

U.S. Department of Education

Washington, D.C. 20202-5335



APPLICATION FOR GRANTS UNDER THE

STATEWIDE LONGITUDINAL DATA SYSTEMS

CFDA # 84.372A

PR/Award # R372A090038

Grants.gov Tracking#: GRANT10076241

OMB No. 1890-0004, Expiration Date:

Closing Date: SEP 25, 2008

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Application for Federal Assistance SF-424

Version 02

* 1. Type of Submission:

- ☐ Preapplication
☒ Application
☐ Changed/Corrected Application

* 2. Type of Application:

- ☒ New
☐ Continuation
☐ Revision

* If Revision, select appropriate letter(s):

* Other (Specify)

* 3. Date Received:

09/25/2008

4. Applicant Identifier:

5a. Federal Entity Identifier:

* 5b. Federal Award Identifier:

State Use Only:

6. Date Received by State: 09/25/2008

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:

Massachusetts Dept. of Elementary and Secondary Education

* b. Employer/Taxpayer Identification Number (EIN/TIN):

04-6002284

* c. Organizational DUNS:

799538178

d. Address:

* Street1:

350 Main Street

Street2:

* City:

Malden

County:

* State:

MA: Massachusetts

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

02148-5023

e. Organizational Unit:

Department Name:

MA Dept of Elem & Sec Edu

Division Name:

Information Services and Tech

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

Mr.

* First Name:

Robert

Middle Name:

* Last Name:

Bickerton

Suffix:

Title: Senior Associate Commissioner

Organizational Affiliation:

* Telephone Number: 781.338.3800

Fax Number: 781.338.3394

* Email: rbickerton@doe.mass.edu

Application for Federal Assistance SF-424

Version 02

9. Type of Applicant 1: Select Applicant Type:

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

U.S. Department of Education

11. Catalog of Federal Domestic Assistance Number:

84.372

CFDA Title:

Statewide Data Systems

* 12. Funding Opportunity Number:

ED-GRANTS-062608-001

* Title:

Statewide Longitudinal Data Systems Grant Program CFDA 84.372

13. Competition Identification Number:

84-372A2009-1

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

all cities and towns in MA.

* 15. Descriptive Title of Applicant's Project:

Developing and Implementing the Schools Interoperability Framework as the Engine for Massachusetts
LDS Data Collection and Management

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:

* a. Applicant MA-All

* b. Program/Project MA-All

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date: 03/01/2009

* b. End Date: 03/01/2012

18. Estimated Funding (\$):

* a. Federal	5,993,464.00
* b. Applicant	0.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	5,993,464.00

* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?

- ☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .
- ☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- ☒ c. Program is not covered by E.O. 12372.

* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)

☐ Yes ☒ No

21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: Mr. * First Name: Mitchell

Middle Name:

* Last Name: Chester

Suffix:

* Title: Commissioner of MA Dept. of Elem & Sec Ed.

* Telephone Number: 781-338-3102 Fax Number:

* Email: mchester@doe.mass.edu

* Signature of Authorized Representative: Carole Thomson * Date Signed: 09/25/2008

Application for Federal Assistance SF-424

Version 02

*** Applicant Federal Debt Delinquency Explanation**

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.



U.S. DEPARTMENT OF EDUCATION

BUDGET INFORMATION

NON-CONSTRUCTION PROGRAMS

OMB Control Number: 1890-0004

Expiration Date: 06/30/2005

Name of Institution/Organization:
Massachusetts Dept. of Elementar...

Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.

SECTION A - BUDGET SUMMARY
U.S. DEPARTMENT OF EDUCATION FUNDS

Budget Categories	Project Year 1(a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
1. Personnel	\$ 550,000	\$ 760,000	\$ 160,000	\$ 0	\$ 0	\$ 1,470,000
2. Fringe Benefits	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
3. Travel	\$ 11,000	\$ 9,000	\$ 9,000	\$ 0	\$ 0	\$ 29,000
4. Equipment	\$ 202,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 202,000
5. Supplies	\$ 280,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 280,000
6. Contractual	\$ 600,000	\$ 700,000	\$ 400,000	\$ 0	\$ 0	\$ 1,700,000
7. Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Other	\$ 500,000	\$ 800,000	\$ 800,000	\$ 0	\$ 0	\$ 2,100,000
9. Total Direct Costs (lines 1-8)	\$ 2,143,000	\$ 2,269,000	\$ 1,369,000	\$ 0	\$ 0	\$ 5,781,000
10. Indirect Costs*	\$ 126,286	\$ 63,414	\$ 22,764	\$ 0	\$ 0	\$ 212,464
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 2,269,286	\$ 2,332,414	\$ 1,391,764	\$ 0	\$ 0	\$ 5,993,464

***Indirect Cost Information (To Be Completed by Your Business Office):**

If you are requesting reimbursement for indirect costs on line 10, please answer the following questions:

(1) Do you have an Indirect Cost Rate Agreement approved by the Federal government? ☒ Yes ☐ No

(2) If yes, please provide the following information:

Period Covered by the Indirect Cost Rate Agreement: From: 7/1/2008 To: 6/30/2009 (mm/dd/yyyy)

Approving Federal agency: ☒ ED ☐ Other (please specify): _____

(3) For Restricted Rate Programs (check one) -- Are you using a restricted indirect cost rate that:

☒ Is included in your approved Indirect Cost Rate Agreement? or, ☐ Complies with 34 CFR 76.564(c)(2)?

**U.S. DEPARTMENT OF EDUCATION****BUDGET INFORMATION****NON-CONSTRUCTION PROGRAMS**

OMB Control Number: 1890-0004

Expiration Date: 06/30/2005

Name of Institution/Organization:
Massachusetts Dept. of Elementar...

Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.

SECTION B - BUDGET SUMMARY**NON-FEDERAL FUNDS**

Budget Categories	Project Year 1(a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
1. Personnel	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
2. Fringe Benefits	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
3. Travel	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
4. Equipment	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
5. Supplies	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
6. Contractual	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
7. Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Other	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
9. Total Direct Costs (lines 1-8)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
10. Indirect Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

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Prescribed by OMB Circular A-102

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

<p>* SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL</p> <p>Carole Thomson</p>	<p>* TITLE</p> <p>Commissioner of MA Dept. of Elem & Sec Ed.</p>
<p>* APPLICANT ORGANIZATION</p> <p>Massachusetts Dept. of Elementary and Secondary Education</p>	<p>* DATE SUBMITTED</p> <p>09/25/2008</p>

Standard Form 424B (Rev. 7-97) Back

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

* APPLICANT'S ORGANIZATION

Massachusetts Dept. of Elementary and Secondary Education

* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix: Mr.

* First Name: Mitchell

Middle Name:

* Last Name: Chester

Suffix:

* Title: Commissioner of MA Dept. of Elem & Sec Ed.

* SIGNATURE: Carole Thomson

* DATE: 09/25/2008

Close Form

**SUPPLEMENTAL INFORMATION
REQUIRED FOR
DEPARTMENT OF EDUCATION GRANTS**

1. Project Director:

Prefix:	* First Name:	Middle Name:	* Last Name:	Suffix:
Mr.	Robert	P.	Bickerton	

Address:

* Street1:	350 Main St.
Street2:	
* City:	Malden
County:	
* State:	MA: Massachusetts
* Zip Code:	02148
* Country:	USA: UNITED STATES

* Phone Number (give area code) Fax Number (give area code)

781-338-3800	
--------------	--

Email Address:

rbickerton@doe.mass.edu

2. Applicant Experience:

Novice Applicant ☐ Yes ☐ No ☒ Not applicable to this program

3. Human Subjects Research

Are any research activities involving human subjects planned at any time during the proposed project Period?

☐ Yes ☒ No

Are ALL the research activities proposed designated to be exempt from the regulations?

☐ Yes Provide Exemption(s) #:

--

☐ No Provide Assurance #, if available:

--

Please attach an explanation Narrative:

--

Add Attachment

Delete Attachment

View Attachment

Project Narrative

Abstract Narrative

Attachment 1:

Title: Pages: Uploaded File: 1234-MassAbstract.pdf

Massachusetts Student Connect

Abstract

The Massachusetts Department of Elementary and Secondary Education began the process of establishing the cornerstone of our data system in 1998 with the implementation of the Student Information Management System (SIMS). At that time the architecture of the system was an adequate first step for the initial implementation of a student level data collection system.

The data collection system has grown to encompass additional student, educator and assessment data that are required to meet the increasing demands to make informed policy decisions and understand best practices in the classroom. Massachusetts' educators, policy leaders across the state, parents and students are demanding a system that supports a targeted, data-driven approach to instruction that is readily accessible, less burdensome to compile and easier to use. Through inter-agency collaboration, this integrated data system will enable the longitudinal analysis of services and investments in children and youth over time. Policy makers, educators and researchers will have the tools to better understand which programs and services are creating positive outcomes for children, youth and families, particularly those who are most at-risk.

The Students Connect project contains three overarching components that will complete and support a comprehensive, efficient and effective longitudinal data system. Each component will be implemented between the 2009-2010 and 2011-2012 school years.

1. Develop and Implement the Schools Interoperability Framework (SIF) as the Engine for Massachusetts LDS Data Collection and Management:
 - Streamline the existing systems to improve the timeliness of the data.
 - Implementing a dynamic exchange of data will significantly reduce the burden to local school district staff.
2. Establish An Interagency Readiness Passport System:
 - The Department, in collaboration with other state agencies, will first improve the exchange of aggregate data that are relevant to supporting services and programs for Massachusetts children and youth.
 - A multi-agency working group comprised of policy, data and legal analysts will analyze and develop options to reconcile privacy and data security requirements with the goal of data sharing across the range of services needed by at risk children and families.
3. Evaluation of the Feasibility of Regional Data Sharing Among States
 - Establish a partnership with a team of policy leaders and researchers convened by Professor Steve Coelen and a consortium of New England and Mid-Atlantic states to investigate how policies, best practices and interstate tracking of students can be improved through privacy laws compliant data-sharing and research agreements.

Project Narrative

Project Narrative

Attachment 1:

Title: Pages: Uploaded File: 1237-MassNarrative.pdf

Massachusetts Student Connect

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1. Need for the Project

Massachusetts has used the dual levers of *standards* and *accountability* to drive its education reform efforts since passage of our state's 1993 Education Reform Act and the 2002 federal No Child Left Behind Act. The standards detailed in the Massachusetts Curriculum Frameworks and tested by the Massachusetts Comprehensive Assessment System (MCAS) established a coherent and ambitious foundation of high expectations for learning that focused the efforts of educators at all levels. Our state's *first in the nation* 4th and 8th grade results in the 2005 and 2007 National Assessment of Educational Progress (NAEP) underscore how a strong system of standards and accountability can fuel higher levels of student achievement.

This progress to date, while encouraging, also serves to sharpen our focus on critically important next steps. We are deeply concerned about where our performance falls short. We have yet to eliminate troubling gaps in performance, particularly the achievement gap between white and minority students and between Massachusetts and our top performing international competitors.

- African-American and Hispanic students scored an average of 25 and 26 points lower, respectively, than White students on the 2007 NAEP grade 4 Mathematics exam.
- 78% of White students reached the proficient level on the 2008 Grade 10 Mathematics MCAS exam, while 48% of African-American and 46% of Hispanic/Latino students demonstrated proficiency.
- 80% of White students in the class of 2010 met the graduation requirements of passing the MCAS English Language Arts (ELA), Mathematics, and Science examinations. Just 58% of African American and 28% of Limited English Proficient students from the same class have passed all three tests to date.
- The Trends in International Mathematics and Science Study (TIMSS) indicates that the United States is losing ground in the education of its residents, particularly compared to our major international competitors. When Massachusetts last participated in TIMSS (1999¹), its math score of 513 and science score of 533 were higher than the respective U.S. scores of 502 and 515, still lower than their peers in our international competitors.

Five years ago we set out to develop more robust and refined data collection, analysis and reporting tools to answer what is and is not working well at all levels of the enterprise and to use these findings to more accurately target interventions and resources to close these gaps in student achievement. In this proposal we will describe our progress to date (section 1.2) and how we hope to use a **Longitudinal Data Systems (LDS) grant to plan, develop and implement** the transformation of these current components into a comprehensive interoperable LDS solution that is powerful, yet easy to access and use (beginning with the following section 1.1).

The Department believes that the LDS development we propose is responsive to the second “primary purpose” stipulated in the Request For Applications (RFA), *“The State does not have efficient and reliable interoperability between SEA and local education agency (LEA) data*

¹ Massachusetts is participating in the 2007 TIMSS and anticipates the release of results by the end of the calendar year.

systems.” We have, therefore, written this proposal consistent with the scope and funding opportunities afforded by the RFA for projects responsive to this purpose.

1.1 The Need / Problem That an LDS Can Solve in Massachusetts:

1.1.1 Address Characteristics Missing from Current Massachusetts Data Systems

Massachusetts’ educators need a system that supports a targeted, data-driven approach to instruction that is readily accessible and easy to use. Policy leaders need a system that reveals what is going on behind “average performance,” deconstructing and recombining the many inputs and outputs that yield mixed results over time. This longitudinal data system must provide:

- (a) The infrastructure for analyses at each **level** of the enterprise, i.e., the individual (student, teacher, administrator, et al), class, school, district and student subgroup levels.
- (b) The infrastructure for analyses at each **stage** of the enterprise, i.e., from educator recruitment, to preparation, to licensure, to hiring, to specific work assignment (e.g., teach Intro to Physics section 2), to students enrolled in each class / “instructional setting,” to student academic performance per learning standard, and on to next steps in higher education and employment.
- (c) An infrastructure that not only supports:
 - **point in time reporting**, but also
 - sufficiently dynamic harvesting of data to **capture significant changes** that occur among these components during the course of the year, and
 - **rapid, timely access** to these data and related analytical tools.
- (d) An infrastructure that **leverages interoperability and manages the burden** of data collection and reporting at the district and school levels. Our districts and schools must successfully surmount a wide range of challenges within a highly stressed and resource challenged environment. A longitudinal data system that attempts to resolve rapidly escalating demands for high quality data by simply dropping this onto the backs of districts and schools will be inefficient and ultimately unsustainable.

At the heart of these capabilities are the interactions among students, teachers and the instructional settings/classes they are assigned to. In section 1.2 you will find that Massachusetts has invested and continues to invest significant fiscal and personnel resources in order to collect and relate student, teacher/educator and class data at the individual level. All classes and other instructional settings (hereafter referred to as “classes”) are classified according to the NCES Secondary School Course Classification System. We have connected teachers to the district, school, licenses they hold and individual classes they teach. Separately, we have connected students to their performance on statewide assessments at the individual item and learning standard levels. The state has recently committed an additional \$2.8 million to complete the connections among these core components, i.e., connecting students to the classes they are assigned to. Finally, we have purchased and are beginning to implement a statewide education data warehouse with unlimited licenses for all Massachusetts educators, policy leaders, parents and students that will support both state and locally loaded data.

1.1.2 Enable Policy Leaders and Educators to Answer Currently Unanswerable Questions

For example:

- (a) Are students taking the necessary courses to enroll and succeed in higher education?
- (b) What is the correlation between course taking and performance on both local and statewide assessments?
- (c) What is the differential impact of a new instructional program on student performance?
- (d) What is the differential impact of educator policies and practices (e.g., recruitment, preparation, licensure, professional development) on student achievement?
- (e) What specific learning objectives in math, ELA, science, and history/social science have the students just assigned to my 5th grade mastered or missed over the past 3 years?
- (f) What is the growth profile for students and student subgroups at the state, district, school, teacher and classroom levels?

1.1.3 Overcome Barriers and Limitations in our Current Data Architecture and Processes

The goal we hope to achieve through the Longitudinal Data Systems Grant Program is to establish a comprehensive, efficient and effective Massachusetts LDS. The challenge we must overcome has its roots at the beginning of the current decade. The early support for and implementation of our Student Information Management System (SIMS) in 2001 has been invaluable to educators and policy leaders. This early implementation is also at the root of the need / problem our state must now resolve.

The introduction of SIMS represented a major shift from aggregate reports to an individual student collection and set the bar high for the standardization and quality of these data. The Department was confronted at the district and school levels with a wide variety of legacy and third party student information systems, each with a different degree of functionality and automation. Without the possibility of being able to foresee the escalating demands for more comprehensive and interrelated data that have emerged in recent years, the Department developed an architecture and related processes for SIMS that called for each district and, where applicable, each vendor to map their student data to a state data dictionary / “template” and transmit their data in comma delimited form to the Department three times a year. The vast majority of districts had little or no information technology (I.T.) infrastructure and struggled to meet SIMS specifications. It was not until the third year of this collection that the Department had confidence in the completeness and accuracy of these data.

Although there have been some variations and refinements, the SIMS architecture and related processes have served as the model for other Department data collections, e.g., educators and class assignments (EPIMS) and the School Safety and Discipline Report (SSDR). (Refer to section 1.2 for more details) While these collections have accomplished their originally intended purposes of more accurate, useful data and related reports at the individual level, they have also imposed the following burdens and limitations on our state’s efforts to establish a comprehensive, effective and efficient longitudinal data system:

- (a) The architecture and related processes locate the data transformation and transmission responsibilities directly in school districts. The vast majority of districts are struggling with limited resources overall and even more limited IT capacity in particular.
- (b) There are three problematic, but predictable results when these responsibilities are borne primarily by school districts:
 - i. Inefficiency and friction between the Department and districts as everyone struggles to meet data quality submission specifications completely and on time. Inevitably, frustration builds as multiple submissions are rejected.
 - ii. Department and district staff resources are stretched to the breaking point in the provision of support and completion of corrections.
 - iii. Collections and related reports are often completed after required deadlines.
- (c) The net effect of these burdens and limitations is that it becomes exceptionally difficult to increase the frequency of current collections or to expand collections to additional components of the education enterprise that educators and policy leaders conclude are essential to a comprehensive longitudinal data system.

As we have worked toward integrating the current components (see 1.2) of the Massachusetts LDS, feedback from the governance and user groups / processes we have implemented (see part 3, Project Design), along with our own findings, have led us to the conclusion that we must build a new data collection and an interoperable integrated foundation to successfully support a more comprehensive, efficient and effective system. Our experience with our first educator and class assignments collection (EPIMS) provides an excellent case in point:

- Districts (or their cities/towns) use a wide array of products and processes to manage their workforce, from sophisticated 3rd party and legacy MIS to paper files.
- Most districts experienced great difficulty transforming and transmitting these data to the Department either directly or through 3rd party vendors. Only 13 of 391 districts successfully uploaded these data by the December 2007 deadline, while the remainder of verifiably complete reports trickled in through June 2008.
- These data provide an “October snapshot” of staff and work assignments. Staffing and work assignments will change substantially over the course of the year, particularly in high schools and middle schools with multiple semesters. An annual snapshot may be sufficient for certain required reports, however, it is inadequate for policy and instructional leaders to use for continuous improvement, policy development, programmatic and funding decision making. To meet the design principle articulated in 1.1(c) that the LDS must “capture significant changes” and provide “rapid, timely access” to these data, Massachusetts must have more frequent collections.
- Continuing to build this and other future collections on the SIMS model (highlighted above) is not a viable option. Given the level of frustration and delay already articulated by school districts and observed by the Department, we must shift the burden of collection away from individual districts to a more efficient and continuous system implemented at the state level as articulated in 1.1(d).

The following sections of this proposal will describe how the Department will build a less burdensome, more efficient and continuous data collection system based upon the Schools Interoperability Framework (SIF) interoperability specifications.

1.1.4 Overcome Barriers and Limitations in Multi-Agency Efforts to Provide “Wrap-Around Services” to At-Risk Children and Families

Governor Deval Patrick has challenged Massachusetts agencies to create a “Readiness Passport” for all students as part of his “Readiness Project: A Ten Year Strategic Plan for Education.” The passport would provide parents, guardians and agencies with a simple tool to document key elements of a child’s educational experiences as well as various services, interventions, supports, data and performance evaluations related to each child. With educational experiences at its core, the vision is also to support an exchange of relevant information across state sponsored education, health, human service and employment and training services necessary for many at-risk children and families to overcome multiple barriers to success.

The administration is well aware of the privacy and data security challenges such as the *Family Educational Rights and Privacy Act (FERPA)*, the Fair Information Practices Act of Massachusetts and the Health Insurance Portability and Accountability Act (HIPAA) that such a system must address. We embrace the important protections afforded by each of these statutes and at the same time, have concluded that finding successful means of sharing data within their constraints is imperative. Massachusetts may have achieved among the highest levels of student achievement according to national measures such as the NAEP, however, it has become increasingly clear that closing the achievement gaps among white, minority and low income students requires a broader set of strategies than education alone can deliver. The following sections of this proposal will outline a multi-pronged strategy to lay the foundation for more coordinated services through appropriate interoperable data sharing across a wide range of services.

1.1.5 Overcome Current Limitations in Tracking Students and Dropouts Who Transition to Private Education and Employment and/or Leave the Commonwealth.

The mission of the Massachusetts Board of Elementary and Secondary Education is to strengthen the Commonwealth's public education system so that every student is prepared to succeed in postsecondary education, compete in the global economy, and understand the rights and responsibilities of American citizens.

This Board’s mission statement provides us with a constant reminder that we need to know more about the results and consequences of the K-12 education we provide by following our students’ transitions to higher education, work and civic engagement. While the Department has successfully piloted K-16 data matching using SIMS and the public higher education database (HEIRS), and our state tracks the employment status and wage gain of adults enrolled in adult basic education and job training programs, we currently lack the capacity to seamlessly connect a student’s progression from school through employment.

SIMS has enabled Massachusetts to refine its tracking and reporting of student enrollments and dropouts as well as establishing a rigorous four year graduation rate for each public school and district in the Commonwealth. We are, however, unable to track students who move to private postsecondary education, training, or work in Massachusetts or to any new engagement in other states other than by expecting districts to somehow document such transitions. Districts are

struggling to obtain such documentation and lament the inaccuracies the absence of such documentation may introduce into our published dropout and graduation rate reports.

In this proposal we will describe a proposed new collaboration with other states from the Northeast and mid-Atlantic under the leadership and support of a team led by Professor Steve Coelen.

1.2 Build Upon Existing Systems:

As referenced above, Massachusetts has invested significant fiscal and personnel resources to develop some of the major components of an enterprise wide data driven, continuous improvement education system. We present the following components of that system with pride and to help the reader appreciate that there is a solid foundation and successful track record to undergird our requested LDS project. This highlights a challenging reality for our state. During difficult fiscal times, Massachusetts has tenaciously pursued development and deployment of several of the data collection and reporting components needed for a comprehensive education LDS, often sacrificing other projects in order to do so. While we appreciate the need to have all 50 states engaged in an education LDS, we are hopeful that the U.S. Department of Education will recognize our commitment to this work and award the resources we have not been able to raise within Massachusetts that are essential to moving forward with a comprehensive, efficient, interoperable and effective LDS, particularly for implementing a SIF architecture.

- 1.2.1 The Student Information Management System (SIMS), which catalogues district/school data systems, provides reliable individual student level identification numbers, and related demographic data since 2002.
- 1.2.2 The Education Personnel Information Management System (EPIMS) includes further cataloguing of local data systems, a state assigned educator identification number, multiple descriptors including Highly Qualified Status, and a protocol to define and link educators to each of the roles they perform and the classes they teach.
- 1.2.3 A new state funded project to reengineer SIMS in order to link student to the classes / “instructional settings” they are enrolled in.
- 1.2.4 A database of every student’s response to every item on every test administered under our statewide Massachusetts Comprehensive Assessment System (MCAS) and Massachusetts English Proficiency Assessment (MEPA).
- 1.2.5 An Enterprise Wide Education Data Warehouse (EDW). The data warehouse links individual student data (1.2.1) to MCAS and MEPA assessment data (1.2.4) and the recently completed EPIMS collection (1.2.2). In time, within the constraints of an appropriate role-based security protection for confidential data, the data warehouse will provide the infrastructure and organize the relationships for teachers, administrators, policy leaders, parents and students to easily combine and analyze today’s disconnected data sets.
- 1.2.6 The Educator Licensure and Recruitment system (ELAR), a transactional, online individual applicant/educator licensure database. We are currently linking ELAR to EPIMS (1.2.2) with the ultimate goal of integrating these data into the EDW (1.2.5), again with the constraints of an appropriate role-based security protection for confidential data.
- 1.2.7 Directory Administration, containing role and contact information, grade information, and other details of public school districts, public schools, and other organizations. Directory Administration is used to control user access to web-based applications and

- data available to organizations and educators through the DOE Security Portal.
- 1.2.8 The School Safety and Discipline Report (SSDR), an online reporting system for drug and violent incidents for all students and for all incidents resulting in suspensions for special education students.
 - 1.2.9 A prototype SIMS and MCAS data exchange with the state's Department of Higher Education data warehouse in partial preparation for a pK-16 Database.
 - 1.2.10 Massachusetts has been recognized nationally for their performance in submitting data to the Education Data Exchange Network (EDEN). For 2007, Massachusetts submitted 88% of their expected files to the U.S Department of Education.

Need and Uses

The evolution of the data system at the ESE has focused on providing Massachusetts educators with the data they need to support their work. The ESE has linked SIMS and MCAS data, including related learning standards, for seven years and provided those data back to schools and districts to improve instruction. Until recently, too much of the burden for incorporating these data into specific school contexts has fallen on districts, only a few of which have the capacity to relate them to specific classes of students. ESE staff have constructed queries across multiple data sources to inform a wide range of data-driven decisions at the state level. All of these parties are being brought together by the development of our data warehouse. Soon additional levels of the education enterprise will be able to use these powerful tools to use data to inform the best policy and practice. However, while the state has made a commitment to ensure the availability of data to policy-makers and educators at all levels, we continue to rely on an outmoded data collection process that is inefficient and burdensome to districts. The development of a Schools Interoperability Framework (SIF) deployed and managed by the state will establish the foundation for a comprehensive, efficient and effective LDS in Massachusetts.

In addition, the Department has recently created an Office of Strategic Planning, Research and Evaluation to focus on how we can expand innovative research programs across programs and agencies. This office has created a Research Advisory group (see Appendix A) to help with that cause. This group will be instrumental in determining how a SIF based data system and interagency data exchanges can best be used for cohort analysis to evaluate the effectiveness of various services/programs and lead to more positive outcomes for children.

Governance

The ESE has established governance and user group processes that have proven effective in involving all levels of the enterprise in establishing effective and efficient policies and priorities for our information services and technology initiatives. We are confident that, with the additions detailed in section 3, "Project Design," and section 5, "Project Management" of this proposal, we will have an appropriate governance structure in place to ensure the success of this project. We have found that the regular sharing of information and frequent opportunities to vet proposals by all members of these governance and user groups almost always results in the resolution of differences before decisions are finalized. On those rare occasions when this is not the case, the Commissioner of Elementary & Secondary Education or the Governor's Readiness Cabinet, depending on the nature of the issue, will make the final decisions.

Institutional Support and Sustainability

The Governor and Legislature included \$2 million in the state's I.T. Bond for launching EPIMS and appropriated \$5.2 million for the purchase and implementation of an unlimited number of Enterprise Wide Education Data Warehouse licenses in state fiscal year 2007 (7/06 to 6/07). The state has recently committed an additional \$2.8 million for the redevelopment of SIMS to include the linking of students to the classes they are enrolled in. The last two budget cycles have seen the state funded operating budget for ESE's Information Technology group increase significantly to \$5.4 million/year. These funds are appropriated for the ongoing support of our information technology, data collection and data analysis systems and NOT for the development of the new components for which funding is requested in this proposal for a Statewide Longitudinal Data System grant. Massachusetts has already invested in several core features of a quality LDS and is requesting assistance in completing the key missing elements of a comprehensive education data collection, analysis, planning, and decision making system. The state has demonstrated a substantial commitment to ensure this system is well supported and maintained so that it is widely used for its intended purposes into the future. The state appropriated operating budget referenced above is adequate to provide ongoing support for both existing and with a modest request for additional funding in state FY 2011 the new LDS components that will be developed under this grant (refer to section 4, Institutional Support for more details).

2. Objectives of the Proposed System

2.1 Three Overarching Objectives

As outlined in section 1 above, Massachusetts has many of the components of a longitudinal data system. Missing are three key components of the architecture that when built, will enable Massachusetts policy leaders, educators, students and parents to benefit from a comprehensive, efficient and effective LDS. The following objectives address the three missing components and how they address the essential characteristics of an LDS highlighted in 1.1.1 (a) through (d).

2.1.1 Develop and Implement the Schools Interoperability Framework as the Engine for Massachusetts LDS Data Collection and Management.

(Note: This is our most critical need and highest priority objective.)

ESE currently has two major data collection systems to collect student (SIMS, see 1.2.1) and educator (EPIMS, see 1.2.2) data from school districts. There are additional data collection processes for targeted data collections from school districts, such as academic support programs (see 1.2.8) and graduate follow-up information (see 1.2.9), to meet federal reporting and policy requirements. The initial SIMS system development was completed in 2001; there have been significant enhancements to SIMS since that time but the core architecture has not changed. Initial EPIMS development was completed in time for the school year 2007-2008 data collection; there are enhancements being implemented for the school year 2008-2009 data collection.

Although the systems do bring together many pieces of programmatic, demographic and educator information, the "point in time" nature of the information and the lag in integrating it into reporting systems limits the usefulness of the data. A significant burden exists at the local

level, as each district begins the collection process by extracting files that will be uploaded to the state. Each collection encompasses a six-week collection window while the district works to provide error free files that meet all of the state business rules. Once the window is closed, additional error reports are reviewed and modifications can be made to the data sets as needed resulting in a full collection cycle that is ten weeks at completion.

Implementing changes into the current system as it stands requires a significant amount of resources at the state and local levels. Each time the state makes a change to the data being collected, there is a ripple effect across the districts where local systems must be adapted for the collection and transport of the required data.

The improved state system will streamline the data collection process and simplify making changes and additions. For example, by implementing SIF architecture we would be able to increase the number of data elements and frequency of extractions of data from districts to the state without increasing the reporting burden at the local level. SIMS is currently collected three times each year and EPIMS only once on a preselected date. Implementing a system based on the Schools Interoperability Framework specification will allow for dynamic changes as data collections expand without causing undo burden to the districts.

2.1.2 Establish An Interagency Readiness Passport System.

ESE will collect information from other departments within the Executive Offices of Education (EOE), Health and Human Services (EOHHS) and Labor & Workforce Development (EOLWD) that will be fed into our already existing Education Data Warehouse. (See Appendix A for a list of the agencies under these Executive Offices.) Once the information is loaded into the warehouse a series of reports will be available to support the work of these agencies with students and children across the state.

- (a) Establish a stronger foundation and more systematic protocols for the nascent Massachusetts pK-16 database.

The LDS grant will allow the ESE to move two major pilot initiatives into statewide systems that can be sustained over time:

- i. A plan to assign our unique student identifier (SASID) to children in publicly funded early childhood programs for the purposes of a continuous data stream through their transition to the K-12 education system.
- ii. A school to college database that involves matching Massachusetts' public high school graduates to Massachusetts post-secondary institutions, once again to provide a continuous data stream as students transition from high school to postsecondary education and training.

The ESE will take these initiatives to the next level of implementation and work to make the SASID assignment process seamless from infant/toddler care through public post-secondary enrollment. Currently, the ESE is working with the newly established Department of Early Education and Care to pilot the assignment of a SASID to children enrolled in their center based and home based programs and maintain that identifier through the child's enrollment

in the K-12 data system. The LDS grant will enable Massachusetts to implement this plan statewide so that all publicly funded early childhood program participants would be assigned a SASID that would remain with the student throughout their education.

The ESE and the Department of Higher Education (DHE) currently provide a “link” between public secondary and post-secondary data; however, these systems are not truly connected. With an LDS grant, the ESE and DHE would develop the system enhancements that would allow the storage of the SASID through public post-secondary education. In addition to expanding the longitudinal analyses from pK through the completion of public higher education, DHE is poised to conduct data matching with the employment and wage data maintained by the Massachusetts Revenue Department. Both ESE and DHE appreciate the privacy and confidentiality issues raised by this level of data matching across state services and systems and have already gained significant experience in this regard through their work with the Labor & Workforce Development and Revenue Departments to conduct such data matching with their enrolled adult education and job training students.

- (b) Establish a multi-staged process for linking education, health, human service and employment and training data.

We appreciate the significant privacy and data security standards that must be satisfied before any exchange of personally identifiable data can take place across services provided by state agencies. We anticipate establishing the foundation to do so in the following stages:

STAGE 1: Centralize current aggregate data, re, the “assets,” services and resources available, and “needs,” conditions that create demand for such services, from EOE, EOHHS and EOLWD. These data would then be organized into a suitable geographic distribution, e.g., by city/town, zip code, census block, or other geographic unit as determined by the Massachusetts Readiness Cabinet. These data, while not as powerful a lever as such profiles would be at the individual student level, can be implemented prior to resolving privacy issues and will still assist local personnel in their efforts to wrap services around at risk children and families. A prior pilot of Needs and Assets Profiles was greeted by Massachusetts cities/towns and school districts with great excitement and acclaim and several mayors indicated these data would guide local service planning for the following fiscal year. The absence of a systematic mechanism to continuously update these profiles and link them to a comprehensive LDS has dissipated this momentum.

STAGE 2: The Governor’s “Readiness Cabinet,” including the Secretaries of Education, Health & Human Services and Labor & Workforce Development, has identified the Student Passport System as its priority for policy development in 2009. With modest resources from the LDS grant, a working group comprised of policy, data and legal analysts from all participating state agencies will be convened to develop options to reconcile privacy and data security requirements with the goal of data sharing across the range of services needed by at risk children and families. Among the options under consideration is whether to extend the current “signed release form” approach already used by the adult education and training system.

2.1.3 Evaluation of the Feasibility of Regional Data Sharing Among Northeastern States

The ESE will use a portion of the grant funds to support initial participation in a program being led by Professor Steve Coelen from the University of Connecticut to look at a variety of student data across the nine states in the Northeast census region. Professor Coelen and his team are enlisting each of the nine states to participate in sharing data through a central repository to enable cross-state analysis from many areas including student, employer and institutional data. The project is modeled on work this team has already completed in Connecticut that includes several longitudinal databases not yet included in the Massachusetts LDS such as: high school curricula, college performance through matches with the National Student Clearinghouse, and subsequent employment and earnings histories. Further, this multi-state collaboration could, within the constraints of privacy and confidentiality requirements, enable Massachusetts to follow pK-16 students into eight geographically proximate states; this would constitute a major step forward in our efforts to verify transfers vs. dropouts and transitions to higher education and work. The ESE recognizes the potential benefits to policy and practice of this project and is looking forward to participating with Professor Coelen and the impressive team of researchers he has assembled (see section 3.4 for more detail and Appendix A for staffing information).

2.2 **Measurable Outcomes**

ESE commits to ten measurable outcomes by the end of the 2010-2011 school year. ESE will:

- 2.2.1 Develop, test and deploy a SIF vertical district to state reporting infrastructure.
- 2.2.2 Develop and implement a training protocol and data quality procedures to ensure that local data is accurately mapped to the state.
- 2.2.3 Pilot the SIF data system with 50 school districts by the 2010-2011 school year.
- 2.2.4 Load these data into the data warehouse through SIF systems for their more timely and efficient use by stakeholders at all levels.
- 2.2.5 Through the Readiness Cabinet working group
 - (a) Organize and disseminate Needs and Assets profiles for cities/towns and school districts by December 2009.
 - (b) Enlist the help of outside researchers and provide access to our data within the constraints of FERPA, HIPPA, and FIPA to evaluate our data and district practices during 2009.
 - (c) Evaluate the privacy and data security issues involved in sharing data across the range of education, health, human service, and employment and training services sponsored by state agencies by June 2010. Implement data sharing to the extent feasible and appropriate during state fiscal year 2011.
- 2.2.6 Have a SASID assignment for all public early childhood program participants by 2011.
- 2.2.7 Establish a true pK-16 data system by 2011 through work with the Dept. of Higher Education to ensure that the SASID follows students from secondary to post-secondary level.
- 2.2.8 The ESE will participate in a multi-state data sharing and research project led by the University of Connecticut to track students across a wider geographic area, assess the performance of our students in post-secondary education and employment, and integrate these findings in policy and the sharing of promising / best practices.

2.3 Anticipated Uses

As the ESE collaborates with districts, other Massachusetts state agencies, and the Northeastern States, we expect to learn more about the benefits and uses of the outcomes listed in this section than we have included in the Project Need section (Section 1) of this document. Other agencies bring different perspectives and provide more opportunities to take advantage of this project than one agency might anticipate. Preliminary inter-agency conversations have already yielded thoughtful suggestions for how this project will help their constituencies. For example:

- (a.) Timely data about academic progress and achievement would help inform the development of plans and the identification of services for children and youth in the care and custody of the state
- (b.) Data connections between and among the youth serving agencies and department would inform and improve the services plans for children, youth and families and provide for a more cost-effective and efficient approach to serving clients.
- (c.) In addition to improving public services for children and youth, a comprehensive integrated child and youth data warehouse and reporting system could support and innovate research and program evaluations across agencies and departments among the academic community.
- (d.) The integrated data system would enable the longitudinal study of select cohorts of children to identify their service needs, evaluate the effectiveness of specific services, or to plan for the development of innovative services or inter-agency collaborations for improved service delivery.
- (e.) With a comprehensive, integrated child and youth data system, researchers and policy makers will better understand what programs and services in what combinations lead to positive environments and outcomes for children, youth, and families.

3. Project Design

This project has four main components, two of which are focused on building the SIF infrastructure for ESE and for school districts to improve our data collections, the third is on joining the data collected with additional data from other agencies to build a more complete picture of each child, and the last is to join a consortium of states to share and analyze data.

3.1 Create SIF infrastructure at ESE.

The first task will be to create the infrastructure needed for ESE to receive data using the School Interoperability Framework (SIF) protocol:

- 3.1.1 ESE staff will work with the SIF Association through NCES/CCSSO to be trained on SIF to understand how to incorporate SIF into our existing enterprise architecture.
- 3.1.2 Our project manager and documentation specialist will then work with our technical and data collection staff to create an RFP for consulting assistance for the integration work necessary to design and implement this architecture.
- 3.1.3 Once RFP responses have been reviewed and a vendor chosen, we will award a contract and kick off the consulting engagement.

- 3.1.4 The engagement will begin with a gap analysis between the elements in our current data collection and the SIF data model, a mapping of the current data elements to SIF, and a design of how to capture the additional desired data elements using SIF.
- 3.1.5 Design integration points with our in-house systems, the SIF agent for our SIMS database, and modifications to our SIMS database to house any data created in the SIF transmission process. This will include both the SIF-based assignment of our SASID, as well as the transmission of student and staff demographic and assignment information.
- 3.1.6 As the final integration point, we will enable the transmission of data not only to SIMS but directly to the ESE data warehouse. Our data warehouse is built upon the IBM/Cognos platform so we will need to create a SIF agent that works with Cognos to pull and stage data to load into the 'local' district data area.

The next task will be to design and implement the actual SIF infrastructure known as Zone Integration Server (ZIS) architecture needed at ESE to receive the data:

- 3.1.7 Calculate the appropriate number of SIF infrastructure ZISs needed to receive data transmitted directly from the LEAs.
- 3.1.8 Define how the data collected from the LEAs in each zone through the ZISs will be consolidated statewide for the purposes of ESE internal use and ESE external reporting.

Once the architecture and integration points are complete, we will begin end-to-end testing of the ID assignment, data transmission and data reporting processes:

- 3.1.9 This will include functional unit testing to make sure data transmission takes place;
- 3.1.10 Data validation to ensure correct quantities and types of data are being transmitted;
- 3.1.11 Data reporting tests to ensure our existing reporting processes for aggregating student and staff data for EDEN, AYP and other reporting requirements work correctly in this architecture; and
- 3.1.12 Performance testing to ensure all tasks can be performed reasonably in the new system.

Project milestones for creating the SIF infrastructure at the ESE:

Year 1

- (a) Release RFP for SIF implementation assistance
- (b) Complete requirements analysis
- (c) Install ZIS servers for pilot

Year 2

- (d) Set up and test ID assignment
- (e) Set up and test student data collection
- (f) Implement SIF pilot for data warehouse

3.2 Create SIF infrastructure at School Districts (LEAs)

While we are creating the infrastructure to accept SIF-transmitted data at the ESE, we will need to work with the LEAs to build their capacity to send data within a SIF architecture.

- 3.2.1 Meet with the LEAs to discuss and plan goals for state reporting using SIF. We will go out to districts through information meetings to describe our project goals and raise interest for participation in the second phase of the project.
- 3.2.2 After clarifying the goals, we would provide training for LEAs on SIF.
- 3.2.3 Provide data quality trainings to LEAs to stimulate discussion on how SIF data collection may put pressure on data quality in new ways.
- 3.2.4 Determine exchange rules for LEA data exchange
- 3.2.5 We have identified a few LEAs in our state that already have or are deploying horizontal SIF implementations. We will select districts to participate in an initial pilot of first ID assignment, and then full state report transmission through the SIF architecture. Each stage of this pilot would go through both test and then 'live' transmission phases.
- 3.2.6 Analyze current student information systems (SIS) and number that are SIF compliant (15 current SISs), and do a gap analysis of how many districts need to reach compliance through upgrade, repurchase, or customization.

For the next phase we would offer a grant opportunity to invite districts who do not have SIF compliant systems to apply for grants to upgrade or purchase new SISs. The goal would be to ensure we have representation from all 15 SIS vendors represented statewide in our districts, and to involve an estimated 50 districts.

- 3.2.7 Design the competitive grant program.
- 3.2.8 The grant bid would be released to all districts.
- 3.2.9 Review and select grantees based on readiness, distribution among district size, geography, SIS vendors and data quality.
- 3.2.10 Set out timelines and expectations with grantees.

We will divide the grantee districts into early pilot and later pilot stages, work through ID assignment test and live transmissions, and then full reporting test and live transmissions, until all grantee districts are able to go through the entire SIMS cycle via SIF protocols. We will hold data quality reviews, to ensure that the districts understand that more frequent data transmissions require a more consistent attention to data quality.

- 3.2.11 Monitor and support through SIF setup and testing process.
- 3.2.12 Have the grantee districts perform 'local' data submissions to the data warehouse as well.

Project milestones for creating the SIF infrastructure in school districts:

Year 1

- (a) Complete gap analysis of district abilities to achieve SIF compliance
- (b) Test data exchange with pilot districts

Year 2

- (c) Release grant bid for district grant opportunities
- (d) Test and roll out ID assignment with pilot districts
- (e) Test and roll out student data collection with pilot districts
- (f) Test data exchange with data warehouse
- (g) Test and roll out ID assignment with grant districts
- (h) Test and roll out student data collection with grant districts

3.3 Expansion of Data Warehouse for the Readiness Passport System

The third aspect of our proposal is to expand our data warehouse to integrate data-sharing across state agency sponsored services. The first step would be to integrate the data systems of the three education agencies that comprise the Executive Office of Education. The three education departments, Early Education and Care, Elementary and Secondary Education, and Higher Education have recently been reorganized under a Secretary of Education.

- 3.3.1 This reorganization will facilitate data sharing across the agencies in this Secretariat; hence, our first implementation task would be to redevelop the successful preK-16 pilot previously conducted with the Board of Higher Education.
- 3.3.2 The SASID used by ESE will be incorporated into the higher education data system (HEIRS) in order to integrate these data into the data warehouse and thereby achieve a more integrated analysis of K-12 through postsecondary student performance.
- 3.3.3 Next we would work with the Department of Early Education and Care to complete a planned project to assign SASIDs to children enrolled in infant, toddler and preschool programs. The SASIDs will enable us to integrate these data into the data warehouse in order to analyze early program participation's impact on later academic performance. Our ability to integrate additional data elements in the future depends upon building this infrastructure for data sharing across all three Massachusetts public education systems.

Following the successful loading of education data into the data warehouse, the ESE would begin working with other agencies to load other data to be included in the Readiness Passport. The Project Manager and his or her team, with the input of the interagency council, will:

- 3.3.4 Determine the data that needs to be incorporated into the expanded warehouse design.
- 3.3.5 Design a data model to define how the data will fit into the system.
- 3.3.6 Design the framework of the system.
- 3.3.7 Design the reports that the warehouse will be able to produce.
- 3.3.8 Implement the data model and framework by building the physical database structures.

Once the framework for the Student Passport system has been designed and agreed upon, the work of moving data from the different agency systems to the ESE's data warehouse can begin.

- 3.3.9 Determine how to move the data from source systems to the warehouse.
- 3.3.10 Perform data analysis and QA.
- 3.3.11 Build and test the reports that have been designed.
- 3.3.12 Initiate and complete performance testing.
- 3.3.13 Initiate and complete performance tuning.

Given the complexity of legal issues regarding the sharing of personally identifiable information across agency boundaries, we will establish the two stages for implementation of this component referenced previously in section 2.1.2. **STAGE ONE** will entail sharing non-confidential data between agencies:

- 3.3.14 Identify critical educational, health, human service, employment and training assets and indicators of need relevant to serving at risk children and families.
- 3.3.15 Identify a suitable geographic unit (e.g., city/town, school district, zip code, census tract, etc.) and organize these assets and needs data associated with each such unit.
- 3.3.16 Integrate appropriate inter-agency data into the data warehouse.

STAGE TWO will be focused almost entirely on an interagency exchange of confidential data with our partners, the EOE, EOHHS and the EOLWD, while ensuring that the privacy and data security requirements for sharing data are met.

- 3.3.17 Legal analysis with agencies on data exchange
- 3.3.18 Requirements analysis with agencies

Project milestones for the expansion of data warehouse for the Readiness Passport System:

Year 1

- (a) Identify legal issues
- (b) Identify legal strategies

Year 2

- (c) Complete requirements analysis
- (d) Complete data model and reports design

Year 3

- (e) Complete ETL, data model, and reports implementation
- (f) Test data transmission from agency partners
- (g) Roll out reports

3.4 Evaluation of the Feasibility of Regional Data Sharing Among Northeastern States

One of the more vexing challenges states have faced as they strive to build more robust data systems in support of better policy and practice is how we end up doing so within a box framed by our state's borders. In addition to the obvious laments about "reinventing the wheel" are accompanying limitations in tracking student enrollments and successes when they move to other states and in using a broader and deeper pool of data and expertise to guide policy development and the identification of promising practices. Professor Coelen and an impressive team of colleagues (refer to Appendix A) have approached the New England states, New York and New Jersey with a proposal to transcend these limitations as part of our efforts to build state LDSs.

As background, between 2005 and 2007, Professor Stephen Coelen and colleagues at the University of Connecticut undertook "Next Steps Connecticut," a study of the relationship between Connecticut high school students' assessment test results, their demographic characteristics and their successes in subsequent higher education and/or employment. Undertaken with funding primarily from the Nellie Mae Education foundation and the Connecticut State Department of Education (CSDE), the study assembled longitudinal databases including self-reported high school education curricula (from College Board's SDQ data), middle and high school assessment test scores (CSDE data), college attendance (National

Student Clearinghouse (NSC) and performance therein (CT public college transcript data), and employment and earnings histories (CT DOL data) for five cohorts of grade 10 Connecticut public high school students (1996–2000, 170,064 students). Utmost concern and respect was given to the privacy and confidentiality of data of individual students, schools and employers.

Building upon this experience, Professor Coelen has invited the New England states, New Jersey and New York to join a multi-state collaboration to evaluate the feasibility of regional data sharing among them. In addition to Massachusetts, New York, New Jersey, Connecticut, Rhode Island, Maine and New Hampshire are interested in joining this initiative. The project entails:

- 3.4.1 Developing a plan for obtaining data from participating states on the post-secondary school and labor market experiences of in-state high school graduates.
- 3.4.2 Developing a plan to extend the tracking of students across states both during their K-12 years as well as into the next steps of post-secondary education, training and employment. This will enable each state to further refine key measures such as dropout and graduation rates as well as broaden the universe of data available for program evaluation.
- 3.4.3 Conducting a full policy and legal analysis of privacy and confidentiality requirements related to sharing data across states and developing a plan for how to do so while complying with these requirements. This plan would include preliminary strategies for providing differential access by type of user by type of information.
- 3.4.4 Analyzing prospective and retrospective data longitudinally to evaluate policies and practices for improving student achievement overall, by subgroups and by cohorts.

3.5 Governance

ESE has established processes for large projects involving multiple stakeholders. For our recent educator data collection (EPIMS), we performed requirements analysis with internal ESE users and pilot districts, as well as policy stakeholders such as statewide professional organizations. The pilot district groups were involved in all steps of designing, testing and rolling out the application. For the data warehouse project, we established an ESE / district user groups to gather feedback and provide support and a data warehouse steering committee composed of both district and ESE representatives to set strategic priorities for the initiative. We expect to expand the steering committee to include interagency partners to support the third component of this project. These efforts provide the strategic framework and direction for large projects to make sure that there is a shared definition of success for all parties. For day-to-day management, project managers assigned to large projects are expected to be in regular communication with the CIO and Director of IT on planning, budget, progress and unexpected issues. The supervisors of the combined technology and data teams, along with project managers, hold a weekly status meeting in which current progress, near-term milestones and outstanding issues for all current projects are reviewed, and action steps identified and assigned as needed. In addition, each project manager is expected to hold weekly status meetings for their particular project at which they review progress and issues in more detail, discuss any questions needing resolution to move forward and plan for next milestones. This multilayered model has provided our large projects with goals, accountability and support throughout the project cycle. The CIO meets weekly with the Sr. Associate Commissioner of Education and provides detailed updates of progress on major projects and ongoing operations.

4. Institutional Support and Sustainability

The Massachusetts proposal to complete its longitudinal data system has the strong support of Commissioner of Elementary and Secondary Education Mitchell Chester and Secretary of Education Paul Reville. Both of our state's top educational leaders have committed the staff and related resources during development and for the ongoing operations of the LDS including system maintenance, quality control and user training. The vision of interoperable data exchange and analysis between agencies has the support of EOE Secretary Paul Reville as well as EOHHS Secretary Dr. JudyAnn Bigby and EOLWD Secretary Suzanne Bump (Refer to Appendix A for their letters of support and commitment).

Such promises are more easily made than kept. Massachusetts has demonstrated its commitment to building and sustaining education data systems. As previously highlighted in section 1.2, the state has previously committed \$2 million in IT Bond funding for EPIMS, an initial \$5.2 million for the data warehouse purchase (including unlimited licenses for 390 school districts, 1,900 schools, 80,000 educators, 1,000,000 students and their parents, 550 employees of the Department of Elementary and Secondary Education and state elected and policy leaders), an increased IT operating budget over the last two years from \$776,000 to \$5.4 million/year. These commitments to a more robust education data system have been made during a period of severe state revenue constraints and by scaling back on other priorities. This grant proposal would provide critically needed funding not available from the state to build a robust and efficient data collection system via implementation of the Schools Interoperability Framework (SIF), the development of a Readiness Passport System to enable "wrap around services" for at risk students, and extend the reach of data tracking to adjoining New England and mid-Atlantic states as well as to the National Student Clearinghouse in support of data analysis. The production support for the implementation of SIF protocols can be covered by existing database administrators and developers. The Department is prepared to cover ongoing operational costs with existing resources in FY 2010 and will request increased budget support in the FY 2011 state budget for additional district support specialists to provide additional support for school district SIF implementations.

In addition, Massachusetts Governor Deval Patrick recently released his Readiness Project, a ten-year plan for the next phase of education reform. One of the highlighted components of the plan is for a "Readiness Passport" which would make a variety of education and other relevant life data on students available for education officials and other state agencies throughout the Commonwealth. The Governor has convened a "Readiness Cabinet" comprised of the Secretaries of Education, Health & Human Services, and Labor & Workforce Development to coordinate policy and implementation initiatives across the state agencies under their leadership. They are committed to selecting a single priority focus for their work each year – the priority for 2009 is the development of the Student Passport. Further, the Governor has also appointed a blue ribbon commission to identify the costs and revenue sources for the implementation of Readiness Project goals. Each Secretariat is committed to applying necessary resources to sustain the initiatives, such as the Student Passport, launched to implement the Readiness Project.

ESE supports a scalable and stable technology infrastructure extendible to support new projects. We host our own data center and in November 2008, we will be relocating over 130 servers to a custom-designed data center being built in our new building. The new data center will be

running on top of a brand-new fiber backbone network, with a 30Mbps burstable internet connection. ESE primarily runs a J2EE/Oracle/Windows application architecture platform, with traffic directed by a load-balancing switch and a cluster of J2EE application servers to flexibly manage additional traffic. We also support a full test environment to be able to perform replicable tests in advance of deployment. Our staff DBAs and system analysts monitor the environment, providing hands-on support. (For details on staff qualifications, refer to section 6).

5. Project Management Plan

5.1 Leadership and Governance

5.1.1 Leadership and Organizational Structure

Mitchell D. Chester, the Massachusetts Commissioner of the Elementary and Secondary Education, has stipulated the urgent need for collecting and analyzing data to inform policy and improve instruction. This proposal to move the Massachusetts data collection to a SIF infrastructure to increase the frequency and quality of data collection is an important step towards meeting that need. The Sr. Associate Commissioner of Education, Bob Bickerton, will oversee this project as the policy lead and serve as the project lead until a new Chief Information Officer (CIO) is hired and fully integrated into the Department's information technology and information services operations overall, and this LDS project in particular. The Chief Information Officer will sustain a strong involvement throughout the multi-year period of an LDS development as overall project lead and ensure a smooth and effective transition to its ongoing operations. The Director of Information Technology oversees ESE's technology infrastructure, development projects, and ongoing support of applications. The CIO and Directors of IT, Data Collection and Data Analysis are responsible for on time, on budget and delivery of milestones and final products and management controls. The LDS Project Manager and Team Leader (see 5.2.3) will report to the I.T. Director who in turn reports to the CIO. The Director of Data Collections who also reports to the CIO will be part of the planning team. [Refer to Appendix A for the Organizational Chart and Section 6 for a summary of the qualifications of this leadership team.]

Governor Patrick has appointed a "Readiness Cabinet" comprised of the Secretaries of Education, Health & Human Services and Labor & Workforce Development. They have selected the "Readiness Passport" and the data systems that will support it as their first priority project for 2009. Commissioner Chester, Secretary Bigby and Secretary Bump will provide overall policy direction and support to objective 2.1.2, "Establish an Interagency Readiness Passport System."

5.1.2 Coordination of Leadership, Management and Governance

Every member of the leadership team, from the Governor, to the Readiness Cabinet, to the ESE managers in charge of the LDS project's planning and implementation are firmly committed to proceeding with every aspect of this work in partnership with district and school leaders, other educational professionals, and the providers of other services essential to the success of at risk children and families. The Data Warehouse Steering Committee and the many User Groups described in section 3.4 of this proposal will ensure that leadership from the bottom up converges with leadership from the top in order to achieve broad ownership of an exemplary

comprehensive, interoperable, efficient and effective Massachusetts longitudinal data system. This approach of broad ownership will sustain a sense of parallel co-development and minimize the number of differences that may occur. In the event of differences, the Commissioner or Readiness Cabinet will make the final determination as appropriate.

5.2 Project Managers

The key management functions for this proposal will fall to the three project managers that will be hired with grant funds:

5.2.1 ESE SIF Project Manager

The ESE SIF Project Manager will lead the move of ESE collections to a SIF infrastructure. Along with the Documentation Specialist, this Project Manager will work with current ESE IT staff to develop an RFP to solicit consultants to fully integrate a SIF architecture at the ESE. The ESE SIF Project Manager will also lead the integration of the SIF architecture with the ESE Data Warehouse. The ESE SIF Project Manager will report to the Interagency / Readiness Passport Project manager and will receive additional support and direction from the IT Director.

5.2.2 LEA SIF Project Manager

The ESE will hire a second Project Manager to oversee the SIF integration project from the school district (LEA) perspective. This Project Manager will be responsible for developing the pilot program for a number of districts to lead the implementation of a SIF architecture in the pilot school districts. In addition, this Project Manager will lead the RFP process for district grants to upgrade existing or purchase new student information systems to integrate with a SIF architecture. The LEA SIF Project Manager will report to the Interagency / Readiness Passport Project Manager and will receive additional support and direction from the IT Director.

5.2.3 Readiness Passport / Interagency Project Manager and Team Leader

The third Project Manager will lead the interagency focus of the proposal and be responsible for convening an interagency working / advisory group that will focus on the policy, legal and technical barriers to integrating each agency's data system. This Project Manager will work with representatives from the Executive Office of Education to ensure responsiveness to policies and priorities identified by the Readiness Cabinet. This Project Manager will also share the liaison role with the Directors of Data Collection and Data Analysis (5.2.4) to the "Evaluation of the Feasibility of Regional Data Sharing Among Northeastern U.S. States" project led by Professor Steve Coelen. The ESE SIF Project Manager will also serve as the team leader and overall project manager across all three projects and will report directly to the IT Director Jennifer Goree (refer to section 6 and Appendix B for Ms. Goree's qualifications) who, in turn, reports directly to the CIO (to be hired; refer to section 6 for required qualifications and experience).

All three of the Project Managers will work closely with the ESE's Data Warehouse Steering Committee, led by the state funded DW Project Manager. This committee will serve as the lead advisory committee for this project and will be expanded to include experts on each of the three

projects and legal representation to assist with concerns regarding privacy laws. The DW Steering Committee has worked with the ESE for the past two years to advise work on the Data Warehouse from both district and state perspectives. Current members of the DW Steering Committee can be found in Appendix A. [Refer to section 3.4 for more detail on ESE's technology development governance structure.]

The Project Managers will hold weekly progress meetings throughout the course of the project and develop/monitor a master project plan using MS Project. Once the project plan has been developed, it will serve as the baseline for project monitoring. The Project Managers will submit written monthly reports to the Director of Information Technology highlighting accomplishments during the month and identifying any potential barriers for meeting the project's objectives that may have surfaced during this time. All amendments to the project plan will be documented in writing and submitted to the Director of Information Technology. For each outcome detailed in this narrative, the Project Managers will head a working group; each working group will develop the supporting materials and the detailed design and implementation of the system under the supervision of the Project Managers. During the development and testing phases of the project, the Project Managers will be responsible for coordinating testing, deployments and releases of all code developed for the project components.

Several state funded members of the current ESE I.T. management team have been involved with the design and development of core systems for several years. Section 6, Project Personnel of this narrative, identifies these contributors. The Data Warehouse supervisor will work with all three Project Managers on all aspects of the project concerning the data warehouse, including pulling data into the warehouse through a SIF architecture, loading interagency data, and making the data available through the data warehouse. The Production Support (programming) supervisor and Database Administration supervisor will work closely with the consultants to integrate the SIF architecture appropriately into our existing enterprise architecture, and will review all technical deliverables for the integration.

The Project Managers, with assistance from the Director of Information Technology, the CIO and the Sr. Associate Commissioner, will devote the necessary time and resources (see section 6 for details) to take advantage of the expertise of various offices within the ESE and other agencies including the Executive Office of Education and the Executive Office of Health and Human Services. The Information Technology unit at the ESE has a rich history of collaboration with state agency and district partners and will continue to maintain that blueprint.

5.3 Data Collection and Data Analysis Directors and Teams

The state funded Director of Data Collection will be part of the working group to complete the requirements for the data collection and district training outcomes. This Director will also serve as part of the core staff team supporting the work of the Data Warehouse Steering Committee and as one of three liaisons to the "Evaluation of the Feasibility of Regional Data Sharing Among Northeastern U.S. States" project led by Professor Steve Coelen. The supervisor of the Data Quality Office, who reports to the Director of Data Collections, will coordinate activities with the relevant Project Managers to complete the cross-validation between systems.

The state funded Director of Data Analysis will conduct a thorough review of all data elements captured through the new SIF architecture to ensure that collections provide everything necessary for required reports as well as the development and evaluation of policy and for driving continuous improvement of practice. This Director will also serve as part of the core staff team supporting the work of the Data Warehouse Steering Committee and as one of three liaisons to the “Evaluation of the Feasibility of Regional Data Sharing Among Northeastern U.S. States” project led by Professor Steve Coelen.

6. Project Personnel and Resources

Permanent staff are included here as integral to the success of the project. The prorated salaries of these staff (an estimated \$500,000, see Time % column below) will be provided at state expense to support the project and will not be funded through the LDS grant.

Position	Staff	Title	Time
Overall Policy Lead	Bob Bickerton	Sr. Associate Commissioner of Education	10%
Overall Project Lead	TBH	Chief Information Officer	10%
Technical oversight	Jen Goree	Director, IT	15%
Integration Lead	Sadasy Van	Supervisor, Production Support	15%
Database liaison	Dan Boyle	Supervisor, Database administration	20%
Data Warehouse lead	TBH	Data Warehouse Project Manager	25%
Data collection oversight	Helene Bettencourt	Manager, Data Collection	15%
Data analysis oversight	Rob Curtin	Manager, Data Analysis and Reporting	15%
Subject matter experts	MaryAnn Donie	Supervisor, District support	20%
	Dave Mitchell	Network Infrastructure	5%

6.1 Brief Highlights of State Funded Staff Qualifications and Experience (full resumes can be found in Appendix B)

Bob Bickerton: Sr. Associate Commissioner of Education.
Teacher and educational administrator/manager/policy leader for 35 years; oversees Student Assessment, Educator Preparation & Quality, Educator Licensure, Adult & Community Learning Services, and Information Services & Technology. Strong technical training in undergraduate and post-graduate studies. Experience includes direct project management of a Web based transactional program management, data collection and warehouse developed in-house for 250 adult education programs.

Jen Goree: Director of Information Technology
14 years of experience in software engineering and IT management; degree in computer science; Oversees ESE programming, web, network administration, database administration, data warehouse and desktop support teams. Experience includes direction of ESE data warehouse initiative, direction of ESE data center move and technical oversight of EPIMS data collection. Previous experience includes 5 years in school district information management and 5 years in software industry.

- Sadasy Van: **Supervisor of Production Support**
 10 years of supervisory experience of production system
 Windows 2000-2003, Exchange Server, Oracle, SQL Server, ArcServe
 Enterprise backup. Design and Management of database driven Web sites. C#, ASP.net, ASP, HTML and JavaScript programming. LAN to Internet connection configuration and setup (including proxies and security system).
- Dan Boyle: **Supervisor of Database Administration**
 Over 12 years of experience in database administration in a production and development environment and over 3 years of server administration.
 Databases: Oracle 10g/9i/8i/7, Microsoft SQL Server, Sybase, Informix
- To Be Hired: **Data Warehouse Project Manager**
 A minimum of 5 years experience managing enterprise wide systems, preferably a data warehouse application. Understanding of database reporting and data warehouse concepts. Experience with Cognos data warehouse tools preferred. PMI certification or other documented project management certification preferred
- Helene Bellencourt: **Manager of Data Collection**
 Managed Data Collection unit for 10 years.
 NCES, National Forum on Education Statistics State Representative for 9 years; 2007-2008 National Statistics Agenda Committee, vice-chair; 2008-2009 National Statistics Agenda Committee, chair.
- Robert Curtin: **Manager of Data Analysis and Reporting**
 Led Data Analysis and Reporting Team for the last 5 years.
 Massachusetts CSPP and EdFacts Coordinator;
 Member, CCSSO Permanent Standing Task Force on General Statistics;
 2006-07 Chairperson, EIMAC General Statistics Subcommittee;
 2007 Member, CCSSO Working Group on Calculating Graduation Rates

6.2 The Existing State Funded ESE I.T. Infrastructure

ESE has on-staff experience in production/programming, database, web and network support teams. These teams maintain our web application server infrastructure, J2EE architecture, student information databases, and secure network. ESE staff support includes:

- The Network Administration group who maintain file servers, the data center infrastructure and security standards.
- Production Support group is responsible for development, testing and maintenance of all software applications. This group includes a lead Database Administrator who manages the development and production of all databases.
- Data Collection staff are responsible for secure data collections, e.g., SIMS and EPIMS. District Support staff work with school districts to assist in the transmission of data collections.
- Data Analysis & Reporting unit will compile, draft and provide all federal / state data reports.

6.3 Positions to be Hired Under the LDS Grant

Each separate project component in this narrative will make differential demands on the LDS funded contract positions found in the following chart. As the resumes in Appendix B indicate, the ESE will build upon past project experience (SIMS, EPIMS and Data Warehouse development) to ensure that the contracted positions hired using grant funds have the expertise and qualifications necessary for this project. The descriptions below of contracted staff correlate to the description of activities located in section 3: Project Design.

LDS Grant Positions	Description of Contracted Positions
Project Managers (3) 1 each for objectives 2.1.1, 2.1.2 and 2.1.3	The ESE project managers will monitor all project milestones for these projects to ensure they have been met and the projects are on time and within budget. The project managers will coordinate and oversee all collaborative commitments. <u>Qualifications:</u> The project managers will have experience in project planning and the use of project management tools along with the knowledge of change management principles, procedures and methodology
Data Analyst (1)	The data analyst will analyze available data to inform program reporting and evaluation. <u>Qualifications:</u> The ability to analyze and determine the applicability of educational data, knowledge of research issues in education and experience with managing and developing large data sets and databases.
Quality Assurance Analyst (1)	The contract quality assurance staff will create test plans, test scenarios and test cases in accordance with ESE system testing standards. The tester will execute the test cases and perform and monitor test results. <u>Qualifications:</u> Ability to evaluate and test new or modified programs and development procedures used to verify that programs function according to user requirements and conform to establishment guidelines
Documentation Specialist (1)	The documentation specialist will work on the publication of any RFRs associated with the project, manage both publications to districts and the internal tracking of documents. <u>Qualifications:</u> Experience in technical writing in support of the software development process, as well as experience writing for non-technical audiences.
Regional Collaborative Liaison (1)	The regional collaborative liaison will work with Professor Coelen from the University of Connecticut to share our data safely with other states in the northeast for research purposes. <u>Qualifications:</u> Knowledge of research issues in education and experience with managing and developing large data sets and databases.

Project Narrative

Other Narrative

Attachment 1:

Title: Pages: Uploaded File: 1236-MassAttachments.pdf

Project Timeline

ESE SIF Architecture	Year 1 (March 2009-Feb. 2010)– Months 1-12											
	1 M	2 A	3 M	4 J	5 J	6 A	7 S	8 O	9 N	10 D	11 J	12 F
Hire Project Manager	X	X	X									
Train ESE Staff on SIF	X	X	X									
Write and post RFP	X	X	X									
Hire Data Analyst	X	X	X									
Review RFP Responses; select vendor				X	X	X						
Negotiate and sign vendor contract				X	X	X						
Hire documentation specialist				X	X	X						
Requirements analysis for SIF element				X	X	X	X	X	X			
ZIS architecture analysis and design							X	X	X			
Purchase servers and software										X	X	X
Install and configure ZIS										X	X	X
Design templates for data exchange										X	X	X
Design SIF agent for SIMS database										X	X	X
Data Collection gap analysis										X	X	X
Review data validation process												
ESE SIF Architecture	Year 2 (March 2010-Feb. 2011)– Months 1-12											
	1 M	2 A	3 M	4 J	5 J	6 A	7 S	8 O	9 N	10 D	11 J	12 F
Implement templates for ID assignment	X	X	X									
Design and test SIF agent for SIMS database	X	X	X									
Design and implement changes needed to SIMS database	X	X	X									
Test ID assignment	X	X	X									
Design templates for student data collection	X	X	X									
Implement templates for student data collection				X	X	X						
Test student data collection				X	X	X						
Deploy rest of ZIS architecture to support all districts				X	X	X						
Check EDEN reporting valid from test of student data collection				X	X	X						
Performance testing							X	X	X			
Design SIF agent for data warehouse							X	X	X			
Implement and test SIF agent for data warehouse							X	X	X			

District SIF Integration	Year 1 (March 2009-Feb. 2010)– Months 1-12											
	1 M	2 A	3 M	4 J	5 J	6 A	7 S	8 O	9 N	10 D	11 J	12 F
Hire Project Manager	X	X	X									
Kick off discussions with existing SIF districts	X	X	X									
Identify level of SIF implementation at existing SIF districts	X	X	X									
Identify SIF readiness level of all state SIS vendors				X	X	X						
Analyze whether existing SIF districts can pilot ID assignment				X	X	X						
Present project goals and timelines to districts				X	X	X						
Provide SIF training to districts				X	X	X						
Meet with state SIS vendors to outline project goals and timeline				X	X	X						
District compliance gap analysis							X	X	X			
Review district SIF data quality issues							X	X	X			
Answer district questions about project							X	X	X			
Test pilot districts ability to exchange data with ESE										X	X	X
Discuss ID assignment process with pilots to drive data exchange design										X	X	X
Draft RFP for district grants										X	X	X
Determine budget for potential grant awards										X	X	X

District SIF Integration	Year 2 (March 2010-Feb. 2011)– Months 1-12											
	1 M	2 A	3 M	4 J	5 J	6 A	7 S	8 O	9 N	10 D	11 J	12 F
Test ID assignment with pilot districts	X	X	X									
Release RFP for district grants	X	X	X									
Review grant responses and award grants	X	X	X									
Live ID assignment with pilot districts	X	X	X									
Test student data collection with pilot districts				X	X	X						
Live student data collection with pilot districts				X	X	X						
Kickoff meeting with grant districts				X	X	X						
Identify timelines and requirements for grant districts				X	X	X						
Test of pilot district local data exchange with data warehouse							X	X	X			
Live pilot district local data exchange with data warehouse							X	X	X			
Test of ID assignment with grant districts							X	X	X			
Live ID assignment with grant districts							X	X	X			
Test of student data collection with grant districts										X	X	X
Live student data collection with grant districts										X	X	X
Review of remaining non-SIF districts and discussion of action plans for possible SIF compliance										X	X	X

Data Warehouse Expansion	Year 1 (March 2009-Feb. 2010)– Months 1-12											
	1 M	2 A	3 M	4 J	5 J	6 A	7 S	8 O	9 N	10 D	11 J	12 F
Hire project manager	X	X	X									
Kick off interagency analysis team	X	X	X									
Identify major data points interested in sharing	X	X	X									
Legal analysis				X	X	X	X	X	X			
Draft and review strategies for working within legal framework							X	X	X			
Identify which shared data points have workable legal contexts										X	X	X
Choose interagency data sharing projects based on legal viability										X	X	X
Data Warehouse Expansion	Year 2 (March 2010-Feb. 2011)– Months 1-12											
	1 M	2 A	3 M	4 J	5 J	6 A	7 S	8 O	9 N	10 D	11 J	12 F
Requirements analysis with identified partner agencies	X	X	X									
Data specification				X	X	X						
Report specification				X	X	X						
Data model design							X	X	X			
Framework design							X	X	X			
Security model design							X	X	X			
Reports design										X	X	X
Data Warehouse Expansion	Year 3 (March 2011-Feb. 2012)– Months 1-12											
	1 M	2 A	3 M	4 J	5 J	6 A	7 S	8 O	9 N	10 D	11 J	12 F
Data model implementation	X	X	X									
Data transmission design and implementation	X	X	X									
ETL design and implementation	X	X	X									
Security implementation	X	X	X									
Data analysis and QA	X	X	X									
Data model and framework implementation				X	X	X						
Report implementation				X	X	X						
Report QA				X	X	X						
Data transmission pilot							X	X	X			
Report system testing							X	X	X			
Performance testing										X	X	X
Performance tuning										X	X	X
Data sharing kickoff										X	X	X

Project Timeline

Regional Data Sharing	Year 1 (March 2009-Feb. 2010)– Months 1-12											
	1 M	2 A	3 M	4 J	5 J	6 A	7 S	8 O	9 N	10 D	11 J	12 F
Meet with Prof. Coelen	X	X	X									
Hire Researcher				X	X	X						
Begin MOU Process							X	X	X			
Meet with Advisory Group and Prof. Coelen							X	X	X			
Regional Data Sharing	Year 2 (March 2010-Feb. 2011)– Months 1-12											
	1 M	2 A	3 M	4 J	5 J	6 A	7 S	8 O	9 N	10 D	11 J	12 F
Share Data				X	X	X						
Develop Reports				X	X	X						
Plan for Release of Findings										X	X	X
Regional Data Sharing	Year 3 (March 2011-Feb. 2012)– Months 1-12											
	1 M	2 A	3 M	4 J	5 J	6 A	7 S	8 O	9 N	10 D	11 J	12 F
Share Findings	X	X	X									

Appendix A

Research and Evaluation Advisory Group Members

Ethan Cancell, Ed.D.	Associate Director, Assessment, Data Analysis, Research, and Evaluation	Brockton Public Schools
Ellie Drago-Severson, Ed.D.	Associate Professor of Education	Teachers College, Columbia University
Daphne Kenyon, Ph.D.	Principal	D. Kenyon and Associates
	Research Fellow	Lincoln Institute for Land Policy
	Member	New Hampshire Board of Education
Steven Rivkin, Ph.D.	Professor of Economics	Amherst College
Magaly Ronan	Elementary Mathematics Support Specialist	Lowell Public Schools
Gavin Samms, Ph.D.	Research Director, American Inequality Project	Harvard University
	Partner and co-founder	Legacy Solutions Group

Educational Personnel Advisory Council Members

Frances Cooper-Berry	Staff Developer	Cambridge Public Schools
Linda Davis-Delano	Past President	Mass. Association of Colleges for Teacher Education (MACTE)
Fred Fuentes	Asst. Superintendent for Equity & Diversity	New Bedford Public Schools
Barbara Garvey	Teacher	Brockton Public Schools
Elizabeth Gushov	Teacher	Wilmington Public Schools
Denise Hammon	Vice President for Policy and Research	Association of Independent Colleges and Universities, Massachusetts
Marcia Horne	President	Commonwealth Teacher Education Consortium (COMTEC)
Stacey DeBoise Luster, Esq.	Human Resource Manager	Worcester Public Schools
Eileen Lee	Director of Improving Teacher Quality Grants	MA Board of Higher Education
Donald McCallion	Executive Director	Mass. Association of School Personnel Administrators (MASPA)
Peter Mili	Teacher	Cambridge Public Schools
Phyllis Renton-Walt	Coordinator/Professor: Early Childhood Education	Massachusetts Bay Community College
Ray Shurtleff	Educational Consultant	EPAC Chair
Nora Todd	Professional Development Specialist	Massachusetts Teachers Association
Philip Veysey	Director of Education Policy	American Federation of Teachers Massachusetts (AFT of Massachusetts)

Regional Data Sharing Among Northeastern States Key Personnel

Professor Steve Coelen, Managing Partner, WISER LLC, World Institute for Strategic Economic Research Located at Holyoke Community College. Research Professor in Economics, University of Connecticut, Connecticut Center for Economic Analysis, UConn Center for International Business and Education Research (CIBER). Adjunct Professor, University of Fort Hare, Eastern Cape, Republic of South Africa. Professor Emeritus, University of Massachusetts at Amherst.

Dr. Jacob Benus, V.P. and Executive Director for Research at IMPAQ International, LLC, is a senior economist with 25 years of experience in directing studies rigorous evaluation studies including for employment and job training programs.

Fred Carstensen, Professor of Economics and Director of the Connecticut Center for Economic Analysis, runs both a demographic and economic forecast for the State of Connecticut.

Professor Michael Kirst, Professor Emeritus of both Business Administration and Education of Stanford University. Formerly staff Director of the U.S. Senate Subcommittee on Manpower, Employment and Poverty and president of the California State Board of Education.

Dr. Pat Forgione, Superintendant of the Austin Independent School District. Formerly head of NCES and Connecticut DOE Director of Research.

Dr. Ray Pechione, Co-executive Director of the Stanford University School Redesign Network. Formerly directed assessment policy in Connecticut.

Dr. Douglas Rindone, senior consultant to the Council of Chief State School Officers in Washington D.C., is coordinator for the states of Technical Issues in Large-Scale Assessment (TILSA) Committee.

Massachusetts State Agencies Contributing to Readiness Passport

Executive Office of Education (EOE), Paul Reville, Secretary

- Department of Early Education and Care
- Department of Higher Education
- Department of Elementary and Secondary Education

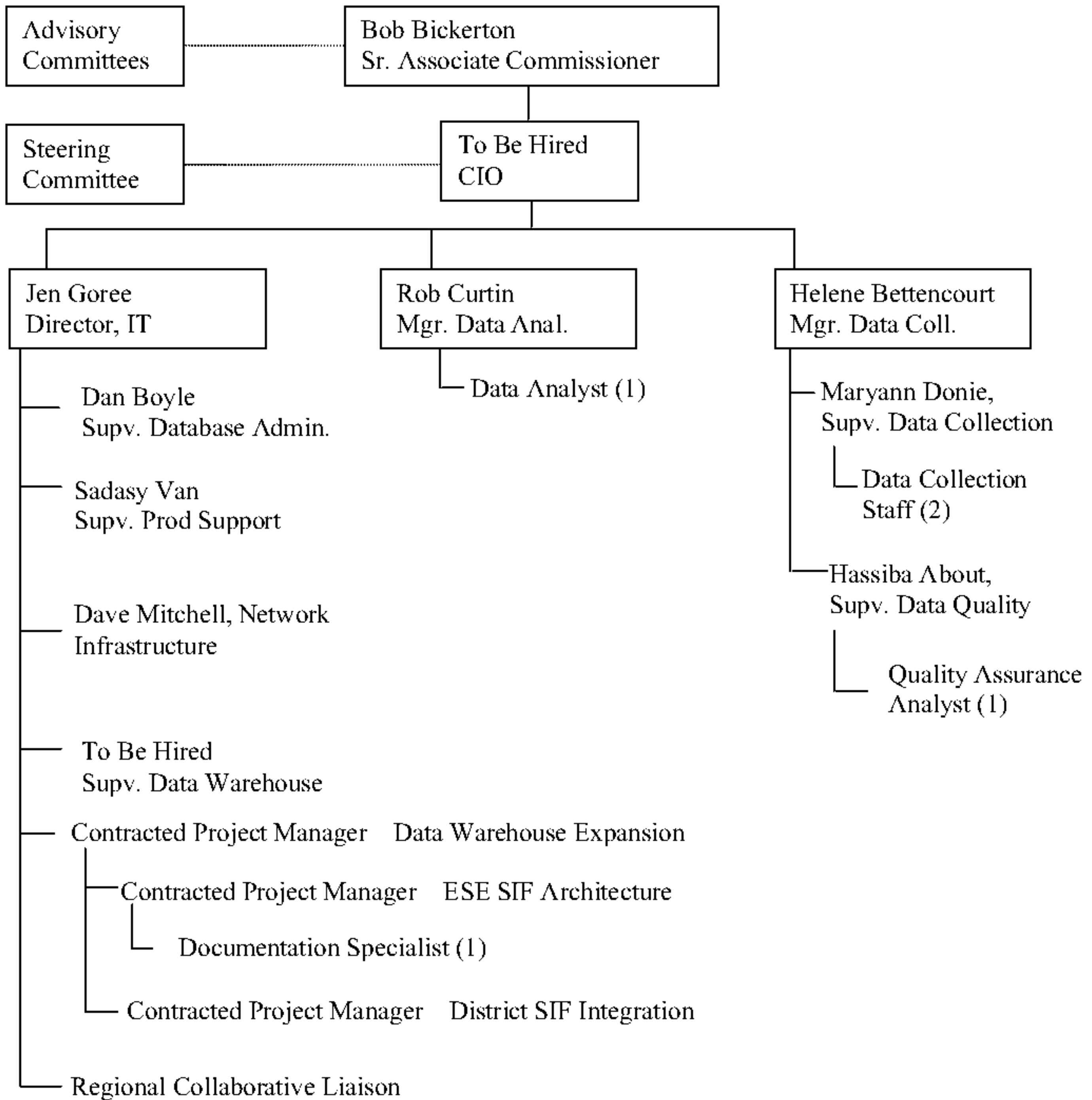
Executive Office of Health and Human Services (EOHHS), Dr. JudyAnn Bigbie, Secretary

- Office of Health Services
 - Department of Public Health
 - Department of Mental Health
 - Division of Health Care Finance and Policy
- Office for Disabilities and Community Services
 - Department of Mental Retardation
 - Massachusetts Rehabilitation Commission
 - Governor's Commission on Mental Retardation
 - Massachusetts Commission for the Blind
 - Massachusetts Commission for the Deaf and Hard of Hearing
- Office of Children, Youth and Families Services
 - Department of Children and Families
 - Department of Transitional Assistance
 - Department of Youth Services
 - Office for Refugees and Immigrants
- Executive Commission for Homeless Services Coordination

Executive Office of Labor and Workforce Development (EOLWD), Suzanne Bump, Secretary

- Department of Workforce Development
 - Commonwealth Corporation
 - Division of Apprentice Training
 - Division of Career Services
 - Division of Unemployment Assistance
 - Division of Employment and Training
- Massachusetts Workforce Investment Board
- Department of Labor
 - Division of Occupational Safety
 - Labor Relations Commission
 - Division of Labor Relations
 - Joint Labor Management Committee
 - Department of Industrial Accidents

ESE Organizational Management Structure



EDWARD M. KENNEDY, MASSACHUSETTS, CHAIRMAN

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PAT ROBERTS, KANSAS
WAYNE ALLARD, COLORADO
TOM COBURN, M.D., OKLAHOMA

J. MICHAEL MYERS, STAFF DIRECTOR AND CHIEF COUNSEL
KATHERINE BRUNETTY MCGUIRE, MINORITY STAFF DIRECTOR

United States Senate

COMMITTEE ON HEALTH, EDUCATION,
LABOR, AND PENSIONS

WASHINGTON, DC 20510-6300

<http://help.senate.gov>

September 25, 2008

Dr. Grover Whitehurst
Director
Institute of Education Sciences
U.S. Department of Education
555 New Jersey Ave, NW
Washington, DC 20208

Dear Dr. Whitehurst:

I am writing to express my strong support for the application by the Massachusetts Department of Elementary and Secondary Education for a grant under the Statewide Longitudinal Data System Grants program. The project proposed by the Department seeks to increase the capacity of existing data collection systems in Massachusetts, and to ensure that such systems support the sound development, evaluation, and sustainability of public education reforms in our Commonwealth.

Massachusetts was one of the first states in the nation to establish a system to individually collect essential demographic and program information for its nearly one million students. The Commonwealth's Student Information Management System has supported the Massachusetts Comprehensive Assessment System as well as the state's accountability structure for elementary and secondary schools.

In 2007, Massachusetts enhanced its commitment to collecting and analyzing meaningful data with the implementation of the Educator Personnel Information Management System. This new system better tracks demographic and work assignment data for school personnel and strengthens the Commonwealth's ability to anticipate the employment needs of districts.

To complete its work in this area, Massachusetts is seeking to expand and re-engineer the existing data-collection system, in order to strengthen connections between the Executive Office of Education and the Executive Office of Health and Human Services. These new connections will provide a more comprehensive picture of students' educational programming and support services, and better meet the demands of responding to the No Child Left Behind Act.

For these reasons, I strongly support the grant application. I look forward to the beneficial information that such a system will provide to state and local policymakers, educators, students, and parents. I urge you to give this application your highest consideration.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ted Kennedy". The signature is fluid and cursive, with the first name "Ted" being more prominent.

Edward M. Kennedy

cc: Margaret Spellings, U.S. Secretary of Education
Mark Schneider, Commissioner, National Center for Education Statistics
Tate Gould, Research Scientist, National Center for Education Statistics



THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE DEPARTMENT

STATE HOUSE • BOSTON 02133

(617) 725-4000

DEVAL L. PATRICK
GOVERNOR

TIMOTHY P. MURRAY
LIEUTENANT GOVERNOR

The Honorable Margaret Spellings
U.S. Secretary of Education
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Spellings,

The Commonwealth of Massachusetts has demonstrated the very real results that emerge through data-driven decision and policy making. Using the dual levers of standards and accountability, our state has established itself as a national education leaders and our work has served as a model for states across the nation. Yet for all of our success, we are acutely aware of the need to move ever-forward, to deliver on a new promise of public education: that every student be ready for 21st century success.

Successful delivery on this new promise is not only contingent upon a continuing commitment to academic rigor, relevance and accountability but also on an unprecedented level of cooperation and collaboration between and among our education system and other segments. We hope to use a Longitudinal Data Systems (LDS) grant to plan, develop and implement the transformation of our current data system components into a comprehensive LDS that is powerful and easy to use.

Governor Patrick and the executive offices of the state government that serve children, youth and families have identified the development of a statewide, integrated child and youth data warehouse and reporting system as a critical next step in our effort to improve graduation rates for all subgroups, to narrow the achievement gaps between white and minority students and between Massachusetts and our top performing international

competitors. Efficient and reliable interoperability between the Department of Elementary and Secondary Education and local education agency data systems will be the backbone of the comprehensive system we envision.

We hope the U.S. DOE will support our application knowing that the state Executive Office of Education and the state Department of Elementary and Secondary Education will make every effort to share our experiences and the lessons we learn as we not only implement a longitudinal system but the comprehensive system to follow.

Sincerely,

A handwritten signature in black ink, appearing to read "P. Reville". The signature is fluid and cursive, with a large initial "P" and a stylized "R".

Paul Reville
Secretary
Massachusetts Executive Office of Education



THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT

DEVAL L. PATRICK
GOVERNOR

SUZANNE M. BUMP
SECRETARY

TIMOTHY P. MURRAY
LT. GOVERNOR

September 22, 2008

The Honorable Margaret Spellings
Secretary of Education
United States Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Spellings:

I am writing in support of the application being submitted by the Massachusetts Department of Elementary and Secondary Education under the Institute of Education Sciences Statewide Longitudinal Data Systems Grant Program (CFDA # 84.372A).

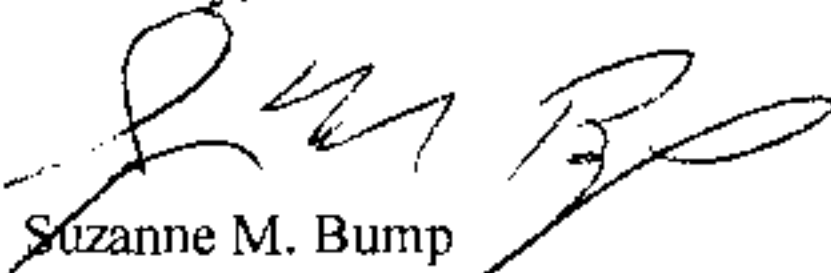
There is significant need in Massachusetts to develop a data system that will allow our state to design, develop, and implement a statewide longitudinal data system to manage, analyze, disaggregate, and use individual student data. In my role as Secretary of Labor and Workforce Development for the Commonwealth, I would welcome federal support for a system that will allow the Department to build their capacity to examine and use data including postsecondary and workforce information.

The enhancement of our ability to evaluate the effectiveness of elementary and secondary education programs with information that tracks youth success in school and career after graduation is invaluable in building a "cradle to career" system that provides young people the skill development needed for success in the 21st century economy. Additionally, integration of administrative data systems will provide us with even more complete and compelling information on patterns of multi-system program use, costs and outcomes.

Our Governor has asked those in his cabinet who have administrative responsibility for programs serving children to coordinate our work wherever possible. One featured initiative of this charge has been that we are tasked with offering recommendations for developing a statewide child and youth data reporting system. Certainly, the availability of these resources will enhance the Commonwealth's ability to develop and implement such a system.

I strongly support the Department's consideration of the Massachusetts application for these resources, and will continue to work with my colleagues in the Governor's Cabinet and their staff to support our partners in the education agencies as they implement the program outlined in this application.

Sincerely,



Suzanne M. Bump

ONE ASHBURTON PLACE • SUITE 2112 • BOSTON, MA 02108
TEL: 617-626-7100 • TTY: 617-727-4404 • FAX: 617-727-1090



The Commonwealth of Massachusetts
Executive Office of Health and Human Services
One Ashburton Place, Room 1109
Boston, MA 02108

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

JUDYANN BIGBY, M.D.
Secretary

Tel.: 617-573-1600
Fax: 617-573-1890
www.mass.gov/cohhs

September 19, 2008

Margaret Spellings, U.S. Secretary of Education

U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202

Dear Secretary Spellings,

The state of Massachusetts has a goal of providing a world class education to the residents of the Commonwealth. Information is the key to identifying strategies to improve educational outcomes. Information is the key to understanding whether we are achieving outcomes.

The Executive Office of Health and Human Services believes that we all must be part of the solution. Sharing data across our systems will allow us to insure that we are providing youth with all of the resources that they need to learn- safety, health, a positive adult relationship, an opportunity to contribute to their community and of course an educational experience that meets their needs.

Governor Patrick has a vision of a longitudinal data system that will be a critical element of an integrated child and youth data system. This grant will strengthen the Elementary and Secondary Education system and improve the timeliness of their reporting. Timely information about children's progress will enable the agencies that provide services to children and youth to respond to concerns and proactively provide needed assistance.

Sincerely,

JudyAnn Bigby, MD
Secretary

Appendix B. Resumes of Key Personnel

Project Manager 2

QA Analyst 6

Data Analyst 10

Documentation Specialist 13

Data Collection Specialist 14

Key ESE State Personnel 16

Project Manager

CORE COMPETENCIES

Strategic Technology Planning and Implementation

Extensive Planning, Management & Budgetary Experience

30 Year Track Record of Innovation & Achievement

Experience Streamlining & Consolidating Business Processes

Extensive experience providing IT solutions in State Government across a variety of disciplines in education, health care, HR, environmental management, and administration and finance

Extensive Project Management Experience

Extensive Hands-on Technical Experience

Proven Ability to Meet Deadlines Under Pressure

Multi-Vendor HW, SW, Network Integration Exp.

CAREER HIGHLIGHTS

Managed projects to develop open source web-based applications to provide efficient and effective applications on time and under budget for the public to look up their physician's profile, find the status of licensed professionals, take a civil service test, or view their civil service standings.

Consistently demonstrated the ability to achieve consensus among key stakeholders across all organizational levels.

Down-sized hardware, installed new software, re-engineered applications and re-trained staff in transition from centralized IBM mainframe to mini-computer/PC LAN/WAN environment.

EXPERIENCE

1/2006 – 9/2008

PROJECT MANAGER

Project manager for the first-ever collection of educator demographic and work assignment data on an individual level to support the “highly qualified” teacher reporting requirements of the Federal No Child Left Behind Act and policy planning requirements. Project supports \$50 million Federal funding stream. Piloted project with 32 school districts in 2006, then implemented project on a statewide basis with 391 school districts in 2007. Focused on stakeholder involvement and the development of a robust, secure, reliable, open-source web based application that assigned randomly generated individual identifiers to over 100,000 educators throughout the state. All project components completed on time and within budget.

- Worked intensively with pilot districts and internal DOE stakeholders to achieve consensus on data elements;
- Coordinated efforts of technical and documentation staff to prototype application design with district users;

- Coordinated efforts of data collection and documentation staff to develop and provide documentation, training materials and web based training sessions for district staff;
- Managed the application development, testing and implementation process;
- Introduced rigorous testing standards and methodology to provide bug free application for system users
- Migrated educator data into DOE Cognos data warehouse and provided cubes and reports for policy analysis;
- Integrated educator database with agency licensing database.

5/2003 – 1/2006

IT DIRECTOR

Development and implementation of web based applications to provide information and services to physicians and the public. Focused on agency-wide data integration project and strengthening critical hardware, software and network infrastructure to provide a solid, secure foundation for on-line licensure and other proposed technology initiatives.

- Managed projects to redesign the agency web site (<http://www.massmedboard.org>) and Physician Profile web application (<http://profiles.massmedboard.org/>).
- Directed the migration and integration of data from unit-based applications into the core mission critical licensing and complaint system.
- Managed the development of a document management workflow application to streamline the licensing process.
- Managed the redesign of the agency license renewal process and the implementation of related system modifications to enhance efficiency and prepare for the implementation of an on-line renewal capability.
- Developed an investment brief, project plan and budget for an on-line physician license renewal project and served as agency liaison for the project with key stakeholders.

9/98 – 5/2003

IT DIRECTOR

Focused on self-service web based technologies to provide information and services to state agencies and the public. Successfully implemented systems eliminated paper and dramatically streamlined business processes.

- Managed the development and implementation of an intranet site to provide information and services to HR professionals & state employees. (<http://www.hrd.state.ma.us/>)
- Managed the development and implementation of the Commonwealth Employment Opportunities (CEO) application to post vacant state positions on the Internet. (<http://ceo.hrd.state.ma.us/>)
- Directed the development of intranet workflow application to streamline the hiring process for state managers.
- Managed the development and implementation of an e-Payment application to apply and pay for civil service applications on-line. <https://www.csexam.hrd.state.ma.us/hrd/>
- Managed the development and implementation of secure self-service Internet applications enabling citizens to retrieve civil service information including their standings on certification lists for employment.

5/94 - 9/98

CHIEF INFORMATION OFFICER

Secretariat Information Technology Officer for 10 Consumer Affairs Agencies providing services and information to consumers and licensing and regulating 600,000 businesses and professionals.

- Developed consensus among Secretariat and agency senior managers to ratify a Secretariat Information Technology Plan calling for the streamlining and consolidation of licensing processes across agencies.
- Planned and initiated multi-year strategic information systems project to re-engineer and streamline the licensing process, build core licensing modules and provide Internet access to licensing information.
- Directed the development of an Information Warehouse of 500,000 active professional licensees.
- Directed the development of a web-based application for the public to review the status of licensed professionals in Massachusetts.
- Developed a pilot application for secure authenticated Internet transactions using digital certificates.
- Coordinated Secretariat IT plans and initiatives to achieve Y2K compliance.

9/81 - 6/94

INFORMATION TECHNOLOGY MANAGER 7/92 - 6/94

Managed and coordinated information system initiatives for 5 state agencies to ensure technical compatibility and conformance to Secretariat IT Plan.

- Contract Administrator and Project Manager for Secretariat Systems Development Project with EDS.
- Reviewed major milestones of system development life cycle for all active projects under development.
- Negotiated interagency agreements and designed and implemented an interagency charge-back system to support the implementation and joint funding of Secretariat wide strategic information systems.

DATA CENTER DIRECTOR

6/84 - 7/92

Directed the implementation and operation of a multi-vendor, multi-platform network to provide uniform office automation and database management services to 2000 users in 5 geographically distributed agencies. Project was nominated for the Smithsonian Award for Excellence in Information Technology and won the URISA Exemplary Systems in Government Award.

- Project Manager for down-sizing hardware, installing new software, re-engineering applications and re-training staff in transition from centralized IBM mainframe to Digital VAX/BANYAN VINES/PC LAN/WAN
- Provided Technical Review and Project Oversight for a complex \$ 8 million permitting application based on an enterprise-wide data model.
- Coordinated the establishment of the State-wide Geographic Information system that integrated ARC/INFO spatial data with the ORACLE Relational Data Base Systems.
- Chaired Interagency Integration Team that established standards and monitored the technical and organizational integration of IT projects.

- Supervised Staff of 15; Managed operational budget of \$1 million.

DATA CENTER SYSTEMS AND PROGRAMMING MANAGER 6/82 - 6/84

Project manager for development/maintenance of IBM mainframe systems for 5 state agencies.

PROGRAMMER/ANALYST 9/81 - 6/82

Analyzed, designed, & programmed on-line & batch mainframe systems. Extensive payroll, financial & HR system experience.

EDUCATION

Master of Urban & Regional Planning

B.A. Sociology

CEU's and Course work in Project Management, System Development Life Cycle, Case Tools, Data Base Management Systems, ORACLE DBMS, Supervision, Programming Languages

QA Analyst

Professional Summary:

- 5+ years of experience as QA tester in the full life cycle of the software design and development process including requirements gathering, design, implementation, testing and maintenance.
- Demonstrated excellence in **creating and developing test cases and test scripts.**
- Experience in **both client server and web based application testing.**
- Experienced in performing automated testing using popular tools such as **Mercury Interactive WinRunner**, QuickTestPro, and TestDirector, LoadRunner
- Proficient in **WinRunner** in customization and creating **checkpoints, synchronization points, parameterization (data-driven test) and break points** for debugging
- Detailed understanding of **Manual and Automated testing.**
- Area of strength includes: **SDLC, functional testing, performance testing, integration testing, regression testing, smoke testing and user acceptance testing**, Rational Unified Process (RUP) methodology and tools
- Excellent knowledge in industry standards like CMM, IEEE, ISO etc
- Interacted with large **team of Business Analyst and developers through excellent communication and interpersonal skills.**
- Experienced in working with rest of the **QA** team member to ensure adequate testing of software has been done both before and after completion, conducted UAT
- Proficient with **MS Office (i.e., Visio, Word, Excel, Power Point, Access)**, AutoCAD, Pro Model simulation tool, and Minitab statistical analysis tool.
- Extensive knowledge in Finance, Banking, Health Care, Telecom, Insurance and Mortgage domain.

Skills:

Testing Tools: Win Runner, Test Director, Load Runner, Quick Test Pro 6.5,
 Other Tools: Bug Tracking Tools, Rational Rose, Requisite Pro, Microsoft Office, Auto CAD, Pro-Model, Minitab
 Operating Systems: Windows 95, 98, NT, 2000, XP, familiar with UNIX
 Database: Oracle9i, IBM DB2, and MS-Access
 Other Skill: SQL Queries, TSL (Test Script Language), Rational Unified Processes (RUP), UML, XML, HTML, knowledge of VB Script, Understanding of Sixsigma

Experience:

QA Analyst

Aug 2005- Mar 2006

Worked with National Pricing System (NPS) application to create one pricing system used in all regions that: enables strategic management of risk pools at the regional level, that incorporates marketplace and regulatory, uses common methodology that is acceptable in the marketplace is cost-based. NPS is centrally maintained but regionally accessed, puts under one system the pricing functions of rate setting, cost projections and rate quoting, & tracks quoted revenue to target. Pricing factors can be defined and assigned at any level by product, customer contract,

and geographic location etc. Provide users with exactly the information they need for creating quotes, invoices, orders & reports. Provide consistent quotes across all company touch points customer service, channel partners, in-house telemarketing sales, online sales, and direct sales representatives.

- Prepared and executed test cases based on Requirements Document.
- Participated in developing High level test scenarios and then **created detailed Test Scripts which maps to the technical requirements**
- Assisted QA lead in developing test plans.
- Performed smoke, system, integration, functional and regression testing of the system.
- **Identified and tracked defects, issues, risks and communicate** with developer with excellent communication skill
- Collaborated with rest of the QA team to develop the test conditions and test cases to be used in testing based on business requirements, technical specifications and/or product knowledge
- Ensure testing and overall project goal has been met by tracking day to day activity with schedule activity.
- Designed and **implemented SQL queries for QA testing and data validation**

QA Analyst

Aug 2004 – July 2005

The Mobile Billing Quality Assurance Team (eBilling) module involved functional, regression and integration testing. The project was Enterprise Integration Test to involve functionality testing to Plan, develop, and document an Oracle OBF data repository, SQL scripts, constraints, stored procedures, and views. Views are constructed based upon test case data requirements, providing data dynamically via automated scripts to assist in identifying the capacity and potential limitations for GUI applications and machine-to-machine interfaces to telecom client provisioning systems.

- Involved in reviewing business requirement documents and the technical specification.
- Implemented black box testing procedure throughout SDLC (software development life cycle) & test environment.
- Assisted the team lead in making the test plan.
- Analyzed system requirements **and wrote test cases, test scripts for testing the application.**
- Performed manual testing prior to **automate testing on the application.**
- Actively participated in the team involving test plan analysis, go/no-go decisions based on the WinRunner test scripts results.
- Involved in execution for testing of database using SQL queries (select, update, Joins, views statements)
- Interacted with developers to resolve technical issues and investigated software for faults.
- Reported software mismatches (from the test planning), to the development team using Test Director.
- **Automated test cases for GUI, Functionality, and Regression testing using WinRunner.**

- Performed regression testing for fixes using WinRunner and closed the defects in Test Director.
- Involved in the end-to-end test using WinRunner and responsible for the Quality Assurance of this application to complete in record time.
- Responsible for building the environment of hardware and software for System Testing and Parallel Testing on both the client side and the server side.
- Contributed to the product documentation, including online help. Also, built macros and created data graphs/charts in MS Excel.

QA Tester

July 2003 - June 2004

The application was designed to provide greater efficiency to all aspects of customer services like Billing, Payments, Financial analysis and premium accounting. This system contains 8 subsystems, which include Order, Account Receivables, Account Payables, Purchase management system, Billing, Auditing, Cash value and Estimates. GUI screens are developed using Java and Backend is Oracle database.

Responsibilities

- Worked closely with development team in creating automated scripts for the application using WinRunner and LoadRunner.
- Effectively implemented different QA methodologies/policies, strategies and plans in all stages of SDLC.
- Created test cases and test scripts development and executed based on business and technical requirements.
- Implemented manual and automated testing methods to perform functional, integration, and regression testing using Mercury Interactive WinRunner.
- Executed system, integration, end-to-end, and user acceptance test (UAT) test cases for web-based and JAVA applications.
- Recorded LoadRunner Vuser scripts implementing parameterization both manually and by data driven wizards in Virtual User Generator.
- Analyzed and created the bug tracking reporting and summary report in the TestDirector.
- Expertise working on TestDirector for requirements management, planning, scheduling, running tests, defect tracking, manage the defects and executing the test cases.

QA Tester

Dec 2001 - April 2003

The project was an E-commerce application which dealt with complete control over stock levels and inventory tracking and distribution of goods to its various distributors. The users were the distributors, who could check for the availability of goods to be distributed to the retail outlets and place orders using their credit cards. It integrates and increases the functionality of the Accounts Receivable, Sales Order, Purchase Order, Accounts Payable, Manufacturing and Point of Sale functions.

- Prepared test scenarios and test cases as per functional, business requirements

- Performed manual testing prior to automated testing on the application
- Manually performed Backend testing by executing SQL queries
- Involved in extensive volume-centric testing.
- Performed performance, stress, load testing using Load Runner
- Defined transactions to measure server performance under load by creating rendezvous points to simulate heavy load on the server
- Investigated software bugs and interacted with developers to resolve technical issues using Test Director
- Interfaced with developers to resolve technical issues and investigated software for faults
- Interacted with Web Administrator, Database Administrator and Network Engineer to help solve performance issues

QA Tester

Jun 2000- June 2001

- Creates test plans, test cases, and scripts and ensure they support testing objectives
- Performed manual and automated testing to test functionality of the system.
- Used WinRunner and TestDirector for automated testing.

Education: Bachelor of Science, Computer Science

Data Analyst

MANAGEMENT/RESEARCH EXPERIENCE

Massachusetts Department of Elementary and Secondary Education, Malden, MA

Jan. 2007 – Present

Senior Programmer/Analyst, Data Analysis and Reporting Team

- Work closely with data collection and technical staff to ensure agency collection of Education Personnel Management System (EPIMS) staff data meets state and federal reporting requirements and agency needs
- Prepare annual state reports relating to EDFacts and Title II of the Higher Education Act for the United States Department of Education
- Provide data and research to assist with the development of state policies and initiatives regarding educator preparation, licensure, preparation program approval, educator quality, supply and demand, and other related areas
- Provide educator data to fill ad hoc data requests from within the agency and from other agencies, the legislature, the governor's office, media, school districts, and the general public
- Coordinate with the Data Collection staff and provide technical assistance to school district staff who have questions about educator data reporting requirements

Research Analyst III, Data Analysis and Reporting Team

- Ensure agency collection of special education data meets state and federal requirements and agency needs
- Provide statistical analysis of the available data and generate, edit and review reports that meet the specifications and deadlines of the US Office of Special Education
- Provide special education data to fill ad hoc data requests from within the agency and from other agencies, the legislature, the governor's office, media, school districts, and the general public
- Participate in information management systems development to ensure full integration of required special education data; and attend special education data conference in Washington, D.C.
- Coordinate with the Data Collection staff and provide technical assistance to school district staff who have questions about special education data reporting requirements

BPA Worldwide, Shelton, CT

2002 – Jan. 2007

Team Leader, Science & Medicine Market Group

- Successfully managed the scheduling, completion, review, and acceptance of media audits for more than 300 member accounts
- Motivated a productive team of five media auditors through consistent mentoring and performance management
- Effectively communicated new initiatives, procedures, and policies
- Lead the team in providing superior customer service by responding to all client inquiries, challenges, and disputes
- Prepared income reports, forecasts, completion rates, and other audit income-related tracking using Excel, Access, and Web-based relational databases

Senior Auditor, Manufacturing, Mining, & Production Market Group, Science & Medicine Group

Auditor, Manufacturing, Mining, & Production Market Group

- Conducted detailed circulation audits using BPA Worldwide specific rules and bylaws
- Provided consulting services to clients by interpreting policies and procedures and recommending areas for improvement via general correspondence and formal written reports
- Performed in-depth market analyses of subscriber demographic data for the publishing and media industries

Centre for the Study of Public Policy, University of Strathclyde, Glasgow 2000 – 2002

Research Fellow

- Produced and analyzed statistics from mass surveys of countries in Eastern Europe and the former Soviet Union utilizing SPSS, translated materials from Russian
- Co-authored, conducted research for, edited, and commented on numerous papers produced by the Centre on topics concerning countries of the former Soviet Union and Asia
- Researched social capital networks in Russia as part of a grant funded by the Leverhulme Foundation

TACIS Project: “Social Consequences of Economic Restructuring and Privatization in Russia” Spring 1998

Consultant

- Analyzed survey data and co-authored reports on housing and healthcare in Russia for a project funded by the European Union

University of Oxford, Board of the Faculty of Social Science

1997-1999

Research Assistant for Dr. Stephen Whitefield

- Organized the results of survey data analyses for academic articles and presentations at conferences.

Becker College, Worcester, MA

1992 – 1994

Computer Services Coordinator

- Ran queries and prepared reports for the college’s administrators
- Acted as a liaison between the Computer Services Department and the Admissions, Business, Registrar’s, Student Services, and Financial Aid Offices
- Implemented the college’s changeover to a computer-based record system, conducted computer in-service training for all offices and provided software support

TEACHING EXPERIENCE

Harris Manchester College, University of Oxford

Spring 1998

Course Tutor

- Taught International Politics between the Wars

The Oxford Programme for Undergraduate Studies

1997-1998

Course Tutor

- Taught Russian Politics, Comparative Politics, The USA and the World, 1917-1945
Fitchburg State College, Fitchburg, MA Summer 1995

Adjunct Professor

- Taught U.S. History II: 1865 to the Present

Devereux Foundation, Rutland, MA

1988-1991

Residential school providing care for special needs children ranging in ages between six and twenty-one

Teacher's Aide, Behavior Manager, Assistant Program Manager

- Assisted teacher in carrying out Individualized Educational Programs for special needs students
- Developed pro-active programs to reduce incidents of self-injurious and inappropriate behaviors
- Responsible for the administrative functions of a residential program

EDUCATION

St. Antony's College, University of Oxford, UK

Doctorate of Philosophy in Politics- Dissertation still pending

Title: Mass Attitudes and Ethnic Conflict in the Baltic States, Ukraine, Moldova, and Belarus

University of London, School of Slavonic and East European Studies, UK

Master of Arts, Contemporary Soviet and East European Studies

Cornell University, College of Arts and Sciences

Bachelor of Arts, Russian and Soviet Studies

SKILLS

Computing

- Statistical Packages: SPSS for Windows
- Operating Systems: MS DOS, Windows
- Word Processing: Microsoft Word, WordPerfect
- Other Packages: Excel, PowerPoint, Access

Documentation Specialist

SUMMARY OF QUALIFICATIONS

- Directed a statewide competitive grant program in educational technology.
- Edited and produced the video *Teaching with Technology in Massachusetts*.
- Wrote and edited grant proposals including a federal Technology Innovation Challenge Grant – one of only twenty funded nationwide.
- Created and managed databases for all statewide educational technology grant programs.
- Copyedited and proofread for various clients including Beacon Press, WGBH, and The JASON Foundation for Education.
- Contributed to the design and upkeep of the Department of Education's extensive website.
- Produced an interactive training CD ROM from start to finish including storyline, design elements, image manipulation, and technical assemblage.
- Planned, wrote, and designed the Massachusetts Department of Education newsletter, directing the details of publication and distribution to 100,000 subscribers.
- Wrote and starred in a one-woman show produced by ImprovBoston in November 2004.
- researched, wrote, and edited movie synopses and trivia information for a 10,000+ title database, being developed for Cablevision.

COMPUTER SKILLS

Internet HTML, Javascript, and CSS

Software DB: Access & FileMaker, Publishing: Quark & Pagemaker, Graphics: Illustrator & Photoshop

Operating Systems Mac and PC

EXPERIENCE

Freelance Writer/Editor 2001 Present

Program Coordinator, Lighthouse Technology Grant/Web Team Assistant 1997
2001

Technical Editor & Project Manager 1995 1997

* Received the Partners in Excellence Award for commitment to innovation and excellence, from Partners HealthCare.

Information Officer, Office of Public Information and Legislative Affairs 1993 1995

EDUCATION

Wellesley College, Wellesley, MA

Bachelor of Arts with cum laude honors

ACTIVITIES

Actress 1998 Present

ImprovBoston, Cambridge, MA

Perform in weekly shows, national festivals, and corporate and private functions.

Data Collection Specialist

Education:

Master of Arts Degree in Educational and Developmental Psychology, May 1997.
Bachelor of Arts Degree in Psychology, May 1995.

Professional Experience:

9/00 Present EDP Systems Analyst III (Information Services and Technology/Data Collection)

- Provide technical assistance to the schools and school districts with the on-line data collection applications.
- Assist in the development and testing of on-line data collection applications with accuracy and attention to detail.
- Generate data collection reports and forms based on department policy and federal reporting requirements.
- Assist with the collection, reviewing and editing of data collection forms by communicating with district staff.
- Maintain and update status reports for the on-line data collection and paper-based forms.
- Respond to requests for information from districts, schools, colleagues, other departments within the agency, and the general public in a professional and timely manner.
- Responsible for responding to requests from the Data@doe.mass.edu e-mail account.

Field Technician for the Student Information Management System (SIMS)

12/02 - present

- Department liaison for 84 school districts.
- Provide technical support to the school and district personnel on the state student ID assignment and student data transmission to the Department.
- Train the school districts on how to use the department's SIMS applications and Directory Administration.

4/98 9/00 Educational Specialist II (Data Collection and Processing Specialist)

- Generate the Occupational Education report and maintain the Occupational Education database.
- Review and edit the Occupational Education reports that were disseminated to the Vocational and Technical High Schools and Public Two Year Community Colleges.
- Train school officials, staff members and liaisons on the Occupational Education report.
- Correspond with the schools and school liaisons until ALL data is complete and accurate.
- Create required reports for the State and Federal Department of Education in a timely fashion.

- Assist with other database, reporting, and spreadsheet tasks.
- Provide assistance to local school staff and other departments within the agency.
- Respond to inquiries and problems regarding the Occupational Education report and general inquiries from parents, schools, and the public.

11/97 – 4/98 *Evaluation Assistant*

- Updated and maintained all data files.
- Checked data collection instruments received from sites for errors and inconsistencies.
- Resolved data errors/inconsistencies either by completing the returned forms and mailing them to the site supervisors or by calling the sites to resolve the issue.
- Produced monthly data status reports for supervisors and managers.
- Assisted the director with the design, planning, implementation and maintenance of the evaluation component of *Child Welfare* programs by report writing, graphic preparation, and preliminary data analysis and training.
- Assisted in data coding and data entry as needed.

9/97 – 11/97 *Interviewer*

- Conducted interviews with Head Start children (ages 3-5) and families.
- Contacted the schools and families to schedule the interviews.
- Administered the Peabody Picture Vocabulary Test – III, Early Literacy Assessment Profile, Early Literacy Profile and Book Concepts using the book “Good Night Moon”.

6/95 – 11-97 *Research Assistant, for the National Head Start/Early Childhood Transition Project*

- **Responsible for all aspects of data collection; data reduction, creating databases, organization, coding, transcription, entry, and analysis.**
- **Assisted with the administration of measures and other testing materials by**
1) Training data collectors
2) Conducting subject interviews.
- **Trained and supervised undergraduate and graduate student volunteers and/or interns with database entry and literature reviews.**
- **Other responsibilities included graphic design and general office and administrative duties for the department.**

Computer Skills:

Proficient with IBM and Macintosh.

Operating Systems: Microsoft Windows, MS-DOS; DBASE

Desktop Applications: Lotus Smart Suite (AmiPro, Lotus Notes)

Microsoft (Excel, Word, Power Point, Publisher, Outlook)

Database Tools: Lotus Approach, Microsoft Access, FoxPro 2.6, SPSS

Internet Tools: Netscape Navigator, Microsoft Internet Explorer

Languages: Fluent in spoken Chinese (Cantonese and Toisanese).

Key ESE State Personnel

HASSIBA AIBOUT

OBJECTIVE: Be able to apply my increasing skills and expertise on a more challenging position and make a higher contribution to the ESE with better achievements.

EXPERIENCE:

Supervisor of Data Quality (Sr. Systems Analyst/Programmer), Data Collection Processing & Reporting

Massachusetts Department of Elementary and Secondary Education, Malden, Massachusetts, 01/2006-present

- Supervise the data quality staff to assure their work is completed accurately and in a timely manner.
- Develop and design systems and technical programs to analyze, review and identify data inaccuracies.
- Test systems and programs by preparing test data, reviewing input and output data for validity and accuracy.
- Identify causes of systems failure and make appropriate recommendations.
- Develop and maintain automated communications system for the Student Management System.
- Collaborate with IT programmers and database team to analyze, develop and maintain online automated data collection processes and provide them with information to meet data collection business needs.
- Develop programs, codes and queries to analyze effectiveness of current processes, databases and systems.
- Verify all collected data adheres to the agency business rules and user needs by implementing data validation systems and writing detailed programming code.
- Apply statistical methods to raw data, interpret results and make recommendations.

Management Analyst II, Data Collection Processing & Reporting

Massachusetts Department of Elementary and Secondary Education, Malden, Massachusetts, 01/2004-01/2006

- Design and develop systems and technical programs to analyze, review and identify data inaccuracies.
- Test systems and programs by preparing test data, review input and output data for validity, identify causes of system failure and make appropriate recommendations.
- Automate communications to districts and data collection staff to document responses and actions taken.
- Supervise the dissemination and documentation of edit report communications to districts and schools and maintain processes and systems to promote the accuracy, timeliness, and efficiency of DOE data collections.
- Direct interaction with IT. Programmers and database administrators to analyze, develop and maintain online automated data collection processes. Provide them with additional information to meet data collection business needs and coordinate information from multiple systems.

- Develop programs, codes and queries to generate various reports for data collection staff. Analyze effectiveness of current processes, databases and systems. Improve them, modify them or create new systems to accommodate user needs.
- Review final data files with a strong attention to details produced from data collections and check final reports for final publication.
- Implement data checking systems and write detailed programming codes using applicable computer language.
- Apply statistical methods to raw data, interpret results and make recommendations.

Associate Project control

Kvaerner Process, New Jersey, 02/2001- 11/2002

- Maintain progress and performance measurement system by collecting data and coordinating information from multiple systems and sources.
- Develop and maintain Access databases and excel spreadsheets to store data and perform analysis to generate multiple reports.
- Interpret and incorporate all project-approved changes in the earned value system database.
- Update, plan and forecast project schedules, analyze it and incorporate it to the system.
- Work closely with the project management team to finalize the monthly report.

Business web bank/ Wire transfer specialist- Electronic banking department

Cambridge Savings Bank, Cambridge, Massachusetts, 10/1997 - 01/2001

- Perform a variety of complex duties related to electronic banking.
- Interface with management team in identifying, reporting and resolving customer's requests.
- Handle web-banking activities and administrative work.
- Implement software (Encore, Bisys, Intracheck and Hybrid) for processing banking transactions.

Sales Representative

Souper Salad, Boston, Massachusetts, 06/1996-03/1997

- Perform quality customer service and provide answers to their requests.
- Balance daily transactions and record the sales figures.
- Train and supervise new staff members.
- Operate cash registers and resolve any related problems.

COMPUTER SKILLS:

Software Systems:

- Operating Systems: Windows 98, 2000, XP, DOS, OS/400, Unix and Windows NT.
- Languages: proficient in C, C++, Pascal, Assembly Language, SQL, PL SQL, Oracle, Foxpro, Visual Basic, HTML and SPSS
- Application Software: MS Office 2003, MS Office 2000, Oracle, SPSS, Remedy, Toad, C4DQ, SQL Analyzer and Enterprise Manager,

Hardware Systems: IBM PC and Compatibles, AS/400.

EDUCATION:

Database Programming, Spring 2005

Refresher course taken at Bunker Hill Community College: “Database Programming-Oracle”. This involved extensive programming and writing codes using SQL/ PL SQL and managing databases.

Bachelor of Sciences in Electrical Engineering, 09/1990- 09/1995

University of Sciences and Technology (U.S.T.H.B), Algiers, Algeria.

Thesis Title: “ Development of Software Application on Fractal Analysis and application on Urban Morphology”

Courses include:

- Database Management Systems, Embedded Systems and Control Systems.
- Real-Time Programming, Signal and Image Processing and Graphic C routines.
- Electricity, Magnetism and Computer Networks.
- Micro, Macro- economics and Finance.

ADDITIONAL INFORMATION:

- Fluent in French.
- Strong work ethics, dependable, flexible, detail-oriented and willing to learn.

HELENE BETTENCOURT

Objective

To secure a position that will challenge me to expand my management skills and apply my knowledge of the field of education.

Experience

2007 present Massachusetts Department of Elementary and Secondary Education Malden, MA

Director of Data Collection

Manage the agency's Data Collection Office

- ❖ Oversee and manage the personnel, systems and activities required for the collection of information to meet the policy analysis & development, program planning, evaluation, fund allocation, and mandated reporting functions for federal and state programs
- ❖ Provide leadership in defining agency data collection needs.

2000- 2007 Massachusetts Department of Education Malden, MA

Data Collection Supervisor

Supervise the agency's Data Collection Office

- ❖ Develop data collection instruments and prepare business rules
- ❖ Coordinate with other agency staff to ensure agency informational needs are met
- ❖ Supervise the implementation of technical assistance to schools and districts

1995 2000 Massachusetts Department of Education Malden, MA

Data Collection Support Staff

Process, and edit educational reports and surveys.

- ❖ Provide technical assistance to school districts staff ensuring that the information is reported accurately
- ❖ Respond to all data requests from DOE staff, legislature, federal offices, and general public

1993 1994 Pentucket Regional Schools Groveland, MA

Coordinator and Teacher of Extended Year Program, ages 3-5

- ❖ Developed program and provided instruction. First year of implementation of program in district.
- ❖ Participate in trans-disciplinary team.
- ❖ Selected and supervised staff.
- ❖ Responsible for implementation of Individual Education Plans

1992 1994 Pentucket Regional Schools Groveland, MA

HELENE BETTENCOURT

Teacher, Integrated Preschool and Kindergarten

- ❖ Curriculum Development.
- ❖ Development and Implementation of IEP goals and objectives.
- ❖ Member of Trans-Disciplinary team integrating therapies into the classroom.
- ❖ Responsible for student assessments and presentation of results.
- ❖ Supervised classroom aide

1991-1992 Professional Center for Handicapped Children,
Andover, MA

Preschool Teacher, Multi-handicapped Children

- ❖ Functioning levels ranged from one to twenty-four months
- ❖ Implemented a total communications system and sign language.

1990-1991 Lowell Public Schools, Lowell, MA

Permanent Substitute

- ❖ Resource Room Teacher for grades K-3, Rogers Elementary School
- ❖ Integrated Preschool Teacher, Laura Lee School

1988-1990 Davis School, Brockton, MA

Kindergarten Resource Room Teacher

- ❖ Responsible for students with developmental delays, learning disabilities,
- ❖ physical limitation, and behavioral difficulties.
- ❖ Moderate special needs assessment of classroom population and regular kindergarten population
- ❖

Education

1994 1995 Lesley University Cambridge, MA

- ❖ M. Ed. in Curriculum and Instruction

1984 1988 Wheelock College Boston, MA

- ❖ B.S. in Special Education and Elementary Education

Computer Skills

Proficient in use of Microsoft Word, Access, Excel. Working knowledge of database tools to access oracle tables

ROBERT “BOB” BICKERTON

PROFESSIONAL EXPERIENCE:

Massachusetts Department of Education, Malden

2/88 present

Sr. Associate Commissioner of Education

Center for Lifelong Learning, Assessment, Educator Quality & Technology

Provide statewide strategic and policy leadership for:

- Adult & Community Learning Services
- Student Assessment,
- Educator Preparation, Quality and Licensure
- Information Services & Technology.

These offices manage a combined \$135 million, including high stakes and formative student assessments, the approval of 1,000 educator preparation programs in 70 Massachusetts colleges and universities, the licensure and license renewal of over 80,000 preK-12 and adult education teachers, all department information and instructional technologies, data collections and analysis (including development and implementation of an enterprise wide education data warehouse) and over 200 adult learning centers, family literacy, transitions to higher education, and workplace education programs.

Director, Adult & Community Learning Services

First director of this office, established in 1988 by the Board of Education to meet its priority for more effective and expanded adult basic education services. Starting with \$7 million in total state and federal funding and a “patchwork quilt” of services, this office has made extraordinary progress restructuring and building a fully integrated ABE service delivery system of more than 200 adult literacy, adult secondary, English for speakers of other languages, family literacy, workplace education, transitions to higher education and distance learning programs staffed by over 2,500 adult educators and supported with \$43 million in total resources. Key characteristics of the system we have developed include standards based design, content and performance criteria, fully WEB/Internet based assessment, data and program management systems, a very successful/ entrepreneurial approach to fund raising and program development, and increased policy integration with several other state agencies.

I have also initiated, supported and/or led several interagency initiatives including the “Massachusetts Family Literacy Consortium” (memoranda of agreements across 14 state education, employment & training, health & human service agencies), served on the executive committee of the MA Workforce Investment Board, helped craft our state’s WIA Unified Plan, and brought all major pK-12 education associations together to forge common ground in pursuit of higher levels of educator effectiveness.

City of Boston Transportation Department, Boston

2/86 - 1/88

Deputy Commissioner

Responsible for overall management of three divisions within the Transportation Department: Traffic Management & Engineering, Operations and Enforcement, which together comprise over 85% of the BTD's 518 employees. I also played an integral role in planning for, securing required personnel and fiscal resources (+55%), and negotiating contracts to implement a number of innovative programs. My role required extensive coordination with other City and State agencies, the Mayor and City Council, formulating policy and development of implementation plans.

ADULT EDUCATION TEACHING, DIRECTING AND COMMUNITY LEADERSHIP:

<u>Jamaica Plain Community Schools, City of Boston</u>	10/84 - 2/86
Regional Director in this racially/ethnically/linguistically diverse community	
<u>Quincy School Community Council, Inc., Boston C.B.O.</u>	9/81 - 10/84
Executive Director in a changing Boston Chinatown neighborhood	
<u>Community Learning Center, Cambridge P.S. & City of Cambridge</u>	9/74 - 8/81
Administrator/ABE Math Teacher	
<u>Boston State College, Flexible Admissions Program, Boston</u>	12/74 - 6/76
Math Coordinator/Teacher	
<u>Education Warehouse, Cambridge C.B.O.</u>	10/72 - 8/74
ABE Volunteers Supervisor & Trainer	
<u>College of Public & Community Service, Univ. of Mass., Boston</u>	2/74 - 8/74
Curriculum Developer and Math Instructor	
<u>Tutoring Plus, Inc., Cambridge C.B.O.</u>	12/70 - 6/72
Youth Activities Coordinator & Tutor	

EDUCATION & CERTIFICATION:

<u>Antioch University/Cambridge College, Cambridge, MA</u>	M.Ed	8/78
<u>Massachusetts Institute of Technology, Cambridge, MA</u>	Architecture	6/73
MA Teachers Certification in Secondary Math	#0231745	9/78

APPOINTMENTS:

Commissioner, National Commission on Adult Literacy
6/06 6/08

<u>National Council of State Directors of Adult Education, and National Adult Education Professional Development Consortium, President, Executive Committee, and</u>	11/91 - 6/06
<u>National Legislative Chair (represented field in negotiations with Congress)</u>	11/93 - 10/97
<u>Jamaica Plain Community Programs, member, Governing Board</u>	9/86 - 2/88
<u>Jamaica Plain Neighborhood Council, by appointment of Mayor Flynn</u>	10/85 - 2/86
<u>Massachusetts Committee on Adult Education, Co-Chair</u>	6/82 - 6/85
<u>Coalition For Cambridge, by appointment of Mayor Frances Duehay</u>	12/80 - 8/81
<u>Forest Hill Neighbors, a Jamaica Plain, Boston Neighborhood Association</u>	2/80 - 11/81
<u>KLH Child Development Center, member, Board of Directors</u>	3/75 - 4/76

DANIEL BOYLE

SUMMARY Daniel Boyle has over 12 years of experience in database administration in a production and development environment and over 3 years of server administration.

TECHNICAL SKILLS

Databases Oracle 10g/9i/8i/7, Microsoft SQL Server, Sybase, Informix

Operating Sys. Sun Solaris, HP, Windows NT, XP, Linux

Applications Business object's Data Architect, Data Insight, Data Integrator ETL,SAP, Siebel , Oracle Financials, Peoplesoft, Enterprise manager, Sapdba, brbackup, brarchive, SQL Loader, import/export, tkprof , utlstat/utlstat, statspack, rman, replication, DB Artisan, Erwin, , Microsoft IIS , Microsoft office, Legato, Veritas netbackup and cluster server, Checkfree, Eastman Workflow , AutoCAD, Softdesk, Lotus Notes, Control M, Brio, Visio ,Crystal Reports, Crystal Enterprise server

Languages PL/SQL, Transact SQL, SQL, Shell programming, Perl, HTML,javascript, C

Hardware Compaq servers, HP servers, Dell servers, Sun servers, EMC storage, optical juke boxes, CD juke boxers, switches, hubs, isdn modems, isdn routers, DLT tape drives, RAID, raw devices, CD burners.

EXPERIENCE

Supervisor of database administration and development, ESE 4/08-present.

- Responsible for managing a group of database administrators and developers who support existing applications and participate in developing new applications.

Project Manager/DBA, Massachusetts Teachers' Retirement System 9/03-4/08

- Project manager of data quality initiative which involved the profiling and cleansing of data in preparation for the migration of a legacy system to a new line of business. Developed project plan including scope, cost, schedule, resources, risk, procurement and communication plan. Managed deliverables, personal and kept project on time and on budget.
- Appointed member of the PMO to help develop the RFP for the NLOB and evaluate responses.
- Served on the project steering committee for go forward recommendations on new technical initiatives
- Conducted use-case analysis and design for projects.
- Developed a retirement tracking application, enrollment application and creditable service billing application, which included a web facing j2ee front-end client and web based back office client developed with Oracle Application Express. Projects included Database Design, logical and physical. Integration of Oracle with a legacy application using oracle heterogeneous gateway. Also involved integration of Microsoft Active Directory for authentication and authorization. Automated correspondence generation through the integration of crystal enterprise server.
- Performed data cleansing, conversion and consolidation of access databases and spreadsheets to oracle.

- Conducted an in depth analysis of a custom developed pension application data model and persistent data layer, and alerted executive staff to serious design issues which resulted in early termination of project.
- Evaluation of hosting vendors and options for MTRS's new pension application
- Installed, configured, and managed Oracle 10g, Web logic, Sun one LDAP server, Apache, Tomcat and applied patches and upgrades.

Team Lead/ DBA, Level3 (formerly Genuity, formerly GTE internetworking) 10/ 99- 9/03

- Responsible for 7X24 support of enterprise database systems which consist of 38 Oracle production instances and over 100 development instances running on Sun Solaris and Windows NT with EMC storage and Veritas cluster server, ranging in size from 2 to 350 GB.
- Provided backup support for Microsoft SQL server, Informix, Sybase and Teradata databases.
- Provide production database support for applications including SAP, Siebel, Vantive, and Oracle financials
- Tasks include software installations, software upgrades, applying patches, performance tuning, space management, backup and recovery, resolving database errors and failures, managing system access, auditing activities and resource utilization, database refreshes, creating scripts, and generating database objects.
- Projects included assisting developers and consultants in the construction of 2 Oracle 8.1.6 data marts using partitioning, materialized views and parallel query.

DBA, Fidelity Investments –Institutional Brokerage Group 5/99-10/99

- Maintained custom sales compensation database on Oracle and generated reports.
- Created physical design, migrated data, and assisted in development of a trade errors database in Oracle
- Maintained Sybase warehouse and assisted in the migration from NT to Unix
- Created procedures, triggers, and Unix shell scripts for database purposes.
- Maintained and upgraded Checkfree application database on Microsoft SQL server.
- Disaster recovery planning

DBA /NT Administrator, Beth Israel Deaconess Hospital 7/98-5/99

- Responsibilities included troubleshooting, performing backup and recovery, tuning of Oracle and Microsoft SQL Sever databases as well as system configuration and disk storage management.
- Tasks included initial software installations, installing software upgrades, resolving database errors and failures, managing system access, auditing activities and resource utilization, creating scripts, and generating database objects in a Unix/NT environment.
- Projects included migrating a warehouse from Sybase to Oracle and redesigning logical/physical design of an Oracle warehouse.
- Installed NT servers, setup backups, responsible for daily maintenance, tuning and capacity planning.

DBA /NT Administrator, Thomson Financial Services 95-7/98

- Installed and administered Oracle and Microsoft SQL Server in a Unix/NT environment.
- Projects included creating databases, upgrading databases and migrating an existing Oracle database on Windows NT to a new server and upgrading the database.
- Research and prototyping for web based documents format and conversions.
- Migrated VAX terminal based production environment to an NT/Eastman software workflow environment.
- Deployed 22 NT servers and migrated users to NT workstations.
- Installed 2 high performance scanning workstations running ascent capture software.
- Setup 7 Microsoft SQL server databases and generated objects.
- Responsible for disaster recovery and capacity planning
- Administered Lotus Notes mail servers.

Engineer, Green International 1994-1995

- LAN administration and Highway design.

Engineer, Youngquist James & Associates 1992-1994

- Civil/Site design.

EDUCATION

University of Massachusetts at Lowell

BS in Civil Engineering

Oracle Corporation

Oracle database administration 10g

Oracle backup and recovery

Oracle performance tuning

Oracle Real Application Cluster 10g

Veritas Corporation

Veritas cluster server

Informix Corporation

Informix database administration

Thomson University

C++ programming

Microsoft NT Administration

New Horizons

Microsoft SQL Sever Administration

ROBERT C. CURTIN

Education

Master of Arts, Political Science, May 2001

Northeastern University Boston, MA

Bachelor of Arts, Government, May 1999

Clark University Worcester, MA

Experience

Massachusetts Department of Elementary and Secondary Education - Malden, MA 2/08
present

Manager, Data Analysis and Reporting

- Currently manage the Data Analysis and Reporting Team that is comprised of seven state employees and is tasked with meeting the majority of the internal and external analytical requests made of the Department.
- Serve as the Massachusetts EdFacts and Consolidated State Performance Report Coordinator
- Responsible for meeting all No Child Left Behind reporting requirements, processing student-level data requests and supervising the development and release of major reports, including graduation, dropout and student retention.
- Actively involved in planning for future data collections to meet analytical and reporting needs, including the most recent release of an individual-level educator data collection

Massachusetts Department of Education - Malden, MA 2/04 2/08

Supervisor, Data Analysis and Reporting

Massachusetts Department of Education – Malden, MA 1/02-2/04

Title I Data Analyst

The Center for Comparative Democracy – Northeastern University 9/99-6/01

Research Analyst

Professional Affiliations

Appointed Member, EIMAC General Statistics Standing Task Force CCSSO 10/05
present

Advisory Board Member, Just for the Kids (Massachusetts) 10/04 present

Chairperson (elected), EIMAC General Statistics Subcommittee - CCSSO 05/06 - 05/08

Member, NCES Task Force on Dropouts and Completers 02/04 07/05

Technical Skills

Proficient in SPSS, MS Word, MS Excel, MS PowerPoint, MS Access, Outlook, Cognos Data Warehousing Tools

MARYANN DONIE

EMPLOYMENT HISTORY

Data Collection Support Supervisor, Massachusetts Department of Education
01/2006 to Present

Supervisor for the Data Collection Support Group.

- Supervise 7 employees.
Responsible for all school district data collections including the Student Information Management System (3 times per year), the School Safety and Discipline Report (ongoing throughout school year), the Private Individual School Report, and the Educator Personnel Information Management System.
- Assist all Massachusetts school districts in the collection and transmission of student level and educator level data.
- Work with all Massachusetts school districts in the analysis of data and reports.
- Collaborate with IT Unit to ensure the smooth operation of all Data Collection applications including the development and review of business rules used to support the implementation of district level reports based on collected data.
- Develop and conduct all trainings and workshops for technical district school staff and for the DOE.
- Supervise the Data Collection Call Center.
- Collaborate with the Data Quality Supervisor and Documentation Specialist in the creation and updating of support materials.
- Lead the SIMS and EPIMS software vendor compliance process.

Long-Term Consultant, Massachusetts Department of Education, TMP – Hudson Resourcing, Field Technologist/User Support and Training for the Student Information Management System (SIMS)
12/1999 to Present

Provide support for the Student Information Management System (SIMS) which is a student-level data collection system that allows the MADOE to collect and analyze more accurate and comprehensive student information to meet federal and state reporting requirements.

- Assist 144 school districts in the collection and transmission of student-level data for three data collection periods per school year.
- Work with districts to collect, properly code, and transmit 52 data elements for every student within their school district.
- Work with school districts to analyze their data and the reports generated from their data using a myriad of databases.
- Assist school districts in utilizing the many applications available on the DOE Security Portal including Directory Administration, the retrieval of reports using Drop-Box Central, the assignment of state assigned student identifiers (SASIDS), etc.

- Provide on-site support and training to school districts which includes working one-on-one with district personnel to making presentations to groups from secretaries to superintendents on the concepts of this project. .
- Author of several user guides which are/will be posted on the DOE's website to assist district personnel in their understanding and use of SIMS. .
- Act as second level of expertise for the Department of Education's data call center.

Software Application Trainer, Data General Corporation

1995 to 1999

- Trained professional and administrative staff of the Worcester District Court and Juvenile Court Systems in the use of Data General's CEO (Comprehensive Electronic Office) System.
- Trained military personnel and civilian staff members for the United States Army Reserve Headquarters in the use of Microsoft Applications. Trained staff of the United States Department of Labor in Washington, DC and all regional offices in the use of Microsoft Applications.
- Designed courseware and provided training in Microsoft Outlook for a large HMO in the Midwest.

Software Application Trainer, Helen Miller & Associates

1995 to 1997

- Provided training in all levels of Word, Excel, Access, PowerPoint, Outlook, Word Perfect, Lotus and Lotus Notes.

Research & Marketing, Corporate Environmental Engineering

1993 to 1995

- Assisted engineering staff with research related to environmental projects.
- Conducted file reviews at the Department of Environmental Protection for the New England States.

Stay at Home Mom

1986 to 1993

- Part-time Adult Education Teacher, Milford Public Schools
- Lived abroad 1986-1988, Paris, France

Trainer/Course Developer, Data General Corporation

1979 to 1985

- Worked as a trainer in the Financial Systems & Services Group and the Customer Education Group.
 - Developed course materials and delivered training classes to Data General staff and customers in the use of the CEO System.

Education

Attended Worcester State College and Becker College.

JENNIFER GOREE

PROFESSIONAL EXPERIENCE

***Massachusetts Department of Elementary and Secondary Education, Malden, MA 2005
– present***

(State agency ensuring school and district improvement for 380+ Massachusetts school districts)

Director, Information Technology, Sept 2005-present

Responsibilities:

- Oversee desktop, network, web, programming, and database services
- Responsible for staff of 30+ employees and contractors; 5 direct reports

Selected accomplishments:

- Instituted formal project tracking for all IT projects to focus efforts
- Coached team on employing use cases, prototyping, and usability testing for a new software project, resulting in increased user acceptance of the system
- Coordinated pilot and rollout of a statewide educational data warehouse
- Supervised successful upgrade of email system

Kent School District, Kent, WA 2000 – 2005

(26,000+ students, 40 schools, 3,000+ staff comparable to Springfield, MA or Providence, RI school districts)

Director, Applications and Web Systems, Jan 2004-Sept 2005

Responsibilities:

- Directed strategy and operations for student, financial, payroll, and web systems
- Led group of 13, including manager, programmers, support specialist, and DBA
- Assisted executive director with 5-year strategic plan and facilitation of IT leadership team

Selected accomplishments:

- Rescued a failing data analysis project and delivered a well-received product to executives
- Coordinated repair of an Oracle-based online grading tool to support 1000 concurrent users
- Planned and piloted Microsoft SharePoint-based intranet portal to support staff collaboration
- Blended two work teams into a single group reorganized around strategic priorities and with a stronger professional culture
- Hired and integrated into the group a project and operations manager to improve customer service and project tracking

Manager, Web Systems, Jan 2001-December 2004

Responsibilities:

- Managed maintenance and enhancement of district website and web architecture

- Led group of four, including programmer, support specialist, and system administrator

Selected accomplishments:

- Consolidated web infrastructure on a single UNIX platform using no new resources
- Migrated to a capacity-planned Windows web infrastructure within the project budget
- Initiated a series of 'Lunch and Learn' department-wide talks to improve information sharing
- Coordinated an internal information campaign to support the rollout of over 1000 new PCs
- Built a respected team from the ground up that provided leaders to other teams

Senior Applications Analyst, April 2000 – Dec 2000

Responsibilities:

- Designed and developed web applications to improve the collection of student information

Selected accomplishments:

- Led development of a web-based IEP tool deployed to 250 special education teachers
- Mentored the team on object-oriented design, web development, and Java programming

Headland Digital Media, San Francisco, CA

1998-2000

(Web publishing subsidiary of Pearson PLC, the owner of Penguin Books, Addison-Wesley, and Financial Times, among others)

Special projects consulting (after relocation to Seattle), Jan 2000 – April 2000

- Research into potential content management solutions for future projects
- Analysis of technical architecture and product development to improve project delivery

Manager of Development, Jan 1999 - Jan 2000

Responsibilities:

- Managed department of 12 software engineers and several contractors
- Monitored progress of development work on 5-10 simultaneous projects
- Analyzed the technical strategy and resource needs for upcoming development projects

Selected accomplishments:

- Delivered software for the original versions of the www.penguinclassics.com, travel.roughguides.com, and Scott-Foresman Science (www.sfscience.com) websites
- Succeeded in hiring engineers and DBA during extremely competitive labor market
- Introduced project management and technical documentation processes

Software Engineer, May 1998 - Dec 1998

Responsibilities:

- Created software solutions to support online publishing for education and media

Selected accomplishment:

- Built Windows client with integrated web browser for the KnowZone (<http://www.kz.com> - interactive software for elementary level math instruction)

Mindscape, Novato, CA

1996-1998

(Publisher of educational and entertainment software)

Senior Software Developer, September 1996 - April 1998

Responsibilities:

- Designed and developed software for multimedia educational products
- Supervised full-time onsite contractor and part-time offsite contractor

Selected accomplishments:

- Redesigned user interface code and implemented major new product features for *Mavis Beacon Teaches Typing*, version 8
- Analyzed and completed a Windows porting project for KeySoft, a business typing product

Oracle Corporation, Redwood Shores, CA

1994-1996

(World's second-largest software company, publishing business and database management software))

Applications Engineer, August 1994 - August 1996

Responsibilities:

- Designed and developed software for distribution support software applications
- Fixed bugs in and enhanced the legacy product

Selected accomplishments:

- Delivered the completely redesigned GUI version of core product forms
- Wrote an architecture document outlining standards for group's coding projects
- Resolved priority issues for clients and consultants
- Trained group new hires on tools and development procedures

RELATED VOLUNTEER ACTIVITIES

X-CEL Adult Education Services, Boston, MA

2007-

2008

- Tutor math concepts to adult students pursuing GED

SmartGirls, Seattle, WA

2000-2005

- Chaired the planning committee for Expanding Your Horizons 2005, a science and technology conference for 400+ middle school girls, achieving full registration 2 weeks in advance of the conference date
- Led recruitment of over 60 local science and technology professional women as volunteer workshop presenters, achieving year-to-year 75% return rate of the presenter volunteers

San Francisco Women on the Web, San Francisco, CA

1997-2000

- Founded Educational Technology Special Interest Group for a local professional organization
- Facilitated discussion list, book study sessions, and career panel

San Francisco School Volunteers

1996

- Volunteered with learning disabled elementary school students to boost confidence in their reading, writing, and computer skills by learning word processing and other software

EDUCATION

Sc. B. in Computer Science [GPA 3.6/4.0] Brown University, Providence, RI, May 1994
Currently pursuing MBA through Boston University

SADASY VAN

Skills

Managing a team of software engineer. A lead system architect and ASP.net.

Windows 2000-2003, Exchange Server, Oracle, SQL Server, ArcServe Enterprise backup. Design and Management of database driven Web sites. C#, ASP.net, ASP, HTML and JavaScript programming. LAN to Internet connection configuration and setup (**including proxies, firewalls and security system**). Application, security and web servers:

Weblogic, Entrust getAccess and Microsoft IIS.

Development experience includes Java, ASP.net, C#, JSP, JavaScript, Servlet, Vbscript, Visual Basic and Borland/MICROSOFT C++ programming. Development and implementation of business systems applications utilizing data warehouses and Internet technology.

Special Training

- **Object Oriented Analysis and Design Using UML**
- **Cognos System Administration**
- **User Requirements Documentation**

Education

1993-1993 **Boston University** Boston, MA
Computer Science

1986-1987 **ITT Technical Institute** Chelsea, MA
Computer Technician

Professional Experience

1999-Current Massachusetts Department of Education Malden, MA

Production Support Manager

Over see daily operation of the DOE production system and manage ESE production support team. Coordinate, design and implement production applications. Accountable for the availability of all production applications and application servers.

Provide technical support for the DOE production environment, which currently consist of about 30 or more production servers. Manage over 90 ESE mission critical applications which are configured in a single entry point three-tier environment with IIS front-end, Weblogic and Oracle backend.

Manage ESE's security portal which is currently powered by Entrust getAccess security application package. Monitor production servers' performance and efficiency. Perform applications and servers up grade.

Coordinate deployment of development projects, which include evaluating hardware requirement and security system integration. Debug various applications and diagnose technical issues regarding all production environments. Develop ASP.net database management application for data processing and data collection team.

1998-1999 **OFMS, Inc.** Peabody, MA

MIS and Oracle Administrator:

Solely responsible for maintaining, enhancing, supporting, and managing all aspects of the computing infrastructure consisted of 25-40 computers TCP/IP network of mostly Windows NT computers and Unix Workstations. Manage the following office computing environment: E-mail,

Scheduling, GroupWare, Backups, Intranet, Web Server, Network Faxing, Files Server, MS Applications and document management. Develop hit reports for the company web site and web site content. Design and develop Access databases with Web and Exchange Server interfaces.

Other responsibilities include:

- Provide all on going network, computer, and applications support for the office. Research, purchase, implementation, and management of all software and hardware.
- Developed and maintain asset inventory and company contacts databases which are both Web-enabled and internally accessible to users.
- Windows NT and Exchange Server system administration.
- Manage and maintain company's digital phones and voice mail system. Integrate analog and digital signals that must be mapped throughout the office.

Create Oracle instances and maintain Oracle database servers. Schedule Oracle database backup.

1997-1998 **CCBN (Corporate Communication Broadcast Network)** Boston, MA

Senior NT Network System Administrator:

Managed network-computing infrastructure for the entire company. Configured Internet networking for corporate clients and initiated outsourcing strategy and remote administration of production servers. In charge of testing and purchasing new software and hardware to fit the needs of the company. Responsible for implementing system wide security plans and procedures. Setup firewall (NAT, VPN) and Intranet networking for maximum security. Physical network maintenance, mapping and router configuration. Maintained an up-to-date database of software and equipment such as Laptops, Printers, Desktop workstations, and Computer Parts. Planned and implemented nightly backup of servers and user data. Performed installation and maintenance of network and telecommunications equipment. Worked with the business units to define network requirements, provide high-level network designs of proposed and alternate network systems, and performed critical troubleshooting, monitoring and resolution of network issues.

1995-1997 **M.I.T. (Massachusetts Institute of Technology)** Cambridge, MA

System Support/Network System Administrator:

Coordinated operating system migration and computer system deployment. Troubleshooting of LAN network problems. In addition to LAN management, assisted UNIX system administrator with managing and monitoring servers for proper operation. Maintained and managed user records and assigned access password and users privilege according to department and group membership. Provided support to over 300 PCs within the MIT libraries system. Supported all aspects of software and hardware configuration including network printing and connectivity. Supported end users software including MS-DOS, MS-Office 95, Windows NT, MS-Windows 95 and Windows 3.1. Utilized advanced DOS utilities to manage individual system. Maintained network connection between MIT libraries and MIT-net. Updated and maintained Library's PC support Web Page. Provided phone support to outside users regarding dial-in connection to the MIT library's online catalogs. Provided training to the local technical experts and documented instructions for various system and software installation. Maintain inventory database.

Budget Narrative

Budget Narrative

Attachment 1:

Title: Pages: Uploaded File: 1235-MassBudgetNarrative.pdf

Budget Narrative (Justification)

Year 1

Personnel

Project Manager / Coordinator (1FTE for 12 months @ \$80.00 /hr) \$160,000

The project manager will monitor all project milestones to ensure that they have been met and that project is on time and within budget. The project manager will have experience in project planning and the use of project management tools along with the knowledge of change management principles and methodology. This project manager will also serve as coordinator across all three grant projects, aligning them for any common milestones and deliverables, monitoring dependencies, and reporting to ESE stakeholders.

Project Managers (2FTEs for 12 months @ \$75.00 /hr) \$300,000

The project managers will monitor all project milestones to ensure that they have been met and that project is on time and within budget. The project managers will have experience in project planning and the use of project management tools along with the knowledge of change management principles and methodology.

Data Analyst (1 FTE for 12 months @ \$45.00/hr) \$90,000

The data analyst will review and analyze available data to inform program reporting and evaluation. They will review work products to ensure that data reporting produced is accurate and matches reporting from existing ESE data sources. The analyst will produce reports to meet federal reporting specifications and deadlines as well as state and agency needs. Qualifications include the ability to analyze and determine the applicability of educational data, knowledge of research issues in education and experience with managing and developing large data sets and databases.

Total personnel: \$550,000.00

Travel / teleconferencing costs

Funds are budgeted for travel to LEAs statewide to provide on-site technical assistance and training related to collection and use of data.

Total travel and meeting: \$11,000

Equipment

In year 1, we intend to configure and install the following servers to support the test and production environments:

- Application servers (15) \$150,000
 - These servers are to provide statewide capacity for implementation of the zone integration servers, in a complete production and test configuration
- Server racks (2) \$10,000

- Additional backup capacity \$30,000

The personnel working on this project will require the following equipment:

- PCs (12 @ \$1,000) \$12,000

Hardware total: \$202,000

Total equipment: \$202,000

Supplies

Software license purchase would include the following:

Zone Integration Server software, WebLogic, Jbuilder, StarTeam, db modeler and development tools, SPSS licenses.

Software Total: \$280,000

Total supplies: \$280,000

Contracted assistance:

ESE SIF implementation \$400,000

ESE will post an RFP to engage assistance from a consulting company with experience in designing and implementing statewide SIF architectures. This company would perform the bulk of effort in analysis, design, and implementation of the ESE SIF architecture, in partnership with ESE technical and data collection staff.

Legal assistance \$50,000

ESE anticipates significant legal assistance being required to resolve legal issues around interagency data sharing. This budget item is designated to provide additional help beyond existing agency legal staff to help to move the process forward.

NE Regional consortium liaison \$150,000

The regional collaborative liaison will work with Professor Coelen from the University of Connecticut to share our data safely with other states in the northeast for research purposes.

Total contracted assistance: \$600,000

Other:

District grants \$500,000

ESE will post a grant opportunity for districts to apply for grants to upgrade their student information systems to be SIF-compatible and demonstrate that they can submit their SASID requests and student data collection via SIF.

Total other: \$500,000

Year 1 Totals:

Total direct costs: **\$2,143,000**

State administration for grant = 27.1%

Year 1 indirect costs: **\$ 126,286**

Total project costs for Year 1: **\$2,269,286**

Year 2

Personnel

Project Manager / Coordinator (1FTE for 12 months @ \$80.00 /hr) \$160,000

The project manager will monitor all project milestones to ensure that they have been met and that project is on time and within budget. The project manager will have experience in project planning and the use of project management tools along with the knowledge of change management principles and methodology. This project manager will also serve as coordinator across all three grant projects, aligning them for any common milestones and deliverables, monitoring dependencies, and reporting to ESE stakeholders

Project Managers (2FTEs for 12 months @ \$75.00 /hr) \$300,000

The project managers will monitor all project milestones to ensure that they have been met and that project is on time and within budget. The project managers will have experience in project planning and the use of project management tools along with the knowledge of change management principles and methodology.

Data Analyst (1 FTE for 12 months @ \$45.00) \$90,000

The data analyst will review and analyze available data to inform program reporting and evaluation. They will review work products to ensure that data reporting produced is accurate and matches reporting from existing ESE data sources. The analyst will produce reports to meet federal reporting specifications and deadlines as well as state and agency needs. Qualifications include the ability to analyze and determine the applicability of educational data, knowledge of research issues in education and experience with managing and developing large data sets and databases.

Quality Assurance Analyst (1FTE for 12 months @ \$55.00) \$ 110,000

The quality assurance analyst will be responsible for different stages of the testing process promoting quality achievement and performance. Evaluates and tests new or modified programs and development procedures used to verify that programs function according to user requirements and conform to establishment guidelines. Writes, revises, and verifies quality standards and test procedures for program design and product evaluation to attain quality economically and efficiently.

Documentation specialist (1 FTE for 12 months @ \$50.00) \$100,000

The documentation specialist will document system requirements, create user help documentation, create training materials, review and edit all wording used in the software application, and create presentation materials. Qualifications include previous experience in technical writing in support of the software development process, as well as experience writing for non-technical audiences.

Total personnel:

\$760,000

Travel /meeting costs

Funds are budgeted for travel to LEAs statewide to provide on-site technical assistance and training related to collection and use of data.

Total travel and meeting: \$9,000

Contracted assistance:

ESE SIF implementation \$300,000

ESE will post an RFP to engage assistance from a consulting company with experience in designing and implementing statewide SIF architectures. This company would perform the bulk of effort in analysis, design, and implementation of the ESE SIF architecture, in partnership with ESE technical and data collection staff.

Data warehouse expansion \$300,000

ESE will post an RFP to engage assistance from a consulting company with experience in designing and implementing Cognos data warehouse projects, specifically with K-12 data. This company take the results of the interagency discussions and facilitate analysis and design meetings for the data model and reports, and then implement these in the ESE data warehouse, in partnership with ESE technical and data collection staff.

NE Regional consortium liaison \$100,000

The regional collaborative liaison will work with Professor Coelen from the University of Connecticut to share our data safely with other states in the northeast for research purposes.

Total contracted assistance: \$700,000

Other:

District grants \$800,000

ESE will post a grant opportunity for districts to apply for grants to upgrade their student information systems to be SIF-compatible and demonstrate that they can submit their SASID requests and student data collection via SIF.

Total other: \$800,000

Year 2 Totals:

Total direct costs: \$2,269,000

State administration for grant = 27.1%

Year 2 indirect costs: \$63,414

Total project costs Year 2: \$2,332,414

Year 3

Personnel

Project Manager / Coordinator (1FTE for 12 months @ \$80.00 /hr) \$160,000

The project manager will monitor all project milestones to ensure that they have been met and that project is on time and within budget. The project manager will have experience in project planning and the use of project management tools along with the knowledge of change management principles and methodology. This project manager will also serve as coordinator across all three grant projects, aligning them for any common milestones and deliverables, monitoring dependencies, and reporting to ESE stakeholders.

Total personnel: \$160,000

Contracted assistance:

ESE SIF implementation \$100,000

ESE will post an RFP to engage assistance from a consulting company with experience in designing and implementing statewide SIF architectures. This company would perform the bulk of effort in analysis, design, and implementation of the ESE SIF architecture, in partnership with ESE technical and data collection staff.

Data warehouse expansion \$300,000

ESE will post an RFP to engage assistance from a consulting company with experience in designing and implementing Cognos data warehouse projects, specifically with K-12 data. This company take the results of the interagency discussions and facilitate analysis and design meetings for the data model and reports, and then implement these in the ESE data warehouse, in partnership with ESE technical and data collection staff.

Total contracted assistance: \$400,000

Travel /meeting costs

Funds are budgeted for travel to LEAs statewide to provide on-site technical assistance and training related to collection and use of data.

Total travel and meeting: \$9,000

Year 3 Totals:

Total direct costs: \$1,369,000

Indirect Costs / State Administration for grant = 27.1%

Year 3 indirect costs: \$29,539

Total project costs Year 3 \$1,391,764

Total grant budget for all three years:

\$5,993,464