

## Exhibit 6: Link Budgets

UPLINK BEAM INFORMATION				
Unlink Beam Name	US/Latin America	US/Latin America	US/Latin America	US/Latin America
Unlink Frequency (MHz)	5925 - 6425	5925 - 6425	5925 - 6425	5925 - 6425
Unlink Beam Polarization	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Unlink Beam Relative Contour (dB)	-10	-10	-10	-10
Unlink Contour G/T (dB/K)	-6.6	-6.6	-6.6	-6.6
Unlink SFD (dBW/m <sup>2</sup> )	-79.3	-84.3	-82.3	-82.3
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	Global	Global	Global	Global
Downlink Frequency (MHz)	3700 - 4200	3700 - 4200	3700 - 4200	3700 - 4200
Downlink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Downlink Beam Relative Contour (dB)	-4	-4	-4	-4
Downlink Contour EIRP (dBW)	30.6	30.6	30.6	30.6
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Unlink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Unlink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-31.4	-31.4	-31.4	-31.4
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Unlink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Unlink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-31.4	-31.4	-31.4	-31.4
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W
Information Rate (kbps)	N/A	24575	6000	64
Carrier Modulation	TV/FM	OPSK	OPSK	OPSK
Peak to Peak Bandwidth of EDS (MHz)	4	n/a	n/a	n/a
Code Rate	N/A	1/2 - RS	1/2 - RS	1/2-RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Required C/N <sub>rain</sub> (dB)	10.0	3.4	3.9	3.0
UPLINK EARTH STATION				
Earth Station Diameter (meters)	15.2	10.0	6.1	6.1
Earth Station Gain (dBi)	58.4	54.1	49.4	49.4
Earth Station Elevation Angle	20	20	20	20
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	11.0	4.5	6.1	6.1
Earth Station Gain (dBi)	51.9	43.9	46.5	46.5
Earth Station G/T (dB/K)	31.0	23.6	26.2	26.2
Earth Station Elevation Angle	20	20	20	20
UPLINK PERFORMANCE				
Unlink Earth Station EIRP (dBW)	83.6	78.6	68.5	48.1
Unlink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2
Satellite G/T (dB/K)	-6.6	-6.6	-6.6	-6.6
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Unlink C/N (dB)	29.8	25.6	22.0	21.1
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	30.6	30.6	23.2	2.8
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Earth Station G/T (dB/K)	31.0	23.6	26.2	26.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	17.8	11.2	12.9	12.0
COMPOSITE LINK PERFORMANCE				
C/N Unlink (dB)	29.8	25.6	22.0	21.1
C/N Downlink (dB)	17.8	11.2	12.9	12.0
C/I Intermodulation (dB)	n/a	n/a	20.0	19.1
C/I Unlink Co-Channel (dB)*	27.0	27.0	28.6	28.3
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.6	28.3
C/I Unlink Adjacent Satellite 1 (dB)	20.7	16.5	12.9	12.0
C/I Downlink Adjacent Satellite 1 (dB)	16.3	8.3	10.3	9.4
C/I Unlink Adjacent Satellite 2 (dB)	20.7	16.5	12.9	12.0
C/I Downlink Adjacent Satellite 2 (dB)	17.3	10.8	12.2	11.3
C/(N+I) Composite (dB)	11.0	4.4	4.9	4.0
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.0	3.4	3.9	3.0
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.0	0.0	0.0	0.0
Number of Carriers	1.0	1.0	2.4	268.9
CARRIER DENSITY LEVELS				
Unlink Power Density (dBW/Hz)	-40.8	-50.3	-49.2	-50.1
Downlink EIRP Density At Beam Peak	-31.4	-40.2	-41.1	-42.0

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION				
Unlink Beam Name	US/Latin America	US/Latin America	US/Latin America	US/Latin America
Unlink Frequency (MHz)	5925 - 6425	5925 - 6425	5925 - 6425	5925 - 6425
Unlink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Unlink Beam Relative Contour (dB)	-10	-10	-10	-10
Unlink Contour G/T (dB/K)	-6.6	-6.6	-6.6	-6.6
Unlink SED (dBW/m <sup>2</sup> )	-79.3	-89.3	-81.3	-81.3
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa
Downlink Frequency (MHz)	3700 - 4200	3700 - 4200	3700 - 4200	3700 - 4200
Downlink Beam Polarization	Horizontal	Horizontal	Horizontal	Horizontal
Downlink Beam Relative Contour (dB)	-8	-8	-8	-8
Downlink Contour EIRP (dBW)	33.9	33.9	33.9	33.9
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Unlink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Unlink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-40.9	-40.9	-40.9	-40.9
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Unlink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Unlink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-40.9	-40.9	-40.9	-40.9
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W
Information Rate (kbps)	N/A	24575	6000	64
Carrier Modulation	TV/FM	OPSK	OPSK	OPSK
Peak to Peak Bandwidth of EDS (MHz)	4	n/a	n/a	n/a
Code Rate	N/A	1/2 - RS	1/2 - RS	1/2-RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Required C/N <sub>min</sub> (dB)	10.0	3.4	3.9	3.0
UPLINK EARTH STATION				
Earth Station Diameter (meters)	15.2	6.1	6.1	6.1
Earth Station Gain (dBi)	58.4	49.4	49.4	49.4
Earth Station Elevation Angle	20	20	20	20
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	4.5	3.0	3.0	3.0
Earth Station Gain (dBi)	43.9	39.7	39.7	39.7
Earth Station G/T (dB/K)	23.6	19.2	19.2	19.2
Earth Station Elevation Angle	20	20	20	20
UPLINK PERFORMANCE				
Unlink Earth Station EIRP (dBW)	83.6	73.6	69.5	49.1
Unlink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2
Satellite G/T (dB/K)	-6.6	-6.6	-6.6	-6.6
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Unlink C/N (dB)	29.8	20.6	23.0	22.1
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	33.9	33.9	26.5	6.1
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Earth Station G/T (dB/K)	23.6	19.2	19.2	19.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	13.7	10.1	9.2	8.3
COMPOSITE LINK PERFORMANCE				
C/N Unlink (dB)	29.8	20.6	23.0	22.1
C/N Downlink (dB)	13.7	10.1	9.2	8.3
C/I Intermodulation (dB)	n/a	n/a	20.0	19.1
C/I Unlink Co-Channel (dB)*	27.0	27.0	28.6	28.3
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.6	28.3
C/I Unlink Adjacent Satellite 1 (dB)	20.7	11.5	13.9	13.0
C/I Downlink Adjacent Satellite 1 (dB)	20.3	11.2	10.3	9.4
C/I Unlink Adjacent Satellite 2 (dB)	20.7	11.5	13.9	13.0
C/I Downlink Adjacent Satellite 2 (dB)	22.8	19.9	19.0	18.2
C/(N+I) Composite (dB)	11.0	4.7	4.9	4.0
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.0	3.7	3.9	3.0
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.0	0.3	0.0	0.0
Number of Carriers	1.0	1.0	2.4	268.3
CARRIER DENSITY LEVELS				
Unlink Power Density (dBW/Hz)	-40.8	-50.6	-48.2	-49.1
Downlink EIRP Density At Beam Peak	-24.0	-32.9	-33.8	-34.7

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION				
Unlink Beam Name	US/Latin America	US/Latin America	US/Latin America	US/Latin America
Unlink Frequency (MHz)	5925 – 6425	5925 – 6425	5925 – 6425	5925 – 6425
Unlink Beam Polarization	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Unlink Beam Relative Contour (dB)	-10	-10	-10	-10
Unlink Contour G/T (dB/K)	-6.6	-6.6	-6.6	-6.6
Unlink SFD (dBW/m <sup>2</sup> )	-82.3	-79.3	-83.3	-81.3
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	US/Latin America	US/Latin America	US/Latin America	US/Latin America
Downlink Frequency (MHz)	3700 – 4200	3700 – 4200	3700 – 4200	3700 – 4200
Downlink Beam Polarization	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Downlink Beam Relative Contour (dB)	-6	-6	-6	-6
Downlink Contour EIRP (dBW)	37.4	37.4	37.4	37.4
ADJACENT SATELLITE #1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Unlink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Unlink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-37.1	-37.1	-37.1	-37.1
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE #2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Unlink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Unlink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-37.1	-37.1	-37.1	-37.1
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W
Information Rate (kbps)	N/A	24575	6000	64
Carrier Modulation	TV/FM	OPSK	OPSK	OPSK
Peak to Peak Bandwidth of EDS (MHz)	4	n/a	n/a	n/a
Code Rate	N/A	1/2 - RS	1/2 - RS	1/2-RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Required C/N <sub>min</sub> (dB)	10.0	3.4	3.9	3.0
UPLINK EARTH STATION				
Earth Station Diameter (meters)	13.0	15.2	6.1	6.1
Earth Station Gain (dBi)	56.4	58.4	49.4	49.4
Earth Station Elevation Angle	20	20	20	20
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	4.5	2.4	3.0	3.0
Earth Station Gain (dBi)	43.9	38.1	39.7	39.7
Earth Station G/T (dB/K)	23.6	17.4	19.2	19.2
Earth Station Elevation Angle	20	20	20	20
UPLINK PERFORMANCE				
Unlink Earth Station EIRP (dBW)	80.6	83.6	67.4	47.0
Unlink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2
Satellite G/T (dB/K)	-6.6	-6.6	-6.6	-6.6
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Unlink C/N (dB)	26.8	30.6	20.9	20.0
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	37.4	37.4	29.9	9.5
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Earth Station G/T (dB/K)	23.6	17.4	19.2	19.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	17.2	11.8	12.5	11.7
COMPOSITE LINK PERFORMANCE				
C/N Unlink (dB)	26.8	30.6	20.9	20.0
C/N Downlink (dB)	17.2	11.8	12.5	11.7
C/I Intermodulation (dB)	n/a	n/a	19.9	19.0
C/I Unlink Co-Channel (dB)*	27.0	27.0	28.4	28.2
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.4	28.2
C/I Unlink Adjacent Satellite 1 (dB)	17.7	21.5	11.8	10.9
C/I Downlink Adjacent Satellite 1 (dB)	20.0	5.9	9.9	9.0
C/I Unlink Adjacent Satellite 2 (dB)	17.7	21.5	11.8	10.9
C/I Downlink Adjacent Satellite 2 (dB)	22.5	15.3	18.6	17.7
C/(N+I) Composite (dB)	11.3	4.4	4.9	4.0
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.3	3.4	3.9	3.0
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.3	0.0	0.0	0.0
Number of Carriers	1.0	1.0	2.5	276.1
CARRIER DENSITY LEVELS				
Unlink Power Density (dBW/Hz)	-41.8	-49.6	-50.3	-51.2
Downlink EIRP Density At Beam Peak	-22.6	-31.4	-32.4	-33.3

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION				
Unlink Beam Name	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa
Unlink Frequency (MHz)	5925 - 6425	5925 - 6425	5925 - 6425	5925 - 6425
Unlink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Unlink Beam Relative Contour (dB)	-8	-8	-8	-8
Unlink Contour G/T (dB/K)	-6.8	-6.8	-6.8	-6.8
Unlink SFD (dBW/m <sup>2</sup> )	-78.8	-89.8	-81.8	-81.8
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa
Downlink Frequency (MHz)	3700 - 4200	3700 - 4200	3700 - 4200	3700 - 4200
Downlink Beam Polarization	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Downlink Beam Relative Contour (dB)	-8	-8	-8	-8
Downlink Contour EIRP (dBW)	33.9	33.9	33.9	33.9
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Unlink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Unlink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-40.9	-40.9	-40.9	-40.9
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Unlink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Unlink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-40.9	-40.9	-40.9	-40.9
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W
Information Rate (kbps)	N/A	24575	6000	64
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	1/2 - RS	1/2 - RS	1/2 - RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Required C/N <sub>min</sub> (dB)	10.0	3.4	3.9	3.0
UPLINK EARTH STATION				
Earth Station Diameter (meters)	15.2	6.1	6.1	6.1
Earth Station Gain (dBi)	58.4	49.4	49.4	49.4
Earth Station Elevation Angle	20	20	20	20
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	4.5	3.0	3.0	3.0
Earth Station Gain (dBi)	43.9	39.7	39.7	39.7
Earth Station G/T (dB/K)	23.6	19.2	19.2	19.2
Earth Station Elevation Angle	20	20	20	20
UPLINK PERFORMANCE				
Unlink Earth Station EIRP (dBW)	83.4	73.1	69.2	48.8
Unlink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2
Satellite G/T (dB/K)	-6.8	-6.8	-6.8	-6.8
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Unlink C/N (dB)	29.4	19.9	22.5	21.6
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	33.9	33.9	26.7	6.2
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Earth Station G/T (dB/K)	23.6	19.2	19.2	19.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	13.7	10.1	9.3	8.4
COMPOSITE LINK PERFORMANCE				
C/N Unlink (dB)	29.4	19.9	22.5	21.6
C/N Downlink (dB)	13.7	10.1	9.3	8.4
C/I Intermodulation (dB)	n/a	n/a	20.1	19.3
C/I Unlink Co-Channel (dB)*	27.0	27.0	28.7	28.4
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.7	28.4
C/I Unlink Adjacent Satellite 1 (dB)	20.5	11.0	13.6	12.7
C/I Downlink Adjacent Satellite 1 (dB)	20.3	11.2	10.4	9.6
C/I Unlink Adjacent Satellite 2 (dB)	20.5	11.0	13.6	12.7
C/I Downlink Adjacent Satellite 2 (dB)	22.8	19.9	19.2	18.3
C/(N+I) Composite (dB)	11.0	4.5	4.9	4.0
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.0	3.5	3.9	3.0
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.0	0.1	0.0	0.0
Number of Carriers	1.0	1.0	2.4	259.7
CARRIER DENSITY LEVELS				
Unlink Power Density (dBW/Hz)	-41.0	-51.1	-48.5	-49.4
Downlink EIRP Density At Beam Peak	-24.1	-32.9	-33.7	-34.5

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION				
Unlink Beam Name	Global	Global	Global	Global
Unlink Frequency (MHz)	5925 - 6425	5925 - 6425	5925 - 6425	5925 - 6425
Unlink Beam Polarization	Horizontal	Horizontal	Horizontal	Horizontal
Unlink Beam Relative Contour (dB)	-4	-4	-4	-4
Unlink Contour G/T (dB/K)	-12.2	-12.2	-12.2	-12.2
Unlink SED (dBW/m <sup>2</sup> )	-80.8	-84.8	-84.8	-84.8
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	Global	Global	Global	Global
Downlink Frequency (MHz)	3700 - 4200	3700 - 4200	3700 - 4200	3700 - 4200
Downlink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Downlink Beam Relative Contour (dB)	-4	-4	-4	-4
Downlink Contour EIRP (dBW)	30.6	30.6	30.6	30.6
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Unlink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Unlink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-31.4	-31.4	-31.4	-31.4
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Unlink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Unlink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-31.4	-31.4	-31.4	-31.4
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W
Information Rate (kbps)	N/A	24575	6000	64
Carrier Modulation	TV/FM	OPSK	OPSK	OPSK
Peak to Peak Bandwidth of EDS (MHz)	4	n/a	n/a	n/a
Code Rate	N/A	1/2 - RS	1/2 - RS	1/2 - RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Required C/N, Rain (dB)	10.0	3.4	3.9	3.0
UPLINK EARTH STATION				
Earth Station Diameter (meters)	15.2	9.0	6.1	6.1
Earth Station Gain (dBi)	58.4	53.4	49.4	49.4
Earth Station Elevation Angle	20	20	20	20
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	11.0	4.5	6.1	6.1
Earth Station Gain (dBi)	51.9	43.9	46.5	46.5
Earth Station G/T (dB/K)	31.0	23.6	26.2	26.2
Earth Station Elevation Angle	20	20	20	20
UPLINK PERFORMANCE				
Unlink Earth Station EIRP (dBW)	82.1	78.1	66.1	45.7
Unlink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2
Satellite G/T (dB/K)	-12.2	-12.2	-12.2	-12.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Unlink C/N (dB)	22.7	19.5	14.0	13.1
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	30.6	30.6	23.3	2.8
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Earth Station G/T (dB/K)	31.0	23.6	26.2	26.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	17.8	11.2	12.9	12.1
COMPOSITE LINK PERFORMANCE				
C/N Unlink (dB)	22.7	19.5	14.0	13.1
C/N Downlink (dB)	17.8	11.2	12.9	12.1
C/I Intermodulation (dB)	n/a	n/a	20.1	19.2
C/I Unlink Co-Channel (dB)*	27.0	27.0	28.6	28.3
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.6	28.3
C/I Unlink Adjacent Satellite 1 (dB)	23.2	20.0	14.5	13.6
C/I Downlink Adjacent Satellite 1 (dB)	16.3	8.3	10.4	9.5
C/I Unlink Adjacent Satellite 2 (dB)	23.2	20.0	14.5	13.6
C/I Downlink Adjacent Satellite 2 (dB)	17.3	10.8	12.3	11.4
C/(N+I) Composite (dB)	11.1	4.7	4.9	4.0
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.1	3.7	3.9	3.0
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.1	0.3	0.0	0.0
Number of Carriers	1.0	1.0	2.4	265.1
CARRIER DENSITY LEVELS				
Unlink Power Density (dBW/Hz)	-42.3	-50.1	-51.6	-52.5
Downlink EIRP Density At Beam Peak	-31.4	-40.2	-41.0	-41.9

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION				
Unlink Beam Name	Global	Global	Global	Global
Unlink Frequency (MHz)	5925 - 6425	5925 - 6425	5925 - 6425	5925 - 6425
Unlink Beam Polarization	Horizontal	Horizontal	Horizontal	Horizontal
Unlink Beam Relative Contour (dB)	-4	-4	-4	-4
Unlink Contour G/T (dB/K)	-12.2	-12.2	-12.2	-12.2
Unlink SED (dBW/m <sup>2</sup> )	-81.8	-84.8	-83.8	-83.8
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa
Downlink Frequency (MHz)	3700 - 4200	3700 - 4200	3700 - 4200	3700 - 4200
Downlink Beam Polarization	Horizontal	Horizontal	Horizontal	Horizontal
Downlink Beam Relative Contour (dB)	-8	-8	-8	-8
Downlink Contour EIRP (dBW)	33.9	33.9	33.9	33.9
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Unlink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Unlink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-40.9	-40.9	-40.9	-40.9
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Unlink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Unlink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-40.9	-40.9	-40.9	-40.9
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W
Information Rate (kbns)	N/A	24575	6000	64
Carrier Modulation	TV/FM	OPSK	OPSK	OPSK
Peak to Peak Bandwidth of EDS (MHz)	4	n/a	n/a	n/a
Code Rate	N/A	1/2 - RS	1/2 - RS	1/2 - RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Required C/N <sub>min</sub> (dB)	10.0	3.4	3.9	3.0
UPLINK EARTH STATION				
Earth Station Diameter (meters)	13.0	9.0	6.1	6.1
Earth Station Gain (dBi)	56.4	53.4	49.4	49.4
Earth Station Elevation Angle	20	20	20	20
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	4.5	3.0	3.0	3.0
Earth Station Gain (dBi)	43.9	39.7	39.7	39.7
Earth Station G/T (dB/K)	23.6	19.2	19.2	19.2
Earth Station Elevation Angle	20	20	20	20
UPLINK PERFORMANCE				
Unlink Earth Station EIRP (dBW)	81.1	78.1	67.1	46.7
Unlink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2
Satellite G/T (dB/K)	-12.2	-12.2	-12.2	-12.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Unlink C/N (dB)	21.7	19.5	15.0	14.1
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	33.9	33.9	26.6	6.1
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Earth Station G/T (dB/K)	23.6	19.2	19.2	19.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	13.7	10.1	9.2	8.3
COMPOSITE LINK PERFORMANCE				
C/N Unlink (dB)	21.7	19.5	15.0	14.1
C/N Downlink (dB)	13.7	10.1	9.2	8.3
C/I Intermodulation (dB)	n/a	n/a	20.1	19.2
C/I Unlink Co-Channel (dB)*	27.0	27.0	28.6	28.3
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.6	28.3
C/I Unlink Adjacent Satellite 1 (dB)	22.2	20.0	15.5	14.6
C/I Downlink Adjacent Satellite 1 (dB)	20.3	11.2	10.3	9.5
C/I Unlink Adjacent Satellite 2 (dB)	22.2	20.0	15.5	14.6
C/I Downlink Adjacent Satellite 2 (dB)	22.8	19.9	19.1	18.2
C/(N+I) Composite (dB)	11.0	6.6	4.9	4.0
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.0	5.6	3.9	3.0
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.0	2.2	0.0	0.0
Number of Carriers	1.0	1.0	2.4	265.3
CARRIER DENSITY LEVELS				
Unlink Power Density (dBW/Hz)	-41.3	-50.1	-50.6	-51.5
Downlink EIRP Density At Beam Peak	-24.1	-32.9	-33.7	-34.6

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

## Exhibit 6: Link Budgets (continued)

<b>UPLINK BEAM INFORMATION</b>				
Uplink Beam Name	Global	Global	Global	Global
Uplink Frequency (MHz)	5925 - 6425	5925 - 6425	5925 - 6425	5925 - 6425
Uplink Beam Polarization	Horizontal	Horizontal	Horizontal	Horizontal
Uplink Beam Relative Contour (dB)	-4	-4	-4	-4
Uplink Contour G/T (dB/K)	-12.2	-12.2	-12.2	-12.2
Uplink SFD (dBW/m <sup>2</sup> )	-84.8	-81.8	-84.8	-84.8
<b>DOWNLINK BEAM INFORMATION</b>				
Downlink Beam Name	US/Latin America	US/Latin America	US/Latin America	US/Latin America
Downlink Frequency (MHz)	3700 - 4200	3700 - 4200	3700 - 4200	3700 - 4200
Downlink Beam Polarization	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Downlink Beam Relative Contour (dB)	-6	-6	-6	-6
Downlink Contour EIRP (dBW)	37.4	37.4	37.4	37.4
<b>ADJACENT SATELLITE 1</b>				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-37.1	-37.1	-37.1	-37.1
Downlink Polarization Advantage (dB)	0	0	0	0
<b>ADJACENT SATELLITE 2</b>				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-37.1	-37.1	-37.1	-37.1
Downlink Polarization Advantage (dB)	0	0	0	0
<b>CARRIER INFORMATION</b>				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100K67W
Information Rate (kbits)	N/A	24575	6000	64
Carrier Modulation	TV/FM	OPSK	OPSK	OPSK
Peak to Peak Bandwidth of EDS (MHz)	4	n/a	n/a	n/a
Code Rate	N/A	1/2 - RS	1/2 - RS	1/2-RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Required C/N <sub>min</sub> (dB)	10.0	3.4	3.9	3.0
<b>UPLINK EARTH STATION</b>				
Earth Station Diameter (meters)	9.0	13.0	6.1	6.1
Earth Station Gain (dBi)	53.4	56.4	49.4	49.4
Earth Station Elevation Angle	20	20	20	20
<b>DOWNLINK EARTH STATION</b>				
Earth Station Diameter (meters)	4.5	2.4	3.0	3.0
Earth Station Gain (dBi)	43.9	38.1	39.7	39.7
Earth Station G/T (dB/K)	23.6	17.4	19.2	19.2
Earth Station Elevation Angle	20	20	20	20
<b>UPLINK PERFORMANCE</b>				
Uplink Earth Station EIRP (dBW)	78.1	81.1	65.6	45.2
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2
Satellite G/T (dB/K)	-12.2	-12.2	-12.2	-12.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Uplink C/N (dB)	18.7	22.5	13.5	12.6
<b>DOWNLINK PERFORMANCE</b>				
Downlink EIRP per Carrier (dBW)	37.4	37.4	29.6	9.1
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Earth Station G/T (dB/K)	23.6	17.4	19.2	19.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	17.2	11.8	12.2	11.3
<b>COMPOSITE LINK PERFORMANCE</b>				
C/N Uplink (dB)	18.7	22.5	13.5	12.6
C/N Downlink (dB)	17.2	11.8	12.2	11.3
C/I Intermodulation (dB)	n/a	n/a	19.5	18.7
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.1	27.8
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.1	27.8
C/I Uplink Adjacent Satellite 1 (dB)	19.2	23.0	14.0	13.1
C/I Downlink Adjacent Satellite 1 (dB)	20.0	5.9	9.5	8.7
C/I Uplink Adjacent Satellite 2 (dB)	19.2	23.0	14.0	13.1
C/I Downlink Adjacent Satellite 2 (dB)	22.5	15.3	18.3	17.4
C/(N+I) Composite (dB)	11.2	4.4	4.9	4.0
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.2	3.4	3.9	3.0
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.2	0.0	0.0	0.0
Number of Carriers	1.0	1.0	2.7	298.2
<b>CARRIER DENSITY LEVELS</b>				
Uplink Power Density (dBW/Hz)	-41.3	-50.1	-52.1	-53.0
Downlink EIRP Density At Beam Peak	-22.6	-31.4	-32.8	-33.6

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

## Exhibit 6: Link Budgets (continued)

<b>UPLINK BEAM INFORMATION</b>		Europe/Africa 14000 - 14500	Europe/Africa 14000 - 14500	Europe/Africa 14000 - 14500	Europe/Africa 14000 - 14500	Europe/Africa 14000 - 14500	Europe/Africa 14000 - 14500
Uplink Beam Name							
Uplink Frequency (MHz)		Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Uplink Beam Polarization							
Uplink Relative Contour Level (dB)		-10	-10	-10	-10	-10	-10
Uplink Contour G/T (dB/K)		-3.4	-3.4	-3.4	-3.4	-3.4	-3.4
Uplink SFD (dBW/m <sup>2</sup> )		-82.9	-73.9	-81.9	-81.9	-81.9	-81.9
Rain Rate (mm/hr)		42	42	42	42	42	42
<b>DOWNLINK BEAM INFORMATION</b>							
Downlink Beam Name		South America 11450 - 11950	South America 11450 - 11950	South America 11450 - 11950	South America 11450 - 11950	South America 11450 - 11950	South America 11450 - 11950
Downlink Frequency (MHz)		Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Downlink Beam Polarization							
Downlink Relative Contour Level (dB)		-8	-8	-8	-8	-8	-8
Downlink Contour EIRP (dBW)		44.1	44.1	44.1	44.1	44.1	44.1
Rain Rate (mm/hr)		95	95	95	95	95	95
<b>ADJACENT SATELLITE 1</b>							
Satellite 1 Orbital Location		48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)		-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)		0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)		-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)		0	0	0	0	0	0
<b>ADJACENT SATELLITE 2</b>							
Satellite 2 Orbital Location		52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)		-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)		0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)		-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)		0	0	0	0	0	0
<b>CARRIER INFORMATION</b>							
Emission Designation		36M0F3F	36M0G7W	10M3G7W	100KG7W	1M45G7W	400KG7W
Information Rate (kbps)		n/a	24575	6000	64	512	128
Carrier Modulation		TV/FM	QPSK	QPSK	QPSK	BPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)		4.0	n/a	n/a	n/a	n/a	n/a
Code Rate		n/a	1/2 - RS	1/2 - RS	1/2 - RS	1/2	1/2
Occupied Bandwidth (kHz)		36000	30133	6771.1	75.4	1229	307
Allocated Bandwidth (kHz)		36000	36000	10300	100	1450	400
Minimum C/N, Clear Sky (dB)		10.0	3.4	3.9	3.0	3.4	3.4
Minimum C/N, Rain (dB)		10.0	3.4	3.6	2.8	2.7	2.7
<b>UPLINK EARTH STATION</b>							
Earth Station Diameter (meters)		6.1	6.1	6.1	6.1	6.1	1.8
Earth Station Gain (dBi)		56.8	56.8	56.8	56.8	56.8	46.3
Earth Station Elevation Angle		20.0	20.0	20.0	20.0	20.0	20.0
<b>DOWNLINK EARTH STATION</b>							
Earth Station Diameter (meters)		3.7	2.4	2.4	1.8	1.8	6.1
Earth Station Gain (dBi)		50.7	47.1	47.1	44.4	44.4	55.1
Earth Station G/T (dB/K)		28.2	24.6	24.6	21.9	21.9	32.7
Earth Station Elevation Angle		20.0	20.0	20.0	20.0	20.0	20.0
<b>LINK FADE TYPE</b>							
		Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
<b>UPLINK PERFORMANCE</b>							
Uplink Earth Station EIRP (dBW)		80.0	79.9	66.6	48.6	60.6	47.8
Uplink Path Loss, Clear Sky (dB)		-207.4	-207.4	-207.4	-207.4	-207.4	-207.4
Uplink Rain Attenuation (dB)		0.0	0.0	0.0	0.0	0.0	0.0
Satellite G/T (dB/K)		-3.4	-3.4	-3.4	-3.4	-3.4	-3.4
Boltzman Constant (dBW/K-Hz)		228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)		-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Uplink C/N (dB)		22.2	22.9	16.1	17.6	17.5	10.7
<b>DOWNLINK PERFORMANCE</b>							
Downlink EIRP per Carrier (dBW)		44.1	40.8	32.8	14.8	26.8	14.0
Antenna Pointing Error (dB)		-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)		-205.6	-205.6	-205.6	-205.6	-205.6	-205.6
Downlink Rain Attenuation (dB)		0.0	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)		28.2	24.6	24.6	21.9	21.9	32.7
Boltzman Constant (dBW/K-Hz)		228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)		-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Downlink C/N (dB)		19.3	13.2	11.6	10.5	10.4	14.4
<b>COMPOSITE LINK PERFORMANCE</b>							
C/N Uplink (dB)		22.2	22.9	16.1	17.6	17.5	10.7
C/N Downlink (dB)		19.3	13.2	11.6	10.5	10.4	14.4
C/I Intermodulation (dB)		n/a	n/a	24.2	25.7	25.6	18.8
C/I Uplink Co-Channel (dB)*		27.0	27.0	26.2	28.4	28.8	21.5
C/I Downlink Co-Channel (dB)*		27.0	27.0	26.2	28.4	28.8	21.5
C/I Uplink Adjacent Satellite 1 (dB)		26.4	27.1	20.3	21.8	21.7	14.9
C/I Downlink Adjacent Satellite 1 (dB)		23.2	16.8	15.3	13.8	13.7	18.4
C/I Uplink Adjacent Satellite 2 (dB)		26.4	27.1	20.3	21.8	21.7	14.9
C/I Downlink Adjacent Satellite 2 (dB)		24.3	18.4	16.9	16.0	15.9	19.0
C/(N+I) Composite (dB)		14.6	10.2	7.7	7.2	7.0	6.2
Required System Margin (dB)		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)		13.6	9.2	6.7	6.2	6.0	5.2
Minimum Required C/N (dB)		-10.0	-3.4	-3.9	-3.0	-3.4	-3.4
Excess Link Margin (dB)		3.6	5.8	2.8	3.2	2.6	1.8
Number of Carriers		1.0	1.0	3.5	263.4	16.6	90.0
<b>Carrier Density Levels</b>							
Uplink Power Density (dBW/Hz)		-42.8	-51.7	-58.5	-57.0	-57.1	-53.4
Downlink EIRP Density At Beam Peak		-13.9	-26.0	-27.5	-26.0	-26.1	-32.9

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



## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION		Europe/Africa 14000 - 14250	Europe/Africa 14000 - 14250	Europe/Africa 14000 - 14250	Europe/Africa 14000 - 14250	Europe/Africa 14000 - 14250	Europe/Africa 14000 - 14250
Uplink Beam Name							
Uplink Frequency (MHz)		Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Uplink Beam Polarization		-10	-10	-10	-10	-10	-10
Uplink Relative Contour Level (dB)		-3.4	-3.4	-3.4	-3.4	-3.4	-3.4
Uplink Contour G/T (dB/K)		-82.9	-75.9	-86.9	-86.9	-86.9	-86.9
Uplink SFD (dBW/m <sup>2</sup> )		42	42	42	42	42	42
Rain Rate (mm/hr)							
DOWNLINK BEAM INFORMATION		US/Mexico 11450 - 11700	US/Mexico 11450 - 11700	US/Mexico 11450 - 11700	US/Mexico 11450 - 11700	US/Mexico 11450 - 11700	US/Mexico 11450 - 11700
Downlink Beam Name							
Downlink Frequency (MHz)		Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
Downlink Beam Polarization		-8	-8	-8	-8	-8	-8
Downlink Relative Contour Level (dB)		42.3	42.3	42.3	42.3	42.3	42.3
Downlink Contour EIRP (dBW)		63	63	63	63	63	63
Rain Rate (mm/hr)							
ADJACENT SATELLITE 1		48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Satellite 1 Orbital Location		-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Power Density (dBW/Hz)		0	0	0	0	0	0
Uplink Polarization Advantage (dB)		-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink EIRP Density (dBW/Hz)		0	0	0	0	0	0
Downlink Polarization Advantage (dB)							
ADJACENT SATELLITE 2		52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Satellite 2 Orbital Location		-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Power Density (dBW/Hz)		0	0	0	0	0	0
Uplink Polarization Advantage (dB)		-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink EIRP Density (dBW/Hz)		0	0	0	0	0	0
Downlink Polarization Advantage (dB)							
CARRIER INFORMATION		36M0F3F	36M0G7W	10M3G7W	100KG7W	1M45G7W	400KG7W
Emission Designation		n/a	24575	6000	64	512	128
Information Rate (kbps)		TV/FM	QPSK	QPSK	QPSK	BPSK	QPSK
Carrier Modulation		4.0	n/a	n/a	n/a	n/a	n/a
Peak to Peak Bandwidth of EDS (MHz)		n/a	1/2 - RS	1/2 - RS	1/2 - RS	1/2	1/2
Code Rate		36000	30133	6771.1	75.4	1229	307
Occupied Bandwidth (kHz)		36000	36000	10300	100	1450	400
Allocated Bandwidth (kHz)		10.0	3.4	3.9	3.0	3.4	3.4
Minimum C/N, Clear Sky (dB)		10.0	3.4	3.6	2.8	2.7	2.7
Minimum C/N, Rain (dB)							
UPLINK EARTH STATION		6.1	6.1	6.1	6.1	6.1	2.4
Earth Station Diameter (meters)		56.8	56.8	56.8	56.8	56.8	48.9
Earth Station Gain (dBi)		20.0	20.0	20.0	20.0	20.0	20.0
Earth Station Elevation Angle							
DOWNLINK EARTH STATION		3.7	1.8	2.4	2.4	2.4	6.1
Earth Station Diameter (meters)		50.7	44.4	47.1	47.1	47.1	55.1
Earth Station Gain (dBi)		28.2	21.9	24.6	24.6	24.6	32.7
Earth Station G/T (dB/K)		20.0	20.0	20.0	20.0	20.0	20.0
Earth Station Elevation Angle							
LINK FADE TYPE		Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE		80.0	80.2	63.7	43.5	55.5	46.5
Uplink Earth Station EIRP (dBW)		-207.4	-207.4	-207.4	-207.4	-207.4	-207.4
Uplink Path Loss, Clear Sky (dB)		0.0	0.0	0.0	0.0	0.0	0.0
Uplink Rain Attenuation (dB)		-3.4	-3.4	-3.4	-3.4	-3.4	-3.4
Satellite G/T (dB/K)		228.6	228.6	228.6	228.6	228.6	228.6
Boltzman Constant (dBW/K-Hz)		-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Carrier Noise Bandwidth (dB-Hz)		22.2	23.2	13.2	12.5	12.4	9.5
Uplink C/N (dB)							
DOWNLINK PERFORMANCE		42.3	40.8	33.1	12.9	24.9	15.9
Downlink EIRP per Carrier (dBW)		-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Antenna Pointing Error (dB)		-205.6	-205.6	-205.6	-205.6	-205.6	-205.6
Downlink Path Loss, Clear Sky (dB)		0.0	0.0	0.0	0.0	0.0	0.0
Downlink Rain Attenuation (dB)		28.2	21.9	24.6	24.6	24.6	32.7
Earth Station G/T (dB/K)		228.6	228.6	228.6	228.6	228.6	228.6
Boltzman Constant (dBW/K-Hz)		-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Carrier Noise Bandwidth (dB-Hz)		17.5	10.4	11.9	11.2	11.1	16.3
Downlink C/N (dB)							
COMPOSITE LINK PERFORMANCE		22.2	23.2	13.2	12.5	12.4	9.5
C/N Uplink (dB)		17.5	10.4	11.9	11.2	11.1	16.3
C/N Downlink (dB)		n/a	n/a	26.3	25.6	25.5	22.5
C/I Intermodulation (dB)		27.0	27.0	28.3	28.2	28.6	25.3
C/I Uplink Co-Channel (dB)*		27.0	27.0	28.3	28.2	28.6	25.3
C/I Downlink Co-Channel (dB)*		26.4	27.4	17.4	16.7	16.6	13.7
C/I Uplink Adjacent Satellite 1 (dB)		21.4	13.8	15.6	14.9	14.8	20.4
C/I Downlink Adjacent Satellite 1 (dB)		26.4	27.4	17.4	16.7	16.6	13.7
C/I Uplink Adjacent Satellite 2 (dB)		22.5	16.0	17.2	16.5	16.4	21.0
C/I Downlink Adjacent Satellite 2 (dB)							
C/(N+I) Composite (dB)		13.4	7.7	7.0	6.3	6.2	6.0
Required System Margin (dB)		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)		12.4	6.7	6.0	5.3	5.2	5.0
Minimum Required C/N (dB)		-10.0	-3.4	-3.9	-3.0	-3.4	-3.4
Excess Link Margin (dB)		2.4	3.3	2.1	2.3	1.8	1.6
Number of Carriers		1.0	1.0	2.6	271.2	17.1	90.0
Carrier Density Levels		-42.8	-51.4	-61.4	-62.1	-62.2	-57.3
Uplink Power Density (dBW/Hz)		-15.7	-26.0	-27.2	-27.9	-28.0	-30.9
Downlink EIRP Density At Beam Peak							

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

## Exhibit 6: Link Budgets (continued)

<b>UPLINK BEAM INFORMATION</b>		Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa
		14000 - 14500	14000 - 14500	14000 - 14500	14000 - 14500	14000 - 14500	14000 - 14500
		Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Uplink Beam Name							
Uplink Frequency (MHz)							
Uplink Beam Polarization							
Uplink Relative Contour Level (dB)		-10	-10	-10	-10	-10	-10
Uplink Contour G/T (dB/K)		-3.4	-3.4	-3.4	-3.4	-3.4	-3.4
Uplink SFD (dBW/m <sup>2</sup> )		-82.9	-75.9	-79.9	-79.9	-79.9	-79.9
Rain Rate (mm/hr)		42	42	42	42	42	42
<b>DOWNLINK BEAM INFORMATION</b>		Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa
		10950 - 11200	10950 - 11200	10950 - 11200	10950 - 11200	10950 - 11200	10950 - 11200
		Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Downlink Beam Name							
Downlink Frequency (MHz)							
Downlink Beam Polarization							
Downlink Relative Contour Level (dB)		-8	-8	-8	-8	-8	-8
Downlink Contour EIRP (dBW)		42.3	42.3	42.3	42.3	42.3	42.3
Rain Rate (mm/hr)		42	42	42	42	42	42
<b>ADJACENT SATELLITE 1</b>		48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Satellite 1 Orbital Location							
Uplink Power Density (dBW/Hz)		-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)		0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)		-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)		0	0	0	0	0	0
<b>ADJACENT SATELLITE 2</b>		52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Satellite 2 Orbital Location							
Uplink Power Density (dBW/Hz)		-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)		0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)		-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)		0	0	0	0	0	0
<b>CARRIER INFORMATION</b>		36M0F3F	36M0G7W	10M3G7W	100KG7W	1M45G7W	400KG7W
Emission Designation							
Information Rate (kbps)		n/a	24575	6000	64	512	128
Carrier Modulation		TV/FM	QPSK	QPSK	QPSK	BPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)		4.0	n/a	n/a	n/a	n/a	n/a
Code Rate		n/a	1/2 - RS	1/2 - RS	1/2 - RS	1/2	1/2
Occupied Bandwidth (kHz)		36000	30133	6771.1	75.4	1229	307
Allocated Bandwidth (kHz)		36000	36000	10300	100	1450	400
Minimum C/N, Clear Sky (dB)		10.0	3.4	3.9	3.0	3.4	3.4
Minimum C/N, Rain (dB)		10.0	3.4	3.6	2.8	2.7	2.7
<b>UPLINK EARTH STATION</b>		6.1	6.1	6.1	6.1	6.1	2.4
Earth Station Diameter (meters)							
Earth Station Gain (dBi)		56.8	56.8	56.8	56.8	56.8	48.9
Earth Station Elevation Angle		20.0	20.0	20.0	20.0	20.0	20.0
<b>DOWNLINK EARTH STATION</b>		3.7	2.4	1.8	1.8	2.4	6.1
Earth Station Diameter (meters)							
Earth Station Gain (dBi)		50.7	47.1	44.4	44.4	47.1	55.1
Earth Station G/T (dB/K)		28.2	24.6	21.9	21.9	24.6	32.7
Earth Station Elevation Angle		20.0	20.0	20.0	20.0	20.0	20.0
<b>LINK FADE TYPE</b>		Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
<b>UPLINK PERFORMANCE</b>		80.0	80.2	71.1	50.9	60.5	49.0
Uplink Earth Station EIRP (dBW)							
Uplink Path Loss, Clear Sky (dB)		-207.4	-207.4	-207.4	-207.4	-207.4	-207.4
Uplink Rain Attenuation (dB)		0.0	0.0	0.0	0.0	0.0	0.0
Satellite G/T (dB/K)		-3.4	-3.4	-3.4	-3.4	-3.4	-3.4
Boltzman Constant (dBW/K-Hz)		228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)		-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Uplink C/N (dB)		22.2	23.2	20.6	19.9	17.4	11.9
<b>DOWNLINK PERFORMANCE</b>		42.3	40.8	33.5	13.3	22.9	11.4
Downlink EIRP per Carrier (dBW)							
Antenna Pointing Error (dB)		-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)		-205.6	-205.6	-205.6	-205.6	-205.6	-205.6
Downlink Rain Attenuation (dB)		0.0	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)		28.2	24.6	21.9	21.9	24.6	32.7
Boltzman Constant (dBW/K-Hz)		228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)		-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Downlink C/N (dB)		17.5	13.1	9.6	9.0	9.1	11.7
<b>COMPOSITE LINK PERFORMANCE</b>		22.2	23.2	20.6	19.9	17.4	11.9
C/N Uplink (dB)							
C/N Downlink (dB)		17.5	13.1	9.6	9.0	9.1	11.7
C/I Intermodulation (dB)		n/a	n/a	26.7	26.0	23.5	18.0
C/I Uplink Co-Channel (dB)*		27.0	27.0	28.7	28.7	26.6	20.7
C/I Downlink Co-Channel (dB)*		27.0	27.0	28.7	28.7	26.6	20.7
C/I Uplink Adjacent Satellite 1 (dB)		26.4	27.4	24.8	24.1	21.6	16.1
C/I Downlink Adjacent Satellite 1 (dB)		21.4	16.8	13.0	12.3	12.8	15.8
C/I Uplink Adjacent Satellite 2 (dB)		26.4	27.4	24.8	24.1	21.6	16.1
C/I Downlink Adjacent Satellite 2 (dB)		22.5	18.4	15.2	14.5	14.4	16.4
C/(N+I) Composite (dB)		13.4	10.2	6.8	6.1	6.0	5.8
Required System Margin (dB)		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)		12.4	9.2	5.8	5.1	5.0	4.8
Minimum Required C/N (dB)		-10.0	-3.4	-3.9	-3.0	-3.4	-3.4
Excess Link Margin (dB)		2.4	5.8	1.9	2.1	1.6	1.4
Number of Carriers		1.0	1.0	2.3	244.9	24.8	90.0
<b>Carrier Density Levels</b>		-42.8	-51.4	-54.0	-54.7	-57.2	-54.8
Uplink Power Density (dBW/Hz)							
Downlink EIRP Density At Beam Peak		-15.7	-26.0	-26.8	-27.5	-30.0	-35.5

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

## Exhibit 6: Link Budgets (continued)

<b>UPLINK BEAM INFORMATION</b>		US/Mexico	US/Mexico	US/Mexico	US/Mexico	US/Mexico	US/Mexico
Uplink Beam Name		14000 - 14250	14000 - 14250	14000 - 14250	14000 - 14250	14000 - 14250	14000 - 14250
Uplink Frequency (MHz)		Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Uplink Beam Polarization		-10	-10	-10	-10	-10	-10
Uplink Relative Contour Level (dB)		-3.2	-3.2	-3.2	-3.2	-3.2	-3.2
Uplink Contour G/T (dB/K)		-80.8	-73.8	-75.8	-75.8	-75.8	-75.8
Uplink SFD (dBW/m <sup>2</sup> )		63	63	63	63	63	63
Rain Rate (mm/hr)							
<b>DOWNLINK BEAM INFORMATION</b>		South America	South America	South America	South America	South America	South America
Downlink Beam Name		11700 - 11950	11700 - 11950	11700 - 11950	11700 - 11950	11700 - 11950	11700 - 11950
Downlink Frequency (MHz)		Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Downlink Beam Polarization		-8	-8	-8	-8	-8	-8
Downlink Relative Contour Level (dB)		44.1	44.1	44.1	44.1	44.1	44.1
Downlink Contour EIRP (dBW)		95	95	95	95	95	95
Rain Rate (mm/hr)							
<b>ADJACENT SATELLITE 1</b>		48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Satellite 1 Orbital Location		-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Power Density (dBW/Hz)		0	0	0	0	0	0
Uplink Polarization Advantage (dB)		-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink EIRP Density (dBW/Hz)		0	0	0	0	0	0
Downlink Polarization Advantage (dB)							
<b>ADJACENT SATELLITE 2</b>		52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Satellite 2 Orbital Location		-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Power Density (dBW/Hz)		0	0	0	0	0	0
Uplink Polarization Advantage (dB)		-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink EIRP Density (dBW/Hz)		0	0	0	0	0	0
Downlink Polarization Advantage (dB)							
<b>CARRIER INFORMATION</b>		36M0F3F	36M0G7W	10M3G7W	100KG7W	1M45G7W	400KG7W
Emission Designation		n/a	24575	6000	64	512	128
Information Rate (kbps)		TV/FM	QPSK	QPSK	QPSK	BPSK	QPSK
Carrier Modulation		4.0	n/a	n/a	n/a	n/a	n/a
Peak to Peak Bandwidth of EDS (MHz)		n/a	1/2 - RS	1/2 - RS	1/2 - RS	1/2	1/2
Code Rate		36000	30133	6771.1	75.4	1229	307
Occupied Bandwidth (kHz)		36000	36000	10300	100	1450	400
Allocated Bandwidth (kHz)		10.0	3.4	3.9	3.0	3.4	3.4
Minimum C/N, Clear Sky (dB)		10.0	3.4	3.6	2.8	2.7	2.7
Minimum C/N, Rain (dB)							
<b>UPLINK EARTH STATION</b>		6.1	6.1	6.1	6.1	6.1	2.4
Earth Station Diameter (meters)		56.8	56.8	56.8	56.8	56.8	48.9
Earth Station Gain (dBi)		20.0	20.0	20.0	20.0	20.0	20.0
Earth Station Elevation Angle							
<b>DOWNLINK EARTH STATION</b>		3.0	2.4	2.4	1.8	2.4	6.1
Earth Station Diameter (meters)		48.8	47.1	47.1	44.4	47.1	55.1
Earth Station Gain (dBi)		26.3	24.6	24.6	21.9	24.6	32.7
Earth Station G/T (dB/K)		20.0	20.0	20.0	20.0	20.0	20.0
Earth Station Elevation Angle							
<b>LINK FADE TYPE</b>		Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
<b>UPLINK PERFORMANCE</b>		82.1	80.0	72.4	54.7	64.2	51.9
Uplink Earth Station EIRP (dBW)		-207.4	-207.4	-207.4	-207.4	-207.4	-207.4
Uplink Path Loss, Clear Sky (dB)		0.0	0.0	0.0	0.0	0.0	0.0
Uplink Rain Attenuation (dB)		-3.2	-3.2	-3.2	-3.2	-3.2	-3.2
Satellite G/T (dB/K)		228.6	228.6	228.6	228.6	228.6	228.6
Boltzman Constant (dBW/K-Hz)		-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Carrier Noise Bandwidth (dB-Hz)		24.5	23.2	22.1	23.9	21.3	15.1
Uplink C/N (dB)							
<b>DOWNLINK PERFORMANCE</b>		44.1	40.8	32.5	14.8	24.3	12.0
Downlink EIRP per Carrier (dBW)		-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Antenna Pointing Error (dB)		-205.6	-205.6	-205.6	-205.6	-205.6	-205.6
Downlink Path Loss, Clear Sky (dB)		0.0	0.0	0.0	0.0	0.0	0.0
Downlink Rain Attenuation (dB)		26.3	24.6	24.6	21.9	24.6	32.7
Earth Station G/T (dB/K)		228.6	228.6	228.6	228.6	228.6	228.6
Boltzman Constant (dBW/K-Hz)		-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Carrier Noise Bandwidth (dB-Hz)		17.4	13.2	11.3	10.5	10.5	12.4
Downlink C/N (dB)							
<b>COMPOSITE LINK PERFORMANCE</b>		24.5	23.2	22.1	23.9	21.3	15.1
C/N Uplink (dB)		17.4	13.2	11.3	10.5	10.5	12.4
C/N Downlink (dB)		n/a	n/a	23.9	25.7	23.1	16.8
C/I Intermodulation (dB)		27.0	27.0	25.9	28.4	26.2	19.6
C/I Uplink Co-Channel (dB)*		27.0	27.0	25.9	28.4	26.2	19.6
C/I Downlink Co-Channel (dB)*		28.5	27.2	26.1	27.9	25.3	19.1
C/I Uplink Adjacent Satellite 1 (dB)		21.2	16.8	15.0	13.8	14.2	16.5
C/I Downlink Adjacent Satellite 1 (dB)		28.5	27.2	26.1	27.9	25.3	19.1
C/I Uplink Adjacent Satellite 2 (dB)		22.5	18.4	16.6	16.0	15.8	17.1
C/I Downlink Adjacent Satellite 2 (dB)							
C/(N+I) Composite (dB)		13.8	10.2	8.3	7.7	7.6	7.0
Required System Margin (dB)		12.8	9.2	7.3	6.7	6.6	6.0
Net C/(N+I) Composite (dB)		-10.0	-3.4	-3.9	-3.0	-3.4	-3.4
Minimum Required C/N (dB)		2.8	5.8	3.4	3.7	3.2	2.6
Excess Link Margin (dB)		1.0	1.0	3.5	262.7	24.8	90.0
Number of Carriers							
<b>Carrier Density Levels</b>		-40.7	-51.6	-52.7	-50.9	-53.5	-51.9
Uplink Power Density (dBW/Hz)		-13.9	-26.0	-27.8	-26.0	-28.6	-34.8
Downlink EIRP Density At Beam Peak							

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION	US/Mexico 14000 - 14250	US/Mexico 14000 - 14250	US/Mexico 14000 - 14250	US/Mexico 14000 - 14250	US/Mexico 14000 - 14250	US/Mexico 14000 - 14250
Uplink Beam Name	US/Mexico	US/Mexico	US/Mexico	US/Mexico	US/Mexico	US/Mexico
Uplink Frequency (MHz)	14000 - 14250	14000 - 14250	14000 - 14250	14000 - 14250	14000 - 14250	14000 - 14250
Uplink Beam Polarization	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Uplink Relative Contour Level (dB)	-10	-10	-10	-10	-10	-10
Uplink Contour G/T (dB/K)	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2
Uplink SFD (dBW/m <sup>2</sup> )	-82.8	-75.8	-85.8	-85.8	-85.8	-85.8
Rain Rate (mm/hr)	63	63	63	63	63	63
DOWNLINK BEAM INFORMATION	Europe/Africa 11450 - 11700	Europe/Africa 11450 - 11700	Europe/Africa 11450 - 11700	Europe/Africa 11450 - 11700	Europe/Africa 11450 - 11700	Europe/Africa 11450 - 11700
Downlink Beam Name	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa
Downlink Frequency (MHz)	11450 - 11700	11450 - 11700	11450 - 11700	11450 - 11700	11450 - 11700	11450 - 11700
Downlink Beam Polarization	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
Downlink Relative Contour Level (dB)	-8	-8	-8	-8	-8	-8
Downlink Contour EIRP (dBW)	42.3	42.3	42.3	42.3	42.3	42.3
Rain Rate (mm/hr)	42	42	42	42	42	42
ADJACENT SATELLITE 1	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0	0	0
ADJACENT SATELLITE 2	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0	0	0
CARRIER INFORMATION	36M0F3F	36M0G7W	10M3G7W	100KG7W	1M45G7W	400KG7W
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W	1M45G7W	400KG7W
Information Rate (kbps)	n/a	24575	6000	64	512	128
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK	BPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4.0	n/a	n/a	n/a	n/a	n/a
Code Rate	n/a	1/2 - RS	1/2 - RS	1/2 - RS	1/2	1/2
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4	1229	307
Allocated Bandwidth (kHz)	36000	36000	10300	100	1450	400
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.9	3.0	3.4	3.4
Minimum C/N, Rain (dB)	10.0	3.4	3.6	2.8	2.7	2.7
UPLINK EARTHSTATION	6.1	6.1	6.1	6.1	6.1	2.4
Earth Station Diameter (meters)	6.1	6.1	6.1	6.1	6.1	2.4
Earth Station Gain (dBi)	56.8	56.8	56.8	56.8	56.8	48.9
Earth Station Elevation Angle	20.0	20.0	20.0	20.0	20.0	20.0
DOWNLINK EARTHSTATION	3.7	1.8	2.4	2.4	2.4	6.1
Earth Station Diameter (meters)	3.7	1.8	2.4	2.4	2.4	6.1
Earth Station Gain (dBi)	50.7	44.4	47.1	47.1	47.1	55.1
Earth Station G/T (dB/K)	28.2	21.9	24.6	24.6	24.6	32.7
Earth Station Elevation Angle	20.0	20.0	20.0	20.0	20.0	20.0
LINKRADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
Linkade Type	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE	80.1	80.3	64.6	44.4	56.4	47.4
Uplink Earth Station EIRP (dBW)	80.1	80.3	64.6	44.4	56.4	47.4
Uplink Path Loss, Clear Sky (dB)	-207.4	-207.4	-207.4	-207.4	-207.4	-207.4
Uplink Rain Attenuation (dB)	0.0	0.0	0.0	0.0	0.0	0.0
Satellite G/T (dB/K)	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Uplink C/N (dB)	22.5	23.5	14.3	13.7	13.5	10.5
DOWNLINK PERFORMANCE	42.3	40.8	32.9	12.7	24.8	15.7
Downlink EIRP per Carrier (dBW)	42.3	40.8	32.9	12.7	24.8	15.7
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-205.6	-205.6	-205.6	-205.6	-205.6	-205.6
Downlink Rain Attenuation (dB)	0.0	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	28.2	21.9	24.6	24.6	24.6	32.7
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Downlink C/N (dB)	17.5	10.4	11.7	11.1	11.0	16.1
COMPOSITE LINK PERFORMANCE	22.5	23.5	14.3	13.7	13.5	10.5
C/N Uplink (dB)	22.5	23.5	14.3	13.7	13.5	10.5
C/N Downlink (dB)	17.5	10.4	11.7	11.1	11.0	16.1
C/I Intermodulation (dB)	n/a	n/a	26.1	25.4	25.3	22.3
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.1	28.1	28.5	25.0
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.1	28.1	28.5	25.0
C/I Uplink Adjacent Satellite 1 (dB)	26.5	27.5	18.3	17.7	17.5	14.5
C/I Downlink Adjacent Satellite 1 (dB)	21.4	13.8	15.4	14.8	14.7	20.1
C/I Uplink Adjacent Satellite 2 (dB)	26.5	27.5	18.3	17.7	17.5	14.5
C/I Downlink Adjacent Satellite 2 (dB)	22.5	16.0	17.0	16.4	16.2	20.8
C/(N+I) Composite (dB)	13.5	7.7	7.3	6.6	6.5	6.7
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	12.5	6.7	6.3	5.6	5.5	5.7
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4	-3.4
Excess Link Margin (dB)	2.5	3.3	2.4	2.6	2.1	2.3
Number of Carriers	1.0	1.0	2.7	279.4	17.6	90.0
Carrier Density Levels	-42.7	-51.3	-60.5	-61.2	-61.3	-56.4
Uplink Power Density (dBW/Hz)	-42.7	-51.3	-60.5	-61.2	-61.3	-56.4
Downlink EIRP Density At Beam Peak	-15.7	-26.0	-27.4	-28.0	-28.1	-31.2

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION						
Uplink Beam Name	US/Mexico	US/Mexico	US/Mexico	US/Mexico	US/Mexico	US/Mexico
Uplink Frequency (MHz)	13750 - 14250	13750 - 14250	13750 - 14250	13750 - 14250	13750 - 14250	13750 - 14250
Uplink Beam Polarization	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Uplink Relative Contour Level (dB)	-10	-10	-10	-10	-10	-10
Uplink Contour G/T (dB/K)	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2
Uplink SFD (dBW/m <sup>2</sup> )	-82.8	-74.8	-84.8	-84.8	-84.8	-84.8
Rain Rate (mm/hr)	63	63	63	63	63	63
DOWNLINK BEAM INFORMATION						
Downlink Beam Name	US/Mexico	US/Mexico	US/Mexico	US/Mexico	US/Mexico	US/Mexico
Downlink Frequency (MHz)	10950 - 11200 11450 - 11700	10950 - 11200 11450 - 11700	10950 - 11200 11450 - 11700	10950 - 11200 11450 - 11700	10950 - 11200 11450 - 11700	10950 - 11200 11450 - 11700
Downlink Beam Polarization	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
Downlink Relative Contour Level (dB)	-8	-8	-8	-8	-8	-8
Downlink Contour EIRP (dBW)	42.3	42.3	42.3	42.3	42.3	42.3
Rain Rate (mm/hr)	63	63	63	63	63	63
ADJACENT SATELLITE 1						
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0	0	0
ADJACENT SATELLITE 2						
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0	0	0
CARRIER INFORMATION						
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W	1M45G7W	400KG7W
Information Rate (kbps)	n/a	24575	6000	64	512	128
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK	BPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4.0	n/a	n/a	n/a	n/a	n/a
Code Rate	n/a	1/2 - RS	1/2 - RS	1/2 - RS	1/2	1/2
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4	1229	307
Allocated Bandwidth (kHz)	36000	36000	10300	100	1450	400
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.9	3.0	3.4	3.4
Minimum C/N, Rain (dB)	10.0	3.4	3.6	2.8	2.7	2.7
UPLINK EARTH STATION						
Earth Station Diameter (meters)	6.1	6.1	6.1	6.1	6.1	2.4
Earth Station Gain (dBi)	56.8	56.8	56.8	56.8	56.8	48.9
Earth Station Elevation Angle	20.0	20.0	20.0	20.0	20.0	20.0
DOWNLINK EARTH STATION						
Earth Station Diameter (meters)	3.7	1.8	2.4	2.4	2.4	6.1
Earth Station Gain (dBi)	50.7	44.4	47.1	47.1	47.1	55.1
Earth Station G/T (dB/K)	28.2	21.9	24.6	24.6	24.6	32.7
Earth Station Elevation Angle	20.0	20.0	20.0	20.0	20.0	20.0
LINK FADE TYPE						
Link Fade Type	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE						
Uplink Earth Station EIRP (dBW)	80.1	81.3	65.6	45.4	57.4	47.7
Uplink Path Loss, Clear Sky (dB)	-207.4	-207.4	-207.4	-207.4	-207.4	-207.4
Uplink Rain Attenuation (dB)	0.0	0.0	0.0	0.0	0.0	0.0
Satellite G/T (dB/K)	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Uplink C/N (dB)	22.5	24.5	15.3	14.7	14.5	10.9
DOWNLINK PERFORMANCE						
Downlink EIRP per Carrier (dBW)	42.3	40.8	32.9	12.8	24.8	15.1
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-205.6	-205.6	-205.6	-205.6	-205.6	-205.6
Downlink Rain Attenuation (dB)	0.0	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	28.2	21.9	24.6	24.6	24.6	32.7
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Downlink C/N (dB)	17.5	10.4	11.7	11.1	11.0	15.4
COMPOSITE LINK PERFORMANCE						
C/N Uplink (dB)	22.5	24.5	15.3	14.7	14.5	10.9
C/N Downlink (dB)	17.5	10.4	11.7	11.1	11.0	15.4
C/I Intermodulation (dB)	n/a	n/a	26.1	25.4	25.3	21.7
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.1	28.1	28.5	24.4
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.1	28.1	28.5	24.4
C/I Uplink Adjacent Satellite 1 (dB)	26.5	28.5	19.3	18.7	18.6	14.9
C/I Downlink Adjacent Satellite 1 (dB)	21.4	13.8	15.4	14.8	14.7	19.5
C/I Uplink Adjacent Satellite 2 (dB)	26.5	28.5	19.3	18.7	18.6	14.9
C/I Downlink Adjacent Satellite 2 (dB)	22.5	16.0	17.0	16.4	16.2	20.1
C/(N+I) Composite (dB)	13.5	7.8	7.6	7.0	6.9	6.8
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	12.5	6.8	6.6	6.0	5.9	5.8
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4	-3.4
Excess Link Margin (dB)	2.5	3.4	2.7	3.0	2.5	2.4
Number of Carriers	1.0	1.0	2.7	279.1	17.6	90.0
Carrier Density Levels						
Uplink Power Density (dBW/Hz)	-42.7	-50.3	-59.5	-60.2	-60.3	-56.1
Downlink EIRP Density At Beam Peak	-15.7	-26.0	-27.4	-28.0	-28.1	-31.8

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION		South America 13750 - 14250	South America 13750 - 14250	South America 13750 - 14250	South America 13750 - 14250	South America 13750 - 14250	South America 13750 - 14250
Uplink Beam Name							
Uplink Frequency (MHz)		13750 - 14250	13750 - 14250	13750 - 14250	13750 - 14250	13750 - 14250	13750 - 14250
Uplink Beam Polarization		Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
Uplink Relative Contour Level (dB)		-8	-8	-8	-8	-8	-8
Uplink Contour G/T (dB/K)		-1.5	-1.5	-1.5	-1.5	-1.5	-1.5
Uplink SFD (dBW/m <sup>2</sup> )		-82.6	-75.6	-85.6	-85.6	-85.6	-85.6
Rain Rate (mm/hr)		95	95	95	95	95	95
DOWNLINK BEAM INFORMATION							
Downlink Beam Name							
Downlink Frequency (MHz)		Europe/Africa 10950 - 11200 11450 - 11700	Europe/Africa 10950 - 11200 11450 - 11700	Europe/Africa 10950 - 11200 11450 - 11700	Europe/Africa 10950 - 11200 11450 - 11700	Europe/Africa 10950 - 11200 11450 - 11700	Europe/Africa 10950 - 11200 11450 - 11700
Downlink Beam Polarization		Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Downlink Relative Contour Level (dB)		-8	-8	-8	-8	-8	-8
Downlink Contour EIRP (dBW)		42.3	42.3	42.3	42.3	42.3	42.3
Rain Rate (mm/hr)		42	42	42	42	42	42
ADJACENT SATELLITE 1							
Satellite 1 Orbital Location		48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)		-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)		0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)		-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)		0	0	0	0	0	0
ADJACENT SATELLITE 2							
Satellite 2 Orbital Location		52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)		-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)		0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)		-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)		0	0	0	0	0	0
CARRIER INFORMATION							
Emission Designation		36M0F3F	36M0G7W	10M3G7W	100KG7W	1M45G7W	400KG7W
Information Rate (kbps)		n/a	24575	64	512	512	512
Carrier Modulation		TV/FM	QPSK	QPSK	QPSK	BPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)		4.0	n/a	n/a	n/a	n/a	n/a
Code Rate		n/a	1/2 - RS	1/2 - RS	1/2 - RS	1/2	1/2
Occupied Bandwidth (kHz)		36000	30133	6771.1	75.4	1229	307
Allocated Bandwidth (kHz)		36000	36000	10300	100	1450	400
Minimum C/N, Clear Sky (dB)		10.0	3.4	3.9	3.0	3.4	3.4
Minimum C/N, Rain (dB)		10.0	3.4	3.6	2.8	2.7	2.7
UPLINK EARTH STATION							
Earth Station Diameter (meters)		6.1	6.1	6.1	6.1	6.1	2.4
Earth Station Gain (dBi)		56.8	56.8	56.8	56.8	56.8	48.9
Earth Station Elevation Angle		20.0	20.0	20.0	20.0	20.0	20.0
DOWNLINK EARTH STATION							
Earth Station Diameter (meters)		3.7	2.4	2.4	2.4	2.4	6.1
Earth Station Gain (dBi)		50.7	47.1	47.1	47.1	47.1	55.1
Earth Station G/T (dB/K)		28.2	24.6	24.6	24.6	24.6	32.7
Earth Station Elevation Angle		20.0	20.0	20.0	20.0	20.0	20.0
LINK FADE TYPE							
		Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE							
Uplink Earth Station EIRP (dBW)		80.3	80.5	64.9	44.9	56.8	47.1
Uplink Path Loss, Clear Sky (dB)		-207.4	-207.4	-207.4	-207.4	-207.4	-207.4
Uplink Rain Attenuation (dB)		0.0	0.0	0.0	0.0	0.0	0.0
Satellite G/T (dB/K)		-1.5	-1.5	-1.5	-1.5	-1.5	-1.5
Boltzman Constant (dBW/K-Hz)		228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)		-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Uplink C/N (dB)		24.4	25.4	16.3	15.8	15.6	11.9
DOWNLINK PERFORMANCE							
Downlink EIRP per Carrier (dBW)		42.3	40.8	33.0	13.0	25.0	15.2
Antenna Pointing Error (dB)		-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)		-205.6	-205.6	-205.6	-205.6	-205.6	-205.6
Downlink Rain Attenuation (dB)		0.0	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)		28.2	24.6	24.6	24.6	24.6	32.7
Boltzman Constant (dBW/K-Hz)		228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)		-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Downlink C/N (dB)		17.5	13.1	11.9	11.3	11.2	15.6
COMPOSITE LINK PERFORMANCE							
C/N Uplink (dB)		24.4	25.4	16.3	15.8	15.6	11.9
C/N Downlink (dB)		17.5	13.1	11.9	11.3	11.2	15.6
C/I Intermodulation (dB)		n/a	n/a	26.2	25.7	25.5	21.8
C/I Uplink Co-Channel (dB)*		27.0	27.0	28.3	28.3	28.7	24.5
C/I Downlink Co-Channel (dB)*		27.0	27.0	28.3	28.3	28.7	24.5
C/I Uplink Adjacent Satellite 1 (dB)		28.7	29.7	20.6	20.1	19.9	16.2
C/I Downlink Adjacent Satellite 1 (dB)		21.4	16.8	15.5	15.0	14.9	19.7
C/I Uplink Adjacent Satellite 2 (dB)		28.7	29.7	20.6	20.1	19.9	16.2
C/I Downlink Adjacent Satellite 2 (dB)		21.4	18.4	17.1	16.6	16.4	20.3
C/(N+I) Composite (dB)		13.9	10.3	8.0	7.5	7.3	7.6
Required System Margin (dB)		-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)		12.9	9.3	7.0	6.5	6.3	6.6
Minimum Required C/N (dB)		-10.0	-3.4	-3.9	-3.0	-3.4	-3.4
Excess Link Margin (dB)		2.9	5.9	3.1	3.5	2.9	3.2
Number of Carriers		1.0	1.0	2.6	265.6	16.8	90.0
Carrier Density Levels							
Uplink Power Density (dBW/Hz)		-42.5	-51.1	-60.2	-60.7	-60.9	-56.7
Downlink EIRP Density At Beam Peak		-15.7	-26.0	-27.3	-27.8	-27.9	-31.7

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

## Exhibit 6: Link Budgets (continued)

<b>UPLINK BEAM INFORMATION</b>						
Uplink Beam Name	South America	South America	South America	South America	South America	South America
Uplink Frequency (MHz)	14000 - 14500	14000 - 14500	14000 - 14500	14000 - 14500	14000 - 14500	14000 - 14500
Uplink Beam Polarization	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Uplink Relative Contour Level (dB)	-8	-8	-8	-8	-8	-8
Uplink Contour G/T (dB/K)	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5
Uplink SFD (dBW/m <sup>2</sup> )	-82.6	-73.6	-84.6	-84.6	-84.6	-84.6
Rain Rate (mm/hr)	95	95	95	95	95	95
<b>DOWNLINK BEAM INFORMATION</b>						
Downlink Beam Name	South America	South America	South America	South America	South America	South America
Downlink Frequency (MHz)	11450 - 11950	11450 - 11950	11450 - 11950	11450 - 11950	11450 - 11950	11450 - 11950
Downlink Beam Polarization	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Downlink Relative Contour Level (dB)	-8	-8	-8	-8	-8	-8
Downlink Contour EIRP (dBW)	44.1	44.1	44.1	44.1	44.1	44.1
Rain Rate (mm/hr)	95	95	95	95	95	95
<b>ADJACENT SATELLITE 1</b>						
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0	0	0
<b>ADJACENT SATELLITE 2</b>						
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0	0	0
<b>CARRIER INFORMATION</b>						
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W	1M45G7W	400KG7W
Information Rate (kbps)	n/a	24575	6000	64	512	128
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK	BPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4.0	n/a	n/a	n/a	n/a	n/a
Code Rate	n/a	1/2 - RS	1/2 - RS	1/2 - RS	1/2	1/2
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4	1229	307
Allocated Bandwidth (kHz)	36000	36000	10300	100	1450	400
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.9	3.0	3.4	3.4
Minimum C/N, Rain (dB)	10.0	3.4	3.6	2.8	2.7	2.7
<b>UPLINK EARTH STATION</b>						
Earth Station Diameter (meters)	6.1	6.1	6.1	6.1	6.1	2.4
Earth Station Gain (dBi)	56.8	56.8	56.8	56.8	56.8	48.9
Earth Station Elevation Angle	20.0	20.0	20.0	20.0	20.0	20.0
<b>DOWNLINK EARTH STATION</b>						
Earth Station Diameter (meters)	3.7	2.4	2.4	2.4	2.4	6.1
Earth Station Gain (dBi)	50.7	47.1	47.1	47.1	47.1	55.1
Earth Station G/T (dB/K)	28.2	24.6	24.6	24.6	24.6	32.7
Earth Station Elevation Angle	20.0	20.0	20.0	20.0	20.0	20.0
<b>LINK FADE TYPE</b>						
	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
<b>UPLINK PERFORMANCE</b>						
Uplink Earth Station EIRP (dBW)	80.3	80.2	65.2	45.1	57.1	47.3
Uplink Path Loss, Clear Sky (dB)	-207.4	-207.4	-207.4	-207.4	-207.4	-207.4
Uplink Rain Attenuation (dB)	0.0	0.0	0.0	0.0	0.0	0.0
Satellite G/T (dB/K)	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Uplink C/N (dB)	24.4	25.1	16.6	16.0	15.9	12.1
<b>DOWNLINK PERFORMANCE</b>						
Downlink EIRP per Carrier (dBW)	44.1	40.8	34.1	14.0	26.0	16.2
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-205.6	-205.6	-205.6	-205.6	-205.6	-205.6
Downlink Rain Attenuation (dB)	0.0	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	28.2	24.6	24.6	24.6	24.6	32.7
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Downlink C/N (dB)	19.3	13.2	12.9	12.3	12.2	16.6
<b>COMPOSITE LINK PERFORMANCE</b>						
C/N Uplink (dB)	24.4	25.1	16.6	16.0	15.9	12.1
C/N Downlink (dB)	19.3	13.2	12.9	12.3	12.2	16.6
C/I Intermodulation (dB)	n/a	n/a	25.5	24.9	24.7	21.0
C/I Uplink Co-Channel (dB)*	27.0	27.0	27.5	27.5	27.9	23.7
C/I Downlink Co-Channel (dB)*	27.0	27.0	27.5	27.5	27.9	23.7
C/I Uplink Adjacent Satellite 1 (dB)	28.7	29.4	20.9	20.3	20.2	16.4
C/I Downlink Adjacent Satellite 1 (dB)	23.2	16.8	16.6	16.0	15.9	20.6
C/I Uplink Adjacent Satellite 2 (dB)	28.7	29.4	20.9	20.3	20.2	16.4
C/I Downlink Adjacent Satellite 2 (dB)	24.3	18.4	18.2	17.6	17.5	21.2
C/(N+I) Composite (dB)	15.1	10.3	8.8	8.2	8.1	7.9
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	14.1	9.3	7.8	7.2	7.1	6.9
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4	-3.4
Excess Link Margin (dB)	4.1	5.9	3.9	4.2	3.7	3.5
Number of Carriers	1.0	1.0	3.1	318.6	20.1	90.0
<b>Carrier Density Levels</b>						
Uplink Power Density (dBW/Hz)	-42.5	-51.4	-59.9	-60.5	-60.7	-56.5
Downlink EIRP Density At Beam Peak	-13.9	-26.0	-26.2	-26.8	-26.9	-30.7

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION	South America 13750 - 14000	South America 13750 - 14000	South America 13750 - 14000	South America 13750 - 14000	South America 13750 - 14000	South America 13750 - 14000
Uplink Beam Name	South America 13750 - 14000	South America 13750 - 14000	South America 13750 - 14000	South America 13750 - 14000	South America 13750 - 14000	South America 13750 - 14000
Uplink Frequency (MHz)	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Uplink Beam Polarization	-8	-8	-8	-8	-8	-8
Uplink Relative Contour Level (dB)	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5
Uplink Contour G/T (dB/K)	-82.6	-75.6	-83.6	-83.6	-83.6	-83.6
Uplink SFD (dBW/m <sup>2</sup> )	95	95	95	95	95	95
Rain Rate (mm/hr)						
DOWNLINK BEAM INFORMATION	US/Mexico 10950 - 11200	US/Mexico 10950 - 11200	US/Mexico 10950 - 11200	US/Mexico 10950 - 11200	US/Mexico 10950 - 11200	US/Mexico 10950 - 11200
Downlink Beam Name	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical	Horizontal/Vertical
Downlink Frequency (MHz)	-8	-8	-8	-8	-8	-8
Downlink Beam Polarization	42.3	42.3	42.3	42.3	42.3	42.3
Downlink Relative Contour Level (dB)	63	63	63	63	63	63
Downlink Contour EIRP (dBW)						
Rain Rate (mm/hr)						
ADJACENT SATELLITE 1	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Satellite 1 Orbital Location	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Power Density (dBW/Hz)	0	0	0	0	0	0
Uplink Polarization Advantage (dB)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink EIRP Density (dBW/Hz)	0	0	0	0	0	0
Downlink Polarization Advantage (dB)						
ADJACENT SATELLITE 2	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Satellite 2 Orbital Location	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Power Density (dBW/Hz)	0	0	0	0	0	0
Uplink Polarization Advantage (dB)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink EIRP Density (dBW/Hz)	0	0	0	0	0	0
Downlink Polarization Advantage (dB)						
CARRIER INFORMATION	36M0F3F	36M0G7W	10M3G7W	100KG7W	1M45G7W	400KG7W
Emission Designation	n/a	24575	6000	64	512	128
Information Rate (kbps)	TV/FM	QPSK	QPSK	QPSK	BPSK	QPSK
Carrier Modulation	4.0	n/a	n/a	n/a	n/a	n/a
Peak to Peak Bandwidth of EDS (MHz)	n/a	1/2 - RS	1/2 - RS	1/2 - RS	1/2	1/2
Code Rate	36000	30133	6771.1	75.4	1229	307
Occupied Bandwidth (kHz)	36000	36000	10300	100	1450	400
Allocated Bandwidth (kHz)	10.0	3.4	3.9	3.0	3.4	3.4
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.6	2.8	2.7	2.7
Minimum C/N, Rain (dB)						
UPLINK EARTH STATION	6.1	6.1	6.1	6.1	6.1	2.4
Earth Station Diameter (meters)	56.8	56.8	56.8	56.8	56.8	48.9
Earth Station Gain (dBi)	20.0	20.0	20.0	20.0	20.0	20.0
Earth Station Elevation Angle						
DOWNLINK EARTH STATION	3.7	2.4	2.4	2.4	2.4	6.1
Earth Station Diameter (meters)	50.7	47.1	47.1	47.1	47.1	55.1
Earth Station Gain (dBi)	28.2	24.6	24.6	24.6	24.6	32.7
Earth Station G/T (dB/K)	20.0	20.0	20.0	20.0	20.0	20.0
Earth Station Elevation Angle						
LINK MEDIA TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE	80.3	80.5	66.8	46.7	58.7	48.0
Uplink Earth Station EIRP (dBW)	-207.4	-207.4	-207.4	-207.4	-207.4	-207.4
Uplink Path Loss, Clear Sky (dB)	0.0	0.0	0.0	0.0	0.0	0.0
Uplink Rain Attenuation (dB)	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5
Satellite G/T (dB/K)	228.6	228.6	228.6	228.6	228.6	228.6
Boltzman Constant (dBW/K-Hz)	-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Carrier Noise Bandwidth (dB-Hz)	24.4	25.4	18.2	17.7	17.5	12.8
Uplink C/N (dB)						
DOWNLINK PERFORMANCE	42.3	40.8	32.9	12.9	24.8	14.1
Downlink EIRP per Carrier (dBW)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Antenna Pointing Error (dB)	-205.6	-205.6	-205.6	-205.6	-205.6	-205.6
Downlink Path Loss, Clear Sky (dB)	0.0	0.0	0.0	0.0	0.0	0.0
Downlink Rain Attenuation (dB)	28.2	24.6	24.6	24.6	24.6	32.7
Earth Station G/T (dB/K)	228.6	228.6	228.6	228.6	228.6	228.6
Boltzman Constant (dBW/K-Hz)	-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Carrier Noise Bandwidth (dB-Hz)	17.5	13.1	11.8	11.2	11.1	14.5
Downlink C/N (dB)						
COMPOSITE LINK PERFORMANCE	24.4	25.4	18.2	17.7	17.5	12.8
C/N Uplink (dB)	17.5	13.1	11.8	11.2	11.1	14.5
C/N Downlink (dB)	n/a	n/a	26.1	25.6	25.4	20.7
C/I Intermodulation (dB)	27.0	27.0	28.2	28.2	28.6	23.4
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.2	28.2	28.6	23.4
C/I Downlink Co-Channel (dB)*	28.7	29.7	22.5	22.0	21.8	17.1
C/I Uplink Adjacent Satellite 1 (dB)	21.4	16.8	15.5	14.9	14.8	18.6
C/I Downlink Adjacent Satellite 1 (dB)	28.7	29.7	22.5	22.0	21.8	17.1
C/I Uplink Adjacent Satellite 2 (dB)	22.5	18.4	17.0	16.5	16.3	19.2
C/I Downlink Adjacent Satellite 2 (dB)						
C/(N+I) Composite (dB)	13.9	10.3	8.3	7.8	7.7	7.7
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	12.9	9.3	7.3	6.8	6.7	6.7
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4	-3.4
Excess Link Margin (dB)	2.9	5.9	3.4	3.8	3.3	3.3
Number of Carriers	1.0	1.0	2.7	272.2	17.2	90.0
Carrier Density Levels						
Uplink Power Density (dBW/Hz)	-42.5	-51.1	-58.3	-58.8	-59.0	-55.8
Downlink EIRP Density At Beam Peak	-15.7	-26.0	-27.4	-27.9	-28.0	-32.8

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



## Exhibit 6: Link Budgets (continued)

	Combined 14000 - 14250	Combined 14000 - 14250	Combined 14000 - 14250	Combined 14000 - 14250	Combined 14000 - 14250	Combined 14000 - 14250
<b>UPLINK BEAM INFORMATION</b>						
Uplink Beam Name	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Uplink Frequency (MHz)	14000 - 14250	14000 - 14250	14000 - 14250	14000 - 14250	14000 - 14250	14000 - 14250
Uplink Beam Polarization	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Uplink Relative Contour Level (dB)	-10	-10	-10	-10	-10	-10
Uplink Contour G/T (dB/K)	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5
Uplink SFD (dBW/m <sup>2</sup> )	-82.3	-75.3	-85.3	-85.3	-85.3	-85.3
Rain Rate (mm/hr)	63	63	63	63	63	63
<b>DOWNLINK BEAM INFORMATION</b>						
Downlink Beam Name	US/Mexico	US/Mexico	US/Mexico	US/Mexico	US/Mexico	US/Mexico
Downlink Frequency (MHz)	11450 - 11700	11450 - 11700	11450 - 11700	11450 - 11700	11450 - 11700	11450 - 11700
Downlink Beam Polarization	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
Downlink Relative Contour Level (dB)	-8	-8	-8	-8	-8	-8
Downlink Contour EIRP (dBW)	42.3	42.3	42.3	42.3	42.3	42.3
Rain Rate (mm/hr)	63	63	63	63	63	63
<b>ADJACENT SATELLITE 1</b>						
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0	0	0
<b>ADJACENT SATELLITE 2</b>						
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0	0	0
<b>CARRIER INFORMATION</b>						
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W	1M45G7W	400KG7W
Information Rate (kbps)	n/a	24575	6000	64	512	128
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK	BPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4.0	n/a	n/a	n/a	n/a	n/a
Code Rate	n/a	1/2 - RS	1/2 - RS	1/2 - RS	1/2	1/2
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4	1229	307
Allocated Bandwidth (kHz)	36000	36000	10300	100	1450	400
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.9	3.0	3.4	3.4
Minimum C/N, Rain (dB)	10.0	3.4	3.6	2.8	2.7	2.7
<b>UPLINK EARTH STATION</b>						
Earth Station Diameter (meters)	6.1	6.1	6.1	6.1	6.1	2.4
Earth Station Gain (dBi)	56.8	56.8	56.8	56.8	56.8	48.9
Earth Station Elevation Angle	20.0	20.0	20.0	20.0	20.0	20.0
<b>DOWNLINK EARTH STATION</b>						
Earth Station Diameter (meters)	3.7	2.4	2.4	2.4	2.4	6.1
Earth Station Gain (dBi)	50.7	47.1	47.1	47.1	47.1	55.1
Earth Station G/T (dB/K)	28.2	24.6	24.6	24.6	24.6	32.7
Earth Station Elevation Angle	20.0	20.0	20.0	20.0	20.0	20.0
<b>LINK FADE TYPE</b>						
	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
<b>UPLINK PERFORMANCE</b>						
Uplink Earth Station EIRP (dBW)	80.6	80.8	65.3	45.1	57.1	47.7
Uplink Path Loss, Clear Sky (dB)	-207.4	-207.4	-207.4	-207.4	-207.4	-207.4
Uplink Rain Attenuation (dB)	0.0	0.0	0.0	0.0	0.0	0.0
Satellite G/T (dB/K)	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Uplink C/N (dB)	22.7	23.7	14.7	14.1	14.0	10.6
<b>DOWNLINK PERFORMANCE</b>						
Downlink EIRP per Carrier (dBW)	42.3	40.8	33.1	13.0	25.0	15.5
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-205.6	-205.6	-205.6	-205.6	-205.6	-205.6
Downlink Rain Attenuation (dB)	0.0	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	28.2	24.6	24.6	24.6	24.6	32.7
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Downlink C/N (dB)	17.5	13.1	11.9	11.3	11.2	15.9
<b>COMPOSITE LINK PERFORMANCE</b>						
C/N Uplink (dB)	22.7	23.7	14.7	14.1	14.0	10.6
C/N Downlink (dB)	17.5	13.1	11.9	11.3	11.2	15.9
C/I Intermodulation (dB)	n/a	n/a	26.3	25.7	25.5	22.1
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.3	28.3	28.7	24.9
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.3	28.3	28.7	24.9
C/I Uplink Adjacent Satellite 1 (dB)	27.0	28.0	19.0	18.4	18.3	14.9
C/I Downlink Adjacent Satellite 1 (dB)	21.4	16.8	15.6	15.0	14.9	20.0
C/I Uplink Adjacent Satellite 2 (dB)	27.0	28.0	19.0	18.4	18.3	14.9
C/I Downlink Adjacent Satellite 2 (dB)	22.5	18.4	17.2	16.6	16.4	20.6
C/(N+I) Composite (dB)	13.6	10.2	7.6	7.0	6.8	6.8
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	12.6	9.2	6.6	6.0	5.8	5.8
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4	-3.4
Excess Link Margin (dB)	2.6	5.8	2.7	3.0	2.4	2.4
Number of Carriers	1.0	1.0	2.6	266.2	16.8	90.0
<b>Carrier Density Levels</b>						
Uplink Power Density (dBW/Hz)	-42.2	-50.8	-59.8	-60.5	-60.6	-56.1
Downlink EIRP Density At Beam Peak	-15.7	-26.0	-27.2	-27.8	-27.9	-31.3

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION	Combined 14000 - 14250	Combined 14000 - 14250	Combined 14000 - 14250	Combined 14000 - 14250	Combined 14000 - 14250	Combined 14000 - 14250
Uplink Beam Name	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
Uplink Frequency (MHz)	-10	-10	-10	-10	-10	-10
Uplink Beam Polarization	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5
Uplink Relative Contour Level (dB)	-84.3	-84.3	-86.3	-86.3	-86.3	-86.3
Uplink Contour G/T (dB/K)	63	63	63	63	63	63
Uplink SFD (dBW/m <sup>2</sup> )						
Rain Rate (mm/hr)						
DOWNLINK BEAM INFORMATION	Europe/Africa 11450 - 11700	Europe/Africa 11450 - 11700	Europe/Africa 11450 - 11700	Europe/Africa 11450 - 11700	Europe/Africa 11450 - 11700	Europe/Africa 11450 - 11700
Downlink Beam Name	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
Downlink Frequency (MHz)	-8	-8	-8	-8	-8	-8
Downlink Beam Polarization	42.3	42.3	42.3	42.3	42.3	42.3
Downlink Relative Contour Level (dB)	42	42	42	42	42	42
Downlink Contour EIRP (dBW)						
Rain Rate (mm/hr)						
ADJACENT SATELLITE 1	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Satellite 1 Orbital Location	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Power Density (dBW/Hz)	0	0	0	0	0	0
Uplink Polarization Advantage (dB)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink EIRP Density (dBW/Hz)	0	0	0	0	0	0
Downlink Polarization Advantage (dB)						
ADJACENT SATELLITE 2	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Satellite 2 Orbital Location	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Power Density (dBW/Hz)	0	0	0	0	0	0
Uplink Polarization Advantage (dB)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink EIRP Density (dBW/Hz)	0	0	0	0	0	0
Downlink Polarization Advantage (dB)						
CARRIER INFORMATION	36M0F3F	36M0G7W	10M3G7W	100K67W	1M45G7W	400K67W
Emission Designation	n/a	24575	6000	64	512	128
Information Rate (kbps)	TV/FM	QPSK	QPSK	QPSK	BPSK	QPSK
Carrier Modulation	4.0	n/a	n/a	n/a	n/a	n/a
Peak to Peak Bandwidth of EDS (MHz)	n/a	1/2 - RS	1/2 - RS	1/2 - RS	1/2	1/2
Code Rate	36000	30133	6771.1	75.4	1229	307
Occupied Bandwidth (kHz)	36000	36000	10300	100	1450	400
Allocated Bandwidth (kHz)	10.0	3.4	3.9	3.0	3.4	3.4
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.6	2.8	2.7	2.7
Minimum C/N, Rain (dB)						
UPLINK EARTH STATION	6.1	6.1	6.1	6.1	6.1	2.4
Earth Station Diameter (meters)	56.8	56.8	56.8	56.8	56.8	48.9
Earth Station Gain (dBi)	20.0	20.0	20.0	20.0	20.0	20.0
Earth Station Elevation Angle						
DOWNLINK EARTH STATION	3.7	2.4	2.4	2.4	2.4	6.1
Earth Station Diameter (meters)	50.7	47.1	47.1	47.1	47.1	55.1
Earth Station Gain (dBi)	28.2	24.6	24.6	24.6	24.6	32.7
Earth Station G/T (dB/K)	20.0	20.0	20.0	20.0	20.0	20.0
Earth Station Elevation Angle						
LINK MEDIUM TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE	78.6	71.8	64.4	44.2	56.2	47.4
Uplink Earth Station EIRP (dBW)	-207.4	-207.4	-207.4	-207.4	-207.4	-207.4
Uplink Path Loss, Clear Sky (dB)	0.0	0.0	0.0	0.0	0.0	0.0
Uplink Rain Attenuation (dB)	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5
Satellite G/T (dB/K)	228.6	228.6	228.6	228.6	228.6	228.6
Boltzman Constant (dBW/K-Hz)	-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Carrier Noise Bandwidth (dB-Hz)	20.7	14.7	13.8	13.1	13.0	10.2
Uplink C/N (dB)						
DOWNLINK PERFORMANCE	42.3	40.8	33.2	13.0	25.0	16.2
Downlink EIRP per Carrier (dBW)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Antenna Pointing Error (dB)	-205.6	-205.6	-205.6	-205.6	-205.6	-205.6
Downlink Path Loss, Clear Sky (dB)	0.0	0.0	0.0	0.0	0.0	0.0
Downlink Rain Attenuation (dB)	28.2	24.6	24.6	24.6	24.6	32.7
Earth Station G/T (dB/K)	228.6	228.6	228.6	228.6	228.6	228.6
Boltzman Constant (dBW/K-Hz)	-75.6	-74.8	-68.3	-48.8	-60.9	-54.9
Carrier Noise Bandwidth (dB-Hz)	17.5	13.1	12.0	11.4	11.2	16.6
Downlink C/N (dB)						
COMPOSITE LINK PERFORMANCE	20.7	14.7	13.8	13.1	13.0	10.2
C/N Uplink (dB)	17.5	13.1	12.0	11.4	11.2	16.6
C/N Downlink (dB)	n/a	n/a	26.3	25.7	25.6	22.8
C/I Intermodulation (dB)	27.0	27.0	28.4	28.3	28.7	25.5
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.4	28.3	28.7	25.5
C/I Downlink Co-Channel (dB)*	25.0	19.0	18.1	17.4	17.3	14.5
C/I Uplink Adjacent Satellite 1 (dB)	21.4	16.8	15.7	15.0	14.9	20.7
C/I Downlink Adjacent Satellite 1 (dB)	25.0	19.0	18.1	17.4	17.3	14.5
C/I Uplink Adjacent Satellite 2 (dB)	22.5	18.4	17.2	16.6	16.5	21.3
C/I Downlink Adjacent Satellite 2 (dB)						
C/(N+I) Composite (dB)	13.1	8.3	7.3	6.6	6.5	6.7
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	12.1	7.3	6.3	5.6	5.5	5.7
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4	-3.4
Excess Link Margin (dB)	2.1	3.9	2.4	2.6	2.1	2.3
Number of Carriers	1.0	1.0	2.5	263.9	16.6	90.0
Carrier Density Levels	-44.2	-59.8	-60.8	-61.4	-61.5	-56.4
Uplink Power Density (dBW/Hz)	-15.7	-26.0	-27.1	-27.8	-27.9	-30.7
Downlink EIRP Density At Beam Peak						

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION				
Uplink Beam Name	US/Latin America	US/Latin America	US/Latin America	US/Latin America
Uplink Frequency (MHz)	6180 - 6425	6180 - 6425	6180 - 6425	6180 - 6425
Uplink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Uplink Relative Contour Level (dB)	-8	-8	-8	-8
Uplink Contour G/T (dB/K)	-6.6	-6.6	-6.6	-6.6
Uplink SFD (dBW/m <sup>2</sup> )	-81.3	-81.3	-79.3	-79.3
Rain Rate (mm/hr)	n/a	n/a	n/a	n/a
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa
Downlink Frequency (MHz)	10950 - 11200	10950 - 11200	10950 - 11200	10950 - 11200
Downlink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Downlink Relative Contour Level (dB)	-8	-8	-8	-8
Downlink Contour EIRP (dBW)	42.3	42.3	42.3	42.3
Rain Rate (mm/hr)	42	42	42	42
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W
Information Rate (kbps)	n/a	24575	6000	64
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4.0	n/a	n/a	n/a
Code Rate	n/a	1/2 - RS	1/2 - RS	1/2 - RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.9	3.0
Minimum C/N, Rain (dB)	10.0	3.4	3.6	2.8
UPLINK EARTH STATION				
Earth Station Diameter (meters)	15.2	6.1	6.1	6.1
Earth Station Gain (dBi)	58.4	49.4	49.4	49.4
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	3.7	1.8	1.8	1.8
Earth Station Gain (dBi)	50.7	44.4	44.4	44.4
Earth Station G/T (dB/K)	28.2	21.9	21.9	21.9
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
LINK FADE TYPE				
	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE				
Uplink Earth Station EIRP (dBW)	81.6	74.8	71.6	51.3
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)	-6.6	-6.6	-6.6	-6.6
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Uplink C/N (dB)	27.8	21.8	25.1	24.3
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	42.3	40.8	33.4	13.1
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-205.6	-205.6	-205.6	-205.6
Downlink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	28.2	21.9	21.9	21.9
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	17.5	10.4	8.6	8.7
COMPOSITE LINK PERFORMANCE				
C/N Uplink (dB)	27.8	21.8	25.1	24.3
C/N Downlink (dB)	17.5	10.4	9.5	8.7
C/I Intermodulation (dB)	n/a	n/a	26.6	25.8
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.6	28.4
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.6	28.4
C/I Uplink Adjacent Satellite 1 (dB)	18.7	12.7	16.0	15.2
C/I Downlink Adjacent Satellite 1 (dB)	21.4	13.8	12.9	12.1
C/I Uplink Adjacent Satellite 2 (dB)	18.7	12.7	16.0	15.2
C/I Downlink Adjacent Satellite 2 (dB)	22.5	16.0	15.1	14.3
C/(N+I) Composite (dB)	12.0	5.6	6.0	5.2
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	11.0	4.6	5.0	4.2
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	1.0	1.2	1.1	1.2
Number of Carriers	1.0	1.0	2.4	258.5
Carrier Density Levels				
Uplink Power Density (dBW/Hz)	-42.8	-49.4	-46.1	-46.9
Downlink EIRP Density At Beam Peak	-15.7	-26.0	-26.9	-27.7

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION				
Uplink Beam Name	US/Latin America	US/Latin America	US/Latin America	US/Latin America
Uplink Frequency (MHz)	6180 - 6425	6180 - 6425	6180 - 6425	6180 - 6425
Uplink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Uplink Relative Contour Level (dB)	-8	-8	-8	-8
Uplink Contour G/T (dB/K)	-6.6	-6.6	-6.6	-6.6
Uplink SFD (dBW/m <sup>2</sup> )	-80.3	-80.3	-75.3	-75.3
Rain Rate (mm/hr)	n/a	n/a	n/a	n/a
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	US/Mexico	US/Mexico	US/Mexico	US/Mexico
Downlink Frequency (MHz)	10950 - 11200	10950 - 11200	10950 - 11200	10950 - 11200
Downlink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Downlink Relative Contour Level (dB)	-8	-8	-8	-8
Downlink Contour EIRP (dBW)	42.3	42.3	42.3	42.3
Rain Rate (mm/hr)	63	63	63	63
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W
Information Rate (kbps)	n/a	24575	6000	64
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4.0	n/a	n/a	n/a
Code Rate	n/a	1/2 - RS	1/2 - RS	1/2 - RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.9	3.0
Minimum C/N, Rain (dB)	10.0	3.4	3.6	2.8
UPLINK EARTH STATION				
Earth Station Diameter (meters)	15.2	7.0	6.1	6.1
Earth Station Gain (dBi)	58.4	51.0	49.4	49.4
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	3.7	1.8	1.8	1.8
Earth Station Gain (dBi)	50.7	44.4	44.4	44.4
Earth Station G/T (dB/K)	28.2	21.9	21.9	21.9
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
LINK FADE TYPE				
	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE				
Uplink Earth Station EIRP (dBW)	82.6	75.8	75.7	55.4
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)	-6.6	-6.6	-6.6	-6.6
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Uplink C/N (dB)	28.8	22.8	29.2	28.4
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	42.3	40.8	33.5	13.2
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-205.6	-205.6	-205.6	-205.6
Downlink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	28.2	21.9	21.9	21.9
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	17.5	10.4	9.7	8.9
COMPOSITE LINK PERFORMANCE				
C/N Uplink (dB)	28.8	22.8	29.2	28.4
C/N Downlink (dB)	17.5	10.4	9.7	8.9
C/I Intermodulation (dB)	n/a	n/a	26.7	25.9
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.8	28.6
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.8	28.6
C/I Uplink Adjacent Satellite 1 (dB)	19.7	13.7	20.1	19.3
C/I Downlink Adjacent Satellite 1 (dB)	21.4	13.8	13.0	12.2
C/I Uplink Adjacent Satellite 2 (dB)	19.7	13.7	20.1	19.3
C/I Downlink Adjacent Satellite 2 (dB)	22.5	16.0	15.2	14.4
C/(N+I) Composite (dB)	12.4	6.0	6.7	5.9
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	11.4	5.0	5.7	4.9
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	1.4	1.6	1.8	1.9
Number of Carriers	1.0	1.0	2.3	251.0
Carrier Density Levels				
Uplink Power Density (dBW/Hz)	-41.8	-50.0	-42.0	-42.8
Downlink EIRP Density At Beam Peak	-15.7	-26.0	-26.8	-27.6

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

## Exhibit 6: Link Budgets (continued)

UPLINK/BEAM INFORMATION				
Uplink Beam Name	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa
Uplink Frequency (MHz)	6180 - 6425	6180 - 6425	6180 - 6425	6180 - 6425
Uplink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Uplink Relative Contour Level (dB)	-8	-8	-8	-8
Uplink Contour G/T (dB/K)	-6.8	-6.8	-6.8	-6.8
Uplink SFD (dBW/m <sup>2</sup> )	-82.8	-80.8	-79.8	-79.8
Rain Rate (mm/hr)	n/a	n/a	n/a	n/a
DOWNLINK/BEAM INFORMATION				
Downlink Beam Name	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa
Downlink Frequency (MHz)	10950 - 11200	10950 - 11200	10950 - 11200	10950 - 11200
Downlink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Downlink Relative Contour Level (dB)	-8	-8	-8	-8
Downlink Contour EIRP (dBW)	42.3	42.3	42.3	42.3
Rain Rate (mm/hr)	42	42	42	42
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W
Information Rate (kbps)	n/a	24575	6000	64
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4.0	n/a	n/a	n/a
Code Rate	n/a	1/2 - RS	1/2 - RS	1/2 - RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.9	3.0
Minimum C/N, Rain (dB)	10.0	3.4	3.6	2.8
UPLINK EARTH STATION				
Earth Station Diameter (meters)	11.0	7.0	6.1	6.1
Earth Station Gain (dBi)	55.4	50.9	49.4	49.4
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	4.6	1.8	1.8	1.8
Earth Station Gain (dBi)	53.1	44.4	44.4	44.4
Earth Station G/T (dB/K)	30.6	21.9	21.9	21.9
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
LINK/RADE TYPE				
	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE				
Uplink Earth Station EIRP (dBW)	80.1	75.3	71.2	50.9
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)	-6.8	-6.8	-6.8	-6.8
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Uplink C/N (dB)	26.1	22.1	24.5	23.7
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	42.3	40.8	33.5	13.2
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-205.6	-205.6	-205.6	-205.6
Downlink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	30.6	21.9	21.9	21.9
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	19.9	10.4	9.6	8.8
COMPOSITE LINK PERFORMANCE				
C/N Uplink (dB)	26.1	22.1	24.5	23.7
C/N Downlink (dB)	29.9	10.4	9.6	8.8
C/I Intermodulation (dB)	n/a	n/a	26.6	25.9
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.7	28.5
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.7	28.5
C/I Uplink Adjacent Satellite 1 (dB)	17.2	13.2	15.6	14.8
C/I Downlink Adjacent Satellite 1 (dB)	23.9	13.8	13.0	12.2
C/I Uplink Adjacent Satellite 2 (dB)	17.2	13.2	15.6	14.8
C/I Downlink Adjacent Satellite 2 (dB)	24.8	16.0	15.1	14.4
C/(N+I) Composite (dB)	12.1	5.8	5.9	5.2
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	11.1	4.8	4.9	4.2
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	1.1	1.4	1.0	1.2
Number of Carriers	1.0	1.0	2.4	253.4
Carrier Density Levels				
Uplink Power Density (dBW/Hz)	-41.3	-50.5	-46.5	-47.3
Downlink EIRP Density At Beam Peak	-15.7	-26.0	-26.8	-27.6

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION				
Uplink Beam Name	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa
Uplink Frequency (MHz)	6180 - 6425	6180 - 6425	6180 - 6425	6180 - 6425
Uplink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Uplink Relative Contour Level (dB)	-8	-8	-8	-8
Uplink Contour G/T (dB/K)	-6.8	-6.8	-6.8	-6.8
Uplink SFD (dBW/m <sup>2</sup> )	-82.8	-80.8	-74.8	-74.8
Rain Rate (mm/hr)	n/a	n/a	n/a	n/a
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	US/Mexico	US/Mexico	US/Mexico	US/Mexico
Downlink Frequency (MHz)	10950 - 11200	10950 - 11200	10950 - 11200	10950 - 11200
Downlink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Downlink Relative Contour Level (dB)	-8	-8	-8	-8
Downlink Contour EIRP (dBW)	42.3	42.3	42.3	42.3
Rain Rate (mm/hr)	63	63	63	63
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W
Information Rate (kbps)	n/a	24575	6000	64
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4.0	n/a	n/a	n/a
Code Rate	n/a	1/2 - RS	1/2 - RS	1/2 - RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.9	3.0
Minimum C/N, Rain (dB)	10.0	3.4	3.6	2.8
UPLINK EARTH STATION				
Earth Station Diameter (meters)	11.0	7.0	6.1	6.1
Earth Station Gain (dBi)	55.4	50.9	49.4	49.4
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	4.6	1.8	1.8	1.8
Earth Station Gain (dBi)	53.1	44.4	44.4	44.4
Earth Station G/T (dB/K)	30.6	21.9	21.9	21.9
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
LINK FADE TYPE				
	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE				
Uplink Earth Station EIRP (dBW)	80.1	75.3	76.2	55.9
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)	-6.8	-6.8	-6.8	-6.8
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Uplink C/N (dB)	26.1	22.1	29.5	28.7
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	42.3	40.8	33.5	13.2
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-205.6	-205.6	-205.6	-205.6
Downlink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	30.6	21.9	21.9	21.9
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	19.9	10.4	9.6	8.8
COMPOSITE LINK PERFORMANCE				
C/N Uplink (dB)	26.1	22.1	29.5	28.7
C/N Downlink (dB)	19.9	10.4	9.6	8.8
C/I Intermodulation (dB)	n/a	n/a	26.6	25.9
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.7	28.5
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.7	28.5
C/I Uplink Adjacent Satellite 1 (dB)	17.2	13.2	20.6	19.8
C/I Downlink Adjacent Satellite 1 (dB)	23.9	13.8	13.0	12.2
C/I Uplink Adjacent Satellite 2 (dB)	17.2	13.2	20.6	19.8
C/I Downlink Adjacent Satellite 2 (dB)	24.8	16.0	15.2	14.4
C/(N+I) Composite (dB)	12.1	5.8	6.7	5.9
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	11.1	4.8	5.7	4.9
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	1.1	1.4	1.8	1.9
Number of Carriers	1.0	1.0	2.3	252.8
Carrier Density Levels				
Uplink Power Density (dBW/Hz)	-41.3	-50.5	-41.5	-42.3
Downlink EIRP Density At Beam Peak	-15.7	-26.0	-26.8	-27.6

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION	Europe/Africa 14000 - 14250	Europe/Africa 14000 - 14250	Europe/Africa 14000 - 14250	Europe/Africa 14000 - 14250
Uplink Beam Name				
Uplink Frequency (MHz)	14000 - 14250	14000 - 14250	14000 - 14250	14000 - 14250
Uplink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Uplink Relative Contour Level (dB)	-10	-10	-10	-10
Uplink Contour G/T (dB/K)	-3.4	-3.4	-3.4	-3.4
Uplink SFD (dBW/m <sup>2</sup> )	-83.9	-87.9	-84.9	-84.9
Rain Rate (mm/hr)	42	42	42	42
DOWNLINK BEAM INFORMATION				
Downlink Beam Name				
Downlink Frequency (MHz)	Global 3700 - 3955	Global 3700 - 3955	Global 3700 - 3955	Global 3700 - 3955
Downlink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Downlink Relative Contour Level (dB)	-4	-4	-4	-4
Downlink Contour EIRP (dBW)	30.6	30.6	30.6	30.6
Rain Rate (mm/hr)	n/a	n/a	n/a	n/a
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)	-50	-50	-50	-50
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-31.4	-31.4	-31.4	-31.4
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-31.4	-31.4	-31.4	-31.4
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100K0G7W
Information Rate (kbps)	n/a	24575	6000	64
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4.0	n/a	n/a	n/a
Code Rate	n/a	1/2 - RS	1/2 - RS	1/2 - RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.9	3.0
Minimum C/N, Rain (dB)	10.0	3.4	3.6	2.8
UPLINK EARTH STATION				
Earth Station Diameter (meters)	6.1	6.1	6.1	6.1
Earth Station Gain (dBi)	56.8	56.8	56.8	56.8
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	8.1	3.5	4.5	4.5
Earth Station Gain (dBi)	49.3	41.1	43.9	43.9
Earth Station G/T (dB/K)	28.4	21.0	23.6	23.6
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
LINK FADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE				
Uplink Earth Station EIRP (dBW)	79.0	75.0	65.9	45.8
Uplink Path Loss, Clear Sky (dB)	-207.4	-207.4	-207.4	-207.4
Uplink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Satellite G/T (dB/K)	-3.4	-3.4	-3.4	-3.4
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Uplink C/N (dB)	21.2	18.0	15.4	14.9
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	30.6	30.6	21.6	1.5
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	28.4	21.0	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	-68.3	-48.8
Downlink C/N (dB)	15.2	8.6	8.7	8.1
COMPOSITE LINK PERFORMANCE				
C/N Uplink (dB)	21.2	18.0	15.4	14.9
C/N Downlink (dB)	15.2	8.6	8.7	8.1
C/I Intermodulation (dB)	n/a	n/a	26.5	25.9
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.5	28.6
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.5	28.6
C/I Uplink Adjacent Satellite 1 (dB)	25.4	22.2	19.6	19.1
C/I Downlink Adjacent Satellite 1 (dB)	19.2	9.2	11.5	10.9
C/I Uplink Adjacent Satellite 2 (dB)	25.4	22.2	19.6	19.1
C/I Downlink Adjacent Satellite 2 (dB)	20.6	14.0	14.0	13.4
C/(N+I) Composite (dB)	11.7	4.8	5.2	4.7
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.7	3.8	4.2	3.7
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.7	0.4	0.3	0.7
Number of Carriers	1.0	1.0	2.4	249.7
Carrier Density Levels				
Uplink Power Density (dBW/Hz)	-43.8	-56.6	-59.2	-59.8
Downlink EIRP Density At Beam Peak	-31.4	-40.2	-42.7	-43.2

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION				
Uplink Beam Name	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa
Uplink Frequency (MHz)	14000 - 14250	14000 - 14250	14000 - 14250	14000 - 14250
Uplink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Uplink Relative Contour Level (dB)	-10	-10	-10	-10
Uplink Contour G/T (dB/K)	-3.4	-3.4	-3.4	-3.4
Uplink SFD (dBW/m <sup>2</sup> )	-78.9	-94.9	-84.9	-84.9
Rain Rate (mm/hr)	42	42	42	42
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	US/Latin America	US/Latin America	US/Latin America	US/Latin America
Downlink Frequency (MHz)	3700 - 3955	3700 - 3955	3700 - 3955	3700 - 3955
Downlink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Downlink Relative Contour Level (dB)	-6	-6	-6	-4
Downlink Contour EIRP (dBW)	37.4	37.4	37.4	37.4
Rain Rate (mm/hr)	n/a	n/a	n/a	n/a
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)	-50	-50	-50	-50
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-37.4	-37.4	-37.4	-37.4
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-37.4	-37.4	-37.4	-37.4
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W
Information Rate (kbps)	n/a	24575	6000	64
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4.0	n/a	n/a	n/a
Code Rate	n/a	1/2 - RS	1/2 - RS	1/2 - RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.9	3.0
Minimum C/N, Rain (dB)	10.0	3.4	3.6	2.8
UPLINK EARTH STATION				
Earth Station Diameter (meters)	9.0	6.1	6.1	6.1
Earth Station Gain (dBi)	60.1	56.8	56.8	56.8
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	3.7	3.0	3.0	3.0
Earth Station Gain (dBi)	41.2	39.7	39.7	39.7
Earth Station G/T (dB/K)	20.9	19.2	19.2	19.2
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
LINK FADE TYPE				
	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE				
Uplink Earth Station EIRP (dBW)	84.0	68.0	65.9	45.8
Uplink Path Loss, Clear Sky (dB)	-207.4	-207.4	-207.4	-207.4
Uplink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Satellite G/T (dB/K)	-3.4	-3.4	-3.4	-3.4
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Uplink C/N (dB)	26.2	11.0	15.4	14.8
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	37.4	37.4	28.4	8.3
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	20.9	19.2	19.2	19.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	14.5	13.6	11.0	10.5
COMPOSITE LINK PERFORMANCE				
C/N Uplink (dB)	26.2	11.0	15.4	14.8
C/N Downlink (dB)	14.5	13.6	11.0	10.5
C/I Intermodulation (dB)	n/a	n/a	26.4	n/a
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.5	25.9
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.5	28.5
C/I Uplink Adjacent Satellite 1 (dB)	30.4	15.2	19.6	28.5
C/I Downlink Adjacent Satellite 1 (dB)	17.0	10.9	8.4	19.0
C/I Uplink Adjacent Satellite 2 (dB)	30.4	15.2	19.6	16.5
C/I Downlink Adjacent Satellite 2 (dB)	20.0	19.6	17.1	
C/(N+I) Composite (dB)	11.4	5.5	5.2	4.7
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.4	4.5	4.2	3.7
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.4	1.1	0.3	0.7
Number of Carriers	1.0	1.0	2.5	252.8
Carrier Density Levels				
Uplink Power Density (dBW/Hz)	-42.1	-63.6	-59.3	-59.8
Downlink EIRP Density At Beam Peak	-22.6	-31.4	-33.9	-34.5

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



## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION				
Uplink Beam Name	US/Mexico	Europe/Africa	Europe/Africa	Europe/Africa
Uplink Frequency (MHz)	14000 - 14250	14000 - 14250	14000 - 14250	14000 - 14250
Uplink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Uplink Relative Contour Level (dB)	-10	-10	-10	-10
Uplink Contour G/T (dB/K)	-3.2	-3.4	-3.4	-3.4
Uplink SFD (dBW/m <sup>2</sup> )	-76.8	-82.8	-81.8	-81.8
Rain Rate (mm/hr)	63	63	63	63
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	US/Latin America	US/Latin America	US/Latin America	US/Latin America
Downlink Frequency (MHz)	3700 - 3955	3700 - 3955	3700 - 3955	3700 - 3955
Downlink Beam Polarization	Horizontal	Horizontal	Horizontal	Horizontal
Downlink Relative Contour Level (dB)	-6	-6	-6	-6
Downlink Contour EIRP (dBW)	37.4	37.4	37.4	37.4
Rain Rate (mm/hr)	n/a	n/a	n/a	n/a
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)	-50	-50	-50	-50
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-37.1	-37.1	-37.1	-37.1
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-37.1	-37.1	-37.1	-37.1
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W
Information Rate (kbps)	n/a	24575	6000	64
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4.0	n/a	n/a	n/a
Code Rate	n/a	1/2 - RS	1/2 - RS	1/2 - RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.9	3.0
Minimum C/N, Rain (dB)	10.0	3.4	3.6	2.8
UPLINK EARTH STATION				
Earth Station Diameter (meters)	11.0	6.1	6.1	6.1
Earth Station Gain (dBi)	61.6	56.8	56.8	56.8
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	3.7	3.0	3.0	3.0
Earth Station Gain (dBi)	41.2	39.7	39.7	39.7
Earth Station G/T (dB/K)	20.9	19.2	19.2	19.2
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
LINK FADE TYPE				
	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE				
Uplink Earth Station EIRP (dBW)	86.1	80.1	69.0	49.1
Uplink Path Loss, Clear Sky (dB)	-207.4	-207.4	-207.4	-207.4
Uplink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Satellite G/T (dB/K)	-3.2	-3.2	-3.2	-3.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Uplink C/N (dB)	28.5	23.3	18.7	18.3
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	37.4	37.4	28.5	8.5
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	20.9	19.2	19.2	19.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	14.5	13.6	11.1	10.7
COMPOSITE LINK PERFORMANCE				
C/N Uplink (dB)	28.5	23.3	18.7	18.3
C/N Downlink (dB)	14.5	13.6	11.1	10.7
C/I Intermodulation (dB)	n/a	n/a	26.5	26.1
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.6	28.7
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.6	28.7
C/I Uplink Adjacent Satellite 1 (dB)	32.5	27.3	22.7	22.3
C/I Downlink Adjacent Satellite 1 (dB)	17.0	10.9	8.4	8.0
C/I Uplink Adjacent Satellite 2 (dB)	32.5	27.3	22.7	22.3
C/I Downlink Adjacent Satellite 2 (dB)	20.0	19.6	17.2	16.7
C/(N+I) Composite (dB)	11.5	8.3	5.7	5.3
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.5	7.3	4.7	4.3
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.5	3.9	0.8	1.3
Number of Carriers	1.0	1.0	2.4	241.9
Carrier Density Levels				
Uplink Power Density (dBW/Hz)	-41.5	-51.5	-56.1	-56.5
Downlink EIRP Density At Beam Peak	-22.6	-31.4	-33.8	-34.3

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

## Exhibit 6: Link Budgets (continued)

UPLINK BEAM INFORMATION				
Uplink Beam Name	US/Mexico	Europe/Africa	Europe/Africa	Europe/Africa
Uplink Frequency (MHz)	14000 - 14250	14000 - 14250	14000 - 14250	14000 - 14250
Uplink Beam Polarization	Vertical	Vertical	Vertical	Vertical
Uplink Relative Contour Level (dB)	-10	-10	-10	-10
Uplink Contour G/T (dB/K)	-3.2	-3.4	-3.4	-3.4
Uplink SFD (dBW/m <sup>2</sup> )	-81.8	-82.8	-82.8	-86.8
Rain Rate (mm/hr)	63	63	63	63
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	Europe/Africa	Europe/Africa	Europe/Africa	Europe/Africa
Downlink Frequency (MHz)	3700 - 3955	3700 - 3955	3700 - 3955	3700 - 3955
Downlink Beam Polarization	Horizontal	Horizontal	Horizontal	Horizontal
Downlink Relative Contour Level (dB)	-8	-8	-8	-8
Downlink Contour EIRP (dBW)	33.9	33.9	33.9	33.9
Rain Rate (mm/hr)	n/a	n/a	n/a	n/a
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	48 W.L.	48 W.L.	48 W.L.	48 W.L.
Uplink Power Density (dBW/Hz)	-50	-50	-50	-50
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-40.9	-40.9	-40.9	-40.9
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	52 W.L.	52 W.L.	52 W.L.	52 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-40.9	-40.9	-40.9	-40.9
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100KG7W
Information Rate (kbps)	n/a	24575	6000	64
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4.0	n/a	n/a	n/a
Code Rate	n/a	1/2 - RS	1/2 - RS	1/2 - RS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Minimum C/N, Clear Sky (dB)	10.0	3.4	3.9	3.0
Minimum C/N, Rain (dB)	10.0	3.4	3.6	2.8
UPLINK EARTH STATION				
Earth Station Diameter (meters)	6.1	6.1	6.1	6.1
Earth Station Gain (dBi)	56.8	56.8	56.8	56.8
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	4.5	3.0	3.5	3.5
Earth Station Gain (dBi)	43.9	39.7	41.1	41.1
Earth Station G/T (dB/K)	23.6	19.2	21.0	21.0
Earth Station Elevation Angle	20.0	20.0	20.0	20.0
LINK FADE TYPE				
	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE				
Uplink Earth Station EIRP (dBW)	81.1	80.1	64.2	44.1
Uplink Path Loss, Clear Sky (dB)	-207.4	-207.4	-207.4	-207.4
Uplink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Satellite G/T (dB/K)	-3.2	-3.2	-3.2	-3.2
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Uplink C/N (dB)	23.5	23.3	13.9	13.3
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	33.9	33.9	25.1	5.0
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation (dB)	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	23.6	19.2	21.0	21.0
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C/N (dB)	13.7	10.1	9.6	9.0
COMPOSITE LINK PERFORMANCE				
C/N Uplink (dB)	23.5	23.3	13.9	13.3
C/N Downlink (dB)	13.7	10.1	9.6	9.0
C/I Intermodulation (dB)	n/a	n/a	n/a	26.1
C/I Uplink Co-Channel (dB)*	27.0	27.0	26.7	28.8
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.7	28.8
C/I Uplink Adjacent Satellite 1 (dB)	27.5	27.3	28.7	17.3
C/I Downlink Adjacent Satellite 1 (dB)	20.3	11.2	17.9	13.5
C/I Uplink Adjacent Satellite 2 (dB)	27.5	27.3	14.0	17.3
C/I Downlink Adjacent Satellite 2 (dB)	22.8	19.9	17.9	18.3
C/(N+I) Composite (dB)	11.6	7.1	6.2	5.6
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.6	6.1	5.2	4.6
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.6	2.7	1.3	1.6
Number of Carriers	1.0	1.0	2.3	238.8
Carrier Density Levels				
Uplink Power Density (dBW/Hz)	-41.7	-51.5	-60.9	-61.5
Downlink EIRP Density At Beam Peak	-24.1	-32.9	-35.2	-35.7

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