



# Abilene Update

Joint Techs – Winter 2006

Univ. of NM

Albuquerque, NM

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# Agenda

- FiberCo Overview
- List of RONS
- New FiberCo Offering
- Additional Info

# FiberCo Overview

A tool designed to support optical initiatives nationally

- Spun off from NLR governance discussions
- Internet2 took responsibility for forming the LLC
- Operates on behalf of U.S. higher education and affiliates – Internet2 & NLR members

Not an operating entity

- Will not light the fiber – only a holding company

Functions as market maker

- Assignment vehicle for both national & regional optical initiatives
- Services to assist RONS and universities to build, maintain and operate optical networking infrastructure

# FiberCo Overview

Dark Fiber provider: Level3 Communications

- 3 year pricing agreement ends March '06
- Intercity and metro fiber, new builds at reduced rate
- Continuing discussions on plans post March '06

How does FiberCo work?

- FiberCo assigns both the fiber IRU asset and recurring O&M agreements through an assignment agreement
  - 3-way among FiberCo, Level3 & assignee
  - Assignee has option to waive preferred provider relationship for future fiber acquisitions
  - FiberCo Transaction fee (1/yr): charged for cost recovery since we don't mark up the fiber

# FiberCo Overview

## IRU and O&M Contracts

- 20-year IRU agreements
- 5-year renewable agreement for fiber O&M
  - Includes equipment co-location & power
  - 5 years terms meant to coincide with the expected life-cycle of the optronics
- Contracts are pre-negotiated with the needs of the R&E community in mind

# FiberCo Overview



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	Level 3	Genuity	Metro	Total
Indiana	241	-		241
NLR, Inc.	2,176	165		2,341
FLR (Florida)	900	592		1,492
Michigan	963	-	46	963
Univ. Wyoming	178	-		178
Internet2	321	-		321
North Carolina (MCNC)	766	-		766
PNNL	554	-		554
CENIC	709	-		709
New Mexico State	680	-		680
Texas	318	-		318
CANARIE	1,368	-	58	1,426
<b>Total strand miles:</b>	<b>9,174</b>	<b>757</b>	<b>104</b>	<b>10,035</b>
<b>Minus redundant</b>				<b>982</b>
<b>Total route miles:</b>				<b>9.053</b>



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# Regional Optical Networks

- **Alabama** (Univ Alabama)
- **Arizona** (CENIC)
- Arkansas (AREON)\*
- **California** (CALREN)
- Colorado (FRGP/BRAN)
- Connecticut (Conn. Education Network)
- **Florida** (Florida LambdaRail)
- Georgia (Southern Light Rail)
- Great Plains Network\* (MIDnet)
- **Indiana** (I-LIGHT)
- Illinois (I-WIRE)
- Kansas (KU, KSU)\*
- Louisiana\* (LONI)
- Massachusetts
- Maryland, D.C. & northern Virginia (MAX)
- **Michigan** (MiLR)
- Minnesota/Iowa/Wisconsin (BOREAS)\*
- Missouri (MOREnet/UMo)\*
- Nebraska (UNL)\*
- New England region (NEREN)
- **New Mexico** (NMSU, UNM)
- New York (NYSERNet\*, Cornell)
- **North Carolina** (NC LambdaRail)
- Ohio (Third Frontier Network)
- Oklahoma (OneNet)
- Oregon
- Pacific Northwest (Lariat, **PNNL**)
- Rhode Island (OSHEAN)
- South Eastern U.S. (SRONs)
- Tennessee\* (OneTenn/ORNL)
- **Texas** (LEARN)
- Virginia (MATP)\*
- Wisconsin (WiscNet/WiscWaves)
- **Wyoming**

## **Canada**

- **CANARIE** (for partnership with Michigan/New York and others)  
(RONs in red have made dark fiber acquisitions through FiberCo)

(\*RON/universities with RFX's issued or in process of acquiring fiber)

# FiberCo Professional Services



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- The Research and Education community's networking needs have grown beyond basic lit services offered by service providers - requiring many to acquire their own dark fiber.
- Providing optical services to campuses and researchers requires Carrier-Class Services and Reliability.
- As a service to the members of Internet2 and National LambdaRail, FiberCo now offers customized services to assist universities and regional networks with planning, installation, management and operations of their networking infrastructure.
- Expanding FiberCo's longstanding relationship with Level3 beyond dark fiber to include professional services - a 'cradle to grave' service for our members.



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# FiberCo Professional Services



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- Draws upon Level3's highly-experienced team of networking professionals who have installed and managed optical networks for years.
  - **Same team that installed & turned up NLR's Phase II network**
- Pre-negotiated contracts tailored to meet the unique needs of the Research and Education community
- Aggressive FiberCo pricing:
  - Negotiated rates lower than standard educational pricing market pricing and significantly under current market pricing
  - A la carte set of services (can pick and choose)
- FiberCo will provide Project Management and oversight (Audit/Quality Assurance) on professional services to ensure our members' needs are met.



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# FiberCo Professional Services

## Pre Installation Support:

- Level3's optical engineers and network designers will perform network architecture and route design, transmission engineering and optronics requirements determination, conduct fiber characterizations.

## Installation and Implementation Services:

- Manage build-out logistics; conduct detailed site engineering and installation prep, perform site and route staging and test and turn-up services; route commissioning and as-built documentation.

# FiberCo Professional Services

## Order Management and Asset Tracking:

- Order entry and asset inventory; development of processes and procedures for provisioning inventory, billing and orders.
- Level3 will work with customer to eventually migrate services to university/RON NOC as they gain necessary experience.

## 24 x 7 x 365 Operations Support (Shared NOC):

- Including network monitoring and maintenance management; fault isolation and troubleshooting, field services dispatching; provisioning and lifecycle engineering; service initiation, sparing requirements, equipment maintenance.

# Additional Info

For more information, please contact:

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