are already placed, trying to place a crater will result in an error message to that effect. Craters can be erased by the eraser.

SHIP TOOL - Used to set the starting position of the ship. Click anywhere on the planet, and the ship will then start there.

Objects

FUEL OBJECT - A fuel cell can be created by clicking on the fuel cell in this box and dragging it onto the screen. Clicking in this box automatically changes the current tool to the arrow, since it is used in manipulating objects, and the new fuel cell is selected. Only 14 fuel cells are allowed on one planet; trying to place a 15th results in an error message.

GUN OBJECT - A new gun can be created by clicking on the gun in this box and dragging it onto the screen. This also changes the current tool to the pointer, and the newly created gun is selected, so it can immediately be rotated into position, have its firing angles set, etc. Only 24 guns are allowed on one planet; trying to place a 25th results in an error message.

The arrow buttons below the gun are used to cycle through the different kinds of guns. There are currently two kinds of guns that connect to walls, two kinds that sit on the ground, and one kind of generator, for a total of five. The second type of wall gun looks and acts differently at different orientations, and these other types can be gotten by placing a type 2 gun, then rotating the gun to the correct position.

The generator is just a ground gun that does not shoot, and attracts or repels the ship. Double clicking on a generator brings up a dialog that allows the user to set the strength of the generator's attraction or repulsion, which can have a strength from 0 to 100.

Wall Types

Clicking in any of these three boxes changes the mouse pointer to a

crosshair for placing walls. Walls can then be created on the planet by clicking at the starting point and dragging to the endpoint for the wall, then releasing the mouse. The walls can only be at certain orientations. If the endpoint of the wall is dragged off the window, the window will scroll in that direction to allow walls longer than the editing window. Only the top of the wall shows while dragging the endpoint, but once the mouse is released the screen is redrawn to show the correct view of the wall. This process is modified by "Corner Rounding" and "Safe Walls" in the options menu. Only 124 walls are allowed on one planet; trying to place a 125th results in an error message.

A wall with no tag is a normal wall, which stops bullets and destroys the ship on contact. A wall with a "B" tag is a bouncing wall, which bounces both the ship and all bullets off of it. A wall with a "P" tag is a phantom wall, which does not affect the play of the game (everything goes through it) but exists only to confuse the player.

4. Features

The planet editor allows the creation of ugly, possibly game-crashing planets. This was necessary because coding the restrictions would have been either too tough or too restrictive for some planet designs. As a result, there are some "features" one has to watch out for.

World Boundary
On planets that wrap-around, one will find a very important dotted vertical line that represents the right (and left) edge of the planet. The horizontal scroll bar will scroll in a circle and allow the edge to come into view. This line is to be avoided LIKE THE CRUNGE. Why, you ask? Because the laws of physics act strangely in this no-man's zone. However, it is a necessary evil to allow the users the power of designing wrap-around planets. Below is a list of the known problems (most of them unfixable) that occur near the boundary:

WALLS - Walls cannot extend over the world boundary. If the user starts a wall on one side of the line and drags to the other side, the wall will not drag across, but instead go around the planet the other way. This is useful at times. In addition, the ship does not always bounce correctly off of walls at the world boundary.

OBJECTS - Guns placed overlapping the world boundary often won't be destroyed when shot, since they only really exist on one side. Likewise, fuel cells close to the edge are sometimes not picked up by a ship shielding over them. Guns, fuel, and craters will all disappear suddenly and unnaturally when the world boundary goes off the edge of the screen.

When all is taken into account, the best way to deal with the world boundary is to keep as far away from it as possible. When a wall must cross it, arrange to have a horizontal wall meet it from the left, and a horizontal wall leave it on the right at the same point.

1-dot Walls
Often planet-designers will start to make a wall, decide not to, and just

leave the tiny piece there on the planet. This is fine in the editor, but due to the corners that must be cut to get drawing speed, it breaks some assumptions in the game. Such walls will look like large white blotches when playing the planet. In addition, this sometimes happens on other corners designed with short walls at sharp angles. Even the authors don't know how this works, so the best strategy is: design the planet, play it, and revise anything that doesn't look right by erasing and redoing it.

The Demo Planet
Don't mess with it. Change the slightest thing and the demo will run incorrectly. Another demo planet cannot be designed.

5. Comments,

... beer, daughters, curses, and especially bug reports can be sent to:

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