EXHIBIT A – REQUEST FOR SPECIAL TEMPORARY AUTHORITY

NewCom International, Inc.. ("NewCom"), pursuant to Section 25.120 of the Commission's Rules, 47 C.F.R. § 25.120, hereby requests Special Temporary Authority ("STA") for short-term transmit and receive testing of a non-common carrier fixed earth station operating in the conventional Ku-band. The proposed STA is required to restore communications to critical infrastructure in Joplin, Missouri damaged by a series of tornados on May 22, 2011. STA will be used exclusively to communicate with the Satmex-6 satellite positioned at 113 degrees west longitude. STA authority is sought to operate two (2) identical Patriot 1.2 meter antennas for a period of 60 days beginning May 27, 2011, concluding July 26, 2011. Grant of this request will serve the public interest by restoring disrupted communications to critical infrastructure and disaster recovery personnel in Joplin.

NewCom is a premium provider of advanced fixed satellite services, specializing in custom engineered solutions for government, telecom, healthcare, oil & gas and multimedia end users. NewCom is a leading provider of emergency communications services for government, military and law enforcement, and has designed its Emergency Communications Response ("ECR") solution as a cost-effective contingency plan or back up should regular communications go down, capable of supporting unified voice, video, data and content applications seamlessly. ECR also supports on-the-go communications center for mobile military and public safety corps units.

Subsequent to a serious tornado strike in Joplin on May 22, 2011, NewCom was contacted by the Federal Emergency Management Agency ("FEMA") and Red Cross concerning the availability of ECR systems for rapid deployment. On May 25, NewCom agreed to provide two ECR systems to FEMA/Red Cross at no cost to either end user. The ECR systems en route to Joplin each involve a 1.2 meter Patriot fly-away antenna, which will be deployed in the parking lot of Freeman Hospital (37-03-15.35 N / 94-31-27.59 W). Once deployed in Joplin, these antennas will support duplex voice and data services using the Satmex-6 as the underlying transmission medium to communicate with a cooperating antenna at NewCom's Miami teleport, which is interconnected with extensive telecommunications infrastructure in Miami.

The transmit and receive carriers NewCom seeks to operate pursuant to STA will be within the conventional Ku-band (14.0-14.5 GHz earth-to-space and 11.7 -12.2 GHz space-to-earth). Transmit carrier will be a 1024 Kbps circuit with 0.66 forward error correction coding and QPSK phase RF modulation. Receive carrier will be 12 Mbps circuit with 3/4 forward error correction coding and 8PSK phase RF modulation. Maximum RF power transmitted from the 1.2m Patriot stations will not exceed 6 dBW/MHz and maximum EIRP will not exceed 49.2 dBW/MHz or 25.22 dBW/4KHz. The proposed Patriot antennas are fully in compliance with FCC orbital spacing obligations. Moreover, the accompanying radiation hazard analysis ("Exhibit C") demonstrates that the earth station can be operated safely within the guidelines established by the Office of Engineering and Technology ("OET") for human exposure to RF electromagnetic fields.

In summary, grant of this STA will enable NewCom to provide critical communications to the disaster recovery effort in Joplin, Missouri, and will support FEMA and Red Cross personnel. Both antennas proposed for operation under STA comply with 2-degree orbital spacing obligations and pose no interference threat to other occupants of the Ku-band. Accordingly, this application is in the public interest and should be granted.

EXHIBIT B – TECHNICAL AND OPERATIONAL DESCRIPTION

A. Location of Earth Station Site

Geographic Coordinates:

	Deg.	Min.	Sec.	N/S or E/W
Lat.	37	15	15.35	N
Long.	94	31	27.59	W

Coordinates are NAD 83

Address:
During the proposed operations, the earth station will be located in the parking lot of Freeman Hospital at 932 East 34th Street, Joplin, MO 64804-3932.

Earth Station Point of Contact	Office Tel#	Mobile Tel#
Raul Acosta	305.914.1283	786.412.2278

Site Elevation:
295.0 meters

B. Points of Communication

Satmex-6 at 113º WL

C. Earth Station Antenna Facilities

Site ID	Antenna ID	Quantity	Manufacturer	Model	Antenna Size (meters)	Antenna Gain Transmit and/or Receive (dBi at GHz)
1	Ku1	2	Patriot	1.2 Fly-Away	1.2	41.8 dBi at 11.725 GHz 43.4 dBi at 14.25 GHz

D. Antenna Heights and Maximum Power Limits

Antenna ID	Maximum Height		Building Height (meters)	Maximum Antenna Height Above Rooftop	Total Input Power at Antenna Flange (Watts)	Total EIRP for All Carriers (dBW)
1	Above Ground Level (meters)	Above Sea Level (meters)	0.0	0.0	4	49.2
	2.0	297				

E. Particulars of Operation

Antenna ID	Frequency Bands (MHz)	T/R Mode	Antenna Polarization	Emission Designator	Maximum EIRP per Carrier (dBW)	Maximum EIRP Density per Carrier (dBW/4K Hz)	Description of Modulation and Services
Ku1	11700-12200	R	V	7M50G7W	49.2	25.22	Data QPSK ¾ FEC
	14000-14500	T	H	970KG7W			Data QPSK ¾ FEC

Please note that this earth station will be manned during testing and is not operated by remote control.

Analysis of Non-Ionizing Radiation for a Patriot Flyaway System

This report presents an analysis of the non-ionizing radiation levels for a Patriot Flyaway 1.2 meter. The calculations used in this analysis were derived from and comply with the procedures outlined in the Federal Communication Commission, Office of Engineering and Technology Bulletin Number 65, which establishes guidelines for human exposure to Radio Frequency Electromagnetic Fields. Bulletin 65 defines exposure levels in two separate categories, the General Population/Uncontrolled Areas limits, and the Occupational/Controlled Area limits. The Maximum Permissible Exposure (MPE) limit of the General Population/Uncontrolled Area is defined in Table (1), and represents a maximum exposure limit averaged over a 30 minute period. The MPE limit of the Occupational/Controlled Area is defined in Table (2), and represents a maximum exposure limit averaged over a 6 minute period. The purpose of this report is to provide an analysis of the earth station power flux densities, and to compare those levels to the specified MPE's. This report provides predicted density levels in the near field, far field, transition region, main reflector surface area, area between the main reflector and sub reflector or feed assembly, as well as the area between the antenna edge and ground.

MPE Limits for General Population/Uncontrolled Area

Frequency Range (MHz)	*Power Density (mW/cm^2)*
1500 – 100,000	1.0

Table 1

MPE Limits for Occupational/Controlled Area

Frequency Range (MHz)	*Power Density (mW/cm^2)*
1500 – 100,000	5.0

Table 2

1.2 Meter Patriot Flyaway

Table 3 contains formulas, equations and parameters that were used in determining the Power Flux Density levels for the Patriot Flyaway 1.2M:

Data Type	Data Symbol	Data Formula	Data Value	Unit of Measure
Power Input	P	Input	16	W
Antenna Size	D	Input	1.2	M
Antenna Area	A	$A = (\Pi D^2) \div 4$	1.13	M^2
Subreflector Size	Sub	Input	10.2	cm
Subreflector Area	A_{sub}	$A_{sub} = (\Pi Sub^2) \div 4$	81.71	cm^2
Gain dBi	G_{dbi}	Input	43.5	dBi
Gain Factor	G	$G = 10^{Gdbi/10}$	22387.21	Gain Factor
Frequency	f	Input	14250	MHz
Wavelength	λ	$299.79 / f$	0.021038	Meters
Aperture Efficiency	η	$\eta = [(G\lambda^2) \div (4\Pi)] \div A$	.70	n/a
Pi	Π	Input	3.14159	Numeric
Constant	M/Sec	Input	299,792,458	Numeric
Conversion W to mW	mW	mW = $W \times 1000$	n/a	n/a
Conversion M to cm	cm	cm = $M \times 100$	n/a	n/a
Conversion M^2 to cm^2	cm^2	cm^2 = $M^2 \times 10000$	n/a	n/a
Conversion W/M^2 to mW/cm^2	mW/cm^2	$mW/cm^2 = W / M^2 \div 10$	n/a	n/a

Table 3

1. Far Field Analysis

The distance to the far field can be calculated using the following formula:

$$R_{ff} = \frac{0.6D^2}{\lambda}$$ = 41.07 Meters

The power density in the far field can be calculated using the following formula. Note: this formula requires the use of power in milliwatts and far field distance in centimeters, or requires a post calculation conversion from W/M^2:

$$S_{ff} = \frac{PG}{4\Pi R_{ff}^2}$$ = 1.690 mW/cm^2

2. Near Field Analysis

The extent of the Near Field region can be calculated using the following formula:

$$R_{nf} = \frac{D^2}{4\lambda} = 17.11 \text{ Meters}$$

The power density of the near field can be calculated using the following formula. Note: this formula requires the use of power in milliwatts and diameter in centimeters, or requires a post calculation conversion from W/M^2:

$$S_{nf} = \frac{16\eta P}{\Pi D^2} = 3.961 \text{ mW/cm}^2$$

3. Transition Region Analysis

The transition region extends from the end of the near field out to the beginning of the far field. The power density in the transition region decreases inversely with distance from the antenna, while power density in the far-field decreases inversely with the square of the distance. However the power density in the transition region will not exceed the density in the near field, and can be calculated for any point in the transition region (R), using the following formula. Note: This formula requires the use of distance in centimeters, or requires a post calculation conversion from W/M^2.

$$S_t = \frac{S_{nf} R_{nf}}{R} = 3.961 \text{ mW/cm}^2$$

4. Main Reflector Surface Area Analysis

The maximum power density at the antenna surface area can be calculated using the following formula. Note: this formula requires the use of Power in milliwatts and Area in centimeters squared, or requires a post calculation conversion from W/M^2.

$$S_{surface} = \frac{4P}{A} = 5.664 \text{ mW/cm}^2$$

5. Subreflector Area Analysis

The area between the sub reflector and main reflector presents a potential hazard, with the highest density being located at the sub reflector area. The power density at the sub reflector can be calculated using the following formula. Note: this formula requires the use of Power in milliwatts and Area in centimeters squared, or requires a post calculation conversion from W/M^2.

$$Sub_{surface} = \frac{4P}{A_{sub}} = 783.258 \text{ mW/cm}^2$$

6. Power Density between Reflector and Ground Analysis

The power density between the reflector and the ground can be calculated using the following formula. Note: this formula requires the use of Power in milliwatts and Area in centimeters squared, or requires a post calculation conversion from W/M^2.

$$S_{ground} = \frac{P}{A} = 1.416 \text{ mW/cm}^2$$

Tables 4 and 5 present a summary of the radiation hazard findings on the MobileSat 1.2M terminal for both the General Population/Uncontrolled Area, as well as the Occupational/Controlled area environments.

MPE Limits for General Population/Uncontrolled Area

Area	*Range Meters*	*Power Density (mW/cm^2)*	*Finding*
Far Field	41.07	1.690 mW/cm^2	Potential Hazard
Near Field	17.11	3.961 mW/cm^2	Potential Hazard
Transition Region	17.11 – 41.07	3.961 mW/cm^2	Potential Hazard
Main Reflector Surface	N/A	5.664 mW/cm^2	Potential Hazard
Sub-reflector Surface	N/A	783.258 mW/cm^2	Potential Hazard
Area between Reflector and Ground	N/A	1.416 mW/cm^2	Potential Hazard

Table 4

MPE Limits for Occupational/Controlled Area

Area	*Range Meters*	*Power Density (mW/cm^2)*	*Finding*
Far Field	41.07	1.690 mW/cm^2	Meets FCC requirements
Near Field	17.11	3.961 mW/cm^2	Meets FCC requirements
Transition Region	17.11 – 41.07	3.961 mW/cm^2	Meets FCC requirements
Main Reflector Surface	N/A	5.664 mW/cm^2	Potential Hazard
Sub-reflector Surface	N/A	783.258 mW/cm^2	Potential Hazard
Area between Reflector and Ground	N/A	1.416 mW/cm^2	Meets FCC requirements

Table 5

Based on the above finding there is a potential hazard of radio frequency exposure with use of the Patriot Flyaway 1.2M. In order to mitigate the risk of these hazards, this terminal will only be operated in a controlled area, and the unit will be shut down prior to performing maintenance in any of the occupational hazard areas.