1. \*

Session Access Control Parameters for Space Enterprises

(NORMATIVE)

This normative annex documents a deployment of specific Proximity-1 space data link parameters that defines the protocol option space for specific Space Enterprises. These parameters enable Session Establishment (currently achieved via Hailing), Moving onto a Working Channel, Data Services, and Session Termination. Note that his annex provides the parameter values to carry out both a demand and a negotiated hail.

\* CCSDS Secretariat to assign Annex Letter in CCSDS 211.0-B.

* 1. Mars Enterprise
		1. Mars Hailing channel Parameters

## Hailing Carrier Frequency

* + Channel 0 (437.1 MHz) forward link and Ch 0 (401.58 MHz) return link.
* Hailing Symbol Rate
	+ 8,000 symbols/second
* Coding
	+ Uncoded
* Modulation
	+ Bi-Phase-L
* Polarization
	+ Right Hand Circular
* Transceiver Mode
	+ Proximity-1
	+ USLP
	+ No protocol – Bitstream
		1. MaRS Working channel parameters
* Working Carrier Frequencies
	+ Channels 0,2,3,4,5,6,7,8,9,10,11,12,13,14,15 as defined in CCSDS 211.1-B-4
* Symbol Rates
	+ 1000,2000,4000,8000,16000,32000,64000,128000,256000,512000,1024000,2048000,4096000 (see CCSDS 211.1-B-4)
* Coding
	+ No coding
	+ Convolutional code, rate 1/2, constraint-length 7 defined in CCSDS 131.0-B-3
	+ LDPC (n=2048,k=1024) rate 1/2 code defined in CCSDS 131.0-B-3
* Modulation
	+ Bi-Phase-L
* Polarization
	+ Right Hand Circular
* Transceiver Mode
	+ Proximity-1
	+ USLP
	+ No protocol – Bitstream

* 1. Lunar Enterprise
		1. Lunar Hailing channel Parameters
* Hailing Carrier Frequency
	+ Default Hailing Channel X (TBD GHz in the forward link and TBD GHz in the return link (Transponder Ratio provided here) – Will there be two hailing channels ?
* Hailing Symbol Rate
	+ 1,000 symbols/second
* Carrier Only Duration
	+ Maximum of 5 seconds
* Idle Duration
	+ Maximum of TBD seconds
* Coding
	+ LDPC (6144,4096) Rate 2/3, defined in CCSDS 131.0-B-3
	+ LDPC (n=2048,k=1024) rate 1/2 code defined in CCSDS 131.0-B-3 ???
* Modulation
	+ BPSK
* Polarization
	+ Left Hand Circular
* Transceiver Mode
	+ Proximity-1
	+ USLP
	+ No protocol – Bitstream
		1. Lunar Working channel Parameters
* Working Carrier Frequencies
	+ Channels as defined in CCSDS 211.1-B-4 ???
* Symbol Rates
	+ (see CCSDS 211.1-B-4) or could those rates be dynamically assigned by the controlling spacecraft for the pair?
* Coding
	+ No coding
	+ Convolutional code, rate 1/2, constraint-length 7 defined in CCSDS 131.0-B-3
	+ LDPC (n=6144,k=4096)) rate 2/3 code defined in CCSDS 131.0-B-3
* Modulation
	+ BPSK
* Polarization
	+ Left Hand Circular
* Transceiver Mode
	+ Proximity-1
	+ USLP
	+ No protocol – Bitstream