

U.S. National Missile Defense (NMD) Program

- U.S. is developing a limited NMD system
- No deployment decision has been made
 - Congress passed bills favoring deployment, but
 - Administration: decision next summer 2000 (?)
- Decision will be based on:
 - assessment of missile threat to the U.S.;
 - test results (first test 8/12), expected effectiveness;
 - cost (estimate: \$18–28 billion, half O&M);
 - discussions with Russia on modifying ABM Treaty.

NMD Architecture

Ground-Based Interceptor (GBI)

- 20–100 GBIs at Grand Forks (or Alaska)
- 3-stage missile armed with EKV

Ground-Based Radar (GBR)

- phased-array, X-band (10 GHz) radar

Early Warning Satellites

- DSP for launch, trajectory data
- SBIRS-high beginning in 2004

For over-the-horizon intercept:

- upgrade Pave Paws radars in CA, MA; BMEWS in Alaska, Greenland, Fylingdales
- new FBXBRs at BMEWS sites
- SBIRS-low (beginning after 2006)

Battle Management (BM/C³)

- In-flight Interceptor Comm. System (IFICS)
- Battle Management Center, Cheyenne Mt.

| | C1 | C2 | C3 |
|---------------------|----------------------------------|--|------------------------------|
| Intended capability | small (5 RV) rogue attack, no CM | small rogue or accidental attack, with CM | larger attack with better CM |
| GBIs | 20 one site (GF or AK) | 100 | >100 multiple sites |
| Other sensors | UEWR | GBR at GBI site XBR → SBIRS-low DSP → SBIRS-high | |
| IOC | 2003–05 | 2006? | >2006 |
| Cost (billion) | \$18–22 | \$28 | ? |

Countermeasures

Deployment decision must consider countermeasures within reach of country with ICBM capability:

- CB submunitions released after boost;
- chaff, wire decoys (if no SBIRS-low);
- large enclosing balloon (aluminized mylar, super-insulation);
- multiple, widely-spaced balloons;
- SRBMs launched from ships;
- Alternate modes of delivery (cruise missiles, aircraft, ships, mini-sub, special operations forces, etc.)

Additional CM available to Russia, such as attacking defense, salvage fusing, depressed trajectories, etc.

Conclusions

Planned U.S. NMD system won't be effective even if works as planned, should not be built.

System would not “pose a realistic threat to the strategic nuclear force of the other side” at START II/III levels.

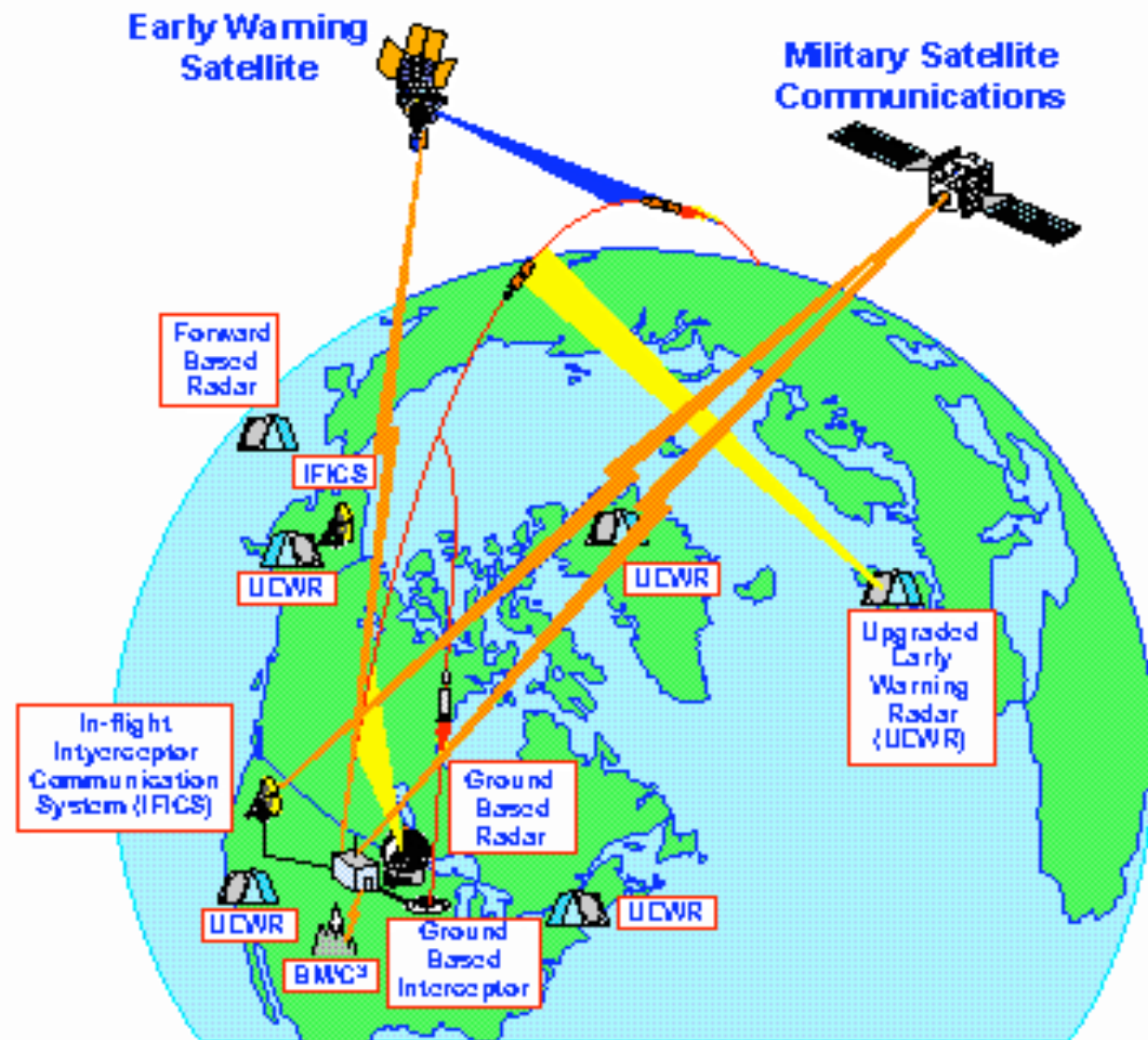
Concerns about “providing a base for such a defense,” obstructing further reductions.

Concerns can be ameliorated by negotiating:

- limit on GBIs produced, deployed;
- limit on number, location of GBI sites;
- limits on sensor deployment, integration;
- limits on TMD basing, integration; and
- information sharing (e.g., test data).



NMD 3+3 ARCHITECTURE



- **Limited NMD System Deployed In 3 Years After Decision (IOC 2003)**
- **Development Is Treaty Compliant**
- **Deployment May Be Treaty Compliant Or May Require Treaty Modification**
- **Architecture**
 - Single Site
 - 20 Ground Based Interceptors
 - 1 Ground Based Radar
 - Upgraded Early Warning Radar
 - Adjunct Forward Based Radar
 - BM/C³ (Includes IFICS)



THE NMD SYSTEM ELEMENTS

