The gang that created the Waypoint magazine and resurrected the computer version of the Harpoon naval & aerial warfare simulator in the early 2000s, strikes again!

**Command: Modern Air / Naval Operations** is the high-fidelity warfare simulator from WarfareSims.com. Combining massive scale (the entire earth is your theater) and incredible depth and breadth (conflicts from 1946 to 2020+) with unprecedented detail, realism and accuracy, a powerful Windows interface and challenging AI, Command has set the new standard for air-naval war games.

Praised by military professionals, hobbyists and the gaming press alike, Command swept the Wargame Of The Year 2013 awards and shattered sales records in its category:

**United States Naval Institute:** “Command will find a following not only among civilian gamers but might have value among military, government, and policy circles as a simulator of modern warfare. […] This is a game with broad appeal for everyone from casual gamers to government users looking to model unclassified, informal simulations. It likely will be the main choice for hard modern warfare simulators for years to come.”

**Michael Peck, War Is Boring:** “This isn’t just a game. It’s a simulation that’s as close as many of us will ever get to real Pentagon simulation. C:MANO, as fans call it, is a real-time game that boasts an incredibly rich—and unclassified—database of the aircraft and ships of the Cold War and beyond. […] I strongly suspect that this game won’t prove any less accurate than the government’s tippity-top-secret simulations.”

**Multiple awards.**
**Over 150 scenarios (as of June 2014).**
**Thousands of fanatical players.**
**Tens of thousands of planes, ships, submarines, land units, satellites, weapons, sensors, and other systems.**

**Command: Modern / Air Naval Operations** is available only at Matrix Games.

For more information go to WarfareSims.com.
Designing A Centralized Integrated Air Defense System in Harpoon 3

What is a Centralized Integrated Air Defense System (IADS)?

A centralized IADS is a network of grouped sensors and air defense equipment that are interconnected via centralized command and control centers. Each group of sensors and equipment is responsible for its own area of airspace. They report their findings to a centralized command and control center which in turn will report the data and issue commands to the reporting group all other air defense groups which need to know to efficiently and effectively defend a nation’s aerospace.

The Soviet Union/Russia and most client nations used this type of system throughout the Cold War. Given the vast territorial expanses needed to defend and the sheer number of air defense equipment these systems served these nations well. Historically successes include Vietnam and the downing of numerous NATO aircraft during the Cold War. The Gulf War ended the impressive career of these systems as Coalition forces were quick to destroy the Iraqi KARI system allowing air dominance over Iraq.

Many nations still use this system today including North Korea, Syria and other nations that depend on Cold War era equipment. Most nations have attempted to improve their systems after the collapse of the Iraqi system in the first Gulf War but given the cost and logistics of doing such a thing many nations air defense systems are still very centralized. There are also several NATO block or western allied members that use a centralized systems but they have had the resources to address many failings in the system and capitalize on its strengths. These systems are thus still relevant to the world today and in correctly modeling that world in a simulation like Harpoon.

What are the advantages of Centralized IADS?

The most obvious advantage is that the host nation will have many sources of information going to specific centers of command and control which can sort out the information and issue orders to each part of the system to effectively respond to any event. The second advantage is that a sensor in one part of the country does not have to be in range to know what is going on in another part of the country. The central node has reported the information and the appropriate action for this sector to take to effectively respond to an event.

What are the disadvantages of a Centralized IADS?

The disadvantages are that if the centralized command and control centers or communications are disrupted or destroyed the system becomes paralyzed because every each individual group is dependent on the command center above it. Data and commands no longer flow from one end of the air defense network to the other. This was proven during the first Gulf War when Coalition forces specifically targeted command nodes of the Iraqi KARI air defense system. Billions of dollars of good air defense equipment became far less effective and in some cases paralyzed allowing Coalition air power superiority several hours into the war and throughout the conflict.

Can You Really Implement this in Harpoon 3?

Harpoon 3 is well suited to model this type of network. Communications are modeled in the game through the simulation with data-links and side postures. Data-links are simply lines of communications between one unit and another. These are established by having like communication equipment listed within their database entries. Postures are relationship settings that can be given to each side of play. They can be set to friendly, neutral and hostile. These settings do not just exist to specify who fights but they also dictate communication relationships between each side. Sides that have specified as friendly to another will send its sensor data to the side it is friendly to. Likewise if the side is set as neutral or hostile it will not. Given that you can create many sides with different postures is possible to create a relationship such as a centralized IADS.

Why should I implement this in my scenarios?
To model reality but the most important reason is you are giving your players a greater reward or penalty than a destroyed facility or platform. If the player intelligently picks his targets he may be able to shut down an air defense system or sector which is much more gratifying then destroying a single SAM. Likewise the player’s air defense network can be shut down the same way presenting a clear challenge for the player. It is just a implementation which really lends itself to a good modern wargaming experience.

**How do I implement a Centralized IADS in Harpoon 3?**

Implementation is achieved by breaking down the air defense system into different sides based on logical geographic or hierarchical groupings and using postures to dictate the communication levels they have with each other. I have created an example with a simple fictional centralized IADS around the city of Bangladesh, India to show how this is achieved.

First I conceive a simple centralized IADS system for Bangladore. I believe one central command center is appropriate for the city with one long range EW radar attached. I then think four subsectors based on their geographic arrangement (North, South, East, West) around the city should be appropriate and create a side for each. Each subsector will include one SA-3 Regimental HQ unit and two SA-3 battalions.

Next I need to establish relationships between each side to properly model a centralized network. I know that the Southern Air Defense Command Air defense headquarters (ADHQ) is my central node and thus should communicate will all subsectors and all subsectors should be able to communicate with it. To accomplish this I set a friendly posture to all sectors and I set each sector side friendly to it. I also know that to be centralized none of the subsectors cannot talk to each other. To accomplish this I leave their postures at neutral.
Central Node friendly to everybody and every sector friendly to it.

Each Sector friendly to the Central Node but Neutral to each other.

I now have a properly implemented a simple Centralized IADS. Looking at the screenshots above you can see that each subsector components have datalinks that point to each respective sector HQ. Each respective sector HQ then points to the central command center/node.

Test This and Show me it works!

In this example I have moved the western sector HQ west out of the range of the other sector’s radars so they do not see what the western sector HQ can see. I then inserted a “bogey side” and tasked a lone B-1 to head east. I then switched sides to the Eastern sector side and waited to see if I would receive a contact report from the western sector. At 12:24:04 I received my first contact report. The bogey was seen by the Western Sector and the report was passed through the central node and on to my current side, the Eastern Sector. It works!
Okay what happens when the Command Side is destroyed and all the links are broken between the sectors?

As you can see the contact becomes lost as the Western sector no longer has a means to communicate with the Eastern Sector. All benefit has been lost and any bogie will now have a greater chance of success as all the component parts of the IADS are not communicating.

This was a very simple example but you can build a huge network using these procedures. Just remember to break the system down into different sides and make sure that you use postures correctly. The command side posture is friendly to every sector and every sector friendly to it. Each sector is friendly to the command side but neutral to it.

**Any known scenario oddities that can occur using this method?**

Yes there is one oddity but it should be very rare. In the instance that you have friendly aircraft sharing aerospace with a hostile that is being engaged it is possible that the friendly may interpret and attack or be attacked. The result would be a hostile posture. Careful planning and management can prevent this. In most cases it would be very rare for this to happen.

Okay that’s it, enjoy☺