

**EXHIBIT 13 : ADJACENT SATELLITE (28.15° EL) LINK BUDGETS**

<b>UPLINK BEAM INFORMATION</b>				
Uplink Beam Name	Eur / ME / Afr	Eur / ME / Afr	Eur / ME / Afr	Eur / ME / Afr
Uplink Frequency (MHz)	6185	6185	6185	6185
Uplink Beam Polarization	Vertical / Horizontal	Vertical / Horizontal	Vertical / Horizontal	Vertical / Horizontal
Uplink Relative Contour Level (dB)	6	6	6	6
Uplink Contour G/T (dB/K)	-5.0	-5.0	-5.0	-5.0
Uplink SFD (dBW/m <sup>2</sup> )	-88.5	-88.5	-81.0	-81.0
Rain Rate (mm/hr)	n/a	n/a	n/a	n/a
<b>DOWNLINK BEAM INFORMATION</b>				
Downlink Beam Name	Eur / ME / Afr	Eur / ME / Afr	Eur / ME / Afr	Eur / ME / Afr
Downlink Frequency (MHz)	3960	3960	3960	3960
Downlink Beam Polarization	Vertical / Horizontal	Vertical / Horizontal	Vertical / Horizontal	Vertical / Horizontal
Downlink Relative Contour Level (dB)	6	6	6	6
Downlink Contour EIRP (dBW)	35.3	35.3	35.3	35.3
Rain Rate (mm/hr)	n/a	n/a	n/a	n/a
<b>ADJACENT SATELLITE 1</b>				
Satellite 1 Orbital Location	26.15 EL	26.15 EL	26.15 EL	26.15 EL
Uplink Power Density (dBW/Hz)	-50.8	-50.8	-50.8	-50.8
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-33.50	-33.50	-33.50	-33.50
Downlink Polarization Advantage (dB)	0	0	0	0
<b>ADJACENT SATELLITE 2</b>				
Satellite 2 Orbital Location	30.5 EL	30.5 EL	30.5 EL	30.5 EL
Uplink Power Density (dBW/Hz)	-45.0	-45.0	-45.0	-45.0
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-30.00	-30.00	-30.00	-30.00
Downlink Polarization Advantage (dB)	0	0	0	0
<b>CARRIER INFORMATION</b>				
Carrier ID	36M0F3F	30M1G7W	5M57G7W	77K0G7W
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	n/a	n/a	n/a
Code Rate	n/a	3/4 + RS	3/4	1/2
Occupied Bandwidth (kHz)	36000	30133	5565	77
Allocated Bandwidth (kHz)	36000	36000	6000	100
Minimum C/N, Clear Sky (dB)	10	6.1	6.8	6.8
Minimum C/N, Rain (dB)	n/a	n/a	n/a	n/a
<b>UPLINK EARTH STATION</b>				
Earth Station Diameter (meters)	7	7	7	7
Earth Station Gain (dBi)	51	51	51	51
Earth Station Elevation Angle	20	20	20	20
<b>DOWNLINK EARTH STATION</b>				
Earth Station Diameter (meters)	7	3.7	4.5	4.5
Earth Station Gain (dBi)	47.5	41.2	43.9	43.9
Earth Station G/T, Clear Sky (dB/K)	26.6	20.9	23.6	23.6
Earth Station Elevation Angle	20	20	20	20
<b>LINK FADE TYPE</b>				
	Clear Sky	Clear Sky	Clear Sky	Clear Sky
<b>UPLINK PERFORMANCE</b>				
Uplink Earth Station EIRP (dBW)	74.4	74.4	67.7	49.1
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2
Uplink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Satellite G/T (dB/K)	-5.0	-5.0	-5.0	-5.0
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-67.5	-48.9
Uplink C/N (dB)	22.2	23.0	23.6	23.6
<b>DOWNLINK PERFORMANCE</b>				
Downlink EIRP per Carrier (dBW)	35.3	35.3	25.8	7.2
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.4	-196.4	-196.4	-196.4
Downlink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Earth Station G/T, Clear Sky (dB/K)	26.6	20.9	23.6	23.6
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-67.5	-48.9
Downlink C/N (dB)	18.1	13.2	13.7	13.7
<b>COMPOSITE LINK PERFORMANCE</b>				
C/N Uplink (dB)	22.2	23.0	23.6	23.6
C/N Downlink (dB)	18.1	13.2	13.7	13.7
C/I Intermodulation (dB)	n/a	n/a	18.7	18.7
C/I Uplink Co-Channel (dB)*	25.0	25.0	26.8	26.0
C/I Downlink Co-Channel (dB)*	25.0	25.0	26.8	26.0
C/I Uplink Adjacent Satellite 1 (dB)	25.6	26.4	27.0	27.1
C/I Downlink Adjacent Satellite 1 (dB)	18.5	12.1	12.9	12.9
C/I Uplink Adjacent Satellite 2 (dB)	21.7	22.4	23.1	23.1
C/I Downlink Adjacent Satellite 2 (dB)	18.3	13.3	13.6	13.6
C/(N+) Composite (dB)	11.8	7.6	7.8	7.8
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+) Composite (dB)	10.8	6.6	6.8	6.8
Minimum Required C/N (dB)	-10.0	-6.1	-6.8	-6.8
Excess Link Margin (dB)	0.8	0.5	0.0	0.0
<b>Carrier Density Levels</b>				
Uplink Power Density (dBW/Hz)	-42.6	-51.4	-50.8	-50.8
Downlink EIRP Density At Beam Peak (dBW/Hz)	-24.7	-33.5	-35.7	-35.7

\* Note: The C/I level is adjusted depending on the signal level and transponder mode of operation.