



## BROADCAST MICROWAVE SERVICES



Broadcast Microwave Services, Inc. (BMS), a wholly owned subsidiary of Cohu Electronics, Inc., is a leader in COFDM microwave transmission equipment for the media and law enforcement markets. The company makes digital microwave radios for the transmission of broadcast quality video and audio. BMS is based in San Diego, Calif.

### OBJECTIVE

BMS wanted to enable broadcast-scale data transmission to TV studios and provide redundant backup to its existing microwave transmission system.

BMS products facilitate a high-speed data path over microwave radio. A BMS media router converts IP traffic into a format suitable for transmission over a dedicated microwave link, which allows an IP connection into a news organization's own network. The typical broadcast is forward-link only and is used to set up a live shot and transmit it from the news van back to the TV studio. If the microwave link went down or a news van needed to drop its antenna to drive to another news site, transmission had to stop.

TV stations wanted a way to keep the video files flowing during these interruptions. In addition, they were undergoing an important workflow shift. Instead of feeding raw footage back to the studio, remote teams were actually editing in the van and transmitting back a complete segment. Since these video files could be transmitted "offline" during drive-time when the microwave antenna was down, the need for an alternate transmission path started to grow significantly. The new workflow also opened up a potential need for reverse-link bandwidth to transport content and receipt acknowledgements from the studio to the van.

### SOLUTION DESCRIPTION

The BMS system consists of a 19-inch, rack-mounted Linux server with Sierra Wireless 580 AirCard® PC cards mounted in the mobile news van with connectivity to the Verizon Wireless BroadbandAccess (EV-DO) network. The file sizes that media organizations transfer can be up to 300 MB. EV-DO offers the bit rate required to make it feasible as a backup system.



[www.bms-inc.com](http://www.bms-inc.com)

### COMPANY

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### OBJECTIVE

- Enable broadcast-scale data transmission to TV studios and provide redundant backup to the existing microwave transmission system

### SOLUTION

- Verizon Wireless BroadbandAccess (EV-DO)
- Sierra Wireless 580 AirCards
- Zumastys systems integration

### RESULTS

- Received very positive feedback at the National Association of Broadcasters (NAB) show
- Rolled out trial implementations with customers



**A-List™**  
*Winner*



**Broadcast Microwave Services is the 2006 winner of the 3G A-List Award in the Technical Innovation category.**

The 3G A-List Awards recognize the leading builders of successful wireless data solutions based on 3G CDMA (CDMA2000 1X, EV-DO, and UMTS/HSDPA) technology. **To learn more about the A-List, please visit [www.3galist.com](http://www.3galist.com)**

#### SUPPORTING PARTNERS

The A-List also recognizes supporting partners for their enabling role in assisting winners with their wireless data deployments.



The EV-DO system facilitated by Zumasys integration offers flexibility to both BMS and its customers. "In most instances, the AirCards provide a return path that enables BMS to set up communications with the studio through the IP network and then act as a return channel for data coming back from the studio," explains Jonathan Bramwell, an engineering manager for BMS. "The AirCards also allow the operator to change wireless carriers based on customer preference."

Reliability and timeliness are critical to delivering live news. "This wireless solution provides an important acknowledgement that each segment transmitted effectively," says Bramwell. "The redundant backup capabilities are critical as well. A news team could be in the midst of a file transfer and have to take down the microwave antenna to move the van.

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*Jonathan Bramwell  
Engineering Manager  
Broadcast Microwave Services*

The EV-DO system can now continue the transfer seamlessly."

#### RESULTS

BMS recently demonstrated its new 3G CDMA mobile broadband solution at the National Association of Broadcasters (NAB) show and is currently in demos with customers. The company will soon be moving into the implementation phase where media news crews will be able to utilize the new high-bandwidth EV-DO feature.