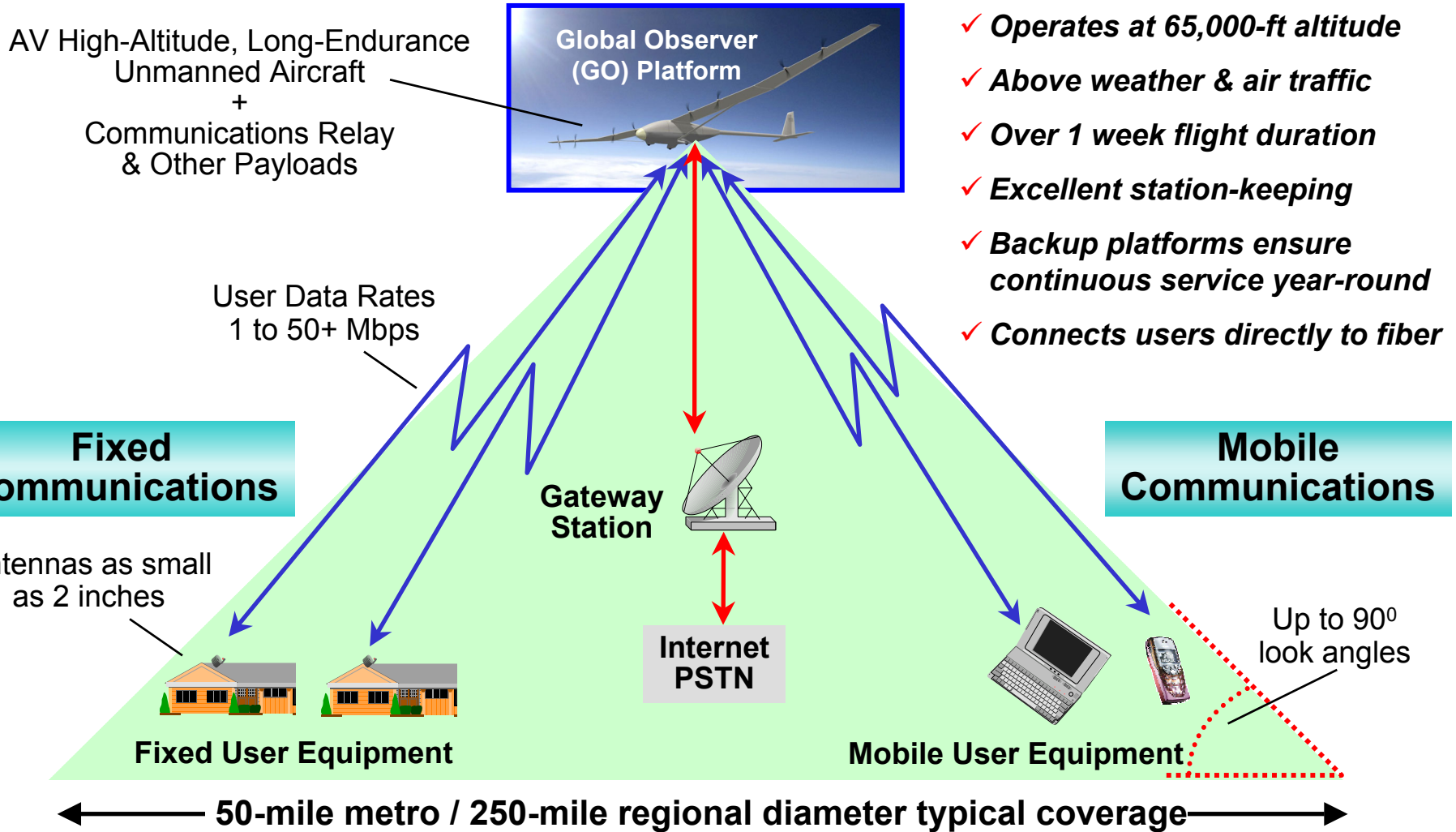


Planned SkyTower Telecom System Concept

Enabled by AV's Global Observer Platform Technology



✓ 2-Way Broadband ✓ Broadcast Video/Audio ✓ Voice/Narrowband

AV Telecom Tests from Stratosphere

World's First from 65,000 ft (GO predecessor)

Successful multinational industry / government collaboration in 2002

AV, Japan Ministry of Post & Telecommunications (NITC), NASA, Toshiba, NEC



1) High Definition Television (HDTV) broadcast tests using UHF channel

- 19 Mbps data rate achieved using under 100 Watts of power

2) IMT-2000 / Third-Generation (3G) mobile tests using 2 GHz bands

- Voice/video/data relay using off-the-shelf NTT DoCoMo 3G mobile handset

AV Global Observer Prototype

World's First Liquid Hydrogen-Powered UAV



Global Observer
Prototype



- **Successful first flights in mid-2005**
- **Prototype designed, built & tested in 6 months**
 - Funded completely internally by AV
 - Third-scale UAV with liquid H₂ propulsion & storage
 - Completed full system validation & air worthiness tests prior to H₂ powerplant integration
 - Established mobile liquid H₂ fueling station & demonstrated safe operating procedures
- **Demonstrated last building block to enable routine long endurance operating capability**
 - Liquid H₂ handling, storage & propulsion system projected to enable over 1 week flight duration