



WILDBLUE

COMMUNICATIONS

2007 Telecommunications Symposium

29 November 2007

David M. Brown

WildBlue Communications

WildBlue is a “*Broadband Internet via Satellite*” service provider with more than 275,000 customers in the 48 contiguous United States.

▶ **Headquartered in Denver, Colorado**

- Privately held corporation
- Entered commercial service June 2005
- Growing rapidly – more than 20,000 new customers a month

▶ **U.S. national infrastructure with**

- 2 Ka-band spot beam satellites
- 11 Gateway Earth Stations
- Network Operations Center
- Business Systems Data Center
- Customer Call Center



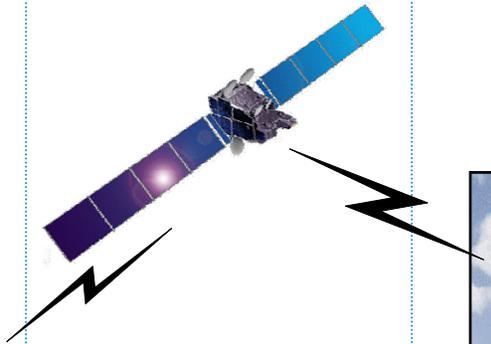
WildBlue Network Architecture

Subscriber Terminal



Small low cost subscriber terminal

Satellite Connectivity



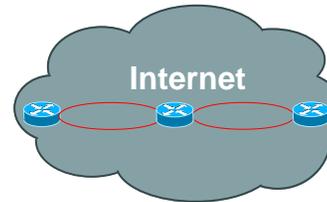
High power, bent-pipe spot beam satellites

Gateway Earth Stations



Unmanned remotely operated Gateway Earth Stations

Fiber Connectivity



Leased connectivity 3rd party email, web hosting, portal

Operations & Business



Network operations Business systems Denver, Colorado

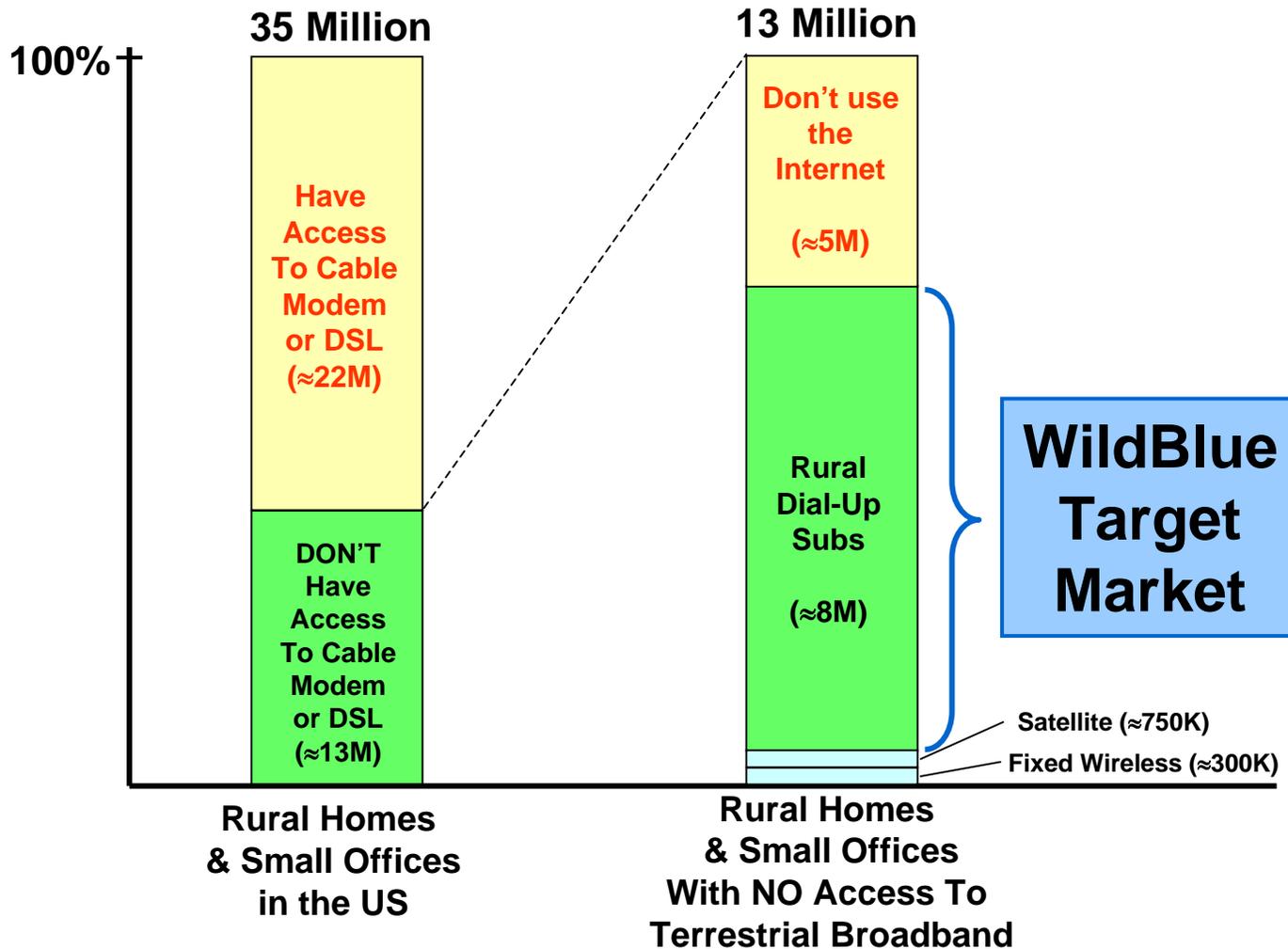
Residential Service Offerings



| <i>Service Offering</i> | <i>Value Pak</i> | <i>Select Pak</i> | <i>Pro Pak</i> |
|----------------------------------|-------------------------|--------------------------|-----------------------|
| <u>Speeds ("up to")</u> | | | |
| Downstream | 512 kbps | 1.0 Mbps | 1.5 Mbps |
| Upstream | 128 kbps | 200 kbps | 256 kbps |
| <u>Consumption Limits</u> | | | |
| Downstream / 30 days | 7.5 GB | 12 GB | 17 GB |
| Upstream / 30 days | 2.3 GB | 3 GB | 5 GB |
| <u>ISP Services</u> | | | |
| Email Accounts | 5 × 100 MB | 5 × 100 MB | 10 × 100 MB |
| Web Hosting | 10 MB | 10 MB | 20 MB |
| Free Dial-up | – | – | 10 hrs/month |
| <u>Upfront Price</u> | | | |
| Equipment | \$199 - 299 | \$199 - 299 | \$199 - 299 |
| Installation | <u>\$ 0 - 179</u> | <u>\$ 0 - 179</u> | <u>\$ 0 - 179</u> |
| Total | \$199 - 478 | \$199 - 478 | \$199 - 478 |
| <u>Monthly Service</u> | \$49.95 – 54.95 | \$69.95 | \$79.95 |



WildBlue's Target Market



Source: WildBlue Market Research, 2006



Key Drivers of Satellite Broadband Market

Social Trends

- Urban & second home movement to rural areas for “lifestyle”
- Long-term reduction in rural jobs
- Telecommuting

Product Trends

- Decline in upfront price
- Demand for speed & capacity (usage)

Competitive Trends

- Growth of DSL/CM (assumed very low)
 - LECs: “we will not serve 20% of our customers with DSL”
- Growth of fixed wireless
- Expansion of nascent technologies (BPL, 3 or 4G, etc.)



Customer Demographics

WildBlue Targets the Most Rural Markets



YOU ARE HERE.

**FINALLY, AFFORDABLE
HIGH-SPEED INTERNET
IS HERE TOO.**

Low-cost, high-speed Internet via satellite. Welcome to WildBlue country.

WildBlue delivers a world of information and resources at blazing speeds. So you can increase the productivity of your farm or ranch, just about anywhere it happens to be.

To get WildBlue with a 30-day satisfaction guarantee, call us at 1-866-379-8115 or see your local dealer.

Advanced satellite technology makes WildBlue up to 30X faster than dial-up.

STARTING AT \$49.95 PER MONTH
\$100 OFF INSTALLATION

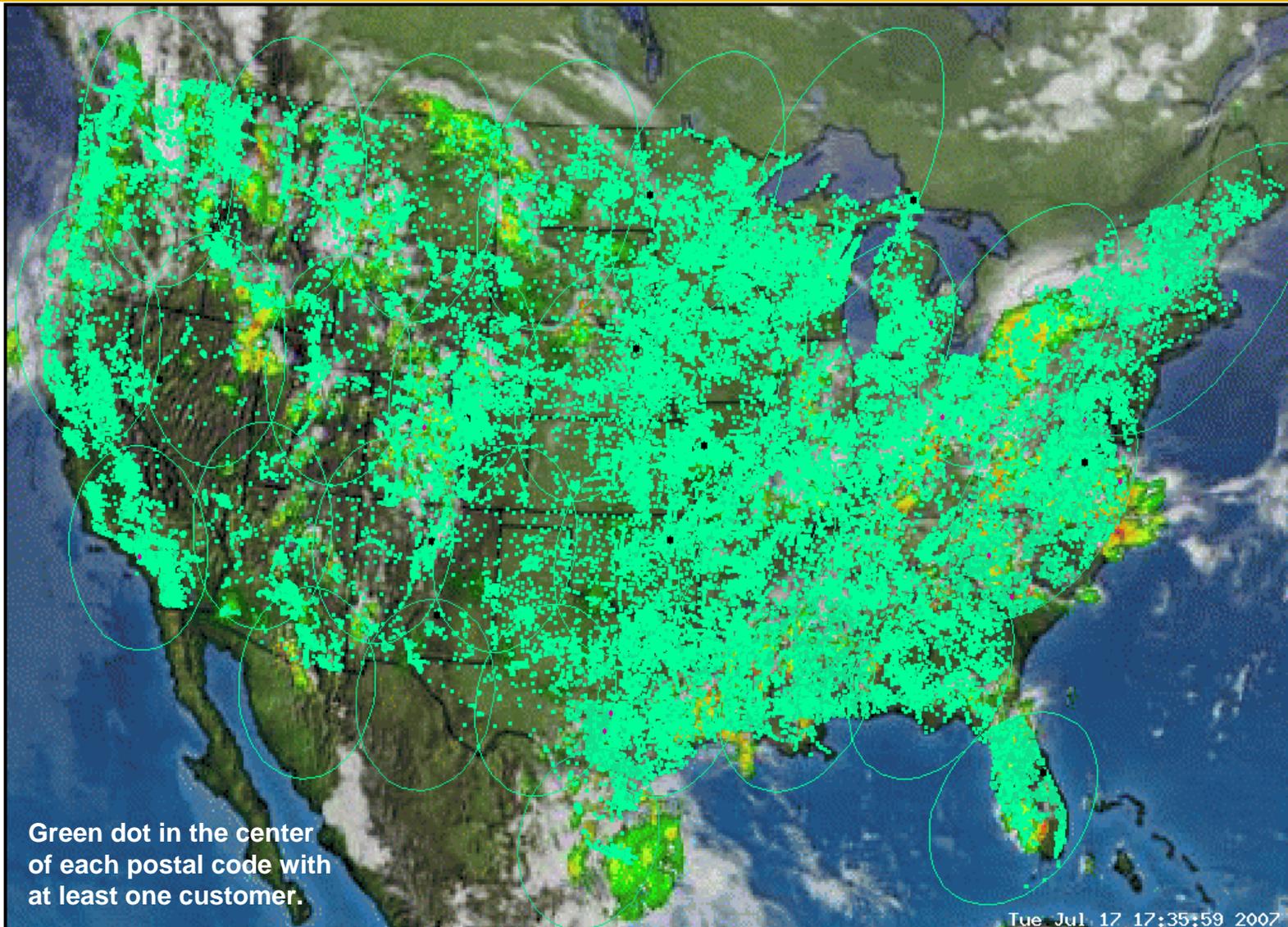
WildBlue Customers: Population Density



Nearly 70% of WildBlue customers are in areas with <30 homes/Km².

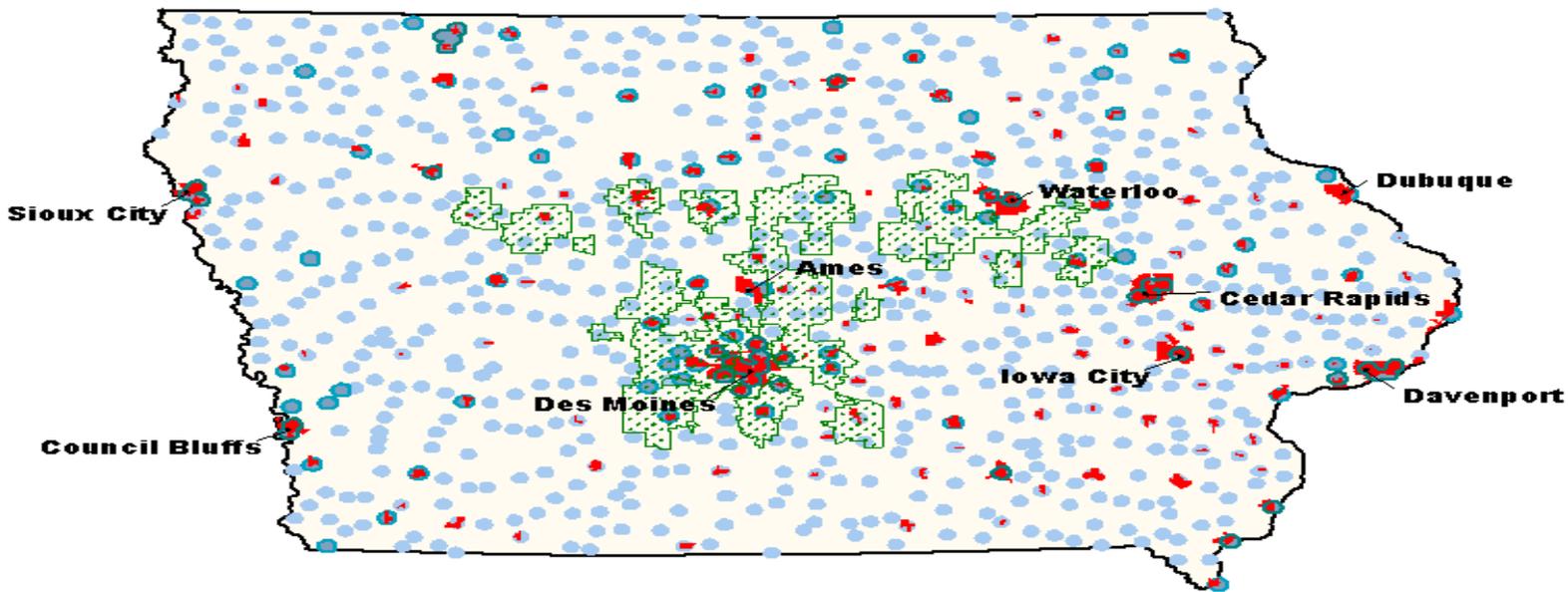


Relative Customer Density



Example 1: Broadband In Iowa

- = DSL available from RBOC
- = DSL available from Independent Telco
- = Cable Modem service available
- = Fixed Wireless service available (Prairie-Inet)

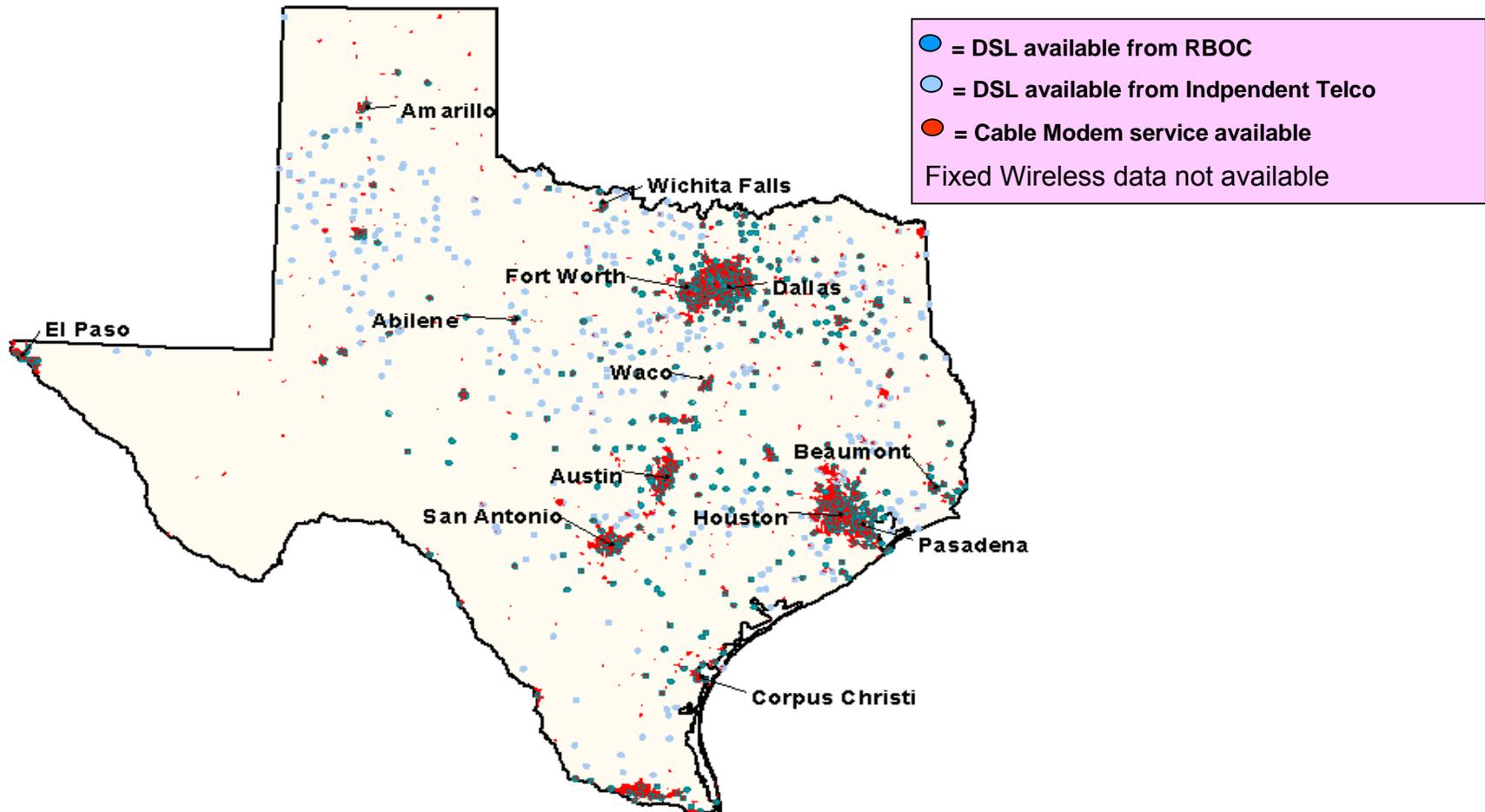


| | Homes by Block Group Household Density (homes per sq.mi.) | | | | | % of total | | | | |
|---------------------------|---|----------|------------|----------|-----------|------------|----------|------------|----------|-------|
| | <50 | 50 to 99 | 100 to 250 | Over 250 | total | <50 | 50 to 99 | 100 to 250 | Over 250 | total |
| No Terr. Broadband | 211,856 | 24,078 | 1,797 | 2,463 | 240,194 | 59% | 28% | 1% | 0% | 20% |
| Terr. Broadband | 144,410 | 63,299 | 173,469 | 585,280 | 966,458 | 41% | 72% | 99% | 100% | 80% |
| Total | 356,266 | 87,377 | 175,266 | 587,743 | 1,206,652 | 100% | 100% | 100% | 100% | 100% |

Source: Pinkham Group (4/06); WildBlue extrapolation; Prairie I-net



Example 2: Broadband In Texas



| | Homes by Block Group Household Density (homes per sq.mi.) | | | | | % of total | | | | |
|---------------------------|---|----------|------------|-----------|-----------|------------|----------|------------|----------|-------|
| | <50 | 50 to 99 | 100 to 250 | Over 250 | total | <50 | 50 to 99 | 100 to 250 | Over 250 | total |
| No Terr. Broadband | 1,062,050 | 191,222 | 1,361 | - | 1,254,633 | 91% | 52% | 0% | 0% | 15% |
| Terr. Broadband | 103,707 | 175,331 | 657,868 | 5,944,732 | 6,881,638 | 9% | 48% | 100% | 100% | 85% |
| Total | 1,165,757 | 366,553 | 659,229 | 5,944,732 | 8,136,271 | 100% | 100% | 100% | 100% | 100% |



Distribution Partners

▶ Retail Distribution

- Approximately 1500 dealers

▶ Wholesale Distribution

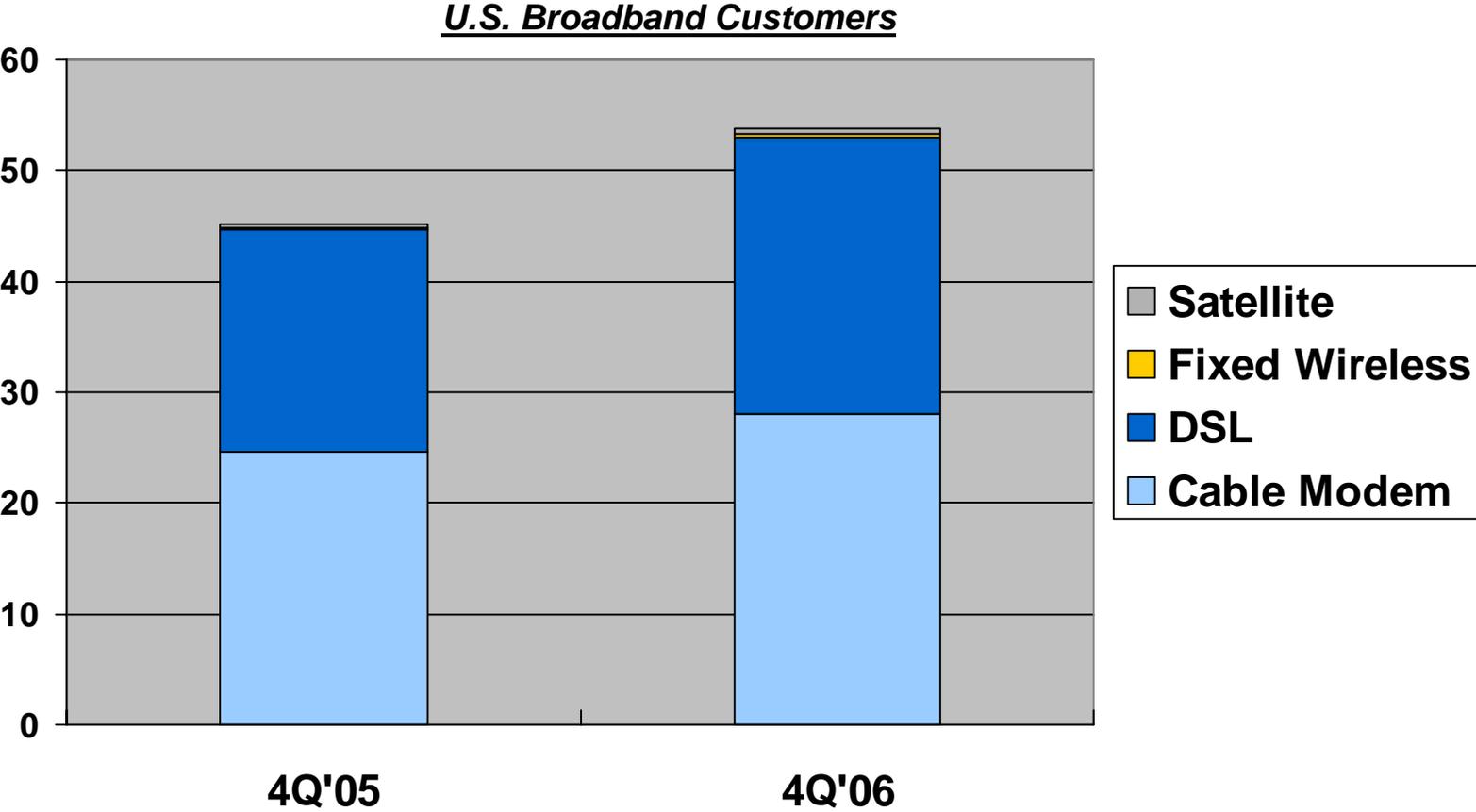
- AT&T
- DIRECTV
- EchoStar/DISH
- National Rural Telecommunications Cooperative (NRTC)

▶ Enterprise Distribution

- Approximately 50 Value-Added Resellers



Broadband Market (by Technology)



Source: Jupiter; ignores BPL subs



Technology Comparison

| | 2005 EOY Subscribers | Growth 2005-09 (CAGR) | Pro | Con |
|------------------------------------|-------------------------|--------------------------|--|--|
| Cable Modem/DSL | 44.6 million | 10% | <ul style="list-style-type: none"> • Speed • Price • Local Presence • Bundled offering | <ul style="list-style-type: none"> • Not ubiquitous |
| Fixed Wireless | 0.2 million | 32% | <ul style="list-style-type: none"> • Price • Local Presence | <ul style="list-style-type: none"> • Not ubiquitous • Mostly unlicensed spectrum (except Sprint/Clearwire) • Must choose where to build |
| Satellite | 0.3 million | 42% | <ul style="list-style-type: none"> • Ubiquity | <ul style="list-style-type: none"> • CPE Cost • Unproven VoIP offering • Time to market for new capacity |
| Broadband Over Power Line (BPL) | <0.1 million | n/a | <ul style="list-style-type: none"> • Price • Local Presence • Some existing infrastructure | <ul style="list-style-type: none"> • Cost • Not ubiquitous • Must choose where to build |



Keys to Success

- ▶ Internet access architecture
- ▶ Affordable bandwidth, bent-pipe spot beam satellites
- ▶ DOCSIS standards
- ▶ Low-cost CPE
- ▶ Small outdoor unit, easy to install and attractive in a residential environment
- ▶ Strong distribution relationships
- ▶ Excellent technology and manufacturing partners



WildBlue Vision for Future Technology

- ▶ **Higher capacity satellites**
 - Incredibly high capacities are possible, allowing millions of customers per satellite
- ▶ **Improved latency mitigation**
 - Better proxy, protocol translation and compression
- ▶ **Decreased cost of providing the service**
 - Smaller spot beams, advanced network design allowing lower power terminals at higher data rates
- ▶ **Higher customer expectations for satellite Internet service will be the challenge**
 - Snappy web surfing
 - “Unlimited” consumption
 - Faster speeds
 - No outages
- ▶ **Next generation WildBlue technology and business processes incorporating lessons learned**





WILDBLUE
COMMUNICATIONS

