INITIAL THOUGHTS

CONCERNS, CONCEPTS, QUESTIONS

FOR THE

HIGH SPEED STRIKE SYSTEM

GENERAL DISCUSSION

- WARFIGHTING CONCERNS
- CONTEMPLATING CONOPS: MODIFICATIONS THAT MIGHT ARISE FROM A HIGH-SPEED STRIKE WEAPON
- KEY QUESTIONS

The Italian Farmer........

WARFIGHTING CONCERNS

- PAST PERFORMANCE PREDICTORS
  - JSOW
    - COST
    - AVAILABILITY
    - TARGETING
    - PERFORMANCE

- PROGRAM IMPACT ON OTHER WEAPON PROGRAMS

WARFIGHTING CONCERNS

- COST
  - AVAILABILITY IN THE MAGAZINE
  - TRAINING OPPORTUNITIES

- TRAINING
  - AVAILABILITY
  - COMPLEXITY
  - RANGES
  - VIRTUAL SIMULATORS

WARFIGHTING CONCERNS

- COMMAND AND CONTROL
  - TARGETING
  - TARGETING
  - TARGETING

- FLEXIBILITY
  - SHIPS
  - SUBS
  - AIRCRAFT
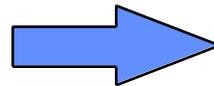 - GROUND VEHICLES

POSSIBLE CONOPS

- LOGIC TRAIN

    IF: MACH 6 IS FAST (THIS IS A GOOD THING)

    AND: OPTIMAL TARGETS ARE SHORT DWELLING, MOBILE PLATFORMS

    AND: FIXED POINT TGTS EASY (EASIER)

    AND: WON'T GENERALLY SHOOT WPN W/IN VISUAL RANGE
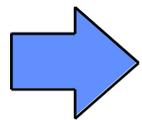
   **THEN**: THE **MOST** IMPORTANT THING WILL BE........

TARGETING

BUILDING A HIGH-SPEED S/O WEAPON W/OUT A ROBUST, RIGOROUS, AGGRESSIVE, AND COMPREHENSIVE TARGETING INFRASTRUCTURE WILL BE LIKE SPENDING ALL YOUR MONEY FOR AN EXPENSIVE CAR AND HAVING NONE LEFT FOR FUEL, REPAIRS, MAINTENANCE, AND INSURANCE - BESIDES BEING FOOLISH, THE CAR WON'T WORK.
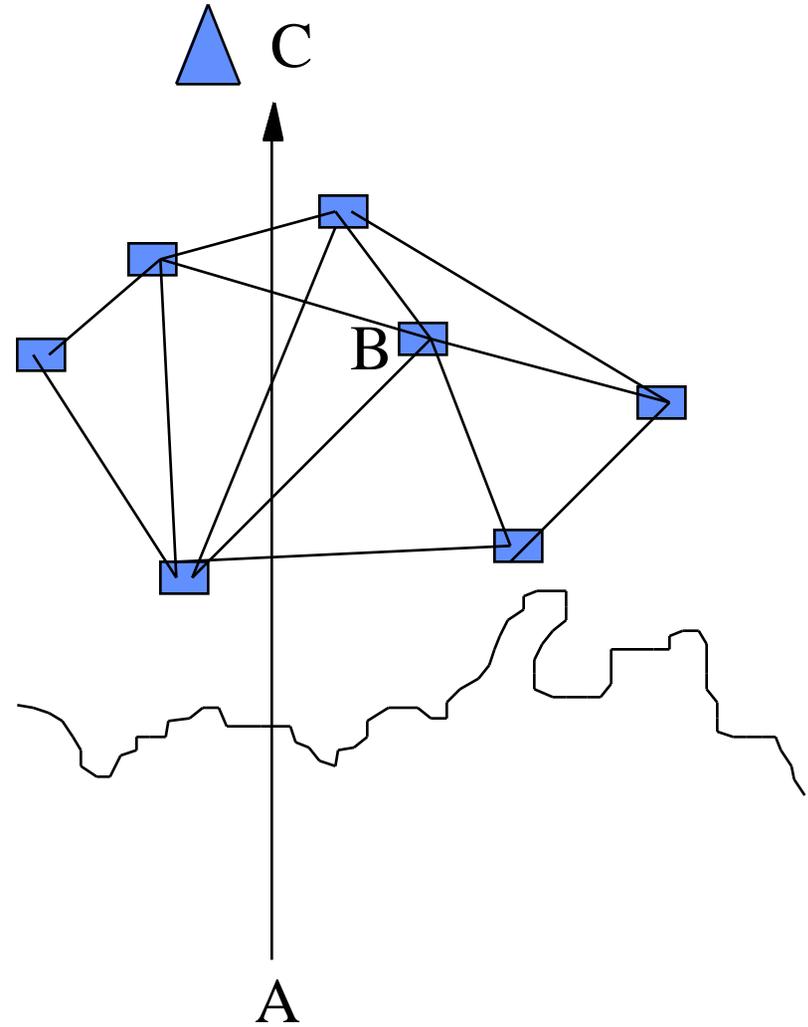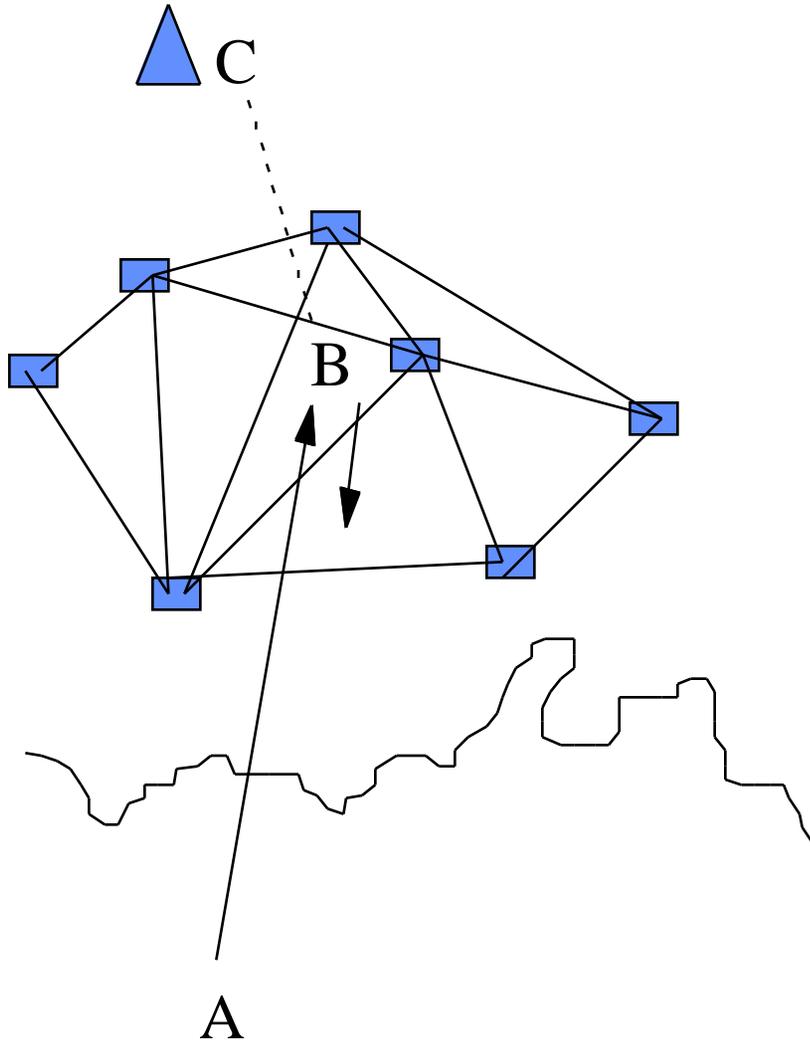
TARGETING

THE TARGETING INFRASTRUCTURE WILL BE MORE IMPORTANT THAN THE WEAPON
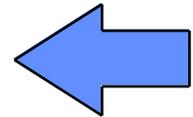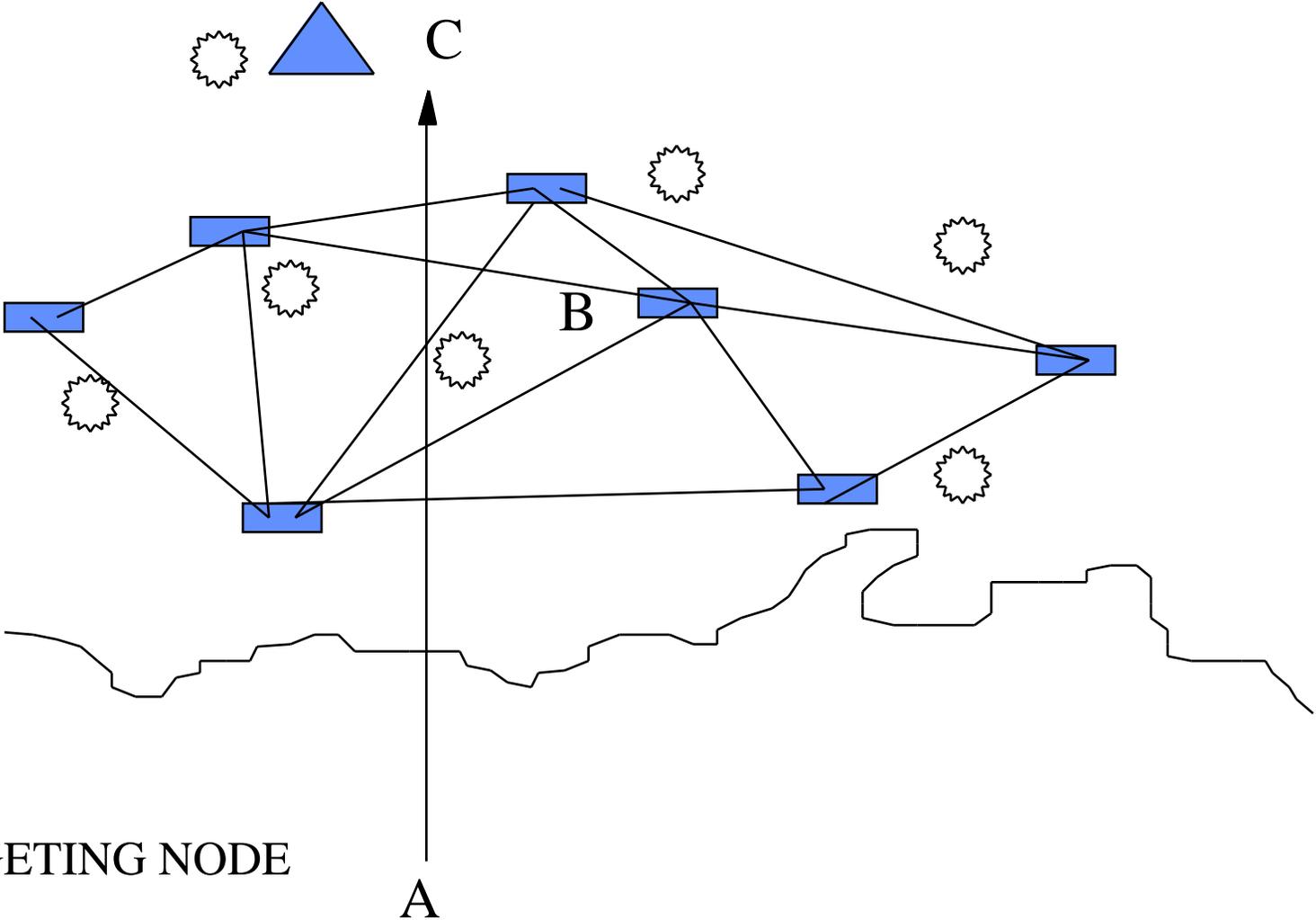
- - THIS MEANS:
  - MORE MONEY FOR TARGETING INFRASTRUCTURE RESEARCH AND DEVELOPMENT
  - SHIFT IN PRIORITIES FROM DELIVERY PLATFORMS TO C2/EW ARCHITECTURE AND SYSTEMS

ONE PICTURE

MORE CONOPS

- TARGETING NODE

TARGETING SYSTEMS SPECTRUM

God

| SATELLITE | OTHER NATIONAL SENSORS |

HIGH-ALTITUDE UAV

| MEDIUM-ALTITUDE UAV | MEDIUM-ALTITUDE UAV |

| LOW-ALTITUDE PROXIMITY TARGETERS | LOW-ALTITUDE PROXIMITY TARGETERS |

LOW-ALTITUDE PROXIMITY TARGETERS

LOW-ALTITUDE PROXIMITY TARGETERS

LOTS   GROUND-BASED TARGETERS   LOTS

Dirt

TARGETING

- IN ALL WX / ALL ENVIRONMENTS
- SURVIVABLE IN EW / IO / IW ENVIRONMENTS
- PROLIFIC ENOUGH FOR THEATER COVERAGE
- SYSTEM ROBUST ENOUGH TO SUFFER SIGNIFICANT DEGRADATION AND STILL FUNCTION ADEQUATELY

MORE TARGETING

- DECENTRALIZED, FLATTENED ARCHITECTURE - NO HIERARCHAL, CENTRALIZED STRUCTURES
- EMBRACE DUMB POWER

DELIVERY PLATFORMS

- "TRUCKS"
  - LOTS OF WEAPONS
  - COMPUTATIONAL / CONNECTIVITY CAPABILITIES
  - ORGANIC TARGETING CAPABILITY

- "TACTICAL"...I.E. "POINTY-NOSE" PLATFORMS MAY NOT BE THE BEST PLATFORM TO INTEGRATE WITH A HIGH-SPEED WEAPON.

COUNTERS TO A HIGH-SPEED WEAPON SYSTEM

- KILL THE TARGETERS
- OBSCURE THE TARGET
- SHORTEN THE DWELL (EXPOSURE) TIME
- BREAK THE TARGETER'S SOLUTIONS
- MAKE TARGETS UBIQUITOUS
- USE REACTIVE ARMOR ON POTENTIAL TARGETS

SOME QUESTIONS

- WHAT WILL IT DO WITH ITS ENERGY?
- WHAT WILL IT DO IN A BODY OF WATER?
- WILL IT LEAVE A "SOUND TRAIL"?
- WHAT TYPE OF MODIFICATIONS OR EMISSIONS WILL IT CAUSE OR AFFECT - PLASMA, EMP, HEAT, ETC.
- WHAT WOULD DEFLECT SOMETHING MOVING AT MACH 6?
- CAN WE ALTER ITS PROFILE?

MORE QUESTIONS

- WHAT WILL IT DO TO CROPS? TO THE "CHEX" CROPS? TO POPPIES?
- WHAT WILL A MACH 6 SHOCK WAVE DO TO:
  - PEOPLE?
  - STRUCTURAL INTEGRITY OF BUILDINGS?
  - WINDOWS?
  - COMPUTER SCREENS AFTER IT BREAKS THE WINDOWS?
- <u>WHY MACH 6</u>? CAN WE PUT (SLOWER) WEAPONS CLOSER?

ONE LAST QUESTION

- WHAT WOULD HAPPEN TO THE COST IF YOU RAN A DESIGN COMPETITION ON THE INTERNET - FOR EITHER THE MISSILE (LEAST EXPENSIVE) OR THE TARGETING INFRASTRUCTURE (MOST EXPENSIVE)?