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# RESPONSE OPTIONS TO ATTACKS ON SPACE ASSETS

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# 2006 National Space Policy

- The United States considers space systems to have the right of passage through and operation in space without interference. Consistent with this principle, the United States will view purposeful interference with its space systems as an infringement on its rights.

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# 2006 National Space Policy (cont)

- The United States considers space capabilities – including the ground and space segments supporting this – vital to its national interests. Consistent with this policy, the United States will:
  - Preserve its rights, capabilities, and freedom of action in space;
  - Dissuade or deter others from either impeding those rights or developing capabilities intended to do so;
  - Take those actions necessary to protect its space capabilities;
  - Respond to interference, and
  - Deny, if necessary, adversaries the use of space capabilities hostile to US. national interests.

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# RESPONSE REQUIRES A DECISION-TREE APPROACH

- ARE WE 100% CERTAIN IT WAS AN ATTACK?
  - Many failures are difficult to diagnose
  - Could be design flaw, space weather, other malfunction
- WHAT KIND OF ATTACK WAS IT?
  - Kinetic (ground-launch, space mine, deliberate collision)
  - Laser
  - Electromagnetic interference
  - Cyber
- WHAT WAS ATTACKED?
  - Military satellite
  - Commercial satellite
  - Civil satellite
  - Dual use satellite
  - Single or multiple satellites
  - Ground-based infrastructure

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# RESPONSE REQUIRES A DECISION-TREE APPROACH (2)

- WAS DAMAGE PERMANENT OR TEMPORARY?
- DO WE KNOW WHO DID IT?
  - How do we know?
  - Are we 100% certain? Absolutely 100%?
  - If so, do they have space assets of their own to protect?
- WHY DID THEY DO IT?
  - To test their capabilities?
  - To test our response?
  - As prelude to major military action?
  - What do they expect our response to be?

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# RESPONSE REQUIRES A DECISION-TREE APPROACH (2)

- RANGE OF RESPONSE OPTIONS AVAILABLE BASED ON THE ANSWERS TO THOSE QUESTIONS, including:
  - Diplomatic (UN condemnation)
  - Economic sanctions
  - Non-kinetic attack on their space assets (we've made it clear we do not want kinetic attacks that ruin the neighborhood)
  - Military attack on ground infrastructure