

INFORMATION ADVANTAGE

ENHANCING OPERATIONAL EFFECTIVENESS

- Statement of the problem
- Review the impact and effect
- Enhancing the SEAD mission
 - Application of information advantage
- Look at the benefits of the solutions
- Review the future



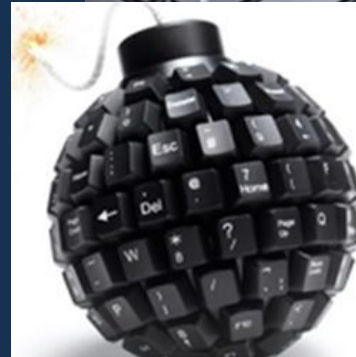
“A new type of war has emerged, in which armed warfare has given up its decisive place in the achievement of the military and political objectives of war to another kind of warfare - information warfare.”

Vladimir Kvachkov, former GRU officer

“To start a war without controlling the electromagnetic spectrum is tantamount to defeat. Russia’s use of Electronic Warfare equipment in the war in Georgia in 2008 and in Syria in 2018 really and radically changed the situation.”

Colonel (retired) Anatoly Tsyganok, member of the Russian Centre for Political-Military Studies

- Exponential growth in computer capability, data, and digital connectivity
 - Increasing hunger for data
- *He who controls the information is king*
 - Warfare without a kinetic effect
 - Information is a strategic asset and critical enabler
- Winning the information battles
 - 'out pace' our opponent



- Information advantage is a Joint Action problem
- Information creates intelligence
 - Supports the decision makers
 - Data is the raw material
 - It needs to be cleaned and refined
- Mitigating risks and shock to our interconnected world
- Death of distance
- Speed of relevance



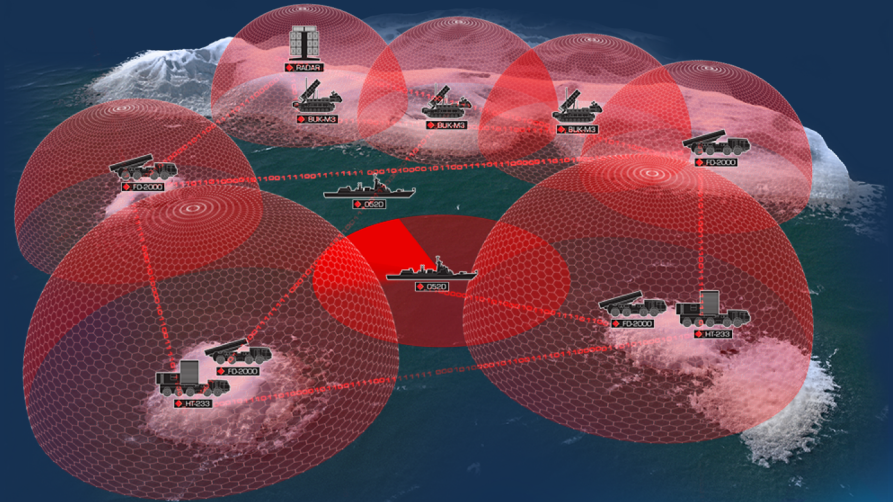
- Rethinking the SEAD mission
 - It's not all about the kinetic effect
- SEAD enables *superiority* over
 - The electromagnetic spectrum
 - The airspace
- SEAD principles versus the current and complex A2AD environment
 - Networks and mobility mitigate surprise
 - Exploit data and information and create the advantage
 - Bring the right effect to bear at the right time



- A modified definition of SEAD;

“The set of activities that neutralises, temporarily degrades, or destroys enemy (surface, air, or space-based) air defences by destructive and/or disruptive means, and contributes to the freedom of manoeuvre for friendly forces in the battlespace”

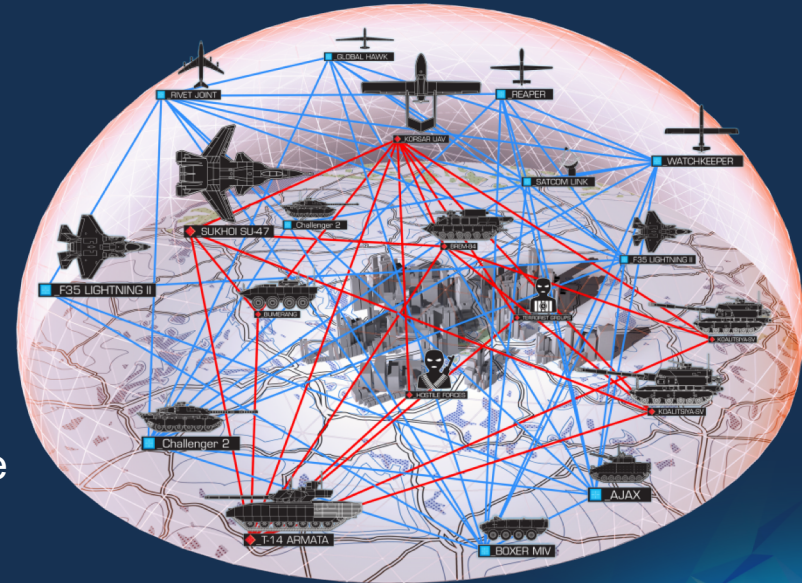
- The modern SEAD mission requires;
 - Diversity of effects
 - Survivable delivery systems
 - Coordinated information capture
 - Synchronisation of effects
 - Delivery at the right place / time / pace



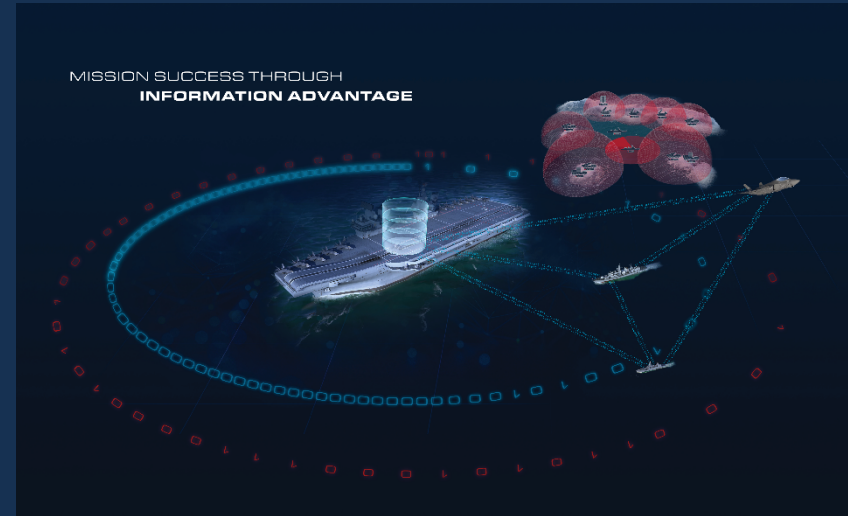
- Effective SEAD mission planning;
 - Exploit the information advantage
 - Understand the environment and the lay down
 - Explore and determine the kill chain
 - Create the Force mix
- Utilise modelling and simulation as well as wargaming



- Information advantage through persistent ISTAR
 - Build a common picture
 - Share at the speed of relevance
- *Win the war before the battle begins*
 - Data – information – intelligence
 - Update mission data as changes impact
- Application of Artificial Intelligence and Machine Learning
- Make use of the 'digital native'



- Information advantage
 - Collect, collate, manage, maintain data
 - Data – information – intelligence
- Delivering the SEAD mission effectively
 - Understand the environment and outcomes
 - Best Force mix
 - Where and when to strike
- Deliver decision-quality information at the speed of relevance



“In future conflicts, the winner will be the one who turns data into information dominance quicker than our adversary”

General Sir Gordon Messenger
Vice Chief of the Defence Staff, Nov 17