



BRAZILLIAN

# ELECTIONS



**INMARSAT GLOBAL GOVERNMENT**  
**COMMUNICATIONS MADE CERTAIN**

This case study is over 5 years old. Whilst the specific hardware mentioned may have been superseded with more advanced models, it proves the longevity and capability of Inmarsat's L-band services. With proven technology and global coverage, you can rely on our services for [#communicationsmadecertain](#)



# THE WORLD'S LARGEST BGAN DEPLOYMENT

Brazil has a history of innovation in voting. It was the first country in the world to implement fully electronic elections. In 2008, it became the first nation to use BGAN mobile satellite technology for voting. BGAN enabled fast, secure, reliable and cost-effective transmission of results from 1,125 remote precincts throughout Brazil—the world's largest BGAN deployment to date.

## CUSTOMER

Brazil's Tribunal Superior Eleitoral (Superior Electoral Court), the agency responsible for national and municipal elections. Headquartered in Brasilia, the federal capitol.

## CHALLENGE

Establish faster, more reliable data and voice communications with electronic polling stations in hundreds of small rural villages lacking access to terrestrial networks.

## SOLUTION

Replaced low-bandwidth satellite phones with BGAN service from Inmarsat, terminals from Addvalue, and 24/7 training and support from Tesacom, an Inmarsat partner.

## RESULTS

Achieved secure, efficient and cost effective satellite communications for 1,125 remote sites. Simplified training. Cut voting data transmission time from hours to minutes.

## NEED FOR SUPERIOR REMOTE COMMUNICATIONS

Brazil was the first country in the world to hold fully electronic elections, successfully shortening the time required to count ballots, which could take more than a week in a presidential election. However, to transmit electronic polling data from hundreds of small villages in rural areas, technicians for Brazil's

Tribunal Superior Eleitoral (TSE) used laptops connected via satellite phones.

Frequently, the signal would get lost and transmission was slow. Maximum data speed, in fact, was only 9.6 kbps. Transmitting electronic ballots, counting votes, and returning results to regional electoral courts took 12 hours or more. Final counts, therefore, were not available until the day after polls closed—a frustrating situation for voters and candidates alike. In 2008, the TSE issued a tender looking for more reliable, secure and cost-effective satellite communications for 1,125 remote polling stations to be set up for municipal elections in the fall. After three intense rounds of bidding against two competitors in Brazil, Tesacom—an Inmarsat partner based in Argentina—won the contract. Tesacom joined forces with Inmarsat and Addvalue to provide TSE with a complete BGAN solution.



The BGAN terminals offered flexible service options, including simultaneous voice and data connectivity at speeds up to 492 kbps—about 50 times faster than the previous service. Addvalue's Wideye SABRE 1 terminal was compact, robust, simple to use, and inexpensive. Value added services—including bulk activations, data encryption, dedicated VPN, terminal authorization, cost controls, and real-time traffic monitoring—proved essential to success.

Since there were only four weeks between the purchase order and elections, timing was critical. It

took just two weeks to obtain 1,200 BGAN terminals from Addvalue in Singapore, and just three days for Tesacom to activate all the SIM cards. Tesacom offered train-the-trainer programs to 300 TSE employees, and produced a seven-minute training DVD for all first-time users.

With massive logistical aid from the Brazilian Army, which was responsible for election security, TSE transported all the BGAN equipment and electronic ballot boxes to rural precincts via helicopter, truck and boat.

"During BGAN testing at a rural village we transferred data from ten polling stations to the Court. It took just five minutes—a speedy success."

Rivaldo Pereira Borges,  
Director of Technology, Regional Electoral Court-Mato Grosso do Sul

# IMPRESSIVE SPEED, SECURITY AND RELIABILITY



BGAN enabled extremely rapid transmission of voting results to the Superior Electoral Court in Brasilia. Communications were so fast, in fact, that Val Oliveira, a TSE technician, said, "It's as if you're in the room next to the Court, where all the votes are counted." TSE personnel in the field used BGAN for both voice calls and FTP data transfers for the election. They set up a private network linking all 1,125 polling stations via IPSec VPN through Stratos BusinessAccess, a secure network totally isolated from the Internet and unauthorized access.

Tesacom and the TSE were able to monitor call data records for each terminal in real-time,

ensuring continuous information flow—a distinct advantage over previous elections. While the actual transmission of election data required just minutes with BGAN, counting the votes and delivering final results to regional organizations still took about four hours. Nevertheless, total elapsed time was two-thirds shorter than previous elections. Results were reported by 11 p.m. the same day—to everyone's delight.

The BGAN system suffered no congestion or network issues despite unusually heavy usage. At times, for example, nearly 500 BGAN terminals within a geographic area achieved simultaneous transmission on a single spot beam.

The SABRE™ I brings high-speed office grade communications to your briefcase, anytime, anywhere. Simple to use, sub-laptop sized, fully self-contained.

## FEATURES

- Simultaneous voice & data communications
- Data rate up to 384 kbps
- Built-in Ethernet and Analog Phone interfaces
- Supports voice, email, messaging, VPN, FTP, VoIP, FoIP and video media streaming
- Designed for non-technical user
- Swiveled antenna mount facilitates easy pointing
- Built-in menu driven graphical user interface for use without a laptop
- Light weight, robust and reliable
- Wide range of accessories to meet your needs
- Wi-Fi supported (by 3rd party external wireless router)



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