

# Creating a New Era of Inflight Broadband

— ZTE, Qualcomm and Aircell Collaborate on World's First ATG Inflight EV-DO Network

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ZTE has displayed a high degree of flexibility. For example, they added the ability to assign a subnet to a mobile device in the PDSN. ZTE has dedicated many resources to our project and has been heavily involved and engaged. This shows a desire to truly partner with Aircell. It has been noticed and is greatly appreciated. Kudos to ZTE!

—Fran Phillips, Vice President of Aircell

Founded in early 1990s, Aircell was originally devoted to R&D and services of inflight communication systems. Its leading products, aircraft-mounted satellite transceivers and cordless phones, have been installed on more than 40 types of aircrafts. In June 2006, Aircell was exclusively licensed for American Air-to-Ground (ATG) communication service. In recent years, Aircell has turned to the inflight wireless broadband market to meet the increasing demand for inflight broadband services.

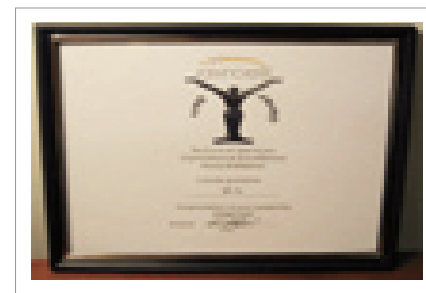
## EV-DO Drives Inflight Internet Service Boom

For many years, as satellite communication links were extremely expensive, few passengers could ever use the inflight voice and data services,

though such services were available in many aircrafts. As the inflight communication technology evolves, many tests by Qualcomm have proved the feasibility of direct communication between aircrafts and terrestrial base stations. The further advancement in inflight communication will significantly increase the bandwidth while dramatically reducing the communication costs and delay, enabling the aircraft's passengers to enjoy inflight network services freely.

After winning the FCC's ATG spectrum licensing auction in June 2006, Aircell immediately negotiated with many equipment vendors, hoping to find the best partner that could develop the inflight broadband connectivity service. Many vendors shrank back at the sight of numerous technical challenges, for

instance, custom bands, fast handoff of terrestrial base stations, and Doppler effect caused by high-speed flight. With the strength of leading position and innovation capability in the CDMA field, ZTE finally stood out from many of its competitors and was selected by Aircell to jointly address the challenges.



Aircell's Technical Services Operational Excellence Award granted to Mr. Fu Xiaolong

## ZTE's Amazing Response to Aircell

In December 2006, Aircell, ZTE and Qualcomm signed an agreement to jointly develop ATG EV-DO network. ZTE established a powerful experienced team that quickly engineered a custom solution for ATG and completed the R&D and commissioning of the custom-designed system in less than six months. In April 2007, ZTE started trial tests with Aircell's CDMA EV-DO network, and all the tests were considered satisfactory.

ZTE's efficient custom solution and quick response to customer demands

**CDMA Solution for Aircell in USA**  
**Customized: Frequency, RF, Chipsets**

**ATG mode:**

**Air**

**Ground**

- Frequency: ATG
- Coverage: national wide exclusive
- Services: Data access in the plane

were highly appreciated by Aircell. Mr. Fu Xiaolong, an on-site engineer of ZTE was honored with Aircell's Technical Services Operational Excellence Award for his outstanding achievement (see Figure 2). "The on-site ZTE engineers have a very strong work ethic. They have always done whatever we have asked, even when that has required extra effort or long hours. Kudos to the on-site ZTE engineers," said Fran Phillips, Vice President of Aircell.

The successful implementation of Aircell's ATG EV-DO network marks a milestone in the CDMA technology for inflight coverage, and also fills a gap in the application of the terrestrial systems to the inflight communications. In one word, it is a pioneer of the inflight wireless coverage and a revolution to the airline industry.

### Proven Track Record

The commercial launch of the CDMA EV-DO inflight network opens a new era for Aircell to offer inflight Internet service across America. This service will definitely speed up the growth of Aircell.

On June 26, 2007, ZTE entered an agreement with Aircell on exclusive supply of custom-made CDMA EV-DO system for air-to-ground coverage. In addition, ZTE also actively helped Aircell develop new



3G CDMA Industry Achievement Award business models, enhance its innovation capability, and make it more competitive.

On November 19, 2008, the ATG EV-DO network was honored by the CDMA

Development Group (CDG) with the 3G CDMA Industry Achievement Award (see Figure 3). Actually, this honor is for the perfect collaboration between ZTE and Aircell on the ATG EV-DO network, a great contribution to the development of wireless technologies.

By the end of 2008, Aircell has contracted with 7 airlines in America to deploy inflight Internet service for their airliners. Currently, such inflight communication service is being delivered to 10 airlines, totaling 50 flights a day. The year of 2009 will witness the booming of inflight Internet service, and Aircell and its partners have prepared well to face the opportunities and challenges.

## Case Summary

### Customer Requirements

- Selecting long-term partner to build the in-flight broadband network
- Building a quality network to provide better customer service

### ZTE Solutions

- Customized EV-DO solution
  - Customized ATG band
  - Dedicated system chip

- New PDSN functions

- Rapid and efficient engineering execution

### Customer Value

- Providing better user experience and winning wider market space
- Creating a new era, making a large number of airlines deploy in-flight Internet service