Ports Of Call – POCSim 3d II

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Installation

Prerequisites:

1. Windows XP
2. Direct X 9.0c
3. Fast Graphic Card (recommended NVIDIA GeForce 6800, GeForce 7800) with 256 MB Texture memory or ATI X600 or faster wih also 256 MB.
4. CPU >2GHz (Intel), >2800+ (AMD)
5. CPU memory 512 MB
6. Sound card using Direct X 9 drivers.

Installation is done using the file

**install_std_POCSim3dII.EXE**

After installation an icon is placed on the desktop and also a file menu to start the program. When starting the Administrator panel is activated (and uses the ini file to set the values), It can be left either by clicking with the mouse (where the panel keeps its windowed size) or by pressing the NEXT Button on the Game pad device, where it changes its size to full screen and disables mouse controls in the main game (uses it for camera position).

When starting from within pocxxl, the full screen mode is automatically selected and the game starts with the user screen !
You need to start POCSim3DII at least once for pocxxl to recognize the installation path of POCSim3DII.

Attention please also install a joystick and the indeo video codec, otherwise you will have problems in the full screen modus due to the message boxes.

Administrator Settings:

This screen is used to prepare the game and configurate specific game situations.
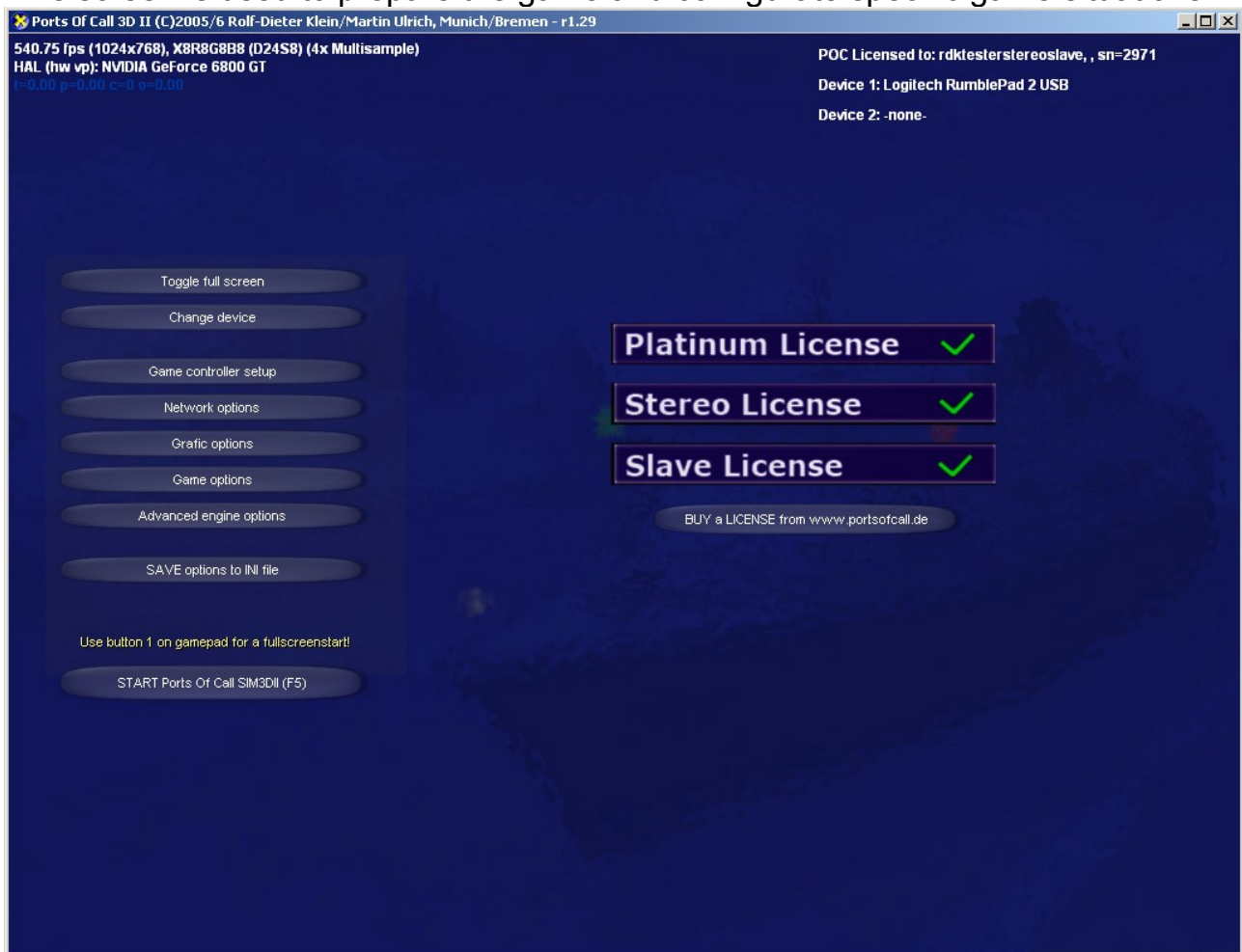
Also the different installed licenses are displayed. If you start it without a license you get an info displayed at this screen. Also the optional „Stereo License" and „Slave License" might not be enabled if you don't have the additional licenses.
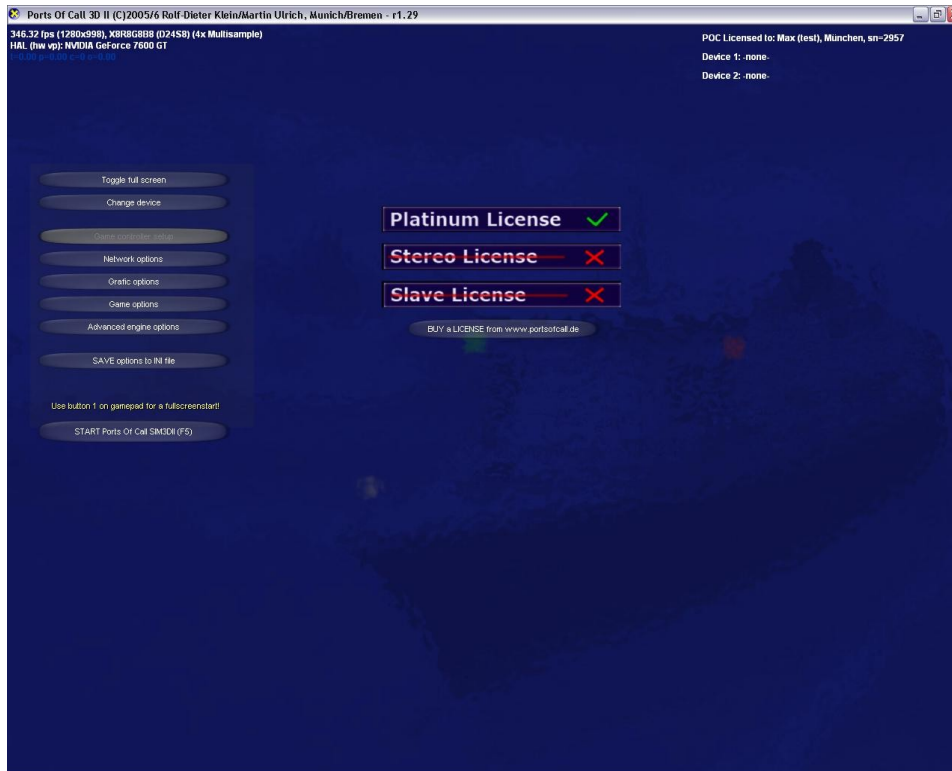
You can start the game directly with the last button or pressing F5,
when you have a game pad then use the Key 1 to start (which also toggles
automatically to full screen.

1. Toggle full screen – this toggles the screen to full screen, or back to the
   windowed modus. Full screen uses the current screen resolution.
2. Change device. This is for experts only, you can change the device
   parameters for performance. For example switchg of the antialiasing on slow
   devices or such with less memory.
3. Change controller setup – if you have game pad or such device, this button is
   enabled. Then you can change the assignment. Up to two controllers are
   supported.
4. Network options – for playing with multiple users
5. Graphic options – for optimizing the display by disabling certain effects which
   are time consuming – also show the STEREO option settings
6. Game options – This influences the game play, you can also disable
   instruments and set the time of day or particle options for rain and snow.
7. Advanced engine options – also for experts, you can change the simulation
   parameters as inertia but also change some input behavior and enable the
   autostart option or selection options
8. Save to ini file saves those settings to a file, which reloads on the next start of
   the program.
9. Start Ports Of Call SIM3DII (F5) finally starts the normal user interface for the
   game (as done by pocxxl automatically)

Menus:

On top info about the adapter is displayed (only if the „show fps + admin sliders" is checked) The current frame rate and the t=xxx for the depth of the submarine. This display can also be hidden by pressing the **X-key.**

Start Ports Of Call 3D (F5)
MAIN START of the Game, the user screen appears. Pressing F5 or the NEXT Key on the game pad also starts the game loop. When using the NEXT on the game pad (or controller), then the screen changes to full screen and also disables any admin display if still on. This allows a mouseless start of the game for SLAVE PCs.

Change device

Changes device parameters, for example the 4x Multisample to none (if trying the program on older graphic cards). Usually should not be changed and is also not saved in the INI-file.
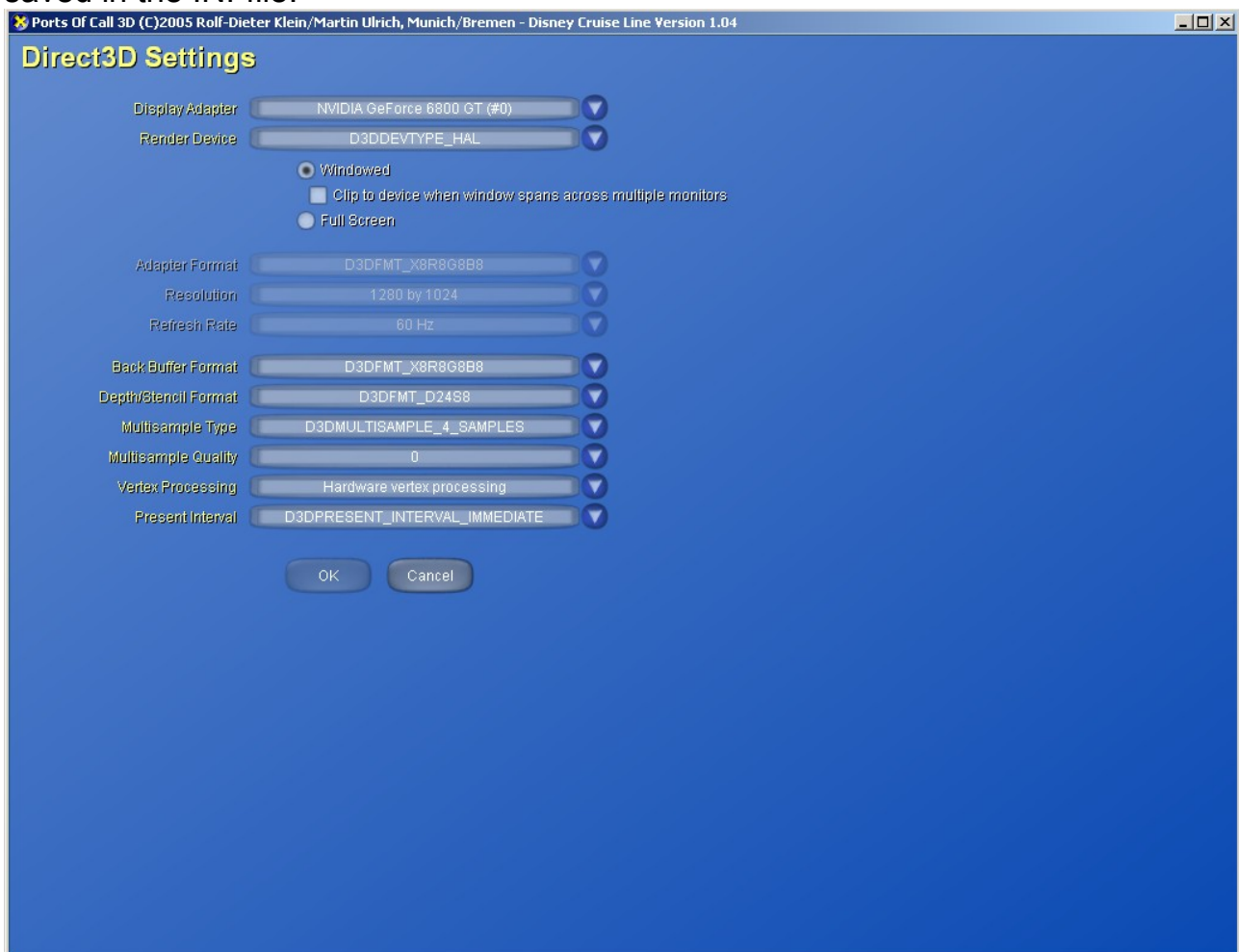
Network options

Used for multi user and for multiple slave PCs. Attention you need one license for each additional user and you need a special SLAVE license for additional SLAVE PCs (they can be used to have extra large displays of instruments or other views at the same time as in the main PC.
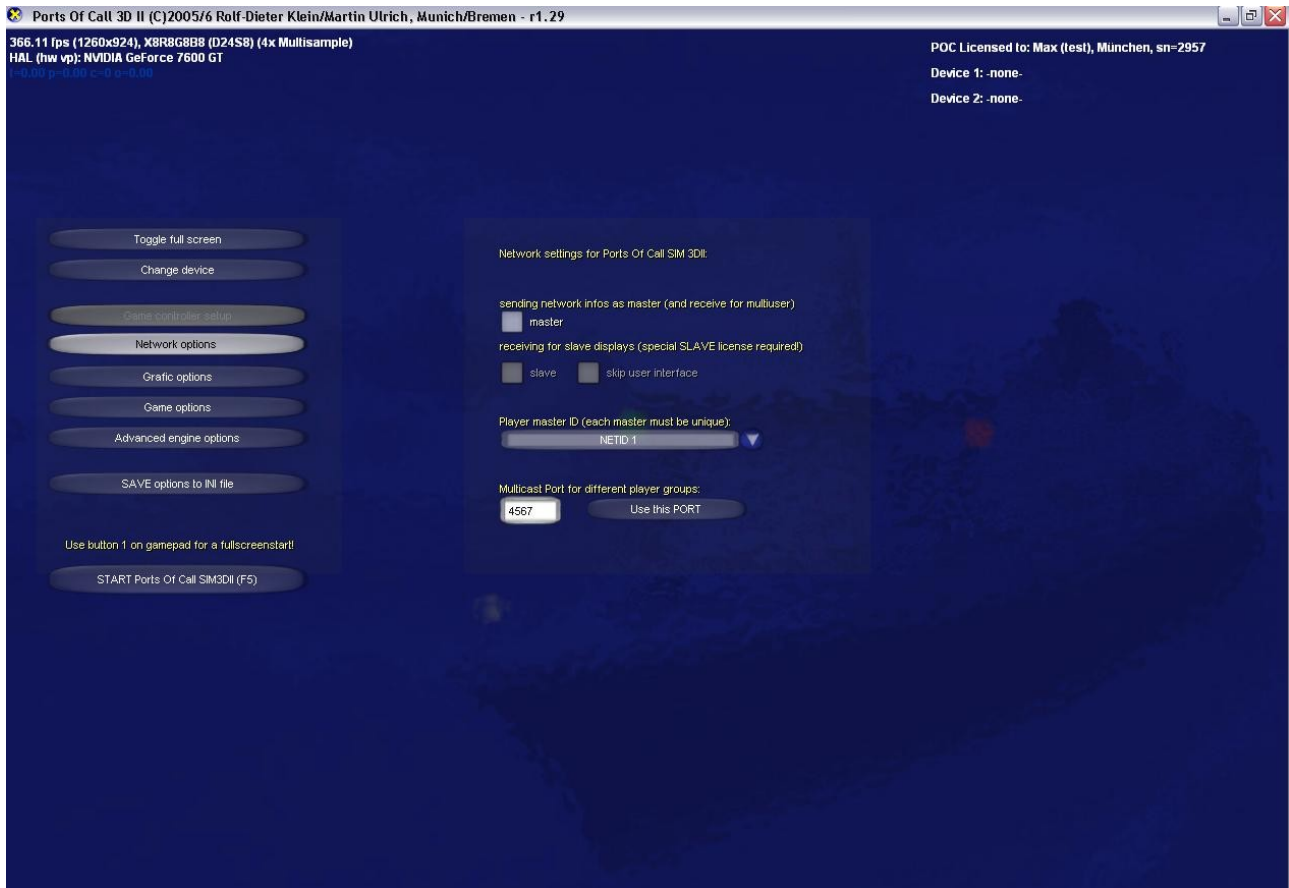
Network settings for Ports Of Call SIM3DII:

a) master
if checked the PC works as master and sends it ship position via broadcast to other stations. Multiple masters are possible, but each master must have its own netid (1..4) and his own **LICENSE** !. This represents the users for a multiuser game. If more PCs are on the same network different groups can be formed by assigning a different Multicast Port (see description). The other masters are shown (ships) if the same scene is selected for them.

b) slave
By checking you can add a SLAVE PC. Its only used for additional displays and follows the main PC (master). Only master or slave should be checked at the same time. You need an EXTRA SLAVE LICENSE for this button to be enabled. (please contact us at poc@rdklein.de).

c) skip use

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On slave PCs this skips the user interface screens, so only the main scene is display while selecting user options (as harbours, ships etc.)

d) Player Group:
Selectable: NETID1, NETID2, NETID3 and NETID4
this allows a maximum of 4 players being in one game at the same time (being master). We can add more in the future, but as each palyers needs a little bit CPU time (for the ship display) and also starting places for the ships we currently have restricted the number of players.

Attention if more than one master used the same NETID (and same Multicast Port) the game is not working and an error message displayed. So carefully check this assignment.

e) Multicast Port for player group.
This allows using a different multicast port for the network packages. This allows multiple groups in one physical network. Use Ports above 4000.
Currently we use the fixed multicast IP address: 234.5.6.7 build into the program.
Attention, you should you the same network speed through the whole network (e.g. on the PCs used). Also slower PCs might skip frames or even freece if overloaded.

f) Use the PORT
Pressing the button changes the port address to the multicast port given in the editable window. This is also done if saved in an ini-file during startup.

Graphic options

This affects the graphic display quality but also the speed. In addtion also the STEREO options are here. For the Stereo options you need a special STEREO LICENSE (please contact us at poc@rdklein.de).
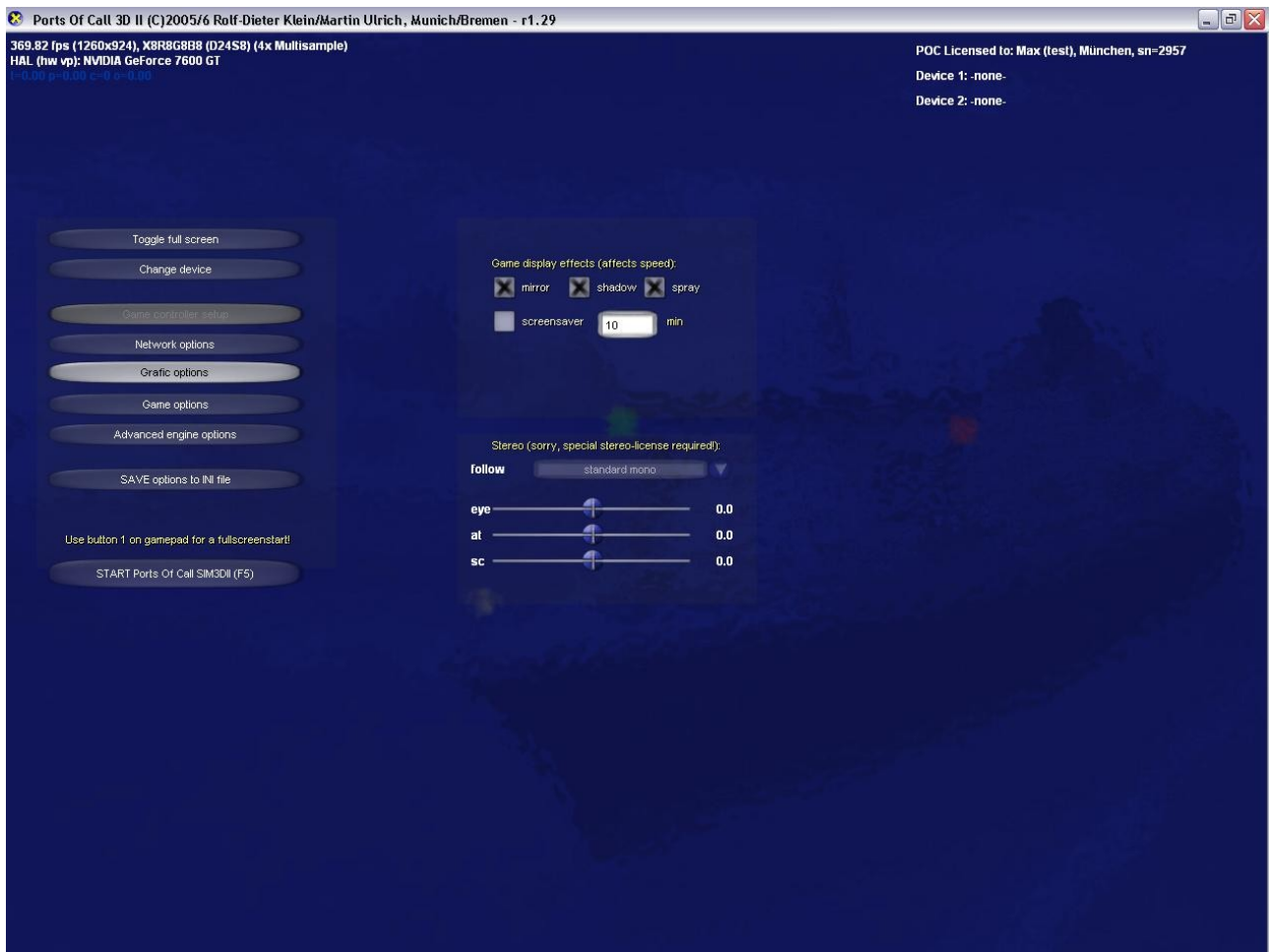
a) mirror, when checked the objects and ships mirror in the water. Do uncheck only if the framerate is too low.

b) shadow. Shadow effects used for ships on the water, also uncheck only if the framerate is too low.

c) spray effects when the own ship is on speed. Also uncheck only if the framerate is a problem.

Stereo Options:

The stereo options allow to change the parameters for each eye to by changed and also different modes. As each camera has it own setting the first iotem shows which camera is currently active. Also all user interfaces haver their own settings. You can Display the stereo menu on other SCREENS by pressing the Z-Key, then its

possible to adjust the stereo displays individual. The setting is saved together with the ini file.

We support different kind of stereo effects.

1. standard mono – of course the default no stereo display
2. stereo left – the PC displays the left eye only (for SLAVE Systems)
3. stereo right – the PC displays the right eye only
4. stereo side by side – the two images side by side (useful for dual monitors)
5. stereo rotated – for a special mirror display (some restrictions apply)
6. stereo red/cyan – for red / cyan glasses
7. stereo interleave even – the image is intereleaved for some projections
8. stereo interleave odd – the reverse case

Be careful when using a stereo mode for longer time as this might cause health problems, especially when using red/cyan glasses.

The three slides compose the stereo image, the eye shifts the eyes apart (parallel), the at rotates the images around the current camera at vector (sometime helpful for a nice stereo effect) and the sc shifts the screen, so you can adjust the backplane distance, and determine the scene before, middle or behind the screen (projection plane)

Example for red cyan.

If you have glasses, you can take a look into this image already.
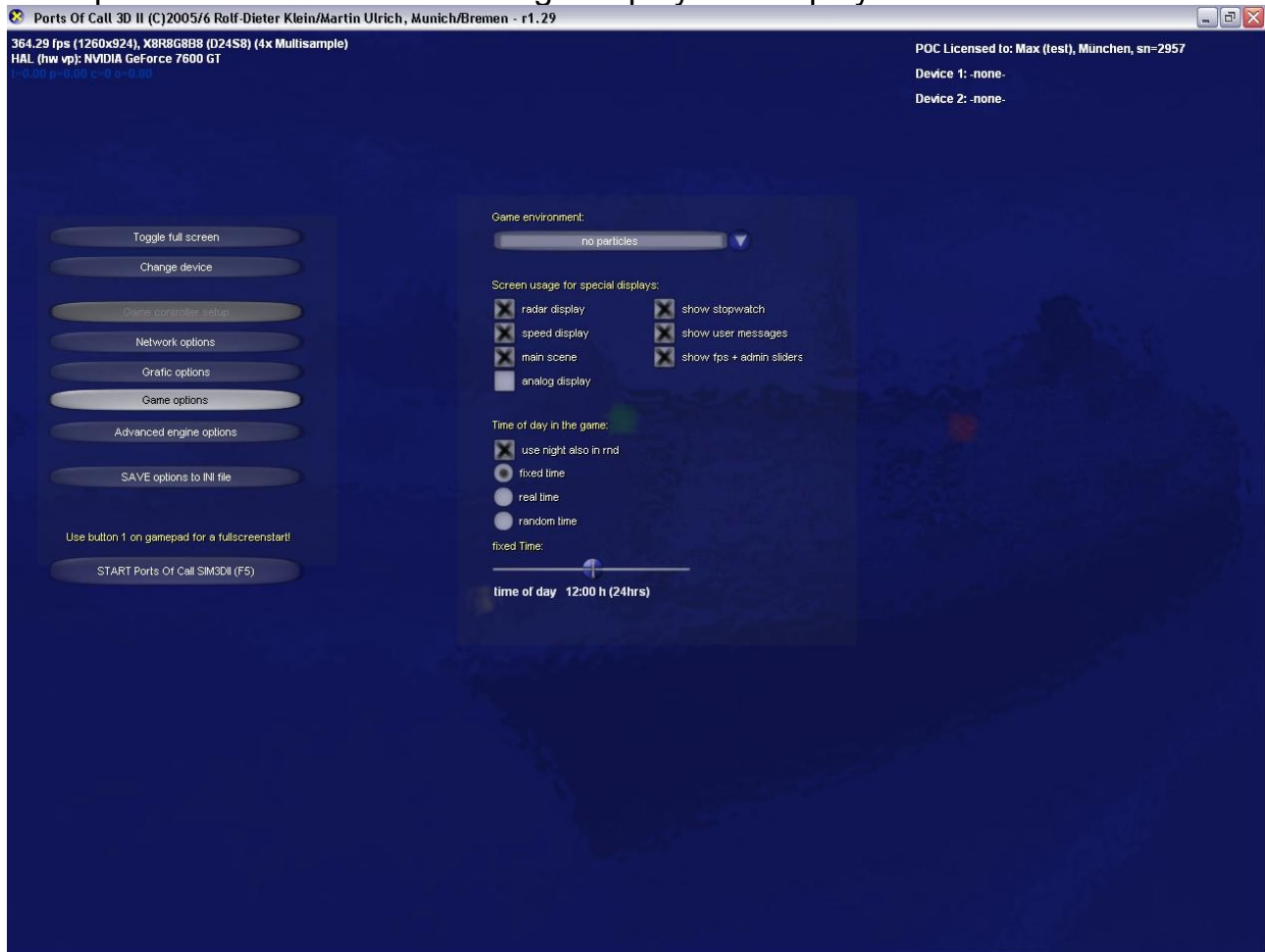Example for the interleave screen:

And the side by side display. This makes sense for stereo projection screens, use a combined (horizontal surface) in the display surface setting so its one direct X surface (separate surfaces wont work) for both monitors.

Game options

The options have influence on the game play and display:

particle settings:
there are three options.
a) no particles
b) rain
c) snow
„no particles" means that no rain and now snow occurs. Currently these events are only enabled if the option is selected and not done by random. All scenes have snow or rain in the case an option is activated. Later we will have some random factor also.

4. Screen Usage for special displays
This allows the individual configuration of a mainscreen display. Mainly used for SLAVEs, or if framerate problems exist.

a) radar display
The radar is displayed in the main screen, either on the left side if „main scene" is selected, or on the left part larger is „speed display" is selected" or full screen if its the only option checked.

b) speed display
Same as radar but for the speed display, which mainly displays on the right side of the screen.

c) main screen
The ship scene is displayed together with the other options.

d) analog display
Additional instruments as wind direction, rotation speed and depth for example (depends on the ships also)

e) show stopwatch
the up counting stopwatch is displayed on the bottom of the screen together with the level information (like cadet...). The Stopwatch starts counting when the scene starts and stops when reaching the destination (either the berth or sea destination for departure). Its used for the user message. Each User has its own stopwatch (eg userid), so when starting a race, the time from the visible screen to reaching the goal is important, while other users can also do a retry and get a new count.

f) show user messages
Messages like „crash" oder „destination reached" which are usually displayed on top of the screen are enabled with this check box. When disabled they are not shown (usually for slave displayes), but a reaction can be necessary like pressing the NEXT button (via game pad or controller).

g) show fps + admin sliders
For normal game operation this should be off. It displays sliders for mouse operation in the main screen of the game and fps infos. It can be toggled also by pressing the **X-Key** during the game. When starting the game with the NEXT Button on the game pad (or controller) then the default is set to off during the game.

Time of Day for game:

a) use night also in rnd
this means when choosing random time also night time is possible for the scenes, this happens only with a chance of about 1:10.

b) use fixed
with this option a fixed time is used for the game (to build special night stations for example), Its using the time of the slider below (between 0:00h and 24:00h) with noon as default (middle position).
All slaves and all masters with netid > 1 also are in sync!

c) real time.
This option uses the current time of day of the computer clock. In this setting the night occurs at 6pm (18:00) and it durate till 6am. All slaves and all masters with netid > 1 also are in sync!

d) random time
A random time of day is chosen each time a new game is started. All slaves and all masters with netid > 1 also are in sync!

Advanced game options

Inertia settings:
The defaults can be changed for the intertia of ships. This is used as multiplier. we recommend to keep the values at the default positions (0.45, 1.0 and 1.54 for expert)
The Master modus cannot be changed as it uses special settings.

autozero speed controller
if set the position of the joystick determines the position of the speed controls, if unchecked a relative modus is activated, eg. to give speed, just press shortly the joystick, the speed will stay there until a negative position is given.

autozero rudder controller
if set the position of the joystick determines the position of the rudder controls, if unchecked a relative modus is activated.

mouse/trackball cam control
Use mouse or trackball for the camera controls. Default is checked.

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For fixed views(mainly slave systems) uncheck this box.

Mouse dx swap
this swaps the direction of the x-axis controlled by the mouse used for the camera.
Especially useful for use together with trackballs (e.g. slave displays).

Mouse dy swap
this swaps the direction of the y-axis controlled by the mouse used for the camera.
Especially useful for use together with trackballs.

horn/zoom middle mousekey
The middle mouse key either controls the horn or the autozoom. Here you can
change the function. The game pad still has a fixed setting for both.

There are startup options also specially used for SLAVE displays (only with our
SLAVE license), also for commercial usage, but an extra license is necessary for all
public access areas using the simulator please contact poc@rdklein.de

Autostart UI
directly starts into the user interface (you can still go back to the admin menue using
the M-key.
The next field „ALLOW ship selection" can skip the user interface for ship selection
and use a fixed ship instead, if an other entry is selected.
The „ALLOW scene selection" does the same thing but for the scene slection user
interface.
Also the camera can be fixed, and defaulted, here the default is „follow cam" any
other camera can be used, which also makes sense for SLAVE displays with a fixed
task.

Keyboard mapping
During the game some keyboard commands are available.

key   function

M   Start the admin menu without asking
N   Start a new Game without asking
X   flip the admin display of sliders and fps rate.
Z   slip the stereo display for setting of the eyes etc.

Pageup, Pagedown   can be used to set time
                    of day during the game – the master with id1 determines the time.

ESC   Exit the game, return to windows.
ATL-F4   Exit the game, return to windows.

ENTER   to press the next button (controller key 1)
<--   Backspace to press the PREV button (controller key 2)
TAB   Use the next option (controller button 2)
SHIFT+TAB   Use the previous option (controller button 3)

-- Controller   keys starting with version 1.12
The keys are active if no controller is mapped to the same function:

UP   increments the speed
DOWN   decrements the speeds
<--   rudder left
-->   rudder right
CTRL + <-- bow thruster left
CTRL + --> bow thruster right
SHIFT + <-- stern thruster left
SHIFT + --> stern thruster right
CTRL+SHIFT   then use both at the same time !

END   Speed to zero
POS/HOME   Rudder to zero
CTRL+POS   Bow to zero
SHIFT+POS   Stern to zero

NUMPAD
+(NUMPAD)   Zoom in radar
-(NUMPAD)   Zoom out radar

7   left nock view
8   view ahead
9   right nock view
5   inner bridge view
1, 3   back view

2   view from back to the ship

0   berth camera (or dest camera)

Mouse mapping:

if in the main screen and no admin sliders are visible, then the x,y – axis of the mouse/trackball are used to move the viewpoint of the camera, and the right button is used to switch between cameras.
If in slave modus and the radar is visible but no scene, then the y-axis of the mouse/trackball controls the zoom of the radar screen, otherwise the zoom is done automatically when approaching a goal.

game pad / Controller mapping

It depends on which device is detected how the mapping is done.

1. game pad devices
They have two joystick defined, and buttons and a pad.

The left joystick is used for rudder and speed control.
Left right is the rudder and up down the speed.
The right joystick is used for the side rudders, Diagonal moves result in a parallel movement (for ships supporting both rudders, the Ecranoplan for example only has one).

Button 1 is mapped to the NEXT or ENTER function in der user menus
Button 2 is mapped to the PREV function, or requesting a NEW game in the main screen (to be answered with NEXT else it will be ignored)
Button 3 is up for the user menu selections and switches to the next camera (if allowed by the admin) in the main screen.
Button 4 is down for the user menu selections and switches to the next camera (if allowed by the admin) in the main screen.

Attention:
Gamepads have different assignments. The buttons 1,2,3 and 4 can have a different order on other manufactures !

Technical mapping:
iY to speed, iX to the rudder,
If a iZ is available then this is use for side rudder 1 else if the slider count is larger than 1 then slider 0 s used instead.
if a rZ is available its used for the side rudder 2
This also works for standard joysticks with some restrictions in comfort.

You can reassign the mapping of this screen,
Use the save button to save the new setting, up to two controllers can be
used at the same time.
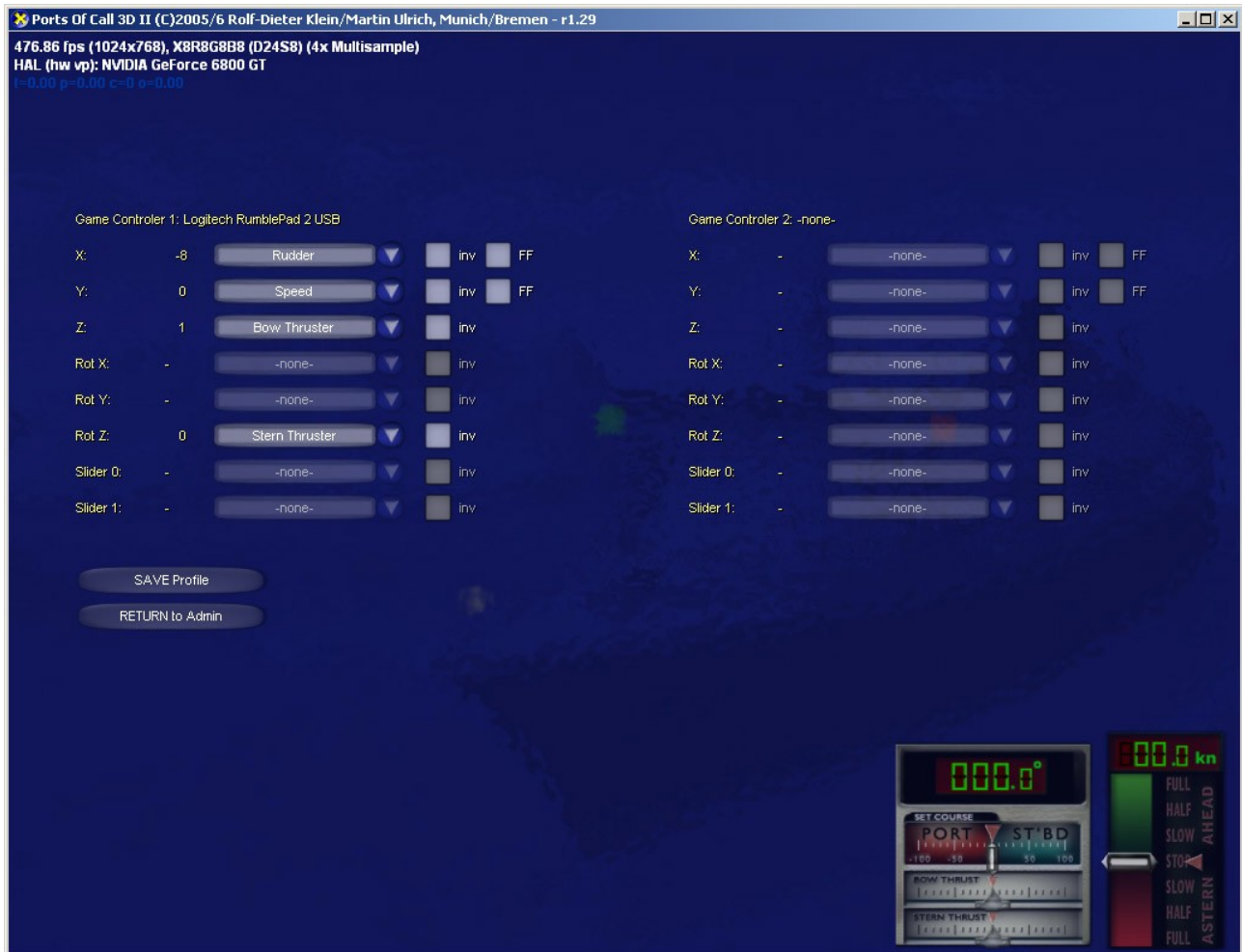
As feedback the speed indicators are visible, so you can check the settings
(except for radar). If a function is set to non, you can control it either via slider
(X modus) or using the keyboard shortcuts.

HERE some infos on the skill level select:

4 different levels are available.

Beginner::
berth area   +30%
severe collision speed: 5 kn
touchpercent   0.4% // added to damage
crashpercent   18% // added to damage for 22kn
to reach destination at berth rotation of the ship must be zero, also sidewards speed
also the current rotation of the ship propeller.

Advanced
berth area   +15%
severe collision speed: 2 kn
touchpercent   1.0% // added to damage
crashpercent   40% // added to damage for 22kn
to reach destination at berth rotation of the ship must be zero, also sidewards speed
also the current rotation of the ship propeller + the real speed of the ship.

Expert
berth area   +0%
severe collision speed: 1 kn
touchpercent   2.0% // added to damage
crashpercent   60% // added to damage for 22kn
to reach destination at berth rotation of the ship must be zero, also sidewards speed
also the current rotation of the ship propeller + the real speed of the ship.

Master:
berth area   +0%
severe collision speed: 1 kn
touchpercent   5.0% // added to damage
crashpercent   90% // added to damage for 22kn
to reach destination at berth rotation of the ship must be zero, also sidewards speed
also the current rotation of the ship propeller + the real speed of the ship.

A damage of 100% is displayed as 20 days in dock, this also results in a new game
cycle.

Ship selection:

Different ships are available for the game, They have different max speeds and different size and weight (inertia).

The submarine automatically dives when the speed is more than 11kn in forward direction. You can dive through other ships but carefule take some distance.

The Ecranoplan is a surface effect vessel (build also in reality) floating above the water surface much like a hovercraft. Therefore it can reach higher speeds. Our Ecranoplan reaches a maximum of 280 kn, and it starts floating at 43kn.

The hovercraft has special controls, The controls for bow and stern thrusters now control the turn of th main propellers. Just try it in the training harbour.

Scene selection:

Different scenes are possible in the game:
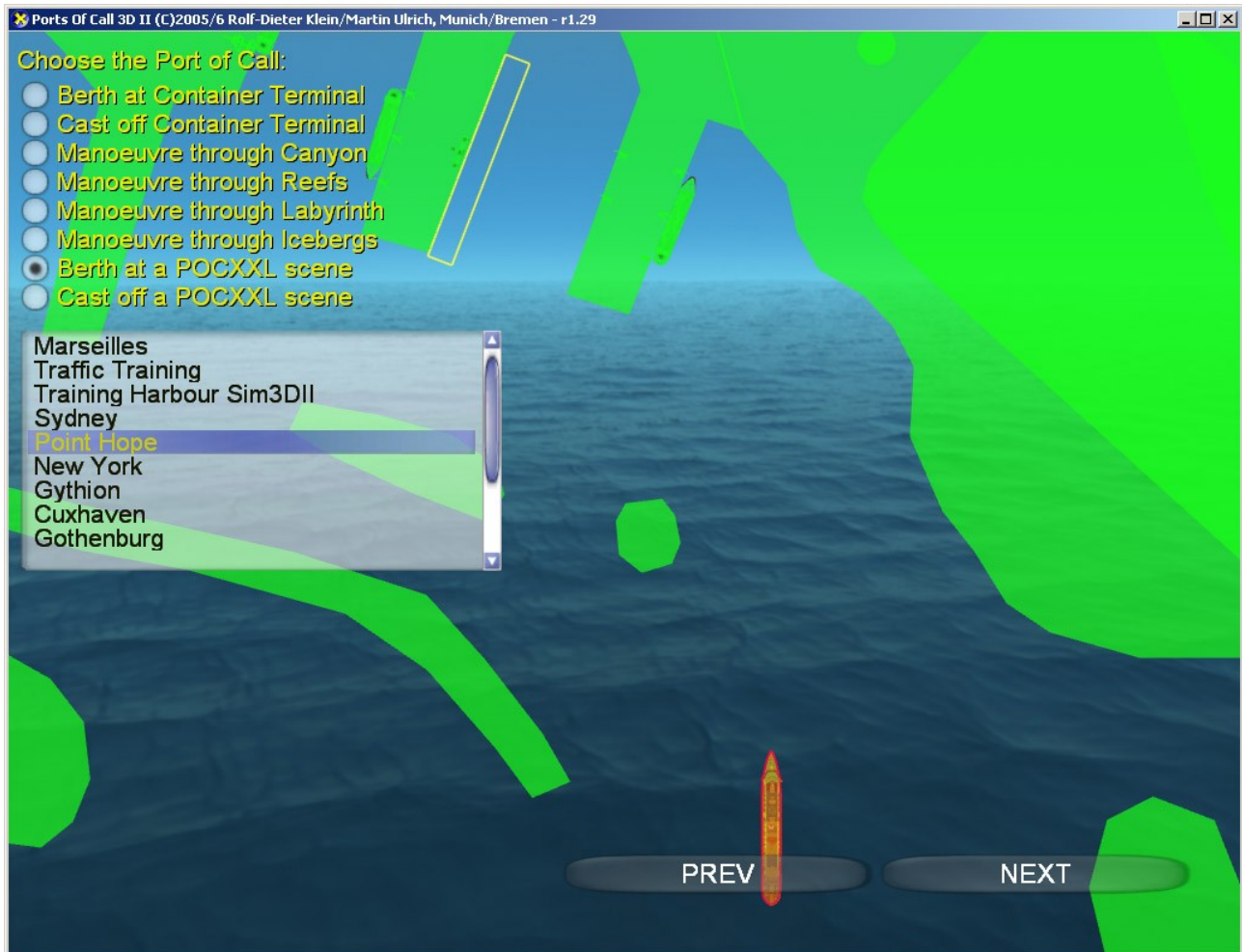
The Container terminal is specially for the container ship and easy for training. It has three berths, one for the container ship and one for the Ecranoplan and one for the liner and submarine, also 4 sea start points.

The Canyon is a scene best used for racings with multiple users, or for getting into a high score. So it has four start and a destination point which must be traversed . Look for the Elephants ! - There are Elephants in the scene, though they look small, the ship are large instead !

Reefs can happen in the real shipping world also, this scene is best for racing, but this time also the best way through the reefs must be searched, its easy to get lost in this scene – same max 4 users with 4 starts and one destination goal.

The labyrinth requires careful navigation and a good plan to reach the destination. Multiple solutions are possible, but not all are the same length. So playing in a multi player race requires watching for each other and a good strategy.

The Ice Scene is challenging in the multiuser modus, try to reach the destination, there are two possible ways.

The harbours in the POCXXL scene are automatically selected when starting from pocxxl and are dynamic, that is the loaded packages will be displayed in the list box.

To use POCSIM3DII within POCXXL you need to set the option POCSIM3DII in the option menu of POCXXL.

POCSIM3DII must have been started at least one time to set the admin panel. This setting is later used for the pocxxl when directly starting.

POCSIM3DII starts then with the beginner/expert selection menu and continues directly into the scene.

Finally the user screen is displayed: