

At the Speed of Relevance: Missile Defense Technology, Operations, Public Diplomacy and the Deterrent Promise of Directed Energy

○ “Leveraging DE as a Potential Missile Defense & Deterrence Technology”

Presented by

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- October 21, 2020 Presentation to the IGDA Conference on Directed Energy Systems
- This presentation will hopefully assist DE supporters to better understand the way in which such technologies are viewed by the US Congress and those actors affecting decision making in the US government.

MISSILES IN OUR FUTURE

In 2012, Robert Kaplan wrote in the “The Revenge of Geography” that countries of the “Heartland” and “Rimland”, stretching from North Korea southward through South Asia and into the Middle East were locked into a “deathly geographical embrace of overlapping missile ranges” as they seek to bolster their military capability by building long range rockets capable of coercing, terrorizing or blackmailing their enemies. [Peter Huessy, “The Geography of Jihad: Missile Terrorism”, Frontiers of Freedom, February 26, 2015].

Missile Defense is now deployed by or supported by 26 American allies around the world from Australia to the United Kingdom

Ballistic missile threat however is moving as the “Brothers Mayhem”* get to vote....

○ Threat....

- IASC's Rick Fisher notes China tested more ballistic missiles in the past year than all the nations of the world combined... including thousands of intermediate range missiles ranging the Western Pacific....
- JINSA's Amb. Edelman/Gen. Wald note Iran has the largest inventory of ballistic missiles in the Middle East...that now range major US military installations.....sell to Venezuela/Miami
- BESA's Uzi Rubin warns Iran's ongoing space launch and missile production, is “... a crucial building block establishing a global range nuclear missile force...”
- *North Korea, Iran, Russia, and China

○ Factors Determining Whether to Deploy

- As the VC of the Joint Chiefs of Staff, General John Hyten has explained, we cannot acquire new defense technologies in a 12-20 year window. We must act “at the speed of relevance” balancing:
- --Time to deploy
- --Cost to deploy
- --Operational flexibility
- --Readiness of Technology
- --Impact on deterrent equation

Directed Energy and Missile Defense Objective

- To help avoid having to pay the price in strategic loss if we are not able to come to the defense of our allies with whom we have an alliance. When facing with aggression in the Western Pacific, the Arabian peninsula or European-Russian borderland....

Status of Directed Energy Technology: Some Issues

Historical

- Is our technology always 5 years over the horizon?
- Do the technologists talk to the operators?
- Test failures are instructive---history of THAAD in the 1990s; 13 satellite/rocket failures just prior to President Kennedy announcing the US is going to the moon;
- ABL worked to inform what we could do and buy down future risk
- THEL White Sands tests worked; needed mobile/maneuverable system [Israeli border]

Public Diplomacy

- Congressional staff influenced by media narrative that test failures=technology doesn't work
- Emphasis near term cost
- Trade off with current and new technology
- How near term the threat?
- How do you know the Chinese have a hypersonic speed capability? Well what about more than 24 consecutive successful tests—Mike Griffith, OSD, MDAA Conference, 9/2019, US Capitol

Missile Defense Promise of Directed Energy

- Directed Energy has Matured Considerably in past five years
- “Speed of light” interceptor great promise
- ABL was the path to which the USAF had to travel to get to DE—Gen Fogleman
- Technology Challenges
 - Need to strike side of missile not warhead
 - Makes counter-air, manned air to air capability problematic
- Need sensor capability to acquire and track missiles especially of hypersonic speed
- Propagation and dwell time key operational constraints
- Boost phase capability relevant to Korean peninsula, unclear re Persian Gulf/Iran
- Russia or China? Space based required.

“The fallacy requirement that missile defense be perfect means it never will be fully deployed. But the grave threats today are escalate to win where the limited use of even nuclear armed missiles is becoming the enemy’s coin of the realm.....”

Walk off Point: In short, when the eager Colonel tells the General what a great idea it would be to attack the Americans today, the General says:
“Not today Comrade.”

“The promise of missile defense is to make the other guy pause—a lot--about going first...”

Gen. Bernard Schriever