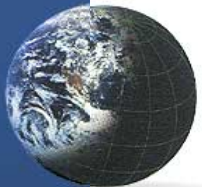


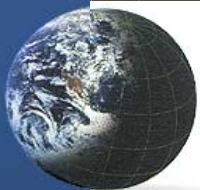
Upper Dublin Township Community Broadband

Business Plan Update
September 2006

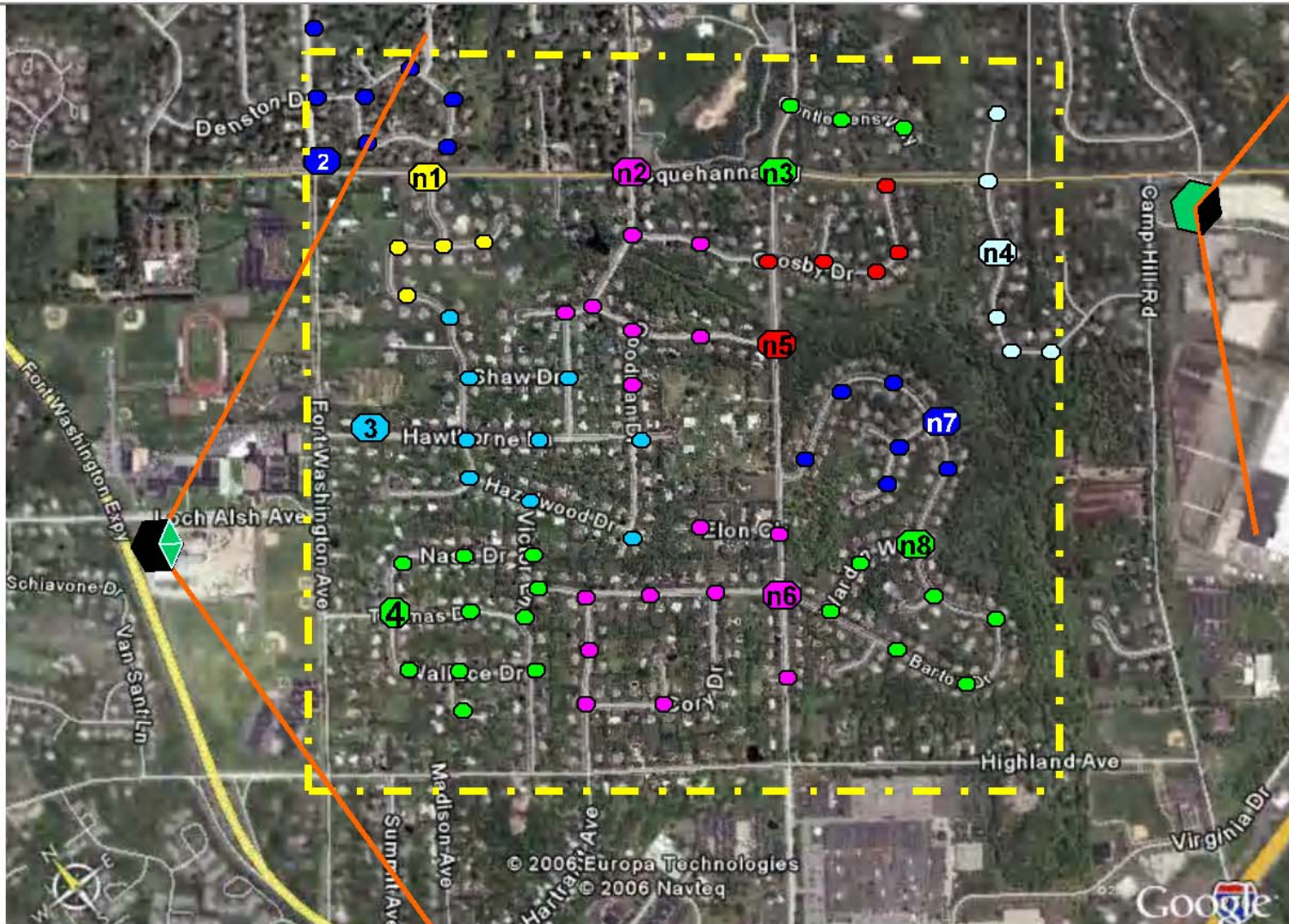


Major System Elements

- ◆ Internet Access Points
- ◆ Canopy Layer
- ◆ Subscriber Access Layer
- ◆ Police/Emergency Subscriber Units



Phase 1 Proposed Coverage – Residential Service Area

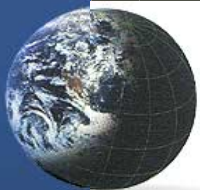


72 Mesh Routers
Approx 1 sq. mile



Coverage Requirements

- ◆ 13 square miles
- ◆ Subscriber Access Layer
 - 81 Repeater Units per Square Mile
 - 13 Gateway Units per Square Mile





Sensoria EnRoute500 campus mesh,
University of Virgin Islands
Evans Student Center Building

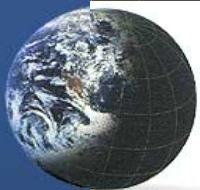


Sensoria EnRoute500 with street light power adaptor,
San Diego, CA neighborhood



Capital Costs

- ◆ Subscriber Access Layer
- ◆ EnRoute 500 Antennae
 - Test Phase Deployment ~ \$ 475,000
 - Scale-up to Full Coverage
Deployment Cost ~ \$ 4,000,000



Capital Cost Estimates

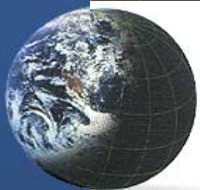
◆ Contingency Rates

- | | | <u>Range</u> |
|---------------|-----|-----------------|
| • Preplanning | 50% | (-50% to +100%) |
| • Post design | 30% | (-20% to +30%) |
| • Post Bid | 10% | (-3% to +15%) |
- ◆ Contingency reserves are normally included in the project's cost and schedule baselines.
 - ◆ Excludes changes in scope or major unforeseen events.



Subscriber Growth Rates

- ◆ Average: 270 customers per year
- ◆ Residential Penetration: 15% of households in 5 Years
- ◆ Total customers: 1,456 in 5 Years

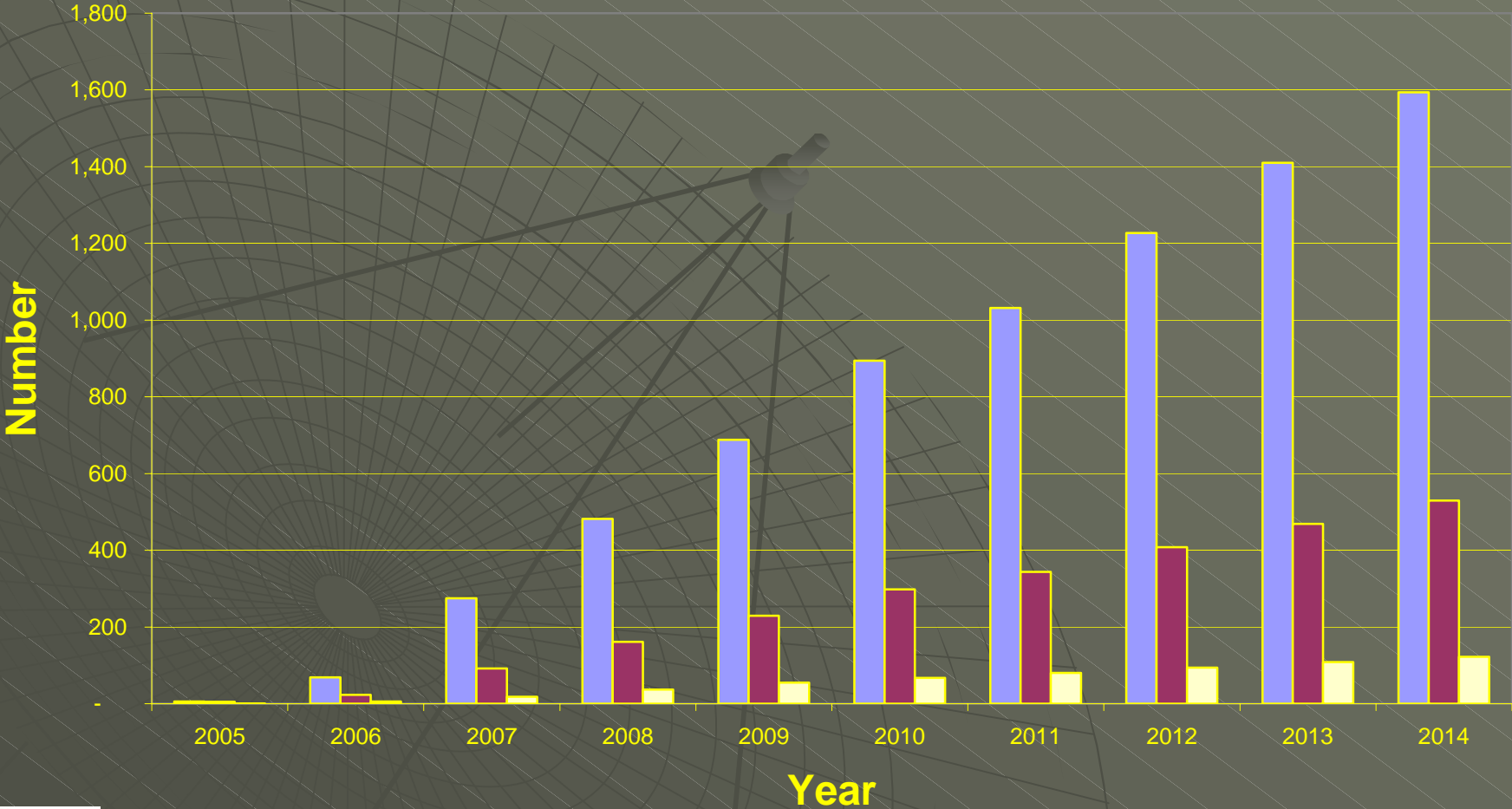


Competitive Rates

- ◆ Verizon DSL
 - 786K/3.0Mbps \$29.95
- ◆ Verizon FiOS
 - 2.0 Mbps/5.0 Mbps \$34.95
 - 2.0 Mbps/15.0 Mbps \$44.95
 - 5.0 Mbps/30.0 Mbps \$179.95
- ◆ Comcast
 - 384K/4.0 Mbps \$57.95
 - 384K/6.0 Mbps \$59.95
 - 768K/8.0 Mbps \$67.95



Subscriber Growth

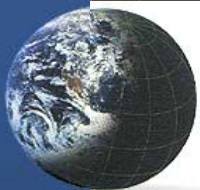


■ Residential ■ Residential Premium ■ Business

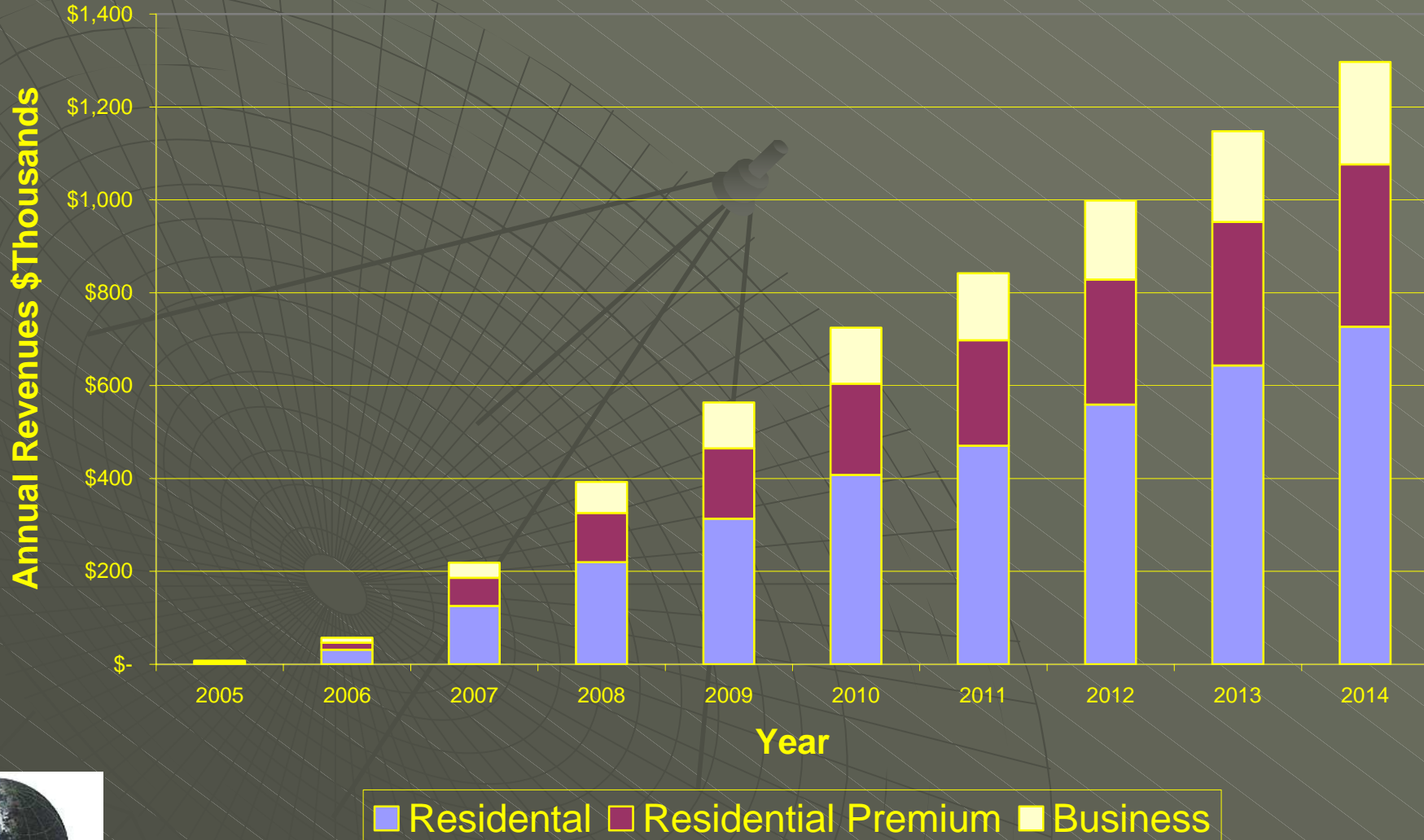


Trial Tariff

- ◆ What if Rates Were Similar to Competition?
 - Residential: \$38.00
 - Premium: \$55.00
 - Business: \$150.00



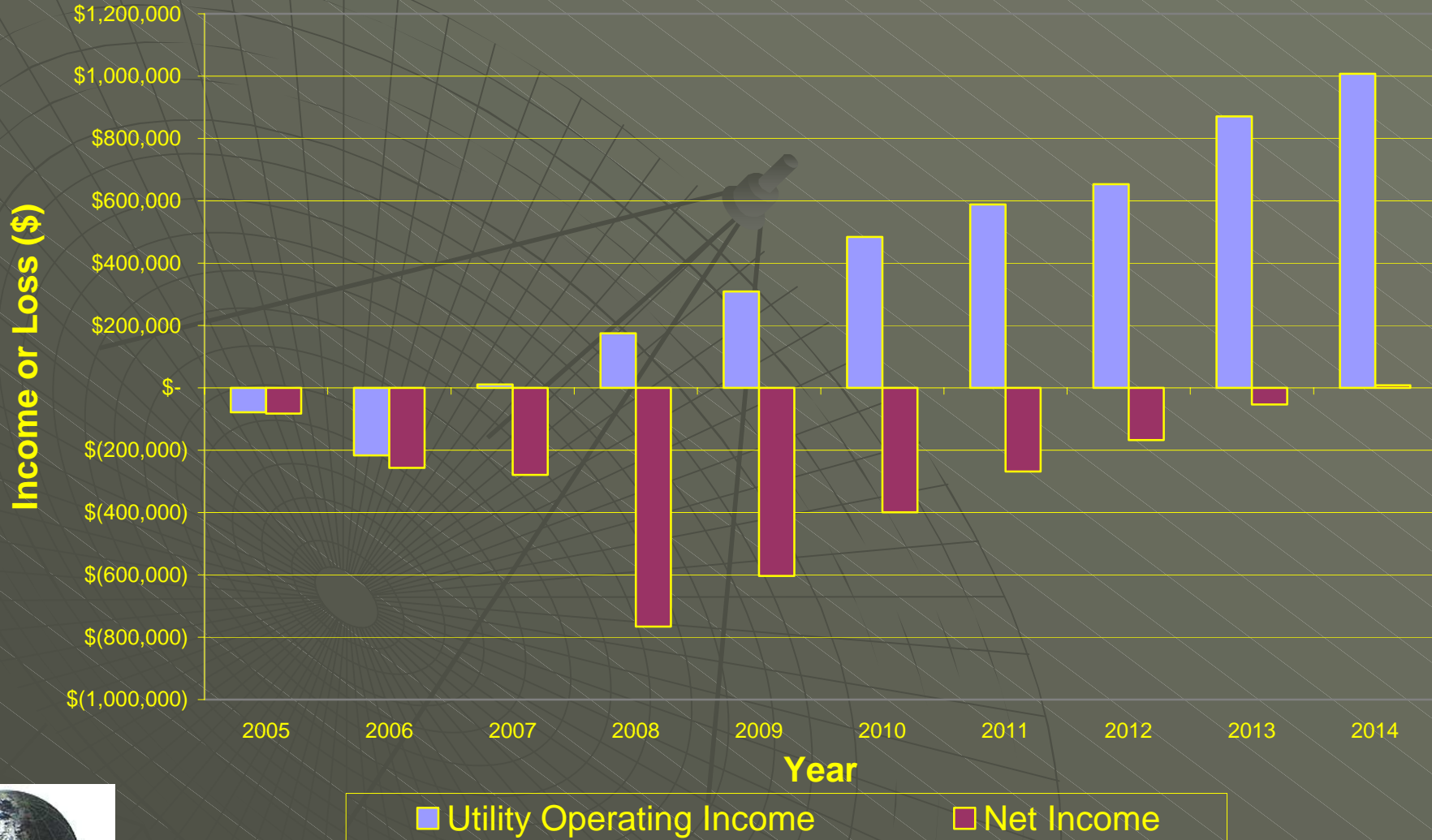
Annual Revenues



Expenses v. Utility Operating Income

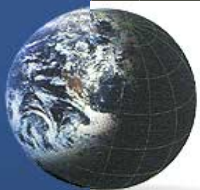


UOI & Net Income



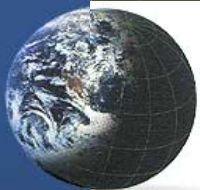
Questions

- ◆ Are the assumed subscription rates valid? Too high? Too low?
- ◆ Would a low rate increase early subscriptions?
- ◆ What level of limited wireless calling/text plans will attract customers and at what rate?



Reducing Uncertainty in the Construction Estimates

- ◆ Prepare a detailed inventory of possible antennae installation points
 - Refine installation costs
- ◆ Pre-Installation RF Survey
 - Refine equipment costs



Questions

- ◆ Can full-scale deployment be paced to customer growth or must it occur simultaneously in all areas?
- ◆ What hot-spots must be provided redundant power supplies for emergency services use? Would the schools and Township buildings be sufficient?

