



The Road to a
**Smarter,
Stronger,
more
Connected**
North Georgia

Welcome: Overview

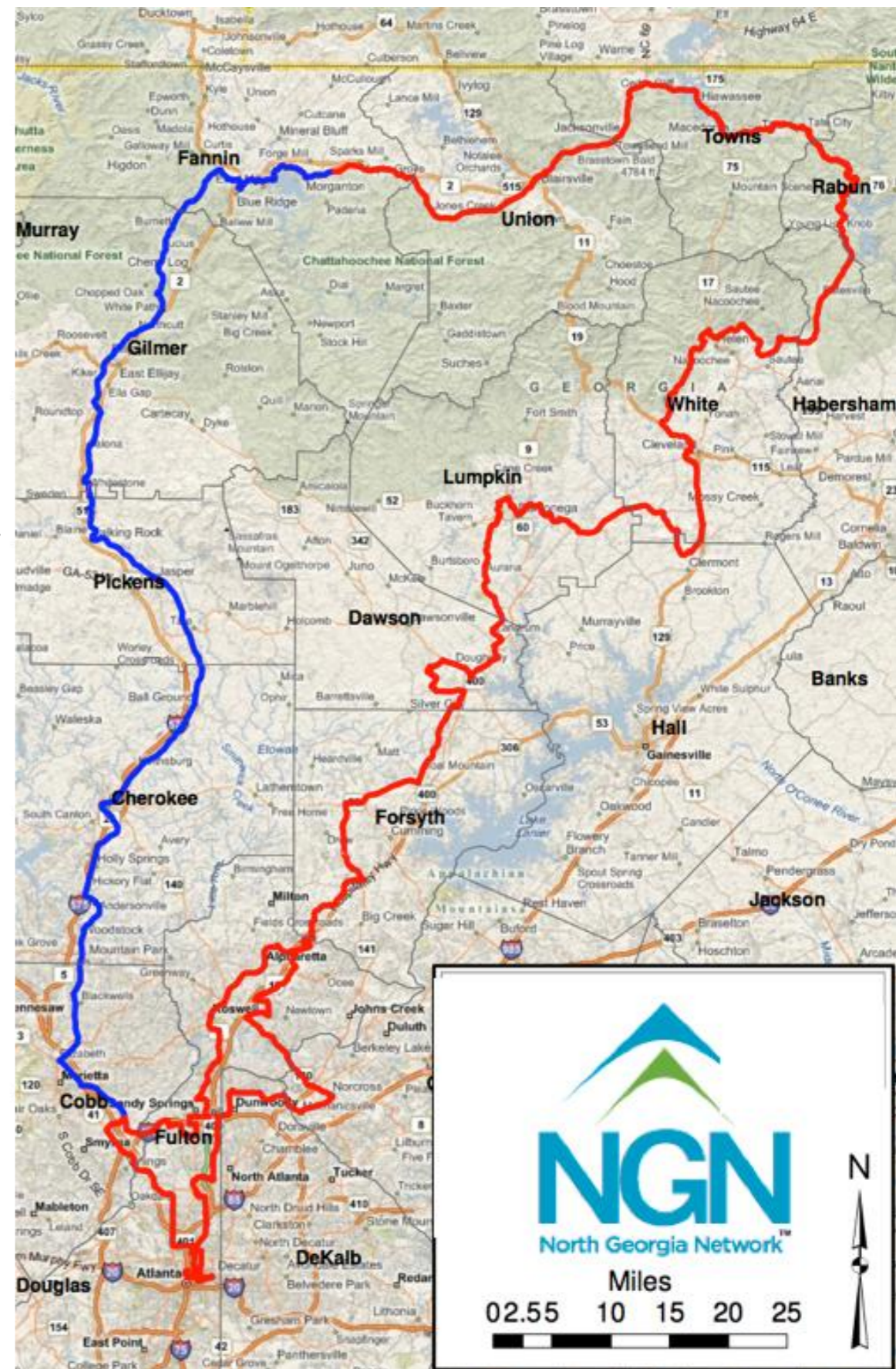
- **What is the North Georgia Network and what are fiber optics?**
- **Why do we need it and why should I want it?**
- **When is it coming and when can I get it?**
- **Updates from the Trail**

What is NGN?

- NGN is a 501(c)12 cooperative (just like EMCs)
- Received \$33M in ARRA/BTOP funds to build fiber connectivity in N. Ga., with \$2.5M from OneGeorgia, \$8M in-kind & matching locally
- Vision is to bring tens of thousands of NG families & businesses to the right side of the 'digital divide'

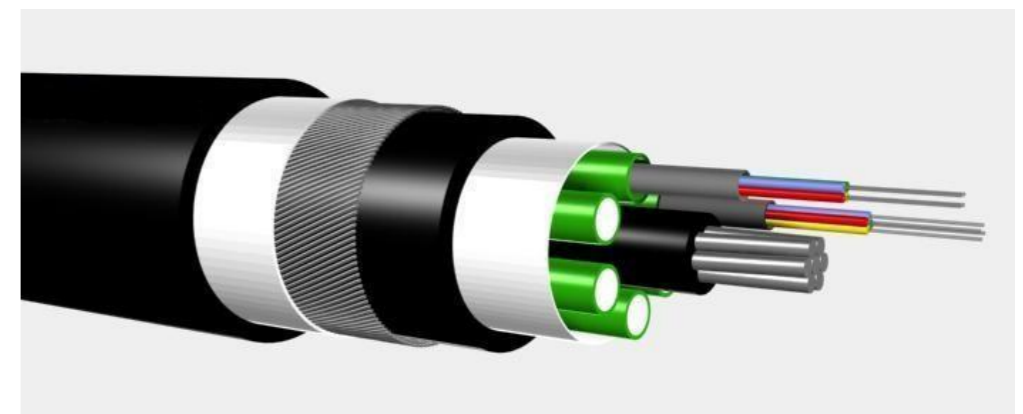
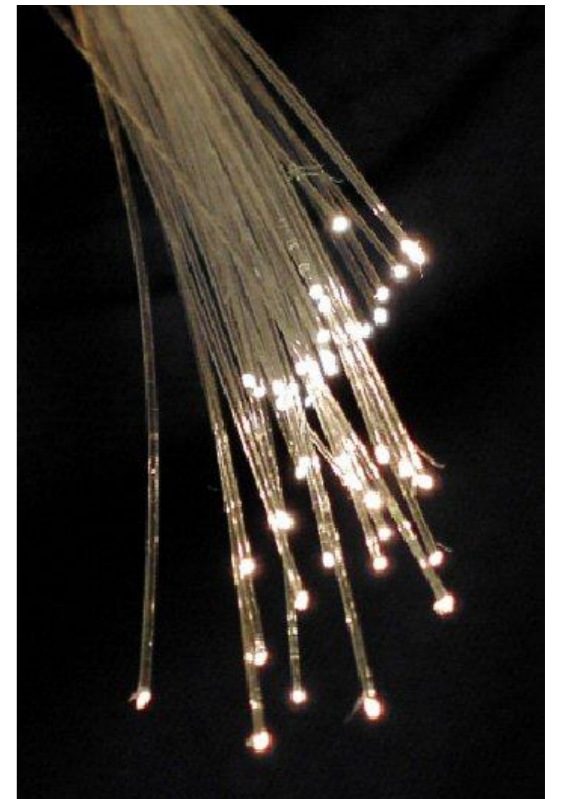
What is NGN (cont.)

- Focus is Core 260-mile ring
- Additional middle-mile fiber will connect “anchor” institutions & areas
- Last-mile fiber will serve 8000+ businesses and home customers in mostly rural, unserved areas



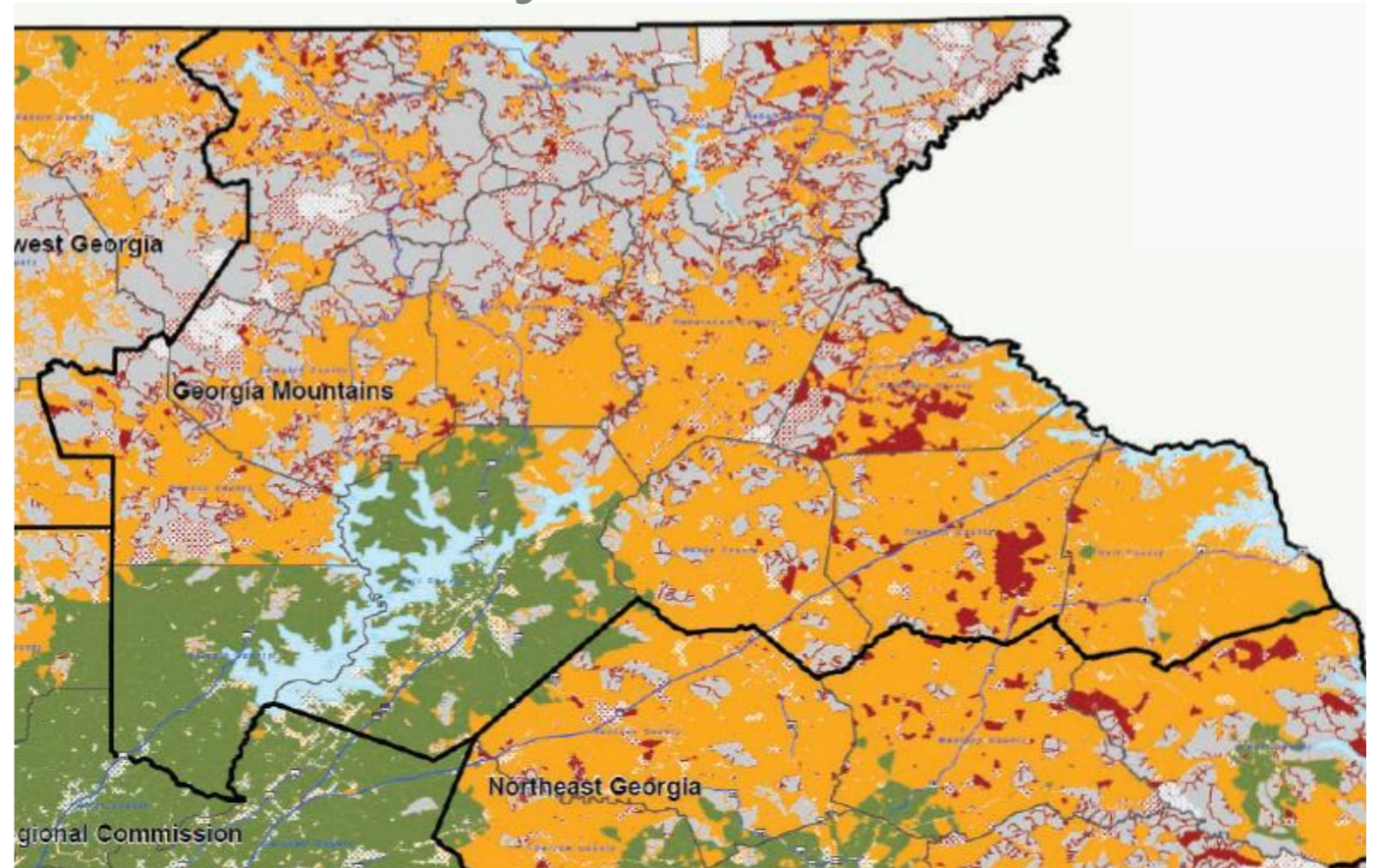
What is “Fiber”?

- Fiber Optic network cable is composed of pure glass/silica strands about the width of a human hair (sample 96-strand)
- Carries laser light signals at speeds currently at 10Gbps per wavelength
- Some fiber can carry hundreds of ‘colors’ per pair



Why do we need NGN Fiber?

- According to the **Jan. 2011** GTA Broadband Report, 11 of the 13 counties in the Georgia Mountains Reg. Comm. are fully **“unserved”** or **“underserved”** – and over 58,000 people have no access to broadband at all



10% of Population Unserved

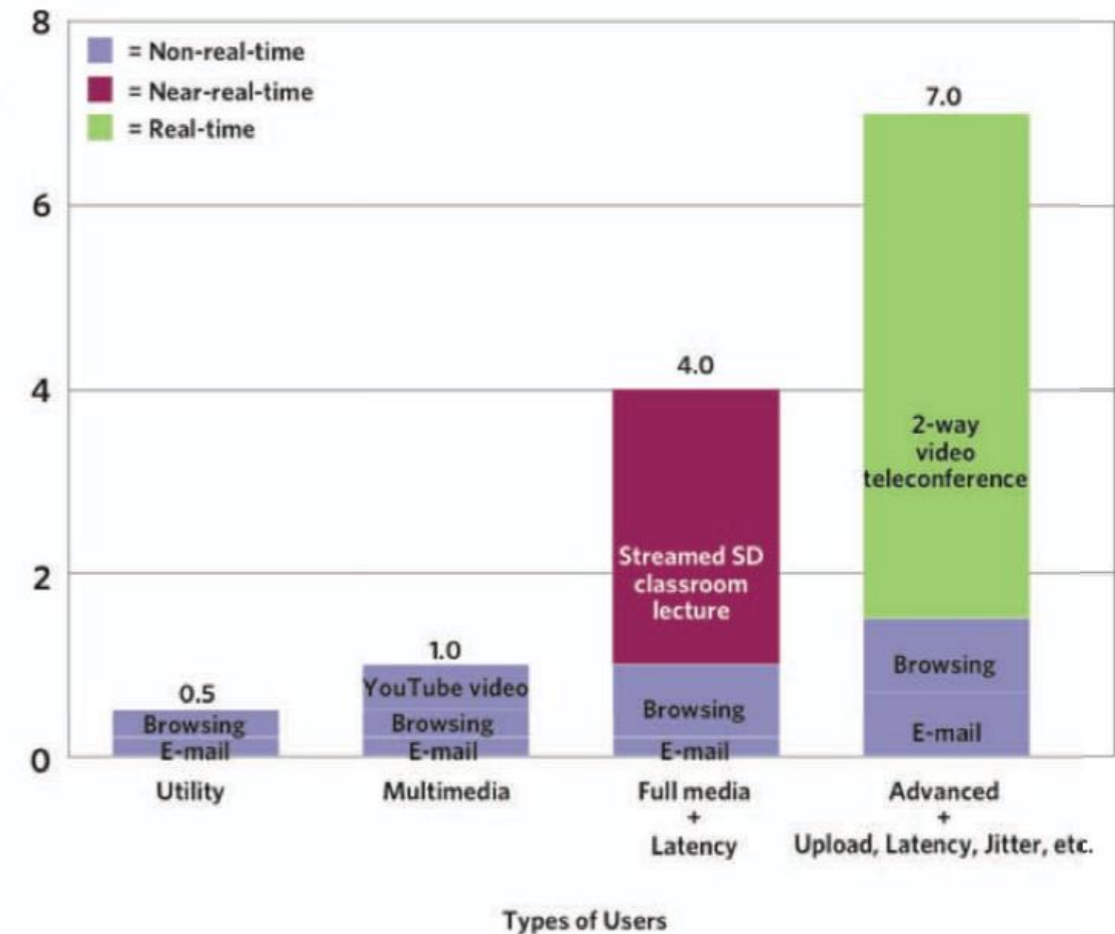
Regional Commission	Number		Served		Underserved		Unserved		Population
		%	Pop	%	Pop	%	Pop		
Atlanta Regional Commission	3	98%	4,095,626	2%	73,024	0%	4,173	4,172,823	
Three Rivers	4	67%	320,887	29%	140,630	3%	15,355	476,872	
Central Savannah River Area	7	60%	260,282	31%	133,884	9%	41,088	435,254	
River Valley	8	59%	208,801	29%	102,712	11%	40,325	351,873	
Southwest Georgia	10	53%	193,535	36%	129,985	11%	41,503	365,023	
Northeast Georgia	5	50%	278,916	44%	245,089	7%	36,912	560,973	
Georgia Mountains	2	48%	286,351	42%	246,186	10%	58,121	590,657	
Middle Georgia	6	46%	215,290	45%	213,115	9%	44,344	472,749	
Coastal	12	39%	243,497	54%	333,512	7%	40,315	617,386	
Northwest Georgia	1	38%	311,385	57%	470,537	5%	41,930	823,770	
Southern Georgia	11	33%	126,433	53%	205,415	14%	55,547	387,356	
Heart of Georgia	9	9%	26,594	65%	188,886	26%	74,534	290,014	
Totals			6,567,597		2,482,975		494,146	9,544,750	

Figure 21 Regional Commission Service Sorted by Served Percentage

Why Fiber? (cont.)

- Today's Internet applications consume more bandwidth – the FCC now classifies “broadband” as a minimum of 4Mbps download and 1Mbps upload speed

*Exhibit 3-C:
Actual Download
Speeds Necessary to Run
Concurrent Applications
(Mbps)*



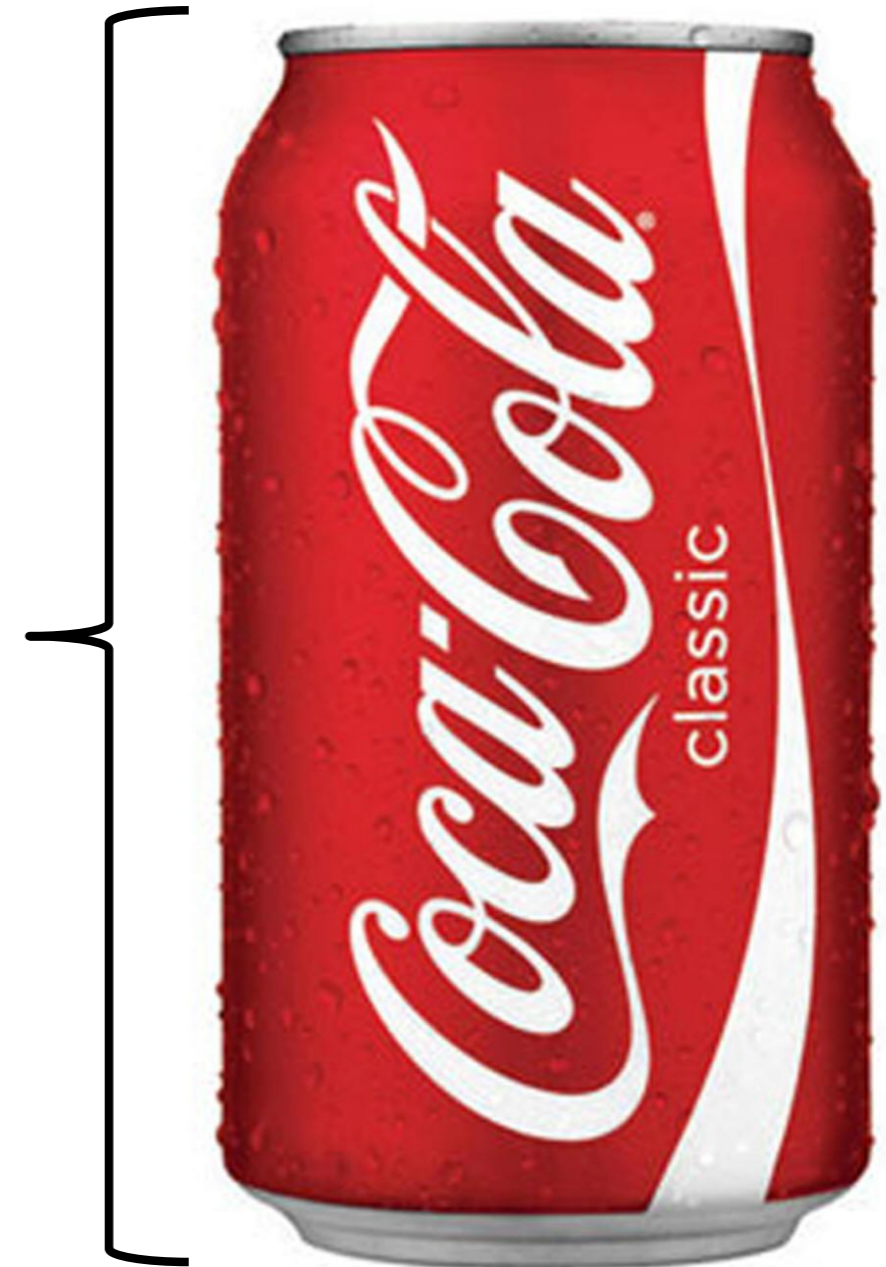
Why Fiber? (cont.)

- Copper infrastructure cannot keep pace with the bandwidth needs of 21st century consumers
- Fiber optics can carry hundreds or thousands of times the capacity, at lower cost & with easier upgrades
- NGN fiber will carry 100Gbps on day 1
- 3.6Tb and higher capacity on demand

Fiber vs. DSL/Cable

- If the average DSL connection in our area (around 1.5Mbps) was equal to the height of a can of Coke...

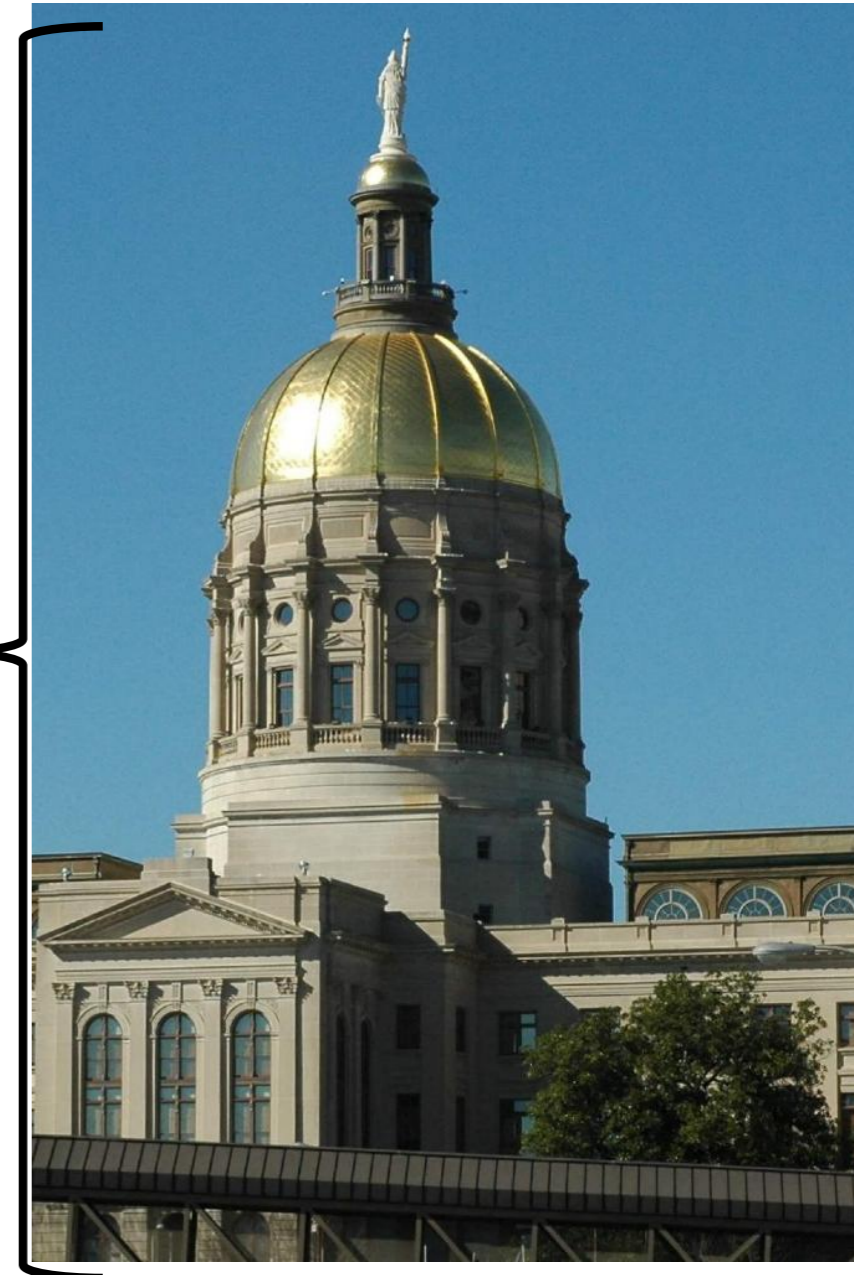
DSL



Fiber vs. DSL/Cable

- 1Gbps Fiber (like the University's) would stretch almost 270 ft high (about the height of the Capitol Dome in Atlanta)

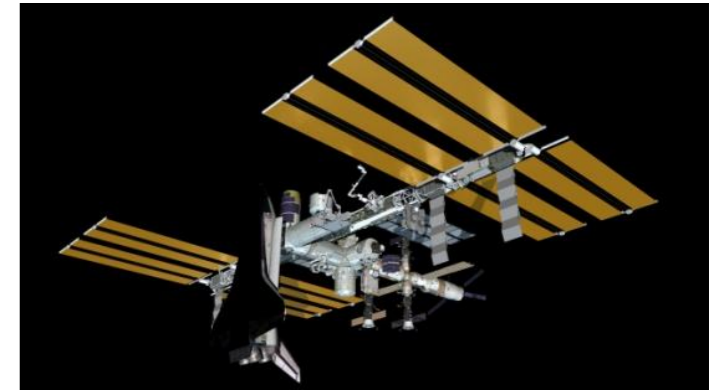
1Gbps
Fiber



Fiber vs. DSL/Cable

- 3.6 Terabits (current NGN Fiber capacity per pair of strands) would span over 180 miles – about the orbit of the International Space Station, or 2.4M cans of Coke high!

3.6
Tbps



What's in it for me?

- Near-term: 8,000 customers in the eight county area will have fiber-to-the-home/business available by the end of 2012
- Mid-term: More options, competition, better prices
- Long-term: High-tech jobs, high-paying, low environmental impact industry

What's in it for Dawson County?

- Four Dawson schools already set for fiber, another 4 within the next 6 months
- New route additions in Dawson to reach desired economic development sites (incl. Charlie's office) just approved
- Distance learning opportunities, industrial & high-tech ultra-broadband

Who's involved?

- **NGN Community Advisory Board**
Regional education representative: Bryson Payne (chair)
County representative 1: Tom O'Bryant (White County)
County representative 2: Mitch Griggs (Union County)
County representative 3: Steve Gooch (Lumpkin County)
County representative 4: Charlie Auvermann
(Dawson County)
County representative 5: open (Forsyth County)
State representative: Nancy Cobb, OneGeorgia Authority
Regional business representative 1: open
Regional business representative 2: open

When is it coming?

- The core 260-mile backbone loop is on schedule for completion in November 2011 (approx. 75% complete as of July 14, 2011)
- An additional 700+ miles of middle-mile and fiber-to-the-home will be in place by November 2012

Updates from the Trail, July 2011

- As of July 14, over 155 miles of core and middle-mile fiber already up in Towns, Union, Rabun, Habersham, White, & Lumpkin counties
- Southern leg (Forsyth, Dawson) to begin in about a month



How can I get more info?

- Web site: www.NorthGeorgiaNetwork.com
- Media Contact: Ms. Lee Ann Roy,
leeann.roy@northgeorgianetwork.com – ask for “News from the Trail” newsletter
- Community Advisory Board Rep: Charlie Auvermann, development@dawson.org
- Community Advisory Board: Dr. Bryson Payne, *CIO, North Georgia College & State University,*
bpayne@northgeorgia.edu