

**Private-Side LAN/WAN
Bandwidth Allocation Policy - Version 1
Effective July 1, 2010**

Background

This policy is intended to create an equitable method of determining how much private-side bandwidth is funded for each public school and library in SC. The following factors were considered in establishing this bandwidth allocation policy:

- 1. Establish new bandwidth baselines**
 - a. Schools - based on student headcount
 - b. Libraries - based on PC count at each site

- 2. Establish a new Private-Side Cost Share Formula for schools and libraries**
 - a. Applies to those who want additional bandwidth above what the new baseline provides
 - b. Provides Funded Baseline Cost based on the serving Local Exchange Carrier (LEC) rates to avoid penalty in high-cost areas
 - c. Uses the individual E-Rate Discount Matrix percentage for each District or Library System to calculate the amount of the Cost Share (rather than the statewide average discount percentage).

- 3. District/Library System Responsibilities**
 - a. All required E-Rate documents (CIPA & Technology Plans) must be current and on file with the Division of State IT (DSIT) and/or SC Department of Education (SDE)
 - b. District/Library must be in good financial standing with DSIT (no past due invoices).
 - c. Annual Block 4 Inventory Verification Documents submitted to DSIT by November 15 each year.
 - i. Any District/Library site not listed on this inventory will be direct billed to the District/Library until the start of the next funding year. (DSIT cannot be reimbursed for sites not listed in the Block 4 section of the statewide E-Rate Applications.)
 - ii. Districts/Libraries must notify DSIT of site disconnects as soon as possible. Failure to do so could result in a charge to the District/Library for 100% of the ineligible charges paid by DSIT for an inactive location plus any audit re-payments that may be required.

- iii. For school or library moves or replacements, the state can only fund one circuit; therefore, simultaneous services at both the old site and the new site will only be provided for a maximum of thirty days. After thirty days, the old site will be disconnected or direct billed to the school district or library.

- 4. **Optional Security Monitoring Available to Districts and Libraries**
See Section C. Security and Traffic Monitoring Activities to be performed by the SC Chief Security Officer's Staff. This Policy includes the functions and/or services that may be provided through the existing Intrusion Detection System (IDS) unit provided by the state at no cost to the district or library. The original purpose of the IDS is to continue to monitor Internet traffic and utilization; however, it can also be used to monitor the private-side network services at the request of the district or Library System.

A. Private-Side LAN/WAN Bandwidth Allocation Policy for Schools

1. Funded Bandwidth

For 2010 we will determine eligible bandwidth for each school based on student headcount (*from Free & Reduced Lunch data on the State Department of Education website posted in December before the start of the July 1 funding year*).

All schools will have a minimum of 10 Megabits (Mbs) bandwidth funded. Schools with more than 1700 students will have 20 Mbs circuits funded. Any multi-school complex site will be evaluated based on the total students served on one circuit.

Bandwidth at Hub/Aggregation Points will be determined by the DSIT Network Design group based on the technology available.

2. Unfunded Bandwidth

If a district/library wants more than the funded baseline bandwidth, they will be responsible for the difference in cost of that additional bandwidth. The amount paid by the district/library is referred to as the "Cost Share" and is calculated as described in Item 3 below.

No "grandfather clause" will apply under this policy; therefore, sites that already have more than their 2010 baseline bandwidth will begin paying the Cost Share for any bandwidth above their 2010 baseline on July 1, 2010.

3. Cost Share Calculations

The monthly Cost Share is the portion of the Total Cost of the bandwidth above the funded baseline for Private-Side Ethernet-type service that is not covered by ERate funding.

The Cost Share formula is:

$$\text{Cost of Requested Bandwidth} - \text{Cost of Funded Bandwidth} = \text{Cost Difference}$$

$$\text{Cost Difference} * \text{District Non-Discount \% (100\% - District \%)} = \text{Monthly Cost Share}$$

Example 1 - School A (90% District) is approved for 10 Mb & wants 20 Mb (and the increase is approved by the K-12 Technology Committee):

Current 20 Mb cost	\$1,410
Minus baseline 10 Mb cost	<u>\$873</u> (Spirit Avg for 10 Mb)
= Difference	\$537 difference
Times 10% (100%-90%)	\$53.70 Monthly Cost Share

Example 2 - School B (80% District) is approved for 10 Mb & wants 20 Mb (and the increase is approved by the K-12 Technology Committee):

Current 20 Mb cost	\$1,410
Minus baseline 10 Mb cost	<u>\$873</u> (Spirit Avg for 10 Mb)
= Difference	\$537 difference
Times 20% (100%-80%)	\$107.40 Monthly Cost Share

B. Private-Side LAN/WAN Bandwidth Allocation Policy for Library Systems

Since there is no student headcount that can be applied for libraries, an alternative basis is the number of personal computers (PCs) at each site. The State Library tracks the number of PCs for the Library Systems and has shared that information with the Division of State IT (DSIT).

1. Funded Bandwidth

For 2010, private-side bandwidth for Library Systems is based on the number of computers with Internet access at each site. Sites having up to 12 PCs are eligible for a T1 (1.544 Mbs). Those with more than 12 PCs are eligible for additional bandwidth based on 128 kilobits (kbs)/PC. Bandwidth at hub sites will be determined by the Network Design group at DSIT with consideration of PC counts as well as the bandwidths at each feeder/branch site.

The following chart shows the proposed bandwidths based on the number of PCs at a site:

<u>PC Count</u>	<u>Funded Bandwidth*</u>
0 to 12	T1
13 to 24	3 Mbs**
25 to 48	6 Mbs**
49 to 70	9 Mbs**
71 to 82	10 Mbs
83 to 160	20 Mbs
161 and above	30 Mbs

** Bandwidth for Hubs/Aggregation points considers total PC counts plus the bandwidth of feeder branches. This will be determined by the DSIT Network Design group based on the technology available. Any additional hardware and/or software required for the agreed upon network design will be the responsibility of the Library System.*

*** Note: 10 Mb Ethernet may be provided where it is more economical than multiple T1s.*

All requests for additional bandwidth will be evaluated by the K-12 Committee.

2. Unfunded Bandwidth

If a Library System wants more than the funded baseline bandwidth, they will be responsible for the difference in cost of that additional bandwidth. The amount paid by the library is referred to as the "Cost Share" and the process for determining if a Cost Share will apply is described in Item 2 of **Section A. Private-Side LAN/WAN Bandwidth Allocation Policy for Schools.**

No "grandfather clause" will apply under this policy; therefore, sites that already have more than their 2010 baseline bandwidth will begin paying the Cost Share for any bandwidth above their 2010 baseline on July 1, 2010.

3. Cost Share Calculations

Cost Share calculations for Library Systems will use the same formula as described in Item 3 of *Section A. Private-Side LAN/WAN Bandwidth Allocation Policy for Schools*.

C. Security and Traffic Monitoring Activities to be performed by the SC Chief Security Officer's Staff:

- Real-time Monitoring of District/Library Networks
 - Network Entry Point Monitoring Using an Intrusion Detection System (IDS) on the District Network
 - Internal & DMZ Monitoring
- Real-time Insight, Visibility and Control Over User Critical Data & Assets
- Real-time Identification of Threats and Patterns of Suspicious Activity
- Actual Threats Identified and Prevented from Impacting User Operation
- Visibility Into the Threats Facing User Databases
- Access to Information Security Professionals and Services
 - Consulting and Training
 - Security Implementation
 - Security Policy Management
 - Security Policy Review and Formulation
 - Security System Design and Planning
 - Network Scanning to Identify Unauthorized Access
 - Incident Consulting & Law Enforcement Coordination
 - Forensic Analysis & Reporting