

A guide for Campaign and Mission Planning

By Hawk

With the help of *all* of my friends and mates at

MultiVipers

Team Speak at IP: 63.252.188.123

(Contact Host or Server Administrators for *server* information and password)

It is with my most heartfelt appreciation that there exist MultiVipers multiplayer server so that people from around the world get to plan, share, and experience the flight simulation Falcon 4 and the subsequent 2005 release of Allied Force.

Why a need for the Guide.

Since January 1999 I (*and many players like me from around the world*) have been enthralled with the simulation Falcon 4.0 and its various releases. At last the player is able to use and control the aspects and assets of the game that were envisioned by some and made into reality by others. Being able to control the Battlefield in its entirety from the *CINC's* (*Commander in Chief*) point of view of the ongoing air, land, and sea battles has just gotten a lot easier. Battlefield Operations has been a remarkable upgrade from the original Falcon 4.0 in terms of being able to control the head to head contacts and battles of all sizes during *Ground Operations* and the corresponding *ATO* (*Air Tasking Order*) which controls the *Air War*. Sea Operations can use some upgrades as they too play a vital role in the overall campaign. Sea operations do occur and the player does have control of the air assets assigned to the carrier groups. The player does not have the ability to move the fleet to specific places and hopefully this will arrive in a later upgrade. The *Artificial Intelligence* (*AI* or *Anything Insane* as I like to refer to it) has become much better but only in as much as the player has gained control over the battlefield. With *Lead Pursuits'* release of Battlefield Operations much of the battlefield has come under player control, albeit at a high price to be paid by dedication to the campaign and a whole set of *nuances* to be learned.

One of the most frequent questions that I get asked is *how do you know what to put up and where to put it?* This is one hell of a tough question to answer. It is tough to answer because you need to know the *flavor* of the campaign. You can not just jump in a campaign and expect to generate a successful mission without some knowledge of the battlefield. I generally rely on my knowledge of military affairs garnered while in the US Armed Forces. I have been involved in mission planning and execution. Being in the intelligence field also helped with an understanding of how battlefield operations are implemented. A lot of what I do in the Allied Force campaign is based on the knowledge I gained over a period of 20 years. Who would have thought that I would use my knowledge for such a *devious* purpose?

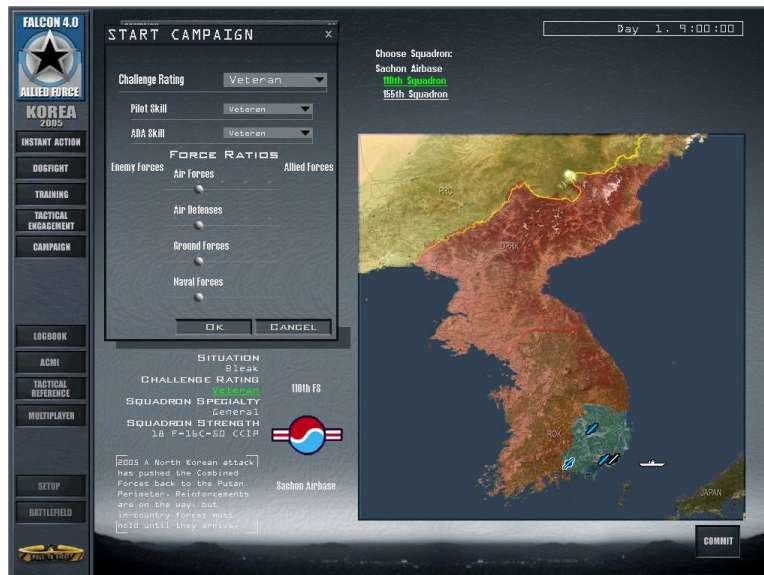
This guide will focus mainly on the Korea 2005 Iron Fortress Campaign. I and the other players never completely finished a multiplayer campaign in Battlefield Operations so *the players (from now on)* had to wait the campaign out and gather information so that we would not lead anyone astray. The multiplayer campaign that we were *controlling* would have not been possible unless all of the parties involved at MultiVipers were in general agreement as to how operations should have been conducted. The first thing that the players have to understand is that control of the Battlefield and Air Wars was a *24 hour operations* as it was played on a *24 hour server*. MultiVipers Server is more than capable of handling as many as 20 to 24 clients at any given time. One of the greatest benefits of multiplayer is that people met other people from around the world and all of us have contributed in one way or another to the outcome of the

campaign. I owe a special thanks to Hardcore as his server was one of the first places that I visited and got my *feet wet* in multiplayer action. My migration to MultiVipers was due mostly to connection issues and 24 hour operations. MultiVipers server has a scripted save and restart program. This allows the server to save the game status every 20 minutes thus if the server crashes for some reason (*this is a rarity*) the game is not lost for the last 12 hours or to the last save point. There is also a scripted restart program the will restart the server and the simulation resulting in the least amount of down time. Ten minutes is all that is required for a restart to occur.

As I mentioned the campaign was set in 2005 Korea Iron Fortress. All campaign *Challenge Rating* settings were set at the veteran level. The campaign and level of experience were chosen for the proximity and easy access to the *Forward Line of Troops (FLOT)* or *Forward Edge of Battlefield Action (FEBA)* as well as the desire to experience the campaign in a more aggressive manner. Understanding the improvements that have occurred with Lead Pursuits' release is difficult at best. As I have only flown in Korea at the Veteran Level (since day one back in 01/1999) I believe that I have a general understanding of how the *AI reacts to player interaction* if anyone can truly make such a bold statement. While I also have a desire to experience the Balkans campaign I am not nearly as knowledgeable with the Balkans arena as I am with the Korean arena. Campaigns are not scripted except for the *starting points*. This means that the players battlefield is always changing based on overall *player ratings* and not by *rules that are set in stone*. The bigger the gene pool of players the more diverse it becomes and you will never fly a mission that is like the last one you flew.

This guide will hopefully assist its readers in managing both the Air and Ground Wars utilizing the options available within the simulation. It is not a single source document and should be used in conjunction with Lead Pursuits' PDF manual that came with the simulation. I wanted to make this a short and to the point guide but the further I got into creating it the more information needed to be presented. While Lead Pursuits' on line manual *is* detailed there are nuances that are not addressed within the manual. The screenshots are hyperlinked allowing the reader to access a larger scaled picture.

Starting the Campaign



There are three ways to operate the Air Tasking Order (ATO) and five different *Challenge Ratings* to select ranging from *Cadet* to *Ace* levels. Challenge Ratings are an individual option but I have found that in multiplayer the higher the Challenge Rating the more experienced virtual pilots you will find there. All

pilots of all levels were and continue to be at MultiVipers. The three options of managing the ATO are as follows: You can try to manage the ATO and Ground War completely. *I highly recommend that you do not try this as it requires a commitment of enormous proportions and at least a half dozen direct contributors to the battlefield management are required to update the Air War and Ground War efficiently.* You can also allow the AI to control everything and take your lumps (*remember the Anything Insane part*) or the players can do a half and half type of thing. This requires direct input from players into the overall flavor of things but also allows for the AI to generate the more tedious aspects of flight operations. *Do not let the AI control your ground forces.* More on this subject later. These options are available by selecting the *Priorities* window and either not having the radio buttons for *ATO set by HQ* and *Set by HQ* options either on or off. Within this campaign the *ATO set by HQ* is selected while the *Set by HQ* is not. Control of the *Target Type*, *Mission Type* and *PAKS* are managed by the players and not the AI.

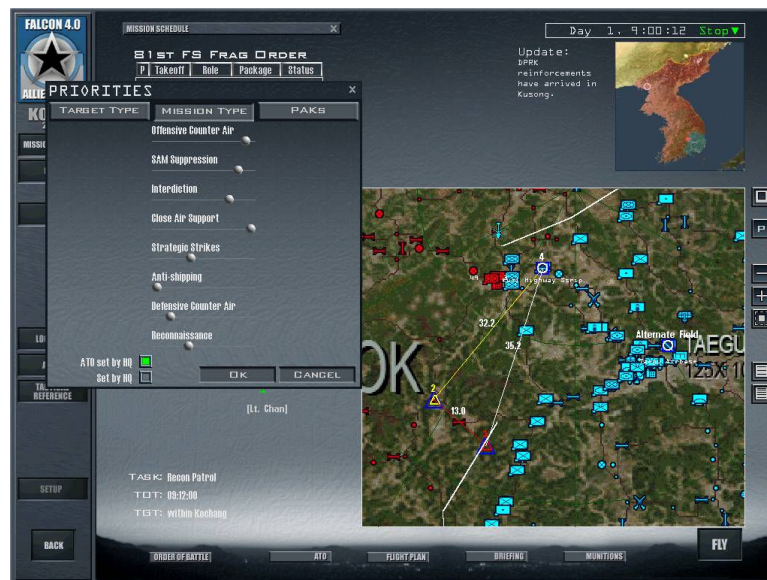
It can not be stress enough to the players how much the *Priorities* and its sub menus *Mission Type*, *Target Type*, and *PAKS* are integral to the campaign. This is how the *flavor* of the campaign is selected. The players saw during the early part of the campaign that they were in a defensive posture and rapidly retreating to the Pusan Perimeter. Players only controlled 4 airbases (*Taegu, Kimhae, Pusan, and Sachon*) and were under jeopardy of loosing *Sachon Airbase* and *Taegu Airfield* to the enemy. *Pohong* did not even come into play until after the 10:00 hour and it is also under threat. The players are required to keep *all* of their airbases operational and under friendly control otherwise up to as much as 25% of their air assets are fodder. When an airfield goes down the ATO will be robbed of assets as it should be. An inconvenience that the players found was that they were unable to get any of their fighters to move to forward airbases and that *Lead Pursuit* is looking into the matter at this time. This was only limited to the fighters as the support aircraft, helicopters, and A10's relocate at will once the airbase or airstrip was secured and far enough behind the *FLOT*. 'Far enough away from enemy activity' is a relative term and no one knows exactly what the distance is. It can not be overemphasize that the players need to *protect and manage* their ground forces. If the players loose their ground forces they loose the war. If the players can not maintain Air Superiority they loose the war. Only through a combination of both Air Superiority and Ground Forces management are the players able to achieve their goal of winning the campaign or at least ending in a draw.



Players should note that the *Infrastructure*, *Naval Units*, and *Naval Bases* sliders are set to the extreme left. This allows the players to choose which of the bridges get destroyed and at what time (*Infrastructure*). The Navy of the North is no match for the Navy of the South. Naval targets can be detailed to a lower priority resulting in more air assets for *OCA*s (*Offensive Counter Air*) operations and *DCA*s (*Defensive Counter Air*) operations. If the players leave it to the AI they will find that they will be locked into the Pusan Perimeter

as the AI will select almost all of the bridges for destruction without an exit strategy from the Pusan Perimeter. Lead Pursuits' newly added engineer units do not repair multi-spanned bridges. However, utilization of the proper engineer units will accelerate airfield repairs. There will be additional details on this subject later. While reviewing *Mission Types* players consider the need to control both Air and Ground operations. Players can not surrender control of either of these operations or they will have a great deal of difficulty trying to regain superiority at a great cost to the campaign both in air power and ground power which are in a very limited supply and re-supply could use a thorough looking at by Lead Pursuit.

Lead Pursuit needs to take notice that the re-supply of ground units is not occurring. While the re-supply of air ordinance seems unlimited the re-supply of ground ordinance and supplies does not occur. When troops and weapons are lost the remaining forces within that unit are left to a bane of attrition and then utter failure and destruction even if moved to the rear. An example of this is disappearing units with around 5% to 10% supply. Even if they are retired to the rear eventually they will just expire while under no threat from the enemy. There are additional Ground Force units that are inbound from outside of the theater but the re-supply of these units with personnel and equipment does not occur. The most prevalent re-supply shortfall is that of the Patriot Battery's MSQ radar. Once the radar is destroyed by enemy SEAD strikes the MSQ will never again be operational. This makes the Patriot Battery useful only for capturing small inconsequential enemy held territory such as the political targets.



Players realize that to gain air superiority and maintain their ground posture they must destroy the enemy's air capability and suspend its forward ground operations by *destroying* the enemy ground forces. Attrition of ground forces is not enough. Destruction of the enemy can only be done by destroying supporting airbases and *moving mud*. Naval operations, while required for successful campaign wins, eat up a lot of air to air and air to ground assets as well as players *Electronic Counter Measures (ECM)* warfare capability. Select the positioning of these sliders to coincide with the players short term objectives. It requires approximately 2 to 3 hours for any impact these sliders will have on operations so players must think outside the bubble and anticipate what the AI will throw at them and how they will achieve their short term and mid term objectives. Short and mid-term objectives are selected through intelligence and the *Order of Battle (OOB)*. Of special note is the need for intelligence information. Players must know where the enemy is so the questions *how and with what* will players destroy that particular enemy asset with. Players can not discount the requirement for *Defensive Counter Air (BARCAPs, DCAs, and Intercepts)*. These flights are the protectors of the players' assets. While it may seem that there are a lot of useless BARCAPs generated, the degree of timing and multiple level control of the air is of paramount importance.

PAKS are also vital. The settings (either less red or more red) will tweak the AI to generate missions that will support the PAKS.

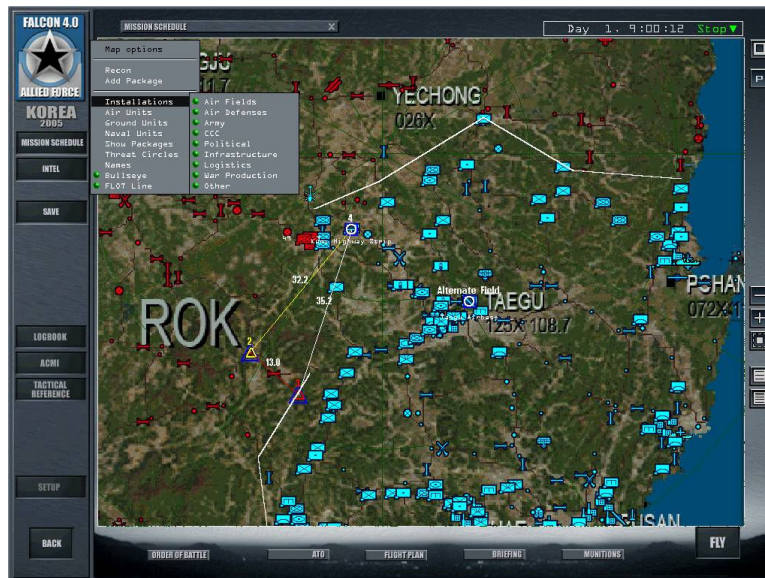
Lead Pursuit need to take notice that when in Multiplayer mode that when a client machine adjust the Priorities sliders the sliders will be updated on all client machines but will not update the server. As a result only the server can change the Mission and Target Types. Client machines do however update the server's PAK's. The downfall to this is that only the server player has the capability to change the flavor of the war. This is a must fix in any future release.



Once these selections are identified and set players are ready to commit to the campaign and get the mission building sub-routine to generate the types of missions that will achieve the players short term and mid term objectives. A short heads up on the ATO. The very first thing that has to be accomplished is to clean up the ATO. By this I mean that the ATO has to be checked thoroughly. Deleting of the suicidal missions as well as checking the tasking of the assigned flights is paramount. Sending in *A10 Warthogs* to attack airbases and airfields with rockets is not the way to proceed. It is however a suprisingly fast way to loose many of your attack aircraft.



The planning map is where players are going to obtain the visual intelligence information for the campaign. This is set to personal preference and can be used as the player sees fit. Players recommend that all of the map properties be selected except *Squadrons* under 'Air Units', 'Show Packages' and 'Names'. *Battalions* instead of *Divisions* with all three sub options of 'Combat', 'Air Defense' and 'Support' should be selected so that you can see all of the ground forces, **both** friendly and enemy. Players will be surprised at what seemingly innocuous threat units are capable of. Threat circles will display the *known* location of radar guided *Surface to Air Missiles (SAMs)* systems and the lethal radius of these threats at either high or low altitude. This is only valid for *SAM* systems and not *ADA (Air Defense Artillery (FLAK))* threat systems. Players will not see the lethal zone of the *Patriot Battery's (Air Defense Battery)* unless they are flying in a *SEAD (Suppression of Enemy Air Defenses)* flight and are now or have been carrying the *AGM-88C HARM (High Energy Anti-Radiation Missile)* or other *SEAD* ordinance. 'Names' will overcrowd the screen and make it impossible to navigate through the options available unless players zoom in on the *Mission Planning Map*. At present players have direct access to air and ground forces in the campaign and a visual cue of all available targets within the *Battlefields* with the exception of ground *Brigade* and *Division* units. This will be addressed later.



The Order Of Battle (OOB)

The OOB provides much needed battlefield information on the assets of all participants of the campaign. During the start of the campaign the players are given an opportunity to view an accurate picture of Air and Ground assets for both friendly and enemy forces. The only problem is that *Battlefield Intelligence* becomes outdated early in the campaign. Air force levels are accurate and reflect what air assets are available and where these assets are. Ground forces tend to dwindle fast based on combat engagements.





Players selection of the flags of the countries involved in the conflict within the OOB will allow players to see all assets and find the locations of these assets. This is paramount in planning any ongoing air or ground operations. The above two slides show the air force compliments at both *Pusan* (US-ROK) airbase and *Onch'on* (DPRK) airbase. Utilizing the same techniques players can view ground units. This is the easiest place to find what are the most serious and immediate threats to players forces. *A complete list of aircraft assets can be found in the OOB by simply clicking on the airfield that has a + sign next to it. By expanding on the + sign, you can see what air assets are located at what air bases.* Players are reminded that airfields with no aircraft still play an important function within the campaign and that if there is no + sign to be expanded upon it does not mean that the airfield is not used, it is just not occupied at present.



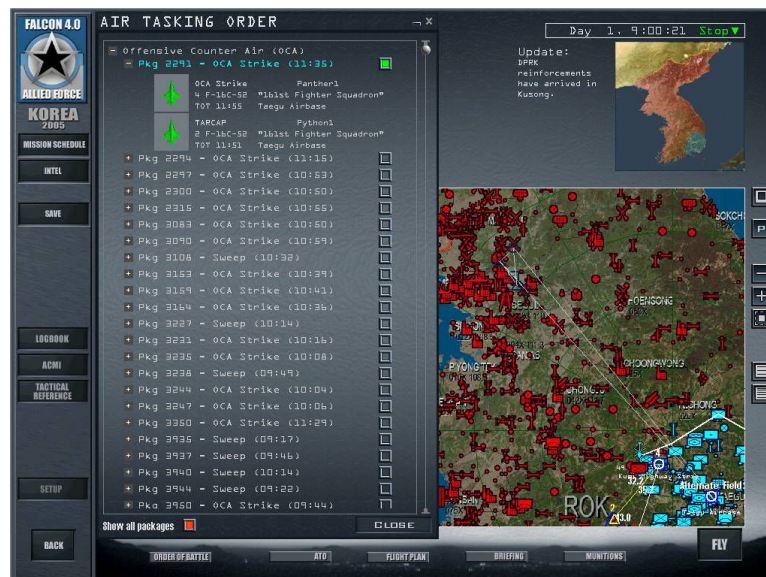
Highlighting the specific air or ground unit and mouse clicking *Find* will result in the planning map zooming onto the selected target in the Mission Planning Map and provide the units *location*, *troop strength*, and *its assigned echelon*. These numbers are an important factor in deciding how to best use units

in combat engagements or what air assets should be utilize to neutralize enemy threats. The ground operations section will provide a clearer description of why these values are important.

The Air War

The Air Tasking Order (ATO)

The air tasking order is one of the most important interfaces players have with the campaign AI. This is the place to find all of the assets that the air manager has assigned for offensive, defensive, and support air operations. It is by no means a complete list as there are aircraft held in reserve as well as aircraft that have returned from operations that must be re-fueled, re-supplied, and re-tasked. The ATO should hold roughly about 60% of the players air assets but this figure will change dramatically during operations. The ATO is also the quickest way to select a flight and join the flight regardless of the squadron that you joined when starting the campaign. Players are advised that they do not have to join a specific squadron at the *commit* to the campaign. Applying the Commit radio button is enough to join the campaign unless players are in single player mode. During *multiplayer* there are three ways to join a specific squadron or flight. The first is by opening the ATO and activating the radio button on the bottom of the screen to *Show All Flights*. Players that have selected this radio button will have access to all the air operations and air supported ground operations that are in the ATO.



By expanding on the flight package and highlighting the flight that the player wants to join the *virtual pilot* selects via the mouse button to join the flight. This will take the player directly to the mission planning *Fragmentation Order (FRAG Order)* of the squadron that is supporting this flight operation. From the ATO the player can switch from squadron to squadron and from flight to flight. This is the location where the players will find the package number (in this case 3106) that is usually referenced when passing information from one virtual pilot to another virtual pilot. The ATO window will also allow the player to delete or cancel what are commonly referred to as *suicidal* flights. An example of a suicidal flight is a *single* fighter *BARCAP* missions when there are multiple *MiG31s*, *SU27s* and *MiG29s* in the BARCAP area. Another example of a flight to be removed from the ATO is one that is going to bomb a power station deep behind enemy lines while the station is at *5%* operational status and is of a very low priority. These flights are best reserved for when there is no threat from enemy air and *SAM (Surface to Air Missile)* systems. Protecting players air assets can not be overstressed and this is a number one priority to monitor

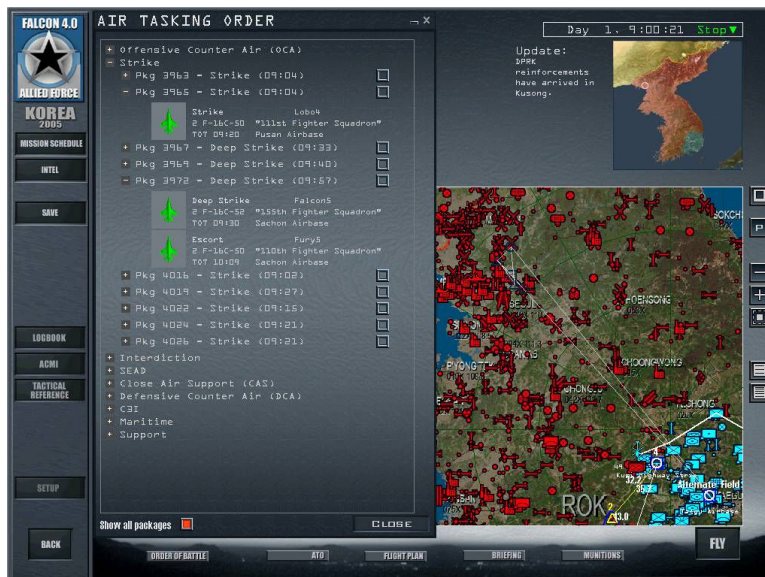
and should not be taken lightly. For every airframe that the player loses the campaign initiative leans to the enemy side. It is much better to abort a mission than to lose four or eight airframes. A second way to join a flight is to open the *Chat* window in the mission planning screen and highlight the name of the virtual pilot that is already in the flight. Mouse clicking on the player's name will provide an option to join the virtual pilot in his flight. The player that you are joining must already be in the flight for this to work. A third way for a virtual pilot to join a flight is to join the squadron when the player first commits to the campaign. The third option is the least desirable as you never know whether the airbase is operational or if there are even flights being generated for the squadron at the airbase.



Air operations are categorized. *Offensive Counter Air (OCA)* are by nature one of the two most horrific operations in the ATO. The other is *mud moving* or offensive/defensive battlefield operations. OCAs are where the battles for Air Superiority will be fought. *Offensive Ground Operations (mud moving)* is where the tires meet the road. In air operations this is where players will find all of the offensive air missions such as *OCA Strikes* to knock out enemy air assets and the enemy's ability to launch various aircraft, *Sweep* missions for clearing a sector of air space from all enemy air assets (including helicopters), *Escort* flights for the protection of offensive operations aircraft, *TARCAP (TARget Combat Air Patrols)* flights for *CAPs* of target areas, and *Suppression of Enemy Air Defenses (SEAD)* escort flights. These SEAD flights differ from the SEAD strikes packages.



Strike and Deep Strikes are missions to destroy enemy production facilities, support facilities, power plants, factories, infrastructure, and like targets. There is little difference between strike and deep strike packages except the distance flown to target. *These strike missions need to be watched closely as they have a direct impact on the re-supply of the enemy forces.* A strike can be an *Interdiction* if it has a direct bearing on immediate battlefield operations. An example of an *Interdiction* is the destruction of a bridge to prevent the enemy from crossing it with great numbers of ground forces.





Interdiction flights are by nature one of the mud moving packages available. The other is *Close Air Support (CAS)* missions. The main difference between the Interdiction and CAS flights is that the CAS flights are in *close proximity* to friendly ground forces. If you hit a friendly ground force or aircraft expect to be court-marshaled for dereliction of duty. There is no worst scenario while flying in multiplayer mode then being in *A2A (Air to Air)* combat and having to watch out for *both* sides. Virtual pilots despise riding silk instead of fighting the fight. Make sure you know what you are shooting at.



SEAD (Suppression of Enemy Air Defenses) are flights with the sole purpose of destroying both *SAM* sites and *ADA (Air Defense Artillery (FLAK))* units. Players may have noticed there are some *EA-6B Prowler* ECM aircraft that are escorting these *SEAD* flights. Their purpose will be addressed in the *Mission Planning and Building Section*. *SEAD Strike* flights differ from *SEAD Escort* flights which are flown in support of other flight packages.



Barrier Combat Air Patrols (BARCAPs), Defensive Counter Air (DCA), and Intercepts are what keep the players airfields, air assets, *IADS (Integrated Air Defense System)* and everything else you own safe from enemy air attack. BARCAPs are usually flown in 20 to 30 minute increments of *Time on Station (TOS)*. They are flown in multiple levels consisting of low, medium, and high altitude packages. It is not unusual to see several BARCAPs being flown in the same area at the same time. These flights are usually handled nicely by the ATO mission generator but they have a way of sapping players offensive capabilities. The AI will also abandon the player at the most critical time by not generating any BARCAPs for some periods of time. Players have to be sure to have their *Defensive Counter Air Mission Type* in the *Priorities* window set to generate the amount of BARCAPs that players think are require. *Defensive Counter Air* flights are generated to protect specific assets. Players will see DCAs protecting critical bridges as well as lanes of air travel. *Intercepts* are generated very poorly by the ATO. Intercepts can be generated easily and should come from aircraft reserves at the air base under threat. It is unfortunate that there are no reserve aircraft at the air base under threat available strictly for intercept missions. When players need the intercepts the most airframes are not there so some scrounging around is required.

Lead Pursuit would save us all a great deal of scrounging time by improving the availability of two to four dedicated aircraft at each base in a ready alert status depending on squadron availability at that particular airbase or airfield. This is not unreasonable and is keeping within current doctrine of operations. Intercepts should also be rated as the highest priority and should allow for ordinance re-configuration of any set of fighter or fighter capable aircraft at the airbase under threat.



C3I is short for *Command, Control, Communications, and Intelligence*. *C3I* flights consist of *AWACS*, *Recon Patrols* (*MD500*'s, *U2/TR1*'s, and *JSTARS*) and all other sources of intelligence, command and control. Without an *AWACS* airborne the players will not be able to identify or have a visual cue of the enemy approaching in the Mission Planning Map until the last minute when it is too late for the player to react to the incoming threat, or until a friendly flight has *visual* contact (within the visual bubble for the AI pilots) on the threat flight. The player will not hear that friendly voice in the sky respond to the query of *declare*. *AWACS* are as integral to the campaign as fuel is to the aircraft.

Recon Patrols play a vital role in updating the Mission Planning Map. If players do not know where or how powerful the enemy is then how can the player decide the how and what to use against the enemy forces and deliver the *deadly* blow that is required to stop the enemy's advance. The AI is lacking severely in keeping *Recon Patrols* airborne and players should get used to setting up the flights themselves. Intelligence and planning will lead to a better chance of survival thus increasing the probability of a campaign win.



Maritime missions are usually carried out by players naval air assets. These missions can be categorized as either land or sea operations. These are the missions that will destroy the enemy's naval forces by sinking ships (oil tankers and cargo ships are important) and naval support units such as ports. While Maritime missions are vital to successful campaign operations they can be delayed for a short time so that the *Air Wings* assigned to the *Aircraft Carrier Group* can be utilized in more productive roles.

FALCON 4.0

ALLIED FORCE

KOREA 2005

MISSION SCHEDULE

INTEL

SAVE

LOGBOOK

ACMI

TACTICAL REFERENCE

SETUP

BACK

AIR TASKING ORDER

Offensive Counter Air (OCA)

Strike

Interdiction

SEAD

Close Air Support (CAS)

Defensive Counter Air (DCA)

CBI

Maritime

Pkg 2507 - Naval Strike (09:05)

Naval Strike

HornetS9

3 F/A-18E "24th Fighter Squadron"

TOT 09140 7th Carrier Present Task Force

Escort

HornetS9

3 F/A-18E "24th Fighter Squadron"

TOT 09139 7th Carrier Present Task Force

Pkg 3500 - Naval Strike (09:37)

Naval Strike

HornetS8

3 F/A-18F "41st Fighter Squadron"

TOT 10110 7th Carrier Present Task Force

Escort

StingB

3 F/A-18F "41st Fighter Squadron"

TOT 10109 7th Carrier Present Task Force

Pkg 3553 - Naval Strike (09:05)

Naval Strike

HornetS8

3 F/A-18F "41st Fighter Squadron"

TOT 09138 7th Carrier Present Task Force

Escort

StingB

3 F/A-18F "41st Fighter Squadron"

TOT 09137 7th Carrier Present Task Force

Support

Day 1, 9:00:23 Stop

Update:
U.S.
reinforcements
have arrived in
Taegu.

Show all packages

CLOSE

ORDER OF BATTLE

ATD

FLIGHT PLAN

BRIEFING

MUNITIONS

FLY

Other flights are the *Air Mobile* flights. Lead Pursuit has given the players a means to move some ground units throughout the theater of operations without having to wait days for them to arrive at the needed locations where the forces can then support ground battles. There is a rather large list of what ground units are *air mobile capable* and this subject will be covered in greater detail in ground force operations.



Lead Pursuit needs to take notice that only C130s currently do air mobilization operations. The C17s, C5s, and C141s airframes need to be utilized in this role also. While Air Mobilization has come a very long way there is little information on how to do an air mobilization. CH47s and UH60Ls will do air mobilization of light infantry units.

Generating Missions

How do I get the Mission in the Air?

I like mission planning. Mission planning is one of the two most intriguing aspects of this simulation. This requires a good deal of ingenuity as well as knowledge of what airframes are in theater and what their capabilities of accomplishing the required mission are. Players are required to know the airframes, ordinance, fuel capacities, the best airframe for major playing roles, and the best airframe for minor playing roles. For this reason players (as an example) need to concentrate on the 15 day campaign for the moment that recently ended, in what we hope was at least a draw. First and foremost players want to express concern over the availability of airframe types and that the lack of availability of these airframes hindered the progression of the campaign. It is possible that it was somehow connected with the inability of the fighter airframes not being able to move near the FLOT to captured airfields. There was wide-spread disappointed that available assets did not include currently available airframes.

Lead pursuit needs to take notice that in any Korea 2005 campaign, Korea would have the same assets available as during either Gulf War. Players did not receive reinforcements of B52s, B1Bs, B2s, E3s, JSTARRS, U2/TR1s, F117s, and F14s with another aircraft carrier group. These assets were never in the theater of operations. That coupled with being restricted to 5 airfields (including Kadena in Japan) lead

for some more intense moments where the players could only stand aside and scratch their heads. Enemy forces were very well re-enforced with H6s and Tu95s, an almost unlimited supply of Mig 31s, SU27s, and Mig 29s. Although players did not see any A50s (there were supposed to be two) players reported seeing some AN124s, IL76 Mainstay transports and IL78 Re-fuelers.

ORDER OF BATTLE

Day 11, 1:57:54 Stop

Samjiyon Airbase
100% Operational

- 181st Bomber Squadron
6 Tu-160 48 Pilots
0 Players
- 181st Fighter Squadron
11 MiG-31 48 Pilots
0 Players
- 182nd Bomber Squadron
8 Tu-160 48 Pilots
0 Players

Army : CIS
Army : DPRK
Naval Forces : CIS
Naval Forces : DPRK

TARGET LIST

TARGET	CONDITION	VALUE
Samjiyon Airbase	100% Operational	
Runway	No damage	Medium
Runway	No damage	Medium
Runway	No damage	Medium
Runway	No damage	Medium
Control Tower	No damage	Low

Buttons: STATUS, FIND, CLOSE, SETUP, BACK, ORDER OF BATTLE, ATC, FLIGHT PLAN, BRIEFING, MUNITIONS, FLY

ORDER OF BATTLE

Day 11, 1:57:54 Stop

Liuh Airbase
100% Operational

- 22nd Fighter Squadron
11 Su-27 48 Pilots
0 Players
- 40th Fighter Squadron
11 Su-27 48 Pilots
0 Players
- 70th Fighter Squadron
12 Su-27 48 Pilots
0 Players
- 88th Fighter Squadron
12 Su-27 48 Pilots
0 Players
- 89th Fighter Squadron
11 Su-27 48 Pilots
0 Players
- 90th Fighter Squadron
11 Su-27 48 Pilots
0 Players

TARGET LIST

TARGET	CONDITION	VALUE
Liuh Airbase	100% Operational	
Runway	No damage	Very High
Runway	No damage	Medium
Runway	No damage	Medium
Warehouse	No damage	Low
Warehouse	No damage	Low
Manufacturer	No damage	Low

Buttons: STATUS, FIND, CLOSE, SETUP, BACK, ORDER OF BATTLE, ATC, FLIGHT PLAN, BRIEFING, MUNITIONS, FLY



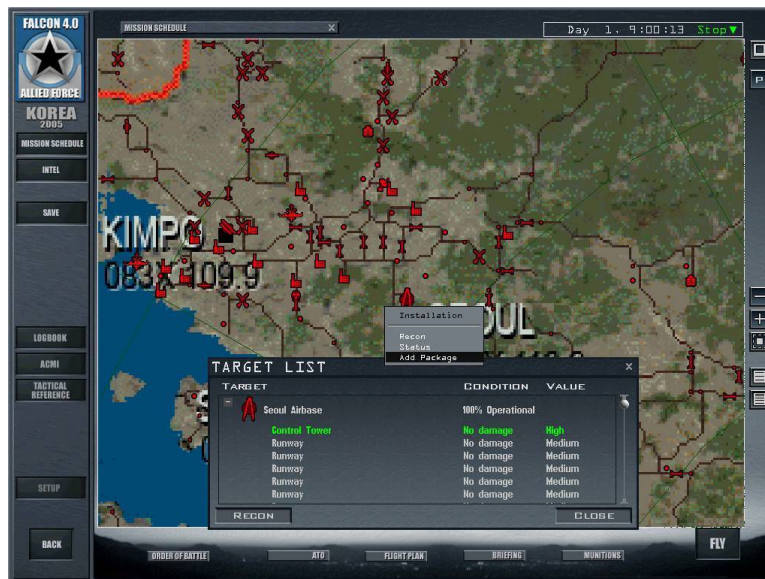
The four most dangerous airbases in existence during the campaign are shown above. Mission planning by players for operations to remove the threats resulted in intense debate and required knowledge of the *flavor* of the campaign. The later part of this guide will address the OCA strike that was generated for Liuhe Airbase.

Building Intelligence Missions

MD500 Defender Helicopters and E2C Hawkeye AWACS were the only intelligence airframes made available in this campaign. AWACS of which the E3 is a member provide the players with an overview of what the air and threats are. The TR1s/U2s and JSTARS (*Joint Standoff Target Acquisition Radar System*) also provide other intelligence data on both ground troops and fixed targets. TR1s and U2s are long range over the target reconnaissance airframes while the JSTARS is a behind the FLOT asset. Also referred to as

the FEBA (Forward Edge of Battle Area), JSTARS airframes operates a good distance behind the FLOT. JSTARS are slow movers and may require a HAVCAP (High Airborne Valued CAP) to protect the asset depending on the air war situation. All of these flights update the battlefield and keep the Mission Planning Map as current as possible. Head to head engagements with ground forces as well as over-flights by friendly aircraft in the battlefield area update the Mission Planning Map with locations of both friendly and enemy forces.

Seoul Airbase was recently recaptured by the *DPRK* and players have seen that the runways are 100% operational even though the airfield is rated at only 55% operational. The need to recon the area to receive an accurate intelligence report of what is there is required so that mission builders may select the proper airframes and ordinance for the strike and possible select other airframes for support roles as needed. The first example of mission building will be an *MD500 Reconnaissance Mission*.



The first step is to place the cursor (the jet thingy) over the *target* and mouse click with either the right or left mouse button, depending on your setup and select the *Add Package* option.



The next step is to select a *Time of Takeoff* or *Time over Target* and insure that one of the selections is locked by selecting the *padlock* and making sure the *padlock* is green and highlighted. The Takeoff time will be about 5 minutes from present *campaign game time*. Information is required immediately so the *Time of Takeoff* is the better selection to be locked. Delaying the *Time of Takeoff* will result in delayed intelligence. Select this package to be a priority *A* package. A priority *A* is required as we are going to task follow-on airframes to destroy *Seoul* airbase and we are required to know the amount and types of threats that are present as well as the types of threats that are moving in.

Lead Pursuit needs to take notice that the Package Priority does not appear to work as a package F is just as likely to get airborne as an A is.

Now select the type of airframe that will be utilized and the amount of airframes required for this particular mission. The squadron and departing airfield/airstrip are also selected. To begin this process we hit the radio button *New*. This will bring up the *Add Flight* window that is used to configure the particulars of the package being generated.



Within the *Add Flight* window there are several categories that have sub sections. It is necessary to be familiar with the airframes capabilities. The *Aircraft* window shows all aircraft squadrons in theater at the present campaign time as well as potential inbound aircraft squadrons that may become available at some future date. In this case the A-10 Warthog *attack aircraft* is the defaulted selection due to it being the first airframe alpha-numerically within the menu. The *Role* menu will assign the specific task that must be accomplished by the package that is selected to ensure a mission success. There are different roles for different airframes so some options will be available for some packages while other options will be available for other types of packages.



In the above slide there are three types of missions that this airframe can carry out as well as a fourth mission type, that of *Training*. The Training options are available for all airframes so it is from within here that the players are able to create a Training mission that is outside of the normal training missions that are available for all to experience. Notice the use of *mission*. This is not a training flight that will just take off

or require you to land but it will be of the entire mission from startup to taxi to takeoff to navigation to ..., until the player lands and shuts-down the aircraft then exits the 3d simulation. In this case a *Recon* will reconnoiter a specific target. *Patrol* means the aircraft will just do exactly that, patrol an area. *Recon Patrol* is a reconnoiter patrol of an area instead of a single target within an area so this is the option that is chosen. *Size* is the amount of airframes that you want to dedicate to this mission. Select a *4-ship* due to the need to collect intelligence information from *around* Seoul Airbase as well as the airbase itself.



The next objective is to select the squadron that the aircraft is to be provided from. Usually the key is to use the squadron that is closest to the requirement but sometimes players have to use squadrons that are further away due to lack of available airframes within this specific squadron or even no take-off slots being available. Players may have to search through 3 or 4 squadrons to find some airframes available.

Lead pursuit needs to take notice that it would be beneficial if only the squadrons that have the required assets and can meet the Takeoff or Time over Target should be available for selection. This would result in less time being spent in locating airframes for specific mission types and times.



After the squadron is selected the *Air Base* will be automatically selected. The *Target* window tells me that the recon area is *South of Saet'omal* which is the target area that we require information on. No other target area is selectable in this instance. When ground operations are covered the target window will allow different target selections. Within air operations players will find that the target window will offer different

options. After the player has ensured that all the required information is correct the *OK* radio button will be initiated to generate the *package*.



A *package* is but one portion of a mission. This is a complete package of airframes for this particular mission. As well as seeing the package generated in the *Add Package* window the steering points (*waypoints*) will be generated at the same time on the Mission Planning Map. Now is the time to move the waypoints, create new waypoints if needed while deleting waypoints that are not needed. Waypoints usually consist of a *takeoff* waypoint, a *marshalling* waypoint where different packages meet prior to ingress into the target area, the *insertion waypoint* or IP, the *strike* waypoint, the *split* waypoint and the *landing* waypoint. Other flights will have a smaller number of waypoints and waypoint requirements depending on the mission assigned. This is package and mission dependant. Other waypoints such as re-fueling and alternate landing field may also be selected or created. Changing waypoints after the mission has been created has been known to cause some crashes to desktop CTDs as well as relocating the takeoff waypoint to nowhere near the airfield that the package is departing from. If this happens the flight should be deleted and the player should re-start the package building process. Deleting the flight if need be due to an error being created during the package generation process requires only that the flight is highlighted in the *Add Package* window and then the *Delete* radio button being selected.



Two additional waypoints to the flight plan were added so that the reconnaissance flight would cover more than just the defaulted values. Information is needed on potential threats to follow-on aircraft so we are attempting to assess if there are ADA units assigned to nearby ground units that may pose these particular threats. Mouse clicking on a steer-point of interest indicates that the required information to ensure that the *Time on Station* (TOS) and selected *Action* are accurate. Only now should the *OK* radio button be selected to have the mission placed into the ATO. Players may get an abundance of error messages at this point ranging from 'takeoff time too early or late', 'no available takeoff slots', 'no available aircraft' and other messages that will show why the mission can not be entered into the ATO. This is the hard part to mission building and if Lead Pursuit can find a way to only allow available aircraft to be tasked many of these messages would go away. If confronted by one of these *no flight messages* the player will be required to begin the mission building process yet again.

Creating additional waypoints has been suspected to cause the waypoint day option (in the TOS menu) to be advanced up to day 36 in some instances in multiplayer. Testing is ongoing to either verify or discount this problem. It is believed that this is the reason that there are flights generated in the ATO that can not be deleted for extended periods of time but still consume the assets in the theater of operations which will result in less aircraft being available for mission planning and execution. Loosing a set of aircraft for a period of 36 days or less will cause adverse results in campaign and ATO management. Make sure that all your waypoints are properly timed. If there is something wrong with a waypoint, usually the Mission Planning Map will show a red line from waypoint to waypoint. I can not stress enough the need that you check all the waypoints in each and every flight that is you generate (not the AI) or else you may find that after a number of days there are a substantial amount of entries in the ATO that will not be flyable or deleteable.



The mission has now been assigned into the ATO for takeoff at 02:01 hours. The last step needed with this mission is to ensure that the weapons load-outs are correct for the mission. The package number (3856) is what virtual pilots will refer to when they talk about joining a flight. Being assigned to the squadron that the flight is scheduled from requires that the player highlight the aircraft package in the ATO and selected the *Join Flight* option by mouse clicking on the sub menu. For the most part the mission planner will automatically be placed in the number one slot of the aircraft when the mission is generated. The reason for this is so that the mission planner may change *all* of the weapons load-outs for the airframes in the package. The load-out of the number 2 can only be changed if you are flying as 1 or 2. Number 3 can change the load-out for both 3 and 4, while the number 4 can only change his load-out. The MD500 Defenders are capable of carrying a 12.7mm machine-gun so the mission planner wants to ensure that it is loaded on the airframe by utilizing the weapons load-out screen.



The mission planning phase has been analyzed, built, and placed into the Air Tasking Order for execution. At this point all that needs to be done is to exit the *Weapons* screen and begin the next task. If players are not aware of the following the clock in the *Weapons* screen is currently yellow. This indicates that the flight is within 4 minutes of take off time. As long as the clock stays yellow the player has the option of changing the weapons load-out. Near the 2 minute mark the clock will turn to red and the *OK* radio button will disappear as the weapons load-out may no longer be changed. If the weapons load-out does need to be changed the *Flight Plan* window can be opened and the *Takeoff* time can be adjusted ahead some small amount of time just so long as the aircraft is not in taxi or takeoff mode. Be particularly cautious when adjusting the waypoint times due to the previous caution statement.

All entries into the Air Tasking Order are created using the same methods utilized above. There are slight subtleties but essentially the game is the same.

Mission Planning for the F16 in Air to Air Engagements

While mission planning for the F16 is a more difficult process the general sequence for events should follow the same routine that was used previously. As the F16 is considered the workhorse of the campaign due to its multi-role *fighter attack* aircraft status, it can carry a vast array of weapons for either mode or both modes simultaneously. These weapons range from Air to Air weapons and Air to Ground weapons. The Air to Air weapons limited to the F16 are the *AIM 120B Slammer*, *AIM 120C-4 Slammer*, and a variety of *AIM9 Sidewinder* IR missiles. Players should take note of the following. The *AIM 120B* has a longer range than the *AIM 120C-4*. The increased range is 3 miles longer than the range of the *AIM 120C-4* however three miles *is* three miles. This could be the difference from a successful air engagement and an unsuccessful one. The *AIM120C-4* has a smokeless motor and that is advantageous at times when the players do not wish to provide their location visually. The *AIM9s* come in all flavors and you need to know the capabilities of each of the IR missiles to be successful in air to air engagements. The virtual pilots primary purpose is to complete the assigned mission but it is also to *bring the airframe home*. The lower the player rating from loosing airframes and not completing the mission, the decreased effectiveness that the blue side will suffer. While flying it is very important to see the mission to conclusion. This means landing the aircraft at a friendly base, preferably your home base. Landing at any friendly airbase/airfield or even a highway strip will generally keep your player rating high and will allow for the airframe to be returned to inventory for further use. The more aircraft that are lost the sooner the campaign will end. It will not be in the players favor. Players are reminded once again about the *vital* role the AWACS provides. AWACS are an integral part to your mission planning and execution.

There is a bridge near Sachon that needs to be destroyed very early in the campaign so that the players do not loose Sachon Airbase. This is the Gwangyang Bridge between the 0 and 7 of the Sachon TACAN channel on the Planning Map just to the west of Sachon. The reason I know this is that this is the only part of the campaign that *is* scripted. It is scripted by Lead Pursuit and it will always start this way in the Iron Fortress campaign. After the clock starts the game is new but it has to start somewhere. There is a large amount of armor, artillery, mechanized infantry, infantry, and air defense units pushing into the Pusan Perimeter. The players' job is to slow the forward movement of these enemy units and to *destroy* the enemy units that have crossed the bridge. To accomplish this players need to put a variety of airframes into the air. The air to air portion of this mission is going to be a Defensive Counter Air (DCA) which is going to protect the lane of air from enemy aircraft that may pose a threat to the follow-on ground attack airframes.

The first requirement is to check the intelligence for air threats that may cause concerns for the DCA by checking the OOB for air threats flying from nearby airbases and potential ground threats to the DCA such as low to medium altitude MANPAD (*Man Portable Air Defense*)/SAM systems. Once the threats are known it will provide and key puzzle piece that will be used to create the DCA package. Package creation is done by mouse clicking in the area that the mission builder wants the DCA to fly in. The *Time over Target* will be locked due to requirement that the DCA arrive prior to the strike packages arrival. In this case the clock is stopped as it is the beginning of the campaign so the mission planner can get the general

flavor of the campaign as it takes time to study the Mission Planning Map and to identify where and what the threats are.



Although the enemy ground forces are not visible they are there. There is no time for a reconnaissance mission as the longer that this bridge is operational the more enemy ground forces there will be entering the players immediate area of operations. This is an example of *reduced intelligence* which simply means that there no current intelligence available. Intelligence information has a life of its own. It is only valid until the last time *someone* or *something* saw it give or take a few minutes to hours. The battlefields ground forces move so intelligence is hard to keep accurate. This is a *watch out for* thing that has to be monitored closely. This is why there is a need for active *reconnaissance patrols*.

It is early in the campaign and the enemy is on the move to expel the *Yankee imperialists* from the Korean peninsula. Thus they are fast movers and it is going to take time for the enemy's CAPs to get into place. Perhaps up to 1 hours time. A single 2 ship DCA should be enough to protect the strike package so that the strike package can get to the target unfettered. There is really no need for a SEAD mission as the worst that the player is facing is portable MANPAD systems that fall into the category of IR missiles which have a low to medium range altitude. This altitude is usually around +0 ft to 7000 feet depending upon the system. This altitude is not all inclusive and different MANPAD systems have different threat engagement zones and altitudes. The strike will be dropping bridge killer bombs like the MK82 or GBU24B munitions.

Creating the DCA package is easy. Mouse click and select the *Add Package* option. This will open the package generation window. Next thing is to select the *New* radio button.



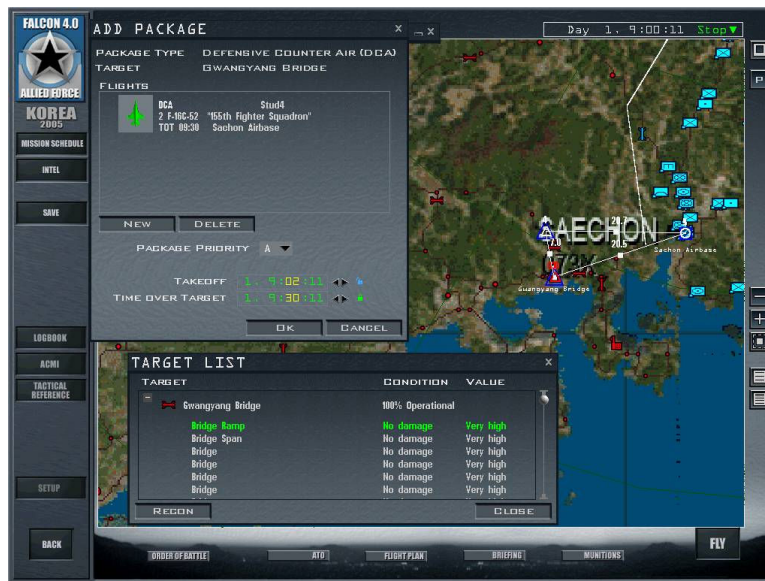
The *Time over Target* time is set for 09:30 hours. The mission planner desires to keep this package of aircraft over the target are for a minimum time as the sooner that the package returns to the airbase the sooner that the package is returned to the *inventory* to be used by the ATO generator. Selection of this particular squadron from the list of squadrons that were available is due to its location at Sachon. This airframes capability to carry some A2A ordinance is pretty hefty. While the *F15C Eagle* and *F15E Strike Eagle* carry more A2A ordinance the player may wish to keep these airframes in reserve for *intercepts* and *escorts* as these airframes have a long range capability without external fuel tanks. The F15s fuel capability coupled with the amount of A2A ordinance it can carry makes it a most formidable fighter. Let the aircraft do what it was designed to do. In this case the F15C was *designed and built* with the premise of “*not a pound for air to ground*” so it is all fighter. However the real reason that the F15s are not selected is that there is only one squadron of F15s available and the re-supply of airframes comes slowly. Know the capabilities of each and every aircraft in the theaters inventory so that an intelligent selection can be made to achieve the desired task. The F16 can carry up to six A2A missiles in any combination as well as external fuel tanks. The range to target is well within the internal fuel range of the F16 which means that external fuel bags will not be required.



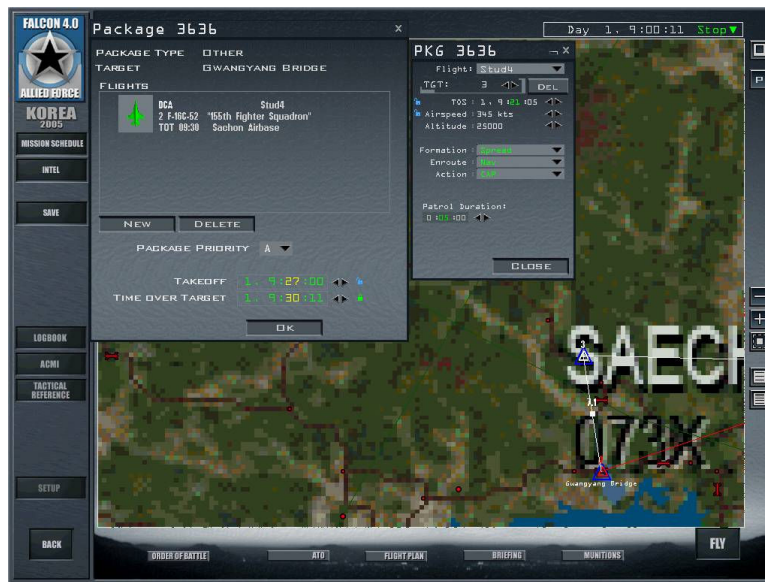
There are three squadrons of F16C-52s in the theater at present. Selection of the squadron will automatically set the airbase or airfield that the squadron performs flight operations from. The package *Size* is chosen to be two aircraft. The *Target* window will show that the target is East of Gwangyang which is where the mission planners follow-on strike aircraft will be operating.



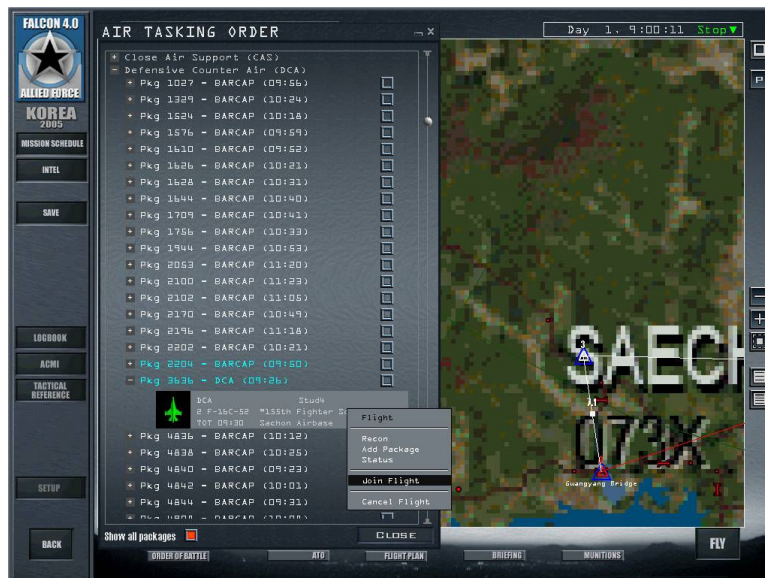
Now satisfied that all of the required information is correctly entered the mission planner will select the *OK* radio button to generate the *package*. If successful the package will show up immediately in the *Add Package* window. If not then the mission planner needs to start the process again.



Configuring the waypoints to provide the best coverage for the follow-on strike package is done at this time. This particular flight track was selected because the bridge runs from West to East so the follow-on attack aircraft will approach the target from the east moving west. The mission planers next task is to check the waypoints to insure that the packages waypoints are set up correctly. The *Patrol Duration* in the bottom of the *Flight Plan* window is change to reflect the time that the package is to remain over the target area. As the follow-on strike is going to be over the target for only one pass a 5 to 10 minute window of coverage is selected. The *OK* radio button is initialized and the mission is generated in the ATO.



Shown below is the completed mission generated into the ATO. Remember to check the weapons load-out by joining the flight from the ATO and entering the *Munitions* screen to verify that the load-out is correct.



It should be noted that the waypoint flight line between waypoints 4 and 5 is red. This indicates that there is something wrong with the waypoint times, air speed, or some other factor. After rechecking the waypoint through the *Flight Plan* menu it was noted that decreasing the time on station lowered the air speed of the package from waypoint 4 to 5 to an unacceptable rate. By decreasing the time on station at waypoint 5, the air speed was brought into conformance with the airframes capabilities. This should have been completed prior to entering the flight into the ATO. *Whenever you change the Time on Station by either decreasing the time or increasing the time, it will directly affect the follow on waypoints and they must be adjusted accordingly.*



Above is the munitions screen for the *DCA* and its load-out adjusted to what the mission planner desires. There will be no external fuel tanks needed as this is a short hop and external fuel tanks will only hamper the airframes if A2A engagements do occur.

Mission Planning for the F16 for Strike Operations

Strike operations are operations against *fixed* targets that usually consist of bridges, factories, power plants, nuclear power plants, oil refineries and underground factories. This is by no means an all inclusive list of strike targets. The same set up procedures are used as were used above however the airframes selected are the *F16C40s* as they have a capability of carrying both *dumb bombs* and *smart bombs* such as the laser *Guided Bomb Units* or *GBUs*. Essentially a GBU is a dumb bomb with some brains added to it. The brains consist of directional glide fins and a laser seeker head supported by the electronics to *guide* the bomb to its target. GBU's only work when you can *illuminate* the target with a laser pod that is placed on the F16. Weather conditions play a major factor in the decision to select smart bombs as the munitions. Dumb bombs do not require laser targeting. Players just have to be comfortable using the *CCRP*, *CCIP*, or other available bombing modes. More information on these modes can be found in the PDF file provided by Lead Pursuit with the simulation. Timing is critical so make sure that the *Time over Target* box is selected and locked when building the mission or else the DCA will not be there to support this operation as the players may arrive too late to be afforded the planned DCA coverage. One of the most important things to remember while building the strike package is that you have to confirm the assigned target. In this case the mission builder wants to assign the bridge ramp as the target of interest so while in the waypoint editor of the mission planning process the mission builder will mouse click on the strike waypoint to bring up the waypoint editor and assign the proper target to the strike package.



The next slide shows the completed package entered into the ATO.



The IP or *insertion point* (the square box steer-point) is moved so that the flight track of the aircraft is aligned with the direction of the bridge being targeted. This is an important factor when planning for Offensive Counter Air operations to strike airfields. The direction of the specific target can be obtained from the *Recon* window available during the initial selection of the target or at any time after that by mouse clicking to bring up the Target and/or Recon windows in the Mission Planning Map. These options are also available in the *Flight Plan* sub menu accessible through the *Mission Schedule* window.



GBU 10I/B are used and the bridge ramp should be destroyed very easily thus affording friendly ground forces some relief and will limit the re-supply of enemy forces. Destroying the bridge ramp on our side will also back up enemy units on the bridge itself where they become easy fodder. Preventing a retreat of the enemy forces by destroying the bridge will allow for other airframes to destroy the incursion of the enemy into the area. Helicopters such as the *AH1 Cobra*, *AH64 Apache*, and the *UH60L Blackhawk* helicopters do a remarkable job of destroying enemy armor, mechanized infantry, and artillery units. Once again it is knowledge of your assets and their capabilities that will provide the best source of information for selection of airframes for package building.

Multiple Package Planning for Striking Airfields

One of the most interesting flights that was planned and created was an OCA strike against Liuhe Airbase. Owned by China and stocked full of *SU27 Air Superiority Fighters* and *SU27SM Attack Aircraft*. These missions are usually delegated to the long range bombers or stealth aircraft both of which were not available in this campaign. Liuhe airfield is one of two airfields that are located in China. There are many SU27SMs flying from Liuhe airbase and they are supporting the inbound bombers as well as providing air to air coverage, battlefield interdiction, and a host of other missions.



The deep location and length of time over enemy territory during this mission is going to require the mission manager to build a large mission package that will have to consist of an OCA (Offensive Counter Air) strike package, a SEAD Escort package, and an Escort package which may be of the Escort, Sweep or TARCAP variety. I do not like TARCAPs as they are usually a good way to lose some aircraft. TARCAPs have a tendency to hover over the target area for 30 minutes and that is far too long a stay over the enemy target. Even though I can adjust the time over target, my preference is to work with Escorts and Sweeps. A2A refueling is a must on both the inbound and outbound legs or else the load-outs for each aircraft package will have to be with three fuel bags and that creates problems particularly for the SEAD as the AGM88C HARM (High Speed Anti Radiation Missile) can only be carried by the F16C-52s on hard-points 5 and 7 where two of the fuel bags normally would be carried. If the SEAD flight does not carry HARMs the entire mission could be fodder for the enemy SAM systems which consist of SA-3s and SA-10s. The mission builder wants to maximize each aircraft's A2A munitions so that if the individual packages come into contact with any out-bound fighters or bombers they can engage the threat and still carry the air to ground ordinance required to complete the mission. As air refueling is required mission planning has to include refueling steer-points as well as the tasking of KC-135 Stratotankers and their HAVCAP aircraft, both of which will also be orbiting in enemy airspace. All in all this mission is estimated to require about 23 to 25 aircraft to support this operation not counting the E2C Hawkeye AWACS that is required to keep the individual packages up to date on the air situation. Although contact with the AWACS will probably be lost when the packages are deep into enemy territory the AWACS is just as essential to this mission as the Stratotankers will be. Two EA6B Prowler ECM aircraft fully loaded with 5 ECM pods each are needed to support the Stratotankers and HAVCAPs. The EA6B Prowlers will provide jamming of enemy electronic warfare systems which consist of enemy SAMs, ADA, and GCI (Ground Control Intercept) radars that are still active at enemy airfields as well as enemy 3C or CCC (Command Control and Communication) facilities. EA6B Prowler ECM aircraft also provide a measure of jamming capability against enemy A2A radar systems. All support role aircraft and their escorts will be required to remain on station for 3 hours so refueling waypoint must be included while building the packages.

Threats that the missions are likely to encounter are SU27 CAP/Escort aircraft, MiG 29 CAP/Escort aircraft, MiG 21 CAP/Escort aircraft, MiG 31 CAP/Escort aircraft, SA-3's, SA-10's, ADA, SAMs, and escorts for out-bound enemy flights. Enemy *Scramble* or intercept aircraft may also play a major role in this operation. There will possibly be some AN124s, IL76s, IL78s, and A50 AWACS aircraft and their HAVCAPs encountered. Bombers and their escort aircraft may also be encountered. There will be no *RESCUE* missions available due to distance behind enemy lines to the target area.

This is the aircraft count: 4 F16C-40/50/52s for the OCA strike.
4 F16C-52s for the SEAD Escort.
4 F16C-40/50/52s for the Sweep/Escort.
2 KC-135 Stratotankers for refueling. Time On Station is 3 hours.
4 F15Cs for a HAVCAP for one of the gas stations. TOS is 3 hours.
4 F15Cs or F15Es for HAVCAP for the other gas station. TOS is 3 hours.
1 E2C Hawkeye AWACS flying in friendly territory.
2 EA6B Prowler ECM Aircraft to support the tankers. TOS is 3 hours.

All aircraft are to be loaded with the maximum amount of A2A and A2G ordinance that can be carried by each individual package with the exception of the HAVCAPs and Escort/Sweep which will carry only A2A ordinance. Fuel bags (*external tanks*) will not be carried to maximize hard-point access for A2G munitions.

Munitions load-out: OCA Strike – 4 Slammers (AIM120B/C's).
2 Sidewinders (AIM9M's) IR seeking missiles.
6 BLU107/B Durandals for the destruction of the runway and associated targets at the airbase.

1 ALQ131 ECM Pod.

SEAD Escort – 6 Slammers (AIM120B/C's).
2 AGM88C HARM High Speed Anti Radiation Missiles.
1 ALQ131 ECM Pod or 1 Fuel Bag at the discretion of the flight lead.

SWEEP – 4 Slammers (AIM120B/C's)
2 Sidewinders (AIM9X's) IR seeking missiles.
1 ALQ131 ECM Pod.

HAVCAP's – 4 Slammers (AIM120B/C's).
4 Sidewinders (AIM9X's).

ECM – 5 ECM Pods per aircraft.

Tankers and AWACS carry no ordinance.

Timing for refueling and time on target is paramount for the success of this mission.

The time for the decision to be made as to how many packages the mission builder wants to place in each mission or how many missions the mission builder wants to create in the ATO needs to be made. As the mission builder I have chosen to create 5 different missions for this endeavor. I have chosen this because by trial and error I have found that mission builders are more likely to succeed in creating all of the packages and getting them airborne doing it this way versus creating just two multi package missions, one for the strike and escorts and the other for the Stratotankers and HAVCAPs. Human pilot as well as AI pilot availability is critical. Mission builders may have access to the aircraft however if the pilots are not available to fly the packages some of the missions will be *scrubbed* just prior to takeoff time. The HAVCAPs, AWACS, ECM, and Stratoankers will be flown by the AI pilots. The remaining twelve slots or however as many flight slots will be filled with human virtual pilots. I would normally have put a TR1/U-2 over the target area with return to base prior to takeoff of the strike package if the airframe was available in this campaign. This would have provided the most up to date intelligence available on the target area.

While the general flight plan of the strike package and its escorts is known, a flight area for the Stratotankers, HAVCAPs, and ECM birds has to be determined. As the SAM threat north of the Korean DMZ is not known there will likely be some SA10s that will cause a problem for the Stratotankers and their HAVCAPs. With this in mind the mission builder has chosen a flight plan that keeps the fuel stations over the DMZ to provide the deepest penetration into enemy airspace while still providing the necessary support to the strike aircraft for a mission success. This dictates that the tankers need to be kept south-east of

Koksan where there are MiG29s stationed. Koksan airbase has been knocked out but the runways are anticipated to be operational sometime during the mission. The track is then decided to be just to the west of Hong Ni and the south-east of Koksan airbase. The track will travel from north to south to north versus east to west to east. Stratoankers should be in the refueling area at least 5 minutes prior to the arrival of the airframes to be refueled.

The time over target is a key element here. This will also set the time of take-off. It is desirable that the time of takeoff for all human slots is within 5 to 7 minutes of each other so that minimal time is expended on the ground before all virtual pilots are flying. It may sound complicated but it really isn't. Once you have a plan then it is easy to create it and watch it come to life in the ATO.

The next slide is that of the Stratotankers and HAVCAPs mission. This mission consist of 4 packages two Stratotankers aircraft and two HAVCAPs packages slaved to each one of the Stratotankers. TOS has been set to 3 hours for the Stratotankers. The TOS for the HAVCAPs and the ECM birds must also be set for 3 hours. Re-fueling waypoints *must* be included for the support HAVCAPs and ECMs or else the support aircraft less the Stratotankers will depart the area after 30 minutes of station time due to lack of fuel.



Here is an example of how you *slave* one package to another package in the *Add Package* window. It is critical that the mission planner slave the HAVCAPs to the tankers or else the HAVCAPs will just fly the steer-points for approximately 30 minutes and then depart the area leaving the Stratotankers unprotected. The *Target* window is where the mission planner will slave one package to another. In this case I slaved the F15Cs to the *Canteen 1* Stratotanker by placing the *Canteen 1* call-sign in the *Target* window of the *Add Flight* menu. I will use this method to slave the F15Es to the *Camel 1* call sign in the *Target* window. If all HAVCAPs are slaved to just one tanker and the tanker is downed or has to leave the area of operations the HAVCAPs that are slaved to that particular tanker will depart the station area as well.



This is the Strike, SEAD, and Sweep missions. Each package was built as a complete mission. Notice that in all package that steer-point 2 and 8 are set for refueling under *Action*.



I can not stress the need to make sure that you understand air operations and how they are supported. This is a learned technique that will come to most if not all within a short period of time. Time on Station timings as well as completeness of mission tasking are as important to mission success as is the availability of aircraft to complete the mission. While we did lose about one third of the strike package and escorts, we were able to strike Liuhe airbase and also had enough ordinance to hit Shenyang airbase resulting in a striking blow to the enemy. Unfortunately both airbases were operational within 6 hours of having their runways destroyed. This did provide a degree of air superiority for a short period of time that we had not seen several days.

Lead Pursuit need to take notice that during the mission building process it would be beneficial if only squadrons that actually can provide the aircraft for these packages should show up as being available for tasking. Allowing the player to select a squadron that has no assets requires that the entire package has to be rebuilt using the Add Flight window as you will get the message 'no aircraft available' once you select the OK radio button in the Add Flight window. Also of note is that the entire 'call sign' list under Target has to be filtered through to slave one package to another package. This 'Call Sign' list under the Target window is quite extensive, often has duplicate call signs (which one do I slave my package to), and requires a great deal of time to filter through as the call signs are not in alphabetical order. This also happens when you create air to ground operations packages. The Target list needs to be in alpha-numerical order to facilitate mission planning.

The next section will cover ground operations and ground forces management. Until then, I hope that this guide (little book) has been of assistance to all players of Falcon 4.0 and Battlefield Operations.

MVS – Hawk