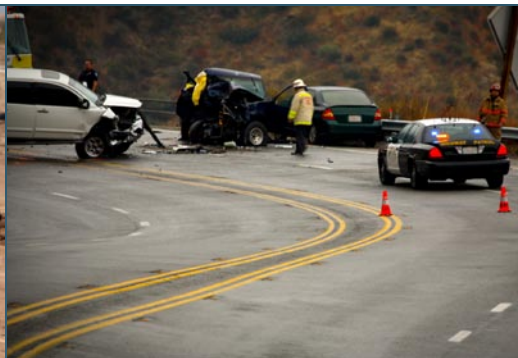




## SECURE & RELIABLE WIDE-AREA WIRELESS COMMUNICATIONS SOLUTIONS FOR



## THE MOST DEMANDING GOVERNMENT, COMMERCIAL & INDUSTRIAL APPLICATIONS

### WHO IS METRIC SYSTEMS CORPORATION

**Metric Systems Corporation** is a U.S. based company specializing in providing government, commercial and industrial enterprises with requirements-based wireless communications systems. Because of our field proven approach of combining "best-in-class" technology solutions with a strong client input, we can provide networking systems tailored to meet local spectrum, environmental and operational requirements.

### WHY METRIC SYSTEMS CORPORATION

Metric Systems Corporation has the engineering expertise and resources to provide your organization with wireless communications systems solution that meets your specific operational and technical requirements. Unlike most manufacturers that focus on a product centric solution or a systems integrator which attempts to solve your unique

challenge by tying together off-the-shelf products, Metric Systems Corporation has the flexibility to meet your objectives by integrating proven components and tailoring existing and new hardware and software to economically and efficiently meet your performance goals.

#### ***Our Commitment to you includes:***

- **Providing** a best in-class technology communications solution which efficiently and economically meets your unique business or operational requirements.
- **Working** with a local team of your choice or local Value Added Systems Integrator to provide on-going project support, continuing training and post deployment support.
- **Assist** as required in each project task component or take responsibility for the entire project from planning to financing to commissioning.

### OUR MISSION

Our mission is to provide the critical communications infrastructure our customers require to consistently meet their needs for reliable communications in the most challenging of environments and situations.

#### ***We achieve our mission through:***

- **Respectful** and flexible ongoing collaboration with our customers.
- **Focus** on tailored solutions using proven industry standard wireless technologies that preserve existing technology investments while simplifying future expansion.
- **Performing** pre and post engineering tasks to ensure performance compliance with our customers.

# WHEN **ZERO** FAILURE IS THE **ONLY** OPTION

## THE DIFFERENCE SUPERIOR COMMUNICATIONS CAN MAKE

Metric Systems Corporation's wireless communication systems are deployed in some of the toughest scenarios imaginable. Many of our systems are rated "**mission critical**" where loss of connectivity quite literally could mean endangering life and property. Our projects include life-line LMR Infrastructure service for U.S. Border Patrol agents along the deadly frontier between the United States and Mexico; a wide-area Air Defense communications system that automatically links fixed and mobile sites to critical targeting information; and an in-ship fault-tolerant communication system to maintain connectivity when fiber and wire infrastructure fails.

Metric Systems Corporation also brings its expertise to industrial and commercial operations. These include continuous and reliable monitoring of widely dispersed petrol-chemical facility operations; wide area multi-camera wireless IP video surveillance system monitoring key public infrastructure sites; and a state lottery that increased its terminal revenues by dramatically improving communication speed and reliability.

Metric Systems Corporation experienced staff of wireless system architects, design engineers and field support technical team has provided robust fixed and mobile wireless communications systems since 1992. Our patented wireless technologies and decades of professional experience have

made Metric Systems Corporation the provider of choice when fault-tolerant solutions are needed.

**U.S. Customs and Border Protection** – The U.S. Customs and Border Protection (CBP) agency is responsible for patrolling the more than 500 miles of harsh frontier terrain along the US/Mexican border. Thousands of field agents depend on strategically deployed VHF and UHF Land Mobile Radio (LMR) base stations and repeaters to communicate as they patrol these dangerous and remote areas.

In this environment, temperatures range from 130°F (55°C) on the desert floor to -20°F (-30°C) on 10,000 foot mountaintops. Extreme lightning storms and power line surges during the monsoon season add to the challenge of maintaining a resilient communications network.

In 2008 and 2009 Metric Systems Corporation provided equipment and support in deploying a fault-tolerant backbone for the CBP's multi-vendor, P25/IP radio network. At the core of each site is a Metric Systems **SAFARI™ COMMANDER NETWORKING SYSTEM** – a durable mesh wireless solution that can quickly detect and reroute communications should a RF link or data gateway be knocked out. The **SAFARI™** communications successfully ensures the safety of CBP agents 24/7.

**Air Defense Communications System** – A key member of the International Non-

Aligned Movement required a mobile high-speed wireless communications network which automatically linked up with other mobile units and maintained overall network operation in the event mobile sites were destroyed. Working with the end-customer and prime contractor, Metric Systems designed and developed a multi-band spread spectrum high-speed wireless transport system. The solution was delivered in less than six months using Metric Systems' **SAFARI™** Wireless Controller as its core component.

Key to operational success was the customer's requirement for basic operator indicators clearly showing when connectivity was established and lost between base and mobile units. This simplified mode of operation is critical during battlefield conditions. Autonomous operation significantly shortened training requirements and enabled a reduced transition to operational service.

**State-Wide Lottery (IGT)** worked with Metric Systems to design and build a secure retail store terminal, and deploy a suite of redundant tower hub sites to service a 5,000 km area. The system tied together urban, suburban and rural points-of-purchase lotto terminals into a highly reliable dual homing secure system to protect against single and multiple point-of-failure events. This approach statistically guaranteed contractual transaction times and a reliable system recovery process in the event of key network component or system faults.

# NETWORKING EQUIPMENT PRODUCTS

## SAFARI™ COMMANDER PERMANENT AND TRANSPORTABLE LMR / IP NETWORKING HUB:

- Multi Radio Wireless Hub for LMR / IP P25 Infrastructure Networks.
- Capable of supporting up to four independent VHF to microwave radio links to create highly fault-tolerant long range to last-mile connectivity.
- Durable military type enclosure makes the SAFARI™ Commander ideal for quick reaction network needs.
- Robust redundant architecture options provide multiple self-healing choices for carrier-grade reliability.
- Power options include 110-220 AC operation and 12, 24 and 48V DC operation.
- Standard government level FIPS 140-2 link and node security capabilities.
- Capable of easy integration into new and existing satellite, microwave, fiber and telco facilities.

SAFARI™ COMMANDER  
SITE-IN-A-BOX WIRELESS NETWORKING HUB



## SAFARI RHINO BOX™ ALL WEATHER ELECTRONICS ENCLOSURES:

- Provides All Weather "Closed Door" operation for commercial, off-the-shelf (COTS) electronic components from -30°F to +170°F.
- Extends life of COTS equipment in harsh environments.

	(1KW INTERNAL HEATING)	
	WITH RHINO	WITHOUT RHINO
AMBIENT TEMP:	115° F	115° F
GROUND TEMP:	140° F	140° F
CASE TEMP:	150° + F	150° + F
INTERNAL TEMP:	< 117° + F	160° + F

- Custom Rhino Box™ solutions for nearly all industry enclosures.

SAFARI™ RHINO BOX™  
ALL-WEATHER OPERATION PACKAGE

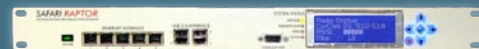


## SAFARI RAPTOR™ PUBLIC SAFETY COGNITIVE RADIO

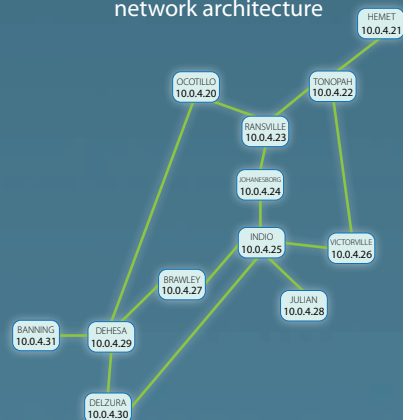
(Scheduled for release the 2nd Quarter of 2010 pending FCC testing and acceptance)

- Utilizes clear spectrum in all VHF and UHF TV bands to build Broadband Point-to-Point, multipoint and Broadcast service.
- Totally automatic system searches for available spectrum for full duplex 60 Mbps link capacity.
- SAFARI™ internal network engine optimized for LMR / P25 use.
- Simultaneously supports video, voice and data.
- Embedded FIPS 140-2 security capability

SAFARI RAPTOR™  
VHF TO 928 MHZ BROADBAND SOFTWARE RADIO



Example of SAFARI Raptor™ network architecture





## KEY EXPERTISE

*Metric Systems Corporation offers the following in-house expertise:*

- Communications design from HF to microwave.
- Product solutions for extreme temperature and vibration operating scenarios.
- Radio Frequency system and traffic analysis from HF to Microwave.
- Network modeling and software protocol design.
- End-user application design and production support.
- System test and commissioning tools and procedures.



**1315 HOT SPRING WAY #106, VISTA, CA 92081-7878**

**WWW.METRICSYSTEMS.COM  
SALES@METRICSYSTEMS.COM**

**PHONE: (760) 560-0348  
TOLL FREE: (800) 549-7421  
FAX: (760) 560-0356**

Copyright 2009, Metric Systems Corporation, All Rights Reserved • Safari Commander, Rhino Box, Safari Raptor are exclusive trademarks of Metric Systems Corporation, All other trademarks are the property of their respective owners • All Metric Systems Corporation's products are covered under one or more of the following U.S. patents: US 6,952,563 B2, US 7,013,345 B1, US 7,089,014 B2

[www.MetricSystems.com](http://www.MetricSystems.com) • [sales@MetricSystems.com](mailto:sales@MetricSystems.com) • (800) 549-7421