



## See How Your Community Can Benefit



**Bryan Wassom**  
**Sr. Account Director**  
**Alcatel FTU**

**Fiber to the User**  
**Light Up Your Future**

**March 18, 2004**

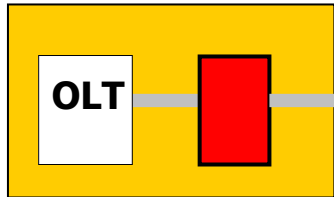
# Business Model Provides Answers



- How Much Will This Cost & How Long Will It Take to Build?
- Financing Options -- ?
- When Will The Operation Break Even?
- Who Gets Service First? Or Where Do We Start Building?
- Do We Start Service in Phases, or Wait to Start Everyone?
- How Will This Affect Our Developers and Their New Construction?
- How Much Can We Charge For Our Services?
- Which Retail Service Providers Will Come To Our Community?
- How Much Can Our Community Save On Its Own Communication Services?
- What New Services Can Our Community Provide To Surrounding Communities --- Do We Want to Expand Beyond Borders?

# Outside Plant Examples ▶

**Optical Distribution Frame (ODF)**  
With cable splices and connectors



Feeder Cable

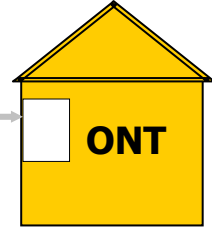


Distribution Cable

**Tap Closure**  
with drop cable splices



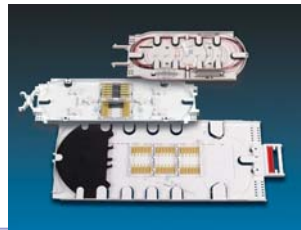
Drop Cable



House

**Distribution Closures and Cabinets**  
with splitters and cable splices

Splitter trays



# Case study - Bristol Virginia Utilities



Bristol CO



Satellite and off-air antenna



OSP Construction



OSP Construction



H-ONT

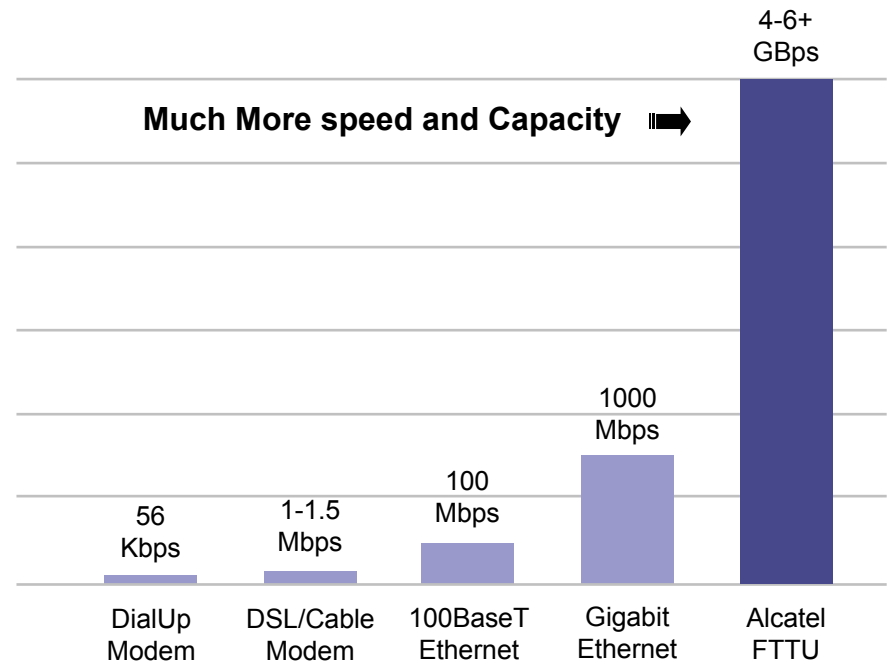


H-ONT

# FTTU, the technology for your community



- > Fiber to the User is the future-proof communications network
- > Virtually unlimited bandwidth capabilities
- > 40% lower maintenance costs than copper
- > Infinite capacity to meet today's and any future needs
- > Quick return on investment



# Case study - Dalton Utilities



## > Dalton Utilities

- Background

- Statewide fiber backbone installed by Spring of 2000
- Overbuilding Alltel and Charter
- Community and the Board requested the utility go into this business. Significantly unhappy with the incumbent Cable TV Providers. Although the current ILEC is providing adequate service the community sentiment is that their money is being sent out of state.
- 13,000 homes passed or with 6500 plan to be served initially.

- Customer order summary through 10/3/03

- 947 total residential customers (24% of 3965)
  - 91% took video
  - 87% took voice
  - 65% took data
- 16 total commercial customers (11% of 145)
  - 73% took voice
  - 75% took data
  - 38% took video



“Dalton Utilities will be cash flow positive by the Second Quarter for next year (2004)!”

Ray Buzzard, Dalton Utilities

# Case study - Bristol Virginia Utilities



## > Bristol Virginia Utilities

### • Background

- Electric Utility with roughly 16,000 electric meters within city limits and 7,500 water customers
- Existing GigE backbone for data services to businesses
- Charter Comm. and Sprint are the incumbent cable and telephone operators

### • Operational status

- Turned up 1,000 subs in the first month
- 30 ONTs installed daily
- 40 activation's per day
- 2004 1Q goals
  - 5,000 subs installed
  - \$450,000 in residential revenue per month
  - HDTV and PVR product launches

	Projected Penetration	Actual Penetration
Telephone customers	500	3,200
Telephone lines	610	2,507
Features	50%	62%
Long Distance	45%	84%
Broadband	435	1,333
CATV	950	2,512

"We also looked at it heavily as an **economic development** project. With the workforce in the **high-tech industries**, if we can bring your high-tech company here with competitive high-speed services for the company, as well as for the employees to have **high-tech at home**, we can use that as a **marketing tool**."

Jim Kelley, telecommunications manager at Bristol Virginia Utilities

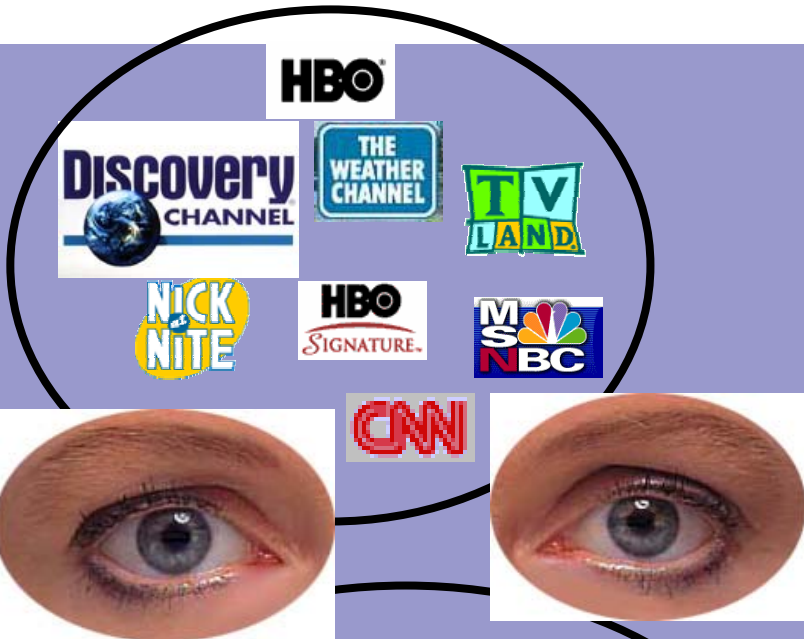
# Other FTTU deployments



- > Squire Creek (Louisiana)
- > Dalton Utilities (Georgia)
- > Acworth CableNet (Georgia)
- > Bristol Virginia Utilities (Virginia)
- > Chelan County Public Utility District (Washington)
- > Futureway Communications [Now FCI Broadband] (Ontario, Canada)
- > SBC, Mission Bay, San Francisco (California)



# What Drives Take-Rates and The Customer Experience?



**VOD**  
 Internet games  
 music  
**Shopping**  
 E-mail

*+Voice!*



S-A 01  
 Welcome to...  
**Thu 2:00-6:00pm**  
 Welcome to Scientific Atlanta

94	Thu 9/23	2:51pm		
CHANNEL	4:30pm	5:00pm	5:30pm	6:00pm
TVN7 507	◀A Civil Action	A Civil Action		
TVN8 508	◀The 24 Hour Woman			24 Hour

Scientific Atlanta  
 Date **THU 9/23** Base



- What's On
- VOD Catalog
- Music
- E-mail
- Web Browser
- Games
- More...
- Help



ESPN 4  
**World Series of Golf - 1999 Highlights**  
**Tue 2:00pm-5:00pm**

GUIDE Program Guide Service Guide Tue 2/15 3:14pm

It's About Services...

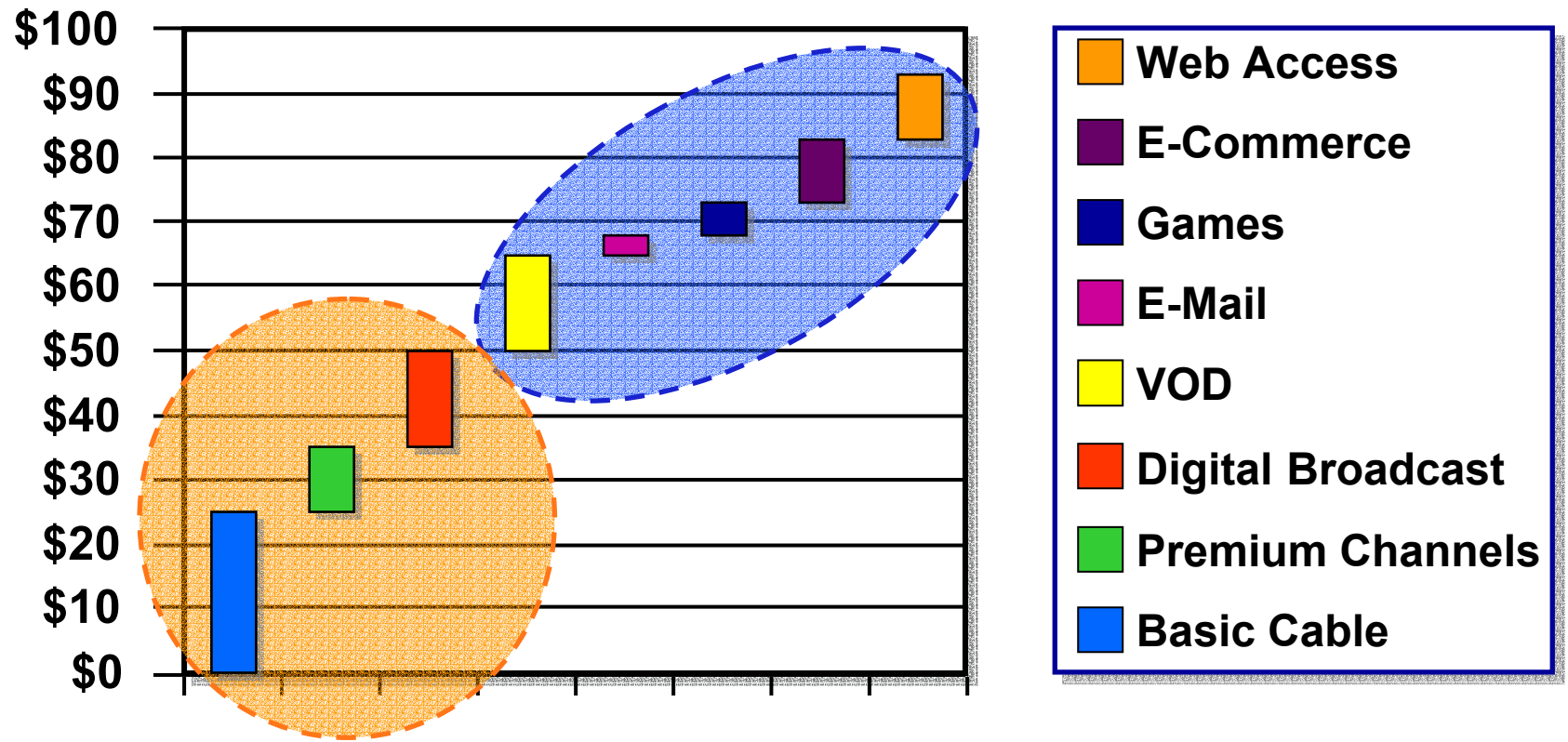


- > Consumers want services – *not boxes*
- > Technology now allows cost effective *new services*:
  - VOD, E-mail, Web browsing, E-commerce, Voice, Video-phone, Games, Home Networking
- > New services place more demands on IP and MPEG transport

... we have a first-to-market, **Interactive TV** advantage !

# Digital continues to boost revenues for our customers...

## VOD+ Enabled Revenue Streams



## Digital Platform Enabled Revenues

# Three Hottest Trends in Digital Home Communications Terminals

## 1. DVR



## 2. HDTV



## 3. xOD





Source: PVR Monitor™ III, Fall 2002, C Cubed, LLC and Explorer Club customers

*...impossible to live without!*

It will change the way you interact with TV.

The greatest gadget that I have ever owned!

It is the best way to watch TV!

*You have to see it to believe it.*

## > Keep your “Best, High End Customers”

- Recent market study indicated:
  - ◆ 82% of HDTV purchases did not need a new TV
  - ◆ Only 2% received HD via cable signal (opportunity)
- Consumer research shows that HD consumers
  - ◆ Tend to spend more money on PPV, VOD and additional broadband services



# Probable HDTV Offering by 2005



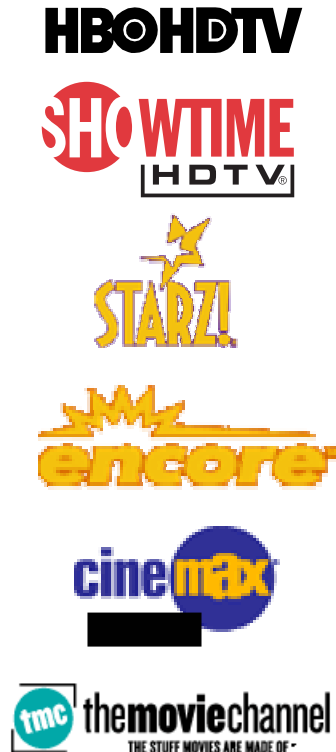
## National Networks & PBS



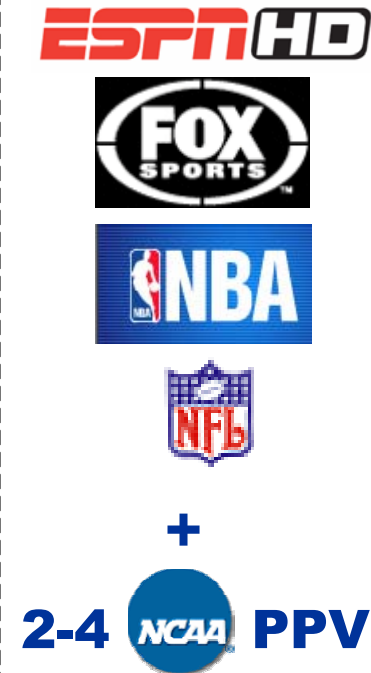
## Digital Networks



## Premiums



## Sports



## Other

8 - 16  
HD-MOD  
Streams

**Likely 24+ HD Channels + MOD**

# Network Based On-Demand Services

## Transactional VOD



- Increase Revenue
- Decrease Churn

## Subscription VOD



- Instant Up Sell
- Dual Branding Area

## Free On Demand



- Added Value

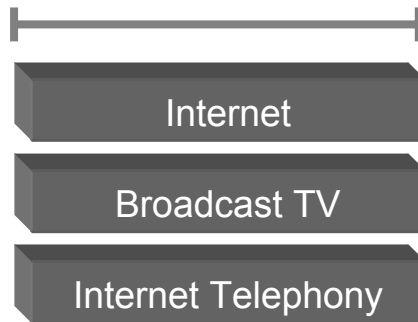
# Multiple Models - One Application

# The Services of Tomorrow



## Enable Advanced Services

### *Replacement Services*



### *Visionary Services and Capabilities*



# A Changing Market... Digital Homes Fiber Lets Our Community Homes Keep Up



## > Yesterday's Homes

- Telephone
- Cable TV
- C-Band Satellite TV
- Low Grade Wiring
- Wrong Topology



## > Today's Homes

- 65% of Homes Have a Computer
- 25% of Homes Have Multiple Computers
- 65% of Homes Have Internet Connectivity
- 10 Million Homes Have Cable Modems

**Fiber Access can increase home price from \$4,000 to \$15,000  
(Render, et al. Study);**