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IRD CLASS FROM RTM

paragraph_id	segment_allocation	req_title	text
NI-0010	FOS SDPS CSMS	Communications with TDRSS	ECS shall have the capability to communicate with the TDRSS via the EDOS/Ecom interface.
NI-0020	FOS CSMS	Commanding via TDRSS	ECS shall have the capability to communicate with the TDRSS for transmitting commands to EOS spacecraft (via the EDOS/Ecom interface). Mission-specific requirements for supporting EOS spacecraft command operations will be documented in the EOS mission-level Detailed Mission Requirements documents.
NI-0030	FOS SDPS CSMS	Telemetry via TDRSS	ECS shall have the capability to interface with the TDRSS for obtaining return link (telemetry) data from EOS spacecraft (via the EDOS/Ecom interface). Mission-specific requirements for supporting EOS spacecraft telemetry operations will be documented in the EOS mission-level Detailed Mission Requirements documents.
NI-0110	FOS CSMS	Communications with NCC	ECS shall have the capability to communicate with the NCC via the Ecom interface.
NI-0120	FOS	TDRSS Schedule Requests to NCC	ECS shall have the capability to send TDRSS schedule requests to the NCC. These messages will be defined in the ICD Between the GSFC MOCs and the NCCDS .
NI-0130	FOS	Schedule Result Messages from NCC	ECS shall have the capability to receive schedule result messages from the NCC. These messages will be defined in the ICD Between the GSFC MOCs and the NCCDS.

NI-0140	FOS	TDRSS Schedules from NCC	ECS shall have the capability to receive TDRSS schedule messages from the NCC. These messages will be defined in the ICD Between the GSFC MOCs and the NCCDS.
NI-0150	FOS	Non-telemetry Messages to NCC	ECS shall have the capability to send other non-telemetry data messages to the NCC, which includes at a minimum status and reconfiguration messages. These messages will be defined in the ICD Between the GSFC MOCs and the NCCDS.
NI-0160	FOS	Non-telemetry messages from NCC	ECS shall have the capability to receive other non-telemetry data messages from the NCC, which includes at a minimum status and reconfiguration messages. These messages will be defined in the ICD Between the GSFC MOCs and the NCCDS.
NI-0170	FOS	GN,DSN,WOTS Contingency Scheduling	ECS shall have the capability to communicate with the NCC to coordinate support from GN, DSN, and WOTS for EOS missions. This interface is defined in the Operations Interface Procedures Between the Network Control Center (NCC) and the Spaceflight Tracking and Data Network Users.
NI-0210	FOS CSMS	Communications with GN/DSN/WOTS	ECS shall have the capability to communicate with the GN, DSN, and WOTS via the EDOS/Ecom interface.
NI-0220	FOS CSMS	Commanding via GN/DSN/WOTS	ECS shall have the capability to communicate with the GN, DSN, and WOTS for transmitting commands to EOS spacecraft (via the EDOS/Ecom interface). Mission-specific requirements for supporting EOS spacecraft command operations will be documented in the EOS mission-level Detailed Mission Requirements documents.

NI-0230	FOS CSMS	Telemetry via GN/DSN/WOTS	ECS shall have the capability to interface with the GN, DSN, and WOTS for obtaining return link (telemetry) data from EOS spacecraft (via the EDOS/Ecom interface). Mission-specific requirements for supporting EOS spacecraft telemetry operations will be documented in the EOS mission-level Detailed Mission Requirements documents.
<u>NI-0240</u>	<u>FOS/CSMS</u>	<u>Telemetry via GN/DSN/WOTS</u>	<u>ECS shall have the capability to receive non-telemetry data from the GN, DSN, and WOTS (via the EDOS/Ecom interface). Mission-specific requirements for supporting EOS spacecraft telemetry operations will be documented in the EOS mission-level Detailed Mission Requirements documents.</u>
NI-0250	FOS CSMS	Expandable for DSN/WOTS Scheduling	ECS shall be expandable to support the capability to communicate with the DSN and WOTS to schedule support for EOS spacecraft beyond AM-1 (in accordance with NASA policy and procedures).
NI-0310	FOS SDPS CSMS	FDF Communications Interface	ECS shall have the capability to communicate with the FDF via the Ecom interface.
NI-0330	FOS	Telemetry Subsets to FDF	ECS shall have the capability to send a subset of EOS spacecraft telemetry stream to the FDF, which includes the following: <ul style="list-style-type: none"> a. Attitude sensor data b. Navigation telemetry data c. Spacecraft maneuver telemetry data Mission-specific requirements for FDF support of EOS missions will be documented in the EOS mission-level Detailed Mission Requirements documents and FDF-developed ICDs.

NI-0340	FOS	Planning & Scheduling Aids from FDF	ECS shall have the capability to receive planning and scheduling information for the EOS spacecraft and instruments from the FDF. Mission-specific requirements for FDF support of EOS missions will be documented in the EOS mission-level Detailed Mission Requirements documents and FDF-developed ICDs.
NI-0350	FOS	Command parameters from FDF	ECS shall have the capability to receive parameters necessary for spacecraft command data generation from the FDF, including the following: a. Navigational operations parameters b. Spacecraft maneuver parameters Mission-specific requirements for FDF support of EOS missions will be documented in the EOS mission-level Detailed Mission Requirements documents and FDF-developed ICDs.
NI-0360	SDPS	O/A quality checks to FDF	ECS shall have the capability to send a notification of orbit or attitude quality checks and request updated (refined/repaired) orbit or attitude data from the FDF when necessary. Mission-specific requirements for FDF support of EOS missions will be documented in the EOS mission-level Detailed Mission Requirements documents and FDF-developed ICDs.
NI-0365	SDPS	O/A quality checks from FDF	ECS shall have the capability to receive from FDF a notification of orbit or attitude quality checks. Mission-specific requirements for FDF support of EOS missions will be documented in the EOS mission-level Detailed Mission Requirements documents and FDF-developed ICDs.

NI-0370	SDPS	Orbit/Attitude products from FDF	ECS shall have the capability to receive from FDF, at a minimum the following: a. Orbit data and associated metadata b. Attitude data and associated metadata Mission-specific requirements for FDF support of EOS missions will be documented in the EOS mission-level Detailed Mission Requirements documents and FDF-developed ICDs.
NI-0400	CSMS	NOLAN Interface	ECS shall have the capability to interface with NASA Data Processing Facilities (including the GSFC SDPF) via NOLAN to receive the following data (at a minimum): a. Science data b. Ancillary data c. Orbit data
NI-0430	CSMS	NOLAN Fault Notifications	ECS shall have the capability to receive notification of faults in the NOLAN network that may affect the quality of NOLAN services between ECS and its users.
NI-0440	CSMS	NOLAN Fault Status/ETTR	ECS shall have the capability to receive information regarding fault status and estimated time to repair or resolve NOLAN faults that may affect the quality of NOLAN services between ECS and its users.
NI-0450	CSMS	NOLAN Fault Summaries	ECS shall have the capability to receive periodic summary information about faults that may have affected the quality of NOLAN services between ECS and its users.
NI-0460	CSMS	NOLAN Performance/Link Utilization	ECS shall have the capability to receive periodic information regarding NOLAN network performance and link utilization.
NI-0470	CSMS	NOLAN Security Breaches	ECS shall have the capability to receive notifications of security breaches at NOLAN sites or within the NOLAN network that could potentially affect ECS sites.

NI-0480	CSMS	ECS Security Breaches to NOLAN	ECS shall have the capability to send to NOLAN notifications of security breaches at ECS facilities that could affect NOLAN and other EOSDIS sites.
NI-1000	FOS SDPS CSMS	ECS RMA	ECS functions shall have an operational availability (computed as defined in the Functional and Performance Requirements Specification for the ECS) of 0.96 at a minimum and a Mean Down Time (MDT) of four (4) hours or less, unless otherwise specified.
NI-1010	FOS	RMA-critical real time functions	The ECS FOS shall have an operational availability of 0.9998 at a minimum and a MDT of one (1) minute or less for critical real time functions that support: <ul style="list-style-type: none"> a. Launch b. Early orbit checkout c. Disposal d. Orbit adjustment e. Anomaly investigation f. Recovery from safe mode g. Routine real time commanding and associated monitoring for spacecraft and instrument health and safety
NI-1030	FOS	RMA for non-critical RT functions	The ECS FOS shall have an operational availability of 0.99925 at a minimum and a MDT of five (5) minutes or less for non-critical real time functions.
NI-1060	FOS CSMS	Loop Delay-Emergency RT Commands	The ECS shall contribute a loop delay of not greater than 2.5 seconds of the total system delay of five (5) seconds for emergency real time commands, not including the time needed for command execution. The loop delay is measured from the originator to the spacecraft/instrument and back and only applies when a TDRSS link is available for contact to the spacecraft.