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CONFERS Lexicon

The purpose of the CONFERS Lexicon Working Group (CLWG) is to discuss and refine the terms and language used by CONFERS in the discussion of rendezvous and proximity operations (RPO) and on-orbit servicing (OOS) missions. The CLWG meets monthly to discuss updates and additions to the CONFERS lexicon. Attachment A contains the list of terms under consideration in the CLWG. The CLWG aims to provide consistency within CONFERS and other international organizations of RPO OOS terminology. Terms in the lexicon generally have dictionary definitions, but in addition have more specialized usage in the context of on-orbit servicing and appear in this lexicon to clarify that specialized usage. As such, the CLWG presents the defined OOS / RPO terminology for CONFERS below:

Term	CONFERS Lexicon Definition
Abort	An action which stops an on-board process and, if necessary, initiates an alternate process to put the servicer spacecraft and client space object in a safe and collision-free state.
Approach Volume	An agreed-upon three-dimensional space centered on the passive vehicle (Client Space Object or Servicing Vehicle) in which unintentional contact is possible within the passive anomaly recovery time and ranging and active relative orbit control is needed for safety. Synonym for Proximity Operations Control Volume
Berthing (verb)	The act of effecting a rigid connection between a Servicing Spacecraft and a Client Space Object with the aid of a robotic arm.
Capture (verb)	The act of establishing a physical connection between two space objects.



Client	An entity/organization procuring the service.
Client Space Object	The space object being serviced by the servicer spacecraft.
Collision Avoidance Maneuver	An operation executed by a space object relative to another space object to avoid contact for a specified amount of time.
Combined Stack	A combined client space object and servicer spacecraft after Docking or Berthing.
Combined Stack Attitude Control	An on-orbit service in which the servicer spacecraft maintains attitude stability for the combined stack.
Docked Life Extension	On-orbit services enabling increased duration of client operations as a Combined Stack.
Docking (verb)	When a servicing spacecraft executes a controlled trajectory to effect a rigid connection with a Client Space Object.
Inspection	Sensing of a Client Space Object by a servicer spacecraft.
Keep-Out Volume	A minimum 3-D volume of space around the client space object defined based on navigational uncertainty of each Rendezvous, Proximity Operations and Docking phase or any additional operational volume into which a servicer spacecraft may not enter without approval.
On-Orbit Assembly	On-orbit activities to physically attach objects to each other.
On-Orbit Servicing (OOS)	Activities by a servicer spacecraft or servicing agent on a client space object which require rendezvous and/or proximity operations.



Prepared	Configured with navigation fiducials and/or grapple/capture interfaces and/or servicing interfaces.
Proximity Operations	Orbital maneuvers performed between a servicer spacecraft and a client space object on a relative planned path within a pre-defined Approach Volume.
Proximity Operations Control Volume	Synonym for Approach Volume.
Relocation	Changing the orbit of the Client Space Object by a Servicing Vehicle.
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/organization that provides On-Orbit Servicing operations.
Servicer Spacecraft	Spacecraft performing the servicing action.
Servicing Operations	Action provided by Servicer Spacecraft to the Client Space Object, including but not limited to: inspection, capture, docking, berthing, relocation, refueling, life extension, removal, combined stack control, repair, upgrade, assembly, manufacturing, un-docking, un-berthing, release.



Attachment A: Terms under consideration

68 terms are under consideration by the CLWG for inclusion in the CONFERS Lexicon. They are:

Abort-Passive
Attitude Control Services
Augment
Automated
Autonomous
Co-Elliptical
Controlled
Cooperative Client
Co-Orbital
Credible Anomaly
Credible Failure
Departure
Drifting Natural Motion Circumnavigation
Dynamic Station Keeping (DSK)
Fail Operation
Fail Safe
Fiducial
Forced Motion Circumnavigation (FMC)
Free Drift
Foreign Object Debris (FOD)
Grapple
Grapple Feature
Grappling (verb)
Hold
Joint Mission Operations
Legacy Spacecraft
Mating Operations
Natural Motion Circumnavigation (NMC)
Navigation Data - Absolute
Navigation Data-Relative
Nominal Mission
Non-Contact Support
On-orbit Upgrade
Orbit Maintenance (Assistance)
Passively Safe
Passive Anomaly Recovery Time
Phases-Launch and Insertion
Phases-Rendezvous
Phases-Transfer
Radial/In-Track/Cross-Track Coordinate Frame
Refill
Refuel



Refueling Value
Relative Motion Coordinate Frame
Release
Removal
Rendezvous-Close Approach
Rendezvous-Far
Repair
Replace
Resident Space Object (RSO)
Resume
Retreat
Safe Orbit
Safety Zone
Secondary State Determination
Separation
Servicing Agent
Servicing Operation Termination (SOT)
Servicing Operations Initiation
Situational Awareness Data
Spacecraft Fiducial
Synchronized Time
Teleoperation
Towing
Un-Prepared
Upgrade
Waypoint