

Single Player Review

S.C.S. - Dangerous Waters

by **Teddy Bär**

Aircraft Review by **Tom "WKLINK" Cofield**



Introduction

It has been a long time between drinks for connoisseurs of fine modern naval warfare. In fact, it has been over three years since Sub Command: Seawolf / Akula / 688(I) was released to rave reviews in late 2001. Since then WWII naval simulations have dominated.

Finally, the wait is over.

Who better to do a modern naval simulation than Sonalysts, a company founded by David Hinkle, a retired naval Commander with a long history of working with the US Navy in areas such as sonar, communications, weapons and training programs.

Sonalysts bring with them a reputation for high quality simulations with previous titles of 688(I), Fleet Command and Sub Command.

S.C.S. - Dangerous Waters offers players seven distinct platforms to control. For the U.S. there is the Oliver Hazard Perry (FFG-7) Class, MH-60R Multi-mission Helicopter, P3-C Orion, Seawolf (SSN 21) Class and the Los Angeles Improved (SSN 688(I)) Class. For the Russian's there is the Kilo SS & Kilo Improved SS Classes (also available for the Chinese) and the Akula 1 Improved SSN & Akula II SSN Classes.



With submarines, a frigate, a helicopter and an airplane Dangerous Waters could be considered four games in one.

Installation and Setup

Unpacking my Deluxe copy of S.C.S - Dangerous Waters I find 2 CDs, a 16 page installation and troubleshooting guide, and the 570 page spiral bound game manual.

Yes, Battlefront is a publisher that believes in the good old-fashioned manual, not a 50+ page leaflet that comes with most of today's games. Some of our readers will be too young to remember a time when a manual of several hundred pages was just the way it was. The quality ring bound manual includes everything that you will need to know to control all the playable platforms.

For those purchasing the Regular version, you will find the same 570 pages of content in the PDF user manual.

The install process is very straightforward taking less than 10 minutes. You have a choice of a full install at 945MB or a typical install at 490MB. Should you not have DirectX9C or Microsoft's Speech Engine 5.1 (or later) already installed you will be prompted to do so during the DW install.

At the end of the install you will be asked to choose an Initial Skill Level; Novice configures all Auto Crewmen to ON and enables quick weapon reload times; Advanced configures all Auto Crewmen to OFF and enables realistic weapon reload times.

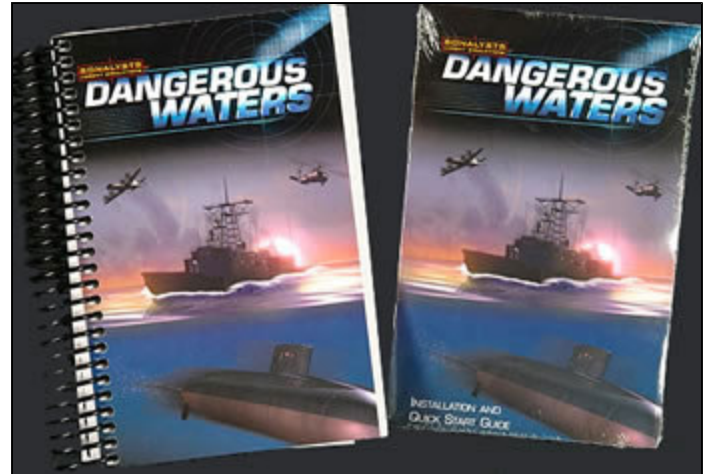
The first order of business before rushing into a mission without reading the manual is to configure the various game options. The options include Game (realism), 3D, Crew (for each platform), Sound, Controls and Multiplayer.

Should you decide during your initial missions that something is not to your liking it is simply a matter of accessing the 'options' while within a game and making the changes.

In the 3D options Sonalysts have included a preview window and a frame per second display enabling you too easily gauge the effect of your graphic choices and what impact it will have on the frame rate.

In the Controls, you are able to remap everything to a key of your choice. An excellent option that is often not available.

For reasons unknown to us mere mortals, the video tutorials and the Mission Editor manual are not installed. The video's — over an hours worth can be found on the second CD in the tutorials directory. The Mission Editor manual can be found on the first CD in the manuals directory.



Graphics

Sonalysts have done a good job of representing the various platforms. They have taken a minimal approach with the textures and shape (that is, they have kept the essence of each platform without the clutter that you see in the archive photo). Despite the minimal approach, the platforms present excellent in game.

The majority of platforms are well done. Some such as the British Type 42 DDG are a work of art, yet some platforms such as the Iranian Houdong WPTG has only a passing resemblance to the archive picture, it is not a wide spread occurrence. I did not personally find this an issue and in no way did this impact upon game play.



The shadow and reflection effects are beautiful to behold and had me going around in circles with the Oliver Hazard Perry ship for about five minutes going "oooh that is cool".

The wave action looks realistic and the water looks great, one of the best I have seen. Nevertheless, it still looks artificial. It always has a 'shine' even when at a sea state of 5 with a wind of 45 knots. To be fair I do not know anyone who has come close to truly representing the look of the ocean.



Nice touches that those of us with a submarine will rarely appreciate are the 3D clouds, the rain and the lightning during storms.

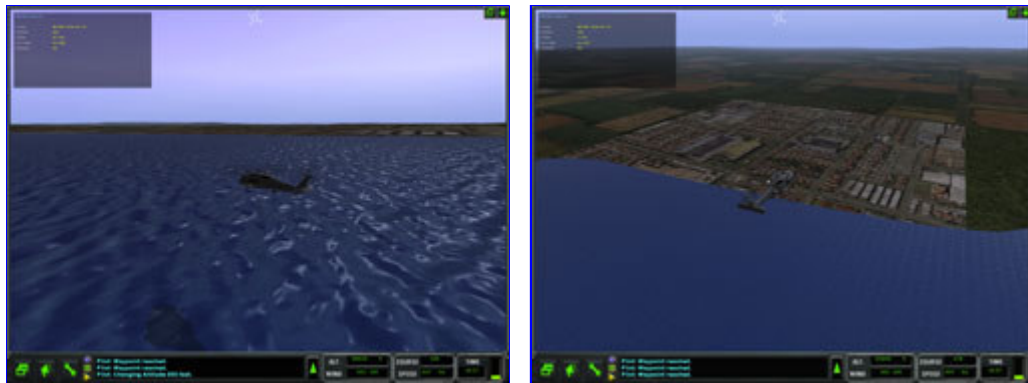
The land and the waters edge (the coast) are featureless and drab. An unattractive flat 2D dark green tile with the odd 'rock' or 'snow' tile thrown in is it. There are 3D trees, but they are so small and so far apart they blend into the green of the land mass. All land masses have a gentle slope from the waters edge.



Cities are a flat 2D image that requires the player to be sitting right upon the tile to be able to see it. Only from a great height can you see what the tile is supposed to be representing. It is easy to miss a 'city' when cruising right past it.

As you would have guessed, you will find no 3D cities or towns on the world map and there is little in the way of buildings that could be used to make anything even resembling a small town. As such, when the limited but great looking buildings or structures are used, they tend look very out of place.

The lack of anything resembling civilization coupled with the featureless coastline can detract from missions played near land, especially when they are based upon a known location. The mission 'Tokyo Harbour Cruise' would have been better titled 'Lunar Lake Cruise'.



For the amount of time a player will spend in and around coastal waters I am surprised by the lack of work done on this part of the game.

The various platform stations are well drawn with all the data and labels being easy to read. The stations themselves are laid out in a way that makes the use of each station a breeze. All platform stations, apart from those on the Oliver Hazard Perry are well lit. The stations on the Oliver Hazard Perry are 'rigged for red', it is a personal thing, but as a result I do not enjoy being in the Perry's stations.



Other platforms look great viewed from either the periscope or the bridge. They look as if they are actually sailing through and not 'on' the water.



Do not expect to see a hole in the side of a ship where your missile hit as damage displayed on ships is very minimally done and it is difficult to tell from a look through the periscope. There also is very little difference between ships with 20% damage to a ship with 75% damage.



Sound

Danger, expectation and inevitability best describes the mood that is set by the in game music. Sonalysts and Aberrant Sounds strived for a "military thriller" style sound and they succeeded. This is the best music in a game I have ever had the pleasure to hear.

The music has three distinct tempos:

Normal - The player is transiting somewhere, looking for someone, etc... threat level is low.

High - The player has detected incoming weapons or has launched some of his own... threat level is medium.

eHigh - Player has been hit and has taken damage.

The music is chosen at random from the available content of each directory.

As for adding to or replacing the existing music with music of your own, that is easy to do. All you need to do is convert your favorite music into 44 kHz PCM WAV files and drop them into the separate directories (as above) for the different "tension" levels.

The crews' voices are distinct, clear and concise. How authentic is each nation's accent? The Chinese sound like the Russians, and the Russians sound as if they do not come from Russia. My preference for voices from non-English speaking countries is that they be done in a neutral accent. Some will say that all the immersion would be lost and that it would then be impossible to play the Russians etc., I say, English speaking Russians on a Russian ship... I do not see what immersion there is to be lost. The American accent thankfully is faint.

The platform sounds are good and sound as you would expect. This type of simulation does not allow a lot of scope for creative sounds. The launching of the various weapons sounds good to a non-expert who has only seen the odd official naval video. However, the 50 caliber or a 76mm gun sounded a little off caliber.

USNI Reference

The USNI (U.S. Naval Institute) Reference is an invaluable tool and is the players Bible. The data contained within this reference helps in determining the threat posed by an enemy platform or what assistance a friendly platform may be, the speed of the platform when listening to the propeller, and to assist in a visual identification when you have not collected enough electronic data to identify the target.

In game, there are several ways to access the USNI Reference. The first method has two options — via the page down key or by using the Esc key then selecting the USNI Reference, the second method is by selecting a platform on the map then using the 'classify contact' menu, the third method is by selecting a platform on the map

then using the 'platform reference' menu.

Accessing the USNI Reference via the page down or Esc key gives you the same version as is available through the main menu option. This main version of the USNI Reference allows you to select a country that will then in turn display all the in game platforms for that country. Choosing a platform then takes you to the relevant data pages, which include a real world photo where available, and the in game model.

Accessing the USNI Reference through the 'classify contact' menu gives you a different version of the USNI reference. This handbook version has the platforms sorted by all or submarine, surface, helicopter and plane with the platforms listed alphabetically. As with the other version, all the technical data is shown and a photo if available. No in game image of the platform is shown. The player also can change the 'confidence' level and ID the platform as 'unknown' through to 'friendly' or 'hostile'.

Accessing the USNI Reference through the 'platform reference' menu, (Note: requires the platform to have been identified), takes you to that platform's main page within the main version of the USNI Reference.

A nice touch would have been to have a unique naval reference for both Russia and China.



Main Menu

When you first start Dangerous Waters you are greeted by an exciting movie showing the four playable platforms that really sets the mood before being taken to the main menu. The main menu allows access to the Missions, Campaign, Multiplayer, Quick Missions, Mission Editor, Players Log, Options and the USNI Reference.



Missions: The single player missions and your saved missions are available through here. Dangerous Waters ships with 25 missions.

Campaign: You have the choice to participate in the Russian Rebellion campaign from multiple perspectives. You can control forces from the U.S., the Russian Loyalists, the Russian Rebels or the Chinese, depending on the mission tasking and objectives.

Multiplayer: Up to thirty players can go head to head via Internet or a local network connection. You can create alliances and play against other alliances or the A.I. Multi-Station mode permits you and other players to man stations within the same platform and play as a team.

Quick Mission: The Quick Mission provides you the opportunity to create a dynamic mission based on a few basic parameters that you select. Select any controllable platform to command in the mission, a basic mission type, a level of difficulty and general world location and quickly create a dynamic mission. The type of mission depends on the platform you have chosen to command.

Mission Editor: The Mission Editor is a powerful tool for creating and editing missions. This is the same tool used by the developers to create all missions in S.C.S. Dangerous Waters.

Players Log: Dangerous Waters maintains a log for all player names you create. The log allows you to access the debrief report of missions attempted by the player name currently selected.

Options: All the game, difficulty and graphic options.

USNI Reference: Has all the technical data including archive picture and the in-game 3D model for each platform. The in-game USNI Reference browser data is from the U.S. Naval Institute (USNI).

Game Play

All missions start at the 2D Navigation station (F5), which is identical for all platforms. With all the other stations on auto crew, it is possible to play the entire game from the 2D Navigation station. Even when I take control of several of the stations, I still find that I spend at least 50% of my time at the Navigation station.

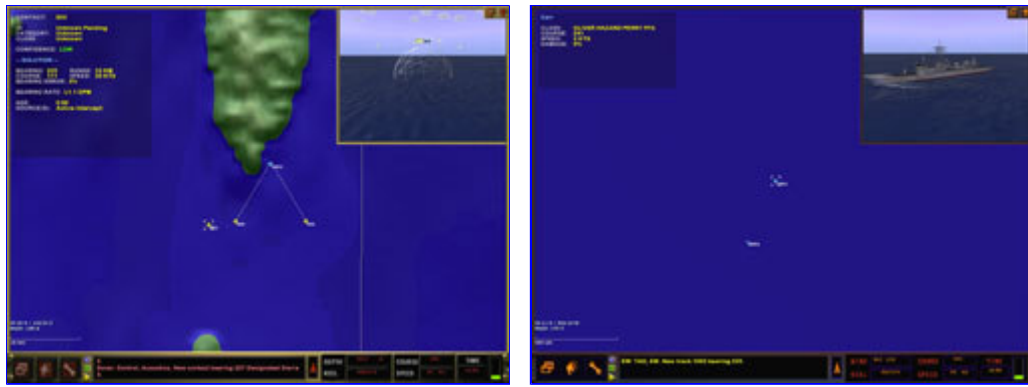


When the 'show truth' is turned off the 2D Navigational station only displays what you know about the world around you from the various collection points i.e. sonar, radar, Mark I eyeball etc. The completeness and the accuracy of this data is dependent upon many factors, such as from what station/s was the information collected, to how many times and how accurately over the period that it was collected. At times platform data will appear in your Navigation station from one of your allies via the data link. As with the data that you have collected, the data supplied by an ally via the data link could be simply a vague sound contact to precise data accurate enough for you to make a successful attack, or as with your data, it could be thousands of meters out with your attack only serving to give away your position.



In the top right hand corner is the 3D display (if the option is not disabled). This will display the platform that is selected as a 3D object in a 3D environment. If the contact is unknown then, it will display a wire sphere, if it is an unknown surface contact it will display a wire ship through to an identified platform displaying the 3D model with a wire box corner showing its alliance. This window can be minimized, or swapped with the Navigational window making the main window the 3D display.

The 3D display is not a cheat. The 3D display simply displays a 3D representation of what is on the 2D map. If you have incorrectly calculated the distance or have misidentified the target in the 2D Navigation station, then the 3D display will not show your error.



At the bottom of all the various stations is the Task Bar. In common with all platforms, it has access to the various stations, orders menu and damage report. It has the history window, the time and accelerator display, course and speed. Some information displayed here is platform specific such as wind speed and direction to depth below keel. You can also perform course, speed, depth/altitude changes on the task bar.

Controlling where your platform goes is done either via waypoints on the map, a general heading or by clicking on the compass. In addition, the submarine and ship can also control direction by use of the rudder.

Controlling the height and speed of the MH-60R Multi-mission Helicopter and the P-3C Orion can be done via selecting predetermined heights and different speeds. Additionally, in the P-3C you have the ability to control each engine individually. Of course playing with these during normal flight can have some very interesting effects on your plane. (Note: A joystick can be used. See Tom Cofield's Aircraft Review included later in this review).

Some platforms may contain more or less functionality in a station compared to another platform; however, I will only cover the main function on each station.

F1 will take you to the Bridge on the FFG, the Ship Control station on the submarines, and the Pilot station on the MH-60R and the P-3C Orion.

F2 will take you to the Acoustic station on the FFG, the Sonar Suite station on the submarines, and the ATO station on the MH-60R and the Acoustic station on the P-3C Orion.

F3 will take you to the ASTAC station on the FFG, the Radar station on the submarines, and the Acoustic station on the MH-60R and the Radar station on the P-3C Orion.

F4 will take you to the Hull Sonar station on the FFG, the Radio-ESM station on the submarines, and the Radar station on the MH-60R and the MAD/ESM station on the P-3C Orion.

F5 will take you to the Navigation station on all platforms.

F6 will take you to the Towed Array station on the FFG, the Fire Control Suite station on the submarines, and the MAD/ESM station on the MH-60R and the TACCO station on the P-3C Orion.

F7 will take you to the Electronic Warfare station on the FFG, the TMA station on the submarines, and the Dipping station on the MH-60R and the Infrared Camera station on the P-3C Orion.

F8 will take you to the Weapons Coordinator station on the FFG, the Periscope-Stadimeter station on the submarines.

F9 will take you to the TMA station on the FFG, the Sail Bridge station on the submarines.

F10 will take you to the Weapons Control station on the FFG.

F11 will take you to the Torpedo Control station on the FFG.

F12 will take you to the Machine Gun station on the FFG.

All stations and functions are there for the player to control if you desire to do so. If you find this overpowering or there are just some tasks that are too mundane for you to care to do, you can invoke the Autocrew. The Autocrew for each station or function can be turned on and off at whim. This allows the player to jump in and out of a station as he or she sees fit.

The various stations are laid out in a manner that is uncluttered and easy to use.

Submariners have always rightly believed that they have been hard done by compared to the more illustrious branches of the navy, and this tradition continues in Dangerous Waters. OK, so I might be slightly exaggerating.

All platforms excluding the submarine come with the old-fashioned Mark 1 eyeball. When a submarine is surfaced and you are on the bridge visual contacts seen by the Mark I eyeball will not be registered in the submarine Navigation station.

I also found several irritating factors when using the Periscope-Stadimeter stations. In the Stadimeter station (a subset of the Periscope station F8) to select the reference platform you are first required to select the country and then the platform. The process to select the United States Harpers Ferry will take in total 25 mouse clicks. 16 to arrive at the United States and another 9 to arrive at the Harpers Ferry. Drop down menu's would have been far more practical.



The perspective of the image used in the Stadimeter (as the reference against the image from the photo) is different to that used in game and can make it difficult to gain an accurate AOB (Angle On the Bow).

None of these issues will stop me choosing a submarine; they are however, annoyances that are out of place when compared with the rest of the stations.

I do have one complaint about the implementation of the view system aboard the Oliver Hazard Perry's Bridge station, the MH-60R Multi-mission Helicopter's Pilot & ATO station and the P3-C Orion's Pilot station. At these stations, you are unable to pan your view; instead, you are limited to a narrow field of view either directly in front or to the sides. When in the wings of the Oliver Hazard Perry's Bridge station you have the ability to pan from the bow to the stern with the view over the bow being at 45 degrees. If you wish to go from the port side to the

starboard side it will take 3 clicks going through each of the Bridge stations sub stations.

The time compression is from 1x, 2x, 4x, 8, and a maximum of 16x. I feel that this battlefield environment does not lend itself to 1024x time compression; however, there were times that I felt that 64x compression could have been useful.



The full-fledge weather system had to be cut. It had been planned that the weather could change over time for the duration of a mission (with subtle states between to lead into each other. The result being that if the mission weather is set to rain, it will rain over the entire 600 nm mile region for the entire mission.

There are no options for toning down the AI. Sonalysts have allowed the player some benefits such as quick reloads and repairs and the ability to be able to 'show truth'. Fear not, the Autocrew are quite good and the use of them allows the player to grow and expand into the various stations.

A Mission

Entering Missions via the main menu I select the Kilo Demo mission.



The orders are clear and concise. Intercept and sink a transiting cargo ship.

The brief is, *"A cargo ship is transiting to the Kuril Islands to resupply an occupying force. The cargo ship is being escorted by a U.S. frigate. Sink the cargo ship before it crosses the Goal Line and is out of reach."*

"Do not attack any other vessels, including neutral shipping and the escorting FFG"

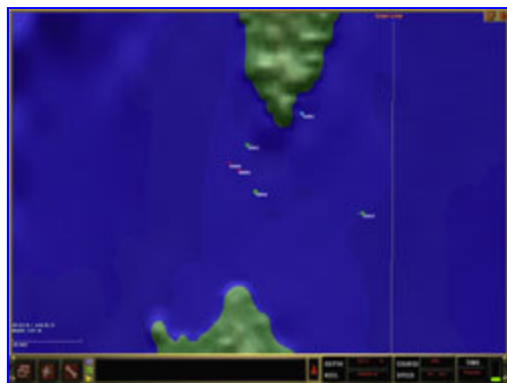


I curse at not being able to attack the enemy of my country, but orders are orders. Maybe if he attacks me...

After loading out my submarine with the torpedoes that I feel that will best aid me in my assigned mission...



...I start the mission.



I find myself submerged off the coast of Japan in shallow water. Extra care will be required as there is no possibility of going deep and attempting to hide under a thermal layer.

I do not have to wait long before two sound contacts are detected in the Broadband Sonar station.



Before marking the targets off, I go to the Narrowband Sonar station in an attempt to identify the sound contacts.



Utilizing the Narrowband Classification Filter (i.e. the computer filters the available profiles to those that most closely match the one selected with the Selection Overlay.) From those suggested I filter the platforms and after careful deliberation conclude that the two sounds contacts are a freighter and a tanker. I am certain that neither is my assigned target. For the moment, I am happy to accept this.

I mark the off the two contacts in the Broadband Sonar station. This updates the Navigation station with the bearing of the two contacts that are automatically assigned the ID tags of S01 & S02 (S for sonar). The distances are the default 10000 meters for a sonar contact.



Whilst trying to find additional sound contacts in the Broadband Sonar station I am interrupted with the distinctive ping of active sonar. Heading straight to the Active Intercept station I see that at a bearing of 230 I am being pinged at a frequency of 7500 Hz.



Upon checking the USNI Reference I am able to confirm my suspicion that this is a military surface vessel.

The Navigation station is automatically updated with the active intercept contact, S03.



Having found what I presume is the Perry FFG I am now certain that the first two sound contacts S01 & S02 cannot be my target.

Knowing that the Perry FFG is at an approximate bearing of 230 and assuming that the target cargo ship must be close I attempt to find it via the Broadband Sonar station. Try as I might, I am still unable to find a sound contact around that bearing.

Having not found the Perry FFG or the cargo ship via the Broadband Sonar station I decide to risk using the periscope.

In the Periscope station, I turn the periscope around to the bearing 230, take a deep breath and reconsider my decision. Again, I decide that the risk of detection is very low and proceed to raise the periscope. On the bearing of 230, I see the top half of a ship over the horizon...



but no Perry FFG. Swinging the periscope to my right I see the distinctive bridge of a freighter over the horizon on a bearing of 237...



I quickly scan to the left as far as bearing 200 but cannot see any other platform. Quickly heading back to the bearing of 230 I take a picture of the platforms bridge before lowering the scope.

With only the bridge visible above the horizon, I will not be able to get a range on this vessel, but I do hope to be able to identify it.

Before the scope has fully lowered, I open the USNI Reference looking at the civilian cargo ship.



Yes! That has to be it.

I go back to the Periscope station and then into the Stadimeter station. Bringing up reference image of the cargo ship, I compare it to the picture I took with the periscope.



There is now no doubt, it is the cargo ship!

Aware that the Perry FFG has a MH-60R multi-mission helicopter I decide not to push my luck and I shelve the idea of using the ESM (Electronic Support Measures) to confirm via a radar signature that the platform pinging is in fact the Perry FFG.

Shortly after two sound contacts show up on the Broadband Sonar station, going to the Narrowband Sonar station I confirm that these are the cargo ship and the freighter I had previously sighted in the periscope. After marking the sound contacts off in the Broadband Sonar station the Navigational station is updated with the new contacts S04 & S05.

Knowing the identities of S04 & S05 from previous visual observations, I manually classify the contacts S04 as the cargo ship & S05 as the freighter.



Assuming that S03 is hostile, I mark it as a hostile surface ship but leave the identity as unknown.



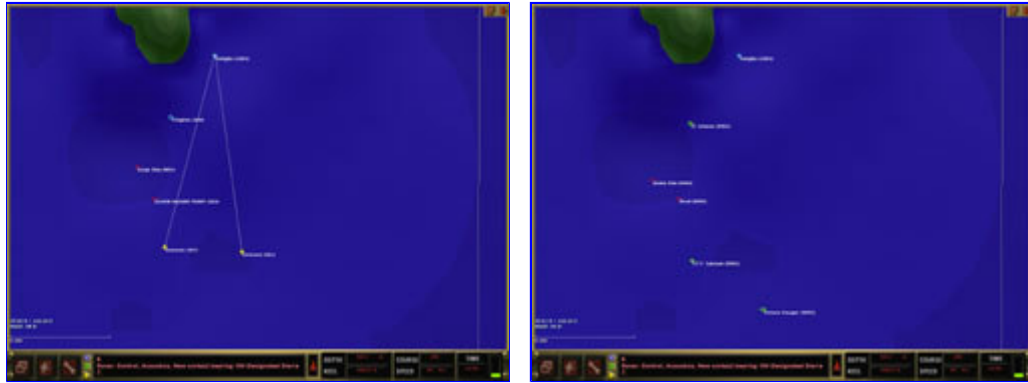
Needing to know the identity of S03 I decide to use the ESM. Seconds after the ESM mast breached the surface it goes crazy. Checking each ESM contact I am rewarded with confirmation that S03 is a Perry FFG.



I mark off the contact on bearing 235 lowering the mast before I am detected.

I manually update S03 as a Perry FFG in the Navigation station.

The ESM contact at bearing 235 matches that of S04 and I decide to merge these into one contact through the TMA (Target Motion Analysis) station, the platform S04 is now has a new designation M01.



I have diligently updated the sound contacts in the Broadband Sonar station, being as accurate as possible with the bearings. I am confident that the TMA solution for the cargo ship from the sonar bearing updates is accurate. However, not wanting to leave anything to chance, I go to the USNI Reference to attain the TPK (Turns Per Knot) for the cargo ship.



Using the DEMON (Demodulated Noise) Display station I confirm that the speed from the TMA solution matches that of the DEMON.



I am now 100% confident that I have a valid attack solution.

I decide now is the time to press home my attack. The freighter S05 sits between myself and the Perry FFG. I decide to use this to my advantage and set my speed to standard enabling me to substantially close the gap between the cargo ship and myself.

The background noise generated by the water rushing over the hull blind me.



After five minutes I slow down to 1/3 speed to take a fresh set of sound bearings.



I again set my speed to standard for five minutes. I confirm the sound contacts against the Navigation station.

In the Fire Control station, I assign the torpedo tubes to the target...



...and allow time for the TMA to be downloaded. Time to launch the torpedoes, I flood the tubes, equalize the pressure, open the muzzle...



...and lift the fire safety.



I sit there for a short while going over everything making sure that there wasn't a mistake. No, everything is right. I am sure of it. With that, I press the fire button on torpedo 1, Sonar reports *"torpedo is running normal"*.

I wait 45 seconds and then launch torpedo 2, again Sonar reports *"torpedo is running normal"*. The torpedoes and the cargo ships sound spike become one large one.



I make an evasive course change to put my stern to the Perry FFG so that should a counter attack happen when I launch the countermeasures they will be between the incoming torpedo and me.

Checking the Active Intercept Display I see that there has been no Active Intercept for 94 seconds...



...could Lady Luck have been with me and that the Perry FFG was facing away from me when I launched?

I watch the Navigation station display show that the first torpedo has missed the target?!

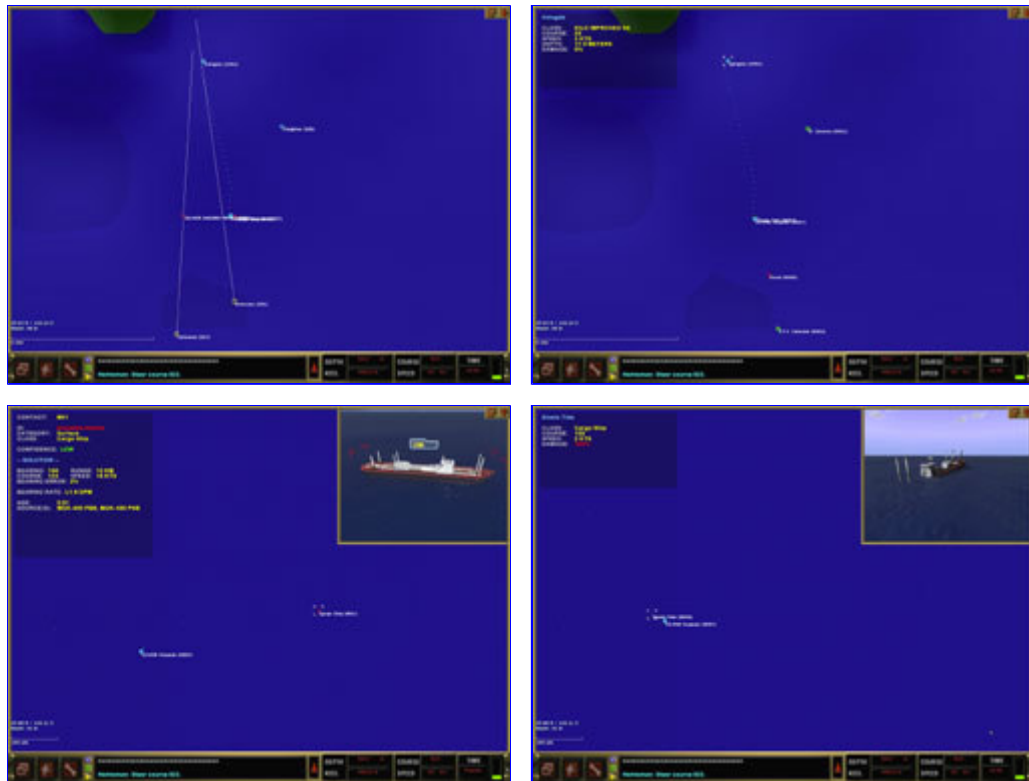


I was certain that the TMA solution was accurate, where could I have gone wrong? Surely, the second torpedo will not miss?

With doubt running rampant in my mind, Sonar announces *"Loud explosion on the bearing of Master 1 (M01)"*



Success with the first torpedo!



End of mission.

While the above example was thankfully, a success, on a previous attempt of the Kilo Demo mission (not my first) I had been detected as a result of my torpedo launch, in the counter attack I was sunk. During the replay, I realized that I was out by several thousand meters and basically had no idea where the target really was.

The Kilo Demo mission took 45 minutes of game time.

The last two show & hide truth give an excellent example of how when the truth is hidden, the Navigation station and the 3D view only display what is believed to be there and this may not be what is there.



Campaign

Jamie Carlson, the Associate Producer and Game Designer is quoted as saying *"The campaign is not fully dynamic but will play out in any number of ways. The alliances with other countries can shift because of the player's actions or sometimes just randomly. The story will change with these shifting alliances and the*

subsequent mission objectives will vary accordingly."

"The only thing static about the campaigns is the mission locations, other than that, the player has the choice of multiple platforms and objectives to decide upon before starting a mission. That choice of platform is directly related to the role it plays (i.e. mission objectives) and can strategically change the flow of the campaign. The conflict will evolve and the outcome will vary significantly. The campaigns will be HIGHLY replay-able and dynamic in their repeated play."

Multiplayer

Full multiplayer review to be done at a later date.

S.C.S. Dangerous Waters allows you to host or join multiplayer games on a local area network or over the Internet.

New in S.C.S. Dangerous Waters is Multi-Station mode. In a multi-station game a team of players are assigned stations on a single platform each taking one or several stations to man as desired. A multi-manned platform can play against the AI (Artificial Intelligence) or against other multi-manned platforms in a multiplayer Multi-Station game.

Sailing Model

Dangerous Waters is a tactical simulation; it is about being a Captain. Your control is in an abstract fashion. You control the speed and direction, but you do not have to worry about the mechanics such as having boilers ready and the likes. This is the way it should be.

After experiencing how the Oliver Hazard Perry FFG platform behaves with regards to the environmental conditions, such as the sea state and wind factor, I feel that the game would have greatly benefited from a more precise sailing model.

I would have liked to see a sailing model that restricted the players' ability when controlling the Oliver Hazard Perry to sail outside the ships abilities in adverse sea states and wind. As an example, in a sea state of 5 with a 45 knot wind that a player would possibly have a restricted maximum rudder at a certain speed and did not allow the player to do donuts and figure eights at flank speed with full rudder. The vessel did slow down, but the ship did not tilt more than 5-10 degrees. I also proceed at flank speed with the bow doing an impression of a submarine.

The speed in which your Oliver Hazard Perry can travel when damaged has no bearing to where you were hit, just that you were.

As it stands now, I feel that the current sailing model gives the Oliver Hazard Perry an unfair tactical advantage.

The submarines sailing model does not require high-pressure compressed air. When the high-pressure compressed air is at 0% after an emergency blow, you are able to submerge, hover, and surface from any depth without forward movement.

When a submarine collides with another platform, it may spin around like a spinning top. This can result in a 3 knot glancing hit at the front of your submarine resulting in your stern then swinging around and hitting the platform, this can result your bow swinging around and hitting the platform, and so forth.

I feel that acceleration and deceleration of all naval platforms is not accurate.

I was unable to determine if the features such as enable wind, currents and wave riding are working and with this sailing model, would it really matter?

As you would have concluded, the sailing model is basic, in some instances/parts not working or modeled. I would have expected to see this sailing model in an action style war game and not in a simulation.



Dangerous Waters Aircraft Review

by **Thomas "WKLINK" Cofield**

Dangerous Waters, unlike Sub Command can actually be called a true multi-genre game. Included with the subs and the Perry Class ships are two platforms, the P-3 Orion and the MH-60R. The P-3 is the long range ASW and surface ship detector for the US Navy while the MH-60 pulls the short range ASW duties.

I was asked to look at the aircraft in use in the game. To be honest I had never flown a simulation of the P-3. I had flown the MH-60's cousin, the UH-60 Blackhawk in Longbow 2 but I have to admit that had been a while. Using my past history with that simulation as a guide I evaluated the MH-60.

Well, serious flight simmers will be disappointed with the MH-60R if they plan on flying it simply as a realistic helicopter simulation. To be honest the thing flies like an add on helicopter to a naval simulation should. The guys at Battlefront told me not to get too excited about the flight model and, well, I didn't. Leading edge effects, ground effects on the aircraft, even transitional lift don't seem to be modeled in the game. It feels a lot like LB2 in easy mode.

The P-3 flies like a truck, which it should. It turns and climbs like a WW2 bomber, something it appears to look like. Simple things that should be on the plane, like trim or even flap control are not present in the game. This means that simple would be the best thing to call the flight models of both aircraft in the game.

I could critique the game based upon flight simulation standards but that would be unfair. Yes, there is no virtual cockpit, heck there are only three views in each cockpit. If this was a flight simulation of the P-3C Orion or the MH-60R then I would slam the flight models and dynamics, the simplistic controls and the lack of views.

Having said that; I need to point out that this is not a flight simulation, but a simulation of naval warfare where someone decided to allow the game player the option of taking the controls. I highly suspect that most players will occasionally take the controls but in general they will allow the AI the mundane task of flying to a certain point.

Each aircraft has essentially similar jobs and somewhat similar stations although of course they had different capabilities and purposes.

First the MH-60. The ATO station (Airborne Traffic Officer) station is the place where you can launch almost all of the weapons on the helicopter. This is also the place where contacts are designated and targeted. The radar station, where you can track surface contacts is in the game as well as the acoustic station, where underwater contacts are tracked, where sonar bouyes are dropped and the dipping sonar is monitored.

In addition there is a nice little feature of the MH-60R called the MAD/ESM system. Not included on the latest versions of the MH-60 this item monitors potential contacts by looking for the magnetic distortion a large object like a submarine makes. Not effective if the helicopter is too high or if the contact dives it may have some effect if the sub is close to the surface.

The P-3C is a much more capable aircraft, with longer range, more weapons and a better sensory capability. It still maintains its primary role as the main ASW weapon of the US Navy but now monitors more than just the underwater threat.

As I said before, some of the stations in the P3 are similar in purpose as the MH60. There is a MAD/ESM station in the aircraft with a similar job. There is a radar station as well as an acoustic station where sonar buoys are monitored. Finally there is the TACCO station (Tactical Coordination Center) where all the info is put together and a weapon is deployed to destroy the enemy ship. In addition there is a camera station on the aircraft where you can get a view of what you are shooting at.

All of these stations are cool but I still think that the most important station isn't really a station. Most folks will find that they will still spend most of their time in MAP mode monitoring everything that is going on. You have the option, like in the rest of the game, to automatically assign most functions to the crew. This gives you the option to put the plane or copter exactly where you want it to be, to monitor what is going on, and then put the sensor or weapon where you want it to be.

Overall, don't get excited about flying in the game. Yes there is an opportunity to fly in the game but if you really want to fly a P-3 Orion, look for a FS2004 add on. If you want to fly the MH60, do the same. I suspect that buyers of Dangerous Waters will probably not show more than a passing interest in the flyables in the game.

I suspect there will be some people who will be immensely interested in the stations in the aircraft and the manual does an excellent job in covering the basics of detecting, monitoring and destroying enemy surface and underwater targets. I must be honest that my abilities continue to be lacking in these quarters. That is the way a game like this should be though, too easy and it wouldn't be enjoyable.



Damage Model

The damage sustained to the hull is represented as a percentage figure. The percentage figure is only for hull integrity and damage to any other part, such as the ESM mast will not add to the hull damage figure. The hull damage is cumulative, should you sustain 41% damage through either an attack or a collision and then sustain a second instance of 31% damage your total damage is 72%. Once you have reached 100% your platform is dead.

Modern warfare is not my area of expertise. As such, I am unable to comment on the accuracy of the damage to any platform from any of the weapons used. Sonalysts say that every weapon in the game has a 'warhead' value in the objects database that closely corresponds to their real-world warhead values in kilograms. A 'armor' value for all the submarines, surface ships, air platforms and land-based buildings is used to determine when those platforms would be considered 'damaged' or 'destroyed'.

Damage sustained in a collision is excessive, as you will read below. The good news is that Sonalysts are aware of the issue. I e-mailed Sonalysts about the excessive collision damage, from the reply I understand that this issue has to do with the update rate of the NavalSimEngine. It periodically checks to see if the platforms are colliding and does some small incremental damage based on speed and thrust. Of course, over time, those increments add up and the number can be quite substantial. Hopefully this issue will be addressed in a future patch.

As an example of the excessive damage, a collision between a Oliver Hazard Perry at 2 knots and a stationary cargo ship will result in over 50% damage to your vessel. Anything faster will result in the total loss of your vessel. In another instance, my Oliver Hazard Perry while traveling at speed in heavy seas nosedived into the shallow seabed and exploded into a thousand pieces. Other platforms when destroyed simply disappear in a blink of the eye.

The excessive collision damage would not be a major issue if collision were a rare occurrence, sadly it is not, as detailed in the AI section of this review.

None of the damage sustained appears to affect your seaworthiness. In the Kilo submarine (the improved one) having sustained 72% hull damage I submerged to 320 meters, 20 meters past my maximum depth.

With substantial damage, whilst submerged my diligent crew were able to repair the bow and stern planes, forward starboard and port tubes, Propellers, compressed air, starboard and port engines, rudder, surface radar, ESM mast, floating wire, periscope, cylindrical array, countermeasures tube and the snorkel mast. There does not appear to be anything that cannot be repaired whilst submerged.

The concept that a substantial amount of non-lethal damage to the bow followed by a small non-lethal damage to my stern can suddenly make the entire hull fail is absurd. Silent Hunter II was the last simulation to use a '%' figure for the 'hull' and it was rightly panned for it. We have to go back to the 1996 and Silent Hunter to see a reasonable implementation of hull damage. The way in which hull damage is modeled ensures that a submarine is always a one hit kill.

The simplistic way in which the damage to the hull is implemented along with the simplistic sailing model also means that the effects are simplistic. Get hit in the bow on the port side with a torpedo in the Oliver Hazard Perry and apart from a reduction in maximum speed and other equipment damage you are free to proceed at maximum speed. No stopping to make the area water tight, no reduction in other stations ability to function etc. Those playing a multiplayer game in a submarine against a player in the Oliver Hazard Perry will at times feel hard done by as demonstrated by this example.

As there is no flooding indicator, coupled with the fact that I have never been lost due to flooding, I can only presume that it is also not included in the damage model.

I would have expected to see this damage model and implementation of repairs in an action style war game and not in a simulation. Either Sonalysts ran out of time to finish the damage model or the game engine's damage model is not up to the level that would be expected from a simulation of this type.

AI

On my test of 5 AI FFG's Vs a Kilo submarine I saw some excellent behavior that one would expect under the conditions. In one run, the FFG discovered the Kilo at a distance of 10 nautical miles (a bit far?) and launched an attack at around 4 nautical miles. After a short period, the Kilo become aware of the attack launched two passive countermeasures and two torpedoes at the same time running away at maximum speed.

I did notice that it would appear that the AI submarine would use countermeasures only once. It may launch both at the same time, but I could not see an instance that it launched one on two separate occasions.

Attacks by an AI platform will often result in another platform other than the intended enemy platform being hit. As an example, in the FFG's Vs a Kilo submarine mission, one FFG launched an attack on the Kilo submarine that was positioned 500 yards to its stern. The result was the torpedoes striking an FFG over 1.3 nautical miles away. The torpedoes never looked as if they were intended for the Kilo submarine. In another instance the Kilo submarine was 380 yards to the FFG's port side and the two torpedoes hit two FFG's over 1200 yards away.

In the FFG's Vs a Kilo submarine it was pleasing to see the Kilo submarine mostly choose the most logical path. No matter how many times I changed the position etc. of the FFG's, the Kilo mostly always took the best path. I say mostly, as the AI platforms only seem to be able to go forward. When I had setup the FFG's to totally block the forward paths of the Kilo submarine it did not go back and around.

One downside I did notice is that when replaying the 5 FFG's and Kilo mission over and over again with no changes the Kilo submarine always went along the exact same path. As discussed below, the lack of lateral movement away from the predetermined course does severely limit the AI's ability to evade the enemy.

The AI appears to be limited in its abilities to act on its own, that is, without the mission designer telling it how to act. In the FFG's Vs a Kilo submarine mission I set 5 AI FFG's to each do a box search with orders to attack the Kilo submarine. Even when the Kilo was discovered at a distance of 10 nautical miles (which seems to be excessive and occurred every time the mission was run), the AI would mostly continue doing it's thing, with only one unit ever making an attack.

As I have alluded to in the above paragraphs the AI's ability to pick up the Kilo submarine traveling at 3 knots at a distance of 10 nautical miles, every time, and, with an accuracy of 100% as shown by using 'show truth' is reason for concern. Set the sea state to 5, and the distance that the Kilo submarine would be detected was around 5-6 nautical miles.

The AI FFG's ability to pick up the Kilo submarine is very evident in the Filipino Convoy mission. Where even when submerged at 320 meters and at a complete stop the FFG will always attack at around the 3 nautical mile mark.

To sit and watch the AI collision avoidance will have you saying "Wow! That was great" and occasionally in the same breath "surely that didn't happen?"

I have conducted a test with four FFG's setup with overlapping box search patterns with myself in a FFG doing my best to cause a collision and to the credit of the AI after 15 minutes at 8x I was not able to cause a single incident. You would be well aware of what a magnificent feat this is if you have seen me drive!

On the other hand, the AI collision avoidance appears to be torn between avoiding the other platform in its path and following the plotted course. This may be why the AI will often only change course to avoid another platform only at the very last minute.

Where an AI platform is following another slower platform one time it may slow down, another time it will run over the ship in front and on another time they may avoid each other. The platform in the lead will never make any move to avoid a collision.

Platforms heading towards each other will often in an attempt to avoid each other will have Platform A turn to the right, then Platform B will turn to it's left and they are again on a collision course. The same process happens in the opposite direction and is repeated until they hopefully pass each other.

At times when the AI has successfully performed collision avoidance, it will do the unexplainable and collide with the other platform.

Once two platforms have collided, often they will continue to do so until one or both are destroyed.

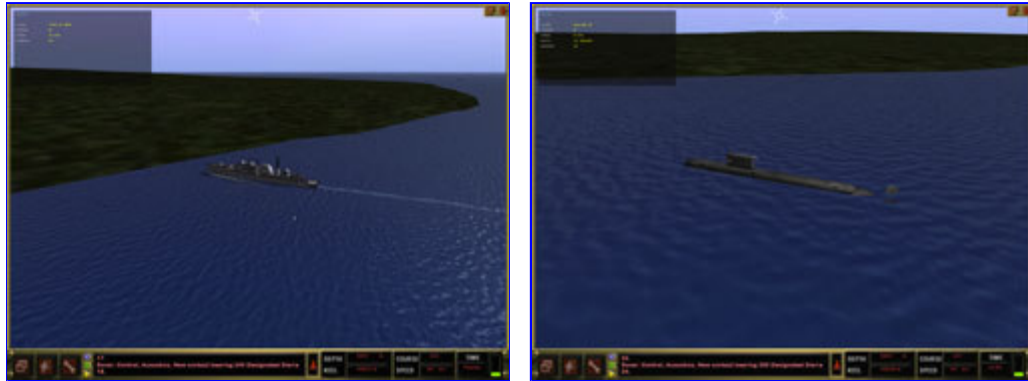
Land is also an issue for the AI platforms. I set two Oliver Hazard Perry's with a plotted course directly over an island. For Platform A I set the first waypoint on the island with the second waypoint behind it. For Platform B I plotted one waypoint in the water several miles behind the island, but directly over it. Platform A went to go around the



Island until it was in line with the first plot, then it turned hard right and did an impression of a beached whale. Platform B tried to go round the island but just never quite made it. I repeated the test several times always with the same result.

On other occasions when the land mass is large enough, the platforms will not attempt to go round, just run aground.

If a submarine is set to a depth of 100 meters and the entire plot is set up for that depth, if any part of the plot covers a shallower depth, then the submarine will immediately surface and proceed along the plotted course.



Sonalysts are aware of the strange behaviors described above and are working hard to resolve them.

Mission Designers (both single and multiplayer) will need to keep the above-mentioned AI collision avoidance issues in mind when making missions.

The player's AI unfortunately lets the player's platform run aground on either land or the sea bed without so much as an "Excuse me Captain but...". The same AI also will not avoid another platform. Two basic actions I would have expected.

These issues will affect everyone except those who play exclusively against human players and exclude all AI platforms. The degree in which the player will experience the AI path finding, collision and appropriate use of weapons issues will largely depend on the mission designers consideration the AI's issues, coupled with circumstances.

Overall, I would say that the AI is in need of some serious attention in the upcoming patches.

Mission Editor

As Dangerous Waters does not have a 'Dynamic Campaign' it falls onto the shoulders of the mission editor and the community at large to make Dangerous Waters a classic single player experience. Assuming, that is, that the rest of the simulation holds up.

Thankfully, Dangerous Waters does ship with a very powerful mission editor that includes such essential items as whales and icebergs! Those who take joy in making challenging missions will be in heaven.

Whilst the mission editor is easy to use and a mission with several platforms can be easily created within 10 minutes it will not be easy to create a challenging mission and even more difficult to create one that can be played more than once without a sense of Déjà vu.

Making missions that make the other players believe will be an art in itself. In this modern technical environment, an understanding of each platform's real world capabilities and an understanding of each navy's doctrine will be essential to creating realistic and exciting missions.

All that said, Sonalysts have crammed the mission editor with a host of tools that will enable you to do so. Such as;

Dynamic Locations: A dynamic location can be used separately or you can string/chain two or more dynamic locations together. From dynamic group/s objects will be added to these locations randomly at game start based upon the minimum and maximum number of objects specified.

Script Editor: Allows you to fine tune the set of events that can occur when a goal is met. You can specify that the MH-60R Multi-mission Helicopter attacks the cargo ship #2 with the Hellfire ASM.

Doctrine Editor: Allows a mission creator to specify criteria that must be met before a trigger can fire. The doctrine language allows testing of detection performance, engagements, the existence of objects, alliances, ROE, aircraft landing and taking off, the taking of photos, and much more.

The sea state and wind are defined by regions, with the regions being as big or small and as numerous as you want. Sea state and wind are configured separately. There can be many Sea states regions and wind regions, with the wind affecting the sea state. As an example, if the sea state is set to '2' with a wind of 40-60 mph then the sea state could raise to 3 or 4.

Conclusion

Dangerous Waters is my first foray into modern naval warfare and it has been a pleasant one. Sonalysts have captured the feel of commanding a vessel whilst still allowing access to the various stations.

The game play is great, exciting and tense. The implementation of the battle field through the Navigation station is superb, something WWII simmers have been after for years. However, Dangerous Waters comes across as having been unfinished with perhaps the game engine coming up a little short for what is expected in today's games. I hope that it is mostly unfinished, as that can be addressed through patches.

Should the various AI issues be addressed quickly, even if the shortcomings of the sailing and damage model are not fully addressed, I feel that Sonalysts and Battlefront will have a winner in Dangerous Waters. At the moment I feel that there are too many rough edges in among many polished ones, and for most part, the rough edges detract from the overall game.

Software and Manual Supplied by Battlefront.com
Game Version: Gold Build v100, Build 0352

Reviewers Systems Specs

Teddy Bär

- Intel P4 2.6GHz

- Gigabyte GA-8PE667 Ultra 2 motherboard
- 1GB Memory
- 120GB Hard Disk
- Radeon 9800 Pro 256MB
- Integrated Realtek ALC650 AC'97 audio
- Broadband cable connection for online play

Tom "WKLINK" Cofield

- Dell Dimension 4600
- Pentium 4, 2.8 GHz (HT)
- 1GB 400MHz DDR RAM
- 80 GB Ultra ATA 100 HD
- Radeon 9800 Pro
- Creative Audigy 2 sound card
- Broadband cable connection for online play