United Nations Committee on the Peaceful Uses of Outer Space, 66th Session, June 6, 2023

Technical Presentation
“TCTB: Facilitating Cooperative Remediation of Massive Derelicts”

Chuck Dickey (United States of America)
Valentin Uvarov (Russian Federation)
Guoyu Wang (China)
Orbital Debris - Our Shared Problem

• Humanity’s future in space is threatened by man-made debris in outer space

• Three sizes
  • Small: Hundreds of millions of objects
  • Medium: Millions of objects
  • Large: 36,000+ objects larger than a grapefruit

• Most dangerous: “Massive Derelicts” in Upper-LEO
  • 2000+ objects, 1-10 tons per object, un-maneuverable
  • Owned mostly by the Russian Federation, the United States of America, and China
  • France, Japan, India and the European Space Agency own a few
  • Objects are tightly clustered in orbital shells and travel at high speeds
  • Forecast collisions (or explosions) are imminent and will be devastating
The Case for International Cooperation

• Purely national programs, although beneficial and necessary, carry baggage that will inhibit timely, efficient and meaningful risk reduction
  • Domestic preferences
  • National security constraints
  • Ineffective to reduce overall statistical risk

• Opportunity versus fault

• Share the burden (enables economic efficiency)
Necessary Building Blocks for Cooperation

• A path to cooperative remediation of **Massive Derelicts** must include:
  • Agreement on a framework for cooperation
  • Principles of Cooperation
  • Planning Process and Timeline
  • Performing the Work – remediation mission business model
Cooperative Structure

• Alternative Frameworks
  • UN-based arrangement (multilateral)
  • Government to government agreements (bilateral)
  • Public - Intergovernmental organization (IGO)
  • Private-Public - Nongovernmental organization (NGO)

• Private-Public International NGO (INGO): The surest path to timely cooperative remediation
  • Non-political (neutral)
  • Low cost, streamlined, transparent
  • Enables economies of scale (efficient)
  • No changes to international law required
Necessary Principles of Cooperation

- Cost, risk and information sharing during planning and remediation missions
- Legal consent
- Object selection methodology
- Procurement plan
- Dispute resolution mechanisms
- Protection of sovereign prerogatives
Necessary Planning Process and Timeline

• Phase 1 – Negotiation of structural agreements including Principles of Cooperation (one year or more)

• Phase 2 – Identifying and selecting initial objects for remediation consideration (one year or less)

• Phase 3 – Development of contracting process, documents seeking proposals for remediation, evaluation of proposals, negotiation and award of mission contracts (one year or more)

• Phase 4 – Performance of initial remediation mission (one year or more)

• Phase 5 – Follow-on missions sufficient to provide meaningful risk reduction (several years)
Performing the Work – Remediation Model

- TCTB’s public-private INGO model facilitates cooperation among governments through its single-issue focus
- TCTB’s neutral, multi-jurisdictional structure ensures confidentiality, transparency and trust
- TCTB’s model enables efficiency
- TCTB’s path is streamlined to meet the urgent need
- Examples of similar NGOs include the Red Cross (shared objective of humanitarian aid), and international mediation for cross-border disputes (shared respect for rule of law)
- More information about TCTB’s novel path to remediation can be found at threecountrytrustedbroker.com
Chuck Dickey  Valentin Uvarov  Guoyu Wang

jcdickey@threecountrytrustedbroker.com
uvarov.valent@yandex.ru
wangguoyu1979@126.com
TCTB Advantages and Limitations

• TCTB Is:
  • The lowest cost alternative
  • Neutral and transparent
  • Fully compliant with existing local and international law
  • Overcomes all legal, political and economic hurdles
  • Ready to begin planning now!

• TCTB Is Not:
  • An obligation to remediate
  • A substitute for diplomacy, or political decision-making
  • A solution for all types of debris – TCTB’s Proposal is limited to Massive Derelicts
Questions?

threecountrytrustedbroker.com

Chuck Dickey (jcdickey@threecountrytrustedbroker.com)
Valentin Uvarov (uvarov.valent@yandex.ru)
Guoyu Wang (wangguoyu1979@126.com)