BALLISTIC MISSILE DEFENSE

Plan To Coordinate Development And Implementation Of Theater Missile Defense Programs With Allies

BALLISTIC
MISSILE
DEFENSE
ORGANIZATION

4 APR 94

Dr. J. David Martin
Deputy For Strategic Relations
Ballistic Missile Defense Organization

pj-42632 / 032994

BALLISTIC
MISSILE
DEFENSE
ORGANIZATION

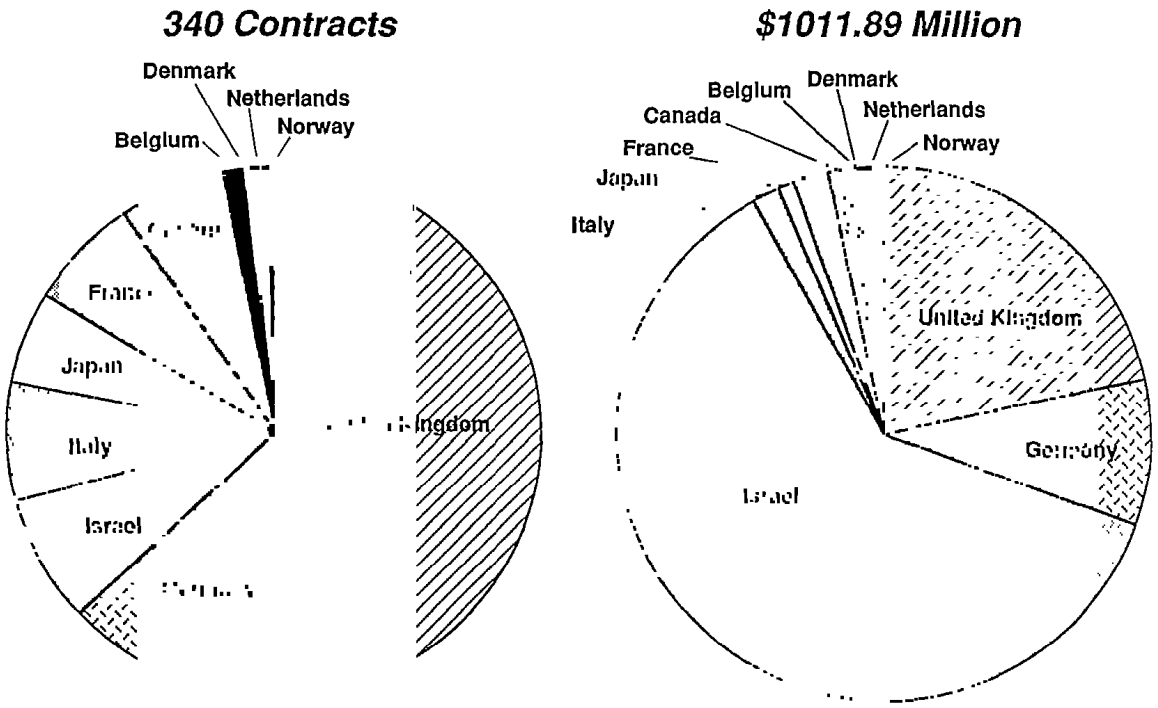
SCOPE OF PRESENTATION

- Background: TMD Allied Participation
- Today's TMD Environment
- U.S. Congressional Perspective
- Plan To Coordinate U.S. TMD Programs With Allies
  - Objectives
  - Approach
  - Underway Now, Near / Mid Term, Far Term
- Summary

pj-42633 / 032994

BALLISTIC
MISSILE
DEFENSE
ORGANIZATION

FOREIGN PARTICIPATION



pj-5434h / 021794

BALLISTIC
MISSILE
DEFENSE
ORGANIZATION

MAJOR BMDO COST SHARE COOPERATION ARRANGEMENTS WITH ALLIES

Country	Program	$ In Millions Value	U.S. / Ally Funding (Approximate)
UK	Data Fusion	26.00	42% / 58%
UK	2 Flight Trials	65.00	59% / 41%
UK	Extended Air Defense Test Bed	19.20	58% / 42%
UK	Artificial Intelligence	3.50	80% / 20%
Israel	Arrow Experiment	158.00	80% / 20%
Israel	Arrow Continuation Experiments (ACES)	322.00	72% / 28%
Israel	System Engineering And Integration	3.15	75% / 25%
Israel	Theater Missile Defense (TMD) Test Bed	33.00	72% / 28%
Israel	TMD Test Bed Enhancement	5.20	80% / 20%
Israel	TMD Test Bed Experiment Program	6.00	50% / 50%
Israel	Hypervelocity Launcher Program	4.06	75% / 25%
Israel	Boost Phase Intercept (BPI)	5.7	75% / 25%
Japan	Western Pacific Architecture Study	6.50	90% / 10%
France	Free Electron Laser (FEL) MOA	TBD	TBD
Netherlands	Hypervelocity Gun Test	17.25	30% / 70%
SHAPE	EADTB	32.3	59% / 41%
France	EADSIM	.68	35% / 65%

pj 33394 / 032994

BALLISTIC
MISSILE
DEFENSE
ORGANIZATION

SCOPE OF PRESENTATION

- Background: TMD Allied Participation
- Today's TMD Environment
- U.S. Congressional Perspective
- Plan To Coordinate U.S. TMD Programs With Allies
  - Objectives
  - Approach
  - Underway Now, Near / Mid Term, Far Term
- Summary

pj-42634 / 032991

BALLISTIC
MISSILE
DEFENSE
ORGANIZATION

SCOPE OF PRESENTATION

- Background: TMD Allied Participation
- Today's TMD Environment
- U.S. Congressional Perspective
- Plan To Coordinate U.S. TMD Programs With Allies
  - Objectives
  - Approach
  - Underway Now, Near / Mid Term, Far Term
- Summary

- Summary

pj-42635 / 032994

BALLISTIC
MISSILE
DEFENSE
ORGANIZATION

U.S. POLICY ON ALLIED PARTICIPATION IN TMD PROGRAMS

FY 94 National Defense Authorization Act

- **Allied Nations Are Encouraged To Participate In, Or Increase Participation In, Cooperative U.S. TMD Programs, Particularly Those Allied Nations That Would Benefit The Most From Deployment Of TMD Systems**
- **The U.S. Is Encouraged To Participate In Cooperative TMD Efforts Of Allied Nations As Such Programs Emerge**

pj-40727 / 032994

TODAY'S TMD ENVIRONMENT

- Allied And Friendly Nations Are More Aware Of Their Vulnerability To Ballistic Missiles
- Scope And Complexity Of ATBM Programs Argue For Combining Best Available Technologies
- Successful Tests And Technology Demonstrations Will Continue To Confirm Feasibility And Expand Interest And Participation
- Refocus Of U.S. Ballistic Missile Defense Program From Global, Space Based Orientation To Theater Missile Defense
  - Addresses More Immediate Requirements
  - May Afford A More Favorable Political Climate
- Declining Defense Budgets Will Promote More Cost Shared Joint Programs, Which In Turn, Will Expand Work Sharing And Opportunities For Domestic And Foreign Industrial Participation

BALLISTIC
MISSILE
DEFENSE
ORGANIZATION

U.S. CONGRESS FY 94 DEFENSE AUTHORIZATION ACT

Language On Cooperation With Allies On Development Of TMD (Sec 242)

- Findings
  - Deployed U.S. TMD Systems Can Contribute To The Security Of Other Nations
  - Cost Of Developing Such Systems Will Be Several Tens Of Billions Of Dollars
  - Cooperative TMD Development And Deployment May Reduce Financial Burden And Provide Technical Expertise
  - Allies Are Unlikely To Cooperate Unless There Is Meaningful Involvement Including R&D And Production

- Plans And Reports
  - DoD Should Develop A Plan To Coordinate U.S. TMD Programs With Allies To Avoid Duplication, Increase Interoperability, And Reduce Cost
  - A Report Of The Plan Will Have Actions Taken To Implement The Plan, Status Of Discussions With Allies, And Status Of Contributions By Allies

pj-40728 / 012594

SCOPE OF PRESENTATION

- Background: TMD Allied Participation
- Today's TMD Environment
- U.S. Congressional Perspective
- Plan To Coordinate U.S. TMD Programs With Allies
  - Objectives
  - Approach
  - Underway Now, Near / Mid Term, Far Term
- Summary

- Summary

BALLISTIC
MISSILE
DEFENSE
ORGANIZATION

OBJECTIVES FOR ALLIED PARTICIPATION

- Strengthen U.S. / Allied Mutual Security Commitments
- Support U.S. / Allied Counterproliferation Policies And Strategies
- Help Underwrite A Portion Of The Cost Of TMD Development, Production And Operation
- Help Provide Protection For U.S. / Allied Forces
- Underpin U.S. / Allied Freedom Of Action In Crisis Situations
- Access Foreign Innovative Technologies, Systems And Unique Capabilities, e.g., Penaids Design
- Facilitate Military Ties To Define Common Requirements, Help Ensure Interoperability, etc.
- Reduce U.S. / Allied R&D, Procurement And Operating Costs

BALLISTIC
MISSILE
DEFENSE
ORGANIZATION

APPROACH FOR ALLIED PARTICIPATION

	Time	Activity
	Now	• Identify And Consolidate Current Studies, Plans, Programs
"Build Upon / Improve Existing Capabilities" • Incremental Enhancement • Interoperability	Near Term	• Pursue Improved Early Warning And Tracking Capability • Pursue Improved Communications / Data Transmission • Improve / Develop Lower Tier Defenses
"Qualitative New Capability" "Defense-in-Depth"	Longer Term	• Expand / Improve Lower Tier Defenses • Develop / Deploy Area Defense Capability

pJ 38192E/ 022294

APPROACH FOR ALLIED PARTICIPATION NOW

- Identify And Consolidate Current Studies, Plans, Programs
  - National Authorities And International Organizations, e.g., NATO, Have
    - Addressed Need For Tactical Ballistic Missile Defense Systems
    - Some Nations Already Have Initiated Or Completed Architecture Studies; Feasibility Studies; National Requirements For I-HAWK Replacement, PATRIOT Upgrades And Other Improvements In Early Warning, Command, Control And Communications
  - Bilateral Discussions And Multinational Meetings, e.g., NATO Ad Hoc Working Group On EAD / TMD, Are Ongoing To Harmonize Requirements, Identify Cooperative Opportunities

BALLISTIC
MISSILE
DEFENSE
ORGANIZATION

APPROACH FOR ALLIED PARTICIPATION NEAR / MID TERM

- Pursue Improved Early Warning And Tracking Capability
  - Delineate All Current Early Warning Capabilities
  - Identify U.S. And Allied Ground / Sea Based Theater Sensor Capabilities And Modifications For U.S. / Allied Integration And Provide Improved Missile Detection And Tracking For A Particular Region. Consider
    - U.S. AEGIS AN / SPY-1 Radar
    - Forward Deployed Ground Based Sensors, e.g., AN / TPS-59, FPS-117
    - Other National Or Alliance Air Defense / Missile Defense Surveillance Systems
  - Pursue Possible Modification Of Airborne Surveillance Systems, e.g., E-3 AWACS
  - Determine Adequacy Of Current Air Defense BM/C^3 Systems And Planned Improvements, Such As NATO Airspace Command / Control System (ACCS), Standard Message Formats, Message Protocols
  - Identify Evolutionary Command And Control Concepts, e.g., Navy Cooperative Engagement Concept (CEC), And Their Potential For Integration Into Alliance Procedures

- Improve / Develop Lower Tier Defenses
  - TPS-59 / HAWK Upgrades To Achieve Interim And Point Defense Capability Against Short Range TBM Threat
  - Near Term Improvements For PATRIOT PAC-2, Planning For PAC-3 To Improve Accuracy And Increase Battle Space
  - Incorporating AEGIS Standard Missile Block IVA, Together With CEC, Into New Air Defense Frigates

- Incorporating AEGIS Standard Missile Block IVA, Together With CEC, Into

pj-42639 / 032994

APPROACH FOR ALLIED PARTICIPATION FAR TERM

- Expand / Improve Lower Tier Defenses
  - Build On Near / Mid Term Achievements To Further Enhance Lower Tier Capabilities
- Develop / Deploy Area Defense Capability
  - Develop Upper Tier, Wide Area Defense Capability, e.g., THAAD-like Systems, Necessary To Counter More Advanced Theater Missiles For Both
    - Defense-in-depth Of Military Assets
    - Territorial Defense

SCOPE OF PRESENTATION

- Background: TMD Allied Participation
- Today's TMD Environment
- U.S. Congressional Perspective
- Plan To Coordinate U.S. TMD Programs With Allies
  - Objectives
  - Approach
  - Underway Now, Near / Mid Term, Far Term
- Summary

• Summary

SUMMARY

- International Community Recognizes The Need For Anti-tactical Ballistic Missile Defense

- U.S. DoD, Through BMDO, Has Established A Sound Plan To Enable Evolutionary Improvement Of National Capabilities

  - BMDO Is Fully Engaged In International Discussions On Collaborative Opportunities

  - Actions Are Being Taken By International Community To Resolve Deficiencies In Response To The Threat

- Allied Participation In The Past Has Been Significant; Continued Participation Will Ensure Improved Missile Defense Systems At Reduced Cost And With Mutual Benefits

Benefits