

On December 8, 2005, Chelsea advertised for responses to Form 470. And on December 9, 2005, Achieve filed its response to the 470 application with Chelsea. Achieve was the only company to respond.

In early May, 2006, Chelsea submitted a letter to USDLA applying for the second year of the grant.

On about July 18, 2006, Chelsea extended the previous contract for services with Achieve. Chelsea had encumbered the funds for the contract.

On September 8, 2008, Chelsea received notification that SLD was requiring a response within a couple of weeks regarding Chelsea's compliance with the rules of the program. This notification informed us that SLD determined prior to sending us the notification that Achieve and other entities relied on USDLA grants [Attached as Exhibit F is the September 8, 2008 letter]. The letter then specifically inquires as to whether the Chelsea used the grants in funding years FY 2005 and FY 2006. Chelsea responded in the affirmative; Chelsea responded truthfully that it did use USDLA grant monies in FY 2005 and FY 2006.

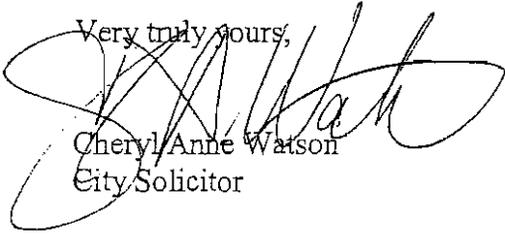
#### **ARGUMENT:**

Chelsea asserts that it in no way violated any state or federal laws regarding competitive bidding. As the facts point out, and there are no facts stating the contrary, Chelsea followed all bidding requirements and did so for both Funding years. Chelsea has never stated that it relied on any information from Achieve regarding funding of their services.

- a. Chelsea has and had no knowledge of a relationship between Achieve and USDLA prior to the September 2008 notification.
- b. Chelsea has and had no knowledge of USDLA's process and determination of awarding funds. In fact, notification of the award informed Chelsea that it was not dependent upon a selection of any specific vendor. Chelsea relied on that statement.
- c. Achieve at no time indicated in their bid, which is attached as Exhibit B, an offer or guarantee of any grants or rebates for their service. Chelsea applied for such grant on its own prior to Achieve, during contract negotiations, mentioned that grant funding was available. If you review the contract with Achieve you will not find any offers or guarantee of grants or rebates.
- d. As to the September 8, 2008 notification, Chelsea did not admit or affirm that Chelsea relied on USDLA grants as a condition of agreeing to contract with Achieve. The answer to the trick question was based on the last sentence. Chelsea only answered in the affirmative that it received funding and used it for FY 2005 and FY 2006. Chelsea's contract with Achieve clearly shows that Chelsea was prepared to pay Achieve for the non-discounted share of the costs, whether or not we received a grant from USDLA.

The above facts and attached documents show that the City in no way colluded, as alleged with Achieve and has not violated any rules or procedures of the SLD program.

Very truly yours,

A large, stylized handwritten signature in black ink, appearing to read 'CAW', is written over the typed name and title.

Cheryl Anne Watson  
City Solicitor

CAW/nas

cc: Dr. Thomas Kingston, Superintendent of Chelsea Public Schools

bcc: McCue

Ardenrotola

ATTACHMENT A

TO DISTRICT'S LETTER  
OF APPEAL

470

Schools and Libraries Universal Service  
Description of Services Requested  
and Certification Form

Estimated Average Burden Hours Per Response: 4.0 hours

This form is designed to help you describe the eligible telecommunications-related services you seek so that this data can be posted on the Fund Administrator website and interested service providers can identify you as a potential customer and compete to serve you.

Please read instructions before beginning this application.

(To be completed by entity that will negotiate with providers.)

**Block 1: Applicant Address and Identifications**

Form 470 Application Number: 118560000524763
Applicant's Form Identifier: 470-2005-06-B
Application Status: CERTIFIED
Posting Date: 12/20/2004
Allowable Contract Date: 01/17/2005
Certification Received Date: 12/21/2004

1. Name of Applicant: CHELSEA SCHOOL DISTRICT		
2. Funding Year: 07/01/2005 - 06/30/2006		3. Your Entity Number 120548
4a. Applicant's Street Address, P.O.Box, or Route Number 500 BROADWAY		
City CHELSEA	State MA	Zip Code 02150
b. Telephone number (617) 889- 8400		c. Fax number (617) 889- 8361
d. E-mail Address		
5. Type Of Applicant <input type="radio"/> Individual School (individual public or non-public school) <input checked="" type="radio"/> School District (LEA;public or non-public[e.g., diocesan] local district representing multiple schools) <input type="radio"/> Library (including library system, library branch, or library consortium applying as a library) <input type="radio"/> Consortium (intermediate service agencies, states, state networks, special consortia)		
6a. Contact Person's Name: Miguel Andreottola		
First, fill in every item of the Contact Person's information below that is different from Item 4, above. Then check the box next to the preferred mode of contact. (At least one box MUST be checked.)		
6b. Street Address, P.O.Box, or Route Number <input type="radio"/> 180 Walnut St.		
City CHELSEA	State MA	Zip Code 02150

<input checked="" type="checkbox"/>	6c. Telephone Number (617) 889- 8654
<input checked="" type="checkbox"/>	6d. Fax Number (617) 889- 8463
<input checked="" type="checkbox"/>	6e. E-mail Address miguelan@bu.edu

**Block 2: Summary Description of Needs or Services Requested**

**7 This Form 470 describes (check all that apply):**

a.  Tariffed services - telecommunications services, purchased at regulated prices, for which the applicant has no signed, written contract. A new Form 470 must be filed for tariffed services for each funding year.

b.  Month-to-month services for which the applicant has no signed, written contract. A new Form 470 must be filed for these services for each funding year.

c.  Services for which a new written contract is sought for the funding year in Item 2.

d.  A multi-year contract signed on or before 7/10/97 but for which no Form 470 has been filed in a previous program year.

**NOTE: Services that are covered by a signed, written contract executed pursuant to posting of a Form 470 in a previous program year OR a contract signed on/before 7/10/97 and reported on a Form 470 in a previous year as an existing contract do NOT require filing of a Form 470.**

**What kinds of service are you seeking: Telecommunications Services, Internet Access, or Internal Connections? Refer to the Eligible Services List at [www.sl.universalservice.org](http://www.sl.universalservice.org) for examples. Check the relevant category or categories (8, 9, and/or 10 below), and answer the questions in each category you select.**

**8  Telecommunications Services**  
**Do you have a Request for Proposal (RFP) that specifies the services you are seeking ?**

a  **YES**, I have an RFP. It is available on the Web at or via (check one):  
 the Contact Person in Item 6 or  the contact listed in Item 11.

b  **NO**, I do not have an RFP for these services.

**If you answered NO, you must list below the Telecommunications Services you seek. Specify each service or function (e.g., local voice service) and quantity and/or capacity(e.g., 20 existing lines plus 10 new ones). See the Eligible Services List at [www.sl.universalservice.org](http://www.sl.universalservice.org) for examples of eligible Telecommunications Services. Remember that only eligible telecommunications providers can provide these services under the universal service support mechanism. Add additional lines if needed.**

Service or Function:	Quantity and/or Capacity:
Digital Transmission Service/Distance Learning	9 School Buildings

**9  Internet Access**  
**Do you have a Request for Proposal (RFP) that specifies the services you are seeking ?**

a  **YES**, I have an RFP. It is available on the Web at or via (check one):  
 the Contact Person in Item 6 or  the contact listed in Item 11.

b  **NO**, I do not have an RFP for these services.

**If you answered NO, you must list below the Internet Access Services you seek. Specify each service or function (e.g., monthly Internet service) and quantity and/or capacity(e.g., for 500 users). See the Eligible Services List at [www.sl.universalservice.org](http://www.sl.universalservice.org) for examples of eligible Internet Access services. Add additional lines if needed.**

**10  Internal Connections**

**Do you have a Request for Proposal (RFP) that specifies the services you are seeking ?**

a  **YES**, I have an RFP. It is available on the Web at or via (check one):  
 the Contact Person in Item 6 or  the contact listed in Item 11.

b  **NO**, I do not have an RFP for these services.

**If you answered NO, you must list below the Internal Connections Services you seek. Specify each service or function (e.g., local area network) and quantity and/or capacity(e.g., connecting 10 rooms and 300 computers at 56kbps or better). See the Eligible Services List at [www.sl.universalservice.org](http://www.sl.universalservice.org) for examples of eligible Internal Connections services. Add additional lines if needed.**

**11 (Optional) Please name the person on your staff or project who can provide additional technical details or answer specific questions from service providers about the services you are seeking. This need not be the contact person listed in Item 6 nor the signer of this form.**

Name:

**Miguel**

Title:

**Andreottola**

Telephone number

**(617) 889 - 8654**

Fax number

**(617) 889 - 8463**

E-mail Address

**mliguelan@bu.edu**

**12.  Check here if there are any restrictions imposed by state or local laws or regulations on how or when providers may contact you or on other bidding procedures. Please describe below any such restrictions or procedures, and/or provide Web address where they are posted and a contact name and telephone number for service providers without Internet access.**

**Massachusetts state and local procurement laws.**

**13. If you intend to enter into a multi-year contract based on this posting or a contract featuring an option for voluntary extensions you may provide that information below. If you have plans to purchase additional services in future years, or expect to seek new contracts for existing services, summarize below (including the likely timeframes).**

**Block 3: Technology Assessment**

**14.  Basic telephone service only:** If your application is for basic local and long distance telephone service (wireline or wireless) only, check this box and skip to Item 16.

**15. Although the following services and facilities are ineligible for support, they are usually necessary to make effective use of the eligible services requested in this application. Unless you indicated in Item 14 that your application is ONLY for basic telephone service, you must check at least one box in (a) through (e). You may provide details for purchases being sought.**

a. Desktop software: Software required  has been purchased; and/or  is being sought.

b. Electrical systems:  adequate electrical capacity is in place or has already been arranged; and/or  upgrading for additional electrical capacity is being sought.

- c. Computers: a sufficient quantity of computers  has been purchased; and/or  is being sought.
- d. Computer hardware maintenance: adequate arrangements  have been made; and/or  are being sought.
- e. Staff development:  all staff have had an appropriate level of training /additional training has already been scheduled; and/or  training is being sought.
- f. Additional details: Use this space to provide additional details to help providers to identify the services you desire.

**Block 4: Recipients of Service**

**16. Eligible Entities That Will Receive Services:**

Check the ONE choice (a,b or c) that best describes this application and the eligible entities that will receive the services described in this application. You will then list in Item 17 the entity/entities that will pay the bills for these services.

- a.  Individual school or single-site library.
- b.  Statewide application for (enter 2-letter state code) representing (check all that apply):
  - All public schools/districts in the state:
  - All non-public schools in the state:
  - All libraries in the state:

If your statewide application includes INELIGIBLE entities, check here.  **If checked, complete Item 18.**

- c.  School district, library system, or consortium application to serve multiple eligible entities:

Number of eligible sites	9
<i>For these eligible sites, please provide the following</i>	
Area Codes (list each unique area code)	Prefixes associated with each area code (first 3 digits of phone number) separate with commas, leave no spaces
617	660, 884, 889

If your application includes INELIGIBLE entities, check here.  **If checked, complete Item 18.**

**17. Billed Entities**

List the entity/entities that will be paying the bills directly to the provider for the services requested in this application. These are known as Billed Entities. At least one line of this item must be completed. Attach additional sheets if necessary.

Entity	Entity Number
CHELSEA SCHOOL DISTRICT	120548

**Ineligible Participating Entity**

**Area Code**

**Prefix**

**Block 5: Certification and Signature**

**19. The applicant includes:(Check one or both)**

- a.  schools under the statutory definitions of elementary and secondary schools found in the No Child Left Behind Act of 2001, 20 U.S.C. Secs. 7801(18) and (38), that do not operate as for-profit businesses, and do not have endowments exceeding \$50 million; and/or
- b.  libraries or library consortia eligible for assistance from a State library administrative agency under the Library Services and Technology Act of 1996 that do not operate as for-profit businesses and whose budgets are completely separate from any school (including, but not limited to elementary and secondary schools, colleges and universities).

**20. All of the individual schools, libraries, and library consortia receiving services under this application are covered by:**

- a.  individual technology plans for using the services requested in the application, and/or
- b.  higher-level technology plans for using the services requested in the application, or
- c.  no technology plan needed; application requests basic local and/or long distance telephone service only.

**21. Status of technology plans (if representing multiple entities with mixed technology plan status, check both a and b):**

- a.  technology plan(s) has/have been approved by a state or other authorized body.
- b.  technology plan(s) will be approved by a state or other authorized body.
- c.  no technology plan needed; application requests basic local and long distance telephone service only. .

22.  I certify that the services the applicant purchases at discounts provided by 47 U.S.C. Sec. 254 will be used solely for educational purposes and will not be sold, resold, or transferred in consideration for money or any other thing of value.

23.  I recognize that support under this support mechanism is conditional upon the school(s) or library(ies) I represent securing access to all of the resources, including computers, training, software, maintenance, and electrical connections necessary to use the services purchased effectively.

24.  I certify that I am authorized to submit this request on behalf of the above-named entities, that I have examined this request, and to the best of my knowledge, information, and belief, all statements of fact contained herein are true.

25. Signature of authorized person:

26. Date (mm/dd/yyyy): 12/20/2004

27. Printed name of authorized person: GERALD A. MCCUE

28. Title or position of authorized person: EXECUTIVE DIRECTOR FOR FINANCE

29a. Address of authorized person: 180 Walnut St.

City: CHELSEA State: MA Zip: 02150

29b. Telephone number of authorized person: (617) 889 - 8406

29c. Fax number of authorized person: (617) 8898328

29d. E-mail address number of authorized person: GMCCUE@CHELSEAMA.GOV

**Persons willfully making false statements on this form can be punished by fine or forfeiture, under the Communications Act, 47 U.S.C. Secs. 502, 503(b), or fine or imprisonment under Title 18 of the United States Code, 18 U.S.C. Sec. 1001.**

**Service provider involvement with preparation or certification of a Form 470 can taint the competitive bidding process and result in the denial of funding requests. For more information, refer to the "Service Provider Role in Assisting Customers" at [www.sl.universalservice.org/vendor/manual/chapter5.doc](http://www.sl.universalservice.org/vendor/manual/chapter5.doc) or call the Client Service Bureau at 1-888-203-8100.**

**NOTICE:** Section 54.504 of the Federal Communications Commission's rules requires all schools and libraries ordering services that are eligible for and seeking universal service discounts to file this Description of Services Requested and Certification Form (FCC Form 470) with the Universal Service Administrator, 47 C.F.R. § 54.504. The collection of information stems from the Commission's authority under Section 254 of the Communications Act of 1934, as amended, 47 U.S.C. § 254. The data in the report will be used to ensure that schools and libraries comply with the competitive bidding requirement contained in 47 C.F.R. § 54.504. All schools and libraries planning to order services eligible for universal service discounts must file this form themselves or as part of a consortium.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

The FCC is authorized under the Communications Act of 1934, as amended, to collect the information we request in this form. We will use the information you provide to determine whether approving this application is in the public interest. If we believe there may be a violation or a potential violation of a FCC statute, regulation, rule or order, your application may be referred to the Federal, state, or local agency responsible for investigating, prosecuting, enforcing, or implementing the statute, rule, regulation or order. In certain cases, the information in your application may be disclosed to the Department of Justice or a court or adjudicative body when (a) the FCC; or (b) any employee of the FCC; or (c) the United States Government is a party of a proceeding before the body or has an interest in the proceeding. In addition, information provided in or submitted with this form or in response to subsequent inquiries may also be subject to disclosure consistent with the Communications Act of 1934, FCC regulations, the Freedom of Information Act, 5 U.S.C. § 552, or other applicable law.

If you owe a past due debt to the federal government, the information you provide may also be disclosed to the Department of the Treasury Financial Management Service, other Federal agencies and/or your employer to offset your salary, IRS tax refund or other payments to collect that debt. The FCC may also provide the information to these agencies through the matching of computer records when authorized.

If you do not provide the information we request on the form, the FCC may delay processing of your application or may return your application without action.

The foregoing Notice is required by the Paperwork Reduction Act of 1995, Pub. L. No. 104-13, 44 U.S.C. § 3501, et seq.

Public reporting burden for this collection of information is estimated to average 4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, completing, and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the reporting burden to the Federal Communications Commission, Performance Evaluation and Records Management, Washington, DC 20554.

Please submit this form to:

**SLD-Form 470  
P.O. Box 7026  
Lawrence, Kansas 66044-7026  
1-888-203-8100**

For express delivery services or U.S. Postal Service, Return Receipt Requested, mail this form to:

**SLD-Form 470  
c/o Ms. Smith  
3833 Greenway Drive  
Lawrence, Kansas 66046  
1-888-203-8100**

FCC Form 470  
May 2003

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**ATTACHMENT B**

**TO DISTRICT'S LETTER  
OF APPEAL**



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*December 20, 2004*

Mr. Miguel Andreottola  
180 Walnut Street  
Chelsea, MA. 02150

Subject:       **Response to 470 Application Number: 118560000524763**

Achieve Telecom Network **SPIN Number 143026761** is pleased to submit this response to 470 Application Number **118560000524763** for your review and consideration in response to your request for **Digital Transmission Service/Distance Learning**. We are confident in our ability to successfully complete this engagement and welcome the opportunity to showcase the value we bring our clients. We currently have projects with DC Public Schools, and three school districts in Massachusetts. We are an Eligible Telecommunications Service Provider with the SLD and offer a fully managed telecommunication service.

In support of these goals, please reference the attached proposal, which documents the scope of work, pricing and specifications.

If you have any questions with regard to the attached proposal or need any further assistance please feel free to contact me at 781-737-1890 or on my cell at 617-512-9493.

Sincerely,

Nicholas Gatto  
Manager of Sales



**Chelsea School District**

*Response to 470 Application Number*

*118560000524763*

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# Table of Contents

<b>1.0</b>	<b><u>EXECUTIVE SUMMARY</u></b> .....	<b>4</b>
<b>2.0</b>	<b><u>OVERVIEW OF ACHIEVE TELECOM NETWORK PRODUCTS AND SERVICES</u></b> .....	<b>5</b>
<b>3.0</b>	<b><u>ACHIEVEXPRESS TECHNICAL SPECIFICATIONS</u></b> .....	<b>8</b>
<b>4.0</b>	<b><u>ACHIEVE TELECOM'S SOLUTION PARTNERS</u></b> .....	<b>12</b>
<b>4.1</b>	<b>DIMENSION DATA NORTH AMERICA OVERVIEW</b> .....	<b>12</b>
<b>4.2</b>	<b>CISCO SYSTEMS, INC. OVERVIEW</b> .....	<b>13</b>
<b>5.0</b>	<b><u>ACHIEVEXPRESS WITH ACHIEVE ALERT</u></b> .....	<b>14</b>
<b>6.0</b>	<b><u>ACHIEVEXPRESS CUSTOMER REQUIREMENTS</u></b> .....	<b>16</b>
<b>6.1</b>	<b>ACHIEVEXPRESS MINIMUM REQUIREMENTS:SCHOOL, SCHOOL DISTRICT, LIBRARY</b> .....	<b>16</b>
<b>6.2</b>	<b>ACHIEVEXPRESS MINIMUM REQUIREMENTS FOR END USERS</b> .....	<b>17</b>
<b>7.0</b>	<b><u>PRICING</u></b> .....	<b>18</b>
<b>8.0</b>	<b><u>CONTRACT EXECUTION / ACCEPTANCE</u></b> .....	<b>18</b>

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## 1. Executive Summary

The Achieve Telecom Network's distance learning transmission service, called **AchieveXpress**, is a comprehensive telecommunications service that permits video, audio and text to be transmitted from one site to one or more sites for use by emergency management, corporations, government facilities, educational institutions or libraries. The telecommunications services of AchieveXpress are used to electronically deliver training and instructional materials and other data to equipment provided by Achieve Telecom that is then connected to the Customer's local area network. Achieve Telecom provides AchieveXpress as a fully managed telecommunications service and can use existing Customer bandwidth for delivery or provision additional terrestrial or satellite connectivity.

The AchieveXpress solution provides infrastructure solutions for distance learning and other applications that require multi-media formats and delivery of all media and content to multiple locations. The AchieveXpress solution significantly enhances the security, reliability, quality and manageability of distance learning applications and content. In addition, AchieveXpress enables K-12 school districts and other customers to move information close to every targeted end-user and enhance overall learning by synchronizing information across the entire district. The underlying premise of AchieveXpress is to, "Get valuable information where it is needed, when it is needed in a secure, reliable and high quality manner that eliminates any management responsibility for school personnel."

AchieveXpress provides a limited suite of applications, focused on the critical need for authentication and authorization. The key feature of DLTS is the underlying infrastructure that enables school-selected applications to provide users with the maximum benefit and increase the K-12 school district's ability to shared high-quality resources (video, audio and text assets) across the entire teaching and learning spectrum and across all grades, teachers and students by means of this distributed network service. AchieveXpress does not provide any of the content that is to be delivered, but rather provides the transmission circuit over which this delivery shall take place. Achieve Telecom will provide the Customer with the information necessary to format Customer-provided or Third-Party content for use over the AchieveXpress network.

Educational resources and training via AchieveXpress can be delivered live or on-demand and at the quality that teachers and students expect from cable TV-like experiences. Teachers and students can access educational material collectively in a central school location or individually from their school, office and home computers. AchieveXpress also provides an integral relay closure capability that can be used to trigger an emergency alert notification, called **Achieve Alert**.

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Achieve Telecom delivers AchieveXpress as a managed telecommunications service. Schools and libraries are eligible for funding discounts by the Federal E-rate program that provides between 20% and 90% of the total cost to eligible K-12 schools and libraries.

## 2.0 Overview of Achieve Telecom Network Products and Services

The AchieveXpress service provides robust Internet Protocol (“IP”) delivery across a Wide Area Network (“WAN”) that in turn provides a single point of access to the customer’s Local Area Network (“LAN”).

AchieveXpress is the product of Achieve Telecommunications Network of MA (“Achieve Telecom”) a registered telecommunications service provider in the Commonwealth of Massachusetts that provides distance learning transmission networks as a tariffed common carrier to business customers across the United States. Achieve Telecom is an inter-exchange carrier within the Commonwealth of Massachusetts subject to the review and regulation of the Massachusetts Department of Telecommunications and Energy. This same service is also offered on an inter-state basis, as identified in Achieve Telecom Network’s Form 499-A filing with the Federal Communications Commission.

### **AchieveXpress**

#### *Achieve Telecom Network’s Distance Learning Transmission Service*

The Achieve Telecom Network’s Distance Learning Transmission Service, called AchieveXpress, is a comprehensive telecommunications service that permits video, audio and text files to be transmitted from one site to one or more sites for use by corporations, government facilities, educational institutions, or libraries.

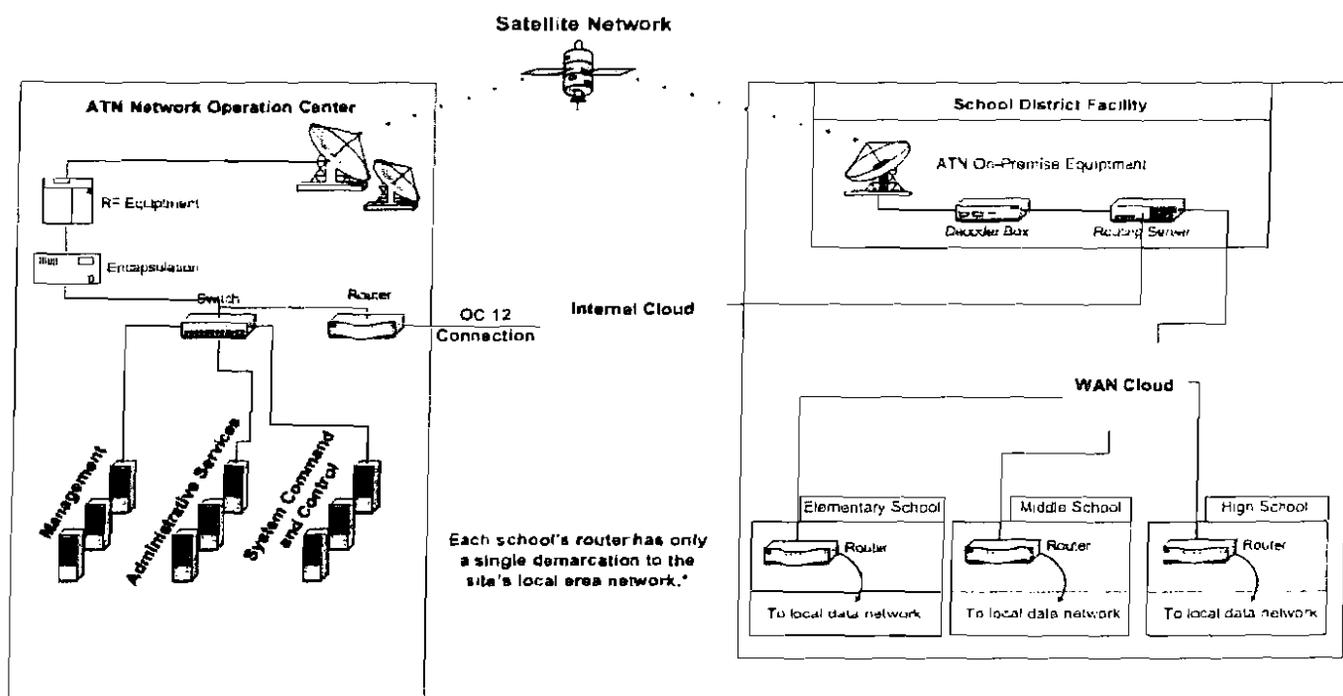
The telecommunications services of AchieveXpress are used to electronically deliver instructional materials and other data to equipment provided by Achieve Telecom that is then connected to the Customer’s local network.

AchieveXpress does not itself provision the content that is to be delivered, but rather provides the transmission circuit over which this delivery shall take place. Achieve Telecom provides the Customer with the information and protocols necessary to format the content for use over AchieveXpress. The Customer is responsible for providing content, whether it is Customer-owned or provided by other Third Parties, and the Customer is responsible for ensuring that all content placed on the Achieve Telecom’s network is appropriately licensed for this use. Circuit connectivity is provided over the Public Switched Telephone Network (PSTN) and, depending on the bandwidth needed for the transmission of digital signals, is augmented by a private satellite overlay network. At a minimum 5mbps of bandwidth is provided.

The comprehensive AchieveXpress option provides access to Achieve Telecom’s transmission facilities and is capable of supporting high-speed data signals used for such applications as distance learning. In addition, AchieveXpress is delivered with the Achieve Alert functionality (described in detail below).

The basic system architecture for AchieveXpress is shown in the following diagram:

### Central Satellite Delivery



\*LAN can function completely independent of the Satellite Delivery Network.

In simple but powerful terms, AchieveXpress creates the delivery highway over a WAN for multimedia content to the customer's LAN for use by identified learners.

The AchieveXpress service, as shown in the diagram above, is composed of the following five (5) key elements:

1. **Network.** The service includes satellite and terrestrial networks for distributing content and for quickly accessing the Internet. Typically, the service is deployed with a terrestrial WAN, providing virtual LAN connectivity between schools in the district. This network may be augmented by the satellite network, multicasting video and associated teaching content from an uplink at the NOC to satellite receiver at the head end school. Content is then pushed over the customers WAN to other schools on the network. Bandwidth on this network will be provisioned to support the aggregate usage and will initially be configured for 5 Mbps (burstable).
2. **Network Operations Center.** The NOC provides overall network management and control.

- 
3. School equipment. The AchieveXpress equipment installed at each school receives the content delivery, interfaces with the WAN, stores the delivered content and then re-serves it on-demand over the LAN to the students and teachers.
  4. Achieve Alert. This comprehensive emergency notification system is provided as an installed feature of AchieveXpress.
  5. Equipment installation and service. The AchieveXpress solution provides full installation, support, and help desk/maintenance services as well as associated documentation, IT staff and end user training as a fully managed service.

This is a complete turnkey end-to-end distance learning service that can be combined with rich media educational videos and lessons from third-party distributors designed to take advantage of the latest educational technologies.

AchieveXpress includes:

- **Achieve Alert for Emergency Notification Services**

AchieveXpress provides an emergency notification service, called Achieve Alert. The Achieve Telecom network provides an integral relay closure capability that can be used to trigger emergency notification and then specific follow-up directions and instructions to all user devices on the network. An example of an expected use would be for the statewide or local emergency manager to initiate an alarm to all schools on the network that directs all users to await further instructions over the Achieve Telecom network, to tune the television to a predetermined channel, or to go to predetermined web site. The Achieve Alert system is maintained at the NOC and may be accessed for the emergency notification by at one or more pre-determined agencies, such as the Superintendent of the School District, emergency response organizations at the Federal, State or Local level. The unique architecture of the Achieve Alert system provides for high levels of customization of Command and Control operations to the specifications of the designated agencies. In addition, multiple emergency responses by scenario can be crafted for each participating school district on the network as required, and the Achieve Alert system maintains the authorization and authentication protocols of the AchieveXpress network.

- **TutorXpress for Instructional Support to Students on State-Mandated Tests**

AchieveXpress provides TutorXpress with the resources to facilitate one-on-one and one-on-many interactive conferencing functions over the AchieveXpress network. This conference functionality can be used by School Districts to provide rigorous tutorials on the structure and format of the State graduation test, on the required content and on the specific student weaknesses that have been identified. Tutoring can be conducted in off-hours by regular teaching faculty who connect to the student(s) via the conferencing functionality of the network and partnerships are available with colleges on a local or national basis to provide additional tutoring resources.

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## 3.0 AchieveXpress Technical Specifications

This section provides the system specifications for the AchieveXpress service.

### ➤ On-Premise Equipment

The specifications for the hardware and software to be installed in each customer site are described in this section. At each site, the following complement of equipment will be provided:

#### ○ Satellite Dish Receiver

A Ku-band satellite receiver dish, with an aperture of approximately 1.5m, will be installed at each school in districts that require a satellite overlay network for robust content delivery. The satellite dish's LNB output will be fed to the distribution server for demodulation and digitization.

#### ○ Routing servers

A routing server will be installed in the school's data closet. Achieve Telecom has selected its routing server for its performance, breadth of functionality, and manageability as follows:

- Reception of video and other education materials via the satellite downlink and/or terrestrial network. The routing server shall include the capability to receive multicast distributions that have been transmitted via a reliable, compressed format and to automatically reconstruct and request any missing transmissions. Content may be periodically refreshed by the central distribution server, which transmits only the changes that have been made. Any change in content on the origin servers is automatically reflected throughout the network.
- Storage of videos and related educational material for playback over the school's LAN. Storage shall be configured in a RAID 5 (Redundant Array of Independent Disks) manner, such that failure of any single disk does not cause loss of content or a system failure. Video storage shall be sufficient to store at least 250 titles (125 hours), where the average title is 30 minutes long and encoded at 1 Mbps (approx. 80 GB).
- Routing server streaming functionality. The delivery server shall stream high quality video over IP using an embedded application-layer Windows Media Technology server. This server shall stream videos encoded in Windows Media format to end users, controlling bandwidth and connection quality

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while enabling videos to be played even when the Internet connection to the NOC is not operational. Additionally, the server shall support both MPEG1 and MPEG2 video streaming to end user PCs.

The Achieve Telecom routing server supports overall service and content management, by providing the hosting center with the following information:

- Periodic status updates, reflecting the health of the server and associated applications;
- Remote configuration interface, enabling Achieve Telecom to centrally configure and control the equipment from the hosting center and to remotely distribute software upgrades to the system;
- Content usage data, identifying who saw what, when, and with what quality;
- Content status storage utilization, identifying content stored on the Achieve Telecom server;
- Connectivity between the Achieve Telecom server and the school's LAN shall be via a 100 Base-T Ethernet interface. The Achieve Telecom server shall provide an additional Ethernet interface to provide additional or redundant connectivity to the LAN or to a remote site. The schools infrastructure should provide a minimum of one switched Ethernet connection to each classroom, WAN connectivity to the Internet and a public IP address.

The routing server shall be interoperable with the content distribution, webcasting authentication, network management, remote administration, and log aggregation protocols employed by the NOC central routing server used by the network operations and hosting service.

#### ➤ Installation Kit –

Achieve Telecom will install the equipment, and provide the necessary hardware to support this installation, including the following:

- Satellite receiver antenna and roof or exterior wall mounting kit. (If required)
- Routing server with mounting hardware. The routing server will be available either in a router/card, 1 RU (1.75") EIA standard rack-mount or in a tower configuration. During the installation survey, a determination will be made as to the best configuration for each school or library.
- Cabling between the routing server and the a) satellite receiver antenna, b) access router, and c) LAN switch.

#### Achieve Alert for Emergency Notification Services

Achieve Alert is an integrated content delivery system that provides a comprehensive approach to emergency response and management. Achieve Alert delivers critical alerts, relevant

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information, and proper response training with public Internet and private network solutions. Achieve Alert provides:

- Comprehensive approach to emergency response and management
- Delivery of critical alerts, relevant information, and proper response training
- Delivery on-time and to identified targeted audiences
- Security of a private network
- 24/7 emergency notification service

The Achieve Alert network provides an integral relay closure capability that can be used to trigger emergency notification and then specific follow-up directions and instructions to all personal computers and other user devices on the network. An example of an expected use would be for the statewide or local emergency manager to initiate an alarm to all customers on the network that directs all users to await further instructions over the Achieve Telecom network, to tune the television to a predetermined channel, or to go to predetermined web site. The Achieve Alert can be initiated at the NOC and/or from designated management points in the customer WAN/LAN configuration, such as Emergency Response Managers at the Federal, State or Local level and/or the Superintendent of the School District.

Key features of Achieve Alert:

- Delivery from our NOC or alternative site(s) as designated
- Emergency signals may be transmitted in video, audio or data formats
- Additional emergency instructions may also use multiple formats
- Delivery of the alert signal to all individual user interfaces on the network
- Full archiving, tracking and report generation
- Authorization and authentication protocols of the AchieveXpress network

The unique architecture of the Achieve Alert system provides for high levels of customization of Command and Control operations to the specifications of the designated agencies. This allows multiple emergency responses by scenario to be crafted for each participating customer, Emergency Management headquarters, public health center, and school district, as required. In addition, the Achieve Telecom bandwidth, both terrestrial and celestial, may be made available for comprehensive and immediate notices from senior officials of the state and/or local emergency authorities.

Key Benefits of the Achieve Alert system:

- Customizes and coordinates Emergency and Contingency Planning
- Improves Emergency Response Time and Performance
- Records the Actions taken
- Ready to be Deployed today

### **Achieve Alert Functionality**

Achieve Alert provides functionality for emergency notification and rapid information transmission and access to Achieve Telecom's transmission facilities. Achieve Alert supports

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high-speed video, audio and data signals that may be used to notify users on the network of an emergency, transmit comprehensive instructions and procedures in a distance learning modality. The Achieve Alert system maintains the authorization and authentication protocols of the AchieveXpress network.

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## 4.0 Achieve Telecom's Solution Partners

### 4.1 Dimension Data North America Overview

Dimension Data is a \$2 billion global technology services company. Dimension Data understands, builds and manages the applications and networks that power your organization. Unlike other IT services companies, Dimension Data has a unique combination of specialist skills and solutions to converge applications and networks. The result is a better return on your IT expenses.

We recognize to be effective, organizations need to collaborate seamlessly, both internally and with others. Effective partnering has helped organizations in both the public and private sectors become leaders in their community and among their peers- but achieving and maintaining that position isn't easy. These organizations know that getting the enabling technology right can mean the difference between success and failure. Dimension Data builds and manages the IT infrastructures that enable organizations to collaborate like market leaders.

Dimension Data employs more than 700 technical staff in the United States, with US headquarters in Reston Virginia. Dimension Data has offices in 30 countries and nearly 10,000 employees worldwide. A financially stable, mature solution provider. Dimension Data was established in 1983 is traded on the London Stock Exchange (symbol DDT) and is a member of the FTSE 250.

Dimension Data partners with industry specialists, such as Achieve Telecom to create vertical industry specific solutions. Dimension Data partners with leading technologies innovators, including Microsoft, Cisco, and EMC to build the infrastructure on which these solutions operate. The group holds elite certifications from each of these suppliers, with an emphasis on providing technical, professional and managed services to ensure our clients see optimal performance and return on their investment in these technologies.

#### Of Particular Relevance:

- **Educational Expertise:** Dimension Data's commitment to the education market has been sincere and effective. In the past six months, Dimension Data has provided IT solutions to 48 Colleges and Universities, 26 elementary and secondary schools, 16 Junior Colleges and 5 major libraries.
- **Using technology to educate in urban environments:** Our commitment to helping these organizations tap the power of emerging technologies to extend educational opportunities to those in urban environments is evident in our recent work on behalf of the Boston Public Library. ([http://newsroom.cisco.com/dlls/ts\\_082203.html](http://newsroom.cisco.com/dlls/ts_082203.html))

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- **Driving user adoption:** The Nielsen Norman Group, a world authority on Web usability, reviewed more than 100 intranets and recognized Inside, the ChevronTexaco intranet site designed by Dimension Data, in its third annual list of top ten intranets worldwide. We feel system usability is a critical component to the success of any educational system. Dimension Data brings design and usability expertise to our engagements.  
[http://www.didata.com/na/news/news\\_pr102203.asp](http://www.didata.com/na/news/news_pr102203.asp)
  - **Financial Stability:** business stability is critical element to selecting any IT partner. Dimension Data is a \$2 billion company that has been in business since 1983, and as a public company, we provide full disclosure of our earnings.  
[http://www.didata.com/investors/inv\\_reports.asp](http://www.didata.com/investors/inv_reports.asp)

## 4.2 Cisco Systems, Inc. Overview

Cisco Systems, Inc. is the worldwide leader in networking for the Internet. Cisco's Internet Protocol-based (IP) networking solutions are the foundation of the Internet and most corporate, education, and government networks around the world. Cisco provides the broadest line of solutions for transporting data, voice and video within buildings, across campuses, or around the world.

Achieve Telecom uses Cisco content networking technologies in the delivery of our solution. The Cisco content networking portfolio, which includes both Layer 4-7 switching and content delivery network (CDN) products, helps business by enabling new applications and maximizing the agility and resilience of e-business infrastructures. Content networking complements and extends Cisco traditional Layer 2-3 network services by providing a higher level of security, availability, scalability, and manageability.

Cisco content networking devices add a layer of intelligence to the IP infrastructure to optimize Website performance, deliver content more efficiently, ensure content availability and security, and scale Websites and content-delivery systems. Cisco content networking provides a comprehensive end-to-end content-networking solution.

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## 5.0 AchieveXpress with Achieve Alert

### *The User Experience in K-12 Education*

The following paragraphs describe the process flow of the AchieveXpress service from the K-12 education user point of view:

The AchieveXpress service provides teachers with access to the central content library where an extensive yet easily searchable virtual library of educational video content and related teaching materials are available to support both classroom and individual instruction. When teachers find titles of interest, they can preview the content from the central library via the school network and then request that the specific content title be delivered to the Achieve Telecom routing server at their specific school building. Lessons, video content and associated tests are viewed in a full-screen, digital cable-quality experience from either a PC for individual student use or via television or projector delivery for group viewing. The AchieveXpress system provides the school system with the tool to create interactive distance learning programming that can be hosted on the Achieve Telecom server at the school or at the Network Operating Center ("NOC").

- Key features of the AchieveXpress service are as follows:
  - Educational content, the AchieveXpress portal and the learning applications are stored and managed at the NOC, central content libraries or hosting service providers;
  - Interactive distance learning programs can be created and distributed
  - From a PC at school or at home, teachers are able to order video content to enhance their lessons, construct curriculums and lesson plans according to state requirements and the teacher's learning objectives
  
- Instructors and curriculum developers are able to:
  - Play videos or video clips on demand that are ordered from the central library and then stored for use on the server at their facility
  - Produce effective learning materials and with integrated testing to measure learning for each student
  - Deliver courses in the classroom or via distance learning
  - Monitor and manage each student's learning process
  - Share lesson plans and content with other instructors on the network
  - Easily and quickly integrate video content into lessons using the AchieveXpress portal.

### ➤ AchieveXpress Portal Interface for the User

The AchieveXpress portal integrates a video library browser, distribution and playback tool with web-based lesson management. The portal is a web-based tool that is accessed by teachers and students using the Microsoft Internet Explorer browser.

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The AchieveXpress video management service brings the highest quality education media to the classroom, and does so by employing the following functionality:

- **Browsing.** Teachers may browse the video title selection available at both the hosting center and school, searching by applicable grade level, course, keyword, etc. The browser displays available information describing the video, its constituent clips, and run lengths.
- **Preview.** During course preparation, teachers may view the video for applicability, and select that video for incorporation into the lesson activity from either her computer at school or at home.
- **Order and reserve.** One day prior to using the video in the class, the teacher should check if the video is available at the school. If the title is not at the school, the teacher may order the video for delivery from the NOC to the routing server in the school. Teachers can order, as many videos as they need – there are no additional charges associated with this ordering process. To ensure that their video is available the day of the class, teachers may reserve the video for a period of time. Unreserved videos may be automatically deleted by the system to provide space for new requests.
- **Play.** Videos that are at the school may be played with full VCR-like commands and will be streamed from the AchieveXpress server at the school.

#### ➤ Network Connectivity

The AchieveXpress service will provision each customer site with the following connectivity:

Terrestrial connectivity with an additional satellite overlay network (if required) WAN with a minimum of 5 Mbps (burstable), dedicated to the transmission of content to the schools.

#### ➤ Achieve Alert

The AchieveXpress service provides a 24/7 alert system, called Achieve Alert to all personal computers that are connected to the Achieve Telecom network. Depending on the protocols as agreed with the customer, the alert can be initiated from the Achieve Telecom NOC and from a designated management point in the customer WAN/LAN configuration. The alert would direct users to prepare for an announcement over the Achieve Telecom Network or point the user to a designated Cable TV, Internet or telephonic location for emergency reports and directions. In addition, the Achieve Telecom bandwidth, both terrestrial and celestial, may be made available for comprehensive and immediate notices from senior officials of the state and/or local emergency authorities.