

Guiding Principles for Commercial Rendezvous and Proximity Operations (RPO) and On-Orbit Servicing (OOS)

CONFERS Mission

CONFERS is an independent, self-sustaining forum created to advocate and promote the satellite servicing industry and encourage responsible commercial rendezvous and proximity operations (RPO) and on-orbit servicing (OOS). CONFERS collaborates on research, development, and publication of voluntary consensus principles, best practices, and technical and safety standards. CONFERS also engages with national governments and international bodies on policy and oversight of satellite servicing activities.

To fulfill its mission, CONFERS will recruit a broad array of members from satellite equipment manufacturers, satellite operators, service providers, developers of RPO simulation, planning and safety tools, and insurers; interact with standards development organizations; and engage other stakeholders from industry, academia, and governments. The process is fully collaborative and includes dedicated outreach activities to the global commercial satellite and space community.

Guiding Principles

We, the members of the Consortium, believe that the following set of guiding principles will help establish responsible norms of behavior for RPO and OOS that our members will endeavor to achieve and to promote throughout the global industry.

- I. **Consensual Operations:** RPO for on-orbit services with artificial space objects will be conducted via commercial agreements between consenting parties using generally accepted business and contractual practices.
- II. **Compliance with Relevant Laws and Regulations:** The collaborating parties of both the client space object and servicer spacecraft, as well as any third parties engaged in the activity (e.g., separate contract with an observation spacecraft), will comply with all appropriate licensing and regulations, of all cognizant national jurisdictions of the involved parties. Moreover, the collaborating parties will conduct their operations in full compliance with the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (the “Outer Space Treaty” or “OST”).
- III. **Responsible Operations:** In order for the industry to flourish, commercial servicing operators will ensure their activities are planned and conducted in a responsible manner to promote safety and mission success.
 - a. The servicing spacecraft will be designed, manufactured, and operated (including applicable testing, validation, and mission planning) using generally accepted engineering practices appropriate to the proposed activity.
 - b. Reasonable provisions will be made in mission planning for mitigating the adverse consequences of close approaches and avoiding collision(s) and generating space debris.

Consortium for Execution of Rendezvous and Servicing Operations

- c. During a servicing operation, the servicing and client organizations will establish and maintain effective communications in support of safe and successful operations.
- d. A servicing operation will be insured to reasonably cover the risk of the activity to third parties.
- e. Best practices and standards for commercial servicing will be based upon actual, accumulated operational experience.

IV. **Transparent Operations:** Parties conducting commercial servicing operations will work within the principle of transparency to promote safety and trust.

- a. In keeping with Article XI of the OST, the parties conducting the servicing operation will notify the relevant State(s) of the general nature, conduct, locations, and results of servicing operations.
- b. In keeping with Article IX and Article XI of the OST, the parties conducting the servicing operation will ensure sufficient communication and coordination with entities that could reasonably be affected by the servicing operation to support safety and avoid harmful interference.
- c. The parties conducting the servicing operation will develop and implement a protocol that provides timely public notification of anomalies or mishaps that could have an adverse impact on other entities or the space environment.
- d. Parties conducting servicing operations will look for opportunities to share lessons learned from operational successes and anomalies while protecting intellectual property and competition-sensitive information, and complying with export control regulations.

Definition of Terms

Client	An entity procuring the service
Client Space Object	The space object being serviced by the servicer spacecraft
On-Orbit Servicing	On-orbit activities by a servicer spacecraft which requires rendezvous and/or proximity
Proximity Operations	Series of orbital maneuvers executed to place and maintain a spacecraft in the vicinity of another space object on a relative planned path for a specific time duration to accomplish mission objectives
Rendezvous	Process wherein two space objects (artificial or natural body) are intentionally brought close together through a series of orbital maneuvers at a planned time and place
Servicer	An entity that provides on-orbit servicing operations
Servicer Spacecraft	Spacecraft performing the servicing operation
Servicing Operation(s)	Action provided by servicer spacecraft to the client space object, including but not limited to: inspection, capture, docking, berthing, relocation, refueling, life extension, combined stack control, repair, upgrade, assembly, undock, unberth, release, and departure.