



HEREFORD, ARIZONA

BORDER TECHNOLOGY

Background and History

MIST Mobile Internet Satellite System



HEREFORD, ARIZONA



Barnett Ranch
Nov. 2002

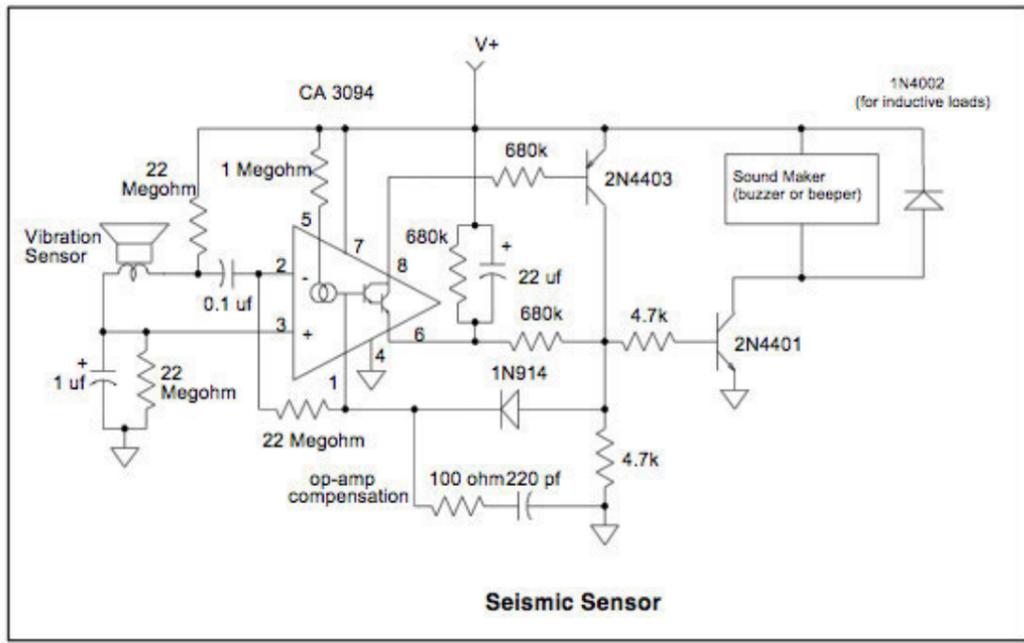
Unattended Ground Sensors



Battery Operated

Single Use

GROUND SENSORS





Unmanned Aerial Vehicles



HEREFORD, ARIZONA





**BORDER
TECHNOLOGY
i INC.**

HEREFORD, ARIZONA



HEREFORD, ARIZONA



Remote BorderCam



HEREFORD, ARIZONA

The System

LandPro 500

LandPro500



The Axsys LandPro500 single field of view thermal imager is today's choice for security and surveillance. With outstanding long-range target detection and recognition, the LandPro500 combines exceptional performance with Axsys reliability and ease of use.

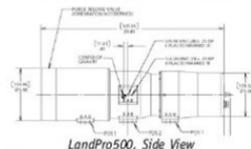
Axsys' LandPro500 offers an extraordinarily clear long-range thermal image at a horizontal field of view of 1.1°, and enables man sized target detection at ranges in excess of 8km in good conditions.

Security/Surveillance

Long-Range Thermal Imaging Camera

Features Include:

- Auto Focus
- High Sensitivity Mode
- Multiple Color Palettes
- Dry Nitrogen Backfilled
- 1.1° horizontal single Field of View
- Motorized Remote Control Operation
- Cooled 3-5µm IR Detector Technology
- Stable over variable temperatures and conditions
- Target Detection: Man > 8km, Vehicle > 19km



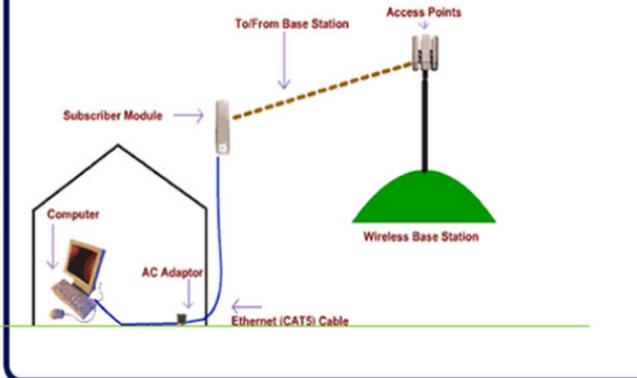
LandPro500, Side View

Motorola Canopy

Motorola High Speed Wireless FAQs

Based on state-of-the-art Motorola Canopy equipment, PrineTIME Internet Solutions brings you a fast, reliable connection.

How does the Motorola Canopy Wireless System work?



Long Range Thermal Sensor



HEREFORD, ARIZONA



Operation Border Count



HEREFORD, ARIZONA

- Need for border assessment
- Looked at Available Technologies
 - Fixed Camera Towers
 - Ground Sensors
 - Game Cameras
 - Aerial Surveillance
- Nothing Suitable

An Old Idea



HEREFORD, ARIZONA



Line of Arrowstar's Litton LRS Vivroseis vehicles in North Dakota.
Arrowstar did extensive seismic survey work for ARCO in and around Willison, North Dakota



From left: Joe Rodgers, ARCO, Carl Fourstar, Arrowstar, Jim Johnson, ARCO (Photo by Glenn Spencer)



HEREFORD, ARIZONA

BORDER TECHNOLOGY i INC.

HEREFORD, ARIZONA



Photo by Glenn Spencer

Let's try it!



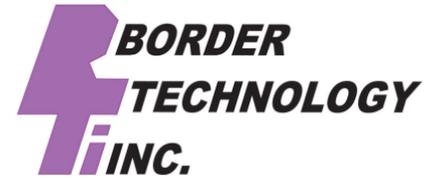
HEREFORD, ARIZONA

1/2 miles of seismic instruments installed

Modifications to operate 24/7

Development of algorithm to analyze data

The Result



HEREFORD, ARIZONA

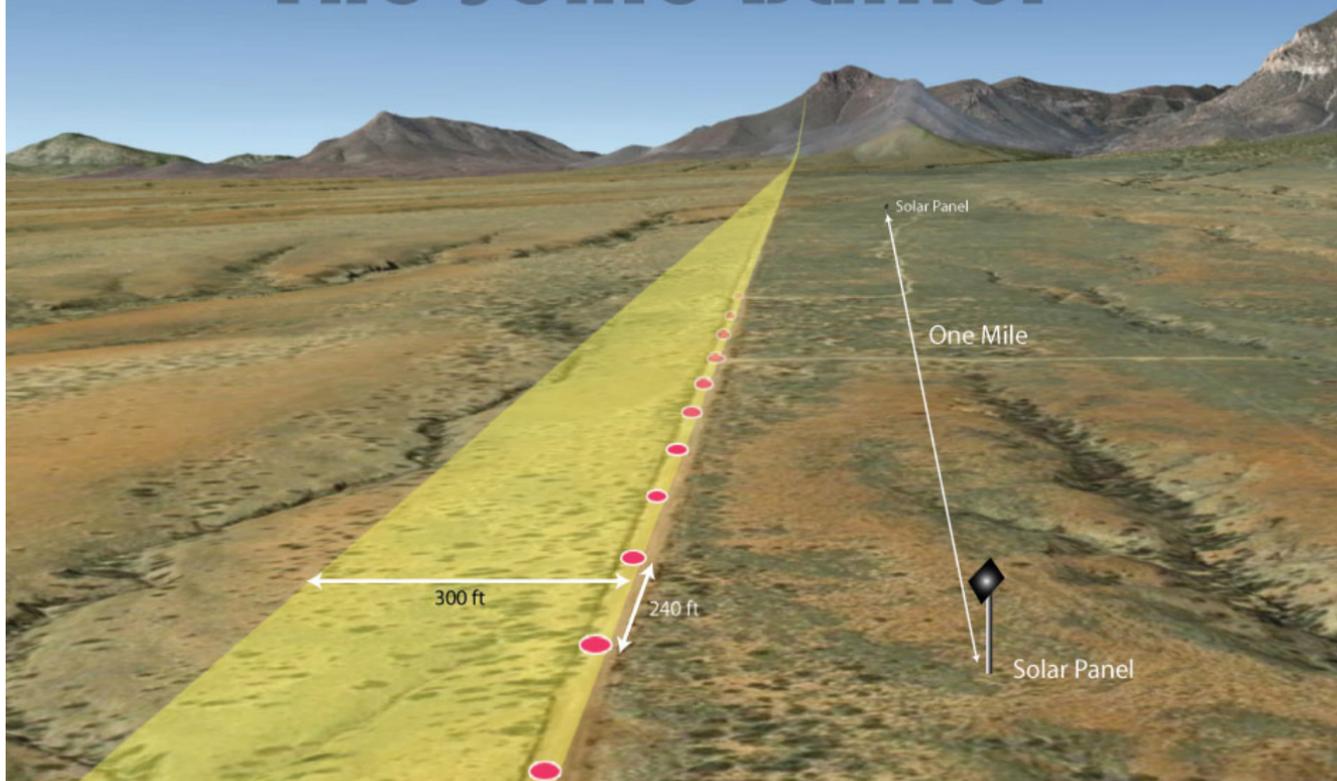
The Sonic Barrier

Detects and counts people on a seamless line.

Operates off solar power

Cost Effective

The Sonic Barrier



**BORDER
TECHNOLOGY
INC.**

HEREFORD, ARIZONA

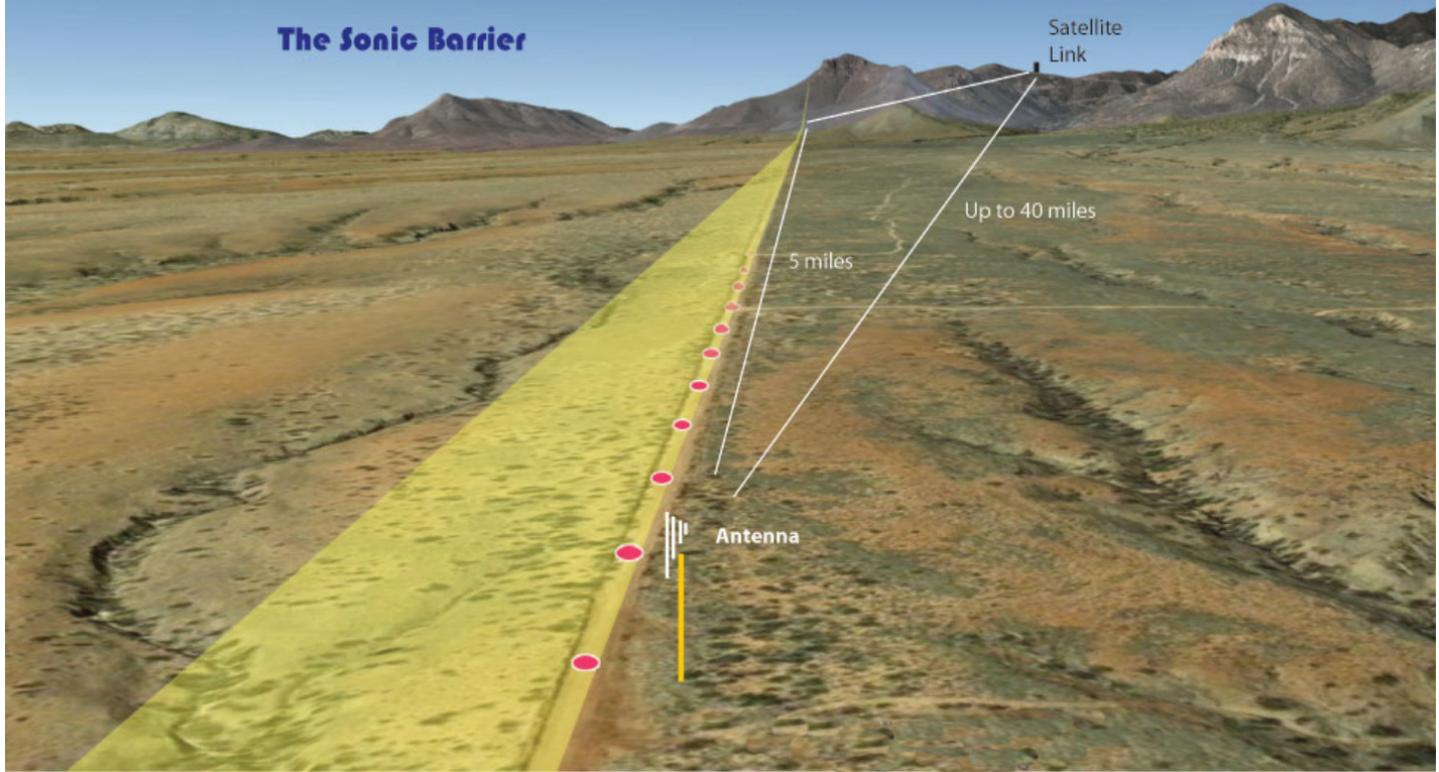
Sonic Barrier

5 Miles



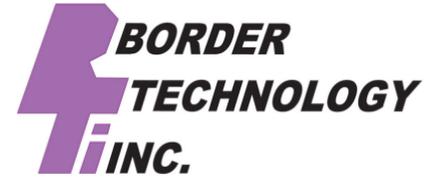
HEREFORD, ARIZONA

The Sonic Barrier



HEREFORD, ARIZONA

Capabilities

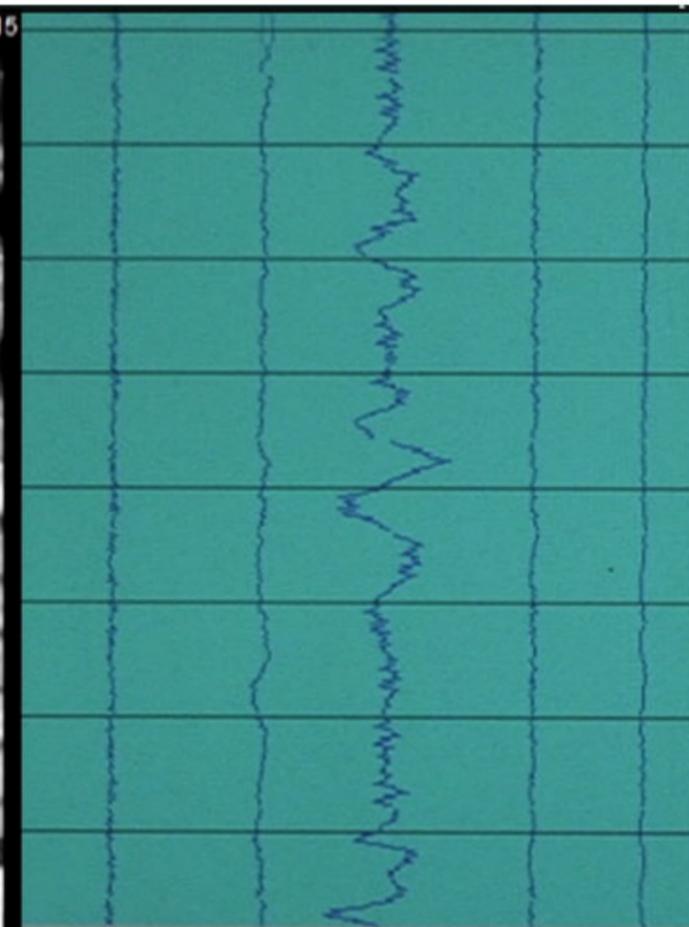


HEREFORD, ARIZONA



- Detection range > 300 feet
- Identify human vs. animal and other
- Low power
- Could count everyone crossing the border

2011/02/15 11:37:15





Analogy

Data like oil for refinery



HEREFORD, ARIZONA

Algorithm like a
refinery



**BORDER
TECHNOLOGY
i INC.**

HEREFORD, ARIZONA

Sonic data
stored on a
hard drive.



HEREFORD, ARIZONA

Algorithm
works great



HEREFORD, ARIZONA

Agreement to use
Pumps

Plumb pumps into
Refinery

Test multiple flows

Live Demonstration



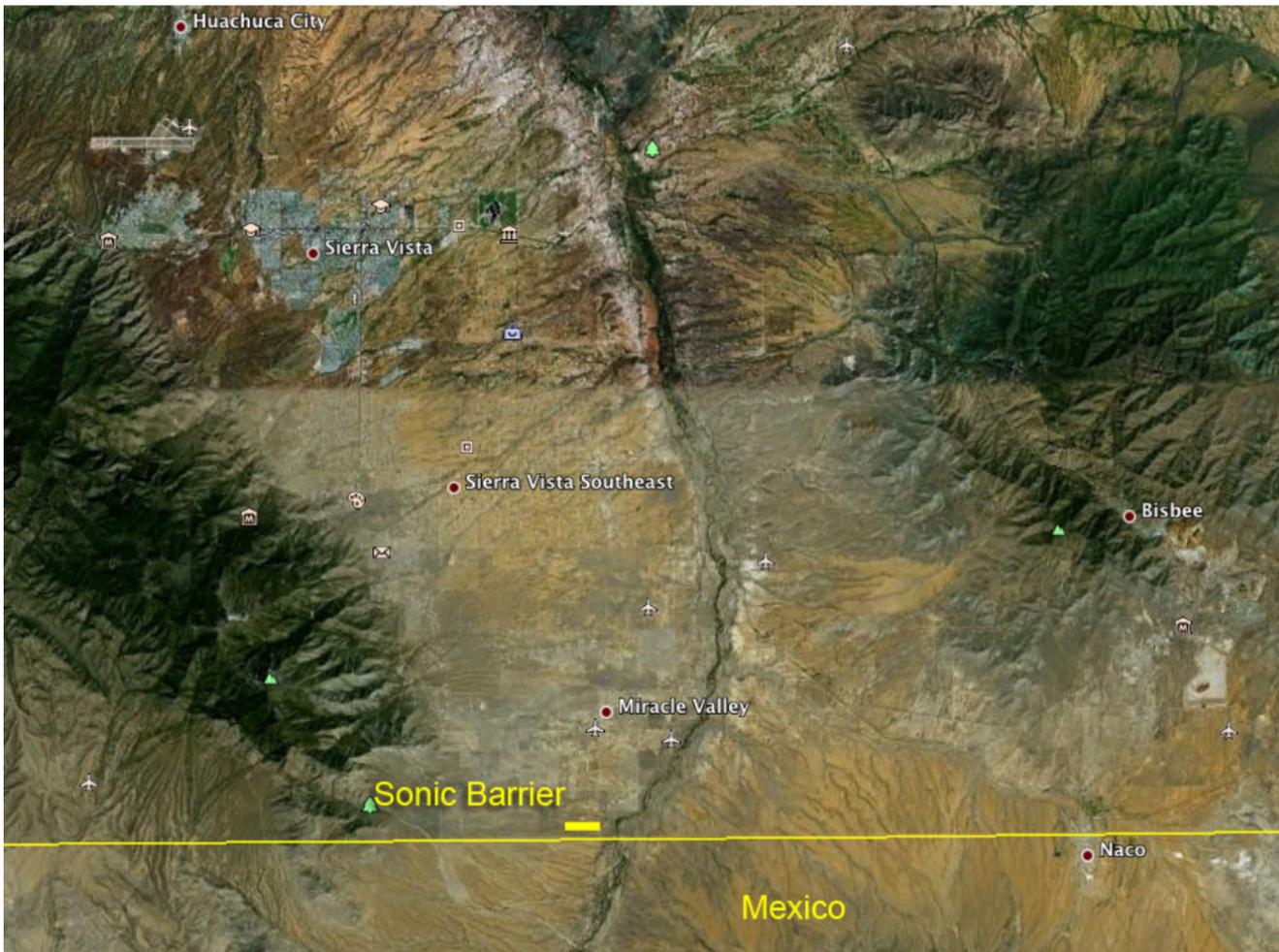
HEREFORD, ARIZONA

The Sonic Barrier

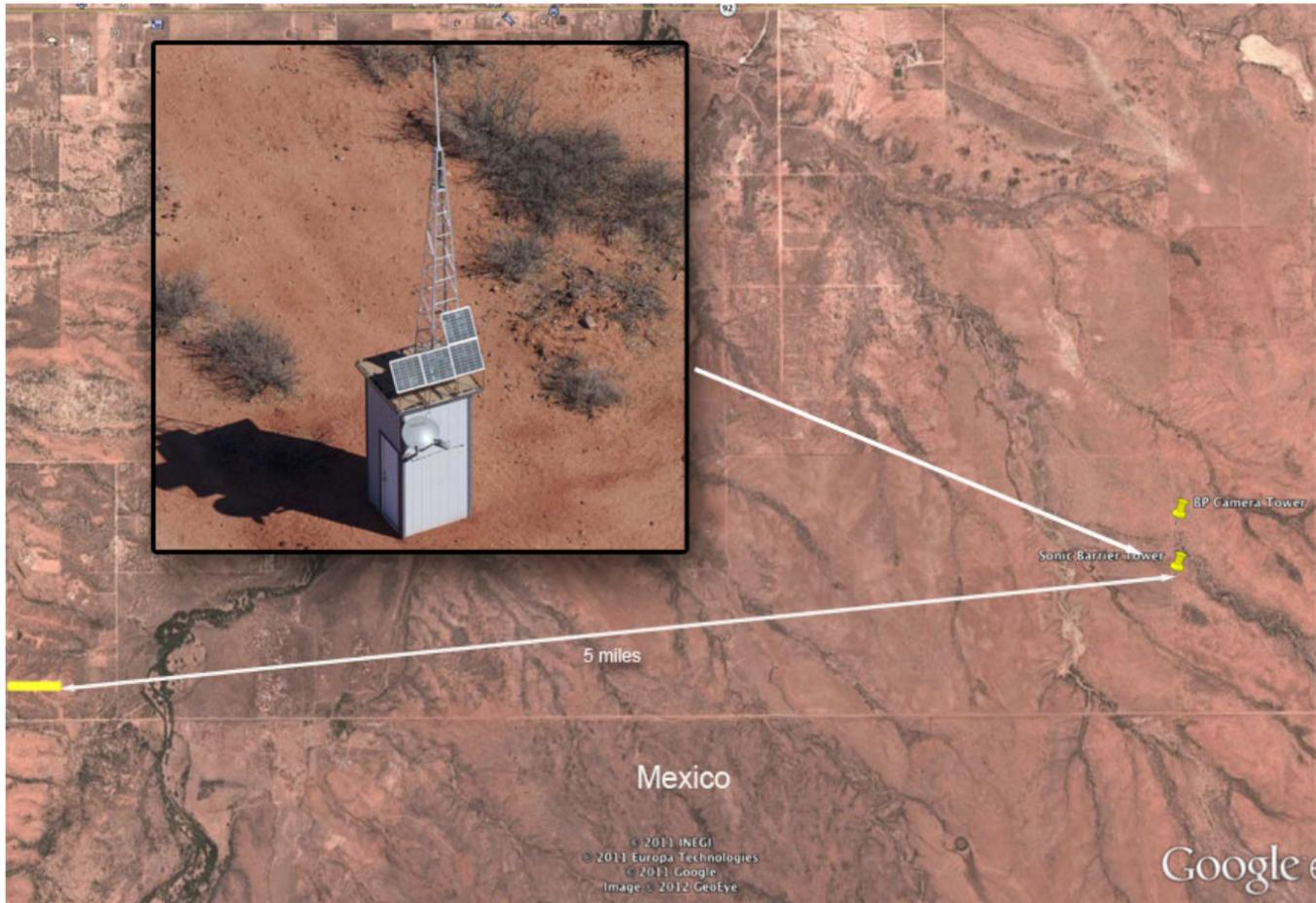


BORDER TECHNOLOGY i INC.

HEREFORD, ARIZONA



HEREFORD, ARIZONA



BORDER TECHNOLOGY i INC.

HEREFORD, ARIZONA

1/2 Mile

Sonic Barrier



300 ft

Camera

International Rd

Mexico

Demonstration



HEREFORD, ARIZONA

Mike King, V.P. Border Technology