# **Building A Capability-Based Missile Defense Force**



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MG Peter C. Franklin, USA Deputy Director Missile Defense Agency



### CHARACTERISTICS OF AN EFFECTIVE BALLISTIC MISSILE DEFENSE SYSTEM



### **ACHIEVING A LAYERED DEFENSE AGAINST ALL RANGES OF MISSILES**





## MISSILE DEFENSE PROGRAM DIRECTION



- Establish A Single Program To Develop An Integrated System Under A Newly Titled Missile Defense Agency (MDA)
- Apply A Capability-Based Requirements Process For Missile Defense
- Enable The Services To Field Elements Of The Overall BMDS As Soon As Practicable
- The President Directed The Initial Fielding Of A Limited BMD Capability In 2004 And 2005

• Director, MDA Announces Intent To Leverage The Test Bed Into Operational Capability **BMD EVOLUTIONARY DEVELOPMENT** 



• Extend To Allies And Friends When Appropriate

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## PRESS BRIEF – 13 JULY 2001

#### SUMMARY OF BALLISTIC MISSILE DEFENSE RDT&E PROGRAM

- Aggressive RDT&E Program
  - Without Commitment To A Single Architecture
  - With No Procurement Until Ready
  - Employs Parallel Risk Reduction Paths To Mitigate Potential Cost/Schedule/Performance Problems
  - Capabilities Based Vs. Requirements Based
  - Robust Testing
- Multilayer, Multi-faceted Development Program
  - Protect U.S., Allies, Friends And Deployed Forces
  - Managed As One System
  - Explores Air, Sea, Ground And Space Concepts
  - Designed To Intercept Any Range Of Threat
  - Designed To Intercept Threat In Boost, Midcourse, Terminal Phase

• Structured To Permit Test Asset For Operational Use On An Interim Basis, If Directed

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- Withdrawal From ABM Treaty Enables Effective Missile Defense
- Evaluated And Made Changes To Program Of Work Based On Progress
  - Initiated Fielding Of One Element Patriot Advanced Capability-3 (PAC-3)
  - Terminated One Element Navy Area Defense
  - Restructured One Element Space-Based Infrared System (SBIRS)-Low
  - Terminated The 2012 Space-Based Laser Experiment Restructured To Technology Effort
  - Continued Progress On All Other Elements
- Testing Over Past Two Years Providing Confidence To Proceed
  - 4 For 5 Long Range Ground-Based Intercepts
  - 3 For 3 Short-Medium Range Ship Based Intercepts
  - 5 For 7 Short Range Ground-Based Intercepts (PAC-3) (Total 11 For 14)
  - ABL First Flight (Without Laser Installed)





#### Ballistic Missile Defense System



Progress Report



## **CURRENT TEST INFRASTRUCTURE**





## BALLISTIC MISSILE DEFENSE SYSTEM TEST BED





"I have directed the Secretary of Defense to proceed with fielding an initial set of missile defense capabilities. We plan to begin operating these initial capabilities in 2004 and 2005, and they will include ground-based interceptors, sea-based interceptors, additional Patriot (PAC-3) units, and sensors based on land, at sea, and in space."



# **EVOLUTIONARY CAPABILITIES DIRECTED BY THE PRESIDENT**

- Initial Integrated Missile Defense Capabilities (2004-2005)
  - 20 Ground-Based Midcourse Interceptors At Test Bed For Long Range Threats;
  - Up To 20 Sea-Based Interceptors For Medium Range Threat;
  - Sensors Based On Land, Sea and In Space;
  - Upgraded Early Warning Radars In UK (2005) And Greenland (2005-2006);
  - Additional Patriot PAC-3 Units For Short To Medium Range Threats
- Potential Improvements (2006 And Beyond) May Include
  - Field More Ground And Sea-Based Interceptors And PAC-3 Units;
  - THAAD And Airborne Laser Systems;
  - Family Of Boost-Phase And Midcourse Hit-To-Kill Interceptors;
  - Enhanced Sensor Capabilities;
  - Development And Testing Of Space-Based Defenses



## AEGIS SEA BASED INITIAL CAPABILITY



Summary Of Initial Capability Against S/MR Threats

3 Aegis Launch Ships, 10-20 SM-3 Missiles

> 15 Aegis SPY-1 Sensor Ships



## FORT GREELY PROGRESS

**Summer 2001** 



October 2002



## FORT GREELY PROGRESS



#### **Missile Field Layout**



### **PATRIOT PAC-3**





- Over The Past Two Years (2001 And 2002) We Conducted 55 Flight Tests Including 17 Intercept Tests And 60 Ground Tests Of The BMDS And Its Elements
- Over The Next Two Years We Plan To Conduct An Additional 68 Flight Tests And 58 Ground Tests
- A Wide Variety Of Wargames, Exercises And Seminars

**Our Long Term Development Program Maintains A High Tempo Of Increasingly Complex Ground And Flight Tests** 



- The Budget Request For Continuing BMDS Development And Test Program Is Expected To Remain Stable At; \$8+B Per Year
- Initial Capability Evolutionary Approach For 2004-2005 Requires An Increase In Funding Of ; \$1.5B Over Two Years
- Navy Has Assigned USS LAKE ERIE As An Operational Ship Dedicated To Missile Defense Agency's Use For Consideration Of \$386M In Outyear Budgets
- Accelerated Production Of PAC-3 Has Been Approved
- Decisions On Further Additions To Evolutionary Capability Will Be Based On Progress, Effectiveness, And The State Of Threat. They Will Be Funded Only When Directed



- Traditional ORD-Based Acquisition Is Well Designed For Procurements Involving
  - Well-known Technologies
  - Proven Systems
  - Sizeable Production Runs
  - Established Operational Experience
- None Of These Conditions Yet Exists For Missile Defense Which Needs
  - Threat Defined More Broadly Within Capability Ranges
  - Flexibility To React As Threat Changes, Technology Improves
  - Trade-offs During Development Between Possible Capabilities



#### CAPABILTY BASED APPROACH OFFERS EARLIER DECISION POINTS TO FIELD CAPABLIITY





## MISSILE DEFENSE STAKEHOLDER RELATIONSHIPS





# CAPABILITY-BASED ACQUISITION SUMMARY

- Motivation
  - Get Ahead And Stay Ahead Of The Threat
  - Flexible Strategy To Take Advantage Of What Can Be Done
  - Place Capabilities "In Play" Sooner
- Capability-Based Acquisition Is Flexible Iterative Process Provides Basis For And Opportunities To
  - Insert New Ideas And Capabilities
  - Make Decisions To Accelerate, Continue, Modify, Or Truncate Activities
- Capability-Based Acquisition Is A Structured And Disciplined Process
  - Iterative Process Converges To Establish Expectations
  - Expectations Are Documented And Progress Is Tracked
  - Baseline Is Controlled
    - Changes Processed Through Change Control Board
    - Changes Executed Through ECPs And Contract Modifications



- Aggressive RDT&E Program On Track
- Testing And Analysis Gives Us Confidence In Taking Initial Steps – Hit-To-Kill Works
- President's Direction For Initial Capability Of Evolutionary Approach Executable With Additional Funding Of; \$1.5B Over Two Years
- We Will Continue RDT&E To Build Confidence And Prepare To Add To Evolutionary Capability
- Capability-Based Force Planning We're Doing It