



Precision Strike
2007
Winter Roundtable



"Precision Engagement – Strategic Context for the Long War"

Arlington, VA

February 1, 2007

PSA Winter Roundtable 2007 Agenda

2007 THE STRATEGIC OUTLOOK and WORLD TRADE, SMUGGLING NUKES, & HOMELAND SECURITY: THE CHALLENGE OF THINKING ANEW:
Peter Huessy—President, GeoStrategic Analysis

LONG RANGE STRIKE WEAPONS:

Frank Cappuccio—Executive Vice President and General Manager, Advanced Development Programs & Strategic Planning, Lockheed Martin Company

JOINT INNOVATION AND EXPERIMENTATION (JI&E) DIRECTORATE:

Rear Admiral James A. Winnefeld, Jr., USN—Director, Joint Experimentation Directorate (J9), U.S. Joint Forces Command

WEAPONS TECHNOLOGY BLUEPRINT FOR THE FUTURE:

John S. Wilcox—Assistant Deputy Under Secretary of Defense for Precision Engagement & Director, ACTD & JCTD Program, OSD



Winter Roundtable 2007

Final Program

Precision Engagement—Strategic Context For the Long War



William J. Perry
Award Luncheon

FEBRUARY 1, 2007

**Crystal Forum—Crystal City Marriott
Arlington, Virginia**

Winter Roundtable is sponsored by:
Raytheon Company

Winter Roundtable

- 0700 **REGISTRATION / CONTINENTAL BREAKFAST**
- 0750 **WELCOME: *Bill Dalecky***—Chairman of the Board,
Precision Strike Association
- 0800 **CONGRESS, ACQUISITION EXCELLENCE, AND
UNMANNED SYSTEMS: *John Douglass***
President, Aerospace Industries Association
- 0830 **NEW CONGRESS—IMPLICATIONS FOR NATIONAL
DEFENSE POLICY: *Peter Huessy***
President, GeoStrategic Analysis
- 0900 **SENATE PERSPECTIVE ON EMERGING THREATS AND
CAPABILITIES:**
Senator Elizabeth Dole (R-NC)
110th Congress, Senate Armed Services Committee (Invited)
- 0930 **OSD PERSPECTIVE ON DEFENSE LEGISLATIVE
PRIORITIES AND CONGRESSIONAL ENGAGEMENT
STRATEGY: *Lisa Marie Cheney***
Principal Deputy Assistant Secretary of Defense (Acting),
(Legislative Affairs), Office of the Secretary of Defense
- 1000 **NETWORKING REFRESHMENT BREAK**
- 1020 **JOINT STRATEGY REVIEW: *Colonel Bill Hix, USA***
Strategy Division Chief, J-5 Strategic Plans and Policy
Directorate, The Joint Staff
- 1100 **LONG RANGE STRIKE WEAPONS: *Frank Cappuccio***
Executive Vice President and General Manager,
Advanced Development Programs & Strategic Planning,
Lockheed Martin Company

Agenda

- 1200 **LUNCHEON & WILLIAM J. PERRY AWARD CEREMONY**
- Luncheon at Crystal City Marriott
 - Chairman's Remarks: Bill Dalecky
 - Select Representatives Remarks
 - Presentation of William J. Perry Award by:
Honorable Gordon England to the **Small Diameter Bomb Team**
 - Small Diameter Bomb Team Remarks
- 1315 **CONGRESSIONAL PANEL—PRIORITIES AND ISSUES:**
Select SASC, HASC, SAC, & HAC
Professional Staff Members
MODERATOR: Dick Rumpf—President, Rumpf Associates Int'l
- 1400 **JOINT EXPERIMENTATION FOR PRECISION ENGAGEMENT:**
Rear Admiral James A. Winnefeld, Jr., USN
Director, Joint Experimentation Directorate (J9),
U.S. Joint Forces Command
- 1445 **NETWORKING REFRESHMENT BREAK**
- 1500 **WEAPONS TECHNOLOGY BLUEPRINT FOR THE FUTURE—HIGH SPEED WEAPONS, DEEP PENETRATION, & SENSOR-TO-SHOOTER TECHNOLOGIES:**
John S. Wilcox—Assistant Deputy Under Secretary of Defense for Precision Engagement & Director, ACTD & JCTD Program, OSD
- 1545 **IED DEFEAT—MAKING IT HAPPEN:**
Colonel Barry Shoop, USA— Science Advisor to the Director and Chief Scientist, Joint IED Defeat Organization
- 1630 **CLOSING REMARKS: Bill Dalecky**



Precision Strike Association

2007 Calendar of Events

ANNUAL PROGRAMS REVIEW*

Date: April 24-25, 2007

Theme: *Precision Engagement--Adapting Technology to Meet Emerging Warfighter Needs*

Location: Waterford Receptions, Springfield, VA

PRECISION STRIKE SUMMER FORUM*

Date: July 10-11, 2007

Location: Virginia Beach Resort Hotel, Virginia Beach, VA

PRECISION STRIKE TECHNOLOGY SYMPOSIUM (PSTS-07)*

Date: October 23-25, 2007

Location: Johns Hopkins University-Applied Physics Laboratory, Laurel, Md.

This symposium will be conducted at the SECRET/NOFORN Level

For more information on these events, check out our website: www.precisionstrike.org. *Sponsorships and Exhibit Space Available

The proceedings for Winter Roundtable will be available for downloading in 2-3 weeks at the following link:

http://www.dtic.mil/ndia/2007psa_winter_roundtable/2007psa_winter_roundtable

You will be sent an email when they are ready. Please note that not all presentations will be approved for distribution.

WINTER ROUNDTABLE 2007 COMMITTEE

Programs Chair: *Ginny Sniegon*

Programs Vice-Chair: *CAPT Pete Murphy, USN*

Congressional Chair: *Dick Rumpf*

PSA Executive Director: *MG Paul Greenberg, USA (Ret)*

PSA Director of Operations: *Dawn Campbell*

PSA Chairman of Board: *Bill Dalecky*



**Create and Deliver Superior Products
Through Innovative Minds**



Advanced Development Programs

**Precision Strike Winter Roundtable
“Long Range Strike Weapons”
Frank Cappuccio, February 1, 2007**



An Industry Perspective



- 1. What LRS Capabilities Does the Customer Community Want?**
- 2. What Are the Desired Attributes of LRS Weapons?**
- 3. How is Industry Responding?**

It All Depends On ... the CAPABILITIES Required & Who's Buying



Long Range Strike Journey



“Here is *Industry Bear*, coming downstairs now, bump, bump, bump, on the back of his head, behind Christopher Robin.

It is, as far as they know, the only way to come downstairs, but sometimes we feel that there really is another way...

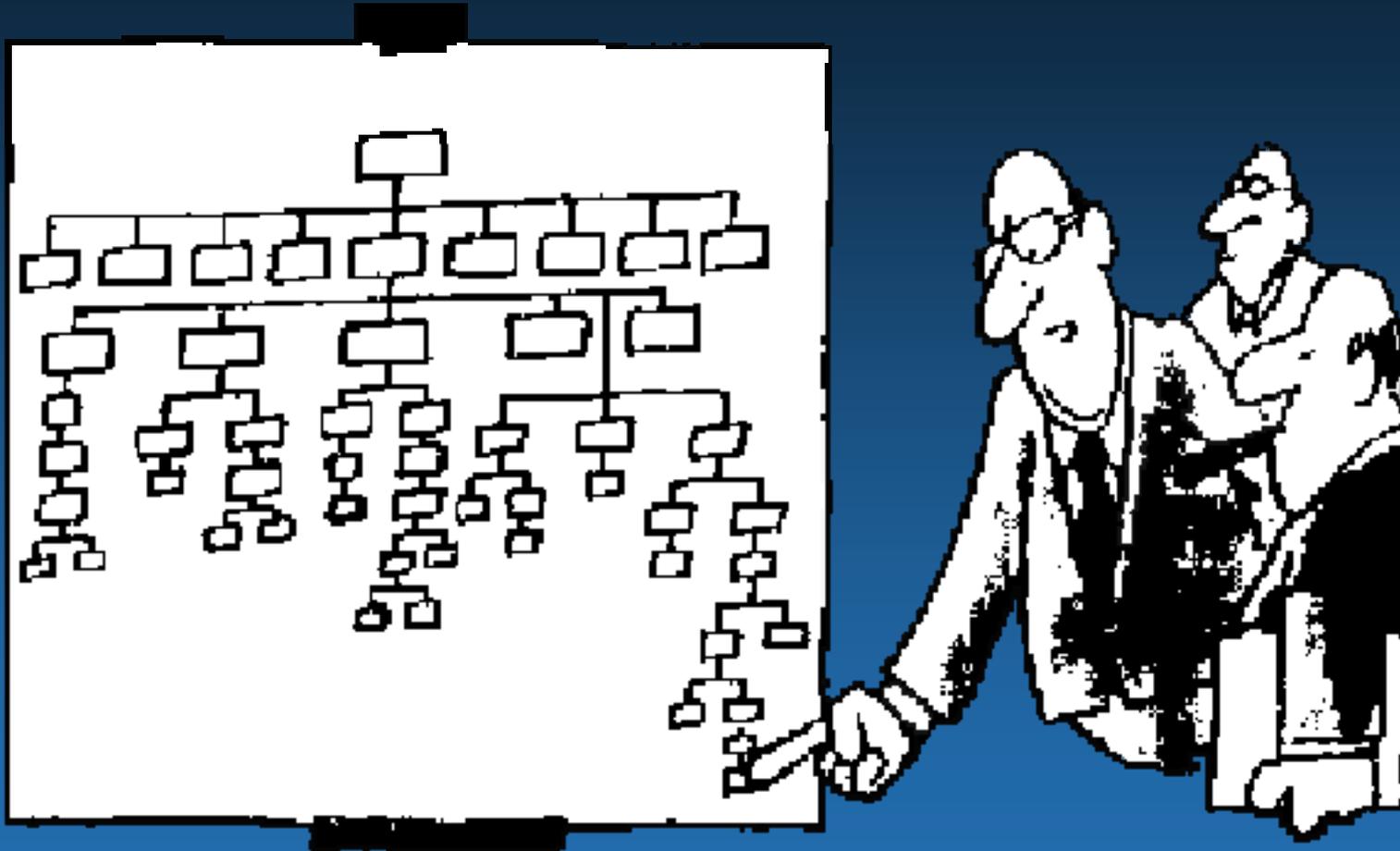
If only we could stop bumping for a moment and think of it!”



Original Source: Augustine's Laws



CEO Opportunity Review Board



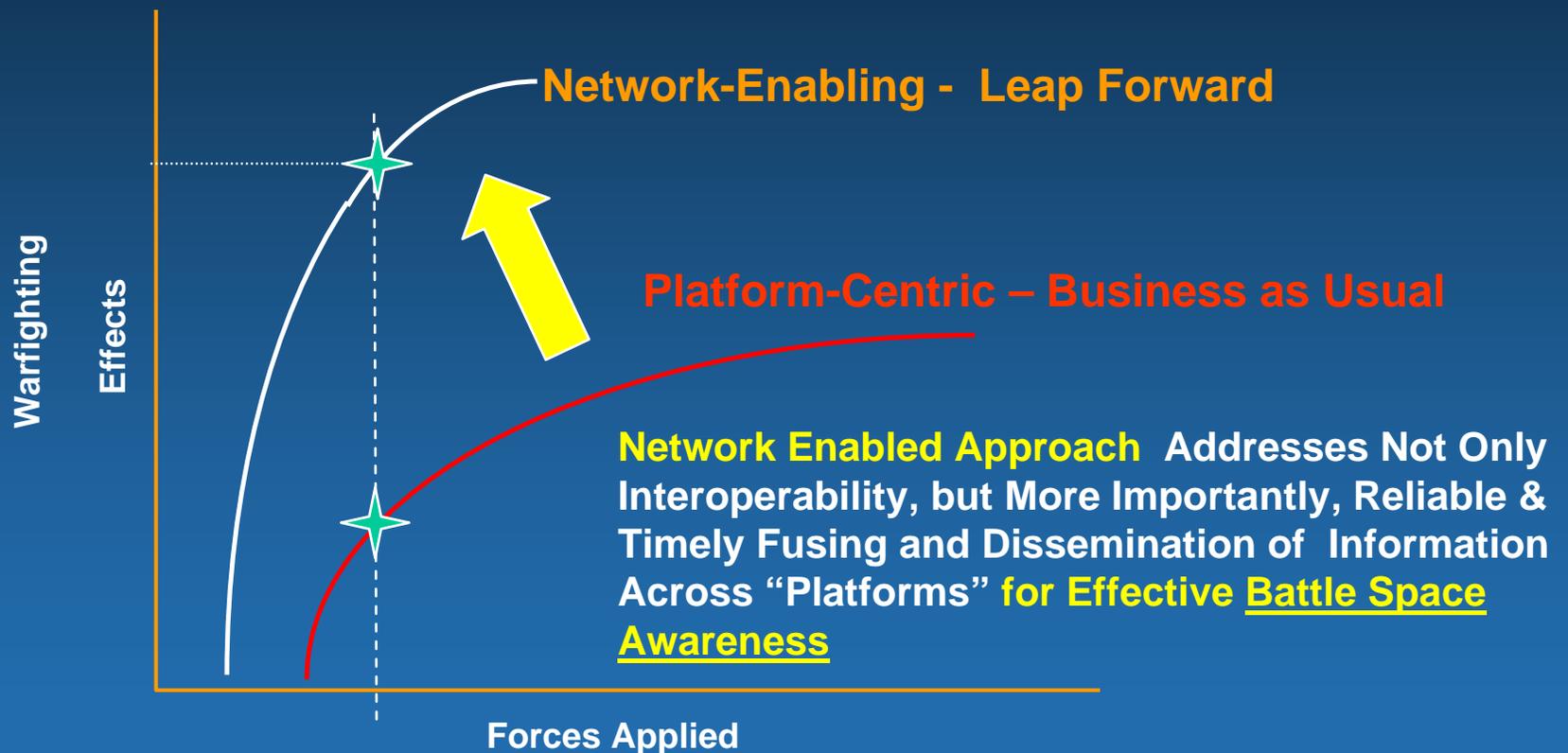
Frank:
“Is this your Requirements Source?”



Framework for the Future



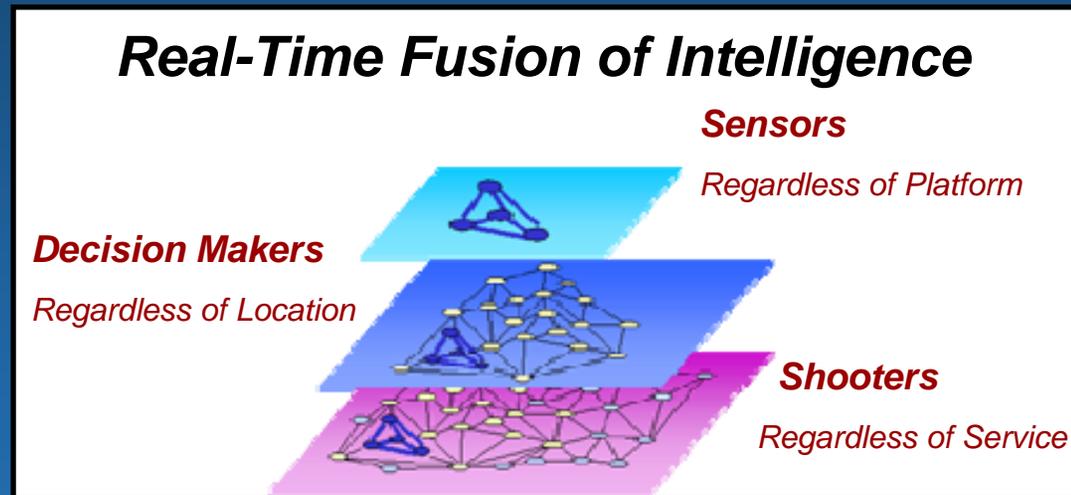
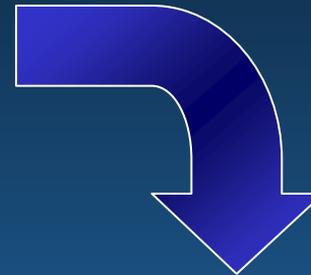
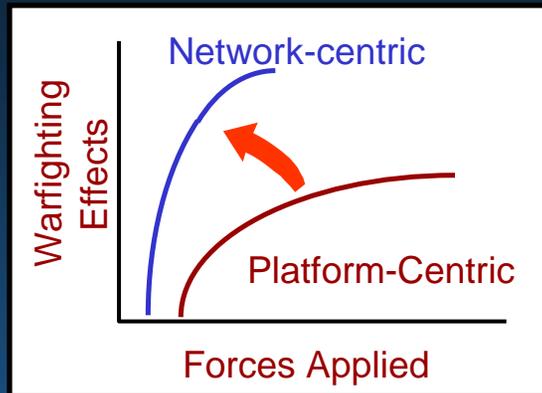
Strategic Vision: Provide the “War-fighter” an Exponentially Increased Capability to Address a Wide Range of Threats, Via Either Preemptive and or Reactive Force, With High Confidence of the Source of the Threat



Information Awareness Critical for Precision Engagement



Framework for the Future



Information Advantage Elements

Battle Space Awareness Critical for Precision Engagement



Future Operational Environment



- **Anti Access Due to Basing Restrictions Must Be Accomplished**
 - *Impacts Navy and USAF CONOPS*
 - *Forces Strikes From Long Distances in Early Days of Campaigns*
- **Proliferation of Next Gen Threat Defensive Systems Must Be Countered**
 - *“Double-digit” SAMs, e.g., S-400, HQ-9, and Follow-ons / Mods*
 - *Advanced Fighters With Advanced IRSTs, Radars, Missiles*
 - *Digital IADS / Networked Radars*
- **Various Levels of Scenarios / Threats Must Be Addressed**
 - *Near Peer, Highly Capable, High Threat, e.g., China*
 - *Difficult / High Threat, e.g., North Korea*
 - *Quick Reaction, e.g., Neutralize WMD Threats, GWOT*
 - *Lower Intensity, e.g., Afghanistan, Bosnia, GWOT, etc*
- **High Value, Time Critical Target (TCT) Set Must Be Prioritized**
 - *Majority Are Fixed, Preplanned*
 - *TBM / SAM Pop Up Targets Included*
 - *Target Rich in Large Scenarios*
 - *“Lone Ranger”*



Future Strategic Strike System Options



Difficulty & Time

Key Requirements/Customers

Technical
Difficulty



LRS (Long Range Strike)	PGS (Prompt Global Strike)
ISC (Interim Strike Capability)	LRS

Near-Mid Term

Mid-Far Term



LRS <ul style="list-style-type: none">• Mach 0.8 – 2+• <3,000 nm• 10 – 40k lb Payload	PGS <ul style="list-style-type: none">• Mach 7 – 25• 5 – 10k nm• 20 – 40k lb Payload
ACC	STRATCOM
ISC <ul style="list-style-type: none">• Mach 0.5 – 2.0• 1,500 – 3000 nm• 5k lb Payload	LRS <ul style="list-style-type: none">• Mach 3 – 7• 3 – 10,000 nm• 10 – 40k lb Payload
ACC	ACC / STRATCOM



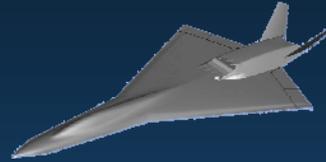
Industry Options For Strategic Strike



Advanced Hard Target Penetrating Weapons



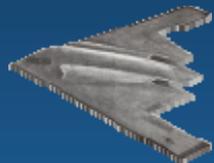
Super / Hyper Weapons



Mach 2-4 QSP & LRSA



Supersonic UCAVs



Traditional



Missileer

Industry Actively Investigating Multiple Categories of Future Strike Systems, Enablers, and Capabilities

- *Examining, Speed, Altitude, Payload, Survivability, Responsiveness*
- *Developing Future C4I Connectivity Solutions*
- *Working with USAF / USN to Identify Requirements*
- *Looking for Cost Effective Solutions*



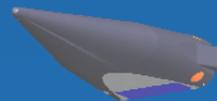
Military Space Plane



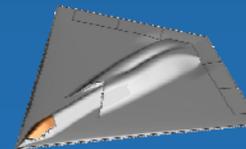
Small Expendable Launch Vehicle



Subsonic UCAVs



Common Aero Vehicle (CAV) Weapons



Subsonic Transonic



Hypersonic & Space Access



Attributes for Precision Engagement



1. Reach

- *Range, Anti-Access, Multiple Platform Compatibility*

2. Responsiveness / Speed

- *Combination of Reach, Speed, and the Right Payload for the Target, Multi-Vector Approach*

3. Lethality

- *Precision Required, Soft, Hard, HDBT, Collateral Damage*

4. Survivability

- *Altitude, Speed, Special Technology*

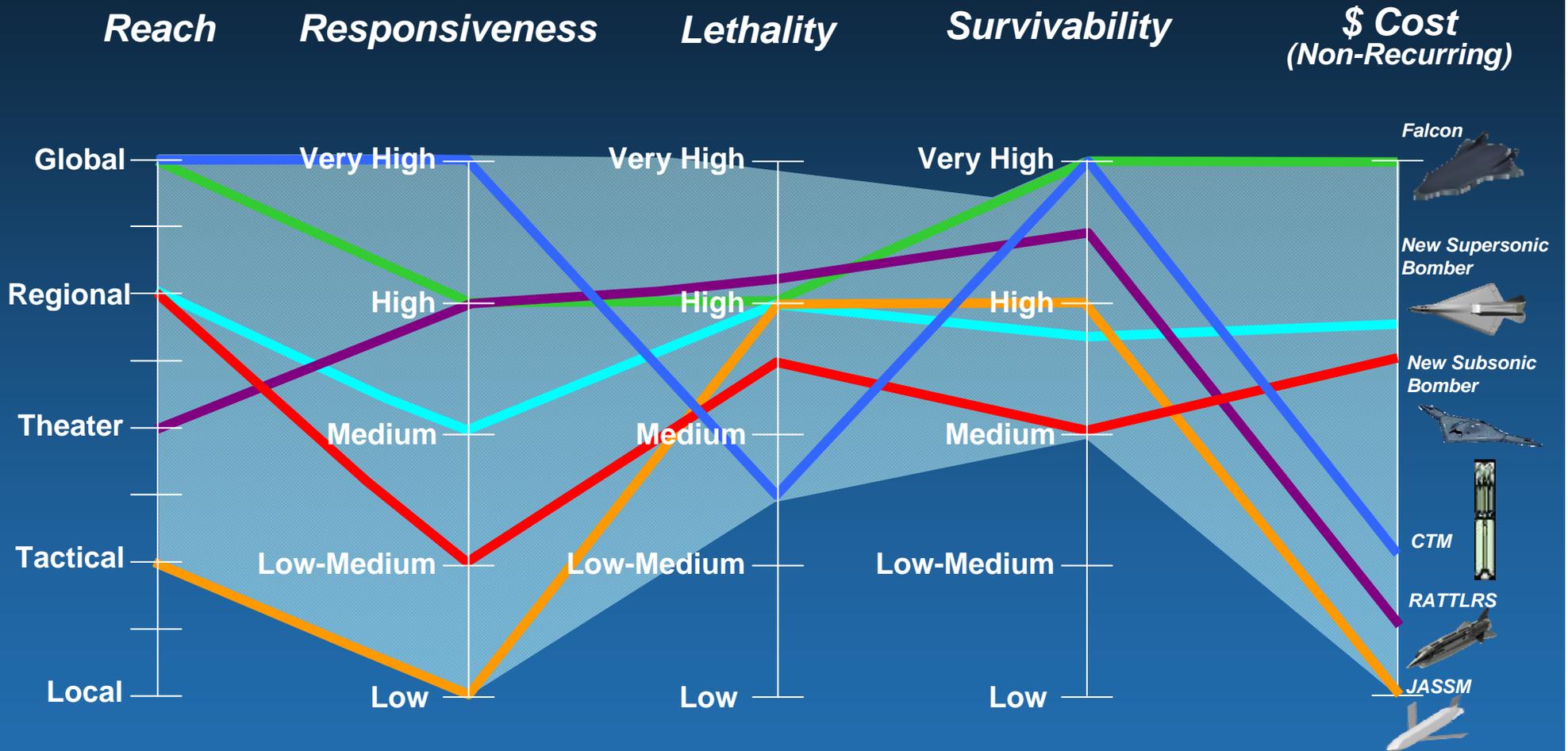
5. Cost

- *Sufficient Production Numbers, Affordable Manufacturing Methods*

It All Depends on ... the CAPABILITIES Required



Precision Engagement Attributes Trades



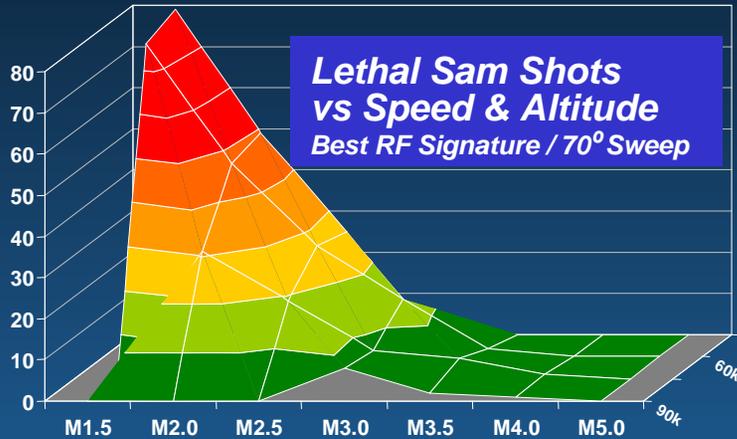
Requirements Drive the Solution



Speed - The Attraction and Risk Remain



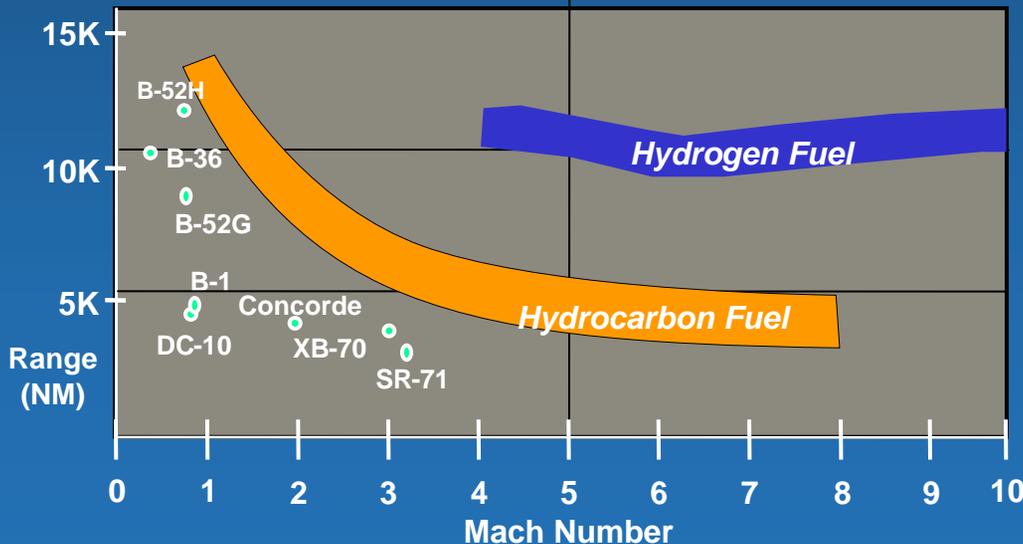
Speed is Life - Survivability



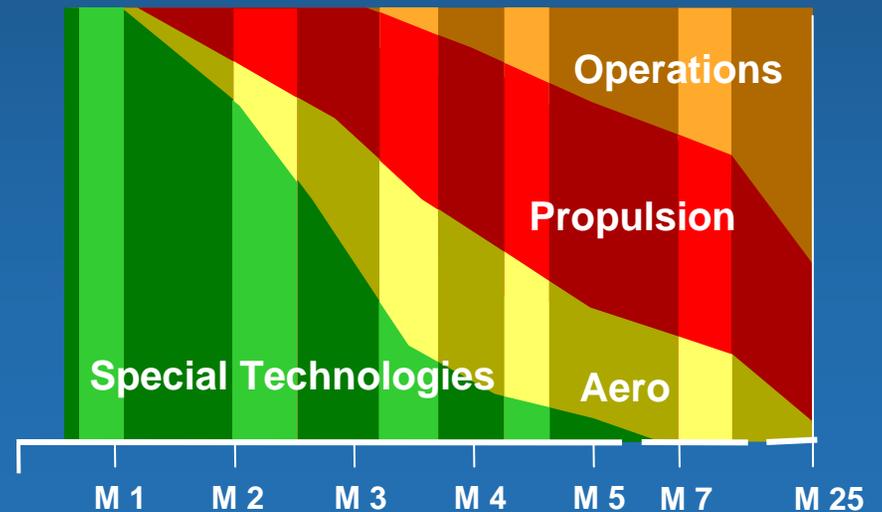
Speed Cuts Timeline to Engage Time Critical Targets

Mach Range	0.8	4.0	6.0	8.0	10.0	12.0
200	26.2	5.2	3.5	2.6	2.1	1.7
400	52.3	10.5	7.0	5.2	4.2	3.5
600	78.5	15.7	10.5	7.8	6.3	5.2
1000	131.0	26.2	17.4	13.1	10.5	8.7

Can Provide Global Range



Technology Focus Changes With Speed





"The Holy Grail"



Let me get this right ... You want to:

- **Geolocate terrorists or WMD to "1 foot"**
- **Reach out 2000 nm in "seconds"**
- **Deliver a lethal payload with "no collateral damage"**
- **Penetrate 200 ft of "super concrete ... steel preferred"**
- **... and hold an "icy refreshing beverage"**



Contact Information



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2007 The Strategic Outlook

Strategic Lessons, Regime Change
Proliferation Threats, the Intel
Record, Defense Budgets, & Deficits

Outline

- I. Cold War Lessons
- II. Post Cold War Lessons
- III. Past and Present of “Regime Change”
- IV. The Intel Record
- V. Counter Proliferation Lessons
- VI. Major Issues?
- VII. Iran As a Test Case
- VIII. The Role of the Media
- Addendum: Some Budget Numbers

The Ultimate in Precision Strike

- It was 1980. The Russell Senate Office Building, Room 222. Hearings on Strategic Nuclear Modernization. The Chairman of the JCS, USAF General David Jones, was asked by Senator John Stennis: “What would the US do if faced with a nuclear armed Libya?”
- The General replied: “Call Qaddafi and keep him on the phone for thirty minutes.”

STRATEGIC LESSONS: Cold War Targeting

- **Defined Frontier of the Fulda Gap and 38th Parallel in Korea**
- **Nuclear Deterrence Targeted Key Nuclear Forces, Industrial Sites, Conventional Tank Armies**
- **Amount of firepower required to destroy targets exponentially reduced—2 B-2 can do the job with JDAMs of 75 aircraft**
- **1996 attack on Libya required 100 combat and support aircraft + 2 carrier battle groups**
- **Only 15% of current Congressional Members in House/Senate in 1991**

Post-Vietnam Cold War Conflicts: Precision Strike Role*

- Capture of the Mayaguez, (1975); Iran Embassy Takeover, (1979); Sandinista's take over Nicaragua, (1979); FMLN seeks overthrow of El Salvador, (1979-90); Beirut Barracks destroyed, (1983); Grenada Liberated, (1983); Afghanistan Mujadeen receive Stingers*, (1983); Embassy in Lebanon Bombed, (1983); Libyan* strikes in response to Berlin disco bombing, (1986); Lockerbie Pan Am (1988); and expulsion of Iraq from Kuwait*, (1991).

Post-Cold War Conflicts

- **Less Defined Borders and Frontiers**
- **Significant Requirement for Elegant Precision and Intelligence in Some Areas**
- **Haiti, Somalia, Kosovo, Iraq, Afghanistan**
- **Non and Counter Proliferation of WMD rises to most serious threat**
- **USSR nuclear weapons: we knew where they were**
- **We have little if any quality information about nuclear programs in Libya, Iraq, Iran and North Korea**

Is the US Guilty of Pushing Regime Change?

- In the 1970s there were 16 nations that were taken over by communist regimes; another 6 went from allied with the US to adversary, most notably Iran. President Carter had campaigned on a platform of ending US support for allied third world dictators in Korea, the Philippines, Chile, Nicaragua and El Salvador. Largest recipient of US foreign assistance in 1979 after Israel and Egypt: the Sandinistas government of Nicaragua

Regime Change 2007

- Iran Seeks to Overthrow Israel, Lebanon and Iraq.
- North Korea Seeks Unification of Korean Peninsula under North Korean Rule
- Question: Why Should the US Be Giving These Guys a “Security Guarantee?”

Regime Change 80's

- Nicaragua and Grenada ended communist tyrannies
- The Warsaw Pact and Communism ended in Eastern Europe: Poland, Czechoslovakia, Hungary, Rumania, Russia, Bulgaria, East Germany, the Baltic's
- Soviet occupation ended in Afghanistan
- Cubans Removed from Angola

THE INTELLIGENCE RECORD

- **A recent article concluded that the use of PGM's and other precision strike capabilities was complicated by the requirement for elegant intelligence:**
- **The fundamental condition of launching a successful attack or inspection is knowledge of "where".**
- **"Without information about the location of hidden nuclear material and installations, no meaningful inspections are feasible". H. Blix, Washington Quarterly, Autumn 1992**

1981 USSR/TERRORISM

- Former USAF Secretary Reed in “At the Abyss” notes CIA Director Casey asked for a CIA assessment of USSR connection to terrorism. The reply: The USSR is opposed to terrorism. Evidence presented: Copies of editorials in Pravda and Tass broadcasts

The Intel Record, (cont)

- **Haiti: Aristide was a “democrat”**
- **Somalia: Adide could be a peace partner**
- **Kosovo/Bosnia: Milosevic in 1995 was our peace partner—**
- **Iran’s Khomeini “Is a Saint”, (Amb Young;) “Is a Moderate”, SecState Vance);**
- **Iraq: Missing the transfer of WMD to Syria and the \$100 billion oil for palaces scam**
- **NK: Missed the Uranium Enrichment Facility; lack of sound intel led to faulty Agreed Framework**
- **Missed Pakistani and Indian nuclear bomb tests**
- **Misjudged Iraqi nuclear program circa 1991**
- **Missed Extent of the Libyan nuclear weapons program**
- **Missed Extent of the Iranian nuclear weapons program**
- **Missed Khan network and nuclear weapons cartel**

Counter Proliferation Lessons?

- **Good target identification not there re: Iran, Iraq, North Korea, Libya, nuclear programs**
- **Makes military options perhaps less useful or credible**
- **But taking such options off the table forces negotiations into an arms control cul de sac, e.g., the Agreed Framework deals with Iran and North Korea**
- **Proliferation Security Initiative: Extraordinary success re: Khan network and Libyan program**
- **Interdiction of Sudanese freighter carrying explosives with the equivalent power of the nuclear bomb dropped on Hiroshima; interdiction of ship carrying 13000 centrifuges for Libya**

Lessons of Proliferation

- David Kay: “The threat from Iraq is even more serious not because of stockpiles of weapons—which still remain unaccounted for—but because Iraq had become prior to its liberation a ‘terrorists bazaar’ where weapons of mass destruction know-how and technology could be stolen, bought or smuggled.” [Testimony before the SASC, January 2004]

In This Context, What Then With Congress and Defense Budgets?

- Ten: (Remember issues are not just budgetary in nature—i.e., \$s, but also involve the time which will be devoted to them)
- 1. Future Direction of Strategic Nuclear Forces, especially RRW and Conventional Ballistic Missile: Giving a long range precision, prompt strike capability with a conventional payload

Issues, (cont)

- 2. Cost and Timeline for deployment of space assets especially following the Chinese ASAT test; issue of “weaponization of space”, the MDA space-based test bed, the ASAT test bed at Redstone, and USAF Space Programs

Issues

- 3. Tactical Aircraft, specifically proposed reductions in F-22 and relationship to JSF
- 4. Transfer, cancellation and Supplement of Some DOD technologies such as the High Altitude Airship, Predator and Global Hawk for domestic homeland security
- 5. Missile Defense: \$9B for missile defense which is .021% of the Defense Budget and .003% of the Federal Budget, especially European Third Site

Issues

- 6. Has the intel reform bill reformed intel?
[For the record: no]
- 7. Replenishment of forces worn out, especially Marines and Army—future budgets big impact; how to determine
- 8. Acquisition Reform: Time to deploy; cost estimating, unit costs.

Issues

- 9. Quality of Life Issues: Health Care; Post-Service Care; In Theater Availability of Weapons/Supplies outside of FOBs.
- 10. What is the relationship of the Balanced Budget proposals to Defense Spending and Overall Discretionary Spending? Long Term Budget Review entitlements and interest being greater % of budget. CBO: Expiration of tax rate reductions leads to projected \$170B surplus in 2012; Administration budget will show \$170 billion surplus with tax rate reductions maintained

Are We Serious About the Threats We Face?

- “Iran is hell bent on becoming a nuclear power!”
Tom Lantos, HFRC Chair
- “With the government of Iran, even deterrence is questionable let alone arms control”, R. James Woolsey, former DCI
- “These are crazed ideologues at the center of the Iranian regime—theocratic, totalitarian, genocidal maniacs.” Ibid
- “Iran must know the world will not back down”,
former Senator John Edwards

Is Congress Going to Get Serious?

- Getting Serious About the Strategic Threats We Face Requires an Informed Citizenry That Understands....
- “A freestanding diplomacy is an ancient American illusion. History offers few examples of it. The attempt to separate diplomacy and power results in power lacking direction and diplomacy being deprived of incentives”. Henry Kissinger, 1/21/07

The Response....

- “The whole concept of moving against Iran is bizarre.” Senator Jay Rockefeller, Chairman, SSCI /123
- “Diplomacy is sitting down for a couple of days and talking about our families and our hopes, building relationships...” Retired General Wesley Clark on how to deal with Iran’s nuclear facilities

The Dinosaur Media: Concentrating on the Right Stuff?

- Three Pigs Trigger Fire in Siberia, AP 1/10
- Artist Hopes to Float Giant Banana Over Texas, AP 1/7
- Hollywood Women Say They Are Too Busy to Shave Armpits, AP 12/6
- Tijuana Police Issued Slingshots, MSNBC, 1/22
- UK Government is Failing Sex Workers, Reuters, 1/11
- Man Loses Nose in Circumcision Ceremony, News.com 1/9

The Media's View of the World

- “The Islamists were the one hope for Somalia”, Time Magazine 1/8
- “Nothing has Changed to Warrant More Troops” and “Once again Bush is sending too few soldiers”, Margaret Carlson, Time, same column, 1/11
- “Kim Il Sung: Enigmatic ‘Great Leader’ of North Korea Dies at 82” David Sanger , NY Times
- “Pinochet, 91, Dictator who Ruled by Terror in Chile, Dies”, Jonathan Kandell, NY Times
- “Castro’s regime a work in progress, US tars Castro as dictator.” Marc Lacey, NY Times

Castro's Obituary

- “Kindly Medical benefactor Dies, Called Dictator by CIA”

Media Comprehension

- “What’s harder to explain is why though crime has fallen so sharply, prison admissions have risen.” Chicago Tribune
1/11/07

What The Media Didn't Tell You

- “We could support a surge of American combat forces to stabilize Baghdad and speed up the training and equipping mission...” Iraq Support Group, 12/7/06

And...

- “When asked if there is a comprehensive strategy to combat terrorism you responded it would be ‘silly’ to believe a comprehensive strategy could be developed to combat terrorism.” Congressman Shays letter to NSC adviser Richard Clarke, July 5th, 2000, submitted to the 9/11 Commission

We Are in Danger of Becoming A Country That Does Not Believe In Itself....

- “You have to understand. I did not want the US to win in Vietnam,” Senator George McGovern in a conversation with James Webb, former Secretary of the Navy as relayed in a 1995 article by Senator Webb.
- “Quit looking for a way to win. We can’t win.”, Michael Moore, November 2006
- “What’s so bad about losing a war?”, G. Seib, Wall Street Journal. December 2006
- “Losing in Vietnam Helped us Win the Cold War.” Larry Korb, National Review Conference, 1/27/07

In Part Because....

- When Christopher Hitchens asked the late ABC Newsman Peter Jennings whether the Gulf War 91 would be considered a victory for the United States, Jennings replied:
- “That’s only true if we say so.”
- Claremont Review of Books, “Theater of War” by Christopher Hitchens, Winter 2006/07

"All the News
That's Fit to Print"

The New York Times

Late Edition
New York, Today, steady and colder,
partly cloudy. High 55. Tonight, under
clouds. Low 45. Tomorrow, a heavy rain-
storm. High 54. Tomorrow, High 55,
Low 35. Weather map on the Page 10.

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NEW YORK, FRIDAY, JUNE 1, 1944

ONE DOLLAR

War scandal! Patton just a decoy in Dunkirk with fake tanks!

Hitler recalls Rommel from wives b-day for d-day

By ADAM WAGNER
and KATHARINE G. MORTON

WASHINGTON, N.Y., Jan. 22 — In their first attack before the first European offensive, the German general staff's calculations showed on Thursday that they could without the invasion across from France to both an aerial victory and sea victory, as they sought to delay extensive army movements about the party's hope of winning both the "who knew the fall."

Looking many and indeed after these weeks of German engineering the same German general in a nuclear advanced effort that they could easily defeat themselves against the list of aircraft on land, military and air units from the European front and offensive against Germany in potential defense for 24 hours.

"There's a light I look behind us," General John Stryker of Massachusetts said when asked if he feared that the "who knew" would be the only one to be able to resist it. "There's a light in the sky," he said.

"There's a light in the sky," he said.



Real invasion to occur in Normandy 350 miles away!

Helen Thomas to FDR: why can't the US fight a fair fight?

By STEVEN B. WEINMAN

WASHINGTON, Jan. 22 — The State department is under growing pressure from foreign leaders to which means and means more to an expanded version of its traditional troop covering, Gen. G. which would also provide for a direct attack last year, administration and troop officials said Thursday.

The officials said Helen Thomas, chairman of the troop covering, Gen. G. had proposed the main expansion in a memorandum before the American government in offering a new government through a new plan which would not be the demand for more troops, Gen. G. would be the main.

Mr. Thomas's proposal would be demonstrated by the expansion of the plan to the point of peace and the proposal to support American troops. The expansion — which was reported called a "first option" — has been reported among other in United States Secretary General Staff. Gen. G. had the official and the plan would be the main.

The kinder side of Adolf and Eva

By ADAM WAGNER

WASHINGTON, N.Y., Jan. 22 — Howard Dean said he is just another teacher dad. His wife of 25 years, Lucille, teaching Dean, said she cannot remember the last time he had his temper. She said her 14-year-old

WIFE RECALLED ADOLF

Two weeks after Gen. Wiley P. Clark said he apparently was the only one to remember the last time he had his temper. Page 10.

being being a dad and a teacher for me."

The incident on "President," when Thursday night, knowledge arranged to visit the U.S. coast on the Dean's staff and experience arranged to remember an other campaign and had his dad in the office. It was a reminder of his and

Ike denies June 6th rumors

By CARL MCGEE

WASHINGTON, Jan. 22 — Gen.



IT'S TIME FOR CHANGE! LET'S SHOW AMERICA DEMOCRATS ARE FOR NATIONAL SECURITY!

HERE! HERE!

YEAH!



WE WILL PASS TOUGHER MEASURES TO FIGHT TERRORISM!

ACTUALLY, WE'RE AGAINST THE PATRIOT ACT.

NO PROFILING.



UH... THEN WE'LL USE ADVANCED TECHNOLOGIES TO LISTEN IN ON TERRORISTS' PLANS!

WE'RE AGAINST THE NSA PROGRAM.

DTTO ON BANK TRANSFERS.



UM... THEN WE'LL CAPTURE TERRORISTS AND MAKE THEM TALK!

ABSOLUTELY NOT!

TERRORISTS HAVE RIGHTS TOO!



THEN WE'LL FIND A SPECIAL PLACE TO LOCK THEM AWAY FOREVER!

SORRY, NO GITMO.

HABEAS CORPUS



WE'LL KILL BIN LADEN?

WE'RE AGAINST THE DEATH PENALTY.

MAYBE WE COULD DRESS HIM UP LIKE A FETUS?



KAUFZ



1993: TERRORISTS ATTACK THE WORLD TRADE CENTER, KILLING 6 AND INJURING MORE THAN 1000.



1995: TERRORISTS BOMB U.S. HEADQUARTERS IN RIYADH, SAUDI ARABIA, KILLING 5 AMERICANS.



1996: TERRORISTS BOMB AL-KHOBAR TOWERS, KILLING 19 U.S. SERVICEMEN AND WOUNDING 300.



1998: TERRORISTS BOMB UNITED STATES EMBASSIES IN KENYA AND TANZANIA, KILLING 24.



2000: TERRORISTS ATTACK THE USS COLE, KILLING 17 SAILORS AND INJURING 39.



2006: ABC NRS 9/11 MINI-SERIES.

THE PATH TO 9/11

www.thetors.com/cartoons

Addendum: Revenue/Deficits

- Last year of Bush 41, revenue to USG climbed: \$63 billion/yr; 2005, revenue under Bush 43 will grow \$177b; FY06 revenue grew \$250 billion
- 93-4, revenue climbed \$104 and \$93billion/yr
- 95-99, revenue climbed \$121b/year
- Stock Market Bubble burst reduced revenue which had climbed from \$25b/year to 100b \$/year, (this after a cut in the capital gains tax); current estimates indicate \$80+ billion a year
- Growth in revenue in past two years \$500 billion

Revenue/Deficits

- Now for the period Oct 1999 through October 2002, thus taking into account the stock market/dotcom bubble burst, the recession and 9/11, revenue which started at \$2.025 trillion declined to \$1.853 trillion; the trend line was that the revenue would have increased over that period of time to \$2.425 trillion

Revenue/Deficits

- Now, from October 2002, during the build-up to the liberation of Iraq, through December 2006, annual revenue will grow from \$1.853 trillion to \$2.557 trillion, growing this year by \$225+ billion.

Deficits/Revenue

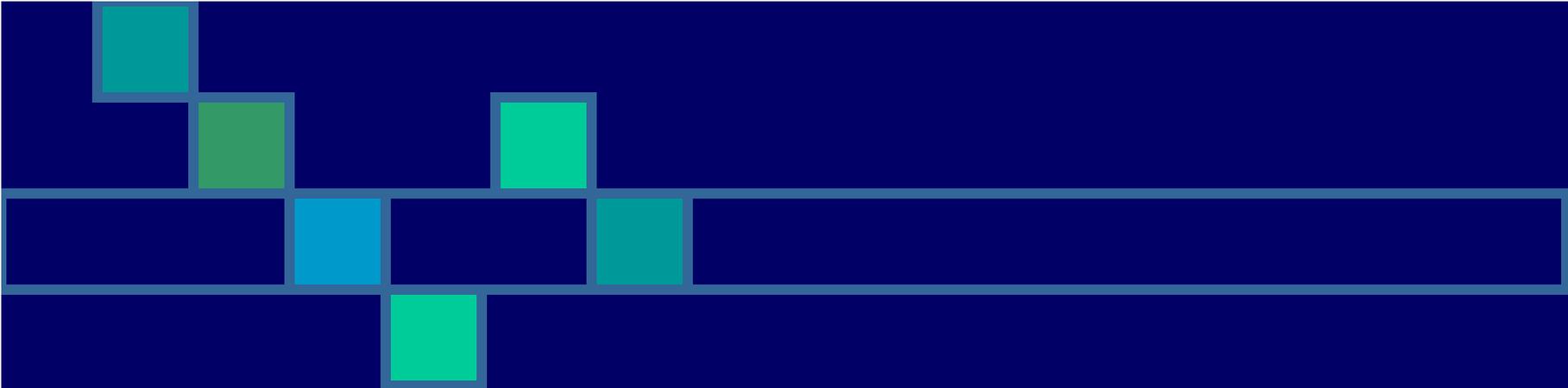
- They key here: The recession of 2000-1 was combined with two other factors not present during 1981-2 and 1990-1: the collapse of the .Com stock market and 9/11.
- It has taken five years to again reach the revenue levels of 2000; tax rate reductions account for only 22% of this; as can now be seen, an economy growing at 3.5%+ is now generating \$250 billion more revenue A YEAR even under lower tax rates.

SPENDING

- Spending for October 1999 through September 2001 averaged \$1.8 trillion
- Spending after 9/11 BUT prior to Iraq averaged \$2.1 trillion
- Spending went up \$140 billion, (FY2004) \$130 billion, (FY 2005), \$95 billion (FY06) and \$125 billion, (FY07-projected)..

SPENDING

- FY04: 2.293 Trillion
 - FY05: 2.472 Trillion
 - FY06: 2.709 Trillion
 - FY07: 2.770 Trillion(projected)
-
- Growth: \$179 billion, \$238 billion, \$61 billion



World Trade, Smuggling Nukes, & Homeland Security: The Challenge of Thinking Anew

— ■ ■ ■ —
Presented by Peter Huessy

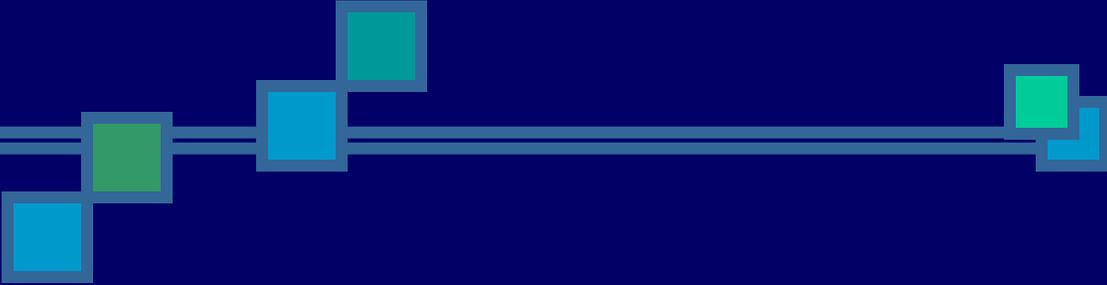
President, Geo-Strategic Analysis, Inc.

Member of the Board, National Center for
Critical Incident Analysis

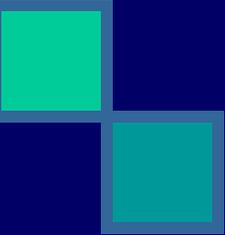


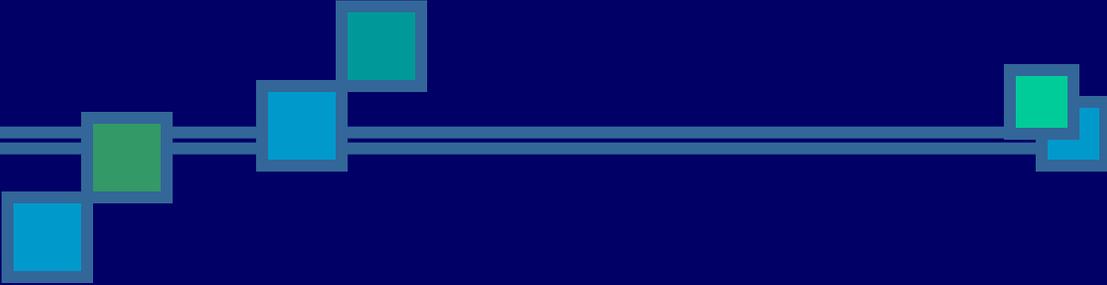
Facing the Nuclear Threat: Five Challenges—Moving From Old Think to a New Strategy.

- Understanding Terror Masters and Terror Servants
 - Elements of New Strategy
 - What is transformation: DOD and DHLS
 - Role of Pre-Emption vs. Law Enforcement
 - Review of Port, Border and Maritime Security
- 

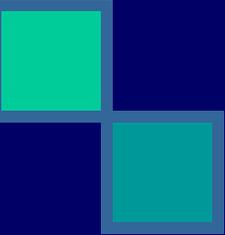


The Terror Masters

- 
- On 9/10, Syria, Iran, Iraq, Afghanistan, Libya, North Korea, Cuba, Sudan, China
 - Libya, Iraq and Afghanistan Eliminated
 - Iran: Sanctions Pending at UN
 - North Korea: Returning to Talks/Demonstrated Nuclear Capability
- 



The Terror Masters Attacks

- 
- Beirut; Berlin; Salvador, Lockerby, WTC93
 - Kobar, Kenya & Tanzania, SS Cole, Bali
 - 9/11, Madrid, Amman, London, Paris
Intifada, West Bank/Gaza
 - Old Think: Law Enforcement Adequate;
Respond "After the Fact"
- 



The Threat Is Real

Al Qaeda and Radiological Dispersal Devices

October 14, 2001, Israeli security arrested a man linked to Osama bin Laden armed with a radiological backpack bomb, as he attempted to enter Israel from the Palestinian Territories via a border checkpoint at Ramallah. The arrest led to the recovery of a device which held a small explosive core encased in radioactive material. "It would not kill a great many people, but it would contaminate a considerable area with radiation."





The Threat Is Real

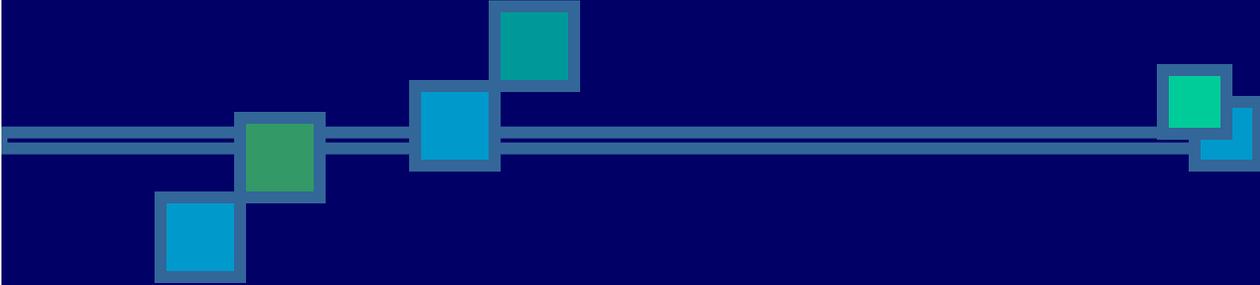


Suitcase Bombs In America

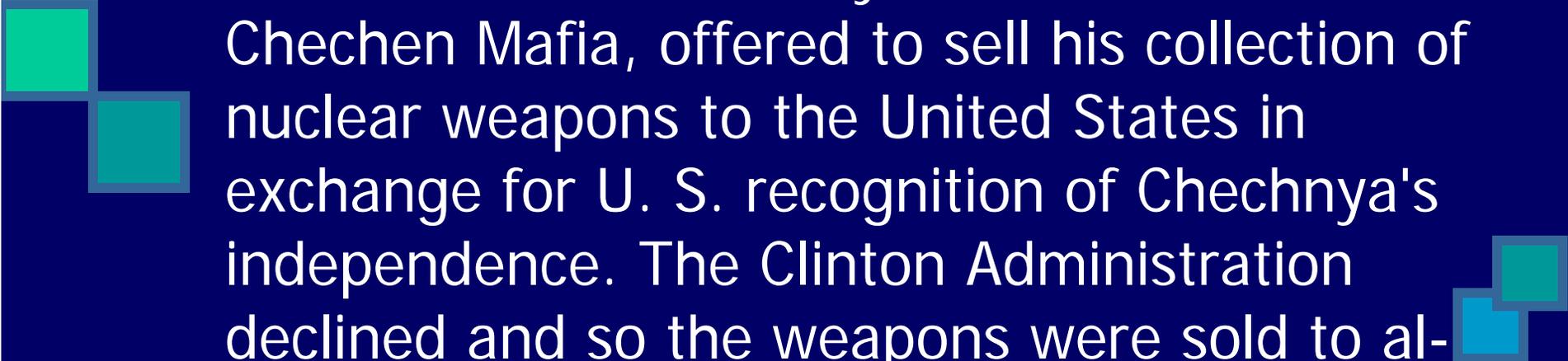


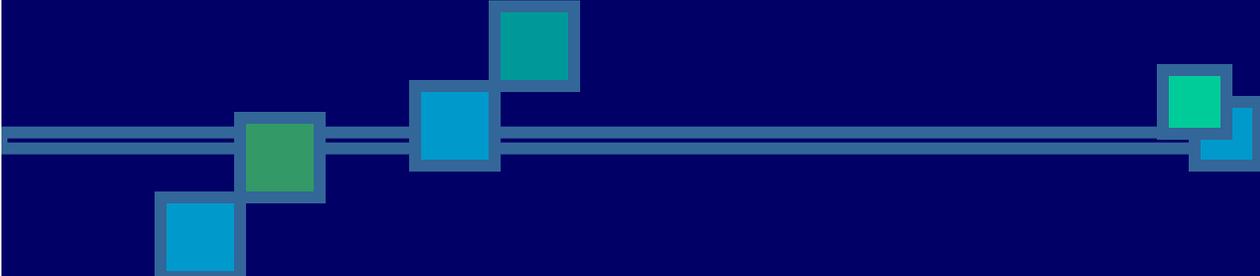
- November 11, 2001: Osama bin Laden may have already shipped weapons of mass destruction to the U.S.
- Pakistan says the Al-Qaeda network has transported nuclear, biological, and chemical weapons there. It claims at least two briefcases containing nuclear weapons may have reached U.S. shores
- The report says Pakistani and U.S. investigators have been able to identify that at least one such weapon has been acquired by Al Qaida from Central Asian groups





In 1996, Dzokhar Dudayev, the leader of the Chechen Mafia, offered to sell his collection of nuclear weapons to the United States in exchange for U. S. recognition of Chechnya's independence. The Clinton Administration declined and so the weapons were sold to al-Qaeda.





"I conclude that some post-Soviet states, mainly Russia, were the main providers of small, tactical nuclear weapons and of nuclear materials to terrorist organizations, often through organized crime contacts. I cannot exclude from this group other states or organizations (like the already broken Dr. Khan's network in Pakistan, like Libya, Iraq or Syria, like North Korea and Iran). Therefore, state-terrorist links are the most dangerous element of the present nuclear threat to the United States, its military forces and institutions abroad, and to Europe and other regions of the world."

David Dastych: A former Polish covert intelligence agent. He monitored illegal nuclear trades for an Israeli organization from 1992-1994.

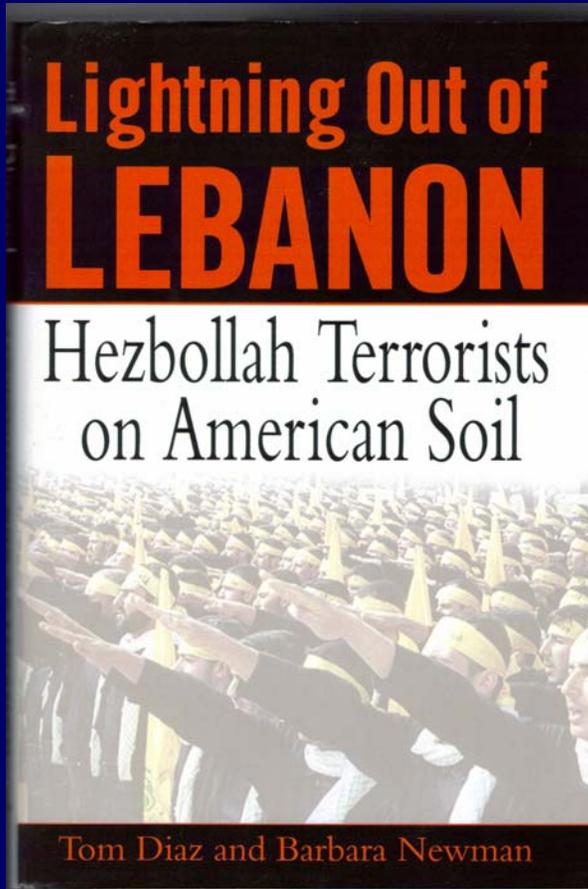


...the Terrorists Are Already Here

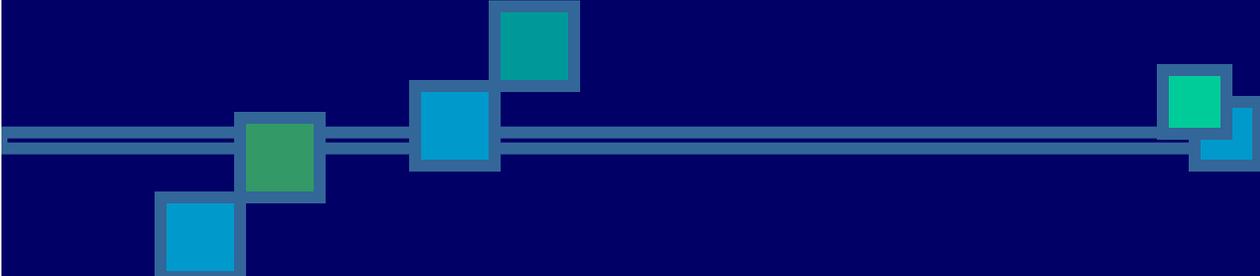




Intelligence

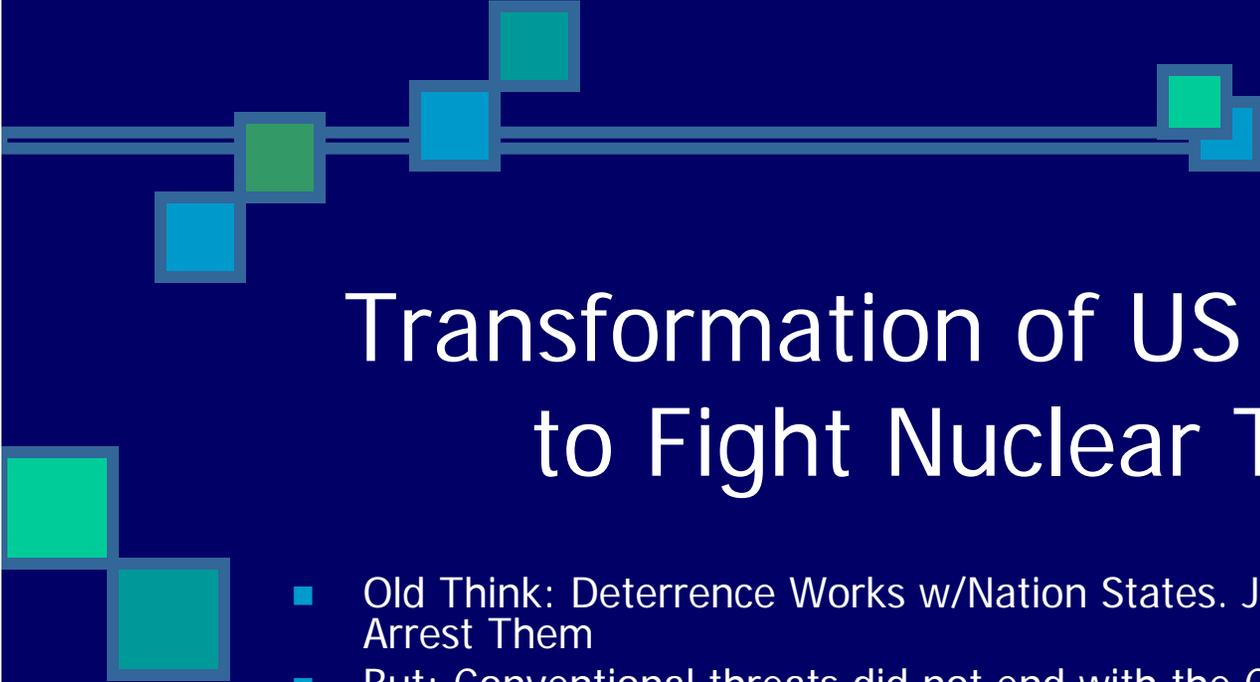


Intelligence Based Policing is the Key



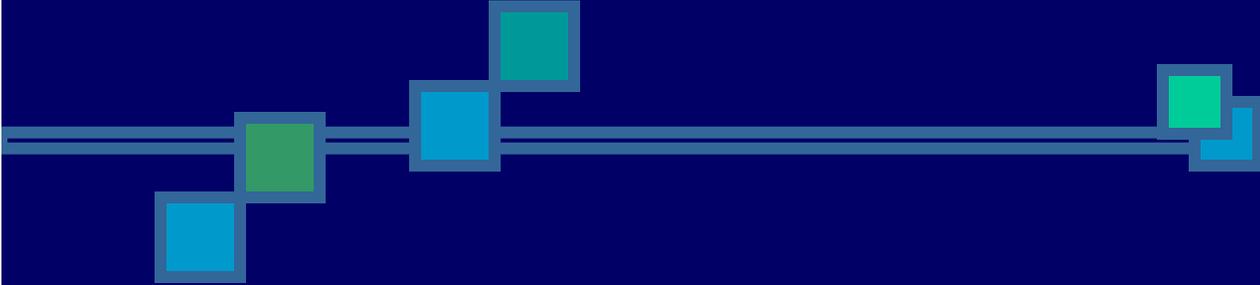
The Strategy to Defeat the Terror Masters

- ANSWER THE FOLLOWING QUESTIONS:
 - Where do they train? Who is their banker? Where do they get their weapons? How do they travel? Where are they given sanctuary?
 - Saddam trained 8000 terrorists between 1998-2002
 - Saddam and AQ agreement to “attack US interests”
 - “If you do not drain the swamps, you cannot find the alligators”, Peter Huessy, NDU/NCIA
 - Once you answer these questions, you then need to.....
- 

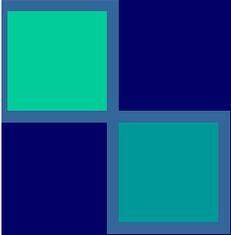
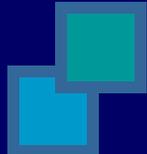


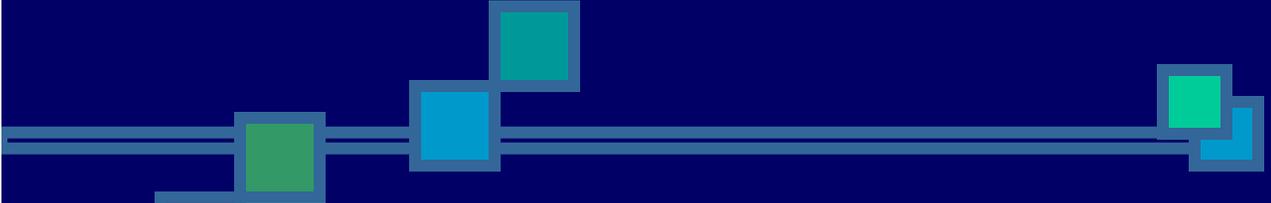
Transformation of US Capability to Fight Nuclear Terror

- Old Think: Deterrence Works w/Nation States. Jihadists/Terror Groups: Arrest Them
 - But: Conventional threats did not end with the Cold War; North Korea, China, Iran
 - Their alliance with terror groups requires new thinking
 - To stop traditional threats we still need nuclear deterrent and strong naval and air power; but
 - Traditional deterrence relied on the US and its allied counting the Soviet "beans"—tanks, bombers, missiles—and having sufficient military capability to deter aggression
 - The new Nuclear states and their terror agents: we cannot "count" the North Korean, Al Qaeda or Iranian "beans", plus we need vastly new intelligence to know where the bad guys are hiding
- 

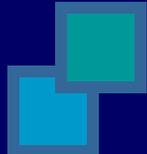


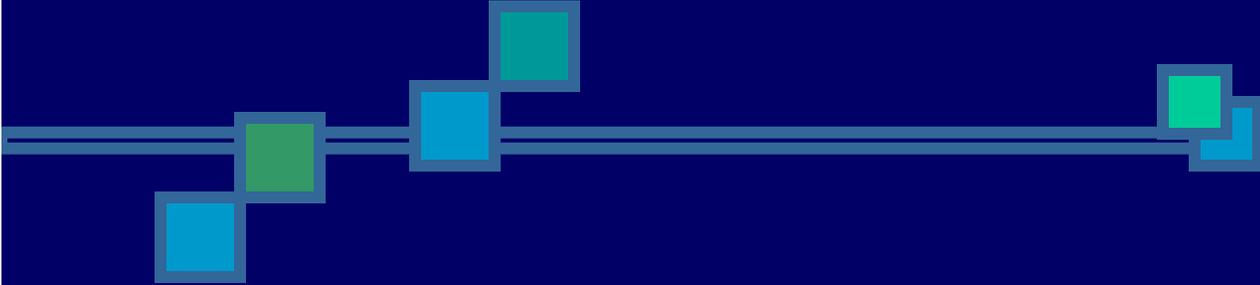
In this Context.....

- 
- Should we (1)rely on deterrence, (2)arrest the perps after the fact, (3)or stop the attacks before they happen?
 - America's Choice: A combination of all of the above with emphasis on (1) and (3)
- 



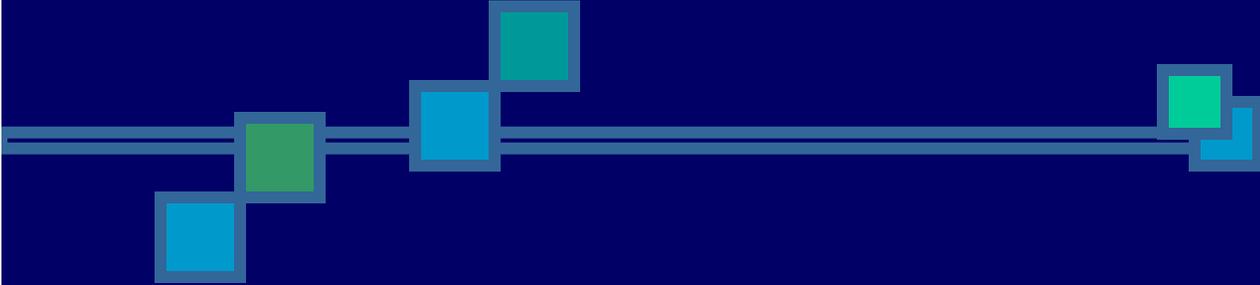
What is the US Government doing to stop a nuclear device from being exploded on US soil?

- Traditional Deterrence; Missile Defense; Proliferation Security Initiative; Nunn-Lugar; Arms Control; Regime Change; Port Security; Financial Games
 - These Initiatives Are The Front Line of Our Security Against the Threat of a Nuclear Attack.
- 

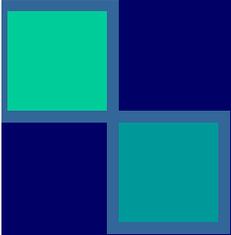
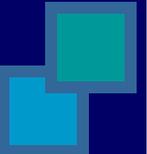


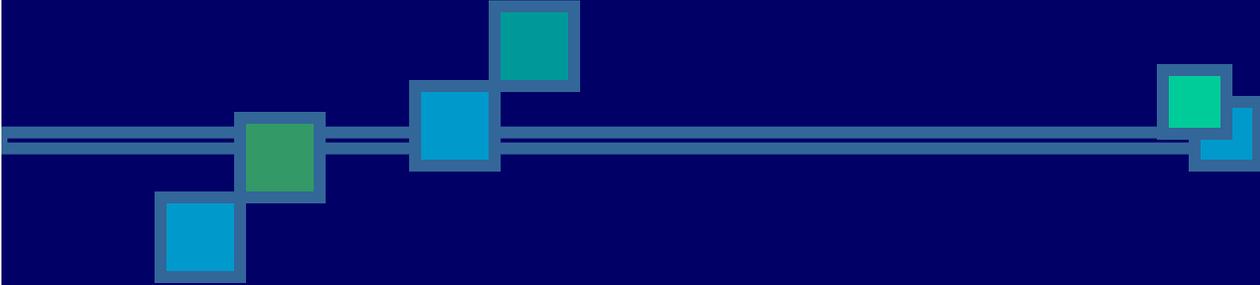
New Strategies...

- Arms Control—US has fewer nukes now than in 1958;
 - Have Demonstrated for the first time, global and layered missile defense—14 consecutive test successes. 800 interceptors by 2012
 - Securing Russian nuclear material to be completed 2010, 4 years earlier than projected in 2004, and a decade earlier than expected in 2000; 90% now secured; \$20 billion/10 years/26 countries
- 



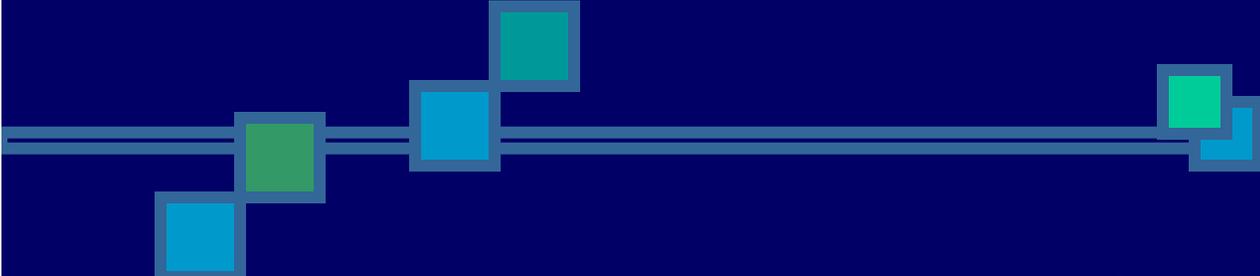
New Strategies...

- 
- 10,000 research sites world-wide—hospitals, research universities-- with nuclear material; 430 sites secured since 9/11 vs. 0 before
 - For the first time we have detectors between the source of nuclear material and the US—mega-ports, FSU, St Petersburg, Russia. 88 crossings out of the FSU have nuclear monitors
 - Rotterdam impressed with nuclear portal monitors; did not hinder trade; developing new generation of technology; transfer to Antwerp
- 

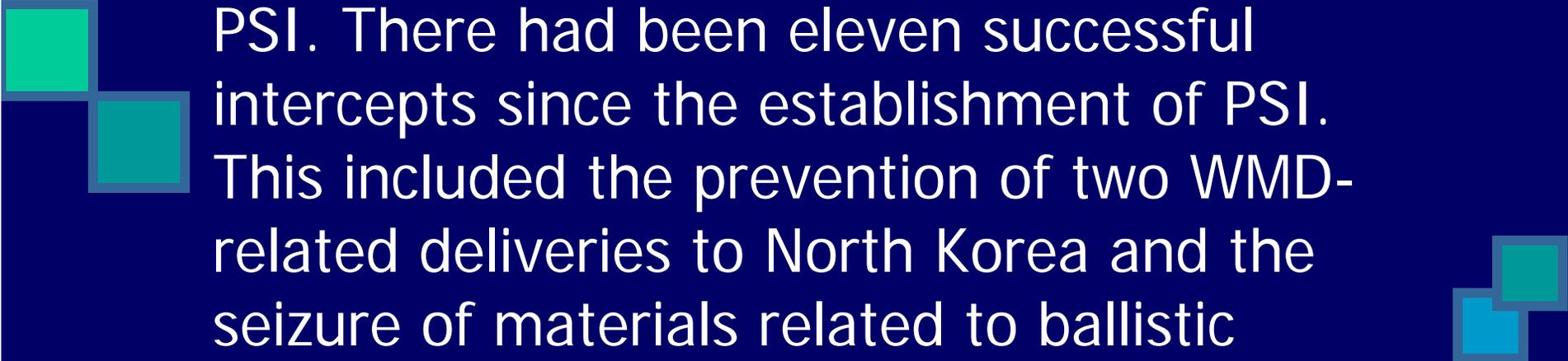


New Strategies...

- 70 Nation's members of the PSI; interdicted 13,000 nuclear centrifuges on Chinese ship run by the AQ Khan, "Nukes 'R Us outfit"; Cut-off terror/nuke financing; NY City/Missouri Retirement Funds "Terror Free"; Stole \$1 billion from NK
- 



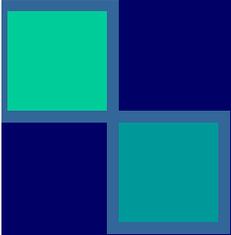
Washington has managed to persuade sixty-five other countries to become involved in PSI. There had been eleven successful intercepts since the establishment of PSI. This included the prevention of two WMD-related deliveries to North Korea and the seizure of materials related to ballistic missiles and nuclear activity en route to Iran.



- 
- Morocco on Monday, November 30 became the first Arab state to join a global initiative led by Russia and the United States to combat nuclear terrorism,
 - First launched at the Group of 8 summit in Russia in July
 - Participating states included Britain, China and France -- -- plus Australia, Canada, Germany, Italy, Japan, Kazakhstan, Turkey and Morocco
 - Participating states make "a commitment and build capacities to prevent the acquisition of sensitive materials by terrorist groups"



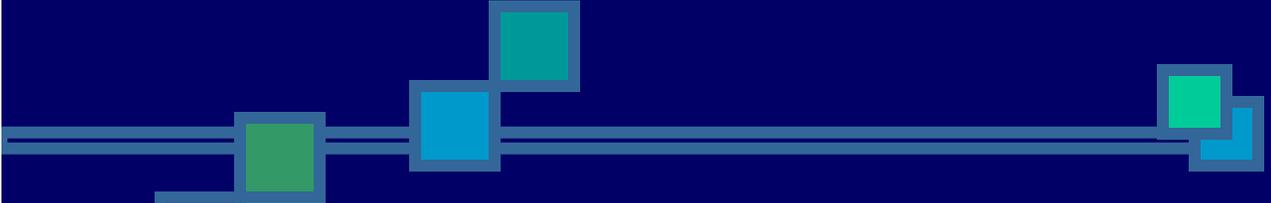
MONEY GAMES:



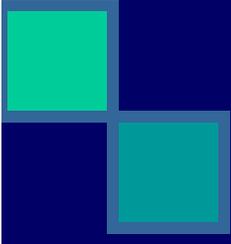
Washington - For three years, the Bush administration has waged a campaign to choke off North Korea's access to the world's financial system, where U.S. officials say the nation launders money from criminal enterprises to fuel its trade in missile technology and its efforts to build a nuclear arsenal.

U.S. pressure forced Macao this year to freeze North Korean assets in one of its banks, then foiled North Korea's panicky attempts to find friendly bankers in Vietnam, Mongolia, Singapore and Europe. And after North Korea's Oct. 9 nuclear test, China ordered some of its major banks to cease financial transactions with the country.



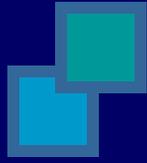


Evidence gathered over the decades by Washington indicates that North Korea has become what some U.S. officials call a "Soprano state." The government in Pyongyang used its embassies to coordinate illegal activities, its ships to move heroin and other contraband, and its factories to make counterfeit \$100 bills and bogus brand-name cigarettes, U.S. officials say.

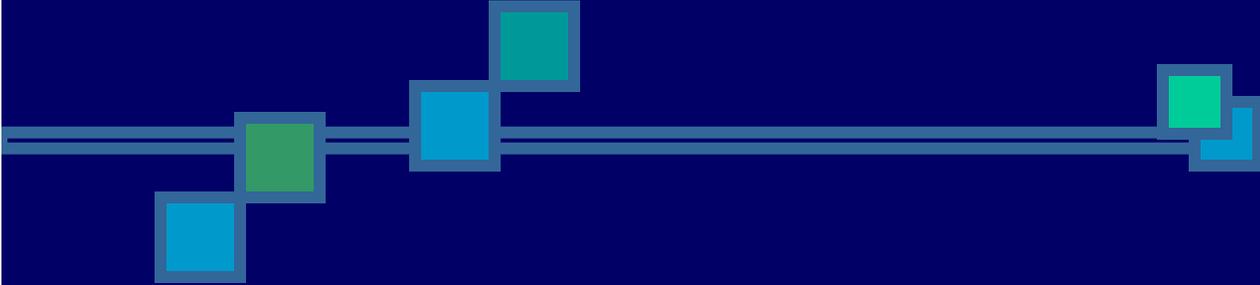


Kim Jong II, the North Korean leader, used the profits to fund his nuclear program, U.S. officials say, but also to import Mercedes-Benzes, pricey cognacs and other luxury items to buy loyalty.

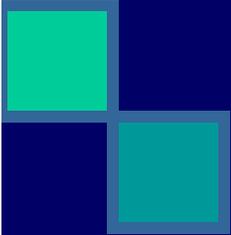
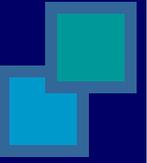
Washington fears that North Korea could decide to use its well-worn trafficking networks to sell Iran or others the hardware or know-how to make weapons of mass destruction.

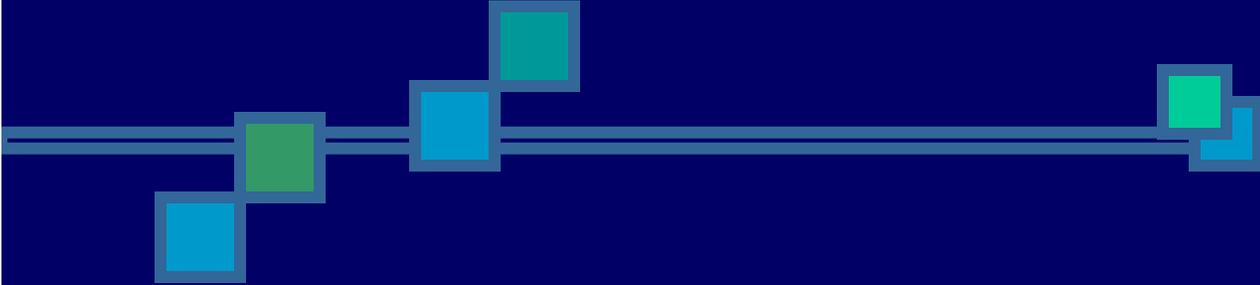


So administration officials decided in 2003 to attack by unconventional means. They created the Illicit Activities Initiative, a classified, multi-agency effort aimed at curbing North Korea's black-market networks.



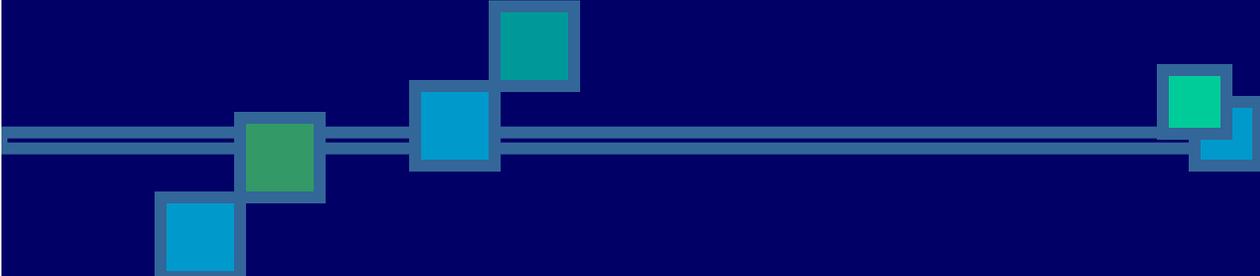
New Strategy...

- 
- Deter: Modernizing/Maintaining Nuclear Deterrent
 - --Minuteman III, Trident, B-2/B52's through 2020-30 or beyond
 - Interdict: 500 Portal Monitors in the US—50% of trade with the US inspected through Mega-Ports
 - Custom Trade Partnership Against Terrorism working well (CTPAT)
 - Discover: Integrated Domain Awareness (AirShip, RF Chips, Scan Tech)
- 



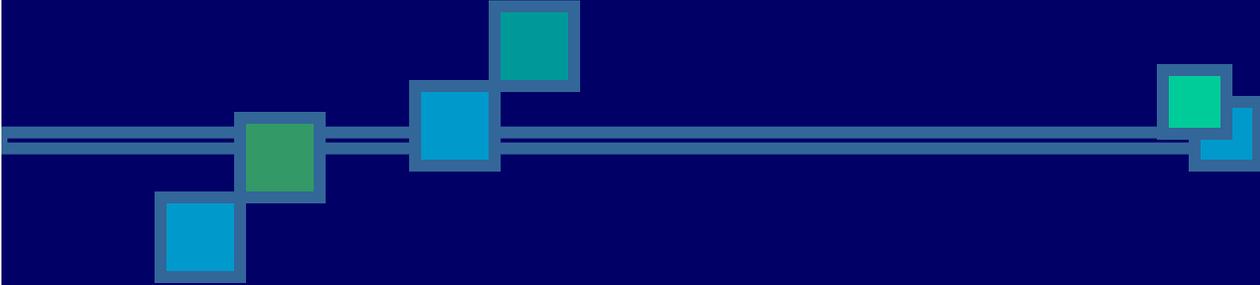
New Strategy...

- We need elegant intelligence to determine where the new nuclear threats may emerge
 - We need a precise capability to intercept, interdict and discover nuclear devices and terror groups/states that are building them
 - Deterrence necessary but not sufficient to deal with such threats
 - Arms Control also of Limited Value re: New and Emerging Threats—rogue states and terror groups;
- 

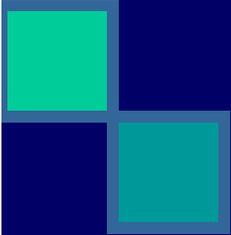


New Think: The Role of Pre-Emption?

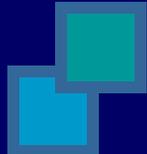
- Old Think: Arrest Perps After an Attack—Long Standing Assumption of US culture, politics ad law enforcement
 - If terror states behind attacks: how do you arrest a country?
 - Do you want a “Mutual Assured Destruction” Relationship with North Korea, Iran, Islamic Jihad, Hezbollah or Al Qaeda?
 - General David Jones: “Keep ‘Em on the Phone for 30 Minutes”
 - “We don’t want anything from you. We want to kill you.” Hezbollah
- 

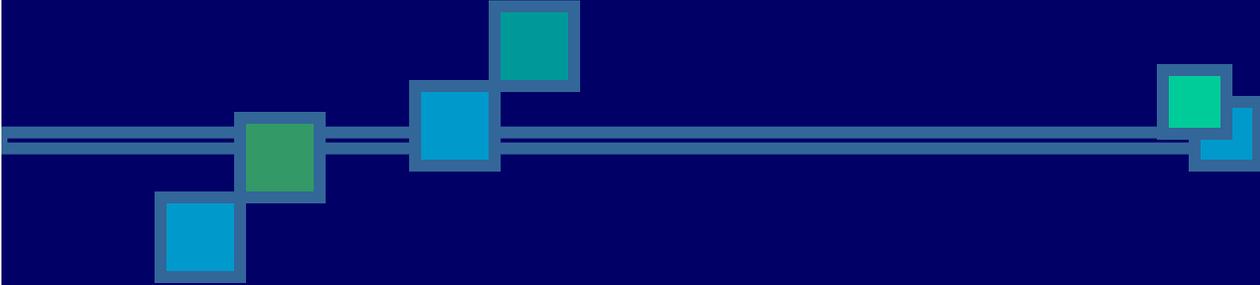


Law Enforcement:

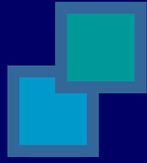


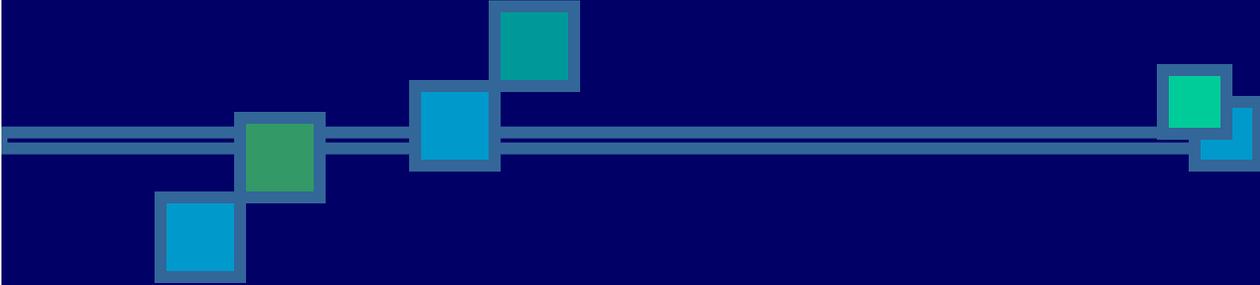
After 12 years of dogged work hindered by corrupt judges and investigators in their own ranks, Argentine prosecutors have finally reached the point of asking a federal judge to order the arrest of senior Iranian and Hezbollah officials for the 1994 car bombing of a Jewish center in Buenos Aires.



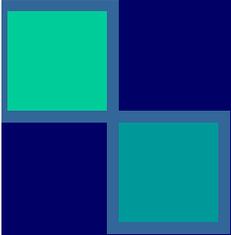


It is also a stark reminder that the reach of terrorist-sponsoring states (Iran) are aided and abetted by non-state actors (Hezbollah) operating from areas of state failure and black holes (the Tri-Border Area, where the attack was planned). This is a pattern that has been often repeated, from Sudan to Afghanistan to Syria, Libya and Iran. But it has been 12 years.....





Nuclear Forensics...



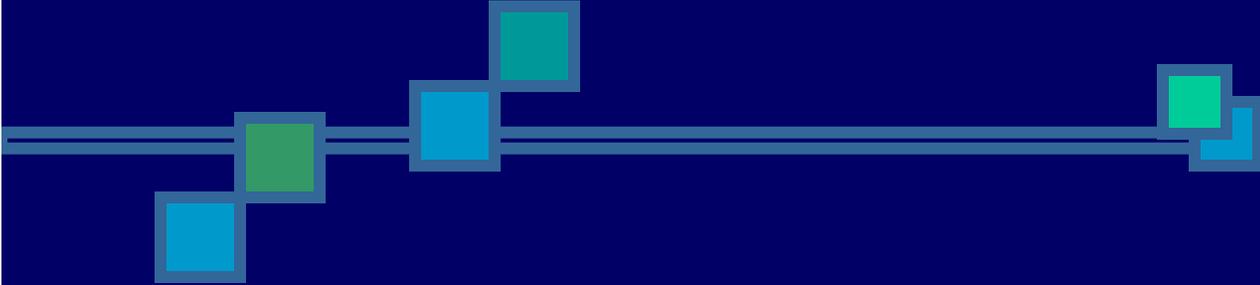
Determining the source of the nuclear bomb or material used in a terrorist attack is vital. An accurate finding “would help in restoring confidence to populations fearful of additional detonations and provide governments with evidence to pursue and find the perpetrators and eliminate further threats.”



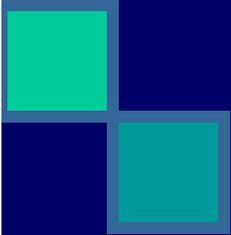
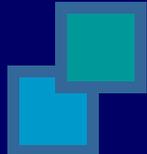


New Practices: The Role of Port and Maritime Security? Its Future Role & Best Practices?

- Is the Job Too Big?
 - 7500 miles of border
 - 95,000 miles of shorelines
 - Can We Detect HEU/Shielded Material?
 - 1000 airfields within 10,000 miles
- 



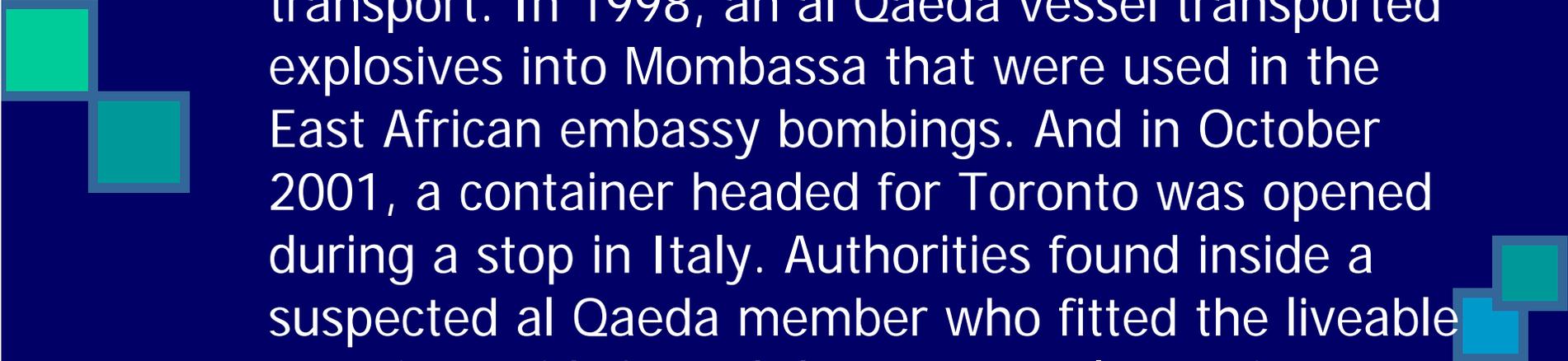
Border Security: New Thinking

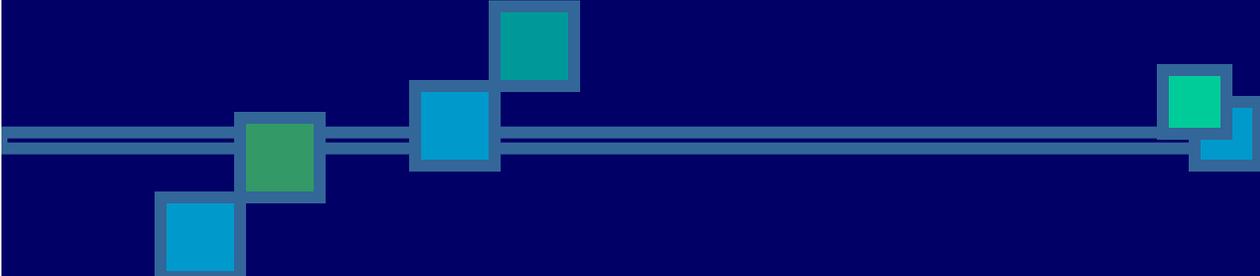
- 
- Border Crossings, Visa Applications, Trade and Cargo, Screen “Bad Stuff”, Sea, Land and Air Domain Awareness
 - \$80 billion in US trade in 1960/Now at \$3 trillion
 - New Technology: Rapidscan, Veritainer, RF Mesh, High Altitude Air Ship, GPS
- 



“They won’t use ship containers”?

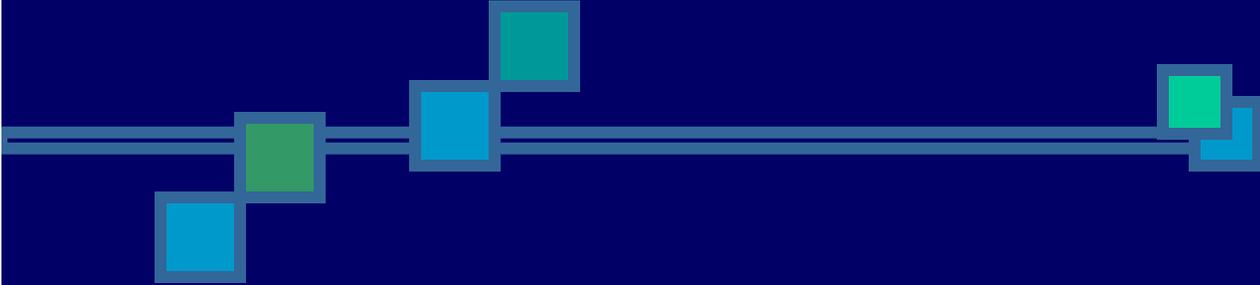
Terrorists have already used such containers for transport. In 1998, an al Qaeda vessel transported explosives into Mombassa that were used in the East African embassy bombings. And in October 2001, a container headed for Toronto was opened during a stop in Italy. Authorities found inside a suspected al Qaeda member who fitted the liveable container with forged documents, electronics equipment, and blueprints and floor plans of a number of facilities throughout North America.





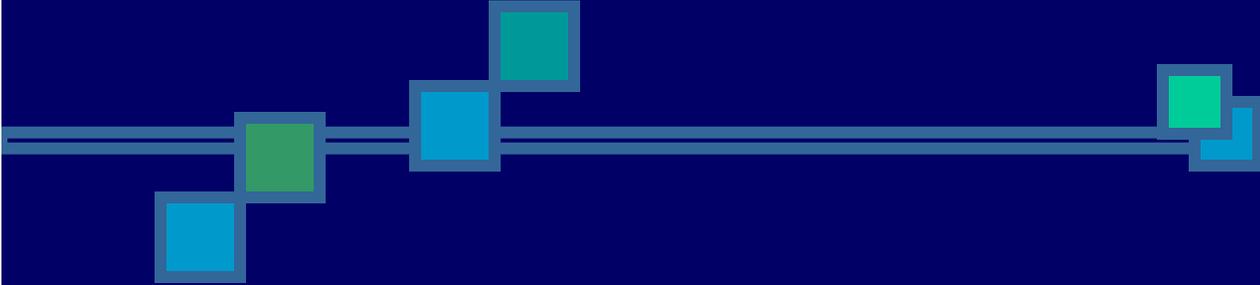
Project Sea-Hawk: Port and Maritime Security

- Since 9/11, What Have We Been Doing?
 - How Far Are We Toward Achieving our Goals?
 - What is the Proper Role of Port and Maritime Security?
- 

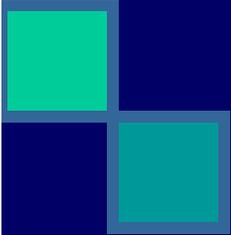
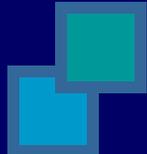


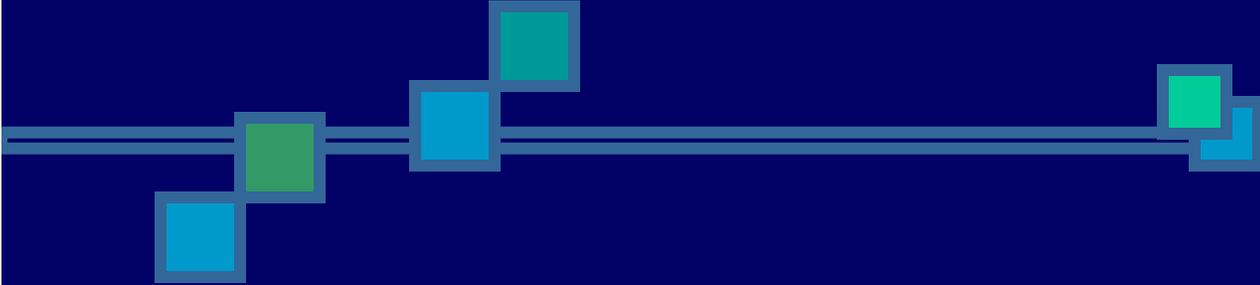
Best Practices

- Set Standards, International and National and Let Industry Adopt Best Practices
 - Assessment of Technology
 - Sharing Best Practices
 - Standards and Protocols Not yet Developed
- 

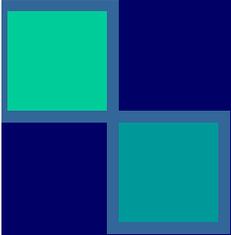
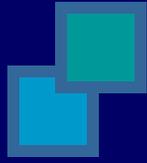


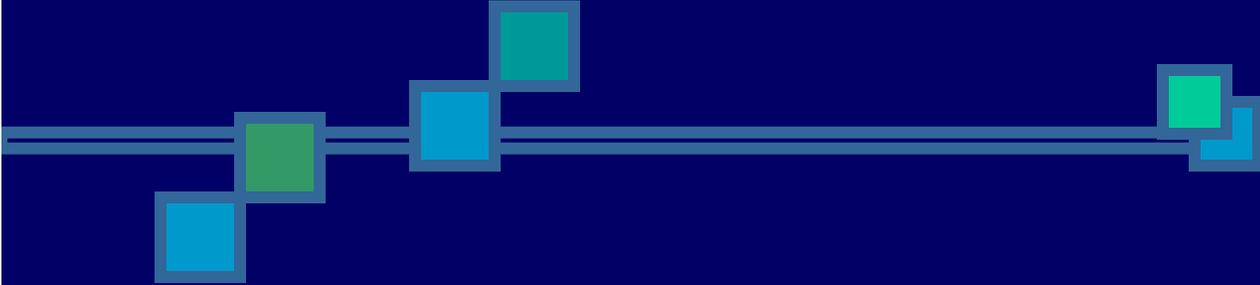
Best Practices

- 
- Information Sharing
 - Authority to Take Action if Material Detected
 - How to Measure Effectiveness? Metrics?
 - Do Practices to Lessen Theft Also Deter Smuggling? Yes!
- 

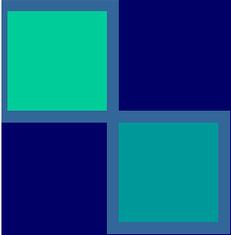
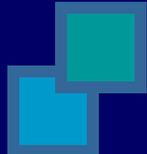


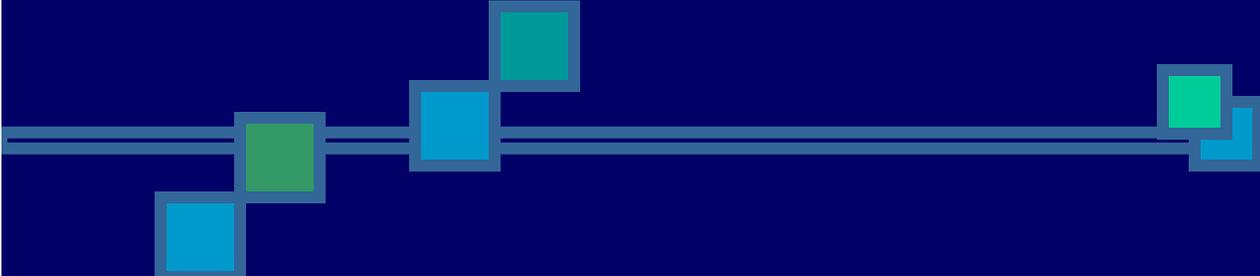
Problems and Potholes

- 
- The media doesn't understand most of this
 - Some members of Congress pushing for 100% inspection—Hong Kong anecdote
 - Public poorly educated on global supply chain
- 



Recommendations

- 
- What Can Technology Do? Let's Find out and share the information
 - Intelligence Sharing Critical to Focus Efforts
 - Media & Public Education Critical
 - Homeland Security Professionals Must Network
 - Public Officials: Education Most Critical-Yes, It's a Thankless Job But I Volunteer to Do It!
- 

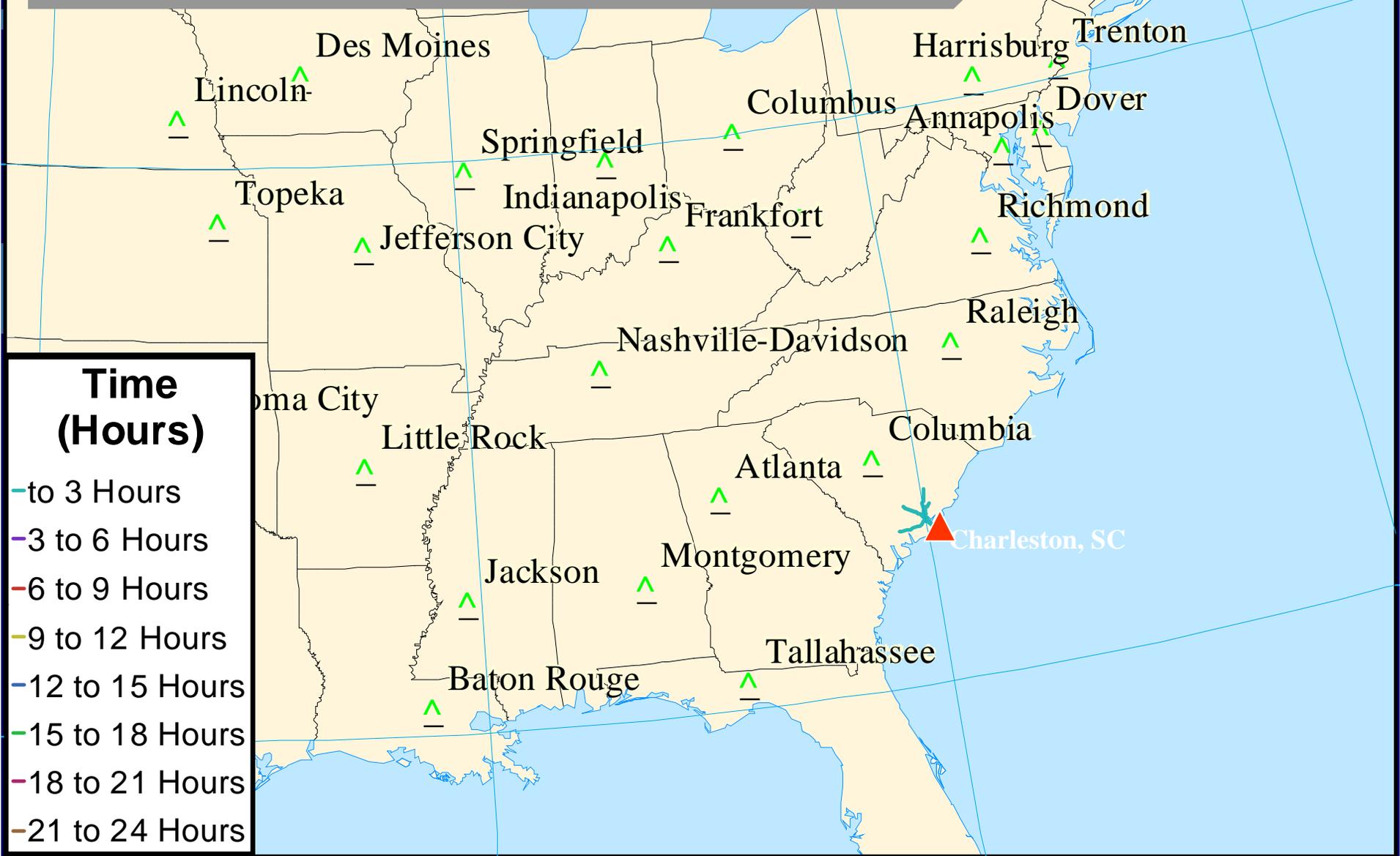


Why We Stop the Stuff Before It gets Here

- By rail, by truck, once it is past our ports, this is where it goes and when.....
- 

Rail Time of Travel Analysis (CSX)

3 Hours



Rail Time of Travel Analysis

3 to 6 Hours



Rail Time of Travel Analysis

6 to 9 Hours



Rail Time of Travel Analysis

9 to 12 Hours



Rail Time of Travel Analysis

12 to 15 Hours



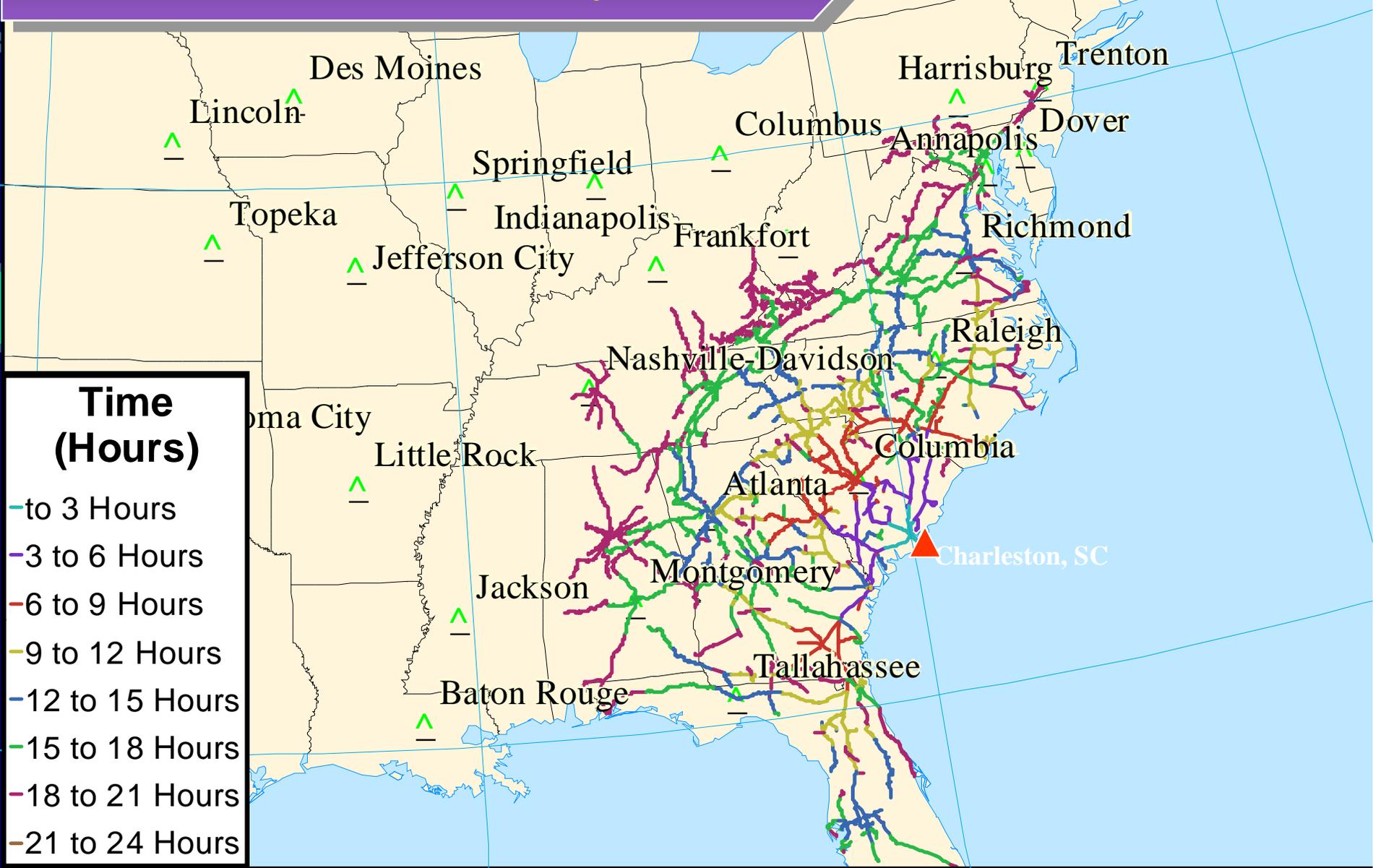
Rail Time of Travel Analysis

15 to 18 Hours



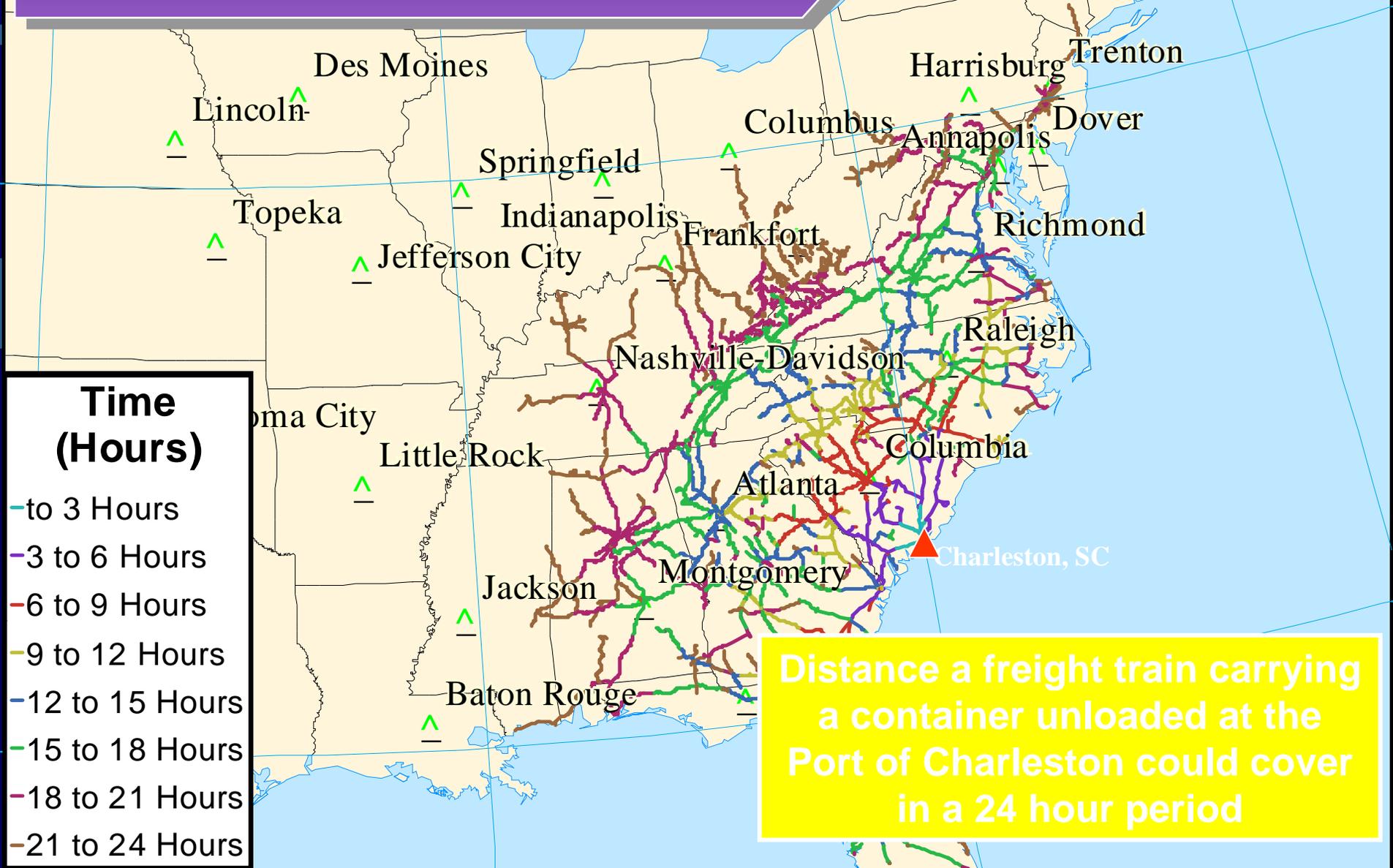
Rail Time of Travel Analysis

18 to 21 Hours



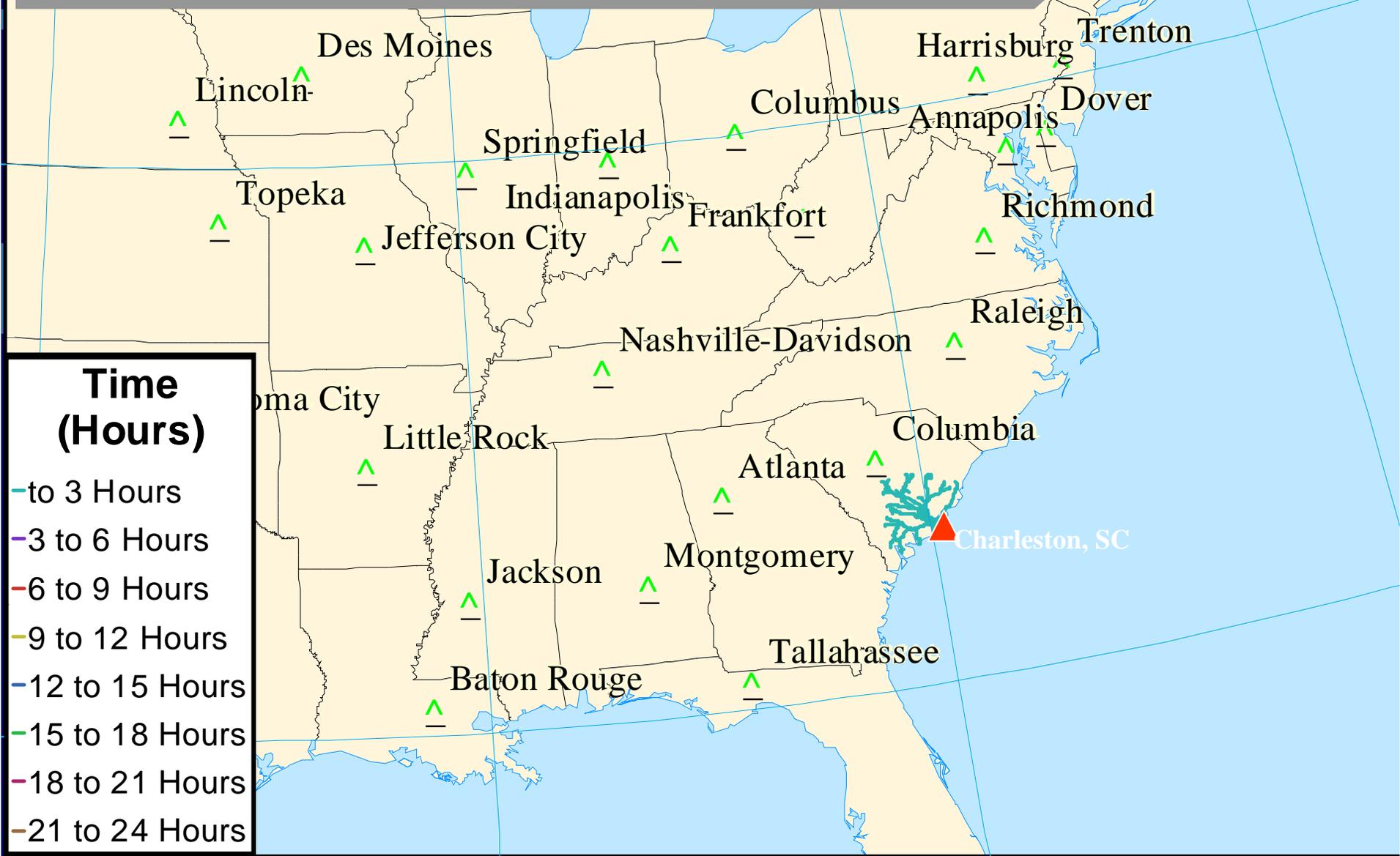
Rail Time of Travel Analysis

21 to 24 Hours



Rapid Intermodal Cargo Movement

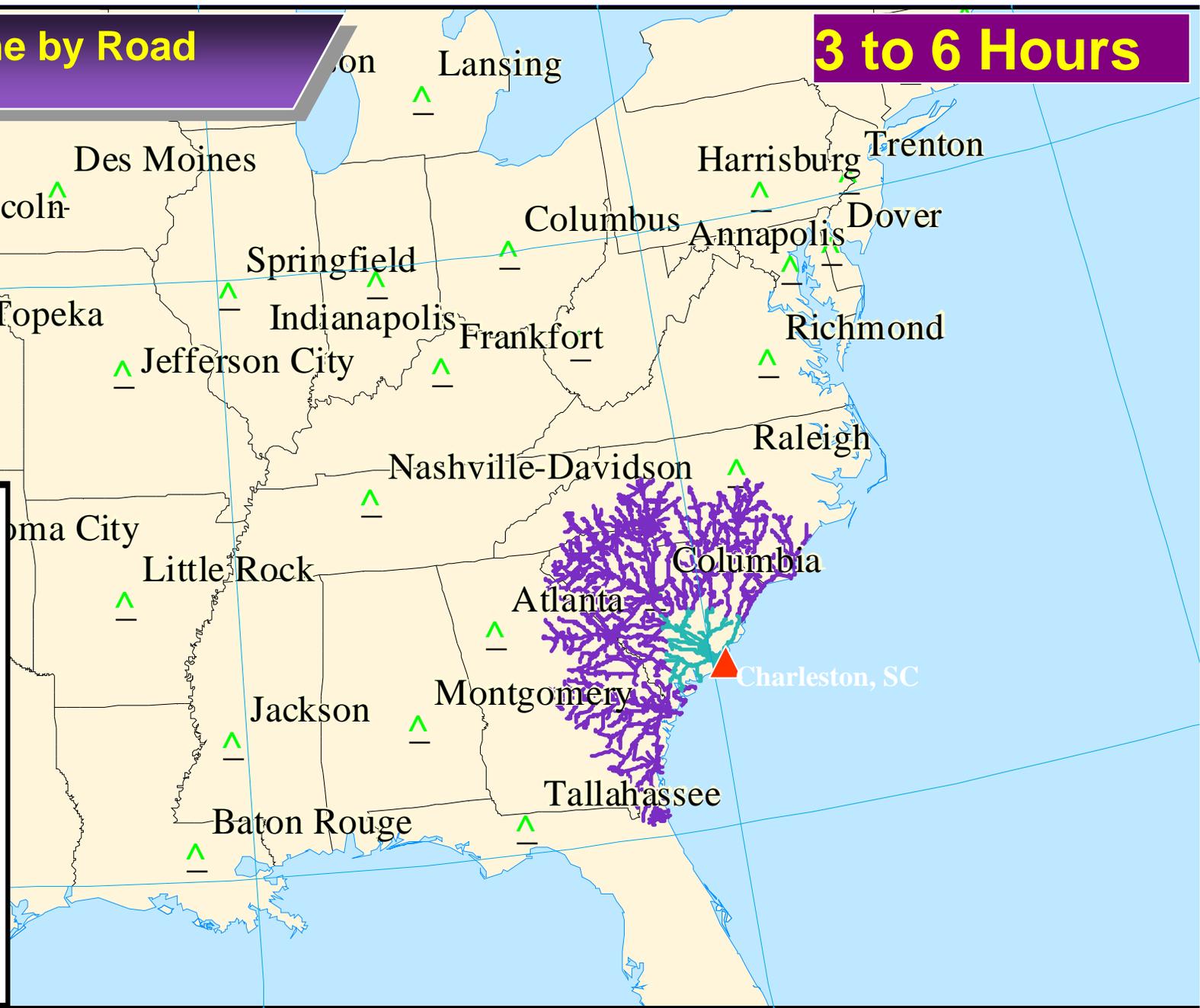
3 Hours



Travel Time by Road

3 to 6 Hours

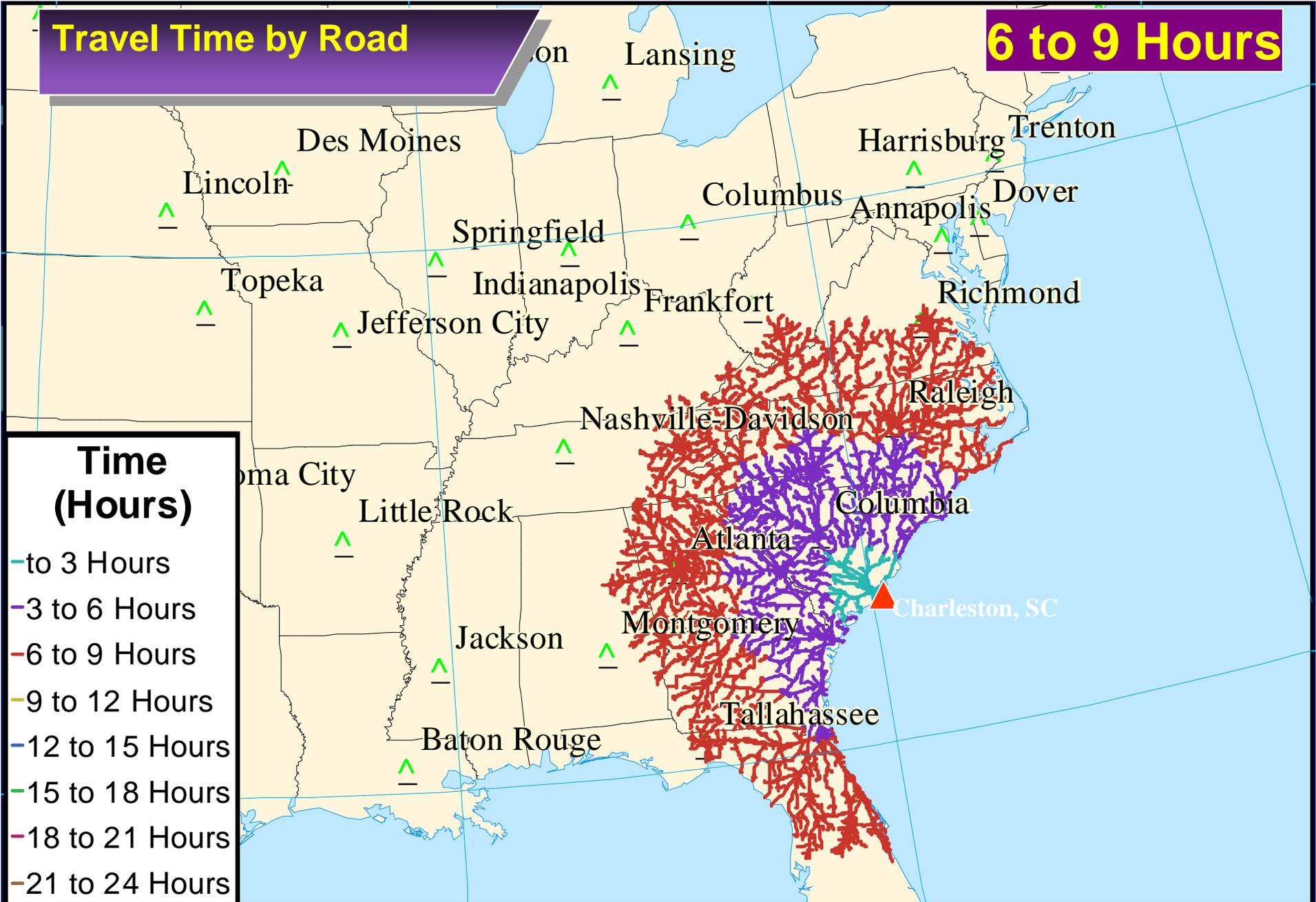
- Time (Hours)**
- to 3 Hours
 - 3 to 6 Hours
 - 6 to 9 Hours
 - 9 to 12 Hours
 - 12 to 15 Hours
 - 15 to 18 Hours
 - 18 to 21 Hours
 - 21 to 24 Hours



Travel Time by Road

6 to 9 Hours

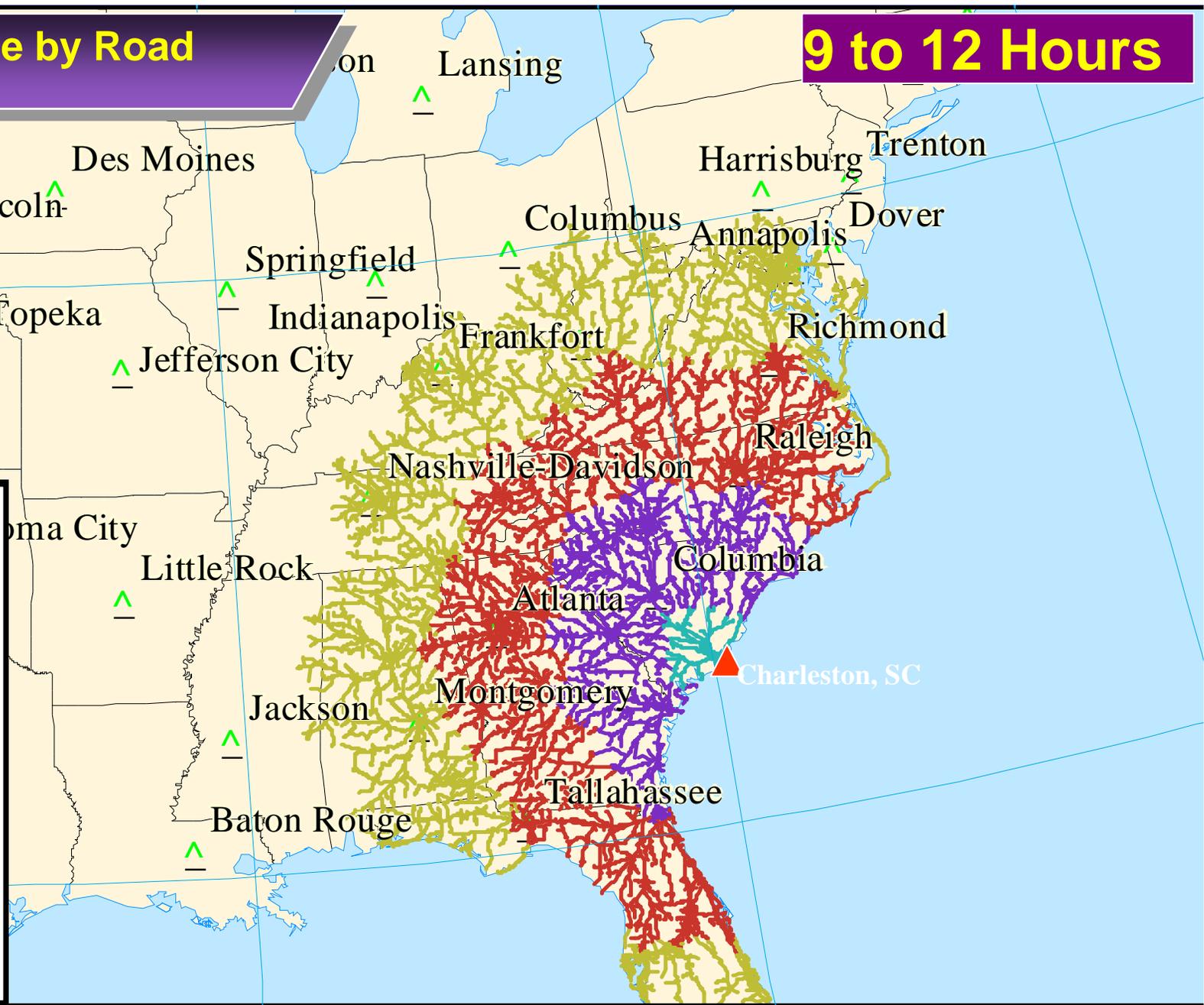
- Time (Hours)**
- to 3 Hours
 - 3 to 6 Hours
 - 6 to 9 Hours
 - 9 to 12 Hours
 - 12 to 15 Hours
 - 15 to 18 Hours
 - 18 to 21 Hours
 - 21 to 24 Hours



Travel Time by Road

9 to 12 Hours

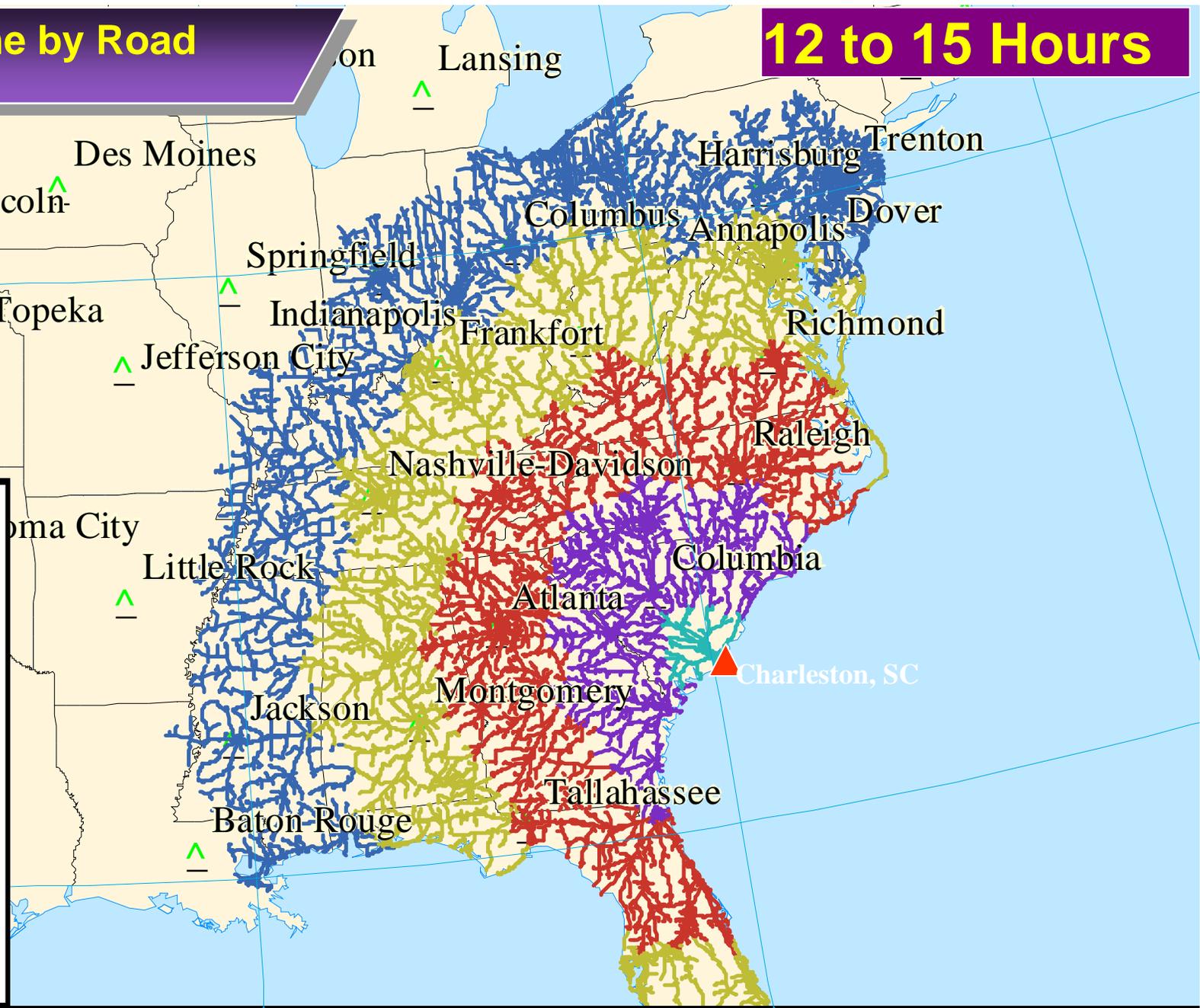
Time (Hours)
to 3 Hours
3 to 6 Hours
6 to 9 Hours
9 to 12 Hours
12 to 15 Hours
15 to 18 Hours
18 to 21 Hours
21 to 24 Hours



Travel Time by Road

12 to 15 Hours

- Time (Hours)**
- to 3 Hours
 - 3 to 6 Hours
 - 6 to 9 Hours
 - 9 to 12 Hours
 - 12 to 15 Hours
 - 15 to 18 Hours
 - 18 to 21 Hours
 - 21 to 24 Hours



Travel Time by Road

15 to 18 Hours

Time (Hours)
to 3 Hours
3 to 6 Hours
6 to 9 Hours
9 to 12 Hours
12 to 15 Hours
15 to 18 Hours
18 to 21 Hours
21 to 24 Hours



Travel Time by Road

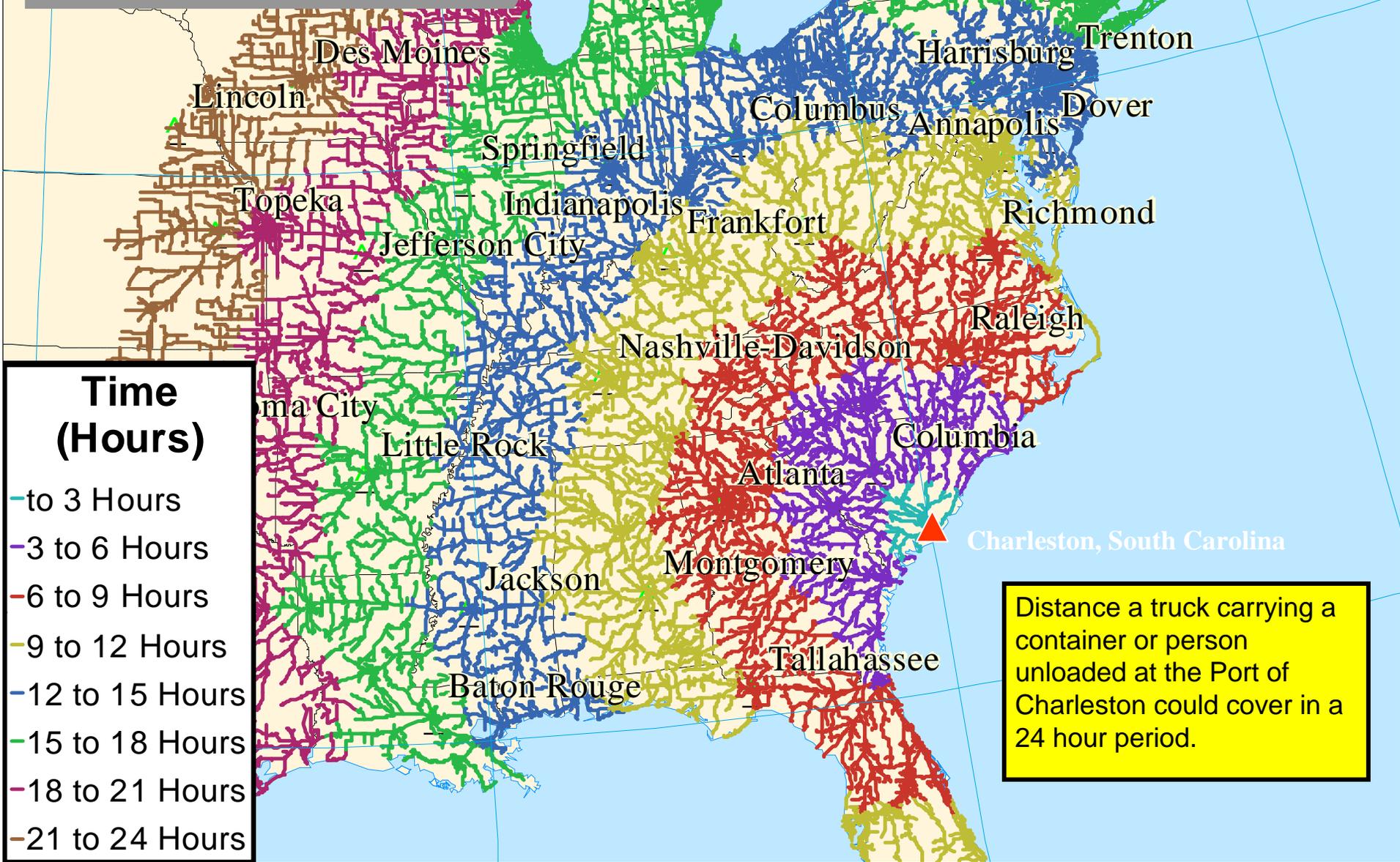
18 to 21 Hours

- Time (Hours)**
- to 3 Hours
 - 3 to 6 Hours
 - 6 to 9 Hours
 - 9 to 12 Hours
 - 12 to 15 Hours
 - 15 to 18 Hours
 - 18 to 21 Hours
 - 21 to 24 Hours



Travel Time by Road

At 24 Hours





The Solution



Project SeaHawk. Predicated on the idea that port and intermodal transportation security can only be achieved by interagency cooperation, joint operations, unity of command, and the sharing of information and intelligence.





DOJ Has Jurisdictional Responsibility

Creation of a U.S. Attorney's Office Anti-Terrorism Task Force in Each District



Department of Justice

WEDNESDAY, MAY 29, 2002
WWW.USDOJ.GOV

(202) 514-2008
TDD (202) 514-1888

FACT SHEET
**SHIFTING FROM PROSECUTION TO PREVENTION,
REDESIGNING THE JUSTICE DEPARTMENT TO
PREVENT
FUTURE ACTS OF TERRORISM**

"When terrorism threatens our future, we cannot afford to live in the past. We must focus on our core mission and responsibilities, understanding that the department will not be all things to all people. We cannot do everything we once did because lives now depend on us doing a few things very well." -- Attorney General John Ashcroft

Crafting an Overall Blueprint for Change,



Law Enforcement Has a Crime Fighting Mission

Prevention Is The First Priority

"This new terrorism threat on our soil is a turning point in America's history. It is a new challenge for law enforcement. Our fight against terrorism is not merely or primarily a criminal justice endeavor. We cannot wait for terrorists to strike to begin our work. The death tolls are too high, the consequences too great."

"We must prevent first, prosecute second."

Attorney General John Ashcroft
September 24, 2001
Senate Committee on the Judiciary



Project SeaHawk Task Force



Gate Strikes



Customs Searches



Vessel boardings



Marine Escorts



**Pre-Incident
Indicator Data
Collection**



Radiological Detector Checks



SeaHawk as a National Model



National Maritime Strategy Announced on Sept 20, 2005



- The **Departments of Homeland Security, Defense, and Justice ... will lead the United States' efforts to integrate and align all U.S. Government maritime security programs and initiatives** into a comprehensive, cohesive national effort of scalable, layered security. This includes full alignment and coordination with appropriate state and local agencies, the private sector, and other nations.
- Additionally, the **Departments of Homeland Security, Defense, and Justice** will oversee the **implementation of a shared situational awareness capability that integrates intelligence, surveillance, reconnaissance, navigation systems, and other operational information inputs**, combined with access at multiple levels throughout the United States Government.
- Wherever feasible and operationally effective, **agencies should co-locate in multi-agency centers** to facilitate direct interaction and efficient use of limited resources.



Project SeaHawk



Seahawk's reassuring readiness

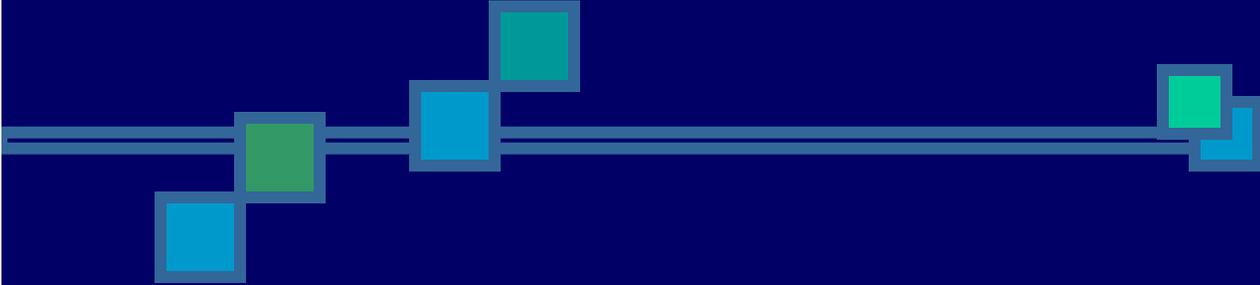
In the more than four years since the 9/11 attacks gave a chilling new gravity to the term "homeland security," persisting deficiencies in communications between government agencies have raised justified concerns about a key element in the nation's counterterrorism capabilities. But South Carolina Sen. Lindsey Graham offered a positive assessment of the progress made on that front by Project Seahawk Tuesday after an on-site review of the Charleston-based maritime-security initiative.

And with the U.S. Department of Homeland Security scheduled to conduct a drill testing the official response to a terror-attack "radiological incident" — possibly a so-called "dirty bomb" — in Charleston Harbor Monday, it's reassuring that with Seahawk, at least, plans are in place to allow security personnel to share what they know in a timely manner.

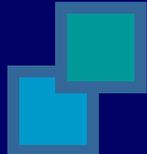
More than 50 government agencies and private contractors work together on Seahawk, which stays in operation 24 hours a day. Sen. Graham told our reporter that he was impressed by the project's capacity to minimize bureaucratic delays in conveying critical information. As he put it, members of the collaborative task force based here "could literally turn around and talk to each other without a phone."

Saving time could save lots of lives if terrorists attempt to strike against a U.S. port, including Charleston. The menace of a devastating weapon hidden in one of approximately 5,000 shipping containers that come through this port each day demands heightened defenses of what Sen. Graham accurately called "a high-value target."

Project Seahawk apparently is a high-value investment of taxpayer money. Other Homeland Security initiatives should learn from and emulate this successful model.



Congressman Brown has worked tirelessly in the House to advocate SeaHawk, and noted in a letter signed by the House Port Security Caucus that "Project SeaHawk has made the Port of Charleston the only port facility in the U.S. that utilizes a revolutionary integrated law enforcement approach, which far outpaces the effectiveness of other systems against today's sophisticated threats." The highest level officials at DHS and DOD have praised the project and the full partnership between these agencies and DOJ





"All the News
That's Fit to Print"

The New York Times

Late Edition
New York, Today, Friday, June 1, 1944
Party usually, Page 15. Foreign, under
edit, Jan. 15. Business, a Party's plan,
12. Local, Page 14. Tomorrow, Page 15,
Jan. 15. Weather, Page 14 or Page 15.

VOL. CLXXI, No. 42,737

Copyright © 1944 by The New York Times

NEW YORK, FRIDAY, JUNE 1, 1944

ONE DOLLAR

War scandal! Patton just a decoy in Dunkirk with fake tanks!

Hitler recalls Rommel from wives b-day for d-day

By JOHN WAGNER
and KATHARINE G. WELCH

WASHINGTON, N.Y., Jan. 22 — In their first debate before the War Relocation Authority, the Democratic presidential candidates declared on Thursday that they could withstand the German invasion from France to both an aerial and sea route, as they sought to show themselves strong Democrats about the party's hope of winning both the White House and the fall.

Looking weary and subdued after three weeks of campaign campaigning, the seven Democrats looked in a no-hesitant rehearsal that they could easily defend themselves against the host of attacks on their military and domestic fronts that Republicans have used effectively against Democrats in presidential elections for 20 years.

"There's a fight I look forward to," began John Ford of Massachusetts and when asked if he looked forward to "that there would be a fight" he replied "I would like to see the fight to win it."

"There's a fight we will win," he said.



Real invasion to occur in Normandy 350 miles away!

Helen Thomas to FDR: why can't the US fight a fair fight?

By STEVEN B. WEINMAN

WASHINGTON, Jan. 22 — The State department is under growing pressure from Congress to establish a new and revised version of its "Outward Bound" program, known as the "Outward Bound" program, which would allow young Americans and foreign officials and students.

The officials said Helen Thomas, chairman of the Foreign Relations Committee, had pressed the matter in a memorandum to the State department in which she urged a new program through a new plan to allow young Americans to serve in the armed forces and the demand for more service by young people.

Mr. Proctor's proposal would be demonstrated by the creation of a new program of service and the proposal to create a new program. The program, which was known as a "fair fight" — has been known among other in United States territory. General Staff, which is the official name of the program, would be the first to get the United States and the world to see that the program is a fair fight.

The kinder side of Adolf and Eva

By JOHN WAGNER

WASHINGTON, N.Y., Jan. 22 — Edward Dean said he is just another teacher and his wife of 25 years, Lucille, teaching Dean, and she cannot remember the last time he had his temper. She said he is "a good

man and a good father."

Two weeks after Mrs. Wilhelmina Clark said her husband was an "evil-doer" because he had a temper, she said he is "a good man and a good father."

being being a dad and a house for me."

The incident in "Proctor," which Thursday night coverage averaged 10 million the day, came as the State's staff and supporters sought to overcome an effort to change the law that would be the first to see the program of the

Ike denies June 6th rumors

By CARL WELCH

WASHINGTON, Jan. 22 — Gen.





1993: TERRORISTS ATTACK THE WORLD TRADE CENTER, KILLING 6 AND INJURING MORE THAN 1000.



1995: TERRORISTS BOMB U.S. HEADQUARTERS IN RIYADH, SAUDI ARABIA, KILLING 5 AMERICANS.



1996: TERRORISTS BOMB AL-KHOBAR TOWERS, KILLING 19 U.S. SERVICEMEN AND WOUNDING 300.



1998: TERRORISTS BOMB UNITED STATES EMBASSIES IN KENYA AND TANZANIA, KILLING 24.



2000: TERRORISTS ATTACK THE USS COLE, KILLING 17 SAILORS AND INJURING 39.



2006: ABC NRS 9/11 MINI-SERIES.

THE PATH TO 9/11

www.thefox.com/cartoons

Precision Strike Winter Roundtable

“Precision Engagement – Strategic Context for the Long War”

Weapons Technology Blueprint for the Future

February 1, 2007

UNCLASSIFIED

Distribution A: Approved for public release



John Wilcox

Asst Deputy Under Secretary of Defense

(Precision Engagement)

Director, Joint Capability Technology

Demonstration (JCTD)

Program

UNCLASSIFIED



Challenges for DoD Investment

- What Have We Learned?

ADVANCED SYSTEMS AND CONCEPTS

Plan

Find

Fix

Track

Target

Engage

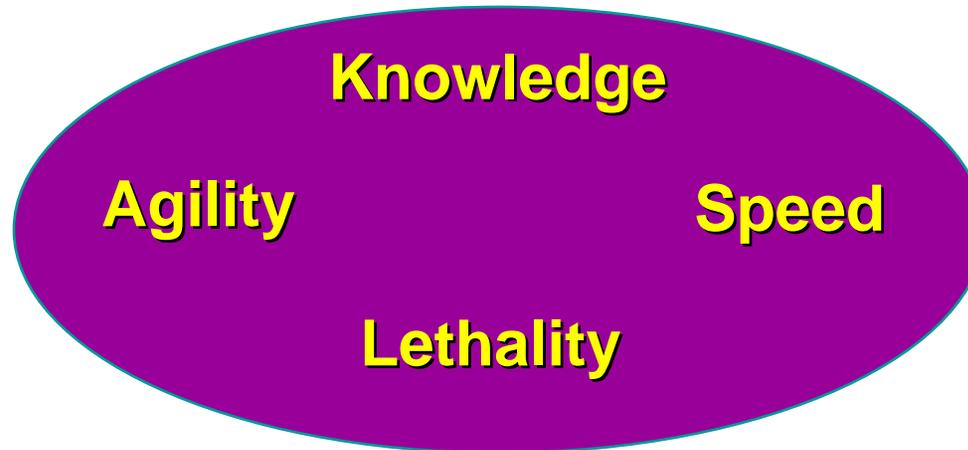
Assess

- **Need to ‘Map the Human Terrain’ across the Kill Chain**
 - Enables the entire Kill Chain for the GWOT
- **Target Detection may be Difficult and Require Non-Traditional Means**
- **Enemy Exists inside potentially High Collateral Damage Areas**
 - And... in Denied Access Areas
- **Sometimes We ID the Enemy but....**
 - ... do not have an adequate/appropriate Strike Solution in time
- **Mobile / Re-locatable Targets Remain a Problem!**
- **The Target Characteristics may Remain Unknown even at...
Time Over Target ... & “How Did We Do?”**
- **If Decision Timeline Varies and can be Long... let’s Enable the Rest of the Kill Chain to be Dynamically Responsive**

DDR&E Transformation - Technology Initiatives



ADVANCED SYSTEMS AND CONCEPTS



- **Surveillance and Knowledge Systems**
- **Energy and Power Technologies**
- **Combat ID & Rapid Targeting Technologies**
- **Weapon Technology Investment**



Key Areas for Technology Investment

Context: Precision Engagement - 'The Long War'

ADVANCED SYSTEMS AND CONCEPTS

- **Persistent Surveillance**
 - *'Sensing in new dimensions'* for the enemy
- **Combat Identification**
 - *'Realize' the Blue Force kinematic advantage*
- **Netted Weapons**
 - *ISR constellation & 'shooters'*
- **Penetrating Weapons Technology**
 - *Goal: Increased Weapons Effectiveness*
- **The 'Right Types' of Weapons**
 - *Realize the 'Importance of 'Speed''*
 - *Can compensate slow decision timelines!*

Unchallenged Advantage Across the Battlespace!



“Find” - Persistent Surveillance

ADVANCED SYSTEMS AND CONCEPTS

Joint Warfighting Problem

- **GWOT demands additional persistent Intelligence, Surveillance and Reconnaissance (ISR) to conduct intelligence operations including forensic intelligence.**
- **Endurance measured in days, not hours, required for an “unblinking eye” system is a transformational capability that does not exist today.**
- **Satellite coverage at most latitudes depends on orbiting satellites with known revisit times, permitting the enemy to conceal, hide and avoid detection.**
- **Bandwidth availability on the battlefield is at a premium and many communications systems cannot be optimized due to higher priority communications conducted via other options.**

Attributes

- **Very Long Endurance**
- **Multi-Dimensional Payloads - “non-traditional” ISR**
- **Avoid Forward Logistics ‘Footprints’**
- **Survivable and Difficult to Detect**



Global Observer

- Hydrogen Powered UAV

ADVANCED SYSTEMS AND CONCEPTS

- **Global Observer UAV**
 - Liquid hydrogen fuel enables 7-day endurance
 - Provides the persistent presence required for an “unblinking eye”
 - Enables forensic intelligence operations and other critical missions for all COCOMS and Services

- **Advantages**
 - Long endurance minimizes ops tempo/cost
 - Fewer flights
 - Fewer aircraft
 - Reduced logistic tail
 - Upgradeable multiple payload capability
 - EO / IR
 - GMTI / SAR
 - Communications Relay
 - Psyops
 - GPS Augmentation
 - Other (SIGINT, COMINT, MASINT)



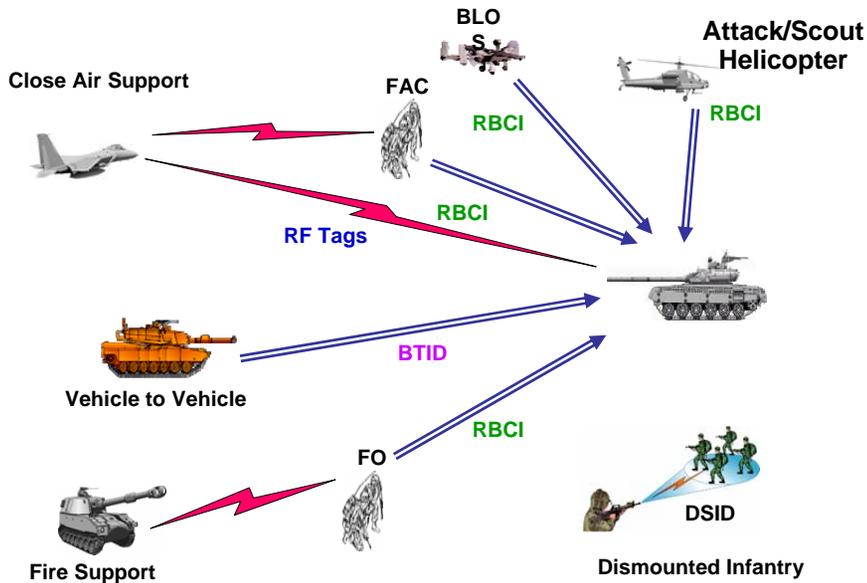
Global Observer UAS
Prototype (in flight)





Coalition Combat Identification (CCID)

ADVANCED SYSTEMS AND CONCEPTS



Led by JFCOM & ACC with participation of 9 nations

Demo – Operation Bold Quest

- “Laser Vision” - Laser Target Imaging – Increased ID Range
- “Radar Vision” – Advanced Radar Algorithms for Target ID

Problem This Solves: Reduced combat effectiveness, constrained tactics, and eroded force cohesion as a result of an increased fratricide rate potential

Solution:

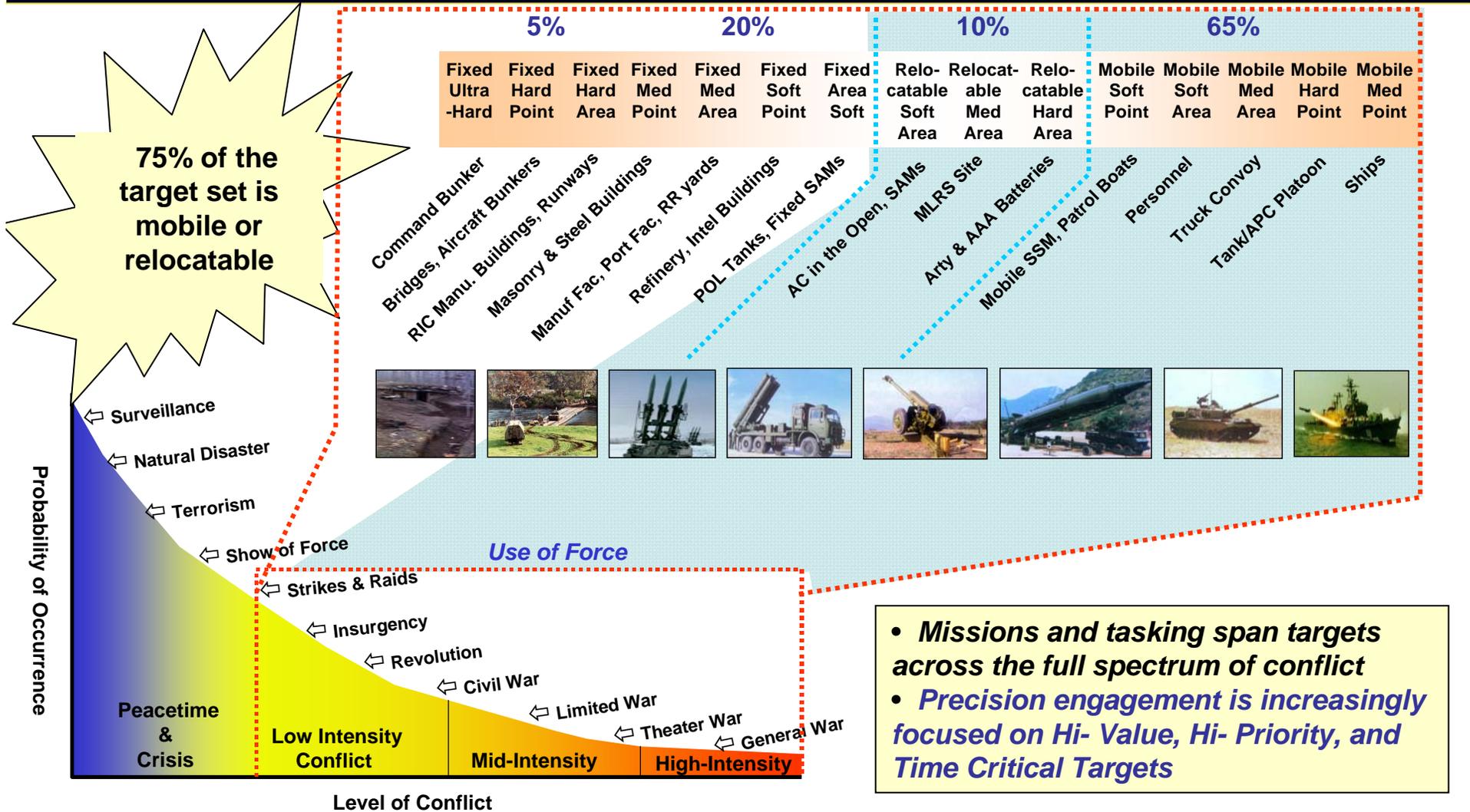
Coalition interoperable Combat ID systems including:

- Battlefield Target ID (BTID)
- Radio Based Combat ID (RBCI)
- Dismounted Soldier ID Device (DSID)
- Radio Frequency (RF) Tags



Dynamic Operational Environment

ADVANCED SYSTEMS AND CONCEPTS



Net-Enabled Weapon Capabilities



ADVANCED SYSTEMS AND CONCEPTS

- **Weapon In-flight Tracking**
 - Strike De-confliction and Synchronization
 - Health, Arming Status, Location, Target Acquisition, ...
- **Weapon In-flight Target Update**
 - Key For Moving and Mobile Targets
 - Key Enabler for Interdiction Role
- **Weapon Retargeting**
 - Importance Increases with Standoff
 - Enhanced Time-Sensitive-Target Capability
- **Weapon Impact Assessment (WIA)**
 - Post-strike Assessment and Re-strike Decisions
 - ISR information
- **Weapon Abort**
 - Collateral damage changes



Key Player in Irregular Warfare!



“Target & Engage” Netted Weapons - Weapon Data Link

ADVANCED SYSTEMS AND CONCEPTS

What have we done to date?...

- **Common Weapon Language To Achieve Required Capabilities**
- **Developed Standard Architecture for Integrating Weapons Into Network – Completed Wpn Interface Control Documents (ICDs)**
- **Demonstrated Communication Network With A Transceiver In Weapon Surrogate**
- **Identify Infrastructure Modifications**
- **Establish Baseline CONOPS For Weapons Network Communication**
- **Risk Reduction For Weapon SPOs’ Data Link SDD Programs**

USAF, USN & JFCOM 2005 ACTD



Networked Weapons

ADVANCED SYSTEMS AND CONCEPTS

Satellite Grid

Theater Grid

Strategic/Tactical Grids

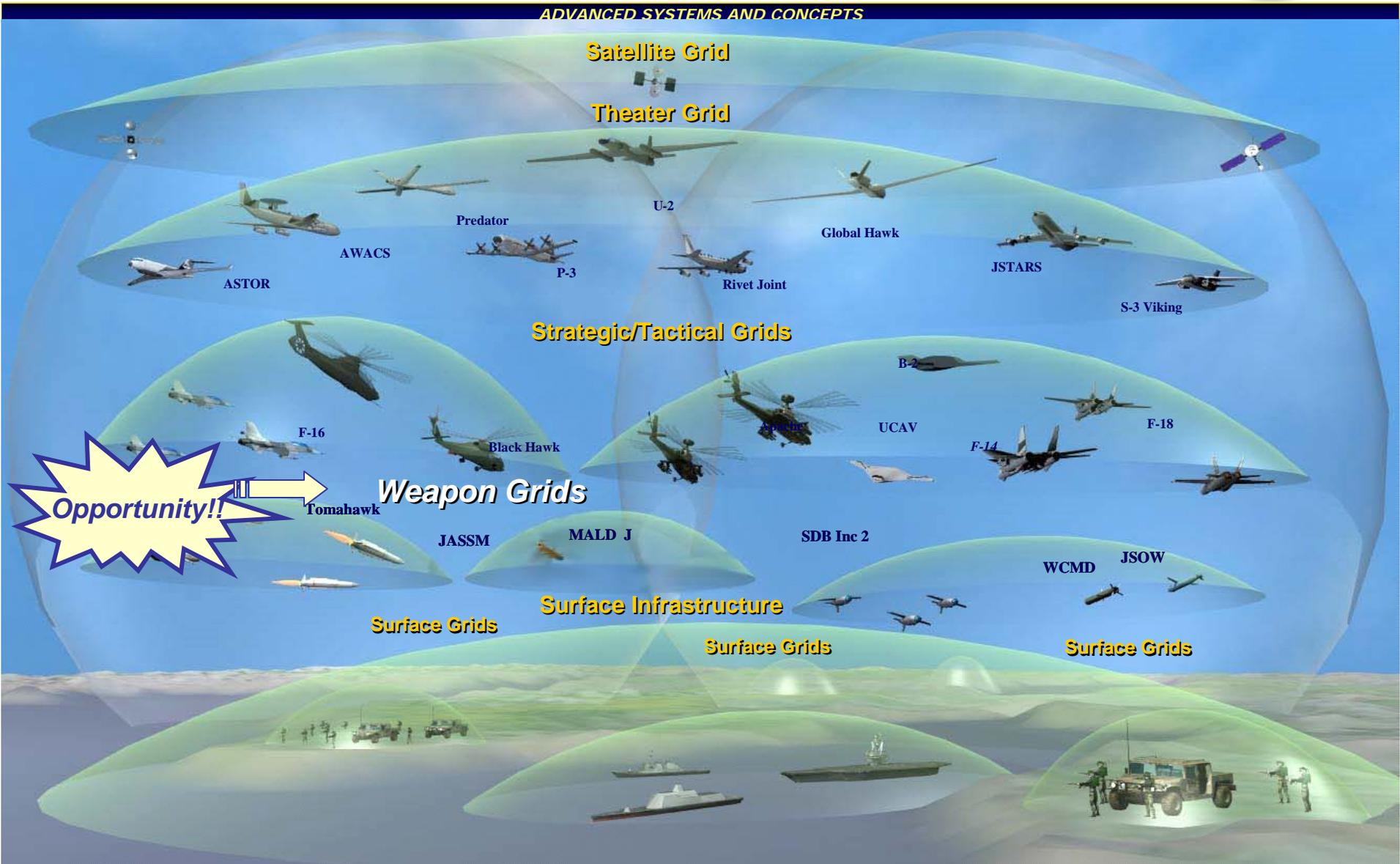
Weapon Grids

Surface Infrastructure

Surface Grids

Surface Grids

Surface Grids

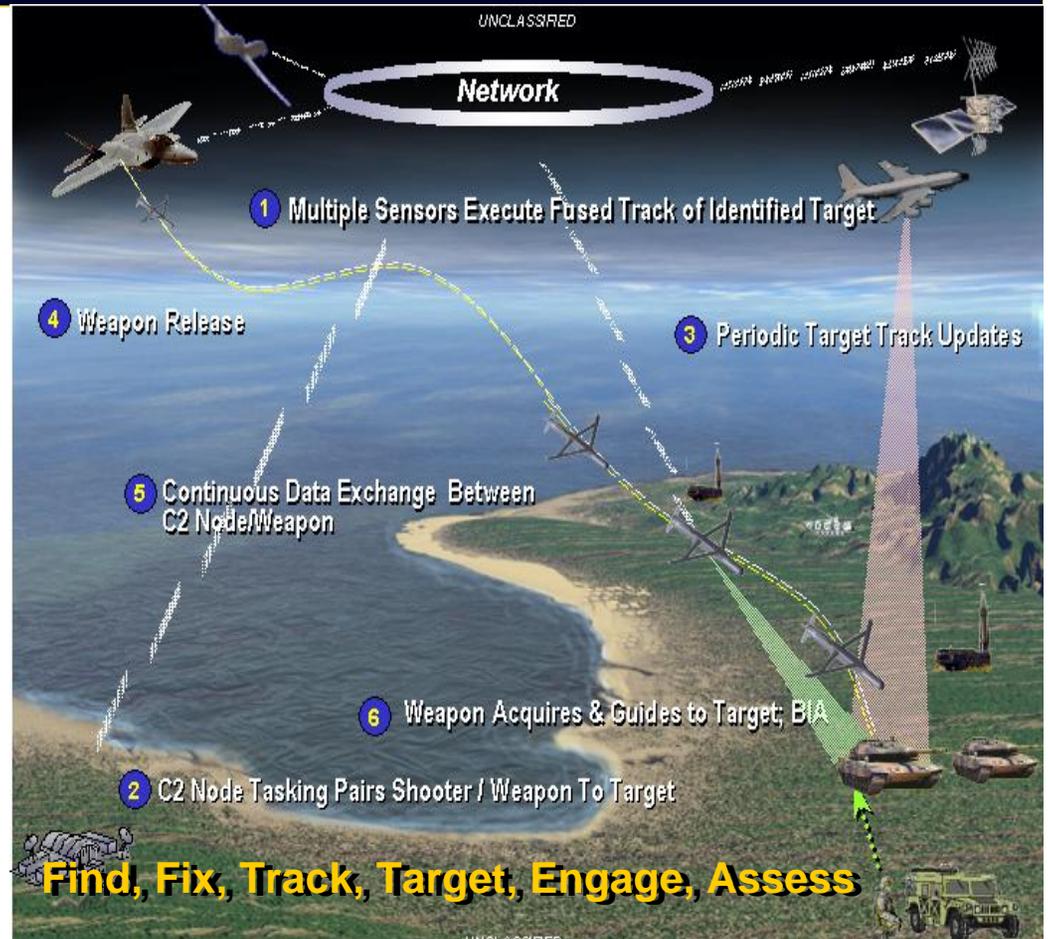




Weapon Data Link Network ACTD

ADVANCED SYSTEMS AND CONCEPTS

- Integrated Data Link Capability into Weapons, Sets Stage for Weapon Integration into Network Centric Warfare
 - Risk Reduction for Weapon SPOs Data Link Programs
 - Develops Architectural Framework Supporting Current/Future Weapons Needs (2010, ~2020)
 - Establishes CONEMP and Common Network Interface
 - Identifies C2 and Aircraft Infrastructure Mods



Pathfinder for Network-Enabled Weapons Capability



“Find, Fix, Track, Target & Engage” Netted Weapons – Joint Surface Warfare

ADVANCED SYSTEMS AND CONCEPTS

What needs to be done?...

- **Incorporate the Weapon Data Link J28 Message into the ISR**
 - Expands Targeting Chain
 - Enables Moving Target Engagement
 - Layers in Combat ID for Friendly vs. Hostile
- **Integrates USAF & USN ISR & Shooters**
 - Joint ISR and Launch Platforms with Weapons
 - Capitalizes on mature technologies to enable target discrimination, multi-target track and multi-target location.
- **Expand Cross-Component Net-Centricity in Combat Operations**

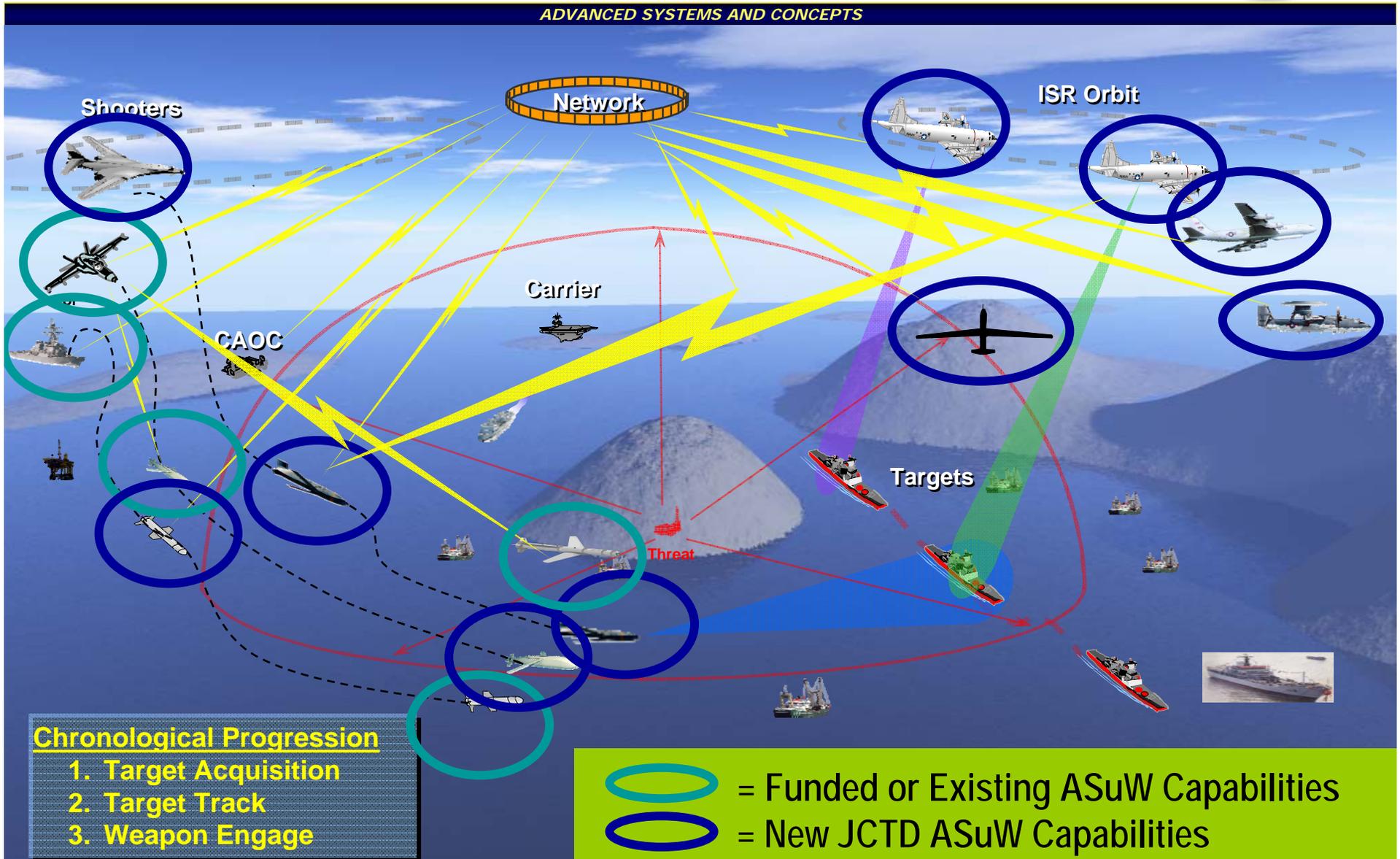
USAF & USN FY07 New Start

Joint SuW Concept

Multiple Interchangeable ISR Assets Targeting Multiple Weapons



ADVANCED SYSTEMS AND CONCEPTS



Joint Warfighting Problem

- Limited and marginal targeting at range
 - Targeting accuracy
 - Selectivity
 - Recognition and ID
- Limited weapon capability through the weather
- Very limited weapon capability in obscured
- Limited Kill Chain connectivity

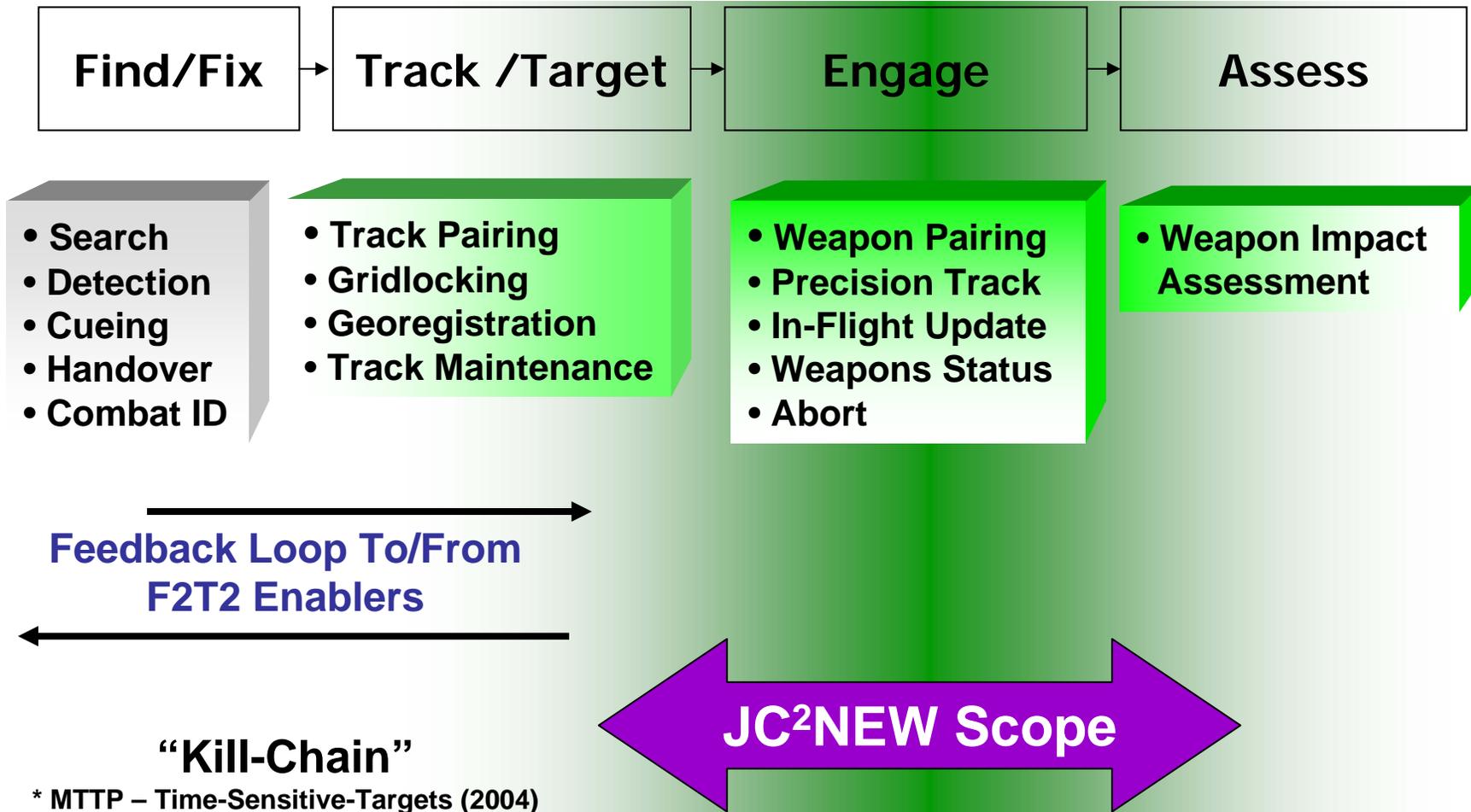
JSuW JCTD

- Comprehensive Kill Chain development and management
- Corrections to existing targeting systems to fulfill those Kill Chains
- Corrections to existing weapons to fulfill those Kill Chains
- Weapons Data Link connectivity to support those Kill Chains

Joint Network Enabled Weapons (JNEW) JT&E (just started!)



ADVANCED SYSTEMS AND CONCEPTS



Net-Enabled Weapons Complete the "Kill-Chain"

“Target & Engage”

- Penetrating Weapons



ADVANCED SYSTEMS AND CONCEPTS

- **Effectiveness of current penetrating weapons**
 - ... needs to be assessed against worldwide target set
- **‘Theme to Date’... Build Large Penetrators with increased HE**
 - Compensates for lack of ‘Knowledge’ of the Target
 - Large Penetrators are usually limited in numbers and logistically difficult!
- **Need to Generate Effect in the HDBT ‘Layers’**
- **“Assess” – Must be able to characterize...**
 - ‘How we did post-strike’ / HDBT BDA
- **Tunnel Targets Remain a Problem**
 - STRATCOM & DTRA – Strong efforts to provide CoComs with new tools and Targeting Capabilities
 - Tunnel Target Defeat Planning Tool Set
 - Thermobaric Weapon



Why A HTVS Fuze Is Required

1. Intel Uncertainty

- Difficult For Intel to Predict
 - Target Depth and Layering
 - Target Hardness
- Void Sensing Mitigates These Issues

2. Trend Toward Harder Targets

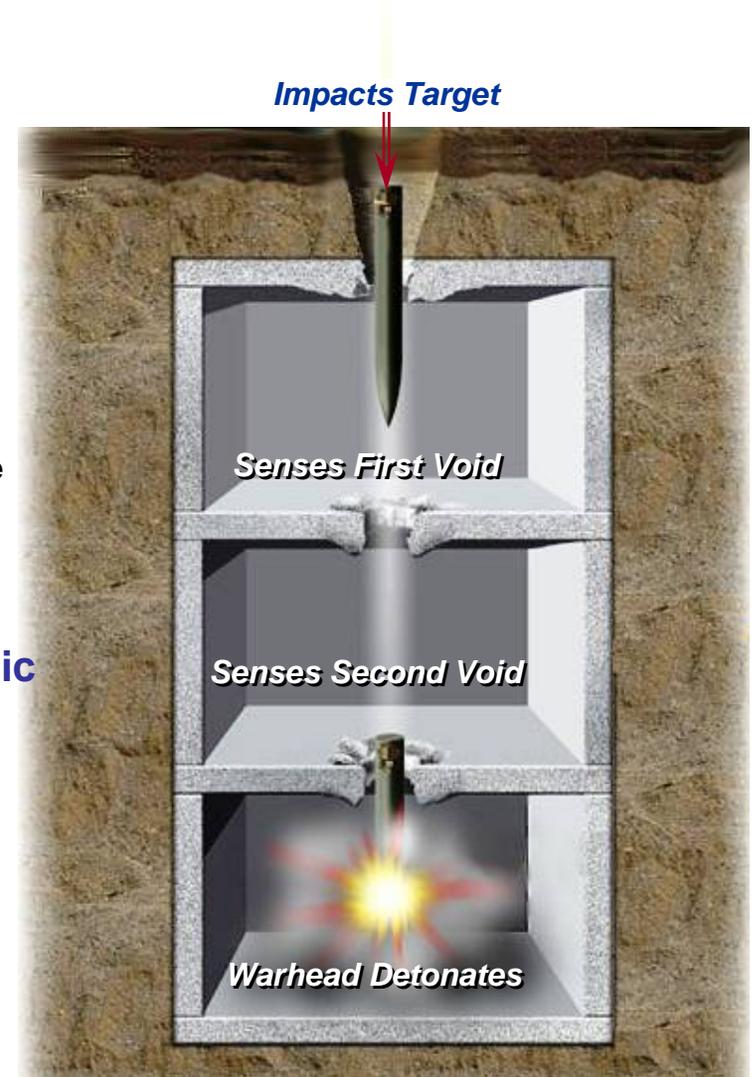
- Need Reliable Fuze to Meet Harder Target Rqmts >10K PSI Concrete
- Legacy Fuzes (FMU-143 & 152) Designed For ≤ 5 K PSI Concrete

3. Risk Reduction For Future Weapons, e.g. Hypersonic

4. Fuze Industrial Base Must Remain Viable

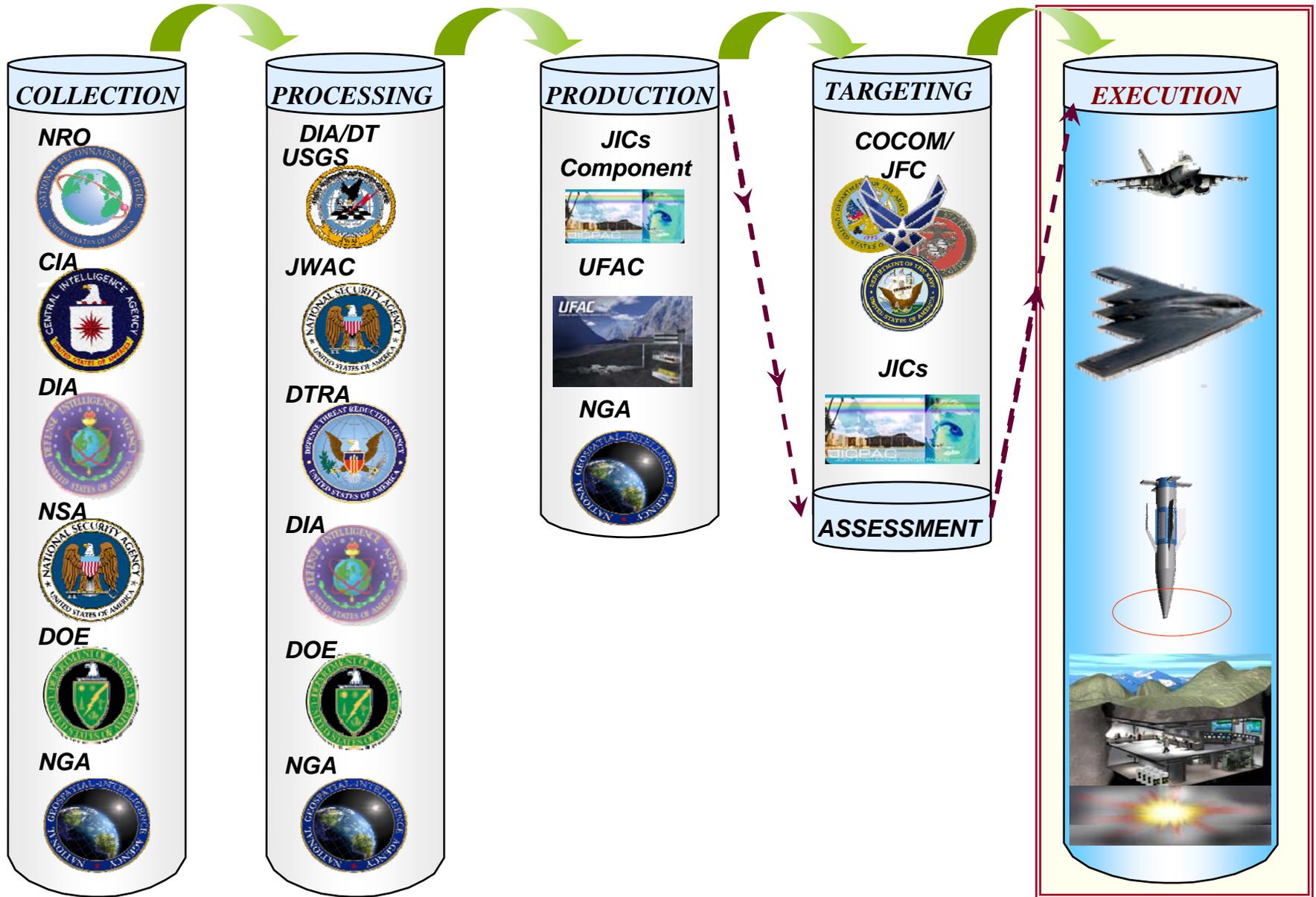
5. Multiple Capability Documents - Stated Fuze Rqmt

- HDBT Mission Area ICD
- HDBT Characterize/Engage/Assess (CEA) ICD
- Chemical, Biological, Agent Defeat (CBAD) Capability Development Document (CDD)



Hard and Deeply Buried Target Characterize, Engage and Assess ICD OV-1

The HDBT 'Kill Chain'



“Target & Engage & Assess” - The ‘Right Types’ of Weapons



ADVANCED SYSTEMS AND CONCEPTS

- **Generate the Desired Effect**
 - Focused Lethality
- **Moving / Re-locatable Targets**
- **Time Sensitive Targeting**
 - Speed? Seeker vs. speed investment
 - Avoid Unnecessary Collateral Damage
- **Improve the Targeting Equation**
 - Target Location Accuracy Improvements
 - GPS Accuracy / Weapon Accuracy
- **Post – Strike Assessment**
 - UAVs
 - Seeker information through Weapon Data Link
 - Unattended Ground Sensors





CENTCOM Need Statement

ADVANCED SYSTEMS AND CONCEPTS

USCENTAF/CD

524 Shaw Drive, Suite 200
Shaw AFB, SC 29152-5029

There is an **urgent operational need** to provide airborne platforms, including the **F-15E**

MEMORANDUM FOR USCENTCOM/Deputy Director, CCJB
FROM: USCENTAF/CD
524 Shaw Drive, Suite 200
Shaw AFB, SC 29152-5029
SUBJECT: Focused Lethality Munition (FLM) Advanced Concept Demonstration

1. (U) USCENTAF fully supports the FLM Advanced Concept Technology Demonstration (ACTD). The intent of this ACTD is to demonstrate the military utility of a high collateral damage (LCD) warhead integrated into the Small Diameter Bomb I (SDB I). The FLM is not intended to replace the SDB I but to complement it. This ACTD exploits the Munition Metal Explosive (DIME) fill and composite warhead technologies being developed in the Force Research Laboratory. DIME is a tungsten high explosive that imparts increased blast/lethality over traditional high explosives. A composite case encapsulates the DIME fill and breaks into small non-metal fibers upon detonation minimizing warhead fragmentation effects.

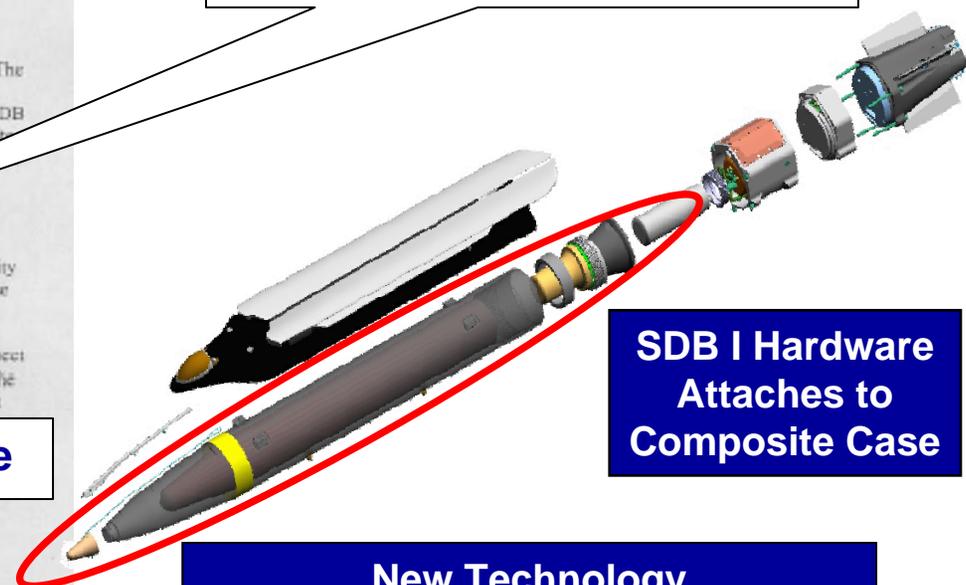
2. (U) There is an urgent operational need to provide airborne platforms, including the F-15E, the ability to kill targets in a high collateral damage environment. SDB I, modified to incorporate a composite case and DIME fill, offers the potential for precisely delivering a lethal blast against soft targets and dramatically reducing collateral damage. USCENTAF requires precision-guided weapons explicitly tailored to operate within a complex battlespace. While our current enemies have shown little respect for international laws of armed conflict, the US military must always strive to minimize the impact of war. The ability to prosecute previously off-limit targets with a precision

dramatically reducing collateral damage

offers the potential to fill an existing capability gap – the ability to precisely engage high collateral damage targets. This ability to effectively prosecute previously off-limits targets would enable USCENTCOM to shorten conflicts while minimizing collateral damage.

BLAIR E. HANSEN
Brigadier General, USAF
Deputy Commander

SDB I, modified to include a **composite case** and **DIME** fill



SDB I Hardware Attaches to Composite Case

New Technology
- Composite Case Warhead
- MNX-1209 Explosive (MBX)
- Blast Only

Focused Lethality Munition (FLM) - Small Diameter Bomb – Eglin AFB



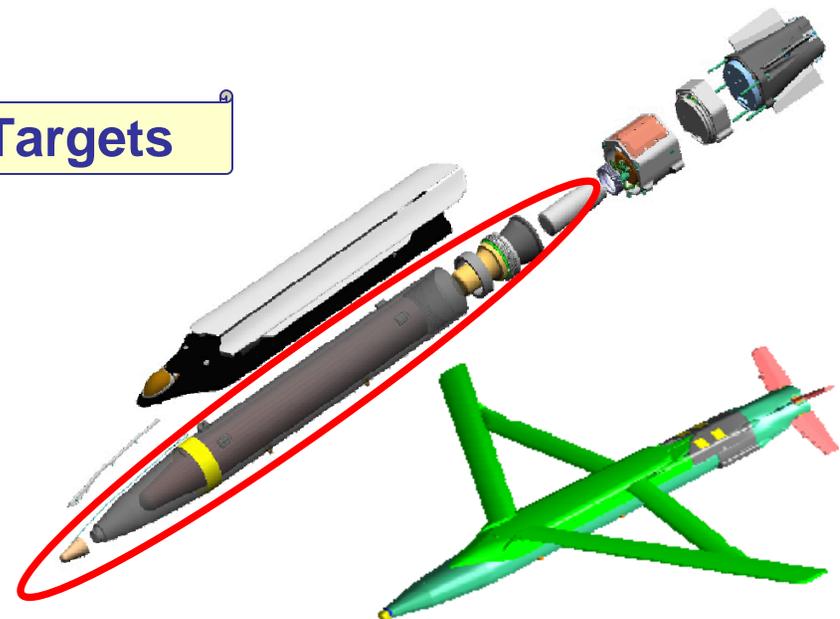
ADVANCED SYSTEMS AND CONCEPTS

- **Problem Statement:** Collateral Damage from Current Weapons Result in Target Restrictions Limiting COCOMs Ability to Prosecute Targets Requiring Minimized Collateral Damage
- **Objective:** Develop Composite Cased Warhead w/ Specialized Fill to Reduce Fragmentation Effects While Increasing Blast Effects → Focused Lethality Munition (FLM)

Prosecute Previously Off-Limits Targets

Solution

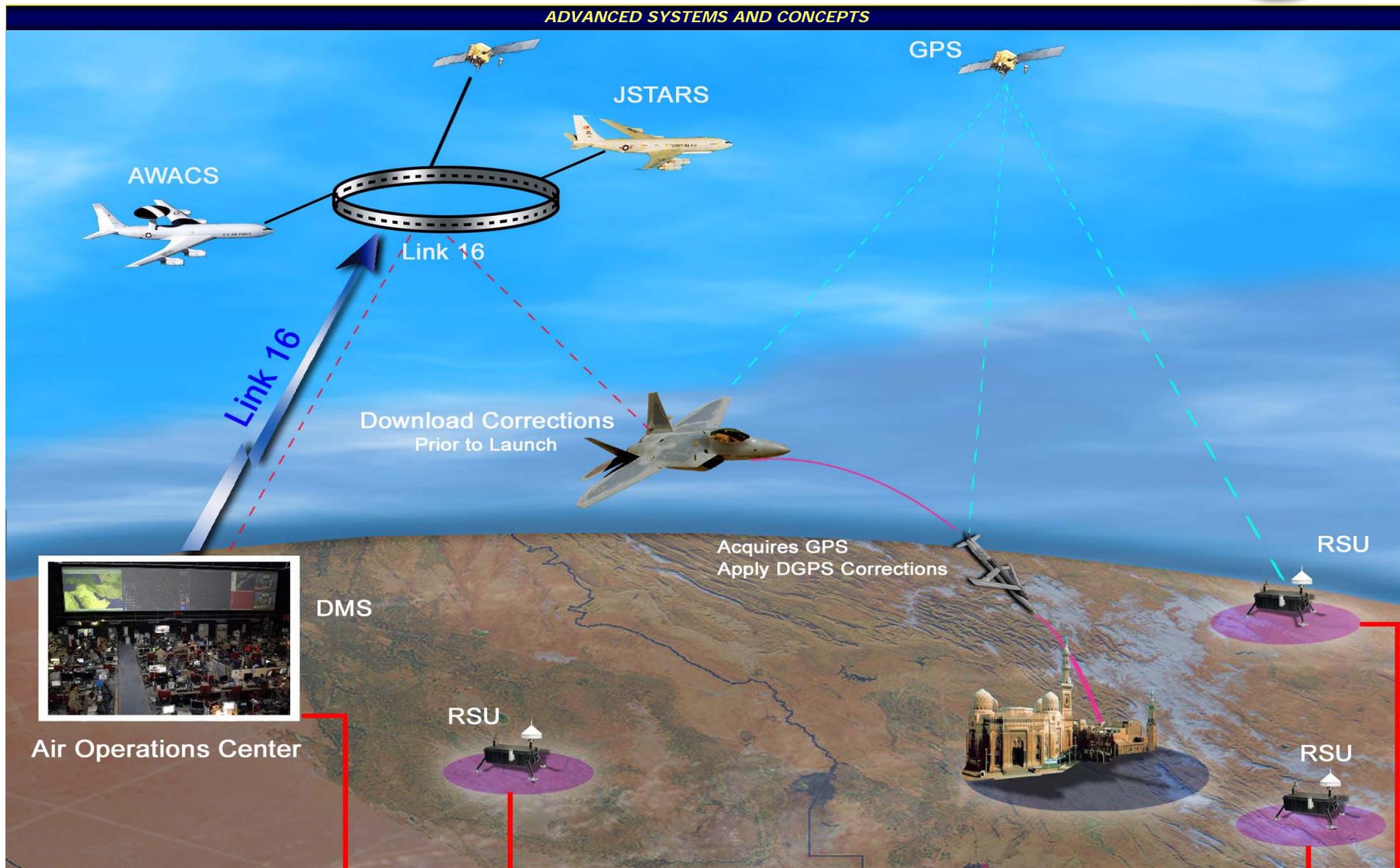
- Integrate Dense Inert Metal Explosive (DIME) w/ Composite Warhead Case into the Small Diameter Bomb (SDB) I Airframe



FLM CONOPS



ADVANCED SYSTEMS AND CONCEPTS



Proposed FLM Target Set



ADVANCED SYSTEMS AND CONCEPTS

- **Personnel**
 - Open, rural areas
 - Open, residential areas
 - Mortar sites
 - Close Air Support
- **Light vehicles, stationary**
 - Vehicle with gun in rear
 - Non-Armored transport vehicles
- **Soft Buildings**
 - Terracotta
 - Dried Mud Hut



Value of Speed... global strike



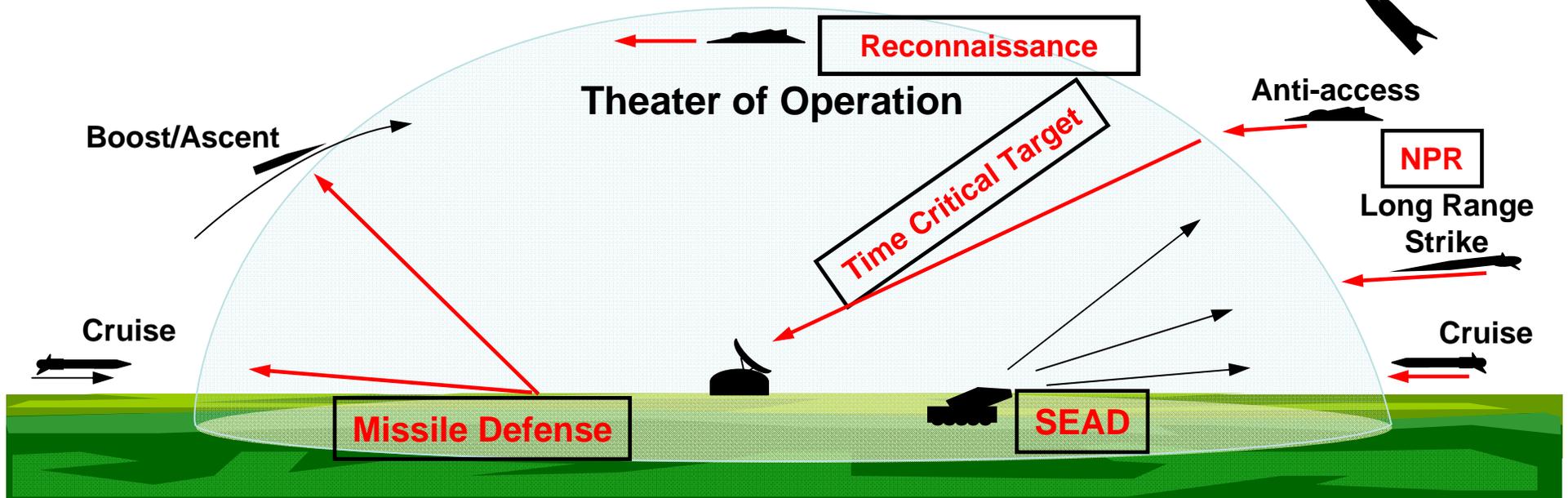
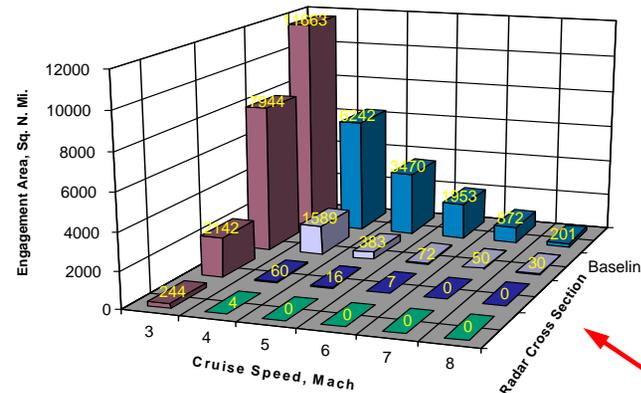
ADVANCED SYSTEMS AND CONCEPTS

Benefits

- Reduced Adversary Detection and Reaction Time
- Reduced Strike Package Assets
- Increased Engagement Area by a Single Platform
- Increased Shooter Survivability
- Increased Kills per Launch
- Address the Deep Penetration Problem

1.8m (speed) ~ Survivability/Vulnerability ~ 1/10 (Signature)

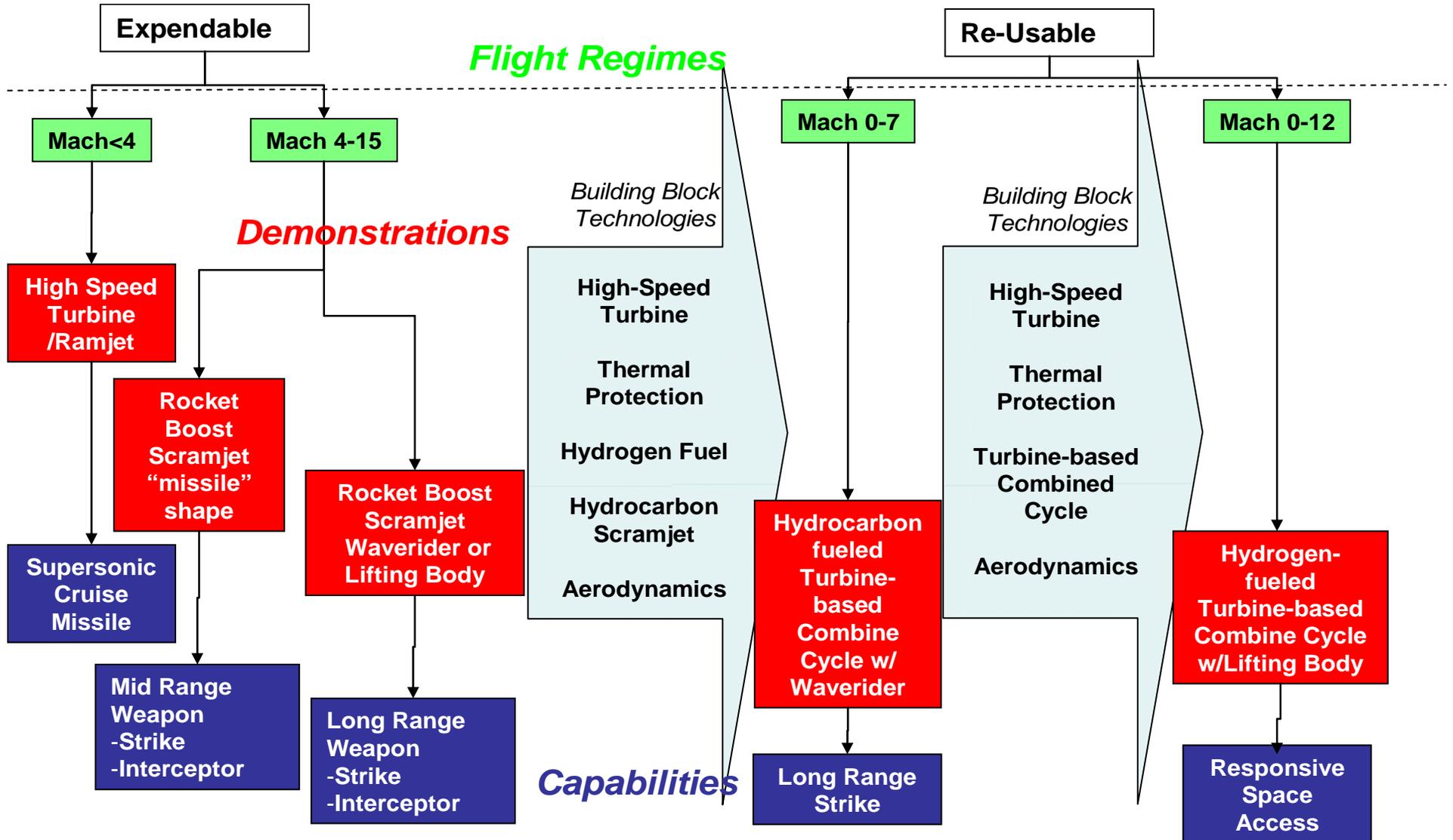
Weapon Engagement by SAM System





Technology Critical Path

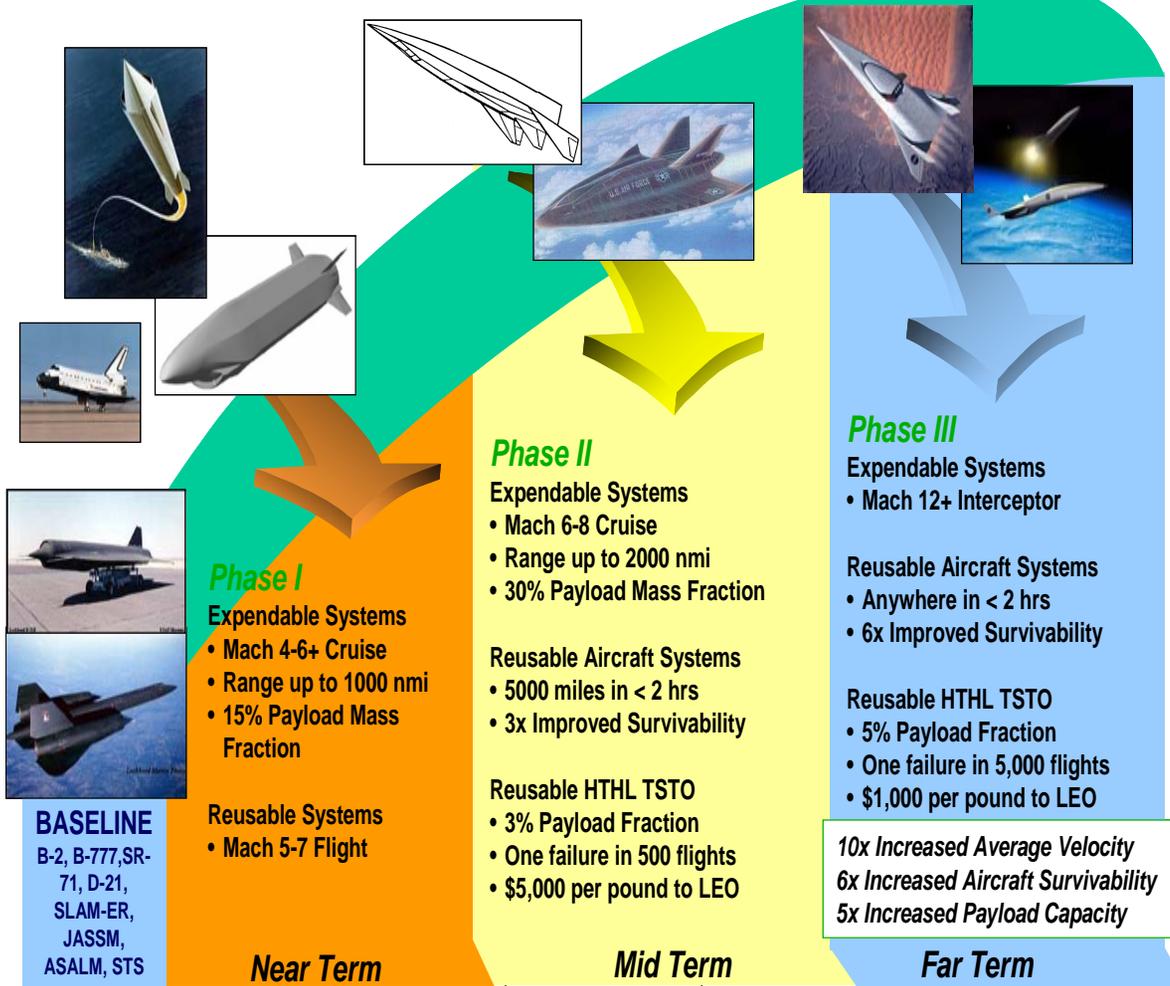
ADVANCED SYSTEMS AND CONCEPTS





High Speed / Hypersonics Taxonomy

ADVANCED SYSTEMS AND CONCEPTS



Capabilities Supported

- On-demand Spacelift
- Assured Access Spacelift
- Long Range Strike
- Global Precision Engagement
- Air & Missile Defense

Note: Reusable airframe technologies addressed via Space Access pillar



Sensor to Shooter Needs

ADVANCED SYSTEMS AND CONCEPTS

- **“Find” - Terrorist Hides in Many Dimensions**
 - They know our Title X ISR investment ... & spectrum
 - Enemy will move to where we cannot look!
 - Need to ‘sense’ in those Dimensions... Niche ISR?
- **“Find/Fix” - Sensors need to collaborate**
 - Track mobile entities in the 24 hour immediate TGT’ing cycle
 - Track dimension to dimension at a high sample rate
 - Fusion to hold the track or immediately pick up
- **“Fix/Finish” - Sensor can Target the Shooter... or shoot!**
 - Metric Sensing... platform inaccuracies!
 - Fuse for more robust Combat ID Capability
 - Rapid targeting of available weaponry

High Value Target (HVT) Kill Chain!



Precision Engagement Needs... ... for the Near Future

ADVANCED SYSTEMS AND CONCEPTS

- **QDR / SPG - mandating new capabilities**
- **Combating WMD... in all phases**
 - Effective Agent Defeat
- **STRATCOM's Global Strike / ISR / IO Mission**
 - Prompt Theater/Global Strike (conventional capability) – Speed!!
- **Robust HDBT Defeat Capability**
 - Target sets going deeper
 - FCT: Programmable Intelligent Multi-Purpose Fuse (PIMPF)
- **Geospatial Intelligence (Better Accuracy! / TLEs too large!)**
 - Immediate targeting of battlefield sensors (UAVs Included) for rapid employment of GPS Weaponry
- **Moving Targets – Advanced SAMs / Counter Maritime**



Challenges for the Future...

ADVANCED SYSTEMS AND CONCEPTS

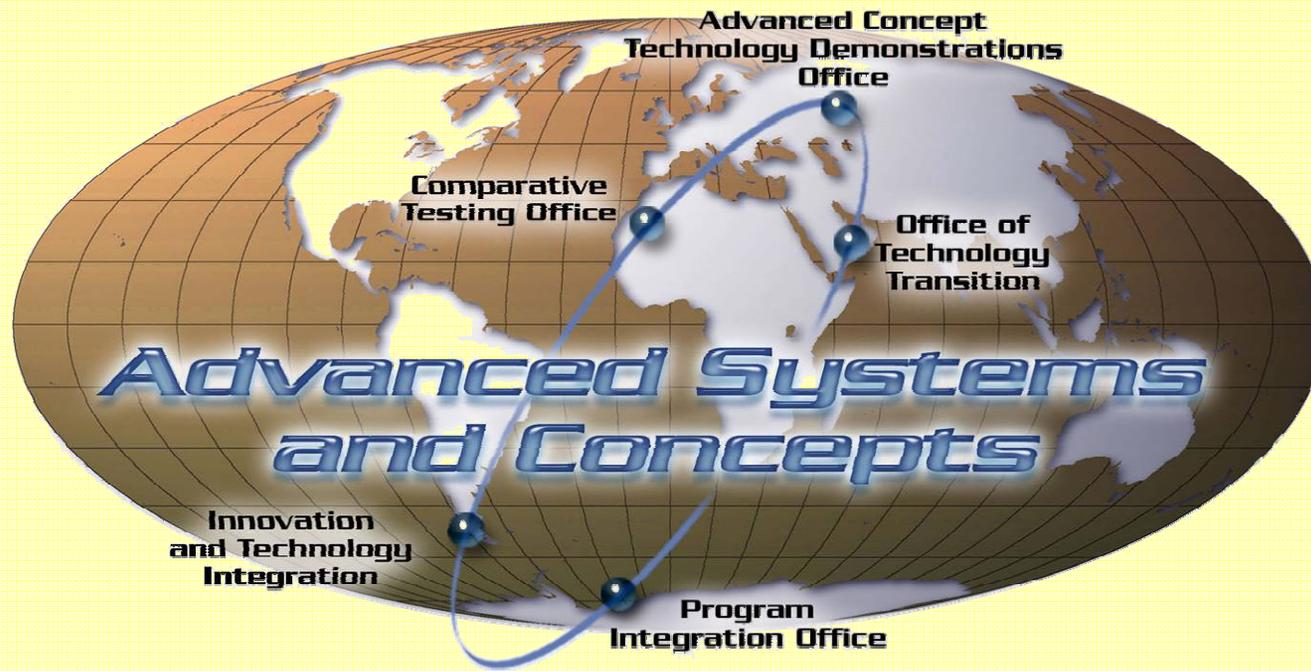
- **Theater TST (can't get around the laws of physics!)**
 - To hit anything in a 600nm Theater in 10-15 mins... need a Mach 3.5 – 4 Weapon !
 - Need In-Flight Re-targeting / Re-Directing
- **Persistent ISR & Rapid Geo-Registration to support 'High- Speed' Weapons**
 - End-to-End Rapid Planning Capability Worldwide
 - Hydrogen Powered UAVs? Airships?
- **Alternatives for Speed Investment**
 - Seeker Investment (TLEs) / Stealth Investment (Loiter/Survive)
 - But... Doesn't get you to the Target quicker!!

OSD Advanced Systems & Concepts



<http://www.acq.osd.mil/asc>

john.wilcox@osd.mil (703) 697-5558



Advanced Systems & Concepts

<http://www.acq.osd.mil/jctd>

USJFCOM



Joint Innovation and Experimentation (JI&E) Directorate

Unclassified



Briefing To

Precision Strike Association

Rear Admiral James “Sandy” Winnefeld
Director
Joint Innovation and Experimentation
USJFCOM, J9

Unclassified

J9 – United States Joint Forces Command



Carrier Air Power and Stability Ops

- **Flew 95 out of 97 line days . . .**
 - Very sustainable...Non-skid is the only thing holding us back
- **Networking with ground forces - liaison officer at the ASOC was a key enabler**
 - Teach ground troops/JTACs to fish vice giving them fish
- **ROVER installation was a high leverage force multiplier**
 - 5 weeks from request to 22 Tomcats complete, at a cost of \$16K
- **Finding IEDs is a growth industry for ATFLIR**
 - Thermal differences . . . signal to noise . . . false alarms
- **Weapons:**
 - GBU-38 certification on F-14 a wise move
 - GBU-12 reliability a concern
 - Laser Maverick JTAC weapon of choice
 - Coordinate self-generation is the future
 - Night strafe a reality and a challenge (low CDE option for JTAC)
 - Working with attack helos, to include buddy lasing
- **NTISR mission would benefit from specialized training**
 - More training with JTACs
 - Trigger-man hunting scenario
 - Incorporate ROVER at Fallon
 - Hunting IEDs with ATFLIR (training range)

Missions

- XCAS – Strike sorties
- Non-traditional ISR (NTISR)
- Counter IED – before, during & after
- Counter Mortar – before, during & after
- Convoy Support
- Show of Force
- Overwatch of Raids / MEDEVACs
- Air Defense of Baghdad
- Helo & S-3 support to MND(SE)



ROVER antenna
on F-14D

IED





JFCOM Transformation



CDR's Strategic Goals

- Provide focused support to win the War on Terror
- Deliver trained, capable, interoperable joint force
- Ensure Global Force Management and visibility
- Develop robust, capable Joint Command and Control
- Lead continuous effort to transform the joint force
- Establish enhanced, agile business processes

CDR's Transformation Objectives

1. Enable Achievement of Unified Action
2. Integrate Operations with Intelligence
3. Enhance Joint Command and Control
4. Improve Joint Force Deployment and Sustainment
5. Develop Joint Concepts
6. Enable Strategic Communications
7. Develop & Support JI&E Community Processes





Joint Urban Fires Prototype (JUFP) Problem Statement

- The urban environment inhibits the commander from employing dominant joint fires
 - Complex terrain
 - Weapons effects
 - Proximity of non-combatants
- The impact on joint fires is even more severe during stability operations, where the concern for collateral damage is greater and requires more precise fires

JUFP Objective



Provide joint warfighters with the ability to call for and apply timely precision fires, from any source, in an urban environment.

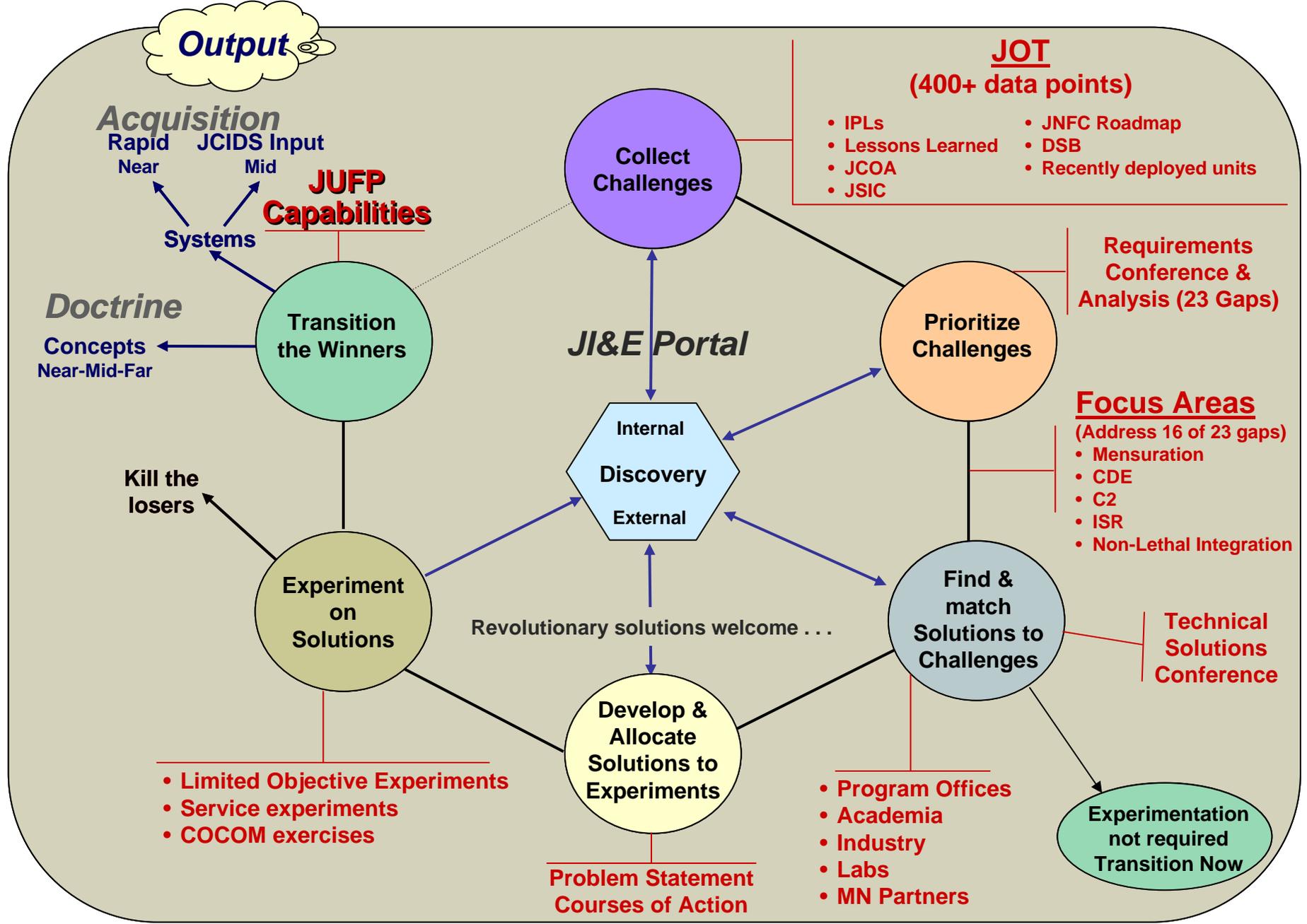


Improved Precision, Discrimination and Response

JI&E Customers and Partners



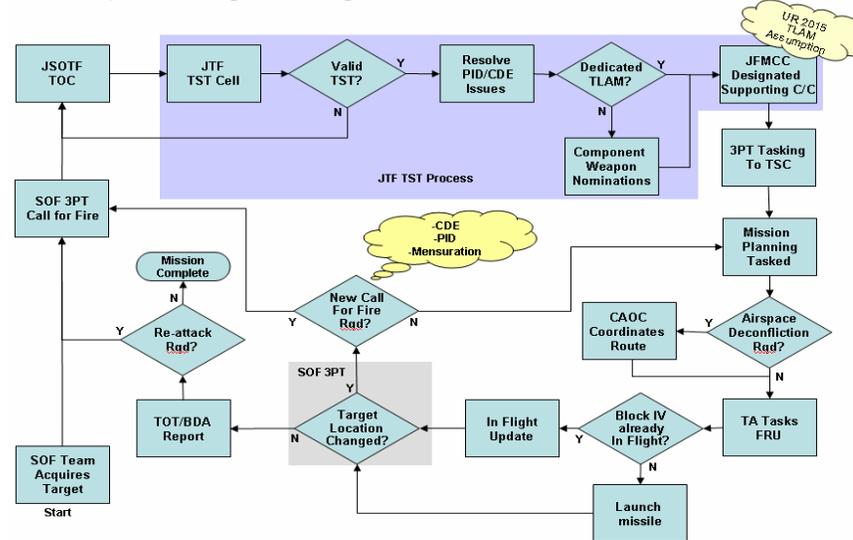
JI&E Enterprise Process Applied to JUFP Development



Improve joint fires C² systems

- Problem: Many service oriented architectures and TTP with non-integrated systems
- Focus: Integrate common systems with a common data schema under a JTF level joint fires architecture
- Mission areas: CPOF, JADOCs, TLAM Suite

Third Party Targeting of Tactical TLAM in UR2015





Mensuration

- Problem: Mensuration only performed at specific locations with outdated imagery
- Focus: Expand mensuration capabilities throughout the joint fires architecture and facilitate the use of real time ISR assets.

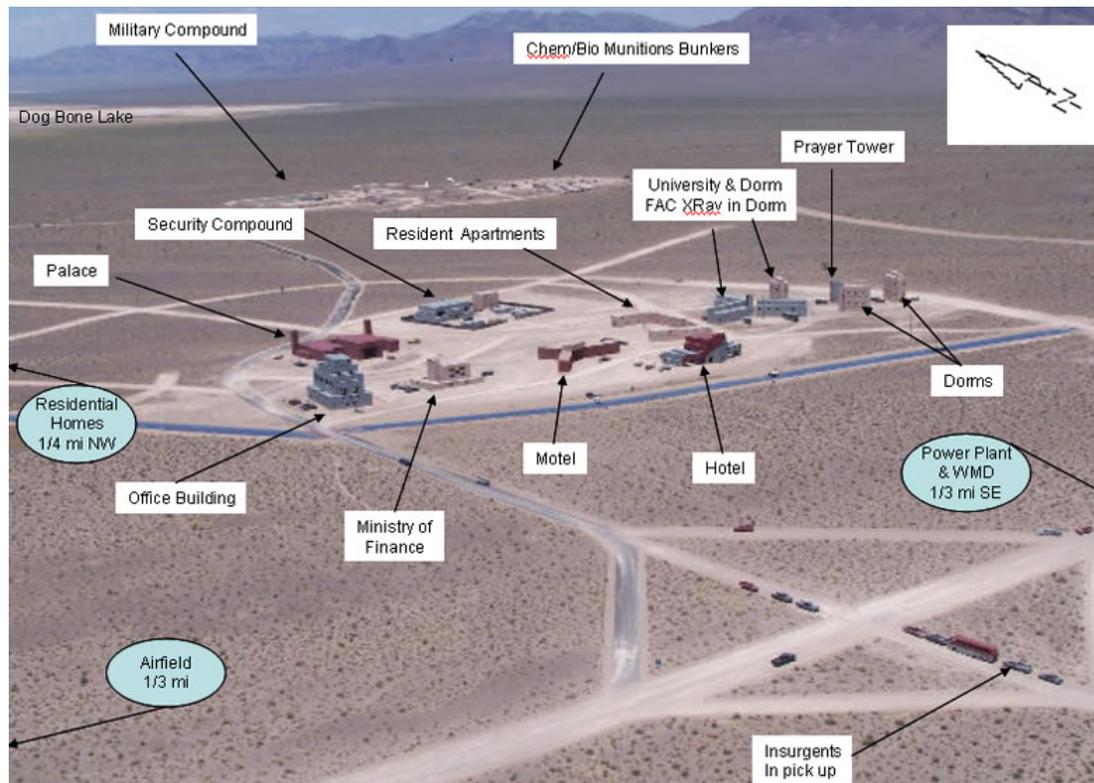
US Army PFED with JUFP precision image





Collateral Damage Estimation

- Problem: No single integrated collateral damage estimation tool
- Focus: Incorporate common automated CDE module into fires systems



JUFP LOE-2
15-17 Sept 06
Creech AFB, NV
MOUT Complex

FY07 Efforts



- Series of tech spirals with partners
 - Risk reduction for FY07 experiment series
- Major experiment with wider number of partners (Empire Challenge 07), Jul 07
 - Exercise using the most up to date imagery in the delivery of coordinate seeking weapons
- Field experiment with the Joint Fires Center of Excellence (JFCOE) at Fort Sill, OK, Aug 07
 - Update the JFCOE on the effort to expand mensuration capabilities to the tactical level using the most up to date imagery
- Transition workshop, Sep 07
 - Ensure delivery and sustainment of capabilities to the warfighter, Sep 07



FY08-09 Focus Areas

- Problem: Many ongoing ISR fusion efforts yet none are integrated in the current fires architecture
 - Focus: Integrate ongoing ISR fusion efforts M2M with fires C² systems
- Problem: Non-lethal weapons are all nominated for use in pre-planned targeting yet there is limited nomination under a dynamic targeting situation
 - Focus: Integrate non-lethal weapons nomination for use in dynamic targeting



“Unique joint solutions to the problems our customers are trying to solve”

Glossary



- **AFATDS:** Advanced Field Artillery Tactical Data System. AFATDS is a totally integrated fire support C2 system that uses fire mission and other related information to coordinate and optimize the use of all fire support assets, including mortars, field artillery, cannon, missile, attack helicopters, air support, and naval gunfire. AFATDS will provide processing capabilities from the corps to the platoon Fire Direction Center.
- **EMT:** Effects Management Tool. EMT is a thin client application allowing disadvantaged users access to some AFATDS capabilities.
- **DPSS-SM:** Digital Precision Strike Suite, Scene Matching. Lap top based mensuration using scene matching technology using a stereo image data base.
- **FAST-CD:** Fast Assessment Strike Tool, Collateral Damage. FAST-CD is a collateral damage estimation tool developed by the Joint Warfare Analysis Center (JWAC).
- **JADOCS:** Joint Automated Deep Operations Coordination System. JADOCS is a Windows™ software application that is hosted on operational area communication infrastructures (i.e. SIPRNET). JADOCS provides an interface between Service systems and allows target attack planning, development and display of situational awareness, and engagement execution monitoring.

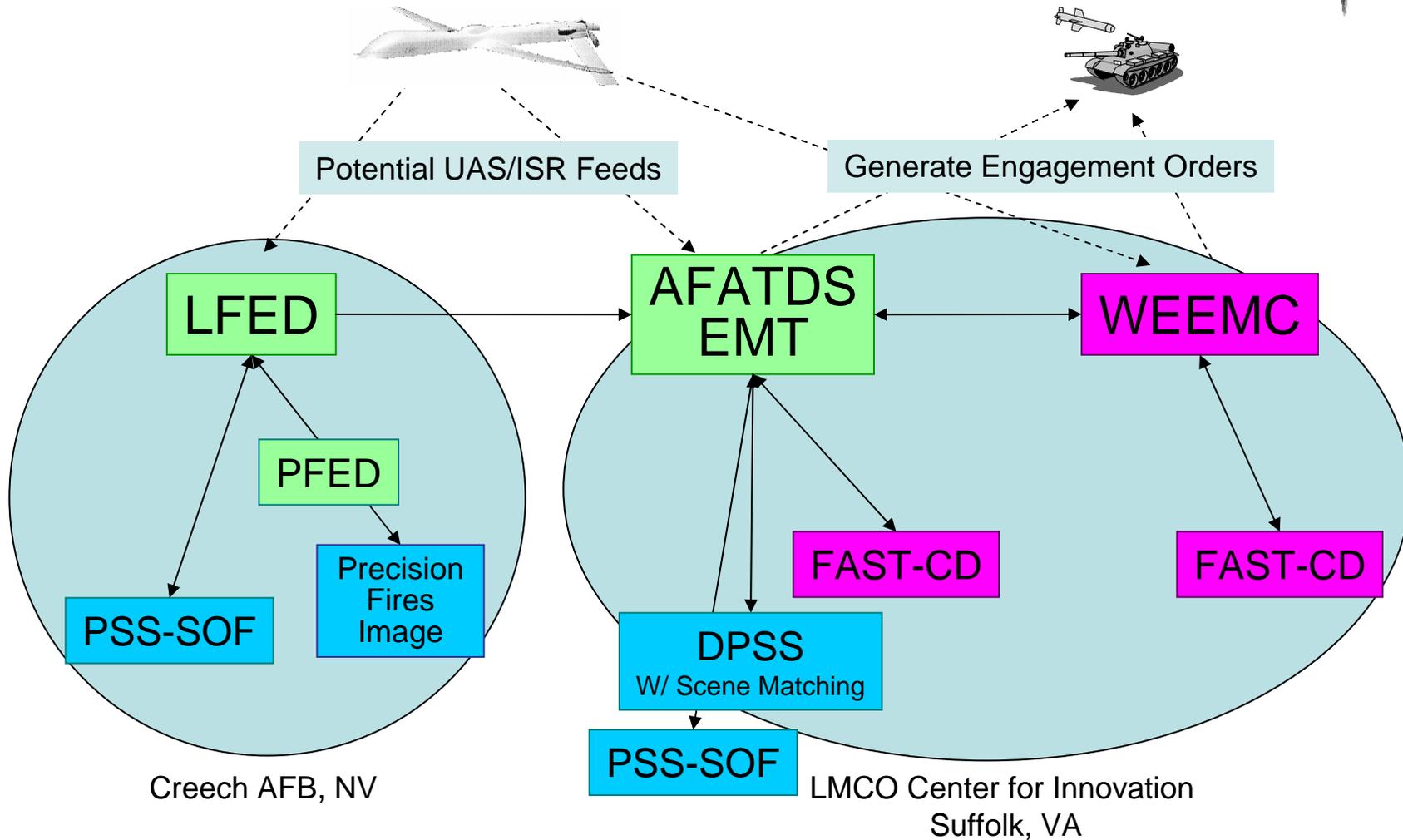
Glossary



- **PFED:** Pocket Sized Forward Entry Device. The PFED is a military grade Personal Digital Assistant (PDA) application designed primarily for dismounted forward observers, artillery fire direction and target acquisition missions. The PFED can communicate direct to AFATDS or through the LFED
- **LFED:** Light-weight Forward Entry Device. A vehicle mounted military grade laptop for generating calls for fire from forward observers to AFATDS. Runs the Forward Observer System (FOS) software which is integrated with PSS-SOF. FOS provides field artillery forward observers with the capability to direct and coordinate field artillery, mortar, close air support, and helicopter munitions onto targets.
- **PFI:** Precision Fires Image. PFI is a digitalized image where every pixel represents a mensurated coordinate.
- **PSS-SOF:** Precision Strike Suite, Special Operations Force: Similar to DPSS, PSS-SOF performs tasks including but not limited to the generation of true geodetic coordinates and elevation of an item or a location, utilizing a stereo image database.
- **WEEMC:** Web-Enabled Execution Management Capability. WEEMC is designed to allow numerous commanders to collaboratively plan and execute time-sensitive strike missions, as well as search and rescue efforts. The system will link Army, Navy, Air Force, Marine, and Special Operations systems into a unified application, giving warfighters instant, integrated access from any command and control location, including Navy ships, Air Operations Centers, or forward deployed command posts. WEEMC is scheduled to replace JADOCS sometime in the future.



JUFP LOE-2 Overview



AFATDS-EMT – Advanced Field Artillery Tactical Data System – Effects Management Tool
 DPSS – Digital Precision Strike Suite
 LFED – Light-weight Forward Entry Device

PFED – Pocked Sized Forward Entry Device
 PSS-SOF – Precision Strike Suite Special Operations Force
 WEEMC – Web Enabled Execution Management Capability

LOE-2 Findings

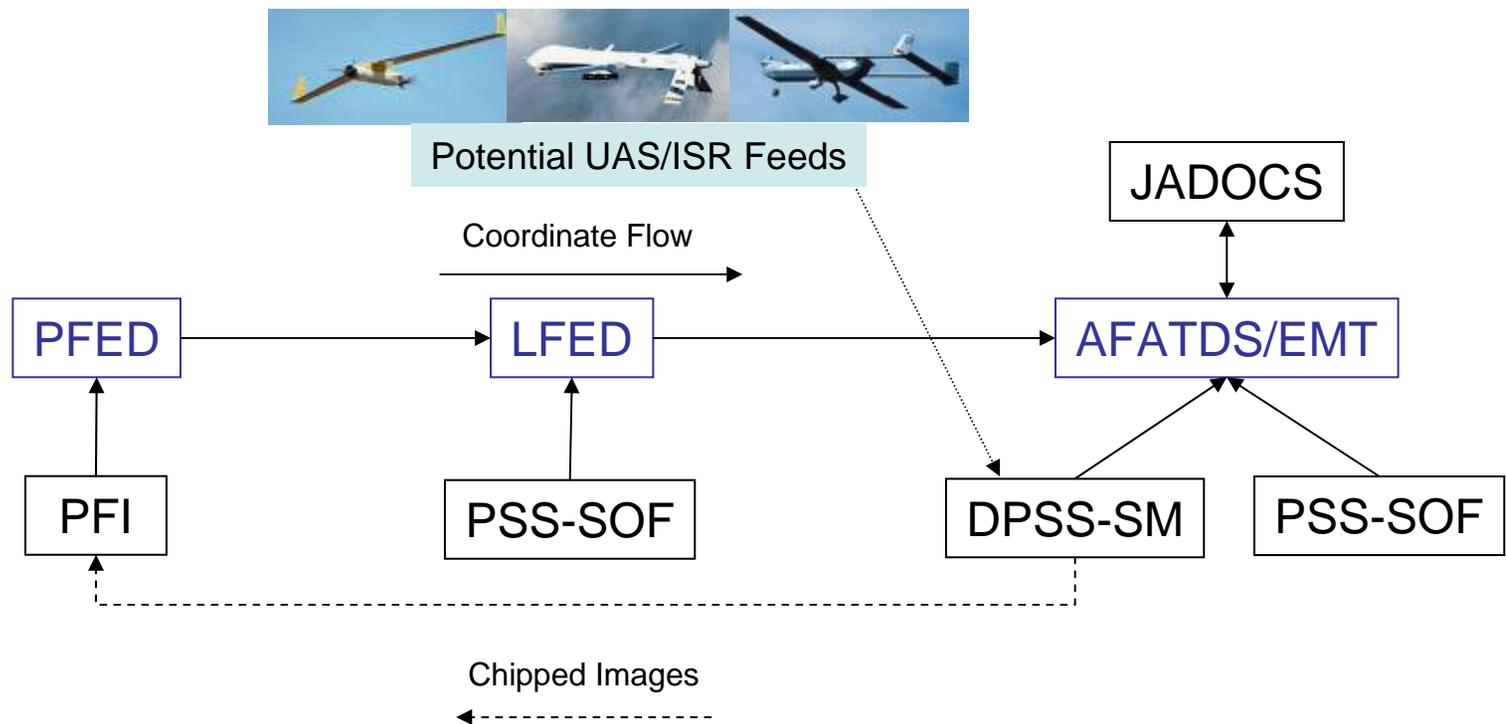


- CDE
 - Component level CDE can provide the JTF commander with an improved decision making process for Joint engagements
 - Pushing CDE below the Brigade/Strike Group level may be difficult

- Mensuration
 - Tactical level mensuration is feasible and can reduce the kill chain timeline for the employment of GPS weapons
 - Joint TTP needs to be further developed and refined for tactical level mensuration

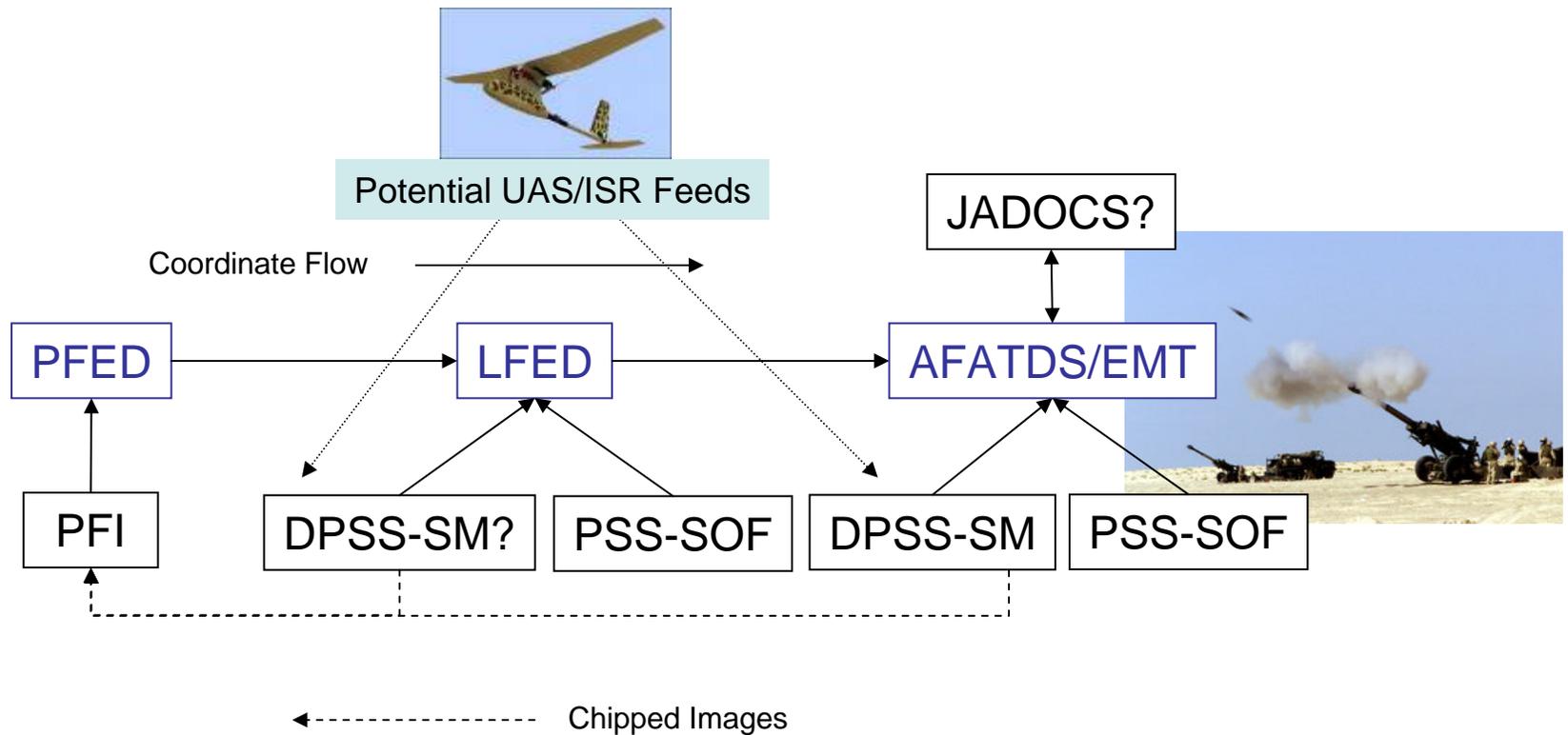
Empire Challenge 07

Goal: Exercise using the most up to date imagery in the delivery of coordinate seeking weapons



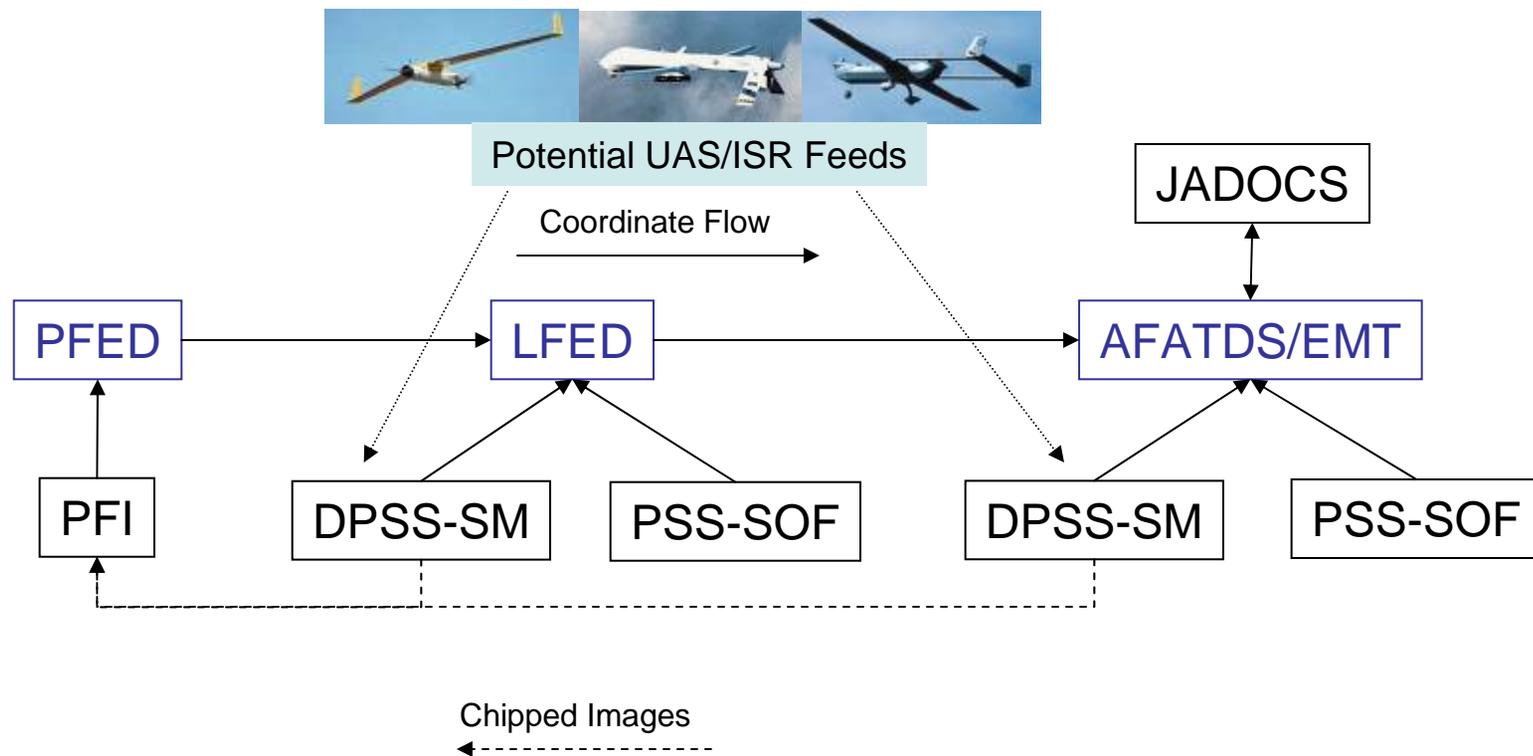
Ft. Sill Field Experiment

Goal: Update the JFCOE on the effort to expand mensuration capabilities to the tactical level using the most up to date imagery



Precision Strike Vision

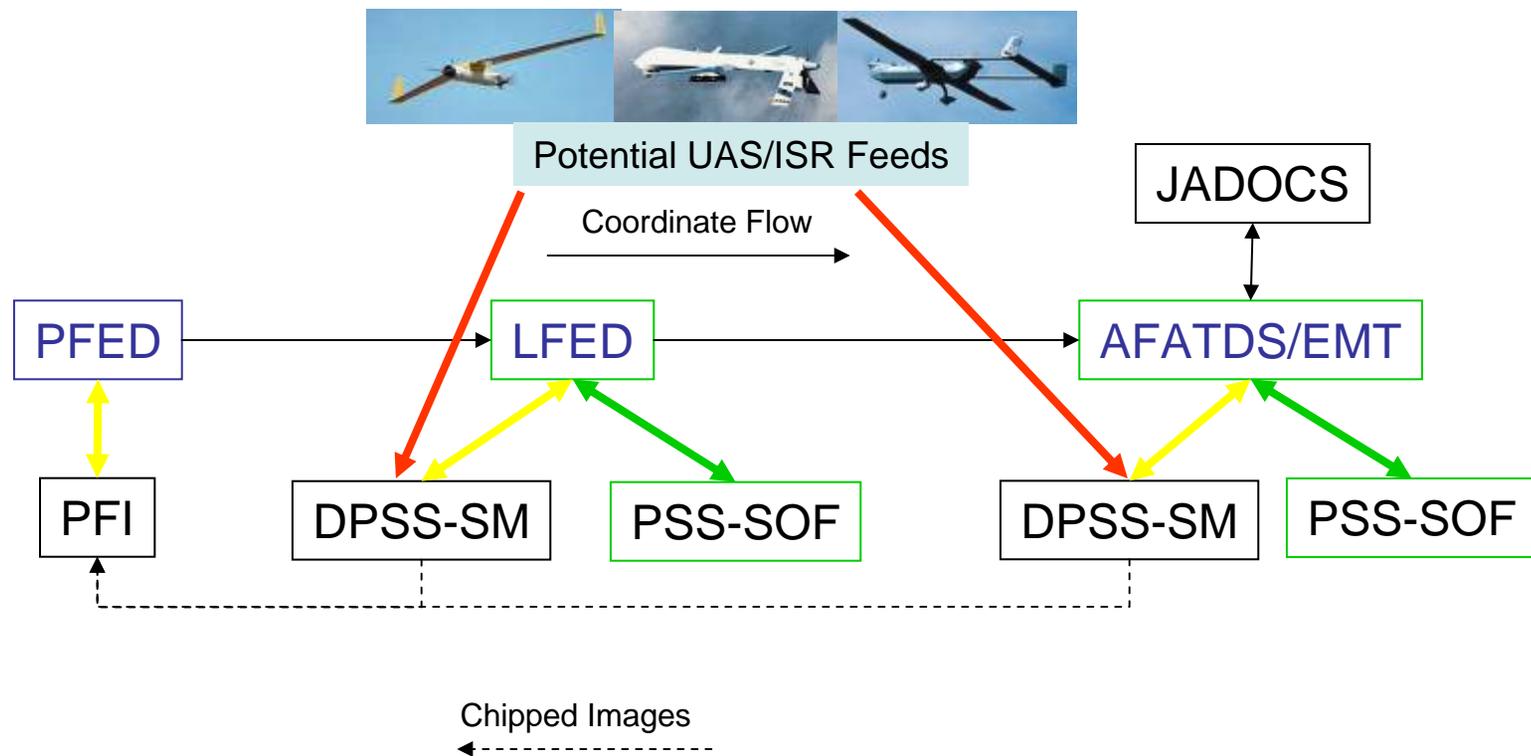
Goal: Allow the commander to use the most up to date imagery in the delivery of coordinate seeking weapons



Precision Strike Vision

How do we get here?

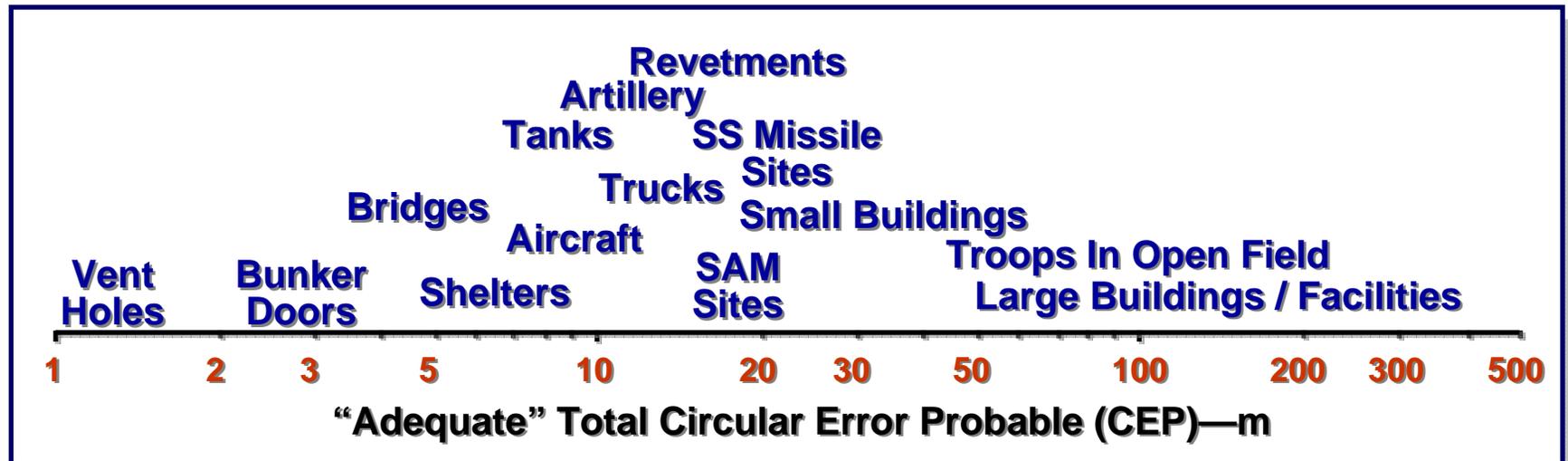
1. C2 Fires Architecture
2. Complete DPSS-SM integration
3. UAS Integration



Accuracy Requirements



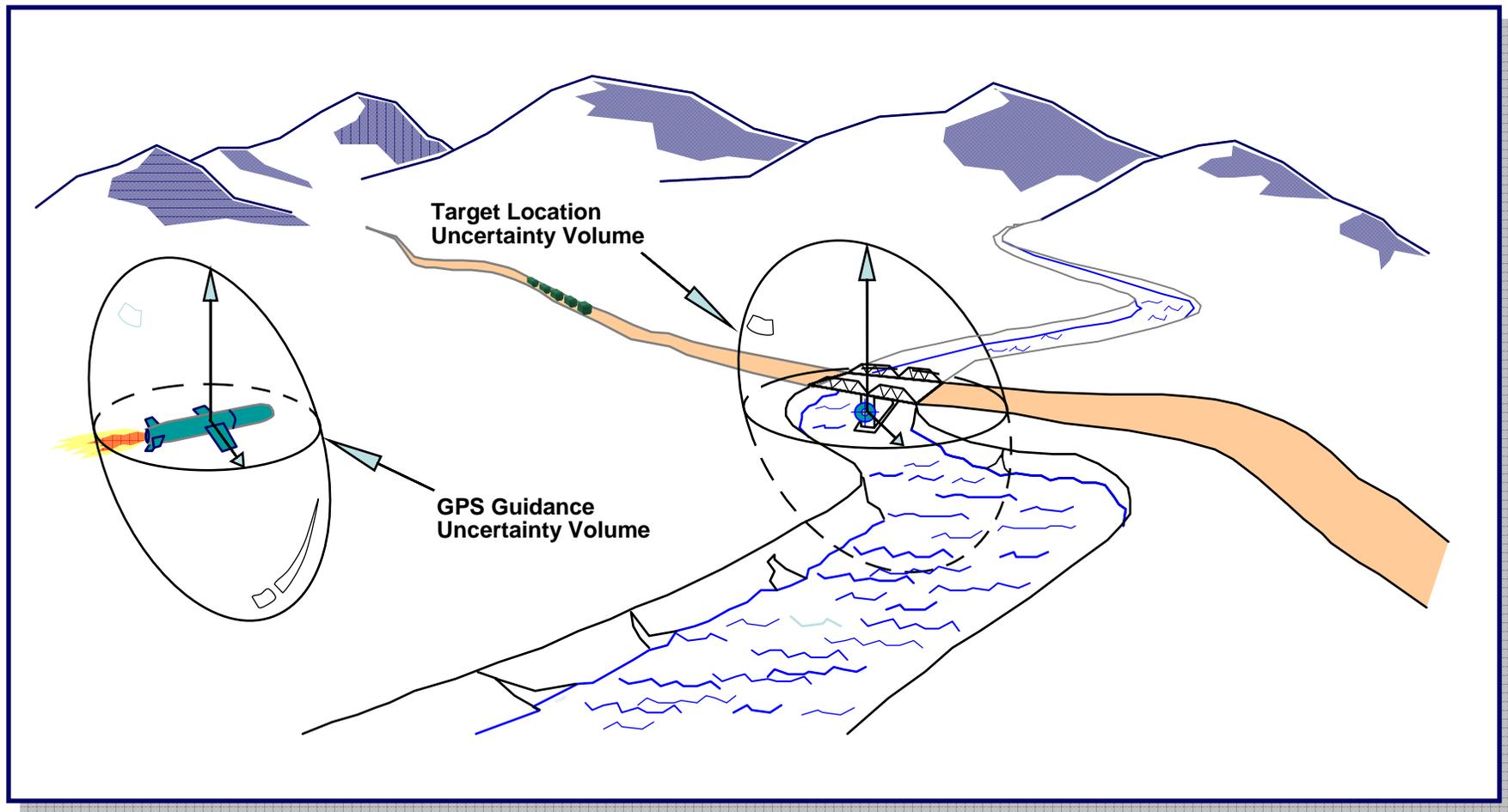
What is good enough?



- There is no single value or accuracy threshold for PGMs (CSWs)
- Accuracy requirements will depend on:
 - Commander's intent (P_K Level, etc.)
 - Weapon & target pairing
 - Rules of engagement (collateral damage)
 - Approach limitations (end-game trajectory)

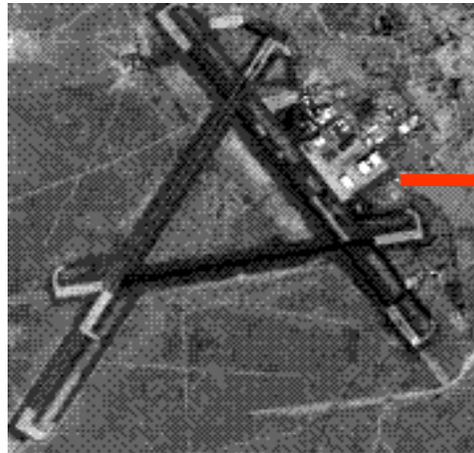
Weapon and Target Uncertainty

$$\text{Total CEP} = \sqrt{(\text{TLE CEP})^2 + (\text{Weapon CEP})^2}$$

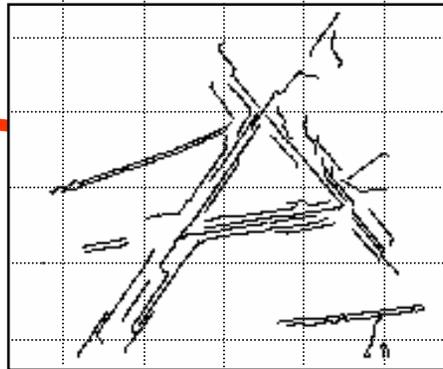




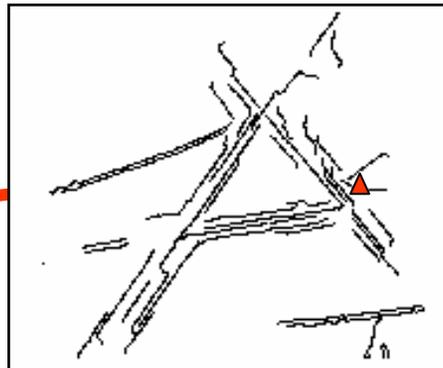
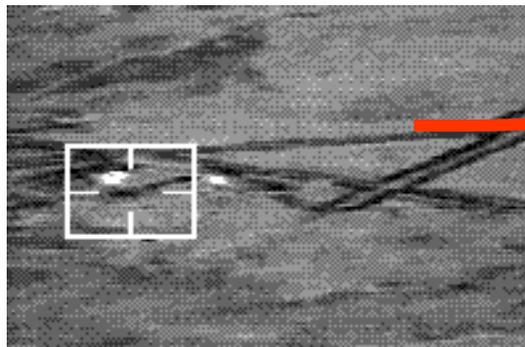
Automated Registration



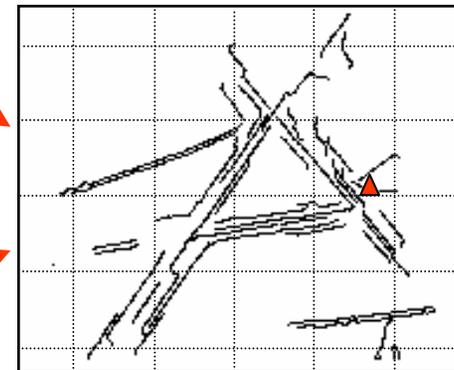
GEO-REFERENCED DPPDB TEMPLATE



EDGE-EXTRACTION ALGORITHMS



RECCE TARGET AREA TEMPLATE



GEOREFERENCED TARGET AREA TEMPLATE

- Technical Issues:**
- Terrain Effects
 - Error Propagation

JUFP Requirements



1. Develop a technology-based, standardized Collateral Damage Estimation (CDE) tool that can be used at the tactical level with seamless operational level interface
2. Develop a more rapid (possibly automated) system for establishing Positive Identification (PID). System must shared access with joint/interagency/coalition databases
3. Expand the use/application of the “attack guidance matrix,” or other TTP to include CDE/PID criteria
4. Incorporate a 10 digit grid coordinate as the standard for urban operations
5. Develop a ground/observer-based remote mensurating system accurate to less than 7m/20 ft (equivalent to current stereoscopic mensuration standards). System must support both Height above Ellipsoid (Global Positioning System (GPS) guided weapons) and the Mean Sea Level reference systems
6. Field a reliable GPS accurate to 1 meter

JUFP Requirements



7. Develop a capability similar to the “Google Earth” type functionality, using National Geospatial-Intelligence Agency imagery, which allows commanders to better view/understand the 3-D urban terrain
8. Provide further sub-divisions in Global Area Reference System (below the 5 min x 5 min box).
9. Improve Joint Professional Military Education coverage of the Rules of Engagement (ROE), including major Judge Advocate General input that focuses on operational ROE and commander’s guidance
10. Pre-deployment training needs to address theater ROE in order to develop proper Standard Operating Procedures
11. Change policy to widen coalition access to the Secret Intranet Protocol Router Network (SIPRNET) (or SIPRNET-like system) through multi-level security and role/permissions-based access systems
12. Develop an enhanced Blue Force tracker/Future Battle Command Brigade and Below (FBCB2) that includes the capability to display maneuver graphics and applicable Fire Support Coordination Measures down to platoon level

JUFP Requirements



13. Establish Air Control Measures to better coordinate low altitude operations to deal with the expanding use of Unmanned Aerial Vehicles at the tactical level
14. Provide a single integrated high fidelity Common Operating Picture with an enhanced ability to manage low altitude air assets in urban operations
15. Develop air-to-surface and surface-to-surface technologies, associated weaponeering and CDE tools, and training and employment doctrine (concept of operations and Tactics, Techniques and Procedures (TTP)) that will improve weapons' accuracy and ability to provide specific timely effects to meet operational requirements while minimizing collateral damage
16. Develop a standard for the specific employment considerations/requirements and evaluation methodology for all weapon systems (i.e.; target location accuracy (Target Location Error/Circular Error Probability), surface danger zones, danger close distance, CDE distance, minimum safe distance and weapon reliability factor) and disseminate/publish in a Joint Tactics, Techniques, and Procedures (i.e. Joint Close Air Support/Joint Fires) to facilitate application of fires at the tactical level. Expand the application of the "attack guidance matrix," to include CDE/PID criteria
17. Improve the integration of lethal and non-lethal fires by coordinating throughout the planning, execution, and assessment process. This effort must be supported by further refinement of TTP, development of collaborative tools, and comprehensive training concerning the capabilities and use of non-lethal fires

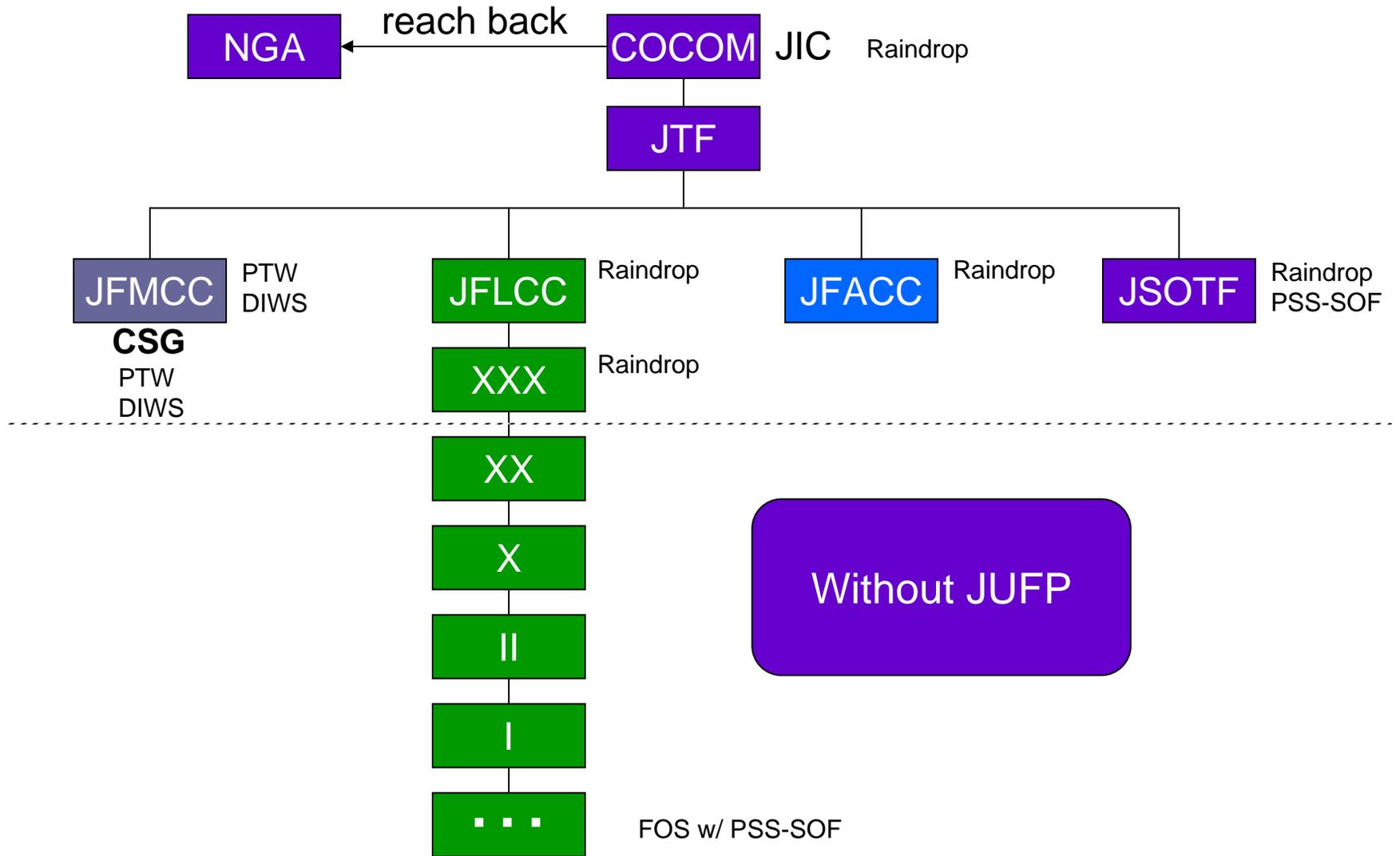
JUFP Requirements



18. Develop the technologies and trained assets to provide the appropriate mix of sensors and observers with the density and interoperability required to meet all F2T2EA observer requirements in an environment where multiple, near-simultaneous events are common
19. Develop technologies, doctrine and TTPs required to overcome the effects of urban terrain on communications systems
20. Develop a standardized data schema which allows an automated capability to integrate, correlate and display near real-time ISR data from multiple intelligence sources (ranging from soldiers to national assets) to support urban targeting
21. Develop a capability to capture and dynamically display ISR asset parameters (including coalition assets) to give joint forces a comprehensive picture of all ISR assets in the battlespace for integrated collection operations
22. Develop or improve the technologies to acquire, positively identify, geo-rectify and report potential targets
23. Develop an ISR data exchange capability that allows sharing to include multinational and interagency considerations

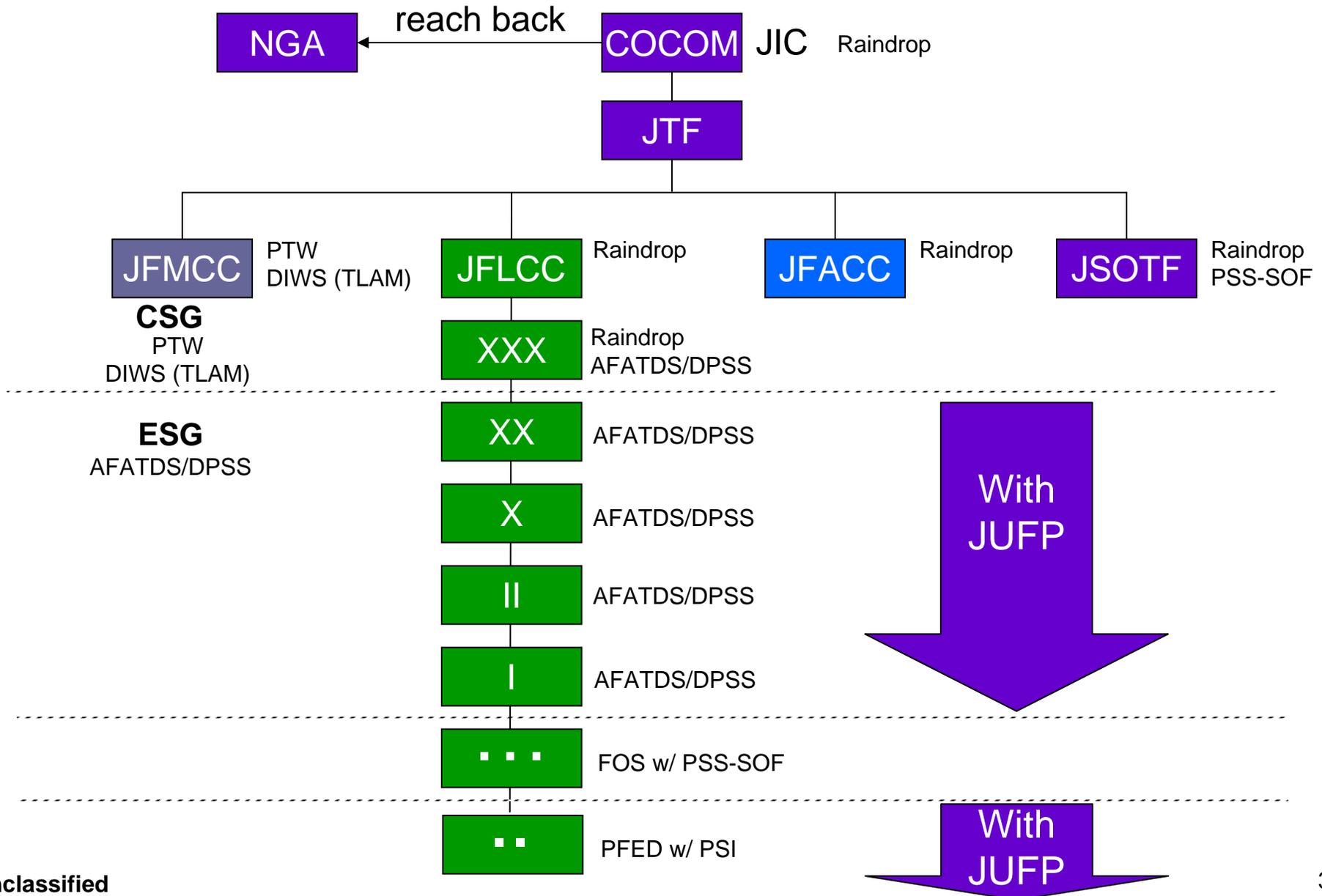


Typical Mensuration Before JUFP





Typical Mensuration After JUFP





Precision Strike Association
presents

Precision Strike Winter Roundtable



**Precision Engagement—
Strategic Context for the Long War**



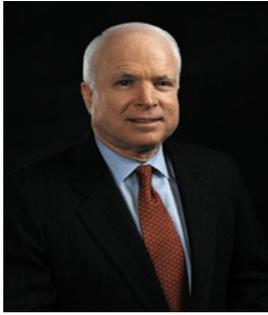
February 1, 2007

*Crystal Forum @
Crystal City Marriott
Arlington, VA*

“Preparing for the future will require us to think differently and develop the kinds of forces and capabilities that can adapt quickly to new challenges and to unexpected circumstances. An ability to adapt will be critical in a world where surprise and uncertainty are the defining characteristics of our new security environment.”

*Donald Rumsfeld
Secretary of Defense*

Precision Engagement—Strategic Context for the Long War



John McCain (R-AZ)
Senator
(Invited)



Mac Thornberry (R-TX)
Representative
(Invited)



Lisa Marie Cheney
Principal Deputy ASD (Acting)
Legislative Affairs
Office of the Secretary of Defense

Why Attend Winter Roundtable 2007

To win the long war, the 2006 Quadrennial Defense Review (QDR) report determined that the Defense Department should reshape the defense enterprise in ways to better support the warfighter. In the effort to redefine national security, the demise of the bipolar world has led to a plethora of security challenges for the United States—challenges not easily addressed by traditional national security bureaucracies. The freedoms we cherish have placed tremendous liabilities in fighting terrorism. Today, the military departments continue to transform in an effort to more effectively counter today's threats.

Winter Roundtable provides a forum that is focused on providing insights to policies and strategies from the perspective of those charged with implementing and executing both. To enhance your understanding of new policies that are expected to create innovative opportunities for the precision strike community, the Roundtable speakers will discuss:

- New Congress—Implications for National Defense Policy
- Senate Perspective on Emerging Threats and Capabilities
- House Perspective on Intelligence Reform and Defense
- Congressional Panel on Precision Engagement Priorities and Issues
- OSD Perspective on Defense Legislative Priorities
- Strategic Context for the Long War
- Today's Strategy—Tomorrow's Vision and Requirements for Precision Strike
- Joint Strategy Review Highlights
- Long Range Strike Weapons
- Joint Experimentation for Precision Engagement
- High Speed Weapons, Deep Penetration, and Sensor-to-Shooter Technologies
- Improvised Explosive Device Defeat
- The Way Ahead on Study Group Findings/Recommendations of U.S. Strategy in Iraq



Honorable William J. Perry
Former Secretary of Defense
To present the 11th Annual William J. Perry Award



John Wilcox
ADUSD, Precision Engagement & Director, ACTD & JCTD Program, Advanced Systems & Concepts, OSD



Rear Admiral James A. Winnefeld, Jr., USN
Director, Joint Experimentation Directorate (J9), US Joint Forces Command



Brigadier General Daniel B. Allyn, USA
Deputy Director for Operations, Joint Improvised Explosive Device Defeat Organization



Frank Cappuccio
Executive Vice President & GM, Advanced Development Programs and Strategic Planning, Lockheed Martin



Peter Huessy
President, GeoStrategic Analysis

To register or more information go to www.precisionstrike.org

PROGRAM

Winter Roundtable 2007

Thursday
February 1, 2007
7:00am-4:30pm

Crystal Forum
Crystal City Marriott
1999 Jefferson Davis Hwy
Arlington, VA 22202
703-413-5500

Winter Roundtable Committee-2007

Programs Chair:
Ginny Sniegon

Programs Vice-Chair:
CAPT Pete Murphy, USN

Congressional Chair:
Dick Rumpf

Registration
Deadline
Jan. 25, 2007

- 0700 **REGISTRATION / CONTINENTAL BREAKFAST**
- 0750 **WELCOME:** *Bill Dalecky*—Chairman of the Board, Precision Strike Association
- 0800 **NEW CONGRESS—IMPLICATIONS FOR NATIONAL DEFENSE POLICY:**
Peter Huessy—President, GeoStrategic Analysis
- 0830 **SENATE PERSPECTIVE ON EMERGING THREATS & CAPABILITIES:**
Senator John McCain (R-AZ)—Ranking Republican—110th Congress, Senate Armed Services Committee (Invited)
- 0900 **HOUSE PERSPECTIVE ON INTELLIGENCE REFORM & DEFENSE:**
Representative Mac Thornberry (R-TX, 13th District)—Member, House Armed Services Committee & House Permanent Select Committee on Intelligence (Invited)
- 0930 **OSD PERSPECTIVE ON DEFENSE LEGISLATIVE PRIORITIES AND CONGRESSIONAL ENGAGEMENT STRATEGY:**
Lisa Marie Cheney—Principal Deputy Assistant Secretary of Defense (Acting), (Legislative Affairs), Office of the Secretary of Defense
- 1000 **NETWORKING REFRESHMENT BREAK**
- 1020 **JOINT STRATEGY REVIEW:** *Colonel Bill Hix, USA*—Strategy Division Chief, J-5 Strategic Plans and Policy Directorate, The Joint Staff
- 1100 **LONG RANGE STRIKE WEAPONS:** *Frank Cappuccio*—Executive Vice President and General Manager, Advanced Development Programs & Strategic Planning, Lockheed Martin
- 1145 **LUNCHEON & WILLIAM J. PERRY AWARD CEREMONY**
- Luncheon at Crystal City Marriott
 - Chairman's Remarks: *Bill Dalecky*
 - Special Remarks: *Dr. Bill Perry*—Former Secretary of Defense
 - Select Representatives Remarks
 - Presentation of William J. Perry Award to the *Small Diameter Bomb Team*
 - *Small Diameter Bomb Team* Remarks
- 1315 **CONGRESSIONAL PANEL—PRIORITIES AND ISSUES:**
Select SASC, HASC, SAC, & HAC Professional Staff Members
Moderator: *Dick Rumpf*—President, Rumpf Associates International
- 1400 **JOINT EXPERIMENTATION FOR PRECISION ENGAGEMENT:**
Rear Admiral James A. Winnefeld, Jr., USN—Director, Joint Experimentation Directorate (J9), U.S. Joint Forces Command
- 1445 **NETWORKING REFRESHMENT BREAK**
- 1500 **WEAPONS TECHNOLOGY BLUEPRINT FOR THE FUTURE—HIGH SPEED WEAPONS, DEEP PENETRATION, & SENSOR-TO-SHOOTER TECHNOLOGIES:**
John S. Wilcox—Assistant Deputy Under Secretary of Defense for Precision Engagement & Director, ACTD & JCTD Program, OSD
- 1545 **IED DEFEAT—MAKING IT HAPPEN:** *Brigadier General Daniel B. Allyn, USA*
Deputy Director for Operations, Joint Improvised Explosive Device Defeat Organization
- 1630 **CLOSING REMARKS:** *Bill Dalecky*

GENERAL INFORMATION

REGISTRATION

On-Line: Register for this conference on-line at <http://www.precisionstrike.org>. You will be directed to the NDIA registration web page. You will receive an emailed confirmation after you use the CONFIRM button on the web page. When registering online, please review your information then "submit" and "confirm" your entry. **PLEASE** make sure you check your account information for accuracy (i.e.: spelling of name, address, company name, email address, phone number, etc). **IMPORTANT:** If you do not get a registration confirmation after registering on line, the process may not have worked, please call Dawn Campbell to verify registration at **703-247-2590**.

Fax: Complete registration form with payment information and fax to **703-527-5094**

Mail: Complete registration form **with payment** to: **PSA Event #7WIN**, 2111 Wilson Blvd., Suite 400, Arlington, VA 22201-3601

Acceptable forms of payment include: Checks (with mailed registrations); Credit cards: Visa, Master Card, American Express, Diners Club but not Discover Card.

Payment must be made at time of registration. **A late fee of \$50 will be added to any registration received after January 25, 2007. Please register onsite after the deadline date. Non-member fee includes individual membership in PSA for a one-year period.**

FINAL AGENDA AND ATTENDANCE ROSTER

A final (revised) agenda and attendance roster will be distributed at the meeting. In order to appear on the roster, your completed registration and payment must be received by COB Thursday, January 25th. An updated roster will not be printed after the conference.

ATTIRE

Appropriate dress for this conference is business attire for civilian and uniform of the day for active military.

CANCELLATIONS AND REFUNDS

All cancellations and refund requests must be received in writing to Precision Strike Association, 2111 Wilson Blvd, Suite # 400, Arlington, VA 22201-3061, Fax to: **703-527-5094**, or by e-mail: info@precisionstrike.org no later than **January 25, 2007. After this date NO refunds will be given for any cancellations.** Substitutions are welcome prior to the day of the event. This refund policy applies to all attendees regardless of their method of registration or reason for cancellation.

ACCOMMODATIONS

PSA has reserved a block of rooms at the conference site hotel: Crystal City Marriott. When making reservations please reference "**Precision Strike Association**" to obtain the special rate.

Crystal City Marriott:

1999 Jefferson Davis Hwy
Arlington, VA 22202
703-413-5500 or 800-228-9290

Group Room Rate: \$189 for January 31 & February 1, 2007

Cut off date for this rate: January 10, 2007

DISABILITIES

PSA/NDIA supports the Americans with Disabilities Act of 1990. Attendees with special needs should call (703) 247-2590, before January 25, 2007.

PROCEEDINGS

The proceedings for Winter Roundtable will be available for all attendees online about 2 weeks after the event. The URL for the proceedings will be included in the conference materials to be distributed at the symposium. Copies of the CD will be available for purchase for those who cannot attend. The price for the WRT proceedings CD is \$250. Please note that not all presentations are included in the proceedings. The decision to include is left up to the presenter.

DOD APPROVAL

"The Department of Defense finds this event meets the minimum regulatory standards for attendance by DOD employees. This finding does not constitute a blanket approval or endorsement for attendance. Individual DoD Components commands or organizations are responsible for approving attendance of its DOD employees based on mission requirements and DOD regulations."

*PSA would like to
recognize and thank*

Raytheon

*for sponsoring Winter Roundtable
& the William J. Perry
Award Luncheon*

PRECISION STRIKE WINTER ROUNDTABLE

Registration Form

Crystal Forum - Crystal City Marriott, Arlington, VA

February 1, 2007

Precision Strike Association

2111 Wilson Boulevard, Suite 400
Arlington, VA 22201-3061
(703) 247-2590 • (703) 527-5094 fax
www.precisionstrike.org



- Ways to sign up: 1. Online with a credit card at www.precisionstrike.org
 2. By fax with a credit card — Fax: 703-527-5094
 3. By mail with a check or credit card

Address change needed

By completing the following, you help us understand who is attending our meetings.

PSA Master ID/Membership # _____ Social Security # _____
(if known—hint: on mailing label above your name) *(last 4 digits – optional)*

Prefix _____ First Name _____ MI _____ Last _____
(e.g. RADM, COL, Mr., Ms., Dr., etc.)

Military Affiliation _____ Nickname _____
(e.g. USMC, USA (Ret.) etc.) *(for Meeting Badges)*

Title _____

Organization _____

Street Address _____

Address *(Suite, PO Box, Mail Stop, Building, etc.)* _____

City _____ State _____ Zip _____ Country _____

Phone _____ ext. _____ Fax _____

E-Mail _____

Signature* _____ Date _____

Preferred way to receive information

Conference information Address above Alternate *(print address below)* E-mail

Subscriptions Address above Alternate *(print address below)*

Alternate Street Address _____

Alternate Address *(Suite, PO Box, Mail Stop, Building, etc.)* _____

City _____ State _____ Zip _____ Country _____

* By your signature above you consent to receive communications sent by or on behalf of NDIA, its Chapters, Divisions and affiliates (NTSA, AFEI, PSA, WID) via regular mail, e-mail, telephone, or fax. NDIA, its Chapters, Divisions and affiliates do not sell data to vendors or other companies.

Primary Occupational Classification. Circle ONE.

- A. Defense Business/Industry
- B. R&D/Laboratories
- C. Army
- D. Navy
- E. Air Force
- F. Marine Corps
- G. Coast Guard
- H. DOD/MOD Civilian
- I. Gov't Civilian (Non-DOD/MOD)
- J. Trade/Professional Assn.
- K. Educator/Academia
- L. Professional Services
- M. Non-Defense Business
- N. Other _____

Current Job/Title/Position. Circle ONE.

- A. Senior Executive
- B. Executive
- C. Manager
- D. Engineer/Scientist
- E. Professor/Instructor/Librarian
- F. Ambassador/Attaché
- G. Legislator/Legislative Aide
- H. General/Admiral
- I. Colonel/Navy Captain
- J. Lieutenant Colonel/Commander/ Major/Lieutenant Commander
- K. Captain/Lieutenant/Ensign
- L. Enlisted Military
- O. Other _____

Year of birth *(Optional)* _____

Registration Fees

	On-Time Registration	Late Registration After 1/25/07
PSA/NDIA Member*	___\$325	___\$375
Non-Member**	___\$365	___\$415
Government/Academia	___\$300	___\$350

Media and speakers: Please fax your registration form directly to Dawn Campbell at 703-527-5094.

Registration DEADLINE: January 25, 2007

REGISTRATION FEES WILL INCREASE \$50 AFTER THIS DATE

NO refunds for cancellations received after this date.

Substitutions Welcome! Please email request.

* Including NDIA and all affiliates

** Includes a free one-year PSA membership and National Defense magazine for Military and Government employees (first time members only).

HOW DID YOU RECEIVE THIS FORM?

- Brochure Mailing PSA Website NDIA Website
 Other: _____ Email

Payment Options

- Check *(payable to PSA)* Cash VISA MasterCard
 American Express Diners Club

Government PO/Training Form # _____

If paying by credit card, you may return by fax to (703) 527-5094.

Credit Card Number _____ Exp. date _____

Signature _____ Date _____

Questions?

Contact: Dawn Campbell
Office: (703) 247-2590 (fax) 703-527-5094

Mail to: Precision Strike Association (PSA)
Event #7WIN
2111 Wilson Boulevard, Suite 400
Arlington, VA 22201

For more information, please visit our website:
www.precisionstrike.org or email: info@precisionstrike.org

Affiliate: NDIA (National Defense Industrial Association)

*Congratulations
to the 2007
Recipients of the
William J. Perry
Award*

**SMALL DIAMETER
BOMB TEAM**

Dr. William J. Perry
to present award at the
Winter Roundtable
Luncheon

CALENDAR OF EVENTS

ANNUAL PROGRAMS REVIEW

April 24-25, 2007

Location: The Waterford Receptions & Meetings
Springfield, VA

SUMMER PEO FORUM

July 2007

Location: Virginia Beach, VA

PRECISION STRIKE TECHNOLOGY SYMPOSIUM

October 23-25, 2007

Location: The Johns Hopkins University
Applied Physics Laboratory, Kossiakoff Center
Laurel, MD

*This symposium will be conducted at the
SECRET/NOFORN level.*

**Sponsorship and exhibit opportunities
available for all events.**

Precision Strike Association

2111 Wilson Blvd. Suite 400
Arlington, VA 22201



Registration deadline January 25, 2007

For more information or to register online go to www.precisionstrike.org