

BULLET BACKGROUND PAPER

ON

SPACE WEAPONIZATION - A BLENDED APPROACH TO NUCLEAR DETERRENCE

PURPOSE

The purpose of this paper is to redefine deterrence for the twenty first century by identifying the current world scenario and its requirement for two different forms of deterrence, one that is ultimate as provided by nuclear deterrence and one that is scalable as provided by space weaponization.

DISCUSSION

- The Course of Action is to prioritize and develop both kinetic and EMP technology to provide a scalable method of deterrence while maintaining our current nuclear deterrence capabilities
- Moving forward, the traditional concept of deterrence will continue to shift as technology advances and the post-Cold War “mutually assured destruction” model is challenged
 - The nuclear-triad deterrence methodology will remain necessary while adversary nations maintain a nuclear arsenal
 - Space weaponization expands the scope of deterrents to include kinetic and non-kinetic effects that can leverage the threat of mutually assured degradation or destruction
- To adequately address the concept of deterrence in the changing world environment a few key assumptions must be addressed
 - Adversaries have been, and will continue to develop terrestrial and space based weapons and will leverage space and cyber capabilities prior to nuclear capabilities
 - Nuclear capable countries will not give up their current capabilities and are modernizing their respective nuclear arsenals
 - Current space treaties will be honored until new or updated treaties are ratified
 - The U.S. must make hard decisions on prioritization of resources and investment
- Maintaining nuclear capabilities is necessary as there are no credible deterrence alternatives
 - Without a credible alternative our allies depend upon our current nuclear capabilities
 - It is more effective in the long term to invest in space then the limited capabilities provided through nuclear modernization.

- The strategic advantage that space provides is critical and provides the U.S. a credible and scalable form of deterrence through Kinetic and Weapons of Mass Effect
 - The U.S. is currently behind on space capabilities while adversary nations are accelerating funding, development and testing.
 - In a global conflict, it is more likely that an adversary will leverage space and cyber operations before nuclear capabilities to meet an intended effect.
 - EMP capabilities provide a scalable, non-lethal means capable of directing at soft and hard targets providing the US a credible deterrence strategy.
 - The US needs to invest in Weapons of Mass Effect such as EMP due to R&D requirements.
 - The US currently has a substantial understanding of Kinetic capabilities which will require less time deploy which can provide rapid defense of vulnerable space assets.
- As the U.S. invests in space weaponization technologies while maintaining nuclear deterrence the following second the third order effects must be considered
 - As the US increases its capabilities with space weaponization other nations will increase development in similar capabilities. Increase in development from other nations will lead to an accelerated arms race
 - WMEs will provide a second layer to our deterrence strategy forcing the enemy to defend and target multiple factors stretching our enemy's resources. Due to stretched resources the adversary will be more likely to negotiate or bargain nuclear de-escalation
 - Weaponizing space will cause political fallout creating tension. Other nations will pursue sanctions and other non-military means of deterrence to prevent capability development
 - Space weaponization will increase private sector competition because emerging high value investments in a new technology area. Increases in private sector competition will decrease costs and drive national innovation
 - An increase in space weaponization will drive other nations to increase their space situational awareness. As more information becomes available to them they can utilize diplomatic and military means against us

RECOMMENDATION

Capable nations will continue research and development efforts in space weaponry regardless of U.S. initiatives, as such, to maintain both a strong nuclear deterrence and space-superiority posture the U.S. must maintain its nuclear arsenal and space weaponization capabilities.