



A SimHQ "Second Look" Series Feature

European Air War: New Life for an Old Flight Simulator

by Guest Writers **Wallace "Wudpecker" Wood** and **Mike "Sandbagger" Norris**



"Bed-check Charlie's" biplane scares Sabres in Korea. Image by Ade Kelley.

You would have thought the news was: "*World War II is over!...again!*" in the SimHQ Forum for **European Air War**. It was on Thursday, August 11, 2005 at 5:43 GMT.

"Col. Gibbon" (John "Col. Gibbon" Graham) played it cagey with the announcement. He just put up a post with music-playing smiley's under the heading "The day you've all been waiting for is here!" And nothing more. Shades of old martial music before a big announcement in 1940's Europe.

"*All we could have hoped for is about to happen... well, actually it already has happened* ", "Pobs" (Brian Egan) added mysteriously.

The secret did not last long. The loyal and long-suffering EAW community quickly came close to the truth. "RAF_Roy" (Roy King) said it first. "*Wow, let me guess: I won the Lottery, we have World Peace, and EAW owner has released rights to the source code!!?*"

The explosion of posts was a madhouse of congratulations and speculation as to the meaning of this, with many old names reappearing in the list of over 100 posters within a day.

The source code! Hooray! Hooray!

Well, not quite. Atari Interactive CEO Frederic Chesnais had simply agreed in a letter to "Col. J Landers" (Nathan) that forum members could contact former employees. "Col. J Landers" was among a group of EAW fans like "Col. Gibbons" who pressed Atari for the better part of a year as the owners of EAW and requested for the original staff and their secrets.

"Atari Interactive has no objection to your engaging in open discussions with a group of individuals, to include Chris Coons, John Parquin, Will Gee and Nathan Medford, with respect to your development of the old source code related to the "European Air War" software game title" the letter read.

Is this big news? A game first released in November of 1998 by MicroProse has its source code "sort of" released to a sim community. If they can find it. No one seemed to know — or was ready to admit if it even exists. And the community can't sell it or misuse it "for any commercial or profitable purpose, that diminishes or dilutes the good will in or to such game and/or its trademark, or that otherwise disparages or casts a negative light on Atari Interactive, any of its affiliates..." etc. in the small print.

In other words, Atari still owns and has all legal rights to the mysterious code.

Nevertheless, the murky issue of whether the community can legally modify and use the code is at last cleared up. And that is important news, since fans have been working on modifying the code for years.

Mr. Chesnais concluded his letter in a very friendly way, saying he was available for more information, and signing off with... *"AND ENJOY EUROPEAN AIR WAR"*.

Atari's goodwill streaked to the sky at the EAW forum, along with CEO Fred's status.

Atari's founder Nolan Bushnell probably would have approved. His "Pong" game consoles in bars and restaurants started the whole computer game revolution. He loved games and wanted everyone to enjoy them.

EAW in Review

There is a kind of "Retro" movement going on to revive and update old video games. The EAW community is far ahead of the curve on this, and the story of the community itself is at least as interesting as new game developments.

SimHQ Forums was among the first to examine European Air War when it appeared on the flight sim market in November of 1998. It's time to review and update the status of this seven-year old game.

Despite its age, EAW is among SimHQ's most popular flight sim forums, with over 63,000 current posts and many members. Forum member "Pisis" (David Kraus) calculated back in July that if you include the EAW archives, you get 229,393 posts here alone. Posts elsewhere and in now-defunct forums bring the total to over 400,000.

Why do they care? And what's changed?



This was the look of EAW in 1998-1999 when it was new in 640x480 resolution.

Recent screenshots by EAW forum members in higher resolution...



"Para Bellum's" post of a bomber flight. The higher-resolution look of today's game.



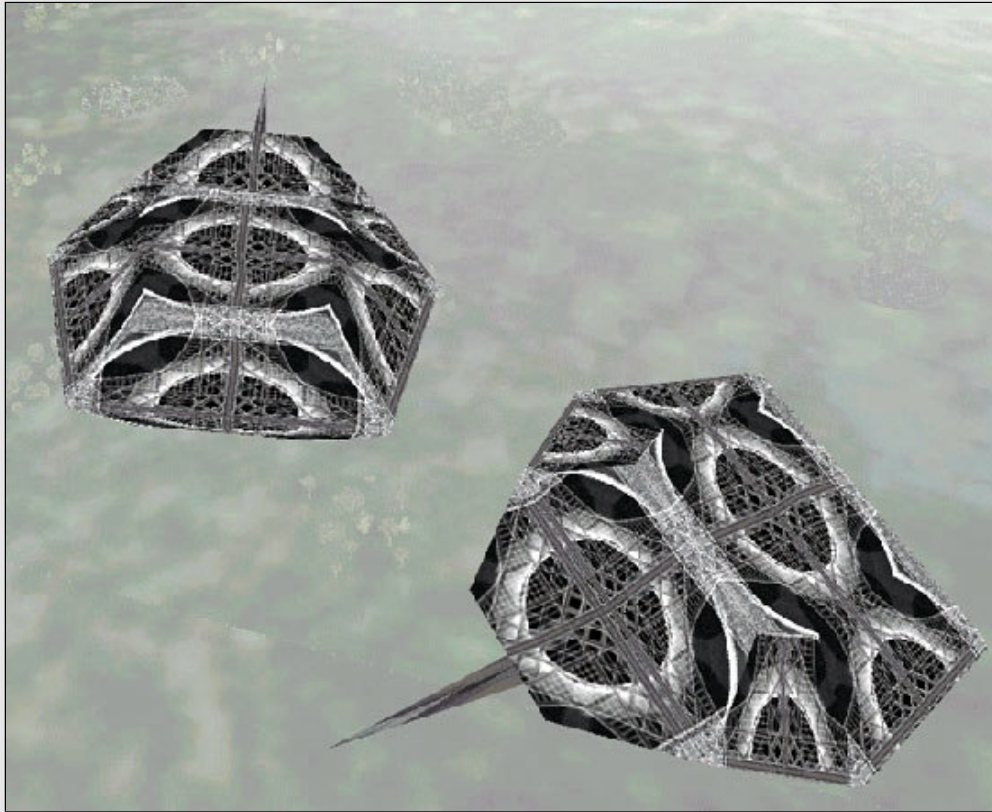
Desert Air War screenshots taken by "Skylark".



Jan Tuma's biplanes. Screen shot by "RAF_Dumoulin" (Dumo).



"Flying Tiger's" (Ade Kelly) Jolly Rogers in Pacific waters, and the in-progress Korean Air War with Herr Shreck.



"Von Beerhofen's" Mars Air War hunter-killers.

European Air War is now a world air war, thanks to its fan club, and has gone far beyond its European boundaries as these pictures show. It covers almost all the theatres of WW II, from the Afrika Corps, to the Soviet Union to the Pacific and Far East through the creative talents of its community. Some go beyond WWII — way beyond.

Background

European Air War as its name says, was originally focused only on a short WWII period of war over England and the European Continent. It was meant to be a follow-up to MicroProse Software, Inc.'s successful 1942: Pacific Air War, to be named 1943: European Air War as a sequel. The 1943 time limit was dropped and the time expanded to cover the Battle of Britain and other significant events.

The basic format gives you the choice of flying as a fighter pilot for either the Royal Air Force, Luftwaffe or the USAAF (U.S. Army Air Force), in roles such as interception, escort, fighter sweeps or ground attack missions. The stock aircraft supplied in EAW cover most of the better-known types of fighter, bomber and ground attack types in the war at that time, with the fighters only being flyable. You have the choice to fly against virtual pilots using Artificial Intelligence (AI) or real pilots online. You can fly in single mission or full career modes. Voices came in German language, American or English accents. No doubt the even-handed way of flying and fighting for either side helped the game's popularity in Europe and elsewhere. Simmers on both sides complained that the game favored either Allied or Axis aircraft. Some adjustments have been made by the flight sim community since then to make aircraft behavior more realistic, particularly by Flight Model expert "Knegel" (Ralf Kraeft).

Almost three years had gone by. Sim fans in 1998 were waiting for a new game to match the rapid development of computers and computer graphics. The cartoon look of such games as LucasArts Secret Weapons of the Luftwaffe (designed by the famed Lawrence Holland) was getting old. EAW was among the much-anticipated new games. Anticipated so long it was considered "vaporware" like

its also-late-blooming sister-sim from MicroProse, Falcon 4.0. EAW was going to be very up-to-date in graphics, with 256 colors, not the standard 16 colors. If it ever arrived, which it did in November of 1998. But EAW was released into a buzz saw of competitive new game releases, particularly Jane's WWII Fighters, which still has a following on SimHQ. Activision's Screamin' Demons Over Europe was soon to follow and Microsoft's Combat Flight Simulator was a heavy threat. All are represented here on SimHQ.

The first release had its problems, which game reviewers including SimHQ's John "Spoons" Sponauer in his **review** were quick to point out. Worst was the limitation of 640x480 screen resolution at a time when screens were getting bigger and better fast. Online play was limited to eight players, and being kicked off-line was common. Other complaints included the deadly accuracy of bomber gunners against the Luftwaffe AI (Artificial Intelligence control) in particular, who did not use their own powerful cannons in retaliation. Nevertheless, the game gained a following of enthusiastic flyers who formed a community dedicated to EAW and it's development. Within a year a new patch was added, known as 1.2, which let screen resolution grow as large as most graphics cards can deliver today. The 1.2 Patch also eased some of the game's other problems, including too-deadly bomber gunners.

Perhaps like Atari, EAW's owners realized the potential of third party modifications to the stock aircraft and released software and a tutorial with the 1.2 Patch to help its game fans "mod" (modify) their planes. The key software is called PicPac. It allows users to create their own aircraft 'skins', by re-coloring. Many of the EAW community became expert in creating these skins and they in turn made tutorials for others to use. Skinners like "Chompy" (John Masters), "Salty" (Jeff Salter), "Mike 1" (Mike Riddell) "Capt. Kurt" (Kurt Schwabauer) and "Mr. J" (Johnson) were awarded "virtual" medals by the Society of European Air Wars Contributors (SEAWC) for their skinning work and other important contributions. "Charles" became an EAW hero for that and many other reasons.

Today, there are over 3,000 such "skins" and aircraft available with more coming every month.

"*More mods!*" the EAW Community cried. They wanted entirely new aircraft beyond the game's 20-standard aircraft limit. 1942: Pacific Air War (PAW) designs were remodeled. "Charles" was a leader here. Thanks to specialized software created by Allesandro Borges and more recently by "Gurney" new aircraft and game "objects" are possible. Whole new "scenarios" appeared to fly and fight from Russia to Africa to the Pacific theatres — and beyond. Mars Air War was created by "Von Beerhofen" (Roel Bartels) to fly for fun. EAW Secrets of the Luftwaffe honors the older game.

Original 1998 system requirements (still in effect)

- 166 megahertz Pentium, equal or better.
- 133 megahertz with a "3D graphics acceleration card"
- CD-ROM drive
- 32 megabytes of RAM memory
- DirectX 6.0 (on the install CD)
- Glide API version 2.43 or higher to use 3Dfx Glide support
- Hard Drive space - 2-megabyte minimum to play off CD
 - 55 megabyte "typical" install
 - 552 megabyte full install
- 28.8 bps modem for online multiplayer games
- Windows 95 or 98

Current recommended system

- 1.2 Patch (released in 1999)
- 333 mhz or faster computer. Newer "high-resolution" graphics make this desirable, but not mandatory. Users still report happy results from older machines.
- A decent graphics card of your choice - except ATI, which lacks horizon "fog" and a briefing screen display in EAW. Usable without these advantages.
- Old cards usually work fine even at low megabytes of video memory. Caution suggests 32 megs of video memory. New, expensive cards don't always work well even with DirectX 9.0. Older drivers sometimes help. Problems are signaled by a "7217" error notice.
- Patches, special .exe files and changes are available to obtain horizon "fog" and correct

briefing screen corruption and other troublesome graphics problems with Voodoo and Glide, but results vary.

- Full 552 megabyte install recommended for best game speed, with user community "patch" to play without CD if you choose.
- 64 Megs RAM memory. More is always considered better, but no one is sure if it makes much difference.
- DirectX can be upgraded to 9.0 Opinions vary on upgrading, but 9.0 is said to be compatible with older DirectX versions.
- Hard drive - As many gigabytes as you can afford. Not for the game. For all the "mods" available (about 1 gigabyte worth).
- Windows 2000 - A patch is available to run EAW on Win2k. Can be found at "Tally-Ho", the main EAW library site.

Windows XP may run EAW perfectly or give problems, depending on machine and programs installed. The Win2k patch may work for XP. All .exe files must be renamed to "eaw.exe" (done automatically by one new user-created program, OAW). XP requires a minimum of 256 megabytes of RAM memory, most of it for its own use.

Windows 98 SE (second edition) is still the standard for most trouble-free EAW play.

Modems? Some still use them in this day of broadband — at 56k maximum speed. Online play restriction to eight players and not being able to join a game in progress still dominate the yells for improvement to the ".exe"

The Sim That Almost Never Was

It takes time, money and a good team to develop any sim or game — with rare exceptions by talented loners. It's very profitable to produce a good seller. The computer game market has grown to the point that more money is taken in by game developers and sellers than is made by Hollywood movies, in the billions of dollars. The trick is a good best-seller, just like books and movies. The rest may lose money, not make it.

The answer was blowin' in the wind back in the mid-1990's. The game industry was alive and hot and growing as fast as the U.S. economy and the stock market. But at MicroProse, the "ambiance" was closer to the British retreat at Dunkirk than it was to D-Day at Normandy. MicroProse's new and advanced European Air War game development was not going well. Not at all. Here is an inside look from "Brand" (Brandon Gamblin), quoted from his blog of July 11, 2005 and passed on by SimHQ member "fng2k": *"When I first started out in the games industry, I was working for a company called MicroProse. They were famous for their sims: Civilization, XCOM, Masters of Orion, stuff like that. I was working on European Air War, a game that was four years into development, and was nowhere near ready to ship. In the first month of my working there, the entire programming team quit. They saw the writing on the wall, and knew that their project was in deep doodoo, so they bailed. I don't hold it against them; they were under incredible strain. Every week, there was a meeting with studio execs, trying to determine whether to cancel the project or not. In those meetings, the execs would ask hard questions, and they never seemed pleased with the answers."*

EAW was "way over budget", ready to be axed if it didn't show immediate results, with huge gaping holes in the game. "Brand" mentioned a few. If you fired your guns, your wings fell off. Planes now and then flew backward. You couldn't take off or land. The AI (Artificial Intelligence) aircraft shot down their own teammates for no discernible reason. "Brand" didn't use the name, but the new lead programmer hired to fix things up fast — or else — was one Ted Kawahito, known as "TK" and currently the sparkplug behind Strike Fighters Project 1 with a community here at SimHQ.

What do you think "TK" worked on first? Did he attack the horrible holes in the game? No. *"He built a new camera object. One that would jump immediately to wherever "cool" things were happening. Sometimes, the cool camera would focus on a plane executing an impressive evasive action to shake the enemy. Sometimes, the camera would follow a bomb from the bay of a B-17, down to the ground in a cool tracking shot where you watched the Earth come rushing up at the camera. Sometimes, the*

cool cam would focus on a firefight, or on a plane that just got shot down, and was now a fireball, barreling toward the ground at terrific speed."

"Brand" said he wanted to scream, *"That doesn't help us! We've got real issues, and you're screwing around with the camera!"*

At one of the next meetings with studio execs sharpening their questions and their money axes, Kawahito turned to the CoolCam. *"One of the execs threw out a tough question, designed to show how far over budget we were. "Tom" put down the joystick, and hit the "cool cam" button. Then he turned around to answer the question. While he was answering the question, every eye in the room was on the screen as one amazing scene showed after another. I looked at the execs, and I swear, some of them were gaping. No one was listening to Tom as he answered the question, and when he finished, he picked up the joystick, and jumped back into the game."*

The money problem eased up. More programmers were hired. Meetings with execs *"dwindled to nothing"*. Finally, *"... we shipped a hell of a game."* The CoolCam did it. *"I swear, that camera saved the project,"* "Brand" said. As he pointed out, years later people still buy and play this game. And hit F-12 to watch the CoolCam.



Biplanes in winter. A Jan Tuma aircraft.

After the Ball is Over, After the Crowds Have Gone

Times weren't tough, but the competition was in 1998. Not only were new and better graphics coming on fast as the Millennium approached and then passed into the present day. The buying crowds of 1999 and 2000 turned to modern sims with jet fighters, helicopters, ground fighting and electronic warfare. MicroProse released Falcon 4.0 about the same time as EAW. It, too, remains a "classic". Flight simmers also turned to the "details."

Microsoft's Combat Flight Simulator appealed to those who wanted to fly "the real thing" and not just hop into a cockpit and shoot 'em up arcade style. CFS demanded everything be authentic, from the cockpit instruments and controls to the sounds and the airports. CFS'ers sneer at anything less. It is said you can learn to actually fly on a Microsoft Flight Simulator and I believe it. It is used regularly in flight schools, I am told.

Frankly, you can't even read the instruments clearly in most EAW cockpits. Only a few dedicated

modders slaved in their graphics programs to sharpen them up. The problem is simply that EAW was designed for 640x480 graphics. The "sheet of paper" the graphics modder has to work with is surprisingly small. It's built into the .exe, and only great understanding by a good programmer with the source code is going to change it. EAW was designed in an era when computer speeds were much lower, memory and hard drive space was still a premium, to say nothing of the load on graphics cards. Cut it to a minimum was the theme, so more computer users can play. It still hurts — or helps. But as one reviewer explained, *"Most combat pilots said they didn't even look at their instruments in a dogfight. They paid attention to their enemy and the sound of their engines."*

Eric McCann wrote as late as May, 2003 in VideoGamesReview.com that EAW's gameplay was *"GREAT, and easily the most accessible WWII combat sim out there. I've played most of the others, which either spent too much time on the "Sim" part (take off? Don't just start the engine, adjust your magneto, your fuel flow, flaps, blah blah blah) or went too far the other way into an unrealistic "arcade" mode."*

Well, you do have to start your engine in EAW. Or use "A" for Autopilot. Then advance the throttle and take your brakes off. And don't forget to raise your landing gear. Sigh. So complicated. Jump to "Instant Action". In truth, plenty of details and adjustments are available by editing EAW's ".ini" section. So many that most players never learn to use them.

The combat sim that blew EAW away completely as far as general popularity goes was IL-2 Sturmovik and especially its follow-ups, IL-2 Forgotten Battles and Pacific Fighters. The stunning graphic details on aircraft, the actual motion of elevators and ailerons, the evident damage that appears on your aircraft when you get hit, all made the blocky polygons of EAW look outmoded. But IL-2's fly very much like their real cousins. That can mean mixtures, prop angle, aircraft trim, etc. And they demand the best in high-speed gameplay machines and video cards or you are watching a slideshow.

One Man's Trash is Another Man's Treasure

The verdict wasn't unanimous that EAW was a great game, even at the height of its popularity. A look at old reviews shows an average of about 8 points out of 10, with gameplay running perhaps 9 out of 10. Those game reviewers are tough.

Common complaints included:

640x480 screen resolution (quickly fixed).

Getting kicked offline while multi-playing EAW by modem (Only 28.8 required!).

Dull campaigns. Other reviewers liked them, though. And there was a voice briefing. In 2002, "wolfbiscuits" wrote: *"EAW's strong point is the dynamic campaign, similar to Falcon 4.0. There must be around 100 missions to fly and your actions affect the outcome..."*

Flat graphics on the ground. Gordon Berg of IGN, called it *"terrain like a giant tarmac"*.

Jim "Twitch" Tittle of Combatsim had a different take. *"Personally do not want too much terrain detail. After you fly over a few times and "gee whiz" about it, it's just ground clutter when you're trying to pick up that 109 turning at 10 o'clock low."*

AI (artificial intelligence-controlled aircraft) brought a few complaints. But many reviewers were surprised. *"I am more impressed than disappointed with the AI pilots. Watch a German fighter attack on an Allied bomber formation, and you'll witness diversionary flights trying to draw away escorts, vicious frontal attacks by the main German flights, and a hell-bent attitude among the German pilots to kill as many bombers as they can."*

"As an escort, giving chase to them usually results in being drawn lower and away from

your flight, which in turn leaves it unescorted for the next wave of incoming fighters...I have also seen some brilliant feats of airmanship by the AI pilots. One particular scissors fight against a Bf109 at treetop level has convinced me that this is no dumb AI model... this particular pilot was good, rolling and banking just feet above the ground. While I ended up getting him with a snapshot burst, it was one of the hardest and most immersive sim "kills" I've ever experienced..." said John "Spoons" Sponauer in his SimHQ game review, December, 1998.

Common praise included:

Immersion factor. A poll of SimHQ EAW forum members mentioned immersion as the Number One reason they play the game. Your teammates helpfully warn of danger or congratulate you on a "Great Shot!" and your wingman will "mother hen" you if you go down. Most of the time, the squadron will listen to your orders. Is this it? Probably not. No one has quite put their finger on why EAW is so engrossing.

Scott R. Krol, PC Gameworld said, *"There has never been a simulation so adept at making you feel like you're actually in the game as EAW."*

"Regardless of the many things you can find wrong with EAW, you can't help but love this sim." Gordon Berg of IGN.

"...full of charm and atmosphere that you just don't get in a sim these days..."
"wolfbiscuits"

"Great game. Far more accessible than most other "sims" without dumbing itself down. Great fun." Eric McCann, Video Games Review.

Other "high fives" from reviewers for the large number of planes in the air. Up to 256 aircraft. Still unequaled in the sim world and the envy of many developers. Yet the FPS (frames per second) seems to hold up fine even on old machines.

Oddly no one reviewer mentions 256 colors as being a limitation. Somehow, the beauty of flying comes through, with gorgeous sunsets and sunrises, stars and moon at night. A bitter subject with modders who work with the EAW color palette, however.

The flight model. Finding you have gone into a dangerous stall and spin doesn't please arcade types (you can shut them off). But Tom "KC" Basham, publisher of Debrief Magazine wrote *"Overall EAW has one of the most accurate representations of the transition from normal flight to high-AOA maneuvering to stall and finally to departure that I've seen in a sim. It more closely matches my experiences in aerobatics and BFM flying than most flight sims out there."*

The sight of empty shell casings dumped by the firing guns, with a little smoke. (The current Atari EAW "demo" download has gun flashes as well — something the fans' .exe team wants to add to the standard game).



Daunting sight for a German pilot-Allied bombers in a protective "box". Created by "Mr. Jelly" this week.



Shell casings pour below guns in EAW's opening movie.

The EAW "Mod" Community's Breakthrough

The loyalty of EAW fans was and is phenomenal. It isn't just the game. *"I think what really makes us unique is the community that has grown around EAW,"* one "Edwin Rommel", fieldmarshall (retired) wrote. *"Marriage counseling is available on the fly- problems with girlfriends, boyfriends, friends- no problem, we even have a resident psychiatrist, some dentists, a few doctors and an attorney or two. We share a laugh or two, we share a burst of anger or two, and we share our lives. Yes we are a damn family!"*

"Col. J Landers" (Nathan) joined the group after taking EAW off his shelf in 2002 and becoming addicted. Early online discussions with "Pobs" (Brian Egan) soon had Nathan eager to contribute something, a hallmark reaction in this community. He began, as many do, by skinning, and eventually produced a famous P-51 he loved, the "Big Beautiful Doll" in HR (High Resolution).

When Nathan heard that the "Holy Grail" of EAW was the missing source code, he started research on the 'Net and by telephone. Atari referred him to Infogrames, the game's current over-owner in the chain of companies since MicroProse. (Yes, that's the company's actual name, not "Infogames" as it is usually called). *"I had also been exploring the angle of tracking down a large number of the original MicroProse team for information by telephone and email,"* Nathan said. *"Though appreciative of my efforts, they were saying nothing due to the copyright issues".* "Col. Gibbons" (John Graham) was doing the same thing with only slightly better results. But "Col. Gibbons" urged Nathan not to quit and they didn't give up. The Atari Public Relations staff was friendly and helpful, and even encouraged Nathan to talk to the original game developers. Without something in writing, though, the programmers weren't talking. Secrets and rights are a big legal thing in the game world, as they are elsewhere.

"With John's support I determined to go back to Atari, and approach the Director Of Legal at Atari (Kristen Keller) to get an answer once and for all." Silence. Nathan sent a final letter thanking the Atari folks for their kindness, making a last plea, and was ready to let it go. Then came a friendly email from Infogrames board member/Atari CEO Frederic Chesnais, asking Nathan to give him a telephone call. *"I found Frederic to be open, generous, knowledgeable, and above all receptive to the group and to any discussions/development by the SimHQ EAW Group with former members of the MicroProse team, to include the original code for the game,"* Nathan said.

Atari's CEO backed it up with a letter the EAW "team" can show to the reluctant former staffers to clear them of legal entanglements.

A Modder's Dream

By accident or design, the structure of EAW makes it very easy to modify-up to a point. The game has a set of compressed data files (CDF's) where the key libraries were stored. But if a particular file is available outside the CDF, the game will use it first. If it doesn't work, the game's .exe simply reverts back to the stored CDF libraries. Make a new file, and the game will use it. A modder's dream. Of course, some hilarious results come with bad files in new scenarios. I won't forget being puzzled to find myself fighting German aircraft in a misloading of "Moggy's" "Sighted Main Body - The Battle of Midway" scenario so brilliantly put together. Where were the Japanese?

Some fine minds — and very inquisitive ones — were attracted to this "new" sim not long after its introduction. One of these was "Charles" whose name belongs in boldface type. "Charles" was a skinner-and much, much more. He examined the game in hex code. He kept meticulous notes on his findings and those of other finder-outers with an eye to modifying ("modding") EAW. What "Charles" did differently was completely organize his notes and present them to the EAW community. They became the "EAW Bible". They are still required reading for modders, and in use today. Much has been learned since "Charles" went on to other things, but his legacy supports EAW. "Charles" also set up a utility to "swap" the growing number of new aircraft and "skins" into and out of the game, called Enemy Coast Ahead (ECA). Still used. His "skins" and new aircraft electrified the community. Naturally, he also has a "virtual" medal from SEAWC. Look [here](#).

Another name in fame is Allesandro Borges. This programmer listened to the cries of pain in the EAW forums and was sympathetic. *"Why don't we have a tool to make other aircraft, not just paint them?"* or *"Why do we have to borrow from PAW (1942: Pacific Air War) for new aircraft / buildings / tanks / trucks(lorries) / ships / people?"* So Allesandro produced another milestone: 3DZ!Studio. This

program took aircraft drawings, made "wireframes" and moved and changed things around. *Voila!* New aircraft and other 3D objects. But there was a cost, and what a cost. This brilliant program had one great flaw: it required the user to change dimensions one mouseclick at a time. A new aircraft cost you thousands of mouseclicks. Many a mouse was lost to modders.

There also is a little matter known in the game graphics trade as the "BSP" tree, or Binary Space Partitioning. They call it the "Rendering Sequence" in EAW. Simply put, the Rendering Sequence tells the computer what part of an aircraft (or other 3D object) is seen — or hidden — in front of or behind another part as the view changes.

Hold your hand in front of your eyes. Rotate it slowly and watch the back of your hand change to the palm, and the fingers appear and disappear in front of or behind another. The BSP tree, or Rendering Sequence must be arranged so each finger and the whole hand can be seen from all angles. Alessandro's program did not deal with it. To this day, mention the Rendering Sequence in a post and the answer you get is not always good-natured. In short, the EAW community still hasn't come up with an easy answer.

Nevertheless, new aircraft were produced. "Charles" made these for the EAW Secret Weapons of the Luftwaffe scenario.



Messerschmitt Bf-109z "Zwilling"



Do-335 twin-engine "Pfeil" (Arrow)



GO-229 Gotha stealth flying wing



The Kyushu "Shinden" from Japan

All screen shots by "RAF_Dumoulin".

Only a month or so ago, computer science student "Gurney" produced another new 3DZ studio without the requisite mouse clicks. Just enter the numbers in a box, and they are calculated. The cries of "*Hallelujah!*" were as loud as the yells of triumph at Atari's generosity this week about the source code. Modders are busy with "Gurney's" new program (and bemoaning the glitches common to new programs). Stopping only to have a beer or soda, perhaps, at the Atari news and post their thanks.

The BSP tree remains a challenge. But a Polish train enthusiast screen-named "Woolfman" (Marek Wilk) did produce a calculator for the "normals" in making 3D mods, and this eases much of the pain still felt about the Rendering Sequence. "Woolfman" also produced an EAW terrain generator to track the "tiles" that are really slices of ground — or water. There are astonishingly few of them — the limit is 59 tile types, with new ones coming— and they must reproduce the entire EAW world.

High Resolution Aircraft

EAW fell behind other sims in popularity, largely because of its grainy and blocky graphics, and the community looked for a way out. "Moggy" (Peter FitzGerald-Morris) found ways to produce entirely new game "scenarios" like Dunkirk, the Battle of Midway in the Pacific ("Sighted Main Body"), and so on. "Moggy" runs a private modder's community at **The Gen** and has his own SEAWC award.

"Why not take two views of an aircraft and put them together?" "Moggy" asked. By making another "texture" (color drawing) of an aircraft part, this doubles the number of polygon "points" limited by the .exe and provides extra drawing space for the artist. Even more than two drawings can be used, as "Von Beerhofen" explains it, "using separate textures for each part instead of a single texture for all parts." And the irritating trick "TK's" team used of "mirroring" one side of an aircraft on the other to save computing space could be gotten around. No more backward numbers if seen from the wrong side. "Chompy" made the first proper HR model P-51D, and from that I think my HR P-39 and B-17 were next," "Col. Gibbon" recalls. "Chompy" disagrees. "Gibbon's HR B-17 was the first true hi rez aircraft, followed by Kurt's Lancaster. My P-51D was the first HR aircraft done by splitting up 3dz's, followed shortly by "Mr.J's" 109 and 190's, and then "Col."Gibbon's P39's and spits." "Mr. Johnson" also was awarded by SEAWC for work on high-res aircraft. "Capt. Kurt" chimes in: "Moggy" developed the idea of using paste on aircraft sections, and he and I collaborated on making the Lancaster." "Sandbagger's" records make it clear Kurt was right: Kurt released his Lancaster in July 2002; "Chompy" released the HR P-51 in October 2002; "Mr J" released his HR FW190A in November 2002 and John released the HR Spitfire and P-39 Airacobra in December 2002.

"HR" aircraft are the standard EAW modder's goal today. Still not up to Il-2's standards, but a great improvement.



P-51 "low resolution" in 640x480 from original game.



"Col. J.Landers" "Big Beautiful Doll" in "HR" high resolution.

"Von Beerhofen" (Roel Bartels) is another name in lights because of his tireless examination of EAW's .exe code. He has mapped out part of the .exe (executable code) without having the mysterious source code. He also produced aircraft carriers with hulls ("Moggy's" Battle of Midway ones were flat on the water), examined and produced new color palettes, moving "waves", and a long list of other small but noticeable changes, as well as a Pacific Tide III game scenario to showcase his work. "Von Beerhofen" is the site-keeper at **The Launchpad**, the main EAW online flight destination. For fun online, "Von Beerhofen" also created Mars Air War out of the bizarre mistakes and discoveries he made in his .exe research.



Mars Air War "Megopolis" battlescene. "Von Beerhofen's" experiment to find searchlights.

The list of other EAW modding toolmakers is long. "RAF_Roy", "Mr. Jelly" (Tony West), and "Gurney" have all produced tools to move frontlines, move airfields, re-do aircraft performance and many other

things. "Knegel" is considered the expert on aircraft performance and armament, and given the community its new standard "flight models" for aircraft, EAWrp2.6

A Great Year

This 2005 year has been a great one for the community. Even at a time when other sims have put EAW into the shadows for popularity, new developments took place. Among the most useful besides "Gurney's" new 3D studio has been "Mr. Jelly's" Online Air Wars, (renamed OAW because of off-line usefulness). With the help of others like "RAF_Roy", "Knegel", and "RAF_Dumoulin" this new game manager keeps track of the vast number of "mods" for aircraft, skies, sounds, and scenarios. A few mouseclicks, and an entirely new "game" can be brought up or aircraft switched around. The latest version of OAW Unified makes it possible for online players to coordinate their games with a key number so all are using the same scenario — and it can check to be sure everyone is on a level playing field with the same settings. AI aircraft can be eliminated entirely, an undocumented feature from the 1.2 Patch.

This past week, "RAF_Dumoulin" (Dumo) got tired of talk about the need for new information updates to "Charles'" notes and putting other materials like "Von Beerhofen's" in one place. He set up a "wiki", a site where modders can post materials and correct the mistakes of others. Dumo is a tireless helper on the forums, with many solutions to problems. His counterpart is the technically knowledgeable "Huntress" (Kay Hammil), whose solutions to the endless oddities of different computers and video cards has saved many an EAW player's enthusiasm.

Conclusion

"The whole is greater than the sum of its parts" is an old saying, but it applies here. Without an enthusiastic community like those members who pestered Atari and the original game developers, European Air War would sit gathering dust on many shelves. Or fill garbage dumps.

As developed by the community, this flight sim is still far from having the "eye candy" of near-real-looking aircraft offered by other sims. But its "HR" high resolution looks good if you don't look closely. If you are dog fighting you won't be lollygagging around enjoying the scenery and counting the rivets on the plane near you. With the new flight models, you know you are getting a fair shake in the air.

The ground or sea may only be clutter to fighter pilots. But "Von Beerhofen", "Shreck", myself and others have recently produced some surprisingly lovely country or ocean to fly over in 256 colors and lure the player from battle in appreciation. Among the most impressive terrain ever done is Desert Air War covering the North African campaign.

The player can now fly bombers and many other types of aircraft beyond fighter planes. The limit is still 20 plane types in one "scenario," but the ever-growing number of scenarios has led to a long list of very different aircraft available.

EAW still does not have movable control surfaces — except for flaps, which have been added by tying their deployment to the landing gear ("undercarriage" in Britain). Its "damage model" doesn't show your aircraft full of bullet holes or gaping gaps — except for Jan Tuma's amazing biplanes. Its campaigns are not sparkling, but there is hope for new developments and new blood. You cannot have your own "favorite" aircraft design fly separately unless you are willing to give up some other aircraft types in the air (one online EAW squadron has personalized all their aircraft). Normally, all aircraft of one type have the same numbers, the same "skin" paint, except in cases like the nose art on bombers.

But this sim plays on almost all machines available today and it seems to play best on old ones with Win98 installed. It wants you to have a good time.

It will take time for new changes to come from rights granted by Atari to use the "eaw.exe" source code. But they will come, as little birdies have whispered about the exe's existence. "RAF_Roy" let the cat out of the bag again by saying flatly the old programmers have "99 percent" of it. A team is already forming to attack the new "target of opportunity". Whether Atari will take notice and take advantage of

the EAW community's eagerness to share their pleasure and have more people join in the fun is something to be determined by time. But the signs are bright.

After six years of loving attention, EAW does sparkle. It still has that "certain something" that makes flying it a joy and an exciting experience. It's also full of surprise "Easter Eggs" put in by programmers, such as a flock of geese that occasionally pop in. They were only UFO rumors until someone took screenshots.



"Easter Egg" appearance of a flock of pheasants in EAW posted by "Knegel".





Another EAW secret. Is this "thumbs up" pilot really "Sweet Sue" Pacquin, lead company artist, flying an aircraft of the same name?

You must learn a good deal before you can use all the "mods" effectively. Most can be found in one place: **Tally- Ho**, the EAW library kept by Mike "Sandbagger" Norris and the EAW Community exchange information **here** at the SimHQ EAW Forum.

The EAW community is friendly and quick to offer advice and help and commiserate when it doesn't work. "Mr. Jelly's" OAW and OAW Unified make it a "click and change" snap to switch aircraft and go from Russia to the Pacific in seconds. It also saves hard drive space by not having to include the basic CDF files with your new Desert Air War scenario or other scenarios.

As posted in the EAW Forum... You don't just fly this sim. *You create it.*

Screenshots and mods by Wallace "Wudpecker" Wood, Erik "Shreck" Brandborg, Ade "Flying Tiger" Kelley, and David "Skylark" Phillips:

- Skylark-- pic of the Macchi MC 200.
- Wudpecker-- mod of seas and ships wakes.
- Shreck--mod of Lysianski Island, part of the upcoming Midway update with many islands and shoals.
- Flying Tiger Kelley pic of the Mossie Mayhem.



Carrier takeoff.



Biplane furball. Jan Tuma's aircraft, "RAF_Dumoulin" pic

Pacific - Lysianski Island.



He 162 Volksjager



Macchi MC 200 over the desert.



Mossie-Mayhem by "RAF_Dumoulin"



Twin Mustangs by "RAF_Dumoulin"



USAAF canard answer to Shinden by "RAF_Dumoulin"