PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS
AGENDA ITEM SUMMARY

Meeting Date: January 24, 2012 **[X] Consent** **[ ] Regular** **[ ] Public Hearing** **[ ] Workshop**

Department:

Submitted by: Information Systems Services
Submitted for: Information Systems Services

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: a revised rate structure applicable to network services provided by Palm Beach County to external organizations.

Summary: Numerous local government, educational, and non-profit organizations receive network services provided by the County through the Information Systems Services (ISS) Department. ISS is proposing a variable rate structure for network services provided to external agencies, which will replace the existing, "point of contact" flat rate structure for all future agreements. The revised rate structure takes into account the bandwidth requirements of each customer with rates established based on ranges of capacity usage. This standardized rate structure was developed using an analysis of market pricing for similar services and will be applicable to all future agreements for network service provided to external organizations. This program supports the concept of collaboration among public sector agencies and results in service improvements for the connected agencies, and cost savings to the taxpayers as well as numerous other intangible benefits. Countywide (PFK)

Background and Justification: ISS began providing network services to external agencies beginning in April 2008 when we entered into the first such agreement with the School Board of Palm Beach County. Standardizing our rate structure will allow ISS to continue promoting the concept of IT service collaboration among public sector organizations, including government, education, health care and non-profit organizations. Benefits of shared services include greater network bandwidth, reduced costs and opportunities to obtain IT-related services, including Internet access and connectivity to remote disaster recovery sites.

The County's fiber optic network with connectivity to the Florida LambdaRail is a valuable resource offered to all qualified public sector and non-profit organizations. The Florida LambdaRail is a non-profit broadband network created to facilitate advanced research, education, and economic development activities in the State of Florida. This statewide network interconnects ten of the state universities and is jointly owned by these same universities, including Florida Atlantic University, Florida State University and the University of Florida.

On April 15, 2008, the Board of County Commissioners approved a contract between Palm Beach County and the Florida LambdaRail, LLC. The County utilizes this connection to provide faster broadband services for Internet access. The LambdaRail also facilitates disaster recovery and expanded access to data sources. Palm Beach County's network can now serve as the "last mile" connection for other public sector agencies interested in linking to the LambdaRail. Palm

(Continued on page 3...)

Attachment:

1. Proposed Network Service Rate Plan (1 original)

Recommended by: Steve Bordelon 12/19/2011
Department Director Date

Approved by: 1/3/12
County Administrator Date

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	**2012**	**2013**	**2014**	**2015**	**2016**
Capital Expenditures	$0	$0	$0	$0	$0
Operating Costs	0	0	0	0	0
External Revenues	0	0	0	0	0
Program Inc (County)	0	0	0	0	0
In-Kind Match (County)	0	0	0	0	0
NET FISCAL IMPACT	* **$0**	**$0**	**$0**	**$0**	**$0**
# Additional FTE Positions (Cumulative)	0	0	0	0	0

Is Item Included in Proposed Budget? Yes ____ No X

Budget Account No(s): Fund ____ Department ____ Unit ____ Rev Src

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

C. Departmental Fiscal Review: 12/19/11

III. REVIEW COMMENTS

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

* Fiscal impact is indeterminable at this time

WS 12/22/11 — **OFMB** SN 12/27/11 — 12/20/11

1/3/12 — Contract Administration 1-3-12

B. Legal Sufficiency:

1/4/12
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...)

Beach County is the first local government to connect to the LambdaRail and our contract enables the County to serve as a re-seller of network access to the LambdaRail. Under this agreement, Palm Beach County is required to pay the LambdaRail $100 per month for each third party that connects through the County network, with exemptions for taxing districts, educational and medical organizations.

Faster Internet response time, access to offsite (backup) computing facilities and a lower cost of service provide strong incentives for other public sector and non-profit organizations to join the County's network. Existing network service agreements include the major educational institutions in Palm Beach County, municipalities, several non-profit organizations and other taxing districts including the Health Care District and Children's Services Council.

The standard rate structure is currently based on a flat $700 per month charge for each "point of connection" and $500 per month for each subsequent point of connection applied to all customers other than small non-profits. This methodology results in customers with the highest level of bandwidth paying the same as customers consuming substantially less bandwidth. While $700 per month is a bargain price for the larger bandwidth consumers, it is not economically viable for small agencies that only require a minimal level of service. A separate tiered rate plan based on actual metered usage levels has been established for small non-profit organizations only.

ISS proposes to replace the above methodologies with a revised rate structure based on the customer's required capacity for general network transport, as well as the capacity required specifically for Internet service. This model is very similar to the way most telecommunications carriers structure their charges for services. The proposed modified rate structure was derived through a two-fold process. For the initial input, ISS reviewed leased circuit costs from multiple carriers including AT&T, FPL Fibernet, Paetec, and Windstream. Additionally, the proposed rate plan was compared to the existing rate methodologies taking into account the budget constraints faced by most public sector and financially assisted agencies.

The proposed rate structure addresses the deficiencies of the existing flat rate methodology by factoring in different monthly rates based on the range of bandwidth utilization that the customer falls into. Thus, the new rates will be more closely aligned with actual network usage.

These rates will be applicable to all future agreements for network services but will <u>not</u> be retroactively applied to existing customers. Existing agreements may be amended in the future by ISS to incorporate the revised rate schedule.

Proposed New Rate Plan for ISS Network Services

Palm Beach County Information Systems Services (ISS) is proposing that a new unified rate structure be adopted to simplify contract terms and service billing in the future. The proposed new rate structure will replace three billing methodologies, which have used in prior agreements as follows:

1. Tiered rate plan based on metered usage levels. This plan applies only to the School District of Palm Beach County.

2. Flat rate structure based on $700 per month fee for first "Point of Connection" and $500 per month for each subsequent point of connection applied to all customers other than small non-profits.

3. Separate tiered rate plan based on actual metered usage levels (for small non-profit organizations only).

ISS proposes to replace the above methodologies with a revised rate structure based on the customer's required capacity for general network transport, as well as the capacity required specifically for Internet service. This model is very similar to the way most telecommunications carriers structure their services.

The modified rate structure proposed for adoption was derived through a two-fold process. For the initial input, we reviewed leased circuit cost from multiple carriers including AT&T, FPL Fibernet, Paetec, and Windstream. Additionally, the proposed rate plan was compared to the existing rate methodologies taking into account the budget constraints faced by most public sector and financially assisted agencies.

One caveat to take into account is that carrier pricing is not firm. Because they have the infrastructure investment complete, they have the ability to negotiate their rates to meet a customer's needs. A potential opportunity for PBC is to allow staff the same flexibility to negotiate with a customer. The incentives for signing up a customer for network services is that very often this initial agreement leads to other services being contracted thereby generating additional revenues to Palm Beach County.

Some other major differences between our proposal and commercial carriers is that we require the agency contracting with the County to pay for all capital costs necessary to attach to our network. In some instances, this can run into the tens of thousands of dollars. Commercial telecom carriers normally require multi-year commitments whereas our standard agreement is on a year-to-year basis.

Competitive quotes were obtained are as follows:

Carrier	Circuit Size	Transport Charge (MRC)	Internet Charge (MRC)	Comments
AT&T	100 Megabit	$1,795	Not Applicable	Internet service is sold separately
FPL Fibernet	100 Megabit	$1,163	$12 per Megabit (must match pipe size)	Three year commit
Windstream	100 Megabit	$1,845	$7 per megabit (must match pipe size)	Three year commit
Paetec	100 Megabit	$1,525		Multi-year commit
AT&T Internet Only	100 Megabit	Not broken out	$7,894	Multi-year commit

As shown in the preceding table, the quoted carrier prices vary widely. If one were to call on three separate occasions, they would likely get three varying quotes. For comparison to another municipal network, the City of Wilson, North Carolina offers phone and cable service to its constituents plus a 100 Megabit Internet connection. These bundled services are priced at only $149 per month.

Proposed New Rate Structure for ISS Network Services

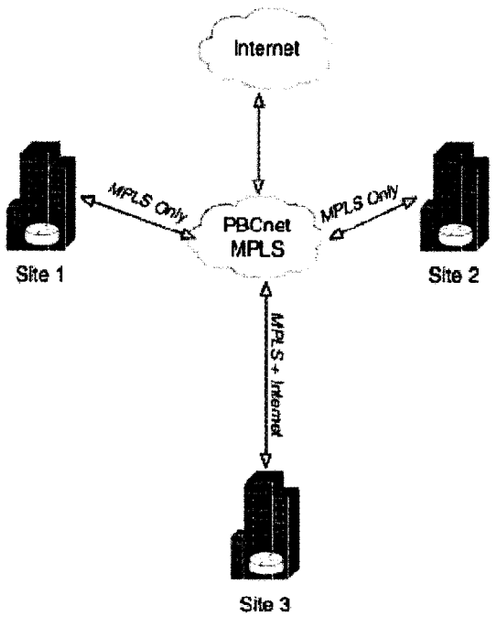
Circuit Type	Size	Transport Charge	Internet Charge (MRC)	Comments
Metro Ethernet	3 Mb	$50	$15 per megabit	Internet OR MPLS Only
Metro Ethernet	3 Mb	$75	$15 per megabit	Internet plus MPLS
Metro Ethernet	10 Mb	$150	$15 per megabit	Internet or MPLS Only
Metro Ethernet	10 Mb	$200	$15 per megabit	Internet plus MPLS
Metro Ethernet	20 Mb	$350	$15 per megabit	Internet or MPLS Only
Metro Ethernet	20 Mb	$450	$15 per megabit	Internet plus MPLS
Metro Ethernet	50 Mb	$550	$15 per megabit	Internet OR MPLS Only
Metro Ethernet	50 Mb	$600	$15 per megabit	Internet plus MPLS
Metro Ethernet	100 Mb	$700	$15 per megabit	Internet OR MPLS Only
Metro Ethernet	100 Mb	$750	$15 per megabit	Internet plus MPLS
Metro Ethernet	250 Mb	$850	$15 per megabit	Internet or MPLS Only
Metro Ethernet	250 Mb	$900	$15 per megabit	Internet plus MPLS
Metro Ethernet	500 Mb	$1,000	$15 per megabit	Internet or MPLS Only
Metro Ethernet	500 Mb	$1,100	$15 per megabit	Internet plus MPLS
Metro Ethernet	1,000 Mb	$1,300	$15 per megabit	Internet or MPLS Only
Metro Ethernet	1,000 Mb	$1,500	$15 per megabit	Internet plus MPLS

Supplemental Fees

Description	Charge	Comments
FLR Surcharge	$100	Monthly surcharge to be paid to FLR (dependent upon customer type)
NWRDC Cross-Connect	$100	Monthly cross-connect fee for access to NWRDC (separate from metered charge as designated in Server fees.
Administrative Fee	15% of actual charges	Administrative surcharge added to pass-through cost for external services paid by PBC and then charged to the customer

We believe that the above pricing structure will allow us to provide affordable services to public sector agencies while also generating additional revenues. Additionally, because we are primarily providing this service to tax supported agencies, this spreads the cost pool for network services to a larger number of agencies thereby lowering the tax basis for all agencies, including Palm Beach County, and ultimately results in a savings for the taxpayers.

Examples of MPLS vs. Internet are depicted on the following page.



Term	Definition
MPLS	**Multiprotocol Label Switching (MPLS)** is a mechanism in high-performance telecommunications networks, which directs and carries data from one network node to the next with the help of labels. MPLS makes it easy to create "virtual links" between distant nodes. It can encapsulate packets of various network protocols.
Megabit	The term megabit is widely used when referring to data transfer rates of computer networks or telecommunications systems. Network transfer rates and download speeds often use the megabit as the amount transferred per time unit, e.g., a 100 Mbit/s (megabit per second) Fast-Ethernet connection, or a 10 Mbit/s Internet access service, whereas the sizes of data units (files) transferred over these networks are often measured in megabytes. To achieve a transfer rate of one megabyte (1000kB) per second, one needs a network connection with a transfer rate of eight megabits per second. This can be confusing for Internet users assuming the values are in kilobytes and megabytes per second. If one goes to buy a 2 megabit per second Internet plan, they are really only getting a 250 kilobyte per second plan.
Transport	Transport is the charge for connecting various agency or department facilities together to create a backbone network. A Backbone network or network backbone is part of a computer network infrastructure that interconnects various pieces of the network, providing a path for the exchange of information between different local area networks (LANs) or sub networks. A backbone can tie together diverse networks in the same building, in different buildings in a campus environment, or over wide areas. Normally, the backbone's capacity is greater than that of the networks connected to it.

	A large corporation or organization which has many locations may have a backbone network that ties all of these locations together; for example, if a server cluster needs to be accessed by different departments of a company which are located at different geographical locations. The equipment that ties these departments together constitutes the network backbone. Network performance management indices, including network congestion, provide critical parameters to be taken into account when designing a network backbone. A specific case of a backbone network is the Internet backbone, which is the set of wide-area network connections and core routers that interconnect all networks connected to the Internet.
MRC	Monthly Recurring Charge