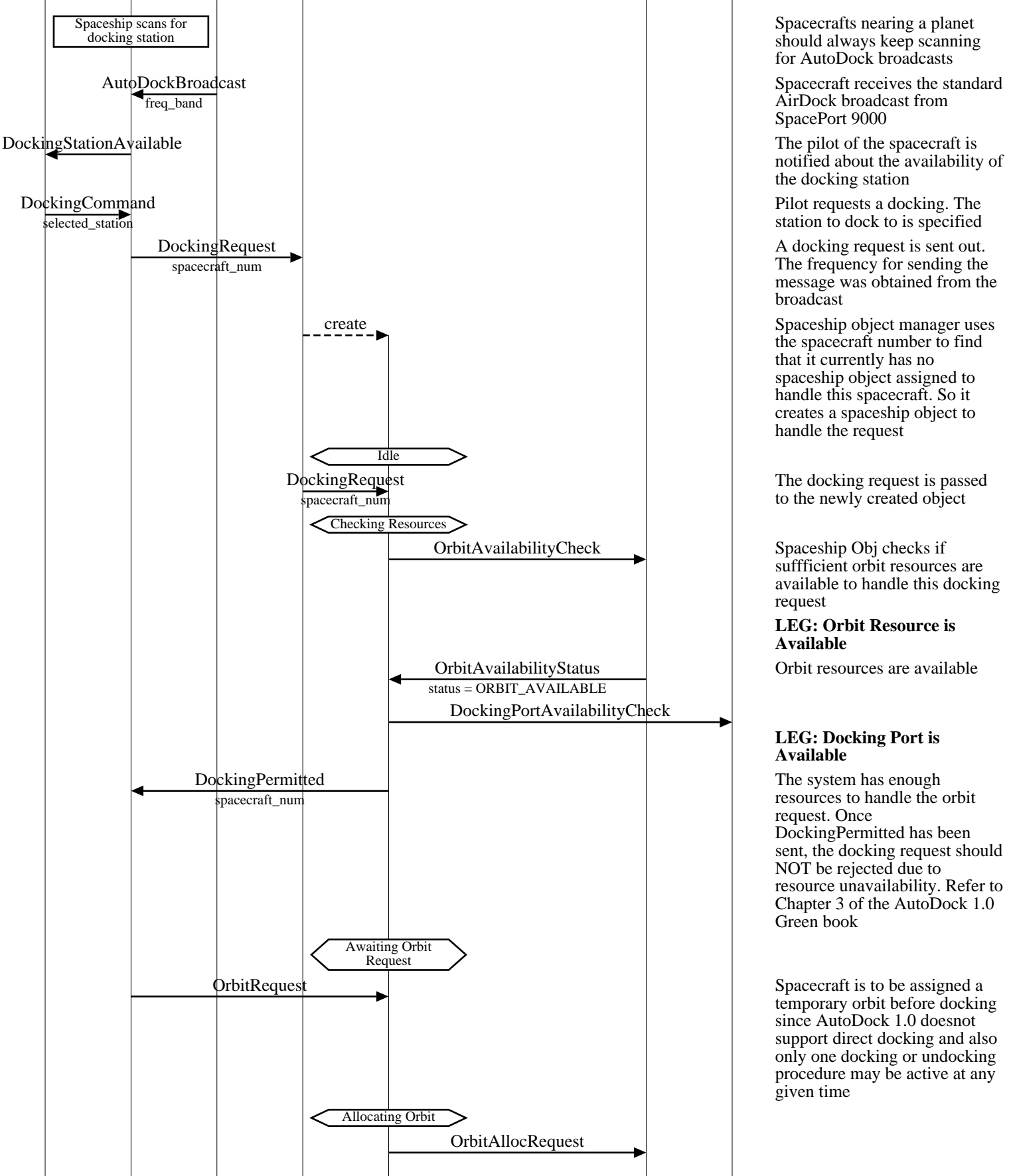


SpacePort Docking and Undocking Procedures (Successful Spacecraft Docking and Undocking)									
space		space port							EventHelix.com/EventStudio 2.0
spacecraft		central proc							
pilot	auto dock	broadcast mgr	spaceship obj mgr	spaceship obj	docking	undocking	orbit allocator	docking allocator	05-Jul-03 16:41 (Page 1)

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Spacecrafts nearing a planet should always keep scanning for AutoDock broadcasts
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The docking request is passed to the newly created object

Spaceship Obj checks if sufficient orbit resources are available to handle this docking request

LEG: Orbit Resource is Available

Orbit resources are available

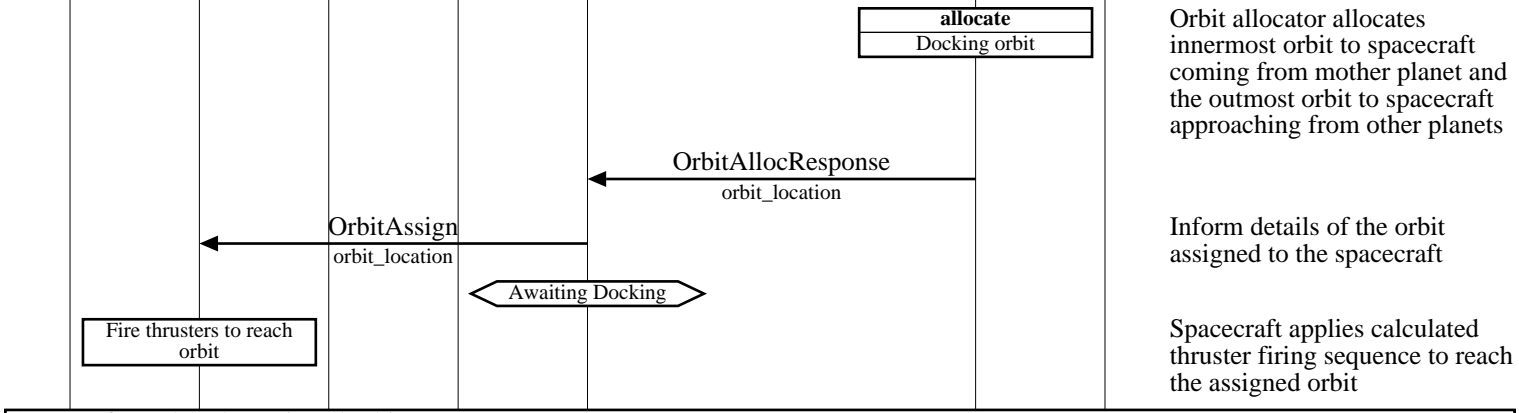
LEG: Docking Port is Available

The system has enough resources to handle the orbit request. Once DockingPermitted has been sent, the docking request should NOT be rejected due to resource unavailability. Refer to Chapter 3 of the AutoDock 1.0 Green book

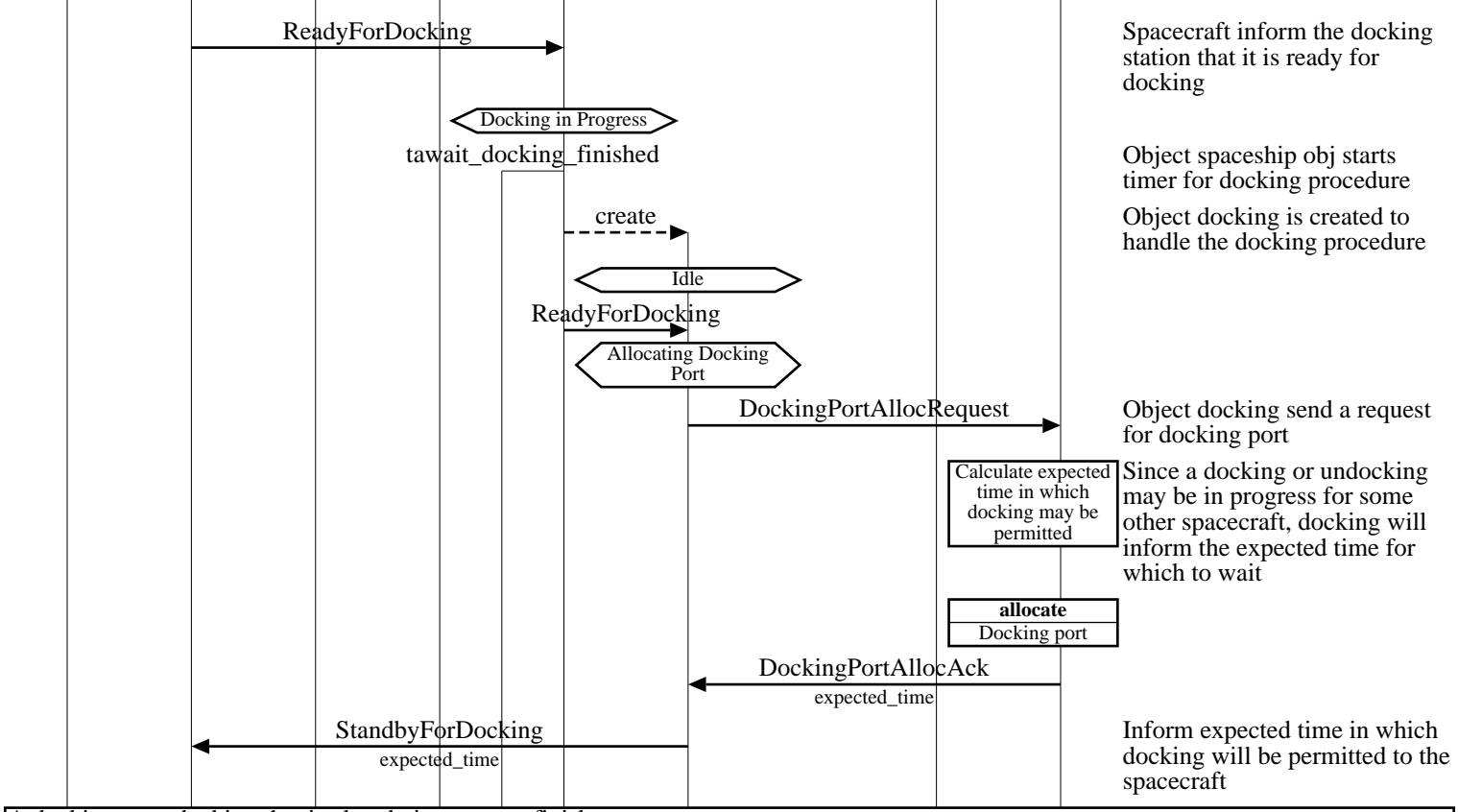
Spacecraft is to be assigned a temporary orbit before docking since AutoDock 1.0 doesnot support direct docking and also only one docking or undocking procedure may be active at any given time

SpacePort Docking and Undocking Procedures (Successful Spacecraft Docking and Undocking)

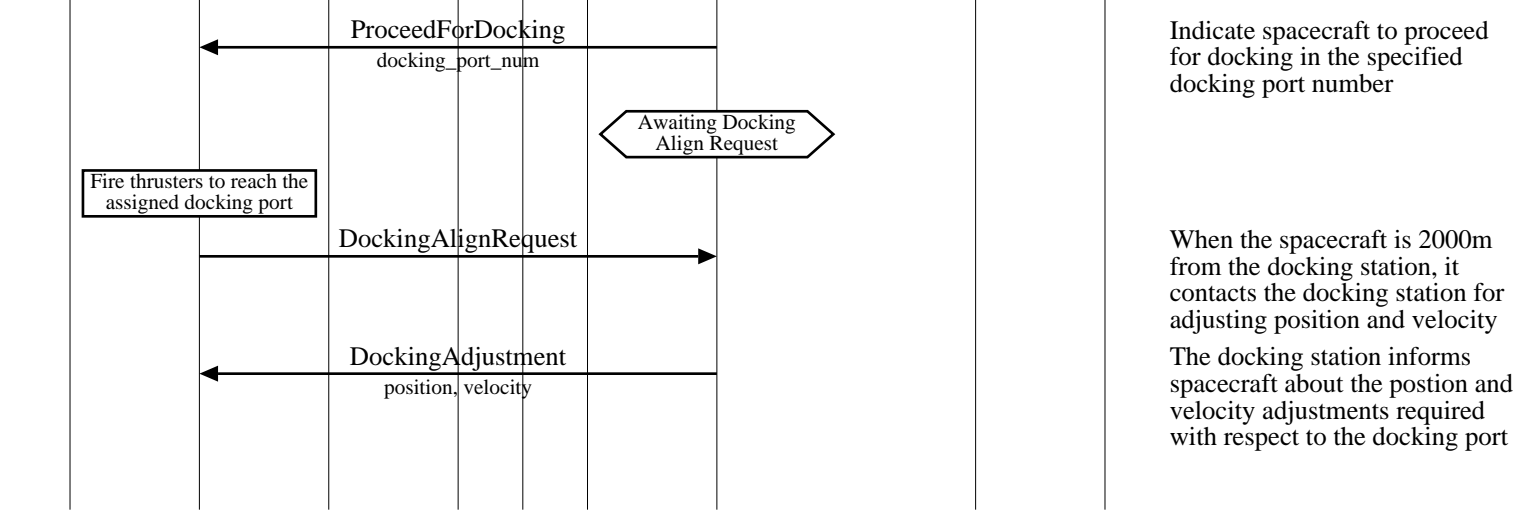
space		space port							EventHelix.com/EventStudio 2.0	
spacecraft		central proc								
pilot	auto dock	broadcast mgr	spaceship obj mgr	spaceship obj	docking	undocking	orbit allocator	docking allocator	05-Jul-03 16:41 (Page 2)	



Spacecraft reaches the assigned orbit

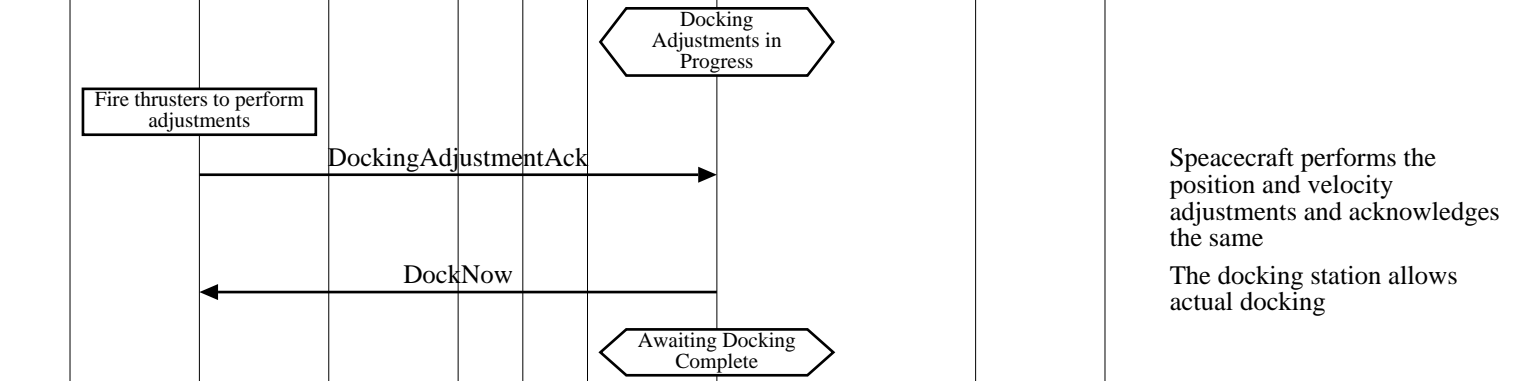


A docking or undocking that is already in progress finishes



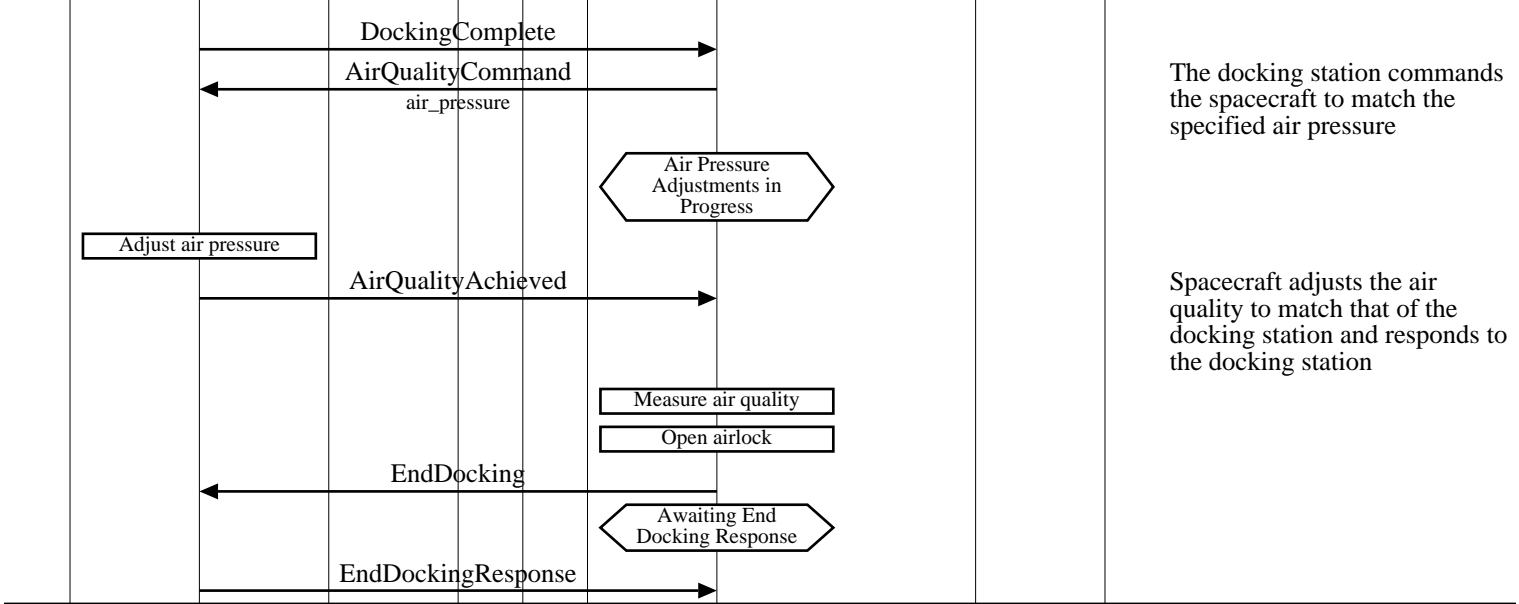
SpacePort Docking and Undocking Procedures (Successful Spacecraft Docking and Undocking)

space		space port							EventHelix.com/EventStudio 2.0
spacecraft		central proc							
pilot	auto dock	broadcast mgr	spaceship obj mgr	spaceship obj	docking	undocking	orbit allocator	docking allocator	05-Jul-03 16:41 (Page 3)



Spacecraft performs the position and velocity adjustments and acknowledges the same
The docking station allows actual docking

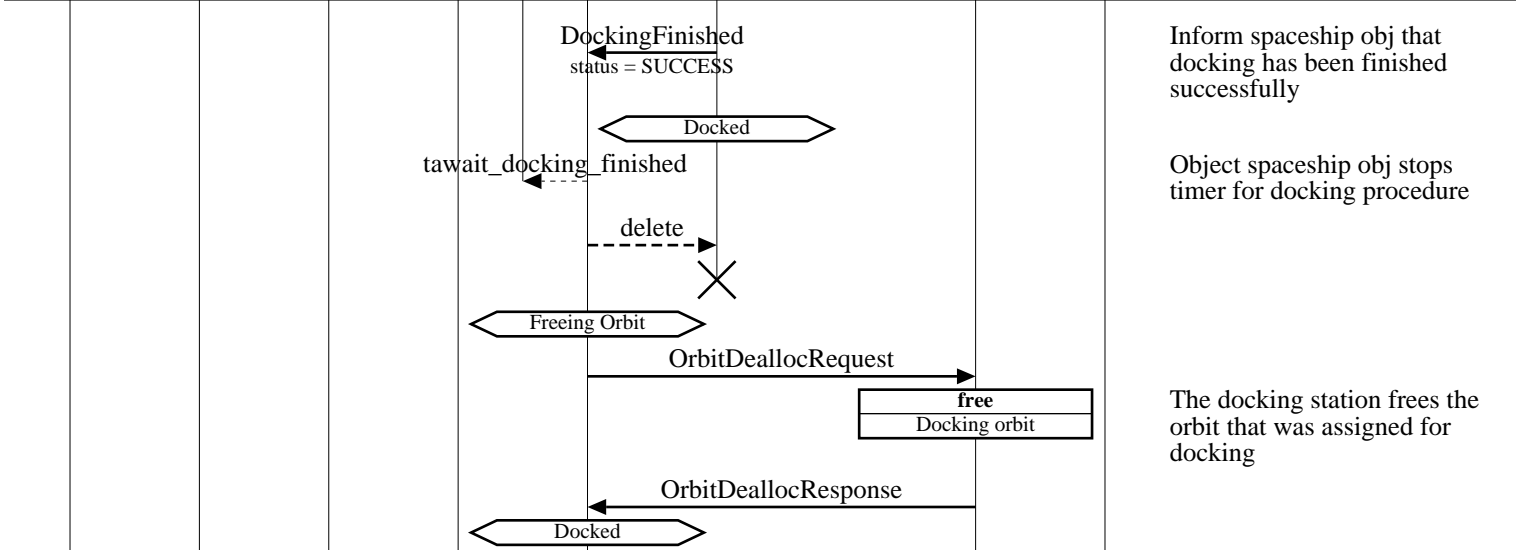
Spacecraft reaches the assigned port and attains the same orbit and velocity as the docking station



The docking station commands the spacecraft to match the specified air pressure

Spacecraft adjusts the air quality to match that of the docking station and responds to the docking station

Spacecraft docking has been completed

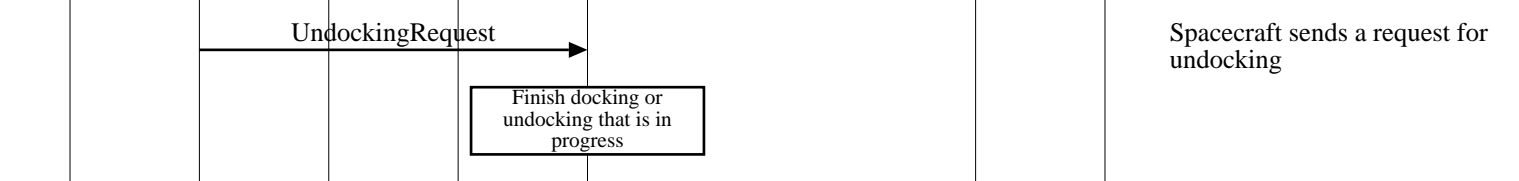


Inform spaceship obj that docking has been finished successfully

Object spaceship obj stops timer for docking procedure

The docking station frees the orbit that was assigned for docking

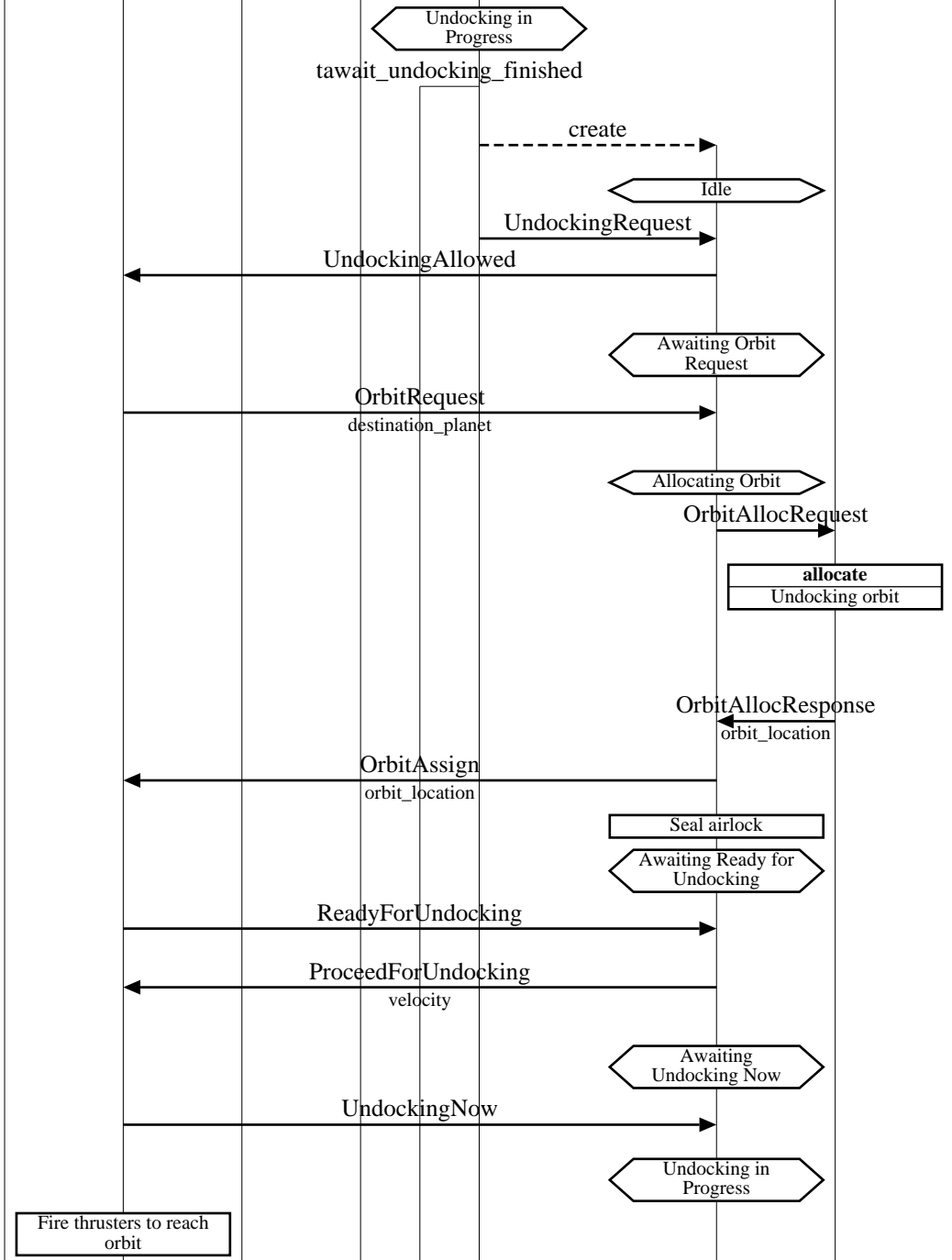
Spacecraft wishes to depart from the docking station



Spacecraft sends a request for undocking

SpacePort Docking and Undocking Procedures (Successful Spacecraft Docking and Undocking)

space		space port							EventHelix.com/EventStudio 2.0
spacecraft		central proc							
pilot	auto dock	broadcast mgr	spaceship obj mgr	spaceship obj	docking	undocking	orbit allocator	docking allocator	05-Jul-03 16:41 (Page 4)



Object spaceship_obj starts timer for undocking procedure
Object undocking is created to handle the undocking procedure

Spacecraft is informed when the undocking procedure can proceed

Spacecraft requests for a temporary orbit. The destination planet is specified

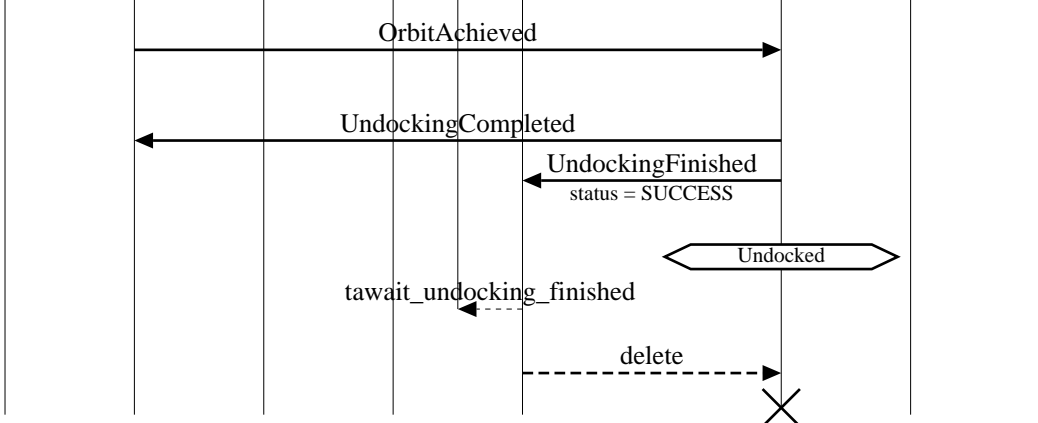
Request orbit allocator to assign a tempory orbit
Orbit allocator allocates innermost orbit to spacecraft going to mother planet and the outmost orbit to spacecraft approaching to other planets

Inform details of the assigned orbit to spacecraft

Spacecraft informs that it is ready to leave
The docking station indicates to proceed for undocking with the recommended velocity

Spacecraft leaves for the assigned orbit

Spacecraft reaches the assigned orbit



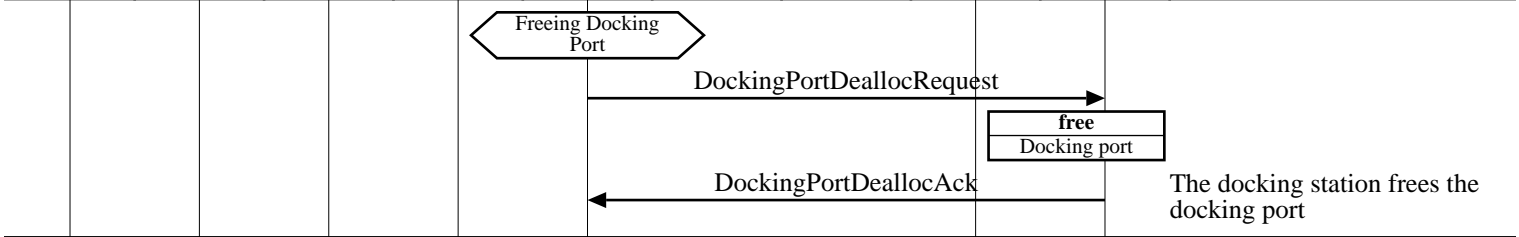
Spacecraft informs the docking station that the assigned orbit has been reached

Inform spaceship_obj that undocking has finished successfully

Object spaceship_obj stops timer for undocking procedure

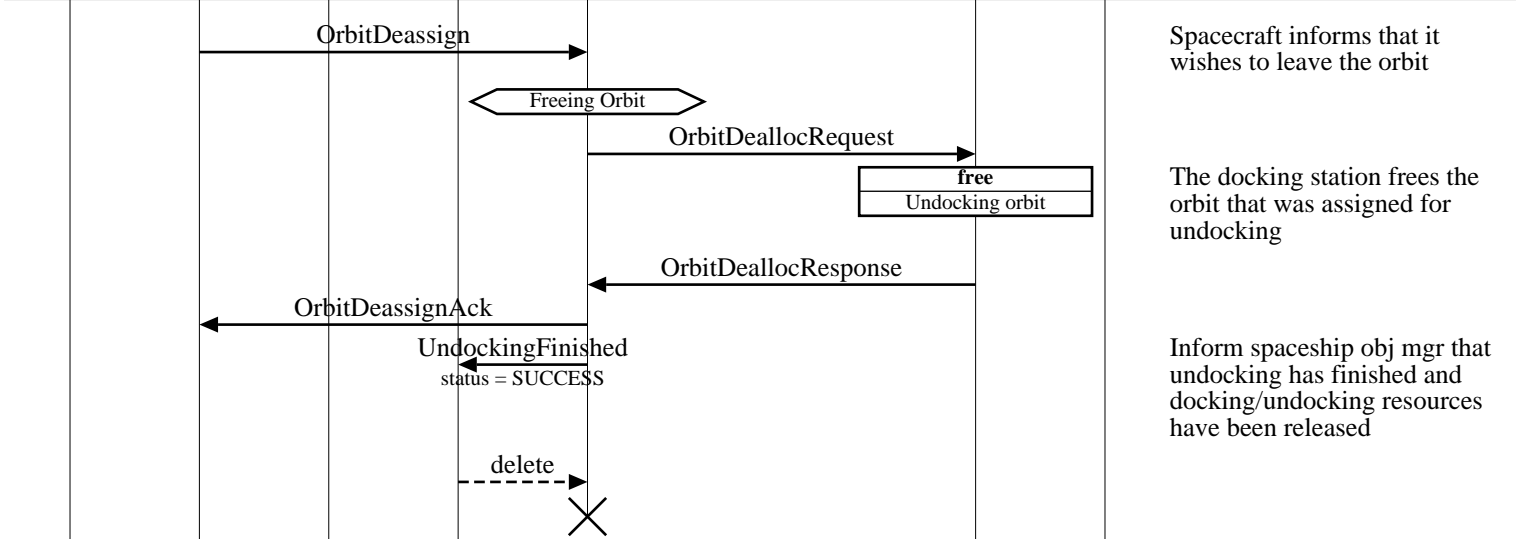
SpacePort Docking and Undocking Procedures (Successful Spacecraft Docking and Undocking)

space		space port							EventHelix.com/EventStudio 2.0
spacecraft		central proc							
pilot	auto dock	broadcast mgr	spaceship obj mgr	spaceship obj	docking	undocking	orbit allocator	docking allocator	05-Jul-03 16:41 (Page 5)



The docking station frees the docking port

The docking station schedules next docking or undocking request

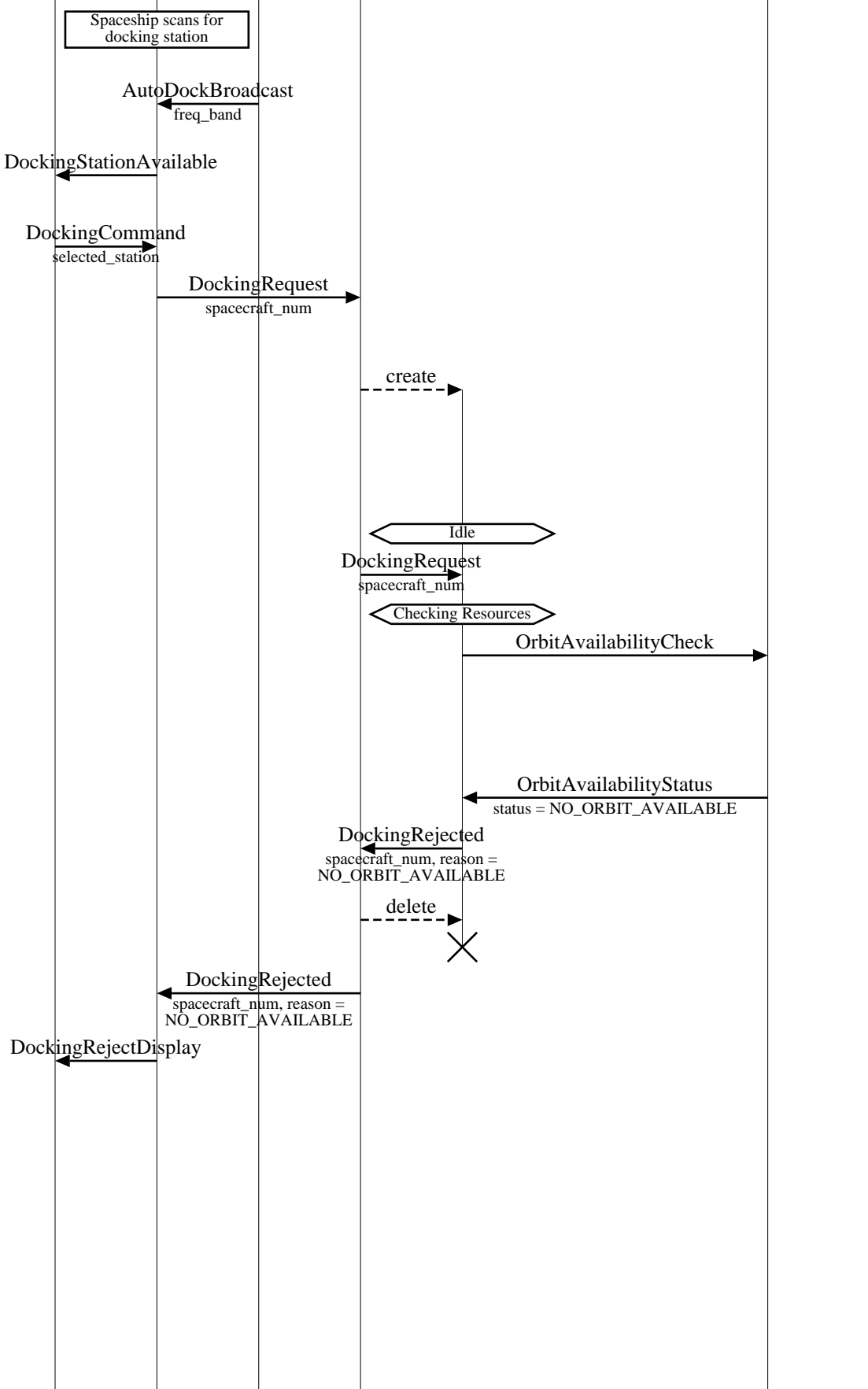


Spacecraft informs that it wishes to leave the orbit

The docking station frees the orbit that was assigned for undocking

Inform spaceship obj mgr that undocking has finished and docking/undocking resources have been released

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The docking request is passed to the newly created object

Spaceship Obj checks if sufficient orbit resources are available to handle this docking request

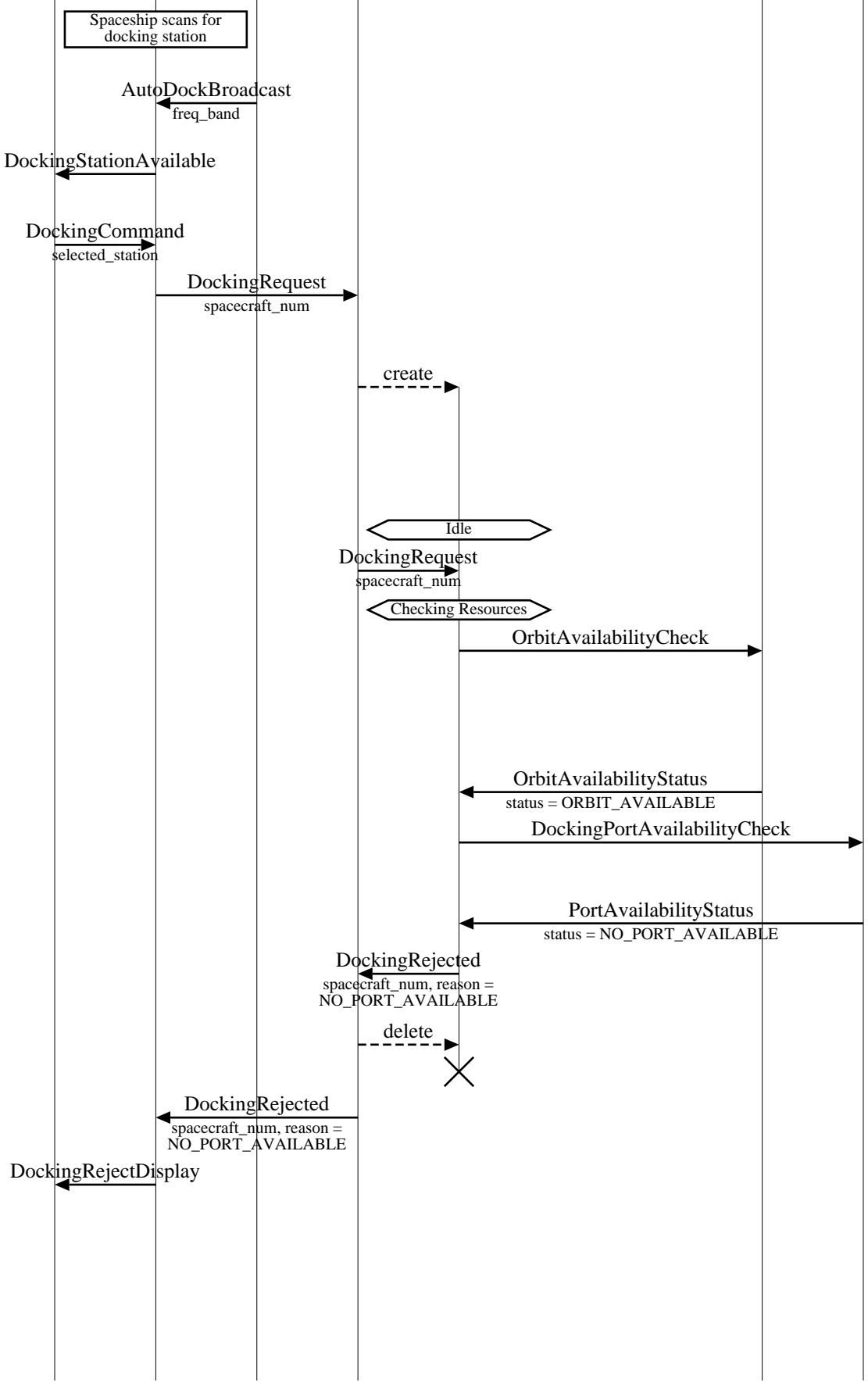
LEG: No Orbit Resource Available

No orbit can be provided

Send the rejection back to the spaceship obj mgr so that it can delete this object

The docking request has been rejected, so inform the pilot and await further action

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Spacecrafts nearing a planet should always keep scanning for AutoDock broadcasts

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The docking request is passed to the newly created object

Spaceship Obj checks if sufficient orbit resources are available to handle this docking request

LEG: Orbit Resource is Available

Orbit resources are available

LEG: No Docking Ports Available

No docking port can be provided

Send the rejection back to the spaceship obj mgr so that it can delete this object

The docking request has been rejected, so inform the pilot and await further action