

PALM BEACH COUNTY  
BOARD OF COUNTY COMMISSIONERS  
AGENDA ITEM SUMMARY

Meeting Date: 04/15/08

Consent

Regular

Ordinance

Public Hearing

Department

Submitted by: Information Systems Services

Submitted for: Information Systems Services

**I. EXECUTIVE BRIEF**

**Motion and Title:** Staff recommends motion to approve: A) Affiliate Connection Agreement with the Florida LambdaRail (FLR) to obtain high-speed network services at an annual cost of \$90,220; and, B) Affiliate Installation Agreement with Florida LambdaRail to inter-connect the Palm Beach County's fiber optic network with FLR for a one-time cost of \$27,500.

**Summary:** Connecting the County's network to the Florida LambdaRail will enable the County to realize a net savings on Internet access costs and enhance overall network services. The term of the Affiliate Connection Agreement is for one (1) year, automatically renewing for five (5) – one (1) year terms. The Florida LambdaRail, LLC (FLR) is a non-profit broadband network created to facilitate advanced research, education, and economic development activities in the State of Florida. It is jointly owned by Florida Atlantic University, Florida Institute of Technology, Florida International University, Florida State University, Nova Southeastern University, University of Central Florida, University of Florida, University of Miami, University of North Florida, and University of West Florida. Countywide (PK)

**Background and Justification:** The County will utilize this connection to provide faster broadband services for Internet access and reduce annual operating costs by approximately \$29,780 per year. This interconnection will also facilitate disaster recovery, access to library resources, and serve as the "last mile" connection for other public sector agencies interested in linking to the Florida LambdaRail via the Palm Beach County network.

The Florida LambdaRail will replace the County's high speed Internet service in the Governmental Center with a connection that has 5 times greater bandwidth than our existing connection. Therefore, the annual costs of connecting to the Florida LambdaRail will be more than offset by the discontinuation of service with our existing Internet Service Provider.

The Florida LambdaRail is a complementary initiative to the National LambdaRail, a national research and experimentation optical-based network infrastructure. The LambdaRail infrastructure is designed to accommodate the networking needs of entities involved in advanced research, education and economic development. As such, this initiative will directly support the goals of Scripps Florida, the Palm Beach Broadband Task Force, the County's Strategic Economic Development Plan, as well as the County's inter-local agreement to connect schools to the County's fiber network.

Continued on page 3...

**Attachments:**

1. 2 Originals, Affiliate Connection Agreement
2. 2 Originals, Affiliate Installation Agreement
3. Florida LambdaRail Services Brochure

Recommended by: Steve Bordelon 4-3-08  
Department Director Date

Approved by: [Signature] 4-2-08  
County Administrator Date

**II. FISCAL IMPACT ANALYSIS**

**A. Five Year Summary of Fiscal Impact:**

Fiscal Years	2008	2009	2010	2011	2012
Capital Expenditures	\$ 27,500	0	—	—	—
Operating Costs	<del>(\$9,928)*</del>	\$90,220	—	—	—
External Revenues	0	0	—	—	—
Program Income (County)	0	0	—	—	—
In-Kind Match (County)	0	0	—	—	—
<b>NET FISCAL IMPACT</b>	<b>\$17,572</b>	<b>\$90,220</b>	—	—	—
<b># ADDITIONAL FTE POSITIONS (Cumulative)</b>	<b>0</b>	<b>0</b>	—	—	—

Is Item Included in Current Budget? Yes X No \_\_\_

Budget Account No.: Fund 3901 Department 491 Unit I268 Object 3401 - \$27,500

Fund 5020 Department 490 Unit 1303 Object 4101 - (\$29,780)

Reporting Category \_\_\_

*[Handwritten Signature]*  
4/3/08

**B. Recommended Sources of Funds/Summary of Fiscal Impact:**

*\*NOTE: This figure is a net savings after taking into account the planned elimination of the County's existing Internet service at the Governmental Center. The County's existing Internet service cost is approximately \$120,000 per year compared to an annual cost of \$90,220 for the LambdaRail connection.*

**C. Departmental Fiscal Review:**

**III. REVIEW COMMENTS**

**A. OFMB Fiscal and/or Contract Dev. and Control Comments:**

ANNUAL NET SAVINGS = \$29,780

*[Signature]* 4-7-08  
OFMB *[Initials]* VO 4/14/08

*[Signature]* 4/17/08  
Contract Dev. and Control

**B. Legal Sufficiency:**

*[Signature]* 4/8/08  
Assistant County Attorney

**C. Other Department Review:**

\_\_\_\_\_  
Department Director

**THIS SUMMARY IS NOT TO BE USED AS A BASIS FOR PAYMENT.**

**Background and Justification (continued from page 1)**

The Florida LambdaRail is deployed over 1,540 miles of fiber which links major nodes located in Pensacola, Tallahassee, Tampa, Miami, Orlando, Gainesville, Melbourne, Ft. Lauderdale, and Jacksonville.

Palm Beach County will be the first local government in the state to connect to the Florida LambdaRail. This contract will enable the County to serve as a re-seller of network access to the Florida LambdaRail. The first year investment includes one-time costs for installation (\$27,500) plus the annual service fee of (\$90,220). This annual service fee is more than offset by the discontinuation of the County's ISP for Internet service in the Governmental Center which currently costs approximately \$120,000 per year. Thus, there will be a recurring annual savings of \$29,780.

**FLORIDA LAMBDARAIL  
AFFILIATE CONNECTION AGREEMENT**

THIS AFFILIATE CONNECTION AGREEMENT (hereinafter referred to as the "Agreement") is made and entered into as of the \_\_\_\_\_ day of \_\_\_\_\_, 2008 by and between **FLORIDA LAMBDARAIL, LLC**, a Florida limited liability company (hereinafter referred to as "FLR"), and **PALM BEACH COUNTY GOVERNMENT, FLORIDA**, a political subdivision organized under the laws of the State of Florida (hereinafter referred to as "Affiliate").

RECITALS

A. FLR has constructed a high-bandwidth optical network (hereinafter referred to as the "Network") to link Florida's research institutions and provide a network to support large-scale research, education outreach, public/private partnerships and information technology infrastructure.

B. Affiliate desires to connect to the Network and obtain the Network Services (as defined hereinbelow) as an Affiliate participant of FLR, and FLR has agreed to furnish such connection and Network Services to Affiliate as an Affiliate participant, on the terms and subject to the conditions hereinafter set forth.

NOW, THEREFORE, the parties hereto set forth their mutual understandings and agreement as follows:

1. Approval of Affiliate. By its execution hereof, FLR acknowledges and agrees that Affiliate has been approved by the Board of Directors of FLR as an Affiliate participant of FLR.

2. Term of Agreement. Unless sooner terminated as provided hereinbelow, the term of this Agreement and Affiliate's status as an Affiliate participant of FLR shall be for a period of one year. This Agreement shall automatically be renewed annually for five (5) successive one (1) year renewal terms unless either party gives written notice of termination of this Agreement as provided for in paragraph 19 hereinbelow.

3. Connection to Network; Network Services. FLR agrees to provide Affiliate with a connection to the Network and to provide Affiliate with the following service (herein referred to as the "Network Services"):

- (a) access to national research networks (e.g., Internet2, NLR, etc.) for eligible Affiliate network users, such as the Palm Beach County educational institutions, libraries, museums, hospitals;
- (b) access to commercial Internet services;
- (c) provisioning of virtual private networks (VPNs) to enable remote access and private data communications over the state-wide infrastructure; and
- (d) peering with other participants in the Network.

4. Connection Locations. FLR will provide Affiliate with connections to the Network in accordance with that certain Florida LambdaRail Installation Agreement of even date herewith ((hereinafter referred to as the "Installation Agreement").

5. Network Management. Once the connection is established, Affiliate agrees to exercise normal prudent network management and implement normal prudent controls so as to ensure FLR's production services are not disrupted. To the extent permitted by Section 768.28, Florida Statutes, Affiliate covenants and agrees to indemnify, hold harmless and defend FLR from and against any and all claims, liabilities, losses, costs, damages and expenses which FLR may sustain, suffer or incur as a result of Affiliate's failure to exercise normal prudent network management and implement normal prudent controls as required by the immediately preceding sentence.

6. Affiliate Responsibilities. Affiliate shall be responsible for all financial, contractual and physical arrangements related to establishing and maintaining its connections to the Network, including without limitation furnishing its own router and interface hardware and local loops. Affiliate shall also be responsible for complying in every respect with the responsibilities set forth in the FLR Service Level Understanding (SLU) attached hereto as Exhibit "A" and made a part hereof.

7. Charges for Connection to Network and Network Services. The charges described hereinbelow for connection to the Network and the Network Services shall be based upon the FLR price schedule applicable to Affiliate participants as approved by the Board of Directors of FLR from time to time. Affiliate acknowledges and agrees that such price schedule will be periodically reviewed and adjusted by the Board of Directors of FLR. Notice of changes shall be provided to Affiliate prior to the effective date of change. Affiliate covenants and agrees to pay the following charges and fees for connection to the Network and the Network Services:

- (a) Recurring Costs. Affiliate shall pay to FLR an annual recurring services fee (hereinafter referred to as the "Services Fee") for FLR services, which are integrated, into a single package as set forth in Exhibit "B". These services include port charges and support functions required to maintain the Affiliate's connection to the FLR infrastructure for each connection location identified in the Installation Agreement, access (75 Mbps) to the commercial Internet, and use (up to 1 Gbps) of the FLR Ethernet-based transport facility. Additional services may be requested at any time and shall be based upon the current price schedule. This Services Fee is effective the date the Affiliate initiates use of the FLR services and shall be due and payable on a quarterly basis. Advanced annual payments are also acceptable.

As part of the FLR network services, for amounts of commercial Internet bandwidth of 100 Mbps or less, a corresponding amount of bandwidth to access the Internet2 network will be available at no additional cost to eligible users of the Affiliate network. Eligible users are educational institution (non-profit and for-profit K-20, technical, and trade schools), museums, art galleries, libraries, or hospitals that require routine collaboration on instructional, clinical, and/or research projects, services, and

content with the Internet2 participants. Affiliate shall have access up to 75 Mbps to the Internet2 network. In order to take advantage of access to the Internet2 network, eligible users must be sponsored participants of Internet2. Sponsorship shall be provided by FLR as part of the Internet2 Secondary Educational Group Participant (SEGP) program. There is no cost to Affiliate or eligible users of the Affiliate's network for this sponsorship.

Based upon the current price schedule applicable to Affiliate participants of FLR, the amounts due hereunder for the above-described charges and fees, subject to adjustment by the Board of Directors of FLR from time to time as provided for hereinabove, shall be as set forth in Exhibit "B", attached hereto and made a part hereof.

8. Status as Affiliate. Affiliate acknowledges and agrees that Affiliate's status as an Affiliate participant of FLR (a) does not create any equity interest in FLR and (b) does not bestow any voting rights upon Affiliate.

9. Resale of FLR Services. Affiliate shall not resell FLR Network services in any manner not approved of in this Agreement or without the written consent of the Board of Directors of FLR, which consent may be withheld in FLR's sole and complete discretion.

10. Use of FLR Services by County Agencies. As an Affiliate, Affiliate will have a direct connection to the Network and shall be authorized to provide access to, or services across the Network through Affiliate's network to certain governmental, educational and medical agencies and institutions within Palm Beach County (hereinafter referred to as the "County Agencies") that have been approved by the FLR Board of Directors. FLR agrees that the Network Services provided hereunder to Affiliate may be utilized by County Agencies at no additional cost to Affiliate and shall not be considered a resale of FLR services for the purposes of this Agreement. County Agencies shall not be construed or deemed to be Affiliate participants of FLR. County Agencies are not Owners, do not own an equity interest in the LLC, have no representation on the Board, and have no voting rights. Affiliate shall be solely responsible for County Agencies' connections to Affiliate's network, and FLR shall have no obligation whatsoever in connection therewith.

11. Use of Affiliate's Network as a Network Aggregator. The parties understand and agree that Affiliate will also utilize its connection to the Network as a "Network Aggregator". As a Network Aggregator, Affiliate shall be authorized to provide connectivity to the FLR Network to any of the municipalities incorporated with Palm Beach County or any other person or entity approved by the Board of Directors of FLR (hereinafter referred to as "Third Party Connections") through a connection to its fiber network. Each Third Party Connection shall be 100 Mbps or less and delivered via Affiliate's fiber network to the FLR location identified in the Installation Agreement. The Third Party Connection shall not be construed or deemed Affiliate participants of FLR. Third Party Connections are not Owners, do not own an equity interest in the LLC, have no representation on the FLR Board of Directors, and have no voting rights. Affiliate agrees not to allow any Third Party Connections to its network that will utilize FLR Network Services unless each such Third Party Connection is to a municipality

located in Palm Beach County or otherwise approved by FLR. Affiliate shall be solely responsible for Third Party Connections to Affiliate's network, and FLR shall have no obligation whatsoever in connection therewith.

Affiliate shall be obligated to collect an annual downstream subscriber fee from each Third Party Connection who utilizes the Network Services provided hereunder to Affiliate and remit such fee collected promptly to FLR. As with the FLR fees and charges for network connectivity, the downstream subscriber fee shall be based upon the FLR price schedule applicable to Third Party Connections as approved by the Board of Directors of FLR. Such price schedule will be periodically reviewed and adjusted by the Board of Directors of FLR. Notice of changes shall be provided to Affiliate prior to the effective date of change.

12. Use of Affiliate's Network for Last Mile Connectivity to the FLR Network. The parties understand and agree that Affiliate will also utilize its connection to the Network to deliver last mile connectivity to the Network to other affiliate participants of FLR (hereinafter referred to as "Affiliate Connectors"). Affiliate shall be authorized to provide connectivity to the FLR Network to Affiliate Connectors through a connection to its fiber network. Each Affiliate Connector shall be greater than 100 Mbps and delivered via Affiliate's fiber network to the FLR location identified in the Installation Agreement. Both parties understand and agree that such connectivity shall be in accordance to provisions established under different and separate agreements between Affiliate and applicable Affiliate Connectors. FLR and Affiliate Connectors shall have separate agreement for the provision of the FLR Network Services. In the event this Agreement shall terminate, the Affiliate agrees to continue its service with Affiliate Connectors in accordance to the provisions established under the separate agreement for last mile connectivity between Affiliate and Affiliate Connectors. Affiliate shall be solely responsible for Affiliate Connectors' connection to Affiliate's network, and FLR shall have no obligation whatsoever in connection therewith.

13. Collocation of Network Equipment. Affiliate desires to share vertical rack space (with power) at the FLR location identified in the Installation Agreement for the purpose of collocating equipment. The FLR agrees to provide an installed and grounded 19" inch wide, 5-U (8.75") of vertical rack space, with 10 amps of DC power, fuse panels and cross connects as required. Affiliate shall be responsible for pre-configuring their equipment prior to installation by the FLR engineering staff. Installation shall be according to FLR standards. Affiliate shall be solely responsible for maintaining the configuration and code levels of their equipment. FLR shall provide Affiliate an "out of band" Ethernet port and IP address to reach their equipment in case of loss of management through normal channels.

Affiliate understands and agrees access to the collocation space shall be coordinated, authorized and approved by FLR. All access to the collocation space shall be through Level3 Tech Escort Services. Adding new or swapping modules in existing equipment may be performed by Affiliate with a Level3 Tech Escort. All other changes shall be completed by FLR and/or Level3 as required. Affiliate shall be responsible for the cost of all Level3 Tech Escort services conducted on their behalf and based upon

separate costs set forth by Level3 according to their dispatch fee schedule. Level3 reviews these charges periodically and subject to adjustments from time to time.

14. General. Capacity on the Network (hereinafter referred to as "Capacity") shall be provided and maintained through FLR in accordance with FLR's then-current technical specifications. In order to protect the technical integrity of the network, FLR has the right to limit the manner by which any portion of the Network is used. FLR reserves the right to reject for any reason any request for Capacity. Capacity is offered subject to the availability of facilities and the submission of accurate information by Affiliate. FLR shall have priority over all other users with respect to use of the Capacity. The Network shall at all times remain the property of FLR. Affiliate shall not take any action or inaction that imposes any encumbrance on the Network or use the Capacity in an unlawful manner or in a way that interferes with FLR's or a third party's use of Capacity or the Network, including any transmission or the content thereof that violates any copyright or export control laws or that are libelous, slanderous or an invasion of privacy. Unless otherwise expressly agreed to in writing by the parties, all connections to the Network for the Capacity shall be made to designated equipment racks at points of presence identified by FLR for the connection locations designated in paragraph 4 herein above and all of the costs of accessing and interconnecting with the FLR connection points shall be borne by the Affiliate. Affiliate understands, acknowledges and agrees that the Capacity is unprotected and is therefore subject to defects, failures and interruptions. Nothing in this Agreement shall prevent FLR from taking such actions as are necessary to repair and maintain the Network upon reasonable notice thereof and without any liability therefor.

THE CAPACITY PROVIDED HEREUNDER IS PROVIDED "AS IS" WITHOUT REPRESENTATION OR WARRANTY OR ANY KIND, EITHER EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY WARRANTY WITH RESPECT TO MERCHANTABILITY, NON-INFRINGEMENT, TITLE, OR FITNESS FOR A PARTICULAR PURPOSE.

15. Force Majeure. Neither party shall be in default if any failure to perform is caused by anything beyond the control of such party.

16. Liability. FLR shall use commercially reasonable efforts to deliver the Capacity by the requested due date, but FLR's failure to do so shall not be a default under this Agreement and FLR shall not be liable to Affiliate or any third party for any damages related thereto.

FLR SHALL NOT BE LIABLE OR RESPONSIBLE FOR INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES SUFFERED AS A RESULT OF THIS AGREEMENT.

IN ADDITION, ANY THIRD PARTY PROVIDER OF SERVICES OR FACILITIES EMPLOYED BY FLR TO PROVIDE THE CAPACITY SHALL NOT BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES SUFFERED AS AN INDIRECT OR DIRECT RESULT IN CONNECTION WITH OR BASED UPON ALLEGED DEFECTS,



FAILURES OR INTERRUPTIONS IN OR OTHERWISE RELATING TO THE SERVICES OR FACILITIES OF THE PROVIDER EXCEPT TO THE EXTENT SUCH DAMAGES ARISE FROM THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF THE PROVIDER.

As provided by Section 768.28, Florida Statutes, Affiliate shall be responsible for any costs incurred by FLR, or any damage to or loss of any of FLR's facilities, arising out of the acts or omissions of Affiliate.

17. Payment. Unless other payment terms are specified in this Agreement, charges hereunder shall be paid 30 days after receipt of the invoice for such charges. In addition to the charges set forth herein and except for income or gross receipts taxes, Affiliate shall pay any fees lawfully imposed by any governmental or quasi-governmental body in connection with the provision of the Capacity, as well as any additional costs that FLR reasonably incurs as an indirect or direct result of this Agreement, not to exceed on an annual basis five percent (5%) of the charges and payments due for the applicable year as specified hereinabove. If Affiliate in good faith disputes any portion of a charge, Affiliate shall provide written notice to FLR of the billing dispute within 30 days thereafter.

18. Assignment. Neither party may assign this Agreement or any of the Capacity without the prior written consent of FLR.

19. Termination of Service. Affiliate shall have the right to terminate this Agreement prior to the expiration of the term hereof in the event it determines it will be unable to make the payments due hereunder. FLR may suspend or terminate, in whole or in part, the Capacity or this Agreement without any liability therefor (a) in the event that Affiliate fails to make payment hereunder if such failure is not corrected by Affiliate within 30 days following written notification thereof; (b) for any other material breach by Affiliate if such breach is not corrected by Affiliate within 30 days following written notification thereof; (c) for any use of the Capacity by Affiliate which FLR determines to be harmful to the Network or other users of the Network or violates any law or regulation; or (d) in the event any law, rule, regulation or judgment of any court or governmental or quasi-governmental agency prevents FLR from providing the Capacity or any portion thereof. Termination or suspension by FLR or early termination by Affiliate shall not relieve Affiliate of liability incurred prior to such termination or suspension.

Affiliate may terminate this Agreement with respect to FLR Network services without liability therefor in the event a material breach by FLR in the performance of its obligations hereunder is not cured by FLR within 30 days following written notification thereof. Affiliate may terminate this Agreement for any reason upon providing FLR with ninety (90) days prior written notice of cancellation. FLR shall make no further commitments hereunder. Affiliate shall be liable to FLR for the cost of all authorized services provided and work completed prior to date of termination.

20. Parties Responsibilities. Each party shall be responsible for its own acts, omissions, and the results thereof.

21. Nondisclosure. Unless otherwise required by law, neither FLR nor Affiliate shall disclose to third parties the rates and fees due hereunder, or any information that is identified as confidential by one of the parties hereto (hereinafter referred to as the "Disclosing Party"), without the prior, written consent of the Disclosing Party. For the purposes of this Agreement, the information disclosed hereunder by the Disclosing Party to the other party hereto (hereinafter referred to as the "Receiving Party") will not be treated as confidential if it (a) is or becomes public knowledge without the fault or action of the Receiving Party, (b) is received by the Receiving Party from a third party, (c) is independently developed by the Receiving Party without access to the information hereunder, (d) is or becomes available to the Receiving Party on an unrestricted basis from the Disclosing Party, or (e) is required to be disclosed by law or court order. The obligation of each party receiving confidential information shall extend for the term of this Agreement as stated above. This section is not intended to prevent required disclosure pursuant the provisions of Chapter 119, Florida Statutes.

22. Miscellaneous. This Agreement or any provision hereof may be amended or waived only by written agreement signed by both parties. This writing constitutes the entire agreement between the parties and supersedes and merges all prior oral or written agreements, representations, statements, proposals and undertakings between the parties regarding the subject matter hereof. Nothing contained herein shall be construed to imply a partnership, joint venture, principal and agent or employer and employee relationship between the parties. Except as set forth in Section 9 above with regard to the provider of the facilities employed by FLR to provide the Capacity, no provision in this Agreement shall provide to any person not a party to this Agreement any remedy, claim or cause of action, or create any third-party beneficiary rights against either party. In the event that any one or more of the provisions in this Agreement shall for any reason be held to have no force and effect, this Agreement shall, if possible, be interpreted in a manner so as to effectuate the intention of the parties. Provisions contained in this Agreement that, by their sense and context, are intended to survive the suspension or termination of this Agreement, shall so survive. All disputes related to this Agreement shall in the first instance be referred to the appropriate executives of each party for resolution. This Agreement is the subject of negotiation between the parties and should not be interpreted more favorably toward one party over the other.

In recognition of their agreements hereunder, the parties have executed this Agreement as of the date first above written.

Approved as to form and legality  
By R. Mason Blake, Esq.  
General Counsel for FLR  
March 6, 2008

FLORIDA LAMBDA RAIL, LLC, a Florida  
limited liability company

By: J. Philip Halstead

Name: J. Philip Halstead

Title: Chief Executive Officer

PALM BEACH COUNTY GOVERNMENT,  
FLORIDA, a political subdivision organized under  
the State of Florida

By: Addie L. Greene

Title: Chairperson

Address: \_\_\_\_\_  
\_\_\_\_\_

E-Mail Address: \_\_\_\_\_

APPROVED AS TO TERMS AND CONDITIONS  
BY Steve Borden  
ISS DIRECTOR



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Florida's Research and Education Network

**EXHIBIT A**

**Florida LambdaRail, LLC  
Service Level Understanding (SLU)**

The purpose for this document is to characterize the availability and problem-recovery/response-interval participants utilizing the FLR networking infrastructure and services may expect. The targeted availability and problem recovery response for the FLR services offered to its participants are noted below.

**I. FLR Services offered:****A. FLRNet Service (Internet, Internet2, Peering, L2/3 VPN)**

**Availability: The design goal for the FLRNet service is five 9's (99.999%)**

FLR Internet service is provided by FLR contract with two Tier1 Internet Service Providers (ISPs), each with their own redundant connection to FLRNet. A redundant path for enhanced access to the National LambdaRail (NLR) and Internet2 (I2) is provided via a 10GE NLR interface to Houston, Texas as the results of a mutual backup arrangement with LEARN/LONI/ONENET.

To ensure highly available FLRNet services each FLRNet 7609 core site backbone is dual connected to other FLRNet core router sites to protect against single wave failures. The CISCO 7609s utilized include redundant supervisor and power supplies. In other words, the FLRNet is redundant outside of a full switch outage.

Because of local fiber access issues observed over the first few months of FLR operations it is advised that each FLR participant connect to FLRNet services with both Primary and Secondary connections to protect against a single local access failure.

**Problem analysis:** The FLR Engineering team is dispatched immediately upon report of problem from the user community or the FLR Network Management System (see below for details on accessing the NMS and NOC.)

**Problem resolution:** Problem resolution for FLRNet is four hours or less after problem analysis. Problem resolution of Internet2 or Internet will depend on upstream providers' response. Problem response may depend on Members local loop provider.

Equipment that supports the FLRnet, (Cisco 7609s) are under smart net contract with Cisco. Contract response for the 7609 is 24/7 by 4 hours on-site. The backbone of FLRNet utilizes FLRWave service.

**EXHIBIT A**

**Florida LambdaRail, LLC  
Service Level Understanding (SLU)**

**B. FLRWave Services - Gigabit Ethernet (GE), OC48, 10GE, OC192**

**Availability:** The design goal of FLRWave services is 99.99%

The design goal for FLRWaves provided over the FLR infrastructure is four 9's availability. For waves that extend outside Florida utilizing NLR may only expect two 9's availability. If your application requires a higher level of availability an additional wave can be provided via alternate physical path at additional cost.

**Problem analysis:** The FLR Engineering team is dispatched immediately upon notification of an outage by its NMS systems or by the participant.

**Problem Resolution:**

Repair is next business day pending Cisco delivery of non-common components. 24/7/4 Smartnet services can be obtained at the request of the customer at additional cost.

Equipment that supports the FLRWave service (Cisco 15454s) is under a Cisco Smartnet contract 8/5 NBD (next business day.) The FLR NOC has spare hardware for the common parts that make up an FLRWave but not the transponders. The common parts can be delivered on-site to anywhere in the state in six hours for total node failure barring natural disaster (e.g. Hurricane). . FLR does not at present maintain spare ROADMs, ADM or Transponders.

Cisco Smartnet service contract requires that we place order for replacement part prior to 3PM EST for next business day delivery.

**II. Service Requests:**

Requesting additional Internet bandwidth or updating any of the FLRNet suite of services is done via the web S-Ticket system. Internet2 service can typically be enabled within a week depending on the response of the Internet2 NOC. Internet service will be enabled within a week if the total FLR Internet utilization is within 80% of capacity otherwise FLR will provide the requested capacity within 17 business days.

**III. Change Management:**

FLR performs and schedule maintenance over two weekly standing change windows. Scheduled work takes place either Sunday morning 6AM-9AM or Tuesday 5AM-6AM. Urgent changes may take place any day from 5AM-6AM. Emergency maintenance: anytime. All changes are reviewed and tracked in a change management tracking system.

**EXHIBIT A****Florida LambdaRail, LLC  
Service Level Understanding (SLU)****IV. FLR NOC**

The FLR NOC is staffed for continuous, 24\*365 monitoring of the state of the optical network, and coordinates restoration of any failures that may surface during the operation of the network. The NOC is hosted at the University of Florida Computing and Network Services. Should the NOC become unavailable due to circumstances outside its control the FLR network design facilitates management (rapid NOC relocation) at any of the other FLRNet core sites and additional Optical sites designed for disaster recovery response.

The services of the NOC include coordination, communications and control between and among the FLR participants, vendors and other upstream service providers.

**V. Participants' Responsibilities**

**A. Provides FLR field engineering staff to assist in network operations:** FLR field engineers should be derived, where possible, from participant's network engineering groups to assist with all portions of FLR network operations, from provisioning to troubleshooting.

**B. Provides end-user support and local problem diagnosis and resolution:** Using detailed tools provided to local engineering staff by the FLR NOC, the first level of troubleshooting of any end-user problems should be performed by the local staff. If the problem is not local to the participant, the FLR NOC will be contacted to report a problem and begin the next level of troubleshooting. If the problem is determined to be at another FLR participant's site, staff from that facility will work with the FLR NOC to diagnose and resolve the problem.

**C. Facilitates, supports participant's research use of the FLR:** In coordination with FLR Experimental Support personnel, designated local staff will facilitate and support participant's interest in the use of FLR for research or teaching purposes.

**VI. The FLR NOC can be contacted via the Web, Telephone and email:**

WEB: <http://noc.flrnet.org/sticket>

Phone: 352.294.FLR1 (3571)

Email: [noc@flrnet.org](mailto:noc@flrnet.org)

**EXHIBIT A**

**Florida LambdaRail, LLC  
Service Level Understanding (SLU)**

**FLR Service Ticket (“S-Ticket”)**

The FLR “S-Ticket” is the one stop system for reporting problems, requesting net service, or a change in existing service. Once you submit a ticket, you will receive confirmation and progress emails.

**Problem Escalation Contacts:**

FLR Dispatch, Ralph Brigham noc@flrnet.org

FLR CTO, Director of Engineering Dave.Pokorney@flrnet.org

FLR COO, Veronica.Sarjeant@flrnet.org

FLR CEO, Phil.Halstead@flrnet.org



**EXHIBIT B**

**FEEES AND CHARGES  
FOR NETWORK CONNECTIVITY AND SERVICES**

**FLR AFFILIATE CONNECTION AGREEMENT  
PALM BEACH COUNTY GOVERNMENT, FLORIDA**

**1 Gbps NETWORK CONNECTION - 75 Mbps – INTERNET & INTERNET2**

<b>PALM BEACH COUNTY GOVERNMENT</b>	
<b>Recurring Cost<sup>1</sup></b>	<b>\$ 90,220</b>

<b>Payment Schedule</b>	
<b>1st Payment</b>	<b>\$ 22,555</b>
<b>2nd Payment</b>	<b>\$ 22,555</b>
<b>3rd Payment</b>	<b>\$ 22,555</b>
<b>4th Payment</b>	<b>\$ 22,555</b>
<b>Annual Total</b>	<b>\$ 90,220</b>

**Notes:**

1. The above cost is based upon the Affiliate price schedule approved by the FLR Board of Directors. This price schedule is reviewed periodically and the fees and charges are subject to adjustments as needed from time to time by the FLR Board of Directors.
2. The recurring cost consists of several FLR services integrated into a single package. These services include co-location, cross connect, and port charges, and support functions required to maintain the Affiliate’s connection to the FLR infrastructure, use (up to 1 Gbps) of the FLR Ethernet-based IP transport facility, and access to the commercial Internet (75 Mbps). This cost is due and payable on a quarterly basis and is effective the date the Affiliate initiates use of the FLR services. Annual advance payments are also accepted. Additional FLR network services may be requested at any time and shall be based upon the current price schedule.
3. Access to the commercial Internet is based upon a Committed Data Rate (CDR). Affiliate has requested an initial CDR of 75 Mbps per month and will be charged \$36 per megabit for additional usage over the requested CDR.

For amounts of commercial Internet bandwidth of 100 Mbps or less, a corresponding amount of bandwidth to access the Internet2 network will be available at no additional cost to eligible users of the Affiliate network. Eligible users are educational institution (non-profit and for-profit K-20, technical, and trade schools), museums, art galleries, libraries, or

**EXHIBIT B**

**FEES AND CHARGES  
FOR NETWORK CONNECTIVITY AND SERVICES**

**FLR AFFILIATE CONNECTION AGREEMENT  
PALM BEACH COUNTY GOVERNMENT, FLORIDA**

**1 Gbps NETWORK CONNECTION - 75 Mbps – INTERNET & INTERNET2**

**hospitals that require routine collaboration on instructional, clinical, and/or research projects, services, and content with the Internet2 participants. Affiliate shall have access up to 75 Mbps to the Internet2 network. In order to take advantage of access to the Internet2 network, eligible users must be sponsored participants of Internet2. Sponsorship shall be provided by FLR as part of the Internet2 Secondary Educational Group Participant (SEGP) program. There is no cost to Affiliate or eligible users of the Affiliate's network for this sponsorship.**

**FLORIDA LAMBDARAIL  
AFFILIATE INSTALLATION AGREEMENT**

THIS AFFILIATE INSTALLATION AGREEMENT (hereinafter referred to as the "Agreement") is made and entered into as of the \_\_\_\_\_ day of \_\_\_\_\_, 2008 by and between **FLORIDA LAMBDARAIL, LLC**, a Florida limited liability company (hereinafter referred to as "FLR"), and **PALM BEACH COUNTY GOVERNMENT, FLORIDA**, a political subdivision organized under the laws of the State of Florida (hereinafter referred to as "Affiliate").

RECITALS

A. FLR has constructed a high-bandwidth optical network (hereinafter referred to as the "Network") to link Florida's research institutions and provide a network to support large-scale research, education outreach, public/private partnerships and information technology infrastructure.

B. Affiliate desires to connect to the Network and has agreed to install a connection to the Network on the terms and subject to the conditions hereinafter set forth.

NOW, THEREFORE, the parties hereto set forth their mutual understandings and agreement as follows:

1. Connection Locations. FLR will provide Affiliate with connections to the network at the FLR Connection Points identified in Exhibit "A", attached hereto and made a part hereof. Affiliate shall have two connections to the network intended to be used as redundant peers of each other. The circuits will shift in the event of an outage of the main connection. Affiliate shall have one year to establish the connections provided for hereinabove at the location identified in Exhibit "A". In the event both of the connections provided for hereinabove have not been established on or before one year after the date of this Agreement, then this Agreement shall automatically terminate and the parties shall be released from any further liabilities or obligations hereunder. In order to establish any connection after the termination of this Agreement pursuant to the preceding sentence, Affiliate shall be required to enter a new Installation Agreement with FLR.

2. Connection and Installation Management. Affiliate understands and agrees that the connection by Affiliate to the Network must be coordinated and supervised by FLR.

3. Affiliate Responsibilities. Affiliate shall be responsible for all costs and expenses incurred by Affiliate related to the connection to the Network (in addition to the charges and fees provided for in paragraph 4 hereinbelow).

4. Connection Fee. As consideration the Affiliate shall pay to FLR a nonrefundable, nonrecurring transaction fee and installation charges (hereinafter referred to as the "Connection Fee") as set forth in Exhibit "B" for each location identified in Exhibit "A". This Connection Fee shall be due immediately upon the Affiliate's connection to the network.

5. Nondisclosure. Unless otherwise required by law, neither FLR nor Affiliate shall disclose to third parties the fees due hereunder, or any information that is identified as confidential by one of the parties hereto (hereinafter referred to as the "Disclosing Party"), without the prior, written consent of the Disclosing Party. For the purposes of this Agreement, the information disclosed hereunder by the Disclosing Party to the other party hereto (hereinafter referred to as the "Receiving Party") will not be treated as confidential if it (a) is or becomes public knowledge without the fault or action of the Receiving Party, (b) is received by the Receiving Party from a third party, (c) is independently developed by the Receiving Party without access to the information hereunder, (d) is or becomes available to the Receiving Party on an unrestricted basis from the Disclosing Party, or (e) is required to be disclosed by law or court order. This section is not intended to prevent required disclosure pursuant the provisions of Chapter 119, Florida Statutes.

6. Miscellaneous. This Agreement or any provision hereof may be amended or waived only by written agreement signed by both parties. This writing constitutes the entire agreement between the parties and supersedes and merges all prior oral or written agreements, representations, statements, proposals and undertakings between the parties regarding the subject matter hereof. Nothing contained herein shall be construed to imply a partnership, joint venture, principal and agent or employer and employee relationship between the parties. No provision in this Agreement shall provide to any person not a party to this Agreement any remedy, claim or cause of action, or create any third-party beneficiary rights against either party. In the event that any one or more of the provisions in this Agreement shall for any reason be held to have no force and effect, this Agreement shall, if possible, be interpreted in a manner so as to effectuate the intention of the parties. Provisions contained in this Agreement that, by their sense and context, are intended to survive the suspension or termination of this Agreement, shall so survive. All disputes related to this Agreement shall in the first instance be referred to the appropriate executives of each party for resolution. This Agreement is the subject of negotiation between the parties and should not be interpreted more favorably toward one party over the other.

In recognition of their agreements hereunder, the parties have executed this Agreement as of the date first above written.

Approved as to form and legality  
By R. Mason Blake, Esq.  
General Counsel for FLR  
March 6, 2008

FLORIDA LAMBDARAIL, LLC, a Florida  
limited liability company

By: J. Philip Halstead

Name: J. Philip Halstead

Title: Chief Executive Officer

PALM BEACH COUNTY GOVERNMENT,  
FLORIDA, a political subdivision organized under  
the State of Florida

By: Addie L. Greene

Title: Chairperson

Address: \_\_\_\_\_

\_\_\_\_\_

E-Mail Address: \_\_\_\_\_

APPROVED AS TO TERMS AND CONDITIONS  
BY Steve Bordenon  
ISS DIRECTOR

CONNECTION LOCATION

FLR AFFILIATE CONNECTION AGREEMENT  
PALM BEACH COUNTY GOVERNMENT, FLORIDA

1 Gbps NETWORK CONNECTION - 75 Mbps – INTERNET & INTERNET2

<u>Affiliate Connection Location</u>	<u>FLR Connection Points</u>	<u>Approx. Date of Connection</u>
	601 15th St. West Palm Beach, Fl	

**EXHIBIT B**

**FEES AND CHARGES  
FOR NETWORK CONNECTIVITY AND SERVICES**

**FLR AFFILIATE CONNECTION AGREEMENT  
PALM BEACH COUNTY GOVERNMENT, FLORIDA**

**1 Gbps NETWORK CONNECTION - 75 Mbps – INTERNET & INTERNET2**

<b>PALM BEACH COUNTY GOVERNMENT</b>	
<b>Transaction Fee</b>	<b>\$ 12,500</b>
<b>Installation Charges</b>	<b>\$ 15,000</b>
<b>Total Connection Fee</b>	<b>\$ 27,500</b>

**Notes:**

- The Connection Fee consists of a non-refundable transaction fee and installation charges to connect Affiliate's network to the FLR network. These costs are due immediately upon the Affiliate's connection to the network.**

**The transaction fee is \$10,000 for the first location and \$2,500 for the second (redundant) location connected to the FLR infrastructure. The two connections are intended to be redundant peers of each other. The circuits will shift in the event of an outage of the main connection.**

**The installation charges are one-time installation costs (network termination, cross connect fees, etc.) associated with establishing the two direct connections to the Network.**



**FLR**  
Florida LambdaRail

## The Florida LambdaRail: Florida's Research and Education Network

Higher education and research programs are experiencing ever-increasing demand for advanced data communication services and interconnectivity. Advancement in research and the tools used for teaching and learning are major driving forces behind this demand. The Florida LambdaRail, LLC (FLR) is a complementary initiative to the National LambdaRail (NLR), a national research and experimentation optical-based network infrastructure. The first of its kind in Florida, the FLR is a high-performance experimental, research, and production networking and support infrastructure that enables participants and their partners to take part in advanced research, education, and economic development activities. As such, the FLR is not in competition with private industry or commercial service providers.



## The Florida LambdaRail:

### Participants

#### Equity Members

Accredited investors and owners of the FLR, LLC. 501(c) (3) are tax exempt entities or public corporations that are either private, non-profit educational institutions or Florida Public universities with an interest in participating in the NLR.

#### Associates

Organizations that provide resources of strategic value, such as transit or peering services, or connectivity for a "community of interest."

#### Affiliates

Participants sponsored and supported by an Equity Member or an Associate to obtain services offered by the FLR.

The primary impetus for the network is research utilizing the enabling bandwidth, dedicated resources, and deterministic quality-of-service features provided by the network. Participants are provided with unprecedented use of networking technologies unimaginable a few years ago. To meet FLR participants' diverse education and research objectives and achieve a broader impact on Florida social and economic development, connection of non-equity participants is allowed. Potential Associates and Affiliates are subject to FLR board approval and must meet one of the following conditions:

1. Providing the service is an integral part of a Florida economic development initiative.
2. The potential participant is an educational institution (i.e., private, non-profit educational institution, Florida public university, community college, for-profit college, or public/private school).
3. The potential participant is in collaboration with other FLR non-profit participants in support of research, education, or economic development initiatives.
4. The potential participant is teaming with an FLR Equity or Associate in research or economic development activities.
5. Providing such service does not jeopardize the FLR's non-profit status.
6. The entity facilitates connecting other State of Florida government entities that do not conflict with the purpose of the company.

To foster collaboration and remove barriers to research, the FLR network has no acceptable use policy (AUP) constraints beyond those required by law.

### Services

The FLR provides a scalable point-to-point optical transport network solution that meets long-term system and network requirements. The FLR offers several advantages: a reliable and flexible network infrastructure that can grow and incorporate technological advancements; enhanced network performance and bandwidth capabilities; and support for collaboration and advanced communication among research participants.

- ▲ Dynamic bandwidth allocation. Utilizing dedicated and shared 10 Gigabit Ethernet or 1 Gigabit Ethernet high-performance data circuits, FLR participants are provided with additional capacity "on demand," to accommodate bursts in data traffic, videoconferencing, or other special requirements.
- ▲ Connectivity to commercial Internet Service Providers in order to provide economical and reliable Internet service to FLR participants.
- ▲ Connectivity to advanced production regional and national networks, such as the NLR and Abilene Internet2 backbone, supporting new applications and services.
- ▲ High speed IP transit paths between participants, supporting both IPv4 and IPv6 protocols. The FLR is designed to allow growth in terms of the number of hosts connected as well as the amount of data transmitted.
- ▲ Network peering between the FLR and other data networks. Arrangements with other networks and traffic exchange points allow the FLR to route and exchange network traffic, resulting in fewer hops and faster access to user destinations.
- ▲ Dedicated wavelengths between FLR participants or FLR and NLR participants. For research applications needing a dedicated wavelength service, the FLR offers participants, point to point, 1.0, 2.5, or 10 gigabits per second optical lambdas as a complement to the FLR optical-based backbone services.

### Cost of Services

Equity Members and Associates are authorized to provide access to or services across, the FLR. The costs of such services are based upon a uniform pricing model that ensures provisioning of consistent services, allows for growth in the network facilities, and enables support of affiliate connections in the most technically appropriate manner.



## Why FLR?

Many scientific disciplines have dramatically increased their dependence on information technology resources, requiring in some cases multi-gigabit networks and teraflops (a trillion operations per second) of computing power to transmit, process and analyze vast amounts of data stored at multiple sites. More and more academic courses are being made available online, which requires greater access to digitized library data, increased use of graphic data and multimedia files. However, the resultant networking demands are often stranded because the current network connections are not fast enough.

The FLR infrastructure was designed explicitly to meet these challenges. If the Internet pipeline today were comparable to a two-lane road, the FLR network would be akin to a 32-lane interstate highway system.

## Benefits

"Orders of magnitude" 100-fold increase in bandwidth capacity

Enhanced network performance

Association, collaboration and advanced communication among participants and researchers throughout the U.S. and other nations

Inherent reduction in the cost of Internet and Internet2 services through an aggregation of these services

Connectivity to the national research network placing Florida universities on the same competitive footing as the best and most progressive universities in the nation

Increased opportunities to participate in leading edge research, grants activities with international partners promoting scientific discovery

Foundation for the next-generation network needed to support large-scale research, education outreach, and public/private partnerships essential to the education community

Support of high performance e-science projects addressing national priorities

A more reliable and flexible network infrastructure that can grow and incorporate technological advancements

The FLR takes pride in its robust, high capacity, next generation communication services for its members, associates and affiliates. The FLR represents the common interests of the entities it serves and is highly accountable for the services it provides.

We welcome your participation in the FLR network. Together, we can make a difference to Florida's future. Questions regarding the FLR services and pricing should be directed to the company at (850) 644-0066 or [mfo@flrnet.org](mailto:mfo@flrnet.org).

## Member Stories/Testimonials

"The FLR and NLR will enable FSU to substantially increase our research networking connectivity speed from 155-Mb/s to 5 Gb/s, all at a substantial reduction in cost. It will also allow FSU to significantly increase our commodity Internet bandwidth capacity and provide failover connectivity while spending significantly less for ISP services. Beyond saving money for our network connectivity, however, the unprecedented connectivity provided by FLR/NLR is redefining what our campus community and researchers can accomplish."

Larry Conrad  
Associate Vice President and  
Chief Information Officer  
Florida State University

"This project (FLR) will allow our faculty to seek research funding unavailable to us before for lack of infrastructure. Our weather-related projects will benefit immediately, and I'm sure there will be applications across the University."

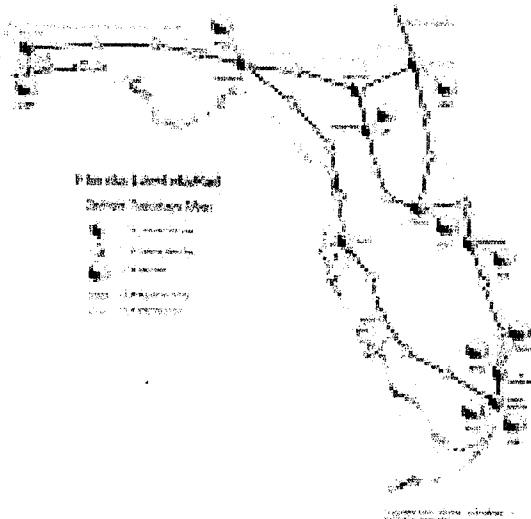
Dr. Neal Coulter  
Dean of the College of Computing,  
Engineering and Construction  
University of North Florida

"High energy physicists at the University of Florida, Florida State University, Florida International University and Florida Tech are participating in the CMS experiment at CERN. By the end of 2005, several terabytes of data will be exchanged every month among these Florida institutions as well as with other institutions on National Lambda Rail. This data rate will rise to petabytes per year by 2007 and continue to increase as the accelerator at CERN provides more data. The Florida institutions will be part of a global CMS Data Grid starting in 2006 that will require high speed optical connections to exchange data with our colleagues in Europe, Asia and South America. All these experimental projects are made feasible by FLR and NLR."

Dr. Marc Holt, Interim Associate Provost for  
Information Technology  
Dr. Paul Avery, Professor of Physics  
University of Florida

### Infrastructure

Deployed over 1,540 miles of dark fiber, obtained through Level 3 Communications, Inc. utilizing the Internet2 and FIBERCO initiatives, the FLR network infrastructure provides for a dedicated statewide communications facility linking major nodes located in Pensacola, Tallahassee, Tampa, Miami, Orlando, Gainesville, Melbourne, Ft. Lauderdale and Jacksonville, as well as interconnecting with NLR nodes located in Jacksonville and planned for Pensacola.



The foundation of the infrastructure is a dense wave division multiplexing (DWDM)-based optical footprint using Cisco Systems' 15454 optical electronic systems with a capacity of 32 wavelengths per fiber pair. Each wavelength can support transmission up to 10 billion bits per second (10 Gbps).

On top of the optical infrastructure is built an Ethernet based MPLS transport facility. This provides for Internet, Internet2 and high speed IPv4 and IPv6 transit between participants. Additionally, private layer 2 or layer 3 services (VPN) may also be provisioned.

Each Equity Member, Florida Atlantic University, Florida Institute of Technology, Florida International University, Florida State University, Nova Southeastern University, University of Central Florida, University of Florida, University of Miami, University of North Florida, and University of West Florida, are provided a primary 10 Gbps and a secondary 1 Gbps connection to the MPLS backbone.

Through advanced technologies, multiple waves are available along the optical backbone in support of primary and secondary access for each member institution, as well as dedicated waves for research activities across institutional boundaries. The FLR infrastructure is owned and operated by the Equity Members.



[www.flrnet.org](http://www.flrnet.org)

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