

DESIGN NOTES FOR CARRIERS AT WAR

by Gregor Whiley

It looks like we will be releasing Carriers at War in time to celebrate the 50th Anniversary of the Battle of the Coral Sea. If we don't make that, there's always Midway... or Solomons... or Santa Cruz...

Whatever, we guarantee it will be published before the 50th anniversary of the Great Marianas Turkey Shoot!

Carriers at War is a game of fleet carrier battles in the Pacific 1941-45. SSG released the original 8 bit version in 1984, to a wildly enthusiastic reception. Now it's time for a 16 bit version.

Carrier operations are inherently tense, uncertain and dangerous affairs, and the 8 bit version conveyed that excitement very well. That meant that we didn't have to change what the game was about, but we welcomed the chance to do it again, and do it even better.

The first action was to discard all the original code. The new CAW is not really a conversion. It's a brand new game that uses the same subject and philosophy as the original. We wanted to take a very detailed approach to elements that were decided at a much higher level in the original game. Rather than accepting compromises that were forced on the 8 bit version, we decided to start from scratch. Those of you who have played the original game will appreciate just how far-reaching the changes have been.

Ships

Ships are still created as ship classes, with individual data for each ship. Each ship class now has an individual picture, which is used in various parts of the game, and can be called up at any time. The system now supplies complete technical information on each ship, plus a note on its historical fate.

Ships now have a much more dynamic damage system. Bomb or torpedo hits

cause permanent damage and can also start fires. Over time, fires can spread, and also cause further damage. Damage control crews attempt to extinguish the fires, although they cannot remove permanent damage. Any damage or fires on a ship will be shown on the ship's status picture.

A ship with good damage control could suffer quite a lot of fire damage but eventually be put more or less right. A ship with poor damage control could suffer only a few hits, but turn into an uncontrollable wreck.

Ships are also rated for vulnerability. Conceptually, a carrier is a large, essentially unarmoured, avgas and ammunition store with a nice flat deck for catching bombs. CAW won't let you forget this fact.

Planes

Each plane in CAW is now tracked in great detail. As well as the normal statistics for each plane type, each individual plane has its own pilot who is rated as Ace, Veteran, Trained or Green. The fate or location of each plane is also known at all times. Every plane type has its own illustration as well as full technical details.

A squadron report can tell you exactly how many planes you have, their damage status, and the experience of each pilot. You can also see why any plane was lost e.g. lost on take-off, damaged by flak, shot down by CAP and so on.

All combat is resolved on an individual

plane basis, and up to 2048 planes can be simulated.

Surface Combat

The new surface combat routines are quite sophisticated. If surface combat is possible, ships are automatically sorted by type. Capital ships (BB, BC and CA) are placed in a battle line. Light ships (DD and CL) are divided between screening formations ahead and behind the battle line. Carriers, transports and anything else are placed behind the battle line, in a protected position.

You can order formations to open or close the range, and nominate targets for each weapon type in range. Light ships may want to close the range to employ torpedoes, while capital ships will probably wish to keep the combat at battleship gun range. Special rules will apply for combat at night, where the opening ranges in a battle will normally be much shorter than in daylight.

Combat occurs in a series of five minute rounds.

We wanted to bring some tactical decision making to surface combat, even though it won't occur all that often. We also felt that anyone who fought a surface group to within gun range of a carrier task force deserved some reward for their enterprise.

Searching/Sighting

This is one of the most critical areas of CAW. For each search sector you have chosen, the system maintains a search plane on an outward search leg. If a plane sights something, then it automatically shadows the sighting, and a new plane is launched. At any time you can call up a reports showing all your current sightings or the exact location and status of all of your search planes. False reports, and misreporting of sightings were simply a fact of life, and the system is designed to reproduce these conditions. It's up to you to sort out what is happening, and make crucial decisions... like launching a strike!

Air/Naval Combat

If you have a sighting, you can launch a strike. The system helps you organise this, and shows you important information like range, time to target and expected recovery time for the strike.

Once launched, a strike must locate the target for itself before it can attack. Strikes will do their own searching if the target isn't where they think it should be. Escort fighters will attempt to engage any CAP, while the bombers run the gauntlet of CAP and light and heavy AA. Even if attacking bombers are not damaged, they can be harassed into a less accurate bombing run. These routines will produce a very accurate simulation of air/naval combat.

Combat Reporting

Choosing the full combat reporting option delivers a blow by blow account of combat. A detailed graphic display shows the fate of each plane as it makes its attack run, and whether its ordinance hits or misses. Hits are shown by animated explosions on the ship, as are any fires or damage caused. This makes the combat sequence very exciting, as you follow the inevitable attrition on your aircraft, and await the result of each bomb drop or torpedo run. Purists can turn this option off, and rely on the far less informative and less accurate after action reports.

Game Control

Carriers at War was designed from the ground up to be mouse controlled, although there is a keyboard option. The system is structured so that it is easy to move laterally, giving the same order to different groups, without having to move up and down menu hierarchies.

Graphics

We have concentrated very strongly on the visual appearance of the game. On the IBM, we have used a hi-res VGA mode with a variable palette of 16 out of 262,144 colours. EGA users are stuck with their fixed 16 color palette. Having a variable palette greatly enhances

the visual effect we were able to achieve.

Scenario Editor

With CAW, we have decided to make the scenario editor a separate item for reasons of price, quality and time. To bundle all the editor material in with the already huge size of the main game would push the price to unacceptable levels. It would also further delay the release of an already long-awaited game. Produced as a separate item, a scenario editor can be a polished and professional piece of work, which only those people who really want it have to pay for. The editor itself will be a fairly massive undertaking, as an explanation of just one section of it will show.

WarRoom™

The main reason for CAW taking as long as it has is the work we have put into the brand new WarRoom™ module. WarRoom™ is the ultimate AI system for wargames, and is the culmination of all of SSG's experience in AI systems for strategy games.

Instead of trying to hard-wire a series of rules for computer players that will be valid for all scenarios, WarRoom™ takes that decision making and gives it all to the scenario creator. Now each scenario comes with a series of specially crafted, infinitely flexible plans for the computer player.

The problem with most AI schemes is that they produce a predictable response by the computer player. After a few games, players know what to expect. WarRoom™ solves this problem



completely. A few examples from the Coral Sea scenario will illustrate what can happen.

The transport fleet invading Port Moresby used to sail a fixed route at a known time. Now we can simply delay its start time by a few days. Or it could take a zigzag path through the Solomon Sea. The Japanese carriers used to sail more or less straight for the middle of the Coral Sea. Now, they could precede the transport group, or escort it closely, or make a high speed dash for the Louisiade Archipelago. US admirals who simply turn up off the end of New Guinea on day three could be in for a very nasty surprise.

It is hard to describe the vast range of options WarRoom™ affords to us as scenario designers. Task Forces (TFs) can be ordered to proceed in an innocuous direction at a leisurely pace for the benefit of search planes during the day, then turn around for a high speed run during the night. Each TF action can have a probability assigned to it, so that the fact that a player has observed actions A and B does not allow him to

infer that action C will follow. The creator can set, and change at any time, all the decision making processes of a TF. These include where to search, what CAP to fly, what sort of targets to strike and which to ignore, special areas for attention, no go zones, speeds and basic TF missions.

The basis of WarRoom™ is the selection of a series of cards by the computer. Each card contains actions that the scenario creator has programmed for a particular TF. The idea behind the cards is that the scenario creator can make a coherent plan and doctrine for each TF in the scenario, much like a human player would.

This plan is not just a simple sequence of activities. Each card can contain a probability of being chosen which allows a great deal of flexibility. A TF at some pivotal point in the scenario could be allowed a choice between three or four different cards.

These could each be start of planned sequences, which could themselves contain further variation. The system also allows for the creator to regain the attention of a TF and redirect it's activities if it has lost its way due to the heat of battle.

The result of a well constructed WarRoom™ set will be to give the computer a real fighting plan for the battle, while forcing the human player to make decisions based on current information, not prior knowledge of how the computer plays.

These are exactly the sort of decisions a real admiral had to make. So much so that now, when you play CAW, you won't just be playing against the computer, you'll be playing against us. We look forward to kicking your butt! ♦

Don't forget! Owners of the original AII/C64 version can upgrade to an IBM version for half the RRP.

It's the best deal in town!

LETTERS... (from p. 17)

I know this happened during the Civil War, but so did the opposite. Perhaps too, small arms range could be factored as well to show the differences instead of just 0 or 1. I feel the graphics are more than adequate for wargaming.

I know you mentioned VGA being used for your latest 16 bit products, but I really hope you devote as much time and effort to the computer opponent (AI) as you've done to graphics because as in computerised chess, a realistic computer opponent gives the game substance and depth and always brings you back for one more go.

Just look at some of the programs that have been published over the last few years where the computer opponent is predictable and unrealistic, where are these programs now? Collecting dust on the shelf. I don't want to see that happen to SSG's latest.

One thing I have noticed in all SSG games lately is the lack of copy protection. While this step is commendable, I feel it should be done strictly on a computer by computer basis. I recently was asked to attend a gamers meeting which was a spin-off of our users group meeting here in Melbourne/Palm Bay. I have to admit I was quite shocked to see the amount of piracy that was going on. While most of the pirated software could not be played because of a lack of documentation, SSG's *Gold of the Americas* could.

I liked what I saw and purchased the game through Software City in Melbourne. But what bothered me is you guys are leaving yourselves wide open to this sort of thing. I will admit I don't care for copy protection, but feel it is necessary, particularly in the case of computers such as the Amiga and Atari ST which do not have the user base of the IBM or Mac. If your sales are not spectacular on these computers, the try the user manual system of copy protection such as Panther Games has done. From what I saw at our meeting, it would make a big difference.

I hope you continue to support the Amiga. I know it is a hard machine to program, but I'm sure the rewards will be worth it. There is supposed to be a fresh new breeze at Commodore. I can only hope you find this so by getting the support you need. In closing, I hope the fresh breeze blowing through Commodore makes it as far as Australia and takes you Amiga sales skyward.

Respectfully yours,
Roger F. Batchelder, II
Palm Bay, FL
USA

Sir,

I just recently purchased *Panzer Battles* and it is an excellent game. I understand that *Panzer Battles* and *Halls of Montezuma* are adaptations from old 64K games. A game, designed from conception, to take advantage of the faster speeds and larger memories available in computers today would be truly impressive. Is there such a game in the works?

The reason I am writing is to provide feedback on your game. I hope your are interested. I won a Mac, so obviously I have been playing that version of the game. I really like the feel of the game. Particularly the ease with which I can view the battlefield and give orders. I feel it is one of the most accurate computer simulations I have played.

I have several suggestions. I have played for many years, and I have an intense interest in seeing better and better games on the market; including computer games. Your game is fantastic, yet I still have some ideas that would improve the game, for me at least since I can't speak for anyone else. Please accept my suggestions in the spirit intended.

The first suggestion is that I would like to be able to point to terrain features and tell the regiment to move there and

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