



Northwest Pennsylvania Regional WAN

Kickoff

December 19, 2006

Agenda

- Project Recap
- Selection Review
- Introduction to Sting Communications
- Why participate in the Regional WAN?
- Costs
- Next Steps
- Q & A

Project Recap

- March 2006
 - Four IU's formed a consortium
- May 2006
 - Request For Information (RFI) was released
- June 2006
 - RFI information was submitted by vendors
- June & July 2006
 - Individual district visits to discuss WAN project
 - \$3,000 per month target fee

Project Recap

- September 2006
 - Request For Proposals released
 - E-Rate form 470 submitted
- October 2006
 - RFP information submitted by vendors
 - Vendor oral presentations held
 - Vendors invited to submit Best and Final Offers (BAFO)
 - e-Fund grant proposal submitted

Project Recap

- November 2006
 - BAFO's received
 - Vendor selected

Sting Communications

- December 2006
 - E-Fund grant awards announced
 - \$5.2 million awarded to the Northwest Pennsylvania WAN project

Sting Communications

- Lowest cost bidder to meet or exceed the RFP requirements
- Proposed state of the art technology with their MPLS solution
- Strong partnerships
- Experience with similar projects

State of the Art Technology

- The MPLS technology allows Sting to work with Districts to manage and utilize their network connections
- Prioritization and Quality of Service settings
- The ability to utilize bandwidth dynamically

Partnership

- Sting has leveraged numerous partners and continues to develop partnerships
- Through partnerships, Sting is able to deliver the WAN on Fiber Optics instead of wireless

Sting and Partners Present Today

- Sting
 - Bob Roland, Sr. VP & General Manager
 - Ken Rabedeau – VP of Engineering
- Velocity.Net
 - John Shafer – Senior Account Manager

Why Participate in the WAN?

- Network capabilities before and after the WAN project
- The e-Fund factor
- The E-rate factor

Why participate?

- Former U.S. Secretary of Education Richard Riley said that none of the top 10 jobs that will be in demand in 2010 exist today. Furthermore, these jobs will employ technology that has yet to be invented -- and these jobs will be created to solve problems that do not exist at the present time.

School Districts: Before WAN



School districts in IU 4

- Average max bandwidth*: 4.88 Mbps
- Average Internet: 1.5 Mbps
 - Lowest average among all IUs in Pa.
- Average Price: \$574/month
- Low: \$205/mo. for 56k
- High: \$1,148/mo. for 1.5 Mbps
- 100 % of circuits used for Internet
- Price/Mbps/month Internet \$382.67
- No schools utilizing Internet2

*Includes Grove City 100 Mbps connection

School Districts: Before WAN



School districts in IU 5

- Average max bandwidth*: 8.79 Mbps
- Average Internet: 4.12 Mbps
- Average Price: \$1,365.16/month
- Low: \$500/month for 3 Mbps
- High: \$3,000/month for 6 Mbps
- 100 % of circuits for Internet
- Price/Mbps/month Internet \$331.35
- No schools utilizing Internet2
- No district-to-district WAN connectivity

*Includes bandwidth of 45 Mbps for Wattsburg SD.

School Districts: Before WAN



School districts in IU 6

- Average max bandwidth: 2.99 Mbps
- Average Internet: 1.69 Mbps
- Average Price: \$1262.13/month
- Low: \$433/month for 1.5 Mbps
- High: \$2,811/month for 4.5 Mbps
- 100 % of circuits for Internet
- Price/Mbps/month Internet \$746.82
- No schools utilizing Internet2
- No district-to-district WAN connectivity

School Districts: Before WAN

School districts in IU 28

- Average max bandwidth*: 81.83 Mbps
 - Without Armstrong's Gig: 3.3 Mbps
- Average Internet: 6.52 Mbps
 - Without Armstrong's 45 Mbps: 3.3 Mbps
- Average Price: \$2,178/month
- 100 % of circuits used for Internet
- Price/Mbps/month Internet \$334.05
- No schools utilizing Internet2
- No district-to-district WAN connectivity

* Includes 1,024 Mbps connection to Armstrong School District

School Districts: Before WAN

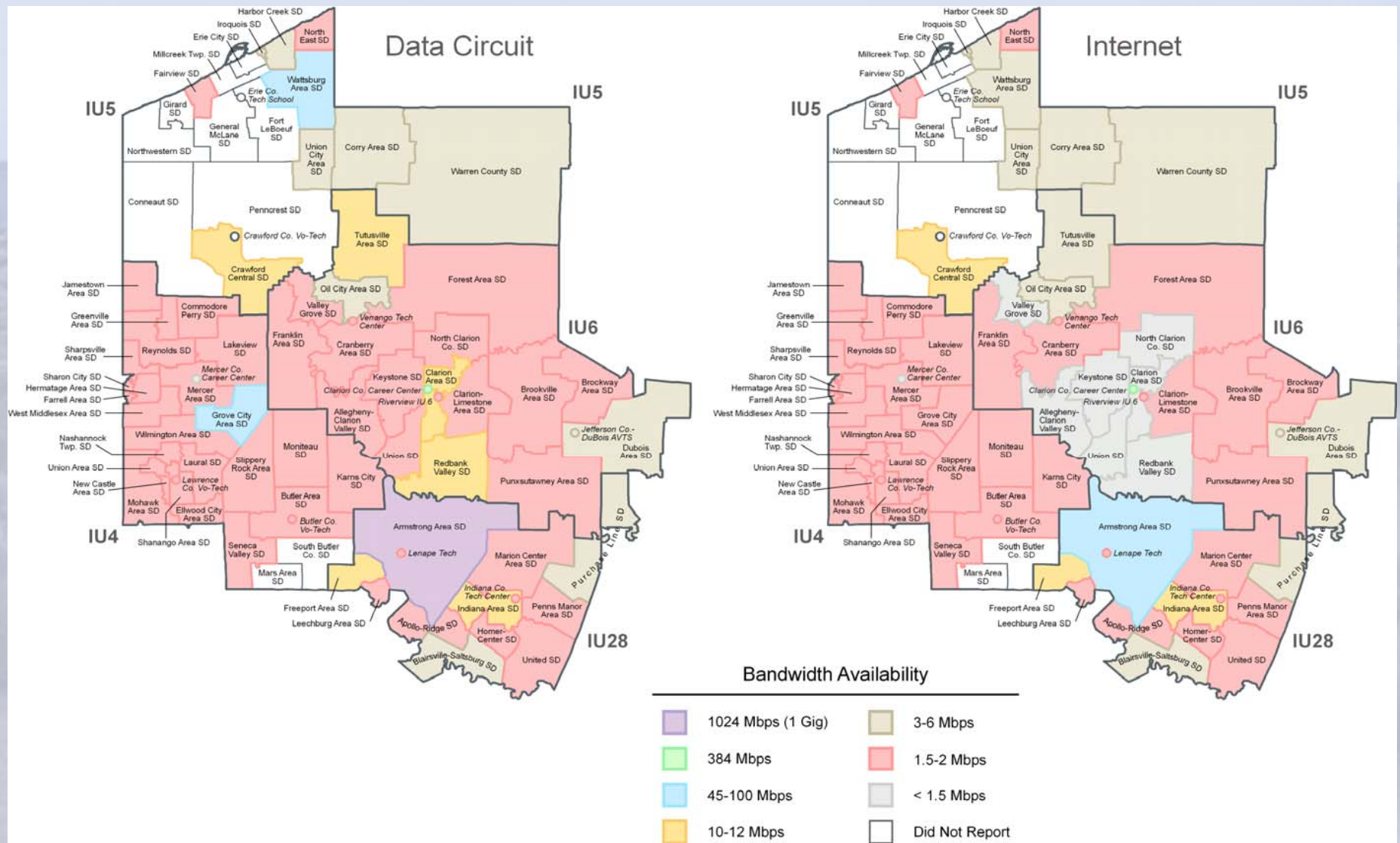


School districts in Northwestern PA

- Average max bandwidth: 18.03 Mbps
 - Excluding 3 outlier districts:* 4.43 Mbps
- Average Internet: 2.99 Mbps
 - Excluding 3 outlier districts:* 2.48 Mbps
- Average Price: \$1,186/month
 - Excluding 3 outlier districts:* \$1,091/month
- 100 % of circuits used for Internet
- Price/Mbps/month Internet \$396.74
- No schools utilizing Internet2
- No district-to-district WAN connectivity

*Excludes Armstrong 1,024 Mbps, Grove City SD 100 Mbps and Wattsburg SD 45 Mbps connections to ISP

Data & Internet Bandwidth Availability per IU 4-5-6-28 School Districts

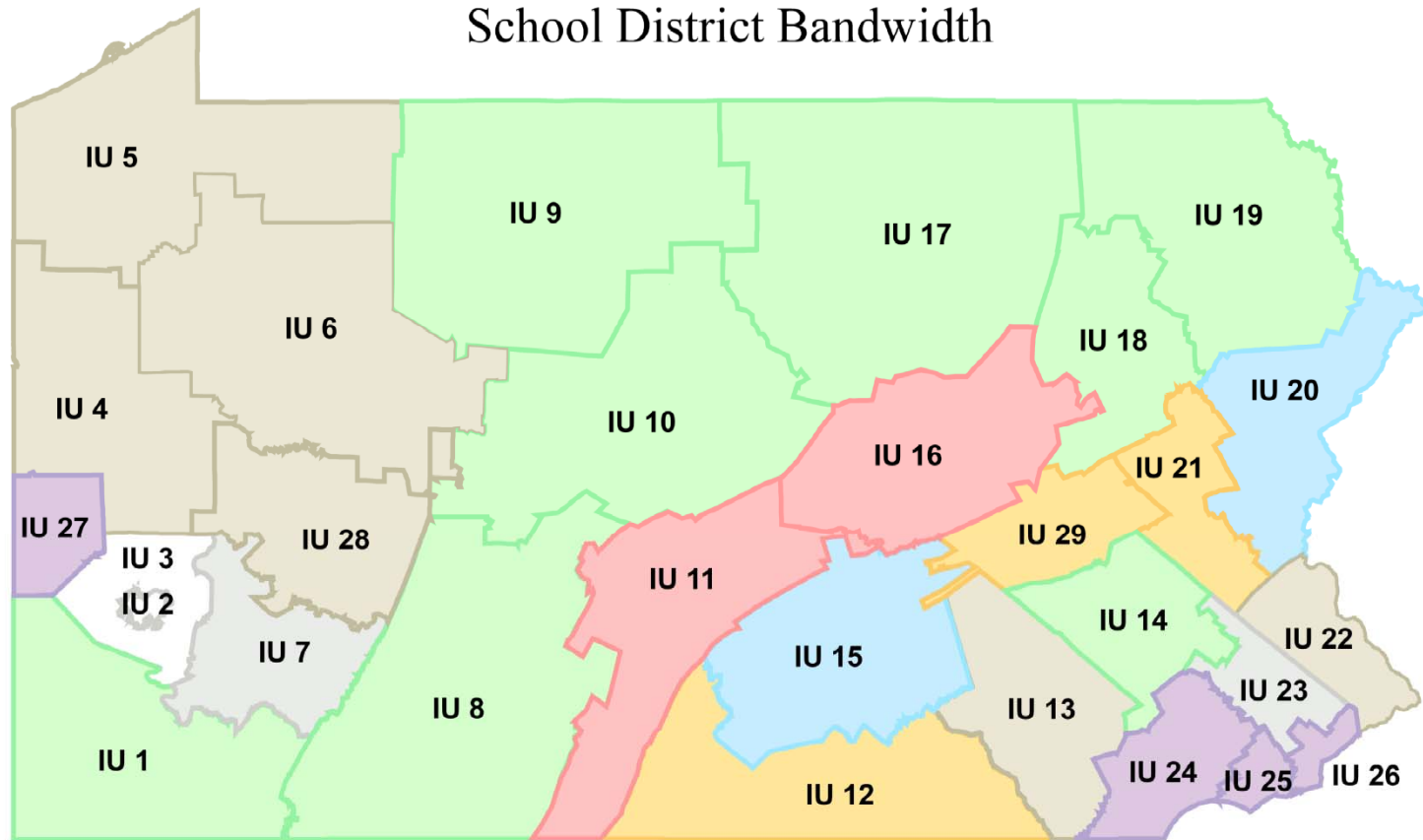


Source: Dellicker Strategies survey.

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PA Intermediate Unit WANs

School District Bandwidth



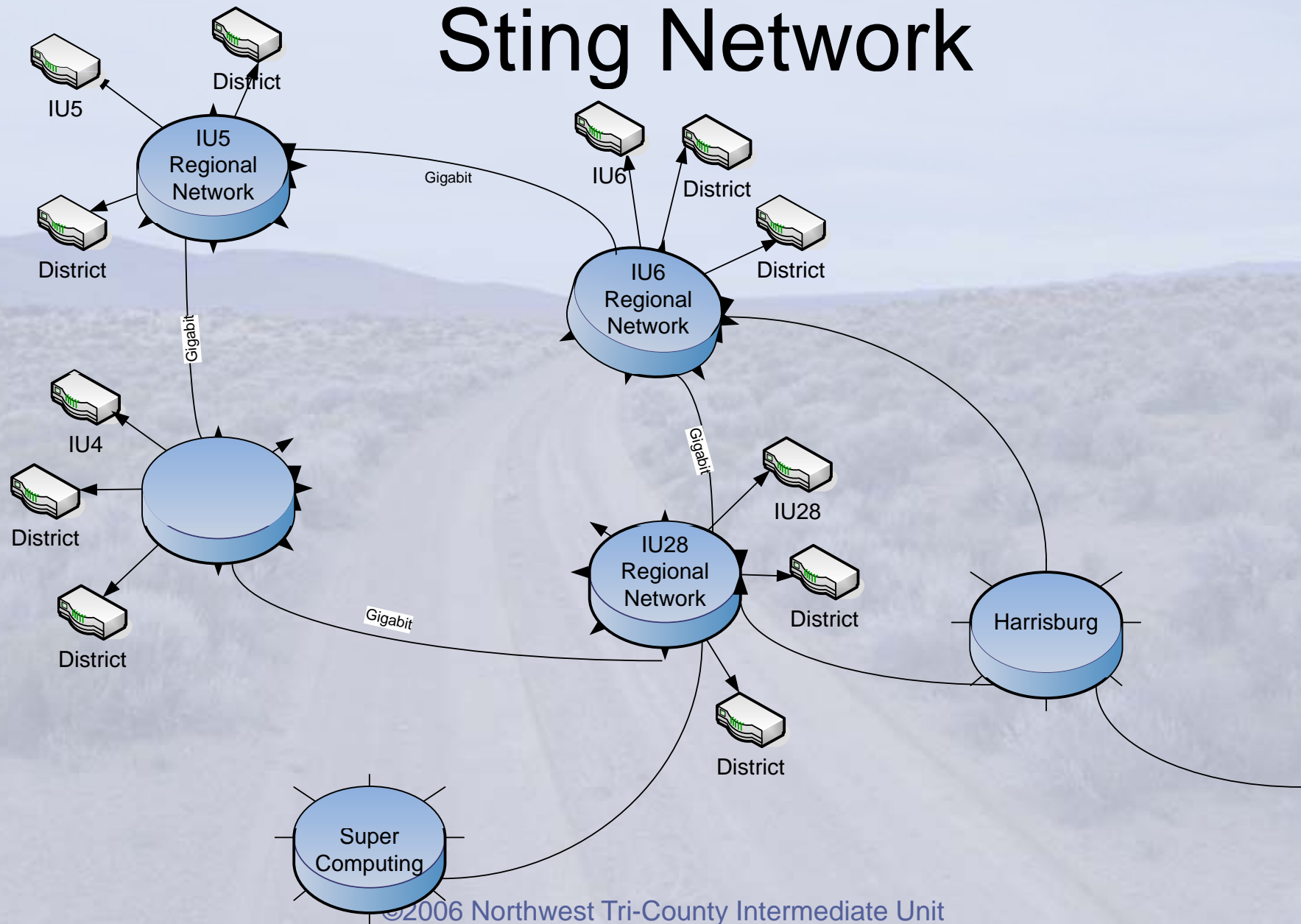
Legend

1,000 Mbps (Gigabit)	45-50 Mbps	1.5 Mbps	Partial Regional WAN
100 Mbps	10 Mbps	Unknown	In Process – 2006 Regional WANs

Source: Dellicker Strategies, LLC

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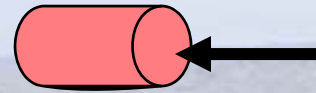
Sting Network



Why Have a WAN?

BEFORE THE WAN

- Schools have only one choice for information exchange
- Internet is the only way to exchange video and data with other schools
- Internet is too expensive, too cluttered and too slow for many applications



**Peering through
the telecom line:**

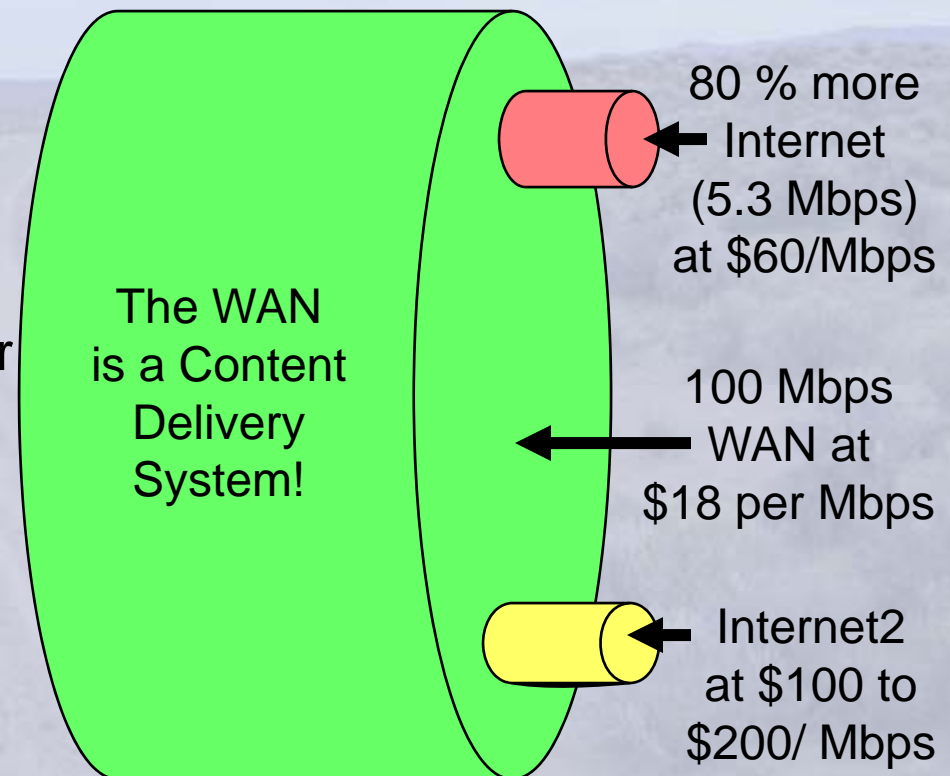
*The average
amount of Internet
purchased by
schools in IUs 4-5-
6-28 is 2.99 Mbps
at \$397 per month
per Mbps*

Why Have a WAN? Cost Effectiveness.

WITH THE WAN:

Schools have three choices

1. The WAN is used for communications with other regional schools
2. Internet 2 is used for communications with schools and colleges outside Pennsylvania
3. The Internet is used for everything else



School Districts: After RFP



School districts in Northwestern PA

- Average max bandwidth: 100 Mbps
 - Excluding 3 outlier districts:* + 2,157%
- Average Internet: 5.3 Mbps + 77%
- Average Price: \$2,110/month +77 %
- 3.7 % of circuits used for Internet
- Price/Mbps/month Internet \$60 -83 %
- All schools with access to Internet2
- 100% district-to-district WAN connectivity

*Excludes Armstrong 1,024 Mbps, Grove City SD 100 Mbps and Wattsburg SD 45 Mbps connections to ISP

Content Delivery System

- To you:

- Traditional Internet
- Streaming Video
 - United Streaming
- Video & Web Conferencing
 - Instructional Classes
 - Content experts
- Voice services
 - Traditional dial tone
 - ISDN services
 - Remote PBX

- From you:

- Streaming video
 - Board meetings
 - Athletic events
- Video & Web Conferencing
 - Instructional Classes
 - Content experts
 - Community contact
 - Business relationships

The e-Fund factor

- The four Intermediate Units submitted a grant for approximately \$6.5 million
- December 15, 2006, the grants were announced
- The amount of the grant received will help determine the final monthly cost of the new network
- The consortium will receive \$5.2 million over 3 years

e-Fund Grant

- What will the grant dollars cover?
 - Non-recurring installation charges
 - Transition costs to help districts adjust to the new monthly fee
 - Professional Development
 - Equipment needed to connect to the new network

What is the E-Rate Factor?

- e-Fund can be applied to the Non-recurring costs (NRC) not covered by E-rate
- E-rate and e-Fund dollars will cover 100% of NRC
- Each district will have their monthly charge reduced by their E-rate discount
 - See E-rate discount per district from 2005-2006 numbers (Handout)
- Once we have the final budget from PDE, the amount of transition costs per district can be determined

When making your final decision consider the following:

- We are not comparing Apples-to-Apples when looking at the WAN project versus your current Internet access
- It is not just pure bandwidth
- The capabilities of the network allow for continued incremental growth
- New application deployment is possible
- Think, no imagine, what you might be able to deliver over the network that can improve student achievement and experiences

Community

- Sting is leveraging partners that are not your typical Telco
- Traditional service barriers will be removed or greatly reduced
- What new options will this provide your students, parents, and businesses?

PDE Vision

- We have talked in the past about PDE's vision
- PAIMS was awarded a \$46,000 planning grant to tie the regional WANS together
- Expect PAIMS to receive a grant next year to tie the regional WANS together in 2008
- When the Commonwealth is "Wired", what possibilities will PDE capitalize on?
 - Will these possibilities reduce cost to your district?
 - Will these possibilities bring new resources to staff, students and communities?

Thinking about Mr. Riley's comment...

- What will your district need to deliver over the network in 2010, 2012, 2014?
- Do you know what the requirements will be at the local, state and federal levels?
- What options will you have if you wait?
- How much will it cost if you wait?

Cost

- The monthly fee to participate in the WAN
- \$2,790.00 before E-rate
 - The likelihood of not receiving E-rate is small
 - Please budget for the before E-rate amount
 - If E-rate is denied, you will be responsible for the before E-rate amount
 - Includes IU5 consortium membership fee

IU5 Consortium Membership

- Why is there a membership fee?
 - File all E-rate paperwork
 - Maintain all E-rate paperwork
 - Manage Sting Contracts
 - All the current benefits of Consortium membership
 - Provides maintenance contract on any non-Sting equipment required to make the network functional
 - Provide funding for immediate network needs to keep the network operational
 - Equipment, wiring, etc.
 - » This is limited to the funds available and only applies to the Regional WAN

Consider the Following?

- From the 2003-2004 PATI Survey
 - Internet costs : \$823,000.00
 - Total IT costs : \$6,614,454.00
 - Internet was 12.5% of the IT budget
- From the 2004-2005 PATI Survey
 - Internet costs : \$657,199.00
 - Total IT costs : \$7,196,000.00
 - Internet was 9% of the IT budget

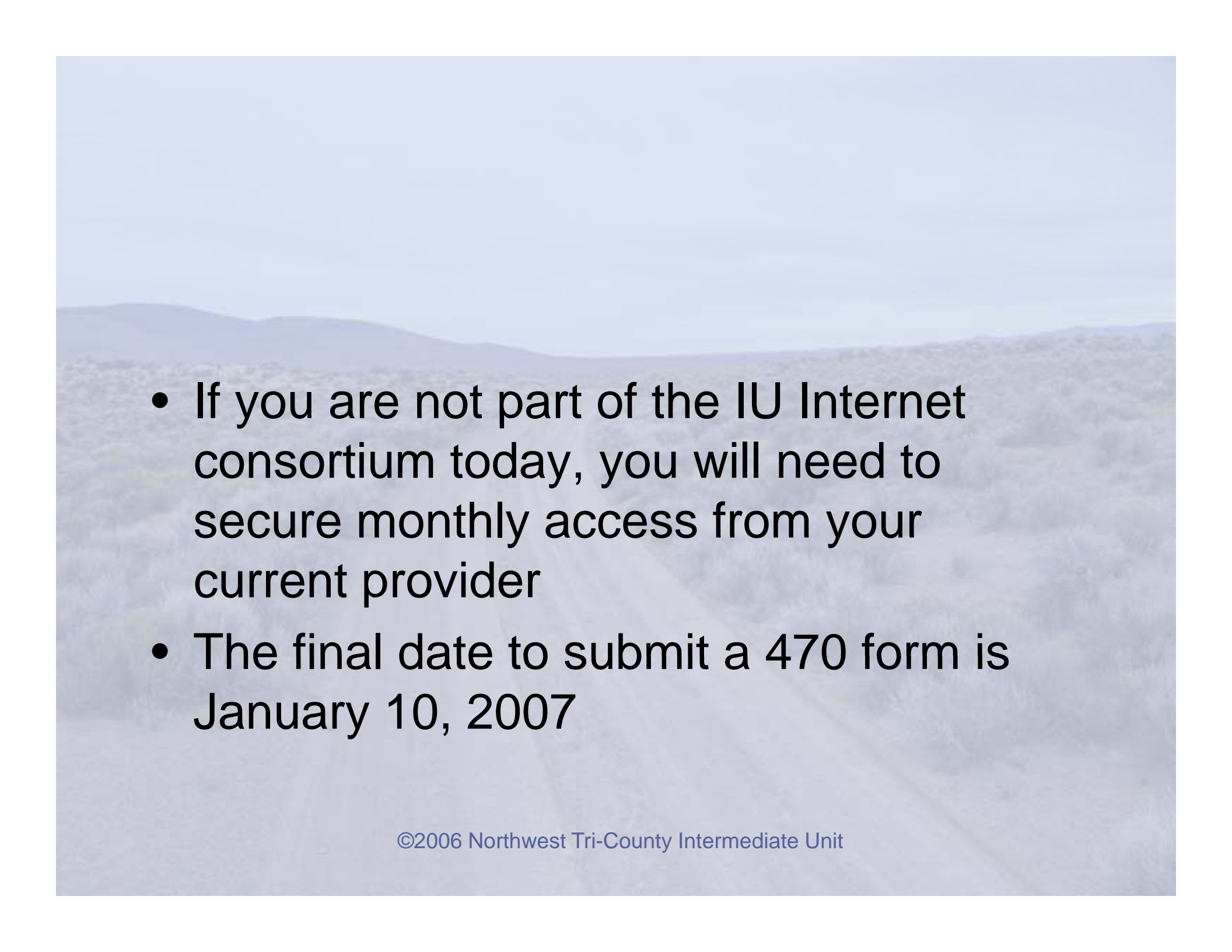
- If all 20 entities in IU5 participate in the WAN
 - The annual cost would be \$669,600.00
- But includes:
 - 100mbps connection to the WAN
 - 1gbps backbone network
 - 5Mbps of Internet per district
 - Internet 2 Transport
 - Any-to-any connectivity over the 100mbps link
 - Ability to connect to the Statewide network when complete

Summary

- Ability to participate in the Regional WAN with 100mb connection to start
- Any-to-any connectivity between districts
- Internet access
- Internet2 transport
- The availability of \$5.2 million dollars in grant money
- \$2.2 million in E-rate dollars (using averages)

Next Steps

- E-rate paperwork due by February 7, 2007
- Districts must approve participation at their January meeting to be included
- The number of participating districts can affect the final monthly fee
- The IU must sign the Sting agreement by January 31, 2007

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- If you are not part of the IU Internet consortium today, you will need to secure monthly access from your current provider
 - The final date to submit a 470 form is January 10, 2007

Questions

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We are available!

- If you would like an IU representative to attend your board meeting, we would be more than happy to.