

Introduction

Welcome to Part Two of our look at some of the AI changes to **Falcon 4.0: Allied Force**. Last week we outlined the most significant improvements to the Air component, to improve realism and immersion. This week it is the Ground element and we explain how this has added a new “dynamic” to the battlefield. Sylvain Gagnon and Mike Laskey detail how the ground war has been transformed.

Air to Ground Attacks

Considerable work has also enhanced the way the AI prosecute attacks against ground targets. The AI will jink and go defensive depending on the concentration of AAA fire. They will also manoeuvre to spoof the AAA by varying altitude when flying through AAA but will also attempt to drop weapons as part of the mission goal. But, if the AAA is excessive, making it too dangerous to go in, the AI may not end up dropping bombs at all, which saves them from being shot down. Again, this is closer to the tactics of a human pilot, who might well decide to abort the mission.



SEAD Escort will also hunt down nearby en-route SAM sites (and not just at the target waypoint) and kill their radars before resuming its mission so the main flight has a better survival rate.

Ground Avoidance

Like all competent pilots, the simulated pilots in **Falcon 4.0: Allied Force** can fly at 100 feet AGL and not crash into the ground, even over hilly terrain like in the Balkans.

FAC

Yes, the role of the Forward Air Controller is modelled in **Falcon 4.0: Allied Force**. If you are assigned to a Close Air Support (CAS) flight, you check in with the FAC which will direct you to the target.

The player can also be the FAC and direct other flights, be they AI or human. If a player chooses to be the FAC, he declares that he is “In” the FAC role, and ready to assign targets. When established in the role, other aircraft on the CAS mission will check in with the player flying as FAC, and request targets. Then it is a matter of bugging the target and telling one of the checked-in aircraft to attack.

If you take the CAS mission, you check in with the FAC and wait for it to give you a target. Once you’ve finished, you check out.



OCA Strikes

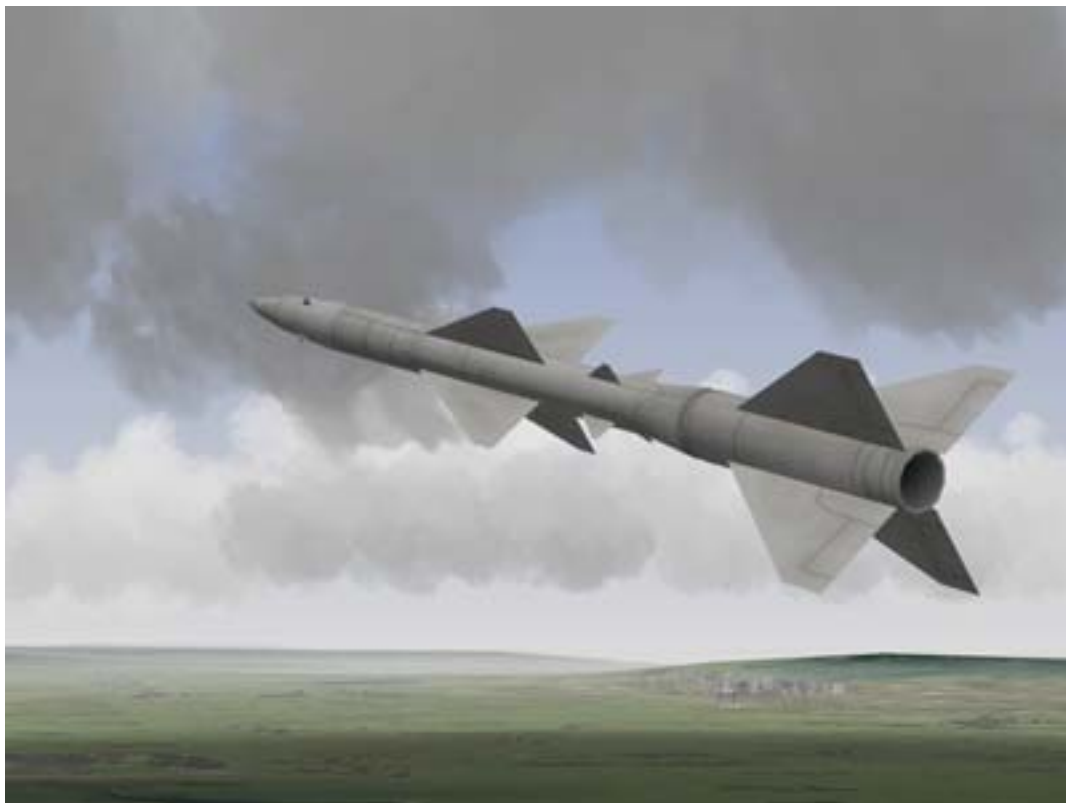
Efficiently delivering an attack against an airbase requires nerves of steel for the pilots of **Falcon 4.0: Allied Force**. Here at Lead Pursuit we greatly enjoyed the challenge of enabling both human and virtual pilots to interact and deliver a powerful punch against enemy airbases. Naturally with the enemy being the bad guys, they will attempt to use the same techniques against your airbases, so protect your airspace and be ready to accept a scramble mission if inbound bombers are detected by AWACS!

Reviewing the flight recorder after a safe landing enables you to observe precisely how events occurred. In training or other learning environments, the ability to step through the flight in slow-motion or real-time is a valuable aid to improving technique.

Speaking of improving technique, both human and AI pilots are equally capable of missing the target if distracted, which is less likely to occur of course with higher skilled pilots!

Ground Units

Ground units now react to the dynamic circumstances in which they find themselves in. For example, they will now go defensive and spread out of formation once a bomb attack is underway. This tactic mitigates the losses the unit might suffer, no longer are they sitting ducks. The human player may successfully get one pass, but after that the AI controlling the ground units will cause them to separate, unless they are radar vehicles, SAM launchers or AAA. Because these are trying to shoot you down, they will remain in position. As a consequence, bombing runs are much more challenging. SAM units can also successfully employ ambush tactics against aircraft. Ground artillery now provides better support for ground units, giving them assistance when required.



In the original Falcon 4.0, engineer battalions were present in the campaign, and moved about, but didn't actually serve any purpose. In **Falcon 4.0: Allied Force**, this has completely changed. Engineer battalions can make the difference between repairing a bridge within a few hours to it taking over a day or even longer.

Your forces will now call in engineer battalions and the engineers will respond to the highest priority. Let's say they are working on fixing up an airbase control tower when they receive a call to fix a front-line bridge. The engineers, providing they are within a realistic range of the damage site, will attempt to travel to the higher priority installation and hopefully effect a repair. They are only human however, and in the heat of battle they too want to stay alive, so don't necessarily expect them to throw themselves to the mercy of the enemy.

Controlling the ground war

Although this is deliberately not the major focus of **Falcon 4.0: Allied Force**, we recognised that sometimes players may want to assume a larger role in how the campaign plays out. We achieve this by offering manual movement control of the ground units in the 2D campaign map environment. Ground units such as infantry battalions will correctly follow the orders of their superiors by default, but players can now override these orders at a battalion level. Let's say a bridge has been destroyed, you can now manually task an engineer battalion to repair it. If you identify an asset particularly valuable to a strategy you are attempting, you can task tank battalions or mobile SAM unit to defend it. Finally after destroying a runway, you might see opportunity to capture the installation and then move in the defense battalions and engineers to repair the objective under its new ownership.





The “new” Order of Battle

The Order of Battle, or “OOB” feature of the original Falcon 4.0 has received a complete overhaul for **Falcon 4.0: Allied Force**. Players of the original will recognise that the OOB feature was non-functional other than displaying the initial state of war assets. This is no longer the case. The OOB is now subject to fog of war, meaning that enemy battalions will not be displayed in the OOB until they have been discovered on the battlefield by your forces. Information about the enemy becomes stale and inaccurate over time if you and your forces do not manage to keep these battalions in-sight.



The same is true for naval forces, and for objectives, the operational level of objectives such as power stations, factories, army bases and airbases is now accurately displayed and updated during the war effort. But this is now straying well into campaign territory, and this is examined in depth next week.