

# **U.S. Department of Education**

Washington, D.C. 20202-5335



## **APPLICATION FOR GRANTS UNDER THE**

**STATEWIDE LONGITUDINAL DATA SYSTEMS**

**CFDA # 84.372A**

**PR/Award # R372A090014**

**Grants.gov Tracking#: GRANT10075935**

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: <input type="checkbox"/> Preapplication <input checked="" type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application		* 2. Type of Application: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision		* If Revision, select appropriate letter(s): <input type="text"/> * Other (Specify) <input type="text"/>	
* 3. Date Received: 09/24/2008		4. Applicant Identifier: <input type="text"/>			
5a. Federal Entity Identifier: <input type="text"/>			* 5b. Federal Award Identifier: <input type="text"/>		
<b>State Use Only:</b>					
6. Date Received by State: <input type="text"/>		7. State Application Identifier: <input type="text"/>			
<b>8. APPLICANT INFORMATION:</b>					
* a. Legal Name: Iowa Department of Education					
* b. Employer/Taxpayer Identification Number (EIN/TIN): 426004525			* c. Organizational DUNS: 808346555		
<b>d. Address:</b>					
* Street1:	400 E 14th St				
Street2:	<input type="text"/>				
* City:	Des Moines				
County:	<input type="text"/>				
* State:	IA: Iowa				
Province:	<input type="text"/>				
* Country:	USA: UNITED STATES				
* Zip / Postal Code:	50319				
<b>e. Organizational Unit:</b>					
Department Name: Iowa Department of Education			Division Name: Financial and School Support		
<b>f. Name and contact information of person to be contacted on matters involving this application:</b>					
Prefix:	Mr.	* First Name:	Jim		
Middle Name:	<input type="text"/>				
* Last Name:	Addy				
Suffix:	<input type="text"/>				
Title:	Administrator				
Organizational Affiliation: <input type="text"/>					
* Telephone Number:	515-281-5293	Fax Number:	515-242-5988		
* Email:	jim.addy@iowa.gov				

**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.):**

State of Iowa

**\* 15. Descriptive Title of Applicant's Project:**

Iowa's United Longitudinal Data System Infrastructure

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 \* b. Program/Project 

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

Add Attachment

Delete Attachment

View Attachment

## 17. Proposed Project:

\* a. Start Date: \* b. End Date: 

## 18. Estimated Funding (\$):

* a. Federal	<input type="text" value="8,777,460.00"/>
* b. Applicant	<input type="text" value="0.00"/>
* c. State	<input type="text" value="5,787,310.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="14,564,770.00"/>

## \* 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:  \* First Name:

Middle Name:

\* Last Name:

Suffix:

\* Title: \* Telephone Number:  Fax Number: \* Email: \* Signature of Authorized Representative:  \* Date Signed:

**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:  
 Iowa Department of Education

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	\$ 241,931	\$ 296,939	\$ 303,597	\$ 310,455	\$ 317,519	\$ 1,470,441
2. Fringe Benefits	\$ 50,336	\$ 69,368	\$ 70,842	\$ 72,359	\$ 73,923	\$ 336,828
3. Travel	\$ 24,040	\$ 24,040	\$ 24,040	\$ 24,040	\$ 24,040	\$ 120,200
4. Equipment	\$ 0	\$ 1,320,000	\$ 570,000	\$ 380,000	\$ 355,000	\$ 2,625,000
5. Supplies	\$ 29,000	\$ 29,000	\$ 29,000	\$ 29,000	\$ 29,000	\$ 145,000
6. Contractual	\$ 401,000	\$ 1,156,125	\$ 1,078,333	\$ 542,152	\$ 546,086	\$ 3,723,696
7. Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Other	\$ 2,500	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,500
9. Total Direct Costs (lines 1-8)	\$ 748,807	\$ 2,895,472	\$ 2,075,812	\$ 1,358,006	\$ 1,345,568	\$ 8,423,665
10. Indirect Costs*	\$ 31,450	\$ 121,610	\$ 87,184	\$ 57,036	\$ 56,514	\$ 353,794
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 780,257	\$ 3,017,082	\$ 2,162,996	\$ 1,415,042	\$ 1,402,082	\$ 8,777,459

**\*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(e)(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:  
 Iowa Department of Education

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	\$ 279,908	\$ 288,306	\$ 296,955	\$ 305,863	\$ 315,039	\$ 1,486,071
2. Fringe Benefits	\$ 75,575	\$ 77,842	\$ 80,178	\$ 82,583	\$ 85,061	\$ 401,239
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	\$ 2,000,000	\$ 1,500,000	\$ 400,000	\$ 0	\$ 0	\$ 3,900,000
7. Construction	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Other	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
9. Total Direct Costs (lines 1-8)	\$ 2,355,483	\$ 1,866,148	\$ 777,133	\$ 388,446	\$ 400,100	\$ 5,787,310
10. Indirect Costs	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
11. Training Stipends	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
12. Total Costs (lines 9-11)	\$ 2,355,483	\$ 1,866,148	\$ 777,133	\$ 388,446	\$ 400,100	\$ 5,787,310

## 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.

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>Jim Addy</p>	<p>* TITLE</p> <p>Administrator</p>
<p>* APPLICANT ORGANIZATION</p> <p>Iowa Department of Education</p>	<p>* DATE SUBMITTED</p> <p>09/24/2008</p>

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

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## 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.

<b>* APPLICANT'S ORGANIZATION</b> Iowa Department of Education	
<b>* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE</b>	
Prefix: Mr.	* First Name: Jim
Middle Name:	
* Last Name: Addy	Suffix:
* Title: Administrator	
<b>* SIGNATURE:</b> Jim Addy	<b>* DATE:</b> 09/24/2008

Close Form

SUPPLEMENTAL INFORMATION  
REQUIRED FOR  
DEPARTMENT OF EDUCATION GRANTS

**1. Project Director:**

Prefix:	* First Name:	Middle Name:	* Last Name:	Suffix:
Mr.	Jim		Addy	

Address:

* Street1:	400 E. 14th Street
Street2:	
* City:	Des Moines
County:	
* State:	IA: Iowa
* Zip Code:	50319
* Country:	USA: UNITED STATES

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

515-281-5293	5152425988
--------------	------------

Email Address:

jim.addy@iowa.gov
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**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
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# **Project Narrative**

## **Abstract Narrative**

Attachment 1:

Title: Pages: Uploaded File: 1234-FINAL ABSTRACT.pdf

## ABSTRACT

### IOWA'S UNIFIED LONGITUDINAL DATA SYSTEM INFRASTRUCTURE

The Iowa Department of Education (IDE) recognizes the need and the importance of a comprehensive, accurate, and timely statewide longitudinal data system. IDE is planning to implement key projects to: 1) generate a unified infrastructure for educational data; 2) establish interconnectivity between entities for analysis and planning; and 3) develop a PK-20 system for tracking individuals throughout their education. To achieve these goals, IDE has developed plans for seven activities that loosely conform to the "foundation" and "expansion" activities paradigm set out in the Institute of Education Sciences (IES) Request for Application (RFA), and which are listed below in that respective order.

#### **Statewide Educational Data Warehouse - EdInsight**

IDE has committed significant internal and contractual resources to develop EdInsight. Input was sought from all levels of the Iowa education community to garner support and guidance regarding EdInsight's formation. Assistance from IES would permit IDE to capture and provide more information, more quickly, thereby improving results for the students and educators of Iowa.

#### **Standards-Based System for Interoperability**

A system for the automatic transmission of student data would enable the state education agency (SEA) and local education agencies (LEAs) in Iowa to improve the accuracy and timeliness of data; it would also free valuable human resources currently expended in the manual data submission processes. A standards-based transmission system would also give LEAs the ability to quickly locate information on students transferring between districts.

#### **EDFacts and the National Governor's Association (NGA) Cohort Graduation Rate**

The funding received from this RFA would allow Iowa to add dropout information when calculating graduation and cohort dropout rates with greater accuracy. IDE would also be able to augment EdInsight with EDFacts specifications and additional data which would satisfy EDFacts reporting requirements.

#### **Expand EdInsight**

The first expansion activity would be to enhance EdInsight by adding teachers, finance, additional assessments, transcripts, community colleges, and disaster mitigation data. IDE's research indicates that our constituency recognizes great value in the creation of a comprehensive unified data source which could be used to support schools and districts as well as improve educational outcomes for children. With assistance from the IES grant, the inclusion of this information in EdInsight would become feasible in a meaningful timeframe.

#### **Interoperability with Postsecondary Systems**

Lawmakers (both state and federal) request analyses that require information spanning the entire duration of a student's education. To respond to this need, Iowa must create interoperability with postsecondary data systems. Currently, no funding mechanism exists to support this initiative, so support from IES will be crucial to its success.

#### **Link Workforce and Educational Data Systems**

To assess the preparedness of graduates for future employment or further education, IDE would explore linking workforce information and IDE PK-12 and community college data. Resources from IES would be used to investigate the most appropriate location and structure for organizing and sharing this information.

#### **Standardized and Electronic Transcripts**

Members of the Iowa postsecondary community have requested a standardized transcript format, stored in a centralized location. This will reduce labor costs and transcript processing time, and increase data quality. With such a system, IDE would also be able to provide a service directly to the citizens of Iowa by having secure access to a non-transient source of transcript information in the form of a statewide transcript repository.

# Project Narrative

## Project Narrative

Attachment 1:

Title: Pages: Uploaded File: 1239-FINAL IES GRANT.pdf

**a) Need for Project:**

The Iowa Department of Education (IDE) seeks assistance from the Institute of Education Sciences (IES) request for applications (RFA) for Statewide Longitudinal Data Systems (SLDS) Grants. Given the vision and scope of this RFA being submitted by IDE, multiple stakeholders were collaboratively involved in its development. IDE is currently in the process of building its SLDS foundation that will provide access to K-12 data and decision system support to stakeholders throughout the education community. An IES grant will complement Iowa taxpayers' current \$4 million investment in the program. IDE intends to undertake all the foundation and expansion activities described in your RFA solicitation and recognizes this process as an opportunity to greatly augment and expedite the system-wide education data infrastructure IDE is in the infancy of developing with its partners.

Overall, Iowa would greatly benefit from the accurate and timely data a comprehensive SLDS would generate. Currently, it is difficult for LEAs to comply with upload deadlines as every upload process requires further LEA data verification once it is in the IDE system. The planned SLDS could streamline this process and in so doing, improve the accuracy and quality of data that are used among other things, in monitoring activities, allocation calculations, and general decision making activities. It could also create a mechanism for providing meaningful data back to area education agencies (AEAs) and LEAs for data-driven decision making, a feature not currently available. The Data Quality Campaign's (DQC) Ten Essential Elements for a P-12 LDS are being implemented to capture Iowa's systemic needs; at this time five are completely or partially met. With the assistance of this IES grant, the potential is provided to marry both state and IES funds and address the remaining five outstanding elements within the next five years:

- Element 4 – Information on untested students and the reasons they were not tested.
- Element 5 – A teacher identifier system with the ability to match teachers to students.
- Element 6 – Student-level transcript information, including information on courses completed and grades earned.
- Element 7 – Student-level college readiness test scores.
- Element 9 – The ability to match student records between the P–12 and higher education systems.

As discussed, Iowa is in the process of developing a SLDS. Having not received an award from the past IES SLDS RFAs, and realizing the importance and necessity of Iowa having a SLDS, IDE undertook the process itself within the limited resources available. Iowa is at various stages for all the foundation and expansion activities described in the RFA already: some are under discussion; in many, the foundations have already been laid; and in others, these implementation activities have begun and are being entirely funded by identified resources. Iowa has three underpinning drivers behind its SLDS: 1) unified education data infrastructure; 2) interconnectivity with other entities for analysis and planning; and 3) a PK-20 system. In addition to these underlying drivers, due to the recent historic natural disasters (e.g., 500-year flooding and tornados) that affected our state, IDE has quickly realized the need for a central repository for student records and transcripts.

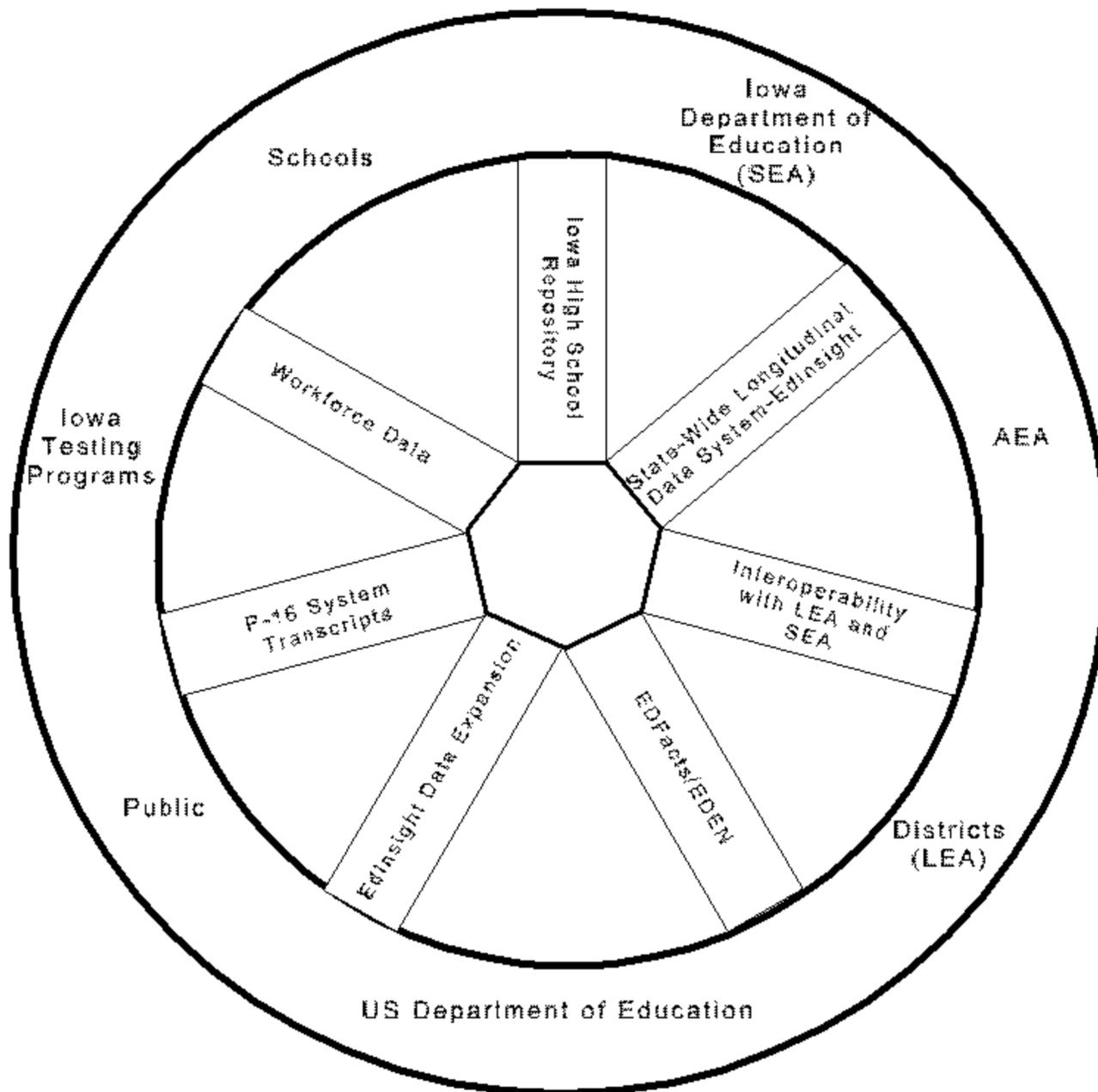
Thus far, IDE, along with stakeholders from all sections of the education community, has been working on two cornerstones of Iowa's SLDS: 1) EdInsight, a data warehouse; and 2) a High School Transcript Repository, which includes moving transcripts electronically to community colleges (CC), higher education, and employers in Iowa. EdInsight should have its first three reports – two in assessments and one in special education – available for Internet access for the first 50 license holders in January 2009 when the Iowa Legislature returns. At that same time, IDE should be awarding the RFP for the Iowa High School Transcript Repository.

These efforts are shared by IDE to demonstrate Iowa's commitment of Iowa: Iowa is willing to meet IES with financial and agency commitment. IDE would use the IES assistance to expand the planned scope and breadth of its SLDS to be a more integrated and comprehensive data warehouse. As stated, IDE would be undertaking all foundation activities and expansion activities set out in the RFA. All of these activities in total would allow more data to be added to Iowa's SLDS that among other things would allow the NGA cohort graduation rate to be calculated as part of EdInsight and shared back directly with LEAs. Though Iowa plans to entirely fund some of these SLDS components listed in the RFA with state funds, given that a substantial amount of assistance will be needed for LEAs, IDE's request for assistance is \$8.8 million; our time horizon is five years.

As a backdrop, as to what is about to be discussed, consider a schematic of the current environment, Appendix A, Graphic 1.

**b) Objectives for Proposed System:**

Before drilling down into the component pieces of Iowa's SLDS, an overview is useful. The following chart seeks to express Iowa's SLDS conceptual at a glance to the reader. It connects the seven activities with the Iowa education community stakeholders to form the unified education infrastructure of Iowa's SLDS.



In this section, each activity will be described: first, it will be set apart by a restatement of the activity along with the need and the outcome/product to be met/delivered in a table. This will be followed by

an overview of the activity including the need that is being addressed, the extent of actions already taken, and how many new actions will address the need that will be accomplished.

Activity 1: The state does not have a statewide longitudinal data system that can provide student-level data over time.	
Needs	A single repository of combined data from multiple sources in one common system for the education community.
	Tools and training in the use of data for benchmarking and longitudinal and comparative analysis for the various tiers of stakeholders.
	Resources to empower data-driven decision making by education stakeholders.
	Increased confidence in data from defining and implementing processes to improve data consistency, reliability, and quality.
Outcomes/ Products	A data warehouse where multiple years of student-level data are linkable and can be stored and used for reporting: Deliverable – EdInsight.
	IDE sharing of data back out to LEAs/AEAs to be used for local decision-making: Deliverable – EdInsight reports.
	District/AEA/IDE access and understanding of the uses and functionality of EdInsight: Deliverable – EdInsight and other analytical professional development.
	IDE sharing of data to public: Deliverable – EdInsight public portal.

Currently, Iowa does not have a SLDS that can provide student level data over time; however, Iowa has invested significant resources to develop a data warehouse, EdInsight. Once complete, EdInsight will provide multiple benefits to the state:

- Enable data integration from three disparate data sources into a scalable data warehouse.
- Analyze student demographic characteristics and student achievement data at various levels such as IDE, AEAs, LEAs, school buildings, grade level, etc., in order to better understand student achievement results and needed interventions.
- Improve Iowa’s educational decision making through the use of educational analytics and performance management tools.
- Provide IDE, AEAs, school districts, schools, and the general public access to appropriate education data, reports, and decision support tools through a flexible, easy-to-use web interface.
- Meet the informational and reporting requirements at the state and federal level as specified in the No Child Left Behind Act (NCLB).
- Comply with state and federal laws and statutes that protect the confidentiality, integrity, and availability of student information through regulations such as the Family Educational Rights and Privacy Act (FERPA) and the Health Insurance Portability and Accountability Act (HIPAA).

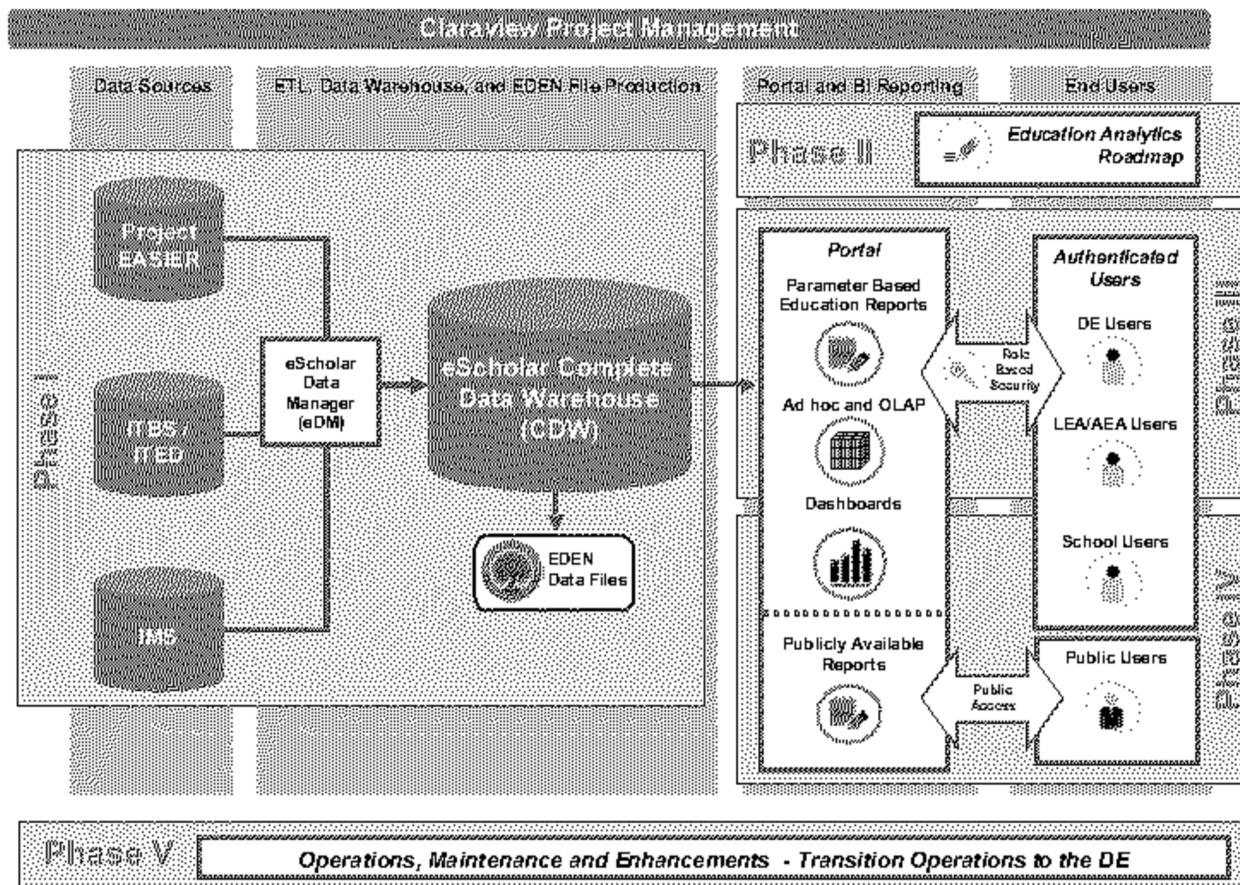
IDE has been appropriated cumulatively \$1.2 million in initial funding from the Iowa Legislature for the EdInsight project through FY09, while the initial implementation will cost IDE \$2.9 million. Federal assessment dollars are also being used because of the enhancements to achievement data. The implementation of EdInsight began in January 2008 and will continue into 2010. The IDE has the preliminary architecture in place and is building the prototype, which will be completed in the fall of 2008. See Appendix A, Graphic 2, for a high level timeline.

EdInsight will have a “back end” that includes three sets of data loaded during implementation: Project EASIER, (Electronic Access System for Iowa Education Records), which is student level demographic and program participation data; Information Management System (IMS), special education student level data;

and Iowa Testing Programs (ITP) student level assessment data. EdInsight will link all these disparate data together for analysis across these domains of information enabling new and meaningful analysis. On the “front end,” different education stakeholders (IDE staff, area education agency staff, local district staff, and longer term the public) can access data in preformatted reports and use more sophisticated analytical tools, dependent on the user’s expertise and security clearances.

The first 10 report areas are the result of a customer-driven design process funded by National Center for Education Statistics (NCES) Task Order money. IDE partnered with Iowa AEA’s to conduct a data and reporting needs assessment among local school district and area education agency staff from across the state. The goal of this assessment was to solicit user input on the portal design and reporting interfaces for the statewide rollout of EdInsight. IDE utilized a two-pronged approach in gathering information by: 1) conducting a statewide survey to quantify the magnitude of responses; and 2) convening a series of focus groups to capture the depth and breadth of qualitative aspects. The target audience consisted of district superintendents, principals, assessment coordinators, curriculum directors, teachers, and other district personnel, as well as AEA staff. There were 179 participants in the 20 focus groups held statewide, two per AEA, and 445 survey respondents.

Triangulating findings from both of these techniques led to the selection of the first 10 report areas: 1) Assessment/Growth; 2) Equity School Improvement; 3) Annual Yearly Progress (AYP) Report; 4) Annual Progress Report (APR) Report; 5) Enrollment; 6) Curriculum; 7) Special Education; 8) Transfer of Student Historical Data/Student Profile; 9) School/District Comparison; and 10) School Report Card for the Public. From the iterative action with the different EdInsight governing committees (explained later), these areas have transformed with some areas merging: School Report Card and APR, as well as Enrollment and School/District Comparison. Transfer of student historical data is also evolving with the e-transcript project on Iowa’s horizon. However, the \$2.9 million in projected funding only covers a limited number of pre-formatted reports designed by the EdInsight vendor, Claraview. To date, 10 reports have already been identified in the assessment/growth area alone. The initial contract will go a long ways towards establishing a process to create a series of reports for users. However, without additional funding from NCES to expand the datasets and the number of reports, the initial roll out will be limited.



Implementation of EdInsight will be in stages. Ultimately, it is the intent of IDE to provide limited, appropriate public access through the portal. This is Phase IV of the current project plan, but will occur in the five-year window of the IES RFA assistance.

Activity 2: The state does not have efficient and reliable interoperability between SEA and local educational agency (LEA) data systems.	
Needs	Having 362 LEAs that use 14 different student information systems (SISs) creates a need for standardization in data transfer.
	Timely data: Iowa's most high profile data collections - Project EASIER, Basic Educational Data Survey (BEDS), and the Certified Annual Report (CAR) - from LEAs to IDE are not 100 percent complete by the due date.
	There is a need and desire from stakeholders to move data electronically between them to improve accuracy, quality, and cost effectiveness.
Outcomes/ Products	Implement a standards-based approach as the backbone for transmission of student information across the state of Iowa.
	Implement Student Interoperability Framework (SIF) student locator.
	Implement SIF vertical reporting infrastructure.
	Implement SIF bar code automation for ITP testing.
	Implement SIF student records exchange (horizontal reporting).
	Implement SIF e-transcript.
	Improve the timeliness of the data filings and certifications.

Iowa does not have efficient and reliable interoperability between SEA and LEA data systems. One crucial component of Iowa's SLDS vision is to automate the data flow between educational entities that share data. No automated process exists: when data are to move from the LEAs to the SEA, an extract file is created that is uploaded through a web portal. There is no interoperability between districts either so that they may directly share information, say for a transfer student. Further, while there will soon be a Iowa High School Transcript Repository, including e-transcripts, there is no guarantee there will be a SIF e-transcript transfer from the LEA to the vendor. (The transfer could potentially be non-SIF depending on which firm wins the Request for Proposal.)

If Iowa were to get the IES RFA, it would create an automated link between IDE and constituent stakeholders. Iowa would use the money to create a direct link between itself and the LEAs, AEA, and CCs. By leveraging data maintained in a district's SIS through an integrated transport mechanism, IDE can reduce the manual data-reporting burden for the school district to fulfill required reporting.

A good portion of the RFA funding would go directly to those constituent stakeholders to SIF enable their SISs. Some LEAs have SIF agents that only need to be activated. Our most prevalent vendor with 223 districts, JMC, does not have a SIF agent. An individual solution would have to be designed and would need to be installed and set-up on every LEA machine(s). Overwhelming, the category of LEAs with the fewest students in Iowa use JMC, one of the reasons presumably because they provide add-on service where every customer's technical aspect is addressed; most of these districts would not have the technical capacity otherwise. It is the policy of IDE to not pass unfunded mandates onto LEAs, AEA, and CCs, so any vertical integration will have to come with the resources for those entities to implement them. (See Appendix A, Map 1 for a map of districts and their SISs.)

It is IDE's intent to implement a SIF student locator with assistance from the SLDS grant. This would also require direct interoperability between the LEAs and IDE's unique student identification

application. Including this particular piece of functionality would allow IDE to more easily track student mobility and generate accurate NGA cohort graduation rates.

Integrating one more stakeholder into the interoperability framework would greatly benefit data flow and reinforce the systems commitment to assessment. The Iowa SLDS would also include a SIF barcode component. This will close the circuit: data will flow between ITP, LEAs, and IDE. The largest assessment data discrepancies that exist occur when matching ITP testing data with test takers that do not have bar codes generated from their LEAs (or AEA's in the case of special education) information system. SIF integration of the ITP barcode for test taking into the educational data infrastructure makes sense, since ITP authors the state test.

SIF e-transcript will be discussed under the expansion activity of dealing with sending and receiving transcripts.

To be certain, there will also be additional hardware costs for educational entities. Transferring data between like entities - horizontal integration - will require zone integration servers. Hopefully, the plan is to group these regionally and support them at AEA's, so it will not be necessary to have 387 servers: 362 LEAs, 10 AEA's, and 15 CCs. As was previously mentioned when describing the NCES Needs Assessment Task Order for EdInsight, the horizontal integration or ability to transfer student records between LEAs was perceived as a great need in the field.

Understandably, interoperability is a need in every state. It is even more so in Iowa with its 14 unique LEA SIS vendors for Iowa's 362 school districts. Fourteen vendors mean that certain members of IDE staff specialize in supporting specific systems so that they can provide individualized service to districts uploading their extract files. This level of human resource commitment is inefficient. Here is an instance where technology could improve efficiencies and free up human capital. Further, many of these individuals specializing in jockeying data hold graduate degrees. The reallocation of human capital due to SIF would result in additional research efforts from freed up resources with the newly available longitudinal data in EdInsight.

Activity 3: The state cannot meet reporting requirements of the U.S. Department of Education's (USDE) <i>EDFacts</i> system, including a four-year adjusted cohort graduation rate consistent with that proposed by the National Governors Association.	
Needs	To have all the data necessary to calculate a true NGA cohort graduation rate in one system so it can be easily and reliably calculated over time.
	To improve the efficiencies of Education Data Exchange Network (EDEN)/ <i>EDFacts</i> / reporting and redirect human capital to more valuable analysis.
Outcomes/ Products	Implement a true cohort graduation rate, which adequately accounts for dropouts.
	Report directly from EdInsight to EDEN/ <i>EDFacts</i> thereby improving the efficiency of the process.

Originally, in the conception stage of the Iowa Data Warehouse, IDE planned to use the data warehouse to report to EDEN/*EDFacts*. However, financial resources are a reality. Up to this point, Iowa is finding the means to fund its data warehouse after twice applying for a SLDS grant. Input from stakeholders in the field grasped the utility of the EDEN/*EDFacts* functionality, but understandably they prioritized this need low. Hence, centralizing and automating the process between IDE and the USDE for reporting was not included in the original contract to implement EdInsight. IDE would use this RFA to expand the SLDS to include EDEN/*EDFacts*.

IDE, specifically those individuals who prepare these reports to the federal government, have been recognized for their outstanding performance. However, this takes a great deal of time and effort. As has

been described with any of Iowa's reporting, the data reside in disparate locations and are difficult to aggregate. Augmenting the eScholar product IDE has already purchased will make this reporting easier from the centralizing of the data and from the fact these data will be constructed in a manner consistent with federal needs.

Iowa also has a very specific need for the ability to move data to EDEN/EDFacts through a SLDS. The proposed changes to Title I indicate that all states must be able to calculate graduation rates using the NGA formula by the 2012 school year. While IDE has multiple cohorts of student data, the capacity to calculate the NGA graduation formula in a data warehouse and disseminate this information statewide is lacking. Further, the initial scope of the IDE data warehouse project (EdInsight) does not include all of the data sets required for the computation as well as creation of needed graduation reports. It is critical to provide this access statewide in order to allow LEAs to be able to know where they stand in relation to critical measures such as graduation rates.

Currently, Iowa does not have the component pieces of a SLDS that would allow it to easily calculate a true NGA cohort graduation rate and that would upload to EDEN/EDFacts. First, it does not have a working data warehouse yet; it is still negotiating its data warehouse with respective stakeholders and beginning the prototyping of its first version reports. Second, as a condition of the first, the respective data sources for calculating a true cohort rate live in disparate silos that prevent them from being truly integrated, and their integration is outside the scope of the current, negotiated contract with the data warehouse vendor. IDE will use this RFA funding to implement and provide access to the tools and reports needed to calculate an NGA graduation rate.

In order to calculate an NGA graduation rate, IDE needs to link enrollment data sets from each fall and spring collection period, as well as data from a separate dropout application for each successive year. In a four-year period, this includes merging 12 disparate data sources into intermediate student retention tables. These tables include subgroup information such as race/ethnicity as well as program information such as individualized education plans for each time period. Including these data in EdInsight not only accomplishes a federal goal, but will allow further LEA analysis through the portal for local data driven decisions.

Further, the number of tables will increase and become more complex as the NGA formula recommends six years of cohort data for full implementation. Six years of data are needed to track first time freshman or other grade retention patterns. In 2004-2005, IDE implemented a unique state identification system for all students. To date, IDE has collected four successive cohorts in order to track achievement gains and implement more robust measures of student success such as executing the NGA graduation rate. However, the current process to calculate a cohort rate is difficult and labor intensive.

The same argument that was made for human resource reallocation when SIF is implemented applies to this activity. Enabling EDEN/EDFacts reporting from the eScholar product will free up staff to do other meaningful projects. As a point of reference, another individual is planned to be hired to assist with this function for the coming year.

Activity 4: The state sees a need to expand K-12 longitudinal data systems to include a more robust set of data to the education community.	
Needs	A single repository of combined data from multiple sources on one common system for the education community.
	Tools and training in the use of data for benchmarking and longitudinal and comparative analysis for the various tiers of stakeholders.
	Resources to empower data driven decision-making by education stakeholders.
	Increased confidence in data from defining and implementing processes to

	improving data consistency, reliability, and quality.
Outcomes/ Products	Expand EdInsight beyond the three planned data sources – Project EASIER (student level data), ITP (achievement data), and IMS (special education data) to other data sets and other units of measure (e.g., building). Data sets to be included would be: <ul style="list-style-type: none"> <li>• Disaster mitigation and recovery data.</li> <li>• Teacher data.</li> <li>• Finance data.</li> <li>• Additional assessments.</li> </ul>
	Expand EdInsight to support building-level data; currently, EdInsight is structured to have a unit of measure being the individual. Expanding to building level will require additional design modification beyond the original program scope.
	Establish a process and use it to explore the potential for linking data with the Regent institutions and other agencies.

Iowa's \$2.9 million investment in EdInsight comes with many positives: the integration of three datasets, reports based on user needs, functionality, and security. Unfortunately, the price tag only comes with three data sets: Project EASIER, ITP, and IMS. Now that Iowa is forging ahead with its data warehouse infrastructure, it makes sense to move the planning horizon for the project further into the future. Iowa would suggest that IES take advantage of Iowa's investment in infrastructure and fund an expansion of the type of data available in the K-12 longitudinal data system, which would directly benefit stakeholders at all levels.

Disaster mitigation and recovery data: Iowa experienced massive, severe natural disasters this summer from flooding and tornadoes that displaced students and disturbed school operations. As this RFA is multi-year assistance, IDE would like to take the opportunity to leverage the data expansion portion of the IES RFA for disaster mitigation. NCES has a Crisis Data Management Task Force that is developing guidelines that can be used by elementary and secondary education agencies to establish policies and procedures for collecting and managing education data before, during, and after a crisis<sup>1</sup>. At this summer's 2008 National Forum on Education Statistics meeting, IDE staff attended presentations by the task force. Iowa is very interested in what the Task Force's recommendations might be for data elements to collect and templates to have designed in order to be prepared in case of persons relocating due to a disaster; especially given the task force has integrated input from agencies such as Family Emergency Management Agency (FEMA). The horizontal SIF interoperability discussed earlier under IDE's foundation activities would complement these data by allowing them to flow between the LEAs that require the data to provide continuity of education to the student.

Teacher data: Teacher data would actually come from an outside agency, with which IDE has a high degree of collaboration, the Board of Educational Examiners (BOEE). (See Appendix A for a letter of support.) Only teacher assignment and licensure data would be added to the SLDS. These data would have the explicit purpose of tying teachers to classes and classes to students and then students to outcomes for program evaluation. This would not be in any way shape or form a human resource evaluation tool as it is not framed that way: key components are not included.

<sup>1</sup> <http://nces.ed.gov/forum/crisisdata.asp>

Finance data: A SLDS that has SIF enabled finance data would be of great help for Iowa. The political and policy environment have created a need to have timelier, appropriate data available for monitoring at IDE and to make more analyzed data available to LEAs, especially as it relates to their spending authorities and unspent balances. In 2004, Iowa began phasing out the budget guarantee for districts that had declining enrollment and replaced it with the budget adjustment that ratchets down 10 percent per year until it phases out in 2014. Roughly two-thirds of Iowa's 362 LEAs are experiencing declining enrollment and 57 LEAs have fewer than 300 students. In effect, the budget adjustment is heightening the financial squeeze for LEAs in Iowa where the primary driver in the school aid foundation formula is enrollment.

As of last year, the Legislature amended Iowa's Phase II accreditation process, so that an accreditation visit by IDE, which could ultimately result in district closure, could be initiated due to financial circumstances: specifically, two consecutive years of a negative unspent balance. A negative unspent balance occurs when a district spends more than it has authority to spend, which may or may not translate into a negative cash balance. The new provision was used on the Russell Community School District which closed at the end of FY08: June 30, 2008. Fourteen other districts may have a negative unspent balance next fiscal year, depending on district actions. It is projected that in two years as many as 60 districts may have at least one year of a negative unspent balance.

SIF-enabled data as part of the SLDS would improve the ability of IDE to provide projections for districts so that they might see the data for planning decisions and make appropriate adjustments. March 2008 was the first time districts were ever notified by IDE that if their behavior continued as it was in the past, in the future they might have a negative unspent balance. This projection was based on June 30, 2007, data. This was a projection, which means it is a model. Hence, there was some variance between the projections and the actual expenditures once they were reported. This was not an issue until the Des Moines Register newspaper reported the existence of these letters and their contents in July 2008, pointing out the use of one-year-old financial data. Financial data are highly fluid and must be timely for the public to have a transparent and accurate picture. These data, the only data available statewide, are neither fluid nor timely and ultimately mischaracterized districts as a consequence.

To address what was learned from notifying the 60 districts about out year projections, Iowa is interested in using an approach that Rhode Island has implemented. Their approach is to have unofficial and official financial data available in their data warehouse. In IDE's model, timely data would be available through system interoperability, yet LEAs would have the opportunity to review, submit corrections (via corrections in their own SIS), and acknowledge the data are official or "certified."

Notifying districts of the projections was an outgrowth of an IDE initiative to provide more finance tools to districts so that they may understand their finances, plan appropriately, and monitor their financial positions. Several additional useful tools exist on the IDE website, but they are all Excel files: data in them are not timely nor are they entirely self-populating. These still require a certain level of expertise, which varies greatly among school district business managers who range from bookkeepers to highly degreed individuals. Also, the Iowa Association of School Business Officials estimate 10 percent of business managers turnover in a given year. Hence, expanding the SLDS so that EdInsight financial reports can be accessed through a secure portal with timely accurate data would address a mounting need in Iowa's education environment.

Additional assessments: The call for additional assessment data in the SLDS comes from all corners of the education community: it is widely held that one source of achievement data cannot fully capture the entire picture. The Iowa Needs Assessment, funded by a NCEES Task Order, validated the value and utility of loading additional assessment data into EdInsight. From a cross-sectional survey of Iowa educators in April 2008, 88 percent of survey respondents cited the use of large-scale assessments for improving instructional techniques. Survey respondents expressed the need for:

- Multiple Assessment Observations – In addition to the Iowa Tests of Educational Development and the Iowa Tests of Basic Skills (ITED/ITBS), educators assert multiple testing points are necessary to make a complete evaluation of the student’s educational needs.
- Frequency of Data Loads – Timeliness of evaluation is necessary to make effective classroom instructional changes. Monthly loads, or more frequent, were selected by 58 percent of respondents.

Beyond ITED/ITBS, which are included under the initial EdInsight contract scope, IDE evaluated the prevalence of third party assessments to prioritize our future acquisition and maximize the utility provided by EdInsight. Appendix A, Table 1 - Top Four Third Party Assessments in Iowa: Prevalence of Use - illustrates the top four most commonly used third party assessments in the state. Each of these assessments requires development of specifications and packages for Extract, Transform, and Load (ETL) processes and subsequent report development. Our current EdInsight contract includes only ITED/ITBS data.

IDE also plans to work further with ITP when expanding the assessments that are in EdInsight and thereby included in Iowa’s SLDS. First, there are additional test scores other than those required of NCLB, including subscale scores. Next, ITP will be working with IDE, AEA’s and LEA’s to implement the Iowa Core Curriculum (ICC), which will require LEA’s to give end-of-course assessments developed by ITP. Beyond the quantitative scores, the curricular approach of ICC will have qualitative factors which will need to be captured so that they may be considered in any analysis of ICC’s efficacy. ITP’s offer of access to university researchers specializing in metrics will be crucial in this endeavor. Also, ITP is working on two different alternate assessments for children who are in special education as well as a writing assessment. Clearly, there is significant potential to increase the number of formative assessments through our relationship with ITP, as is confirmed by the letter in Appendix A. There are also a great many opportunities with other third party assessments.

Activity 5: The state sees a need to create interoperability with postsecondary data systems or create consolidated P-16 data systems, in a manner consistent with the requirements of the Family Educational Rights and Privacy Act.	
Needs	A longitudinal educational data system that spans the entire educational system. (The Legislature has recently required the PK-12 student unique identifier on the Regents and community college student data systems records.)
	To convince higher education there are benefits to engaging in a PK-20 system.
Outcomes/ Products	Phase I of our plan is to initially create a PK-14 system.
	Create a dialogue to move the system forward to create a PK-20 connection in EdInsight ultimately.
	Distribute the “Freshman Year Report” through EdInsight to LEA’s in conjunction with the Regent institutions.

Currently, only a complete K-12 system exists. There are some PK students in the system, but not all of the potential children. Community colleges exist as a division within IDE and there is no systematic interoperability between the K-12 and community college (CC) systems. The Regent institutions have traditionally tightly controlled their data. All of this is set against a back drop of state lawmakers requiring a common unique student identification on all systems and calling for analysis that would require tracking students over the entire course of their education. The inquiries of state lawmakers are echoed by federal lawmakers. That, in itself, sets out the clear need for Iowa to change our data environment to one of PK-16.

Phase I would be to create an integrated PK-14 data system. At the base of the continuum, there are more children entering prekindergarten programs than submit data through Project EASIER. With the addition of the Statewide Voluntary Four-Year-Old Preschool Grants Program, our goal is to have 90 percent of four-year-olds participating in preschool by the 2010-2011 school year, and thus be in the SIS of a reporting entity and thereby participating in the SLDS.

At the top end of the continuum in PK-14 are CC data, which also could be integrated in Phase I. IDE has a Community College Division, so these data are internal. However, they have never been linked to K-12 data. There are issues in integrating these data: the building block of the CC is not the individual student record, the individual, as it is in Project EASIER. That creates real needs such as reports of concurrent enrollment – high school students taking postsecondary courses – that should yield the same result when calculated on both the K-12 and CC systems, but does not.

The Division of Community Colleges and Workforce Preparation has conjectured about restructuring its data system on community colleges, referred to as “MIS” (management information system). If IDE were presented with an opportunity, there might be room to improve the structure of the division’s data to make it more functional and a SIF implementation would lend itself to storing, accessing, and analyzing this data through EdInsight. At a minimum, now that the CC data systems contain the K-12 state student identification, select variables can be moved through the EdInsight ETL process, populated in a template, associated with other data, and be included in reports.

Phase II, going beyond secondary schools and linking postsecondary data back to the PK-12 system; it is not a done deal and should be considered in the long term. In Iowa, there is overt legislative support. The supposition of requiring everyone to have the same unique number in their system is that data will be linked. Many, including some legislators, believe that the intent would be that data be shared between levels, as decisions at one phase affect later available options.

The technology now exists for data to flow both ways between PK-12 and higher education, especially once IDE pays for the implementation of an e-transcript system, which will improve CC and Regent institutions operations at no cost to them. Sensitive data ownership and governance issues still remain for CCs and Regent institutions when it comes to sharing data back with IDE. Arriving at how these data are to be integrated is now a negotiated process.

A potential realizable outcome or product that would example the culmination of the relationship with higher education would be the creation of the Freshman Report through EdInsight. The Freshman Report is produced by the Regent institutions and evaluates the performance of incoming Iowa high school graduates’ first year in the Regent institutions. If these evaluative results could be linked back to LEA districts or teacher and administrator planning, the magnitude of the data-driven decisions that could occur would be powerful for developing teaching and learning strategies.

Activity 6: The state sees a need to import workforce data from other sources to assess the extent to which high school graduates are adequately prepared for work or further education.	
Needs	State lawmakers are very interested in how community colleges prepare students for the workforce. They enacted the Iowa Education and Training Outcomes data project.
	Iowa Workforce Development (IWD) contracts some programs entirely to CCs, so they need CC data for performance evaluation.
Outcomes/ Product	K-12 data will be linked with community college data to assess preparation and earnings after obtaining an associate of arts degree.
	Wage studies of the existing markets which can be taken into consideration in curriculum planning.

	IWD and IDE would arrive at an agreement where IWD would link select data into EdInsight and have analyst access.
	IDE would gain linkage with the many joint-agency job training initiatives IWD partners with.

There is some interest to see how well K-12 prepares students for the workforce. However, there is more interest to see how much CCs prepare students for the workforce due to the policy environment: 1) one of the goals of the Iowa State Board of Education is to increase the number of students who seek postsecondary education; 2) the Iowa Legislature established the Iowa Education and Training Outcomes project whereby IDE and IWD began sharing data this year; and 3) Perkins and the Workforce Investment Act (WIA) funding make community colleges part of the job training center infrastructure. Therefore, this particular activity has outcomes/products very relevant to policy in Iowa.

Partnering with IWD will open the possibility of other joint agency training initiative data. There are lists of academic programs and enrollments relevant to regional economic development initiatives, (such as Workforce Innovation for Regional Economic Development, Regional Innovation Grant, United States Department of Agriculture (USDA) Rural Development, and Workforce Intermediary and Economic Development Administration initiatives), along with their outcome metrics: number of job placements, Time to Hire, wages, retention, etc. Business training initiatives data are available in human services, faith and community organizations, National Guard and other military, corrections, likewise with the same outcome metrics for program evaluation. Existing outside any educational system are professional certifications, registered and non-registered apprenticeships that could also be linked to.

SLDS for Iowa's unified education infrastructure, and specifically EdInsight, could not make valuable use of all those data, so it does not make sense that all should be included. However, as part of the five-year plan, a process of determining which data are appropriate can be accomplished. IWD would then be able to access their data in conjunction with other data in EdInsight. Obviously, security, confidentiality, and access issues would all have to be addressed in turn. All costs associated with expanding the portal to accommodate extra high end users (those with ad-hoc and studio query Cognos functionality) would be something IDE would be asking IES to fund.

Activity 7: The state sees a need to improve the capacity to send and receive transcripts of students applying to postsecondary educational institutions and/or moving across state lines.	
Needs	To move transcript data electronically from secondary to postsecondary in Iowa.
	The need for a backup set of transcripts to exist for Iowa high school students.
	General public's need to access a high school transcript.
Outcomes/ Products	A high school transcript repository: <ul style="list-style-type: none"> <li>• High school records for perpetuity.</li> <li>• Disaster recovery and mitigation: centralized records allow continuity of education and records recovery.</li> <li>• ICC mandate and 8<sup>th</sup> Grade Plan mandated by the Iowa Legislature can be evaluated.</li> <li>• Postsecondary benefits: reduced processing time, reduced labor costs, and increased data quality. Enable ease in calculation of the Regents Admission Index (RAI), which is a cumulative score.</li> </ul>
	The Iowa Legislature has appropriated \$1 million to accomplish specific requirements.
	Sending high school transcript data electronically to colleges and universities.

	Sending individual student transcript data electronically from Iowa school districts to IDE to fulfill state and federal reports.
	Enabling school districts to electronically exchange student records when students transfer to other districts within the state of Iowa.

As has been previously mentioned, the Iowa High School Transcript Repository (e.g., e-transcript system) will be a component of Iowa's SLDS and is being funded via Iowa taxpayers. Implementation of the data repository will allow school districts to leverage data currently in their student information system, which will include electronic transcript data that can be sent to a postsecondary institution or between local school districts. It will also allow the state to keep a transcript of all Iowa high school graduates in a central repository. Many stakeholders stand to benefit from the program.

It is very clear from discussions with a postsecondary advisory committee, that they would like a standardized transcript format. Indisputably, there would be benefits institutionally of reduced processing time, reduced labor costs, and increased data quality. The ability to move transcripts electronically would be made available to all public school districts through the proposed application. Ease of use will benefit school registrars and standardized transcripts will benefit postsecondary registrars, especially with such additional requirements as calculating the RAI.

The RAI will be used to calculate a score for freshman applicants to the University of Iowa, Iowa State University, and the University of Northern Iowa beginning in the fall of 2009. The RAI is composed of four factors one of which is the number of high school courses completed in the core subject areas of English/language arts, mathematics, natural science, social science, and foreign language. IDE uses the NCES course classification system and the School Codes for the Exchange of Data (SCED) for the collection of statewide curriculum data. These national classification systems are used because of the standardization they provide. Through a collaborative effort between the Regent institutions and IDE, a set of NCES/SCED courses was identified as acceptable for inclusion in the RAI calculation. Ascertaining the number of acceptable RAI courses included on a high school transcript will be workable only if the transcripts are provided in electronic format. While all Iowa high schools have a student information system that stores the individual data required for transcripts, the standard transcript options provided by the respective vendors do not include the NCES and SCED codes. This project will facilitate the customization needed to comfortably accommodate this process.

Citizens of Iowa would benefit from a transcript repository centrally housed at IDE from which they could request that their transcript be sent to entities (postsecondary institutions or employers) that may require that information many years after they graduate. Having the information housed in a central location would be similar to citizens being able to access their birth certificate from a central location at the Iowa Department of Health. School districts are required to keep an official permanent record on each student; however, historical records may not be as readily accessible. The same is true as school districts reorganize or dissolve. Permanent records are transferred, but may not be readily accessible. Having a repository of transcripts housed at IDE would provide a service to the citizens of Iowa.

Another convenience for the citizens of Iowa would be access to a transcript at any time of the year. In many cases, school district staff have flexible schedules in the summer and students or former graduates that want to have their transcript sent to a postsecondary institution may not be able to do so if the appropriate school district staff person is not available. The proposed application would allow the student to authorize the postsecondary institution to "pull" the transcript from the repository and thus eliminate the need to wait and have a school district approve the release.

With the recent natural disasters, it is worth pointing out that a centrally housed repository with relatively current student transcripts could serve as a mitigation strategy for disaster recovery. If a district

that were to experience a server loss or file loss, the district would, at a minimum, be able to recover the students' grades. A central repository would also support educational continuity. In the case where a community is devastated and students will be attending other districts for an interim period, these districts would have relatively current records of the students' educational progress and achievement for decision-making.

Data housed in the transcript repository can fulfill the 2006 legislative mandate that requires school districts to report the students who have completed a core of curriculum more accurately than those data collected in Project EASIER, especially when integrated with the analytical capabilities of EdInsight.

### **c) Project Design:**

## **1. GOVERNANCE AND POLICY REQUIREMENTS**

### **NEEDS AND USES:**

From the initial rollout, Iowa's SLDS embodied in EdInsight will address achievement and gaps. Two of the first three data sources in the prototype and Version 1.0 contain achievement/growth data. One of these is special education data, which contains the assessment data for this subpopulation. The final of the three initial data sets in EdInsight contains demographic and subpopulation indicators upon which to parse the achievement data. From the inception, Iowa's SLDS is focused on improving student achievement and reducing achievement gaps.

The vision has been to provide the Iowa education community consistent and accurate longitudinal information on education outcomes and the analytical tools needed to improve decision making and student success. Actualizing that vision are four goals:

- Provide the education community a single repository of combined data from multiple sources on one common system.
- Provide tools and training in the use of data for benchmarking and longitudinal and comparative analysis.
- Empower data driven decision making for education stakeholders.
- Increase confidence in data by defining and implementing processes to improve data consistency, reliability and quality.

The case highlighting specific examples has been made throughout the preceding narrative. Iowa's SLDS will capture specific data to evaluate state policy and help support local data-driven decision making. First, the proposed SLDS leverages the proposed requirement that all PK-20 student data systems contain the student's Iowa unique student identification, provided the individual had one. Next, there was considerable discourse dedicated to describing a potential looming financial crisis for LEAs. As described, a SLDS with timely financial data could support IDE efforts to provide financial technical assistance, predictions, and monitoring. Specific legislative mandates such as monitoring of the ICC and the 8<sup>th</sup> Grade Plan could also be done with transcript data that are to be integrated into EdInsight. The larger data set which those transcripts come from, the SIS student record and the storage of it at the Iowa High School Repository, is another use of the SLDS that addresses the present state concern of disaster planning. Also, teacher data, which resides in another agency, will be linked to student data.

### **GOVERNANCE:**

To some extent, the current governance of EdInsight will dovetail with the SLDS. Currently, a multi-tier governance structure is in the process for EdInsight. This multi-tier approach allows the

discussion of specific issues with the appropriate audiences. That helps keep the process between the stakeholders iterative and ongoing because it is relevant. The four committees are steering, advisory, data governance, and project management. These committees support EdInsight in different ways: Steering directs; Advisory shapes; Data Governance defines; and Project Management engineers. For a better understanding of their roles, each will be delineated.

Steering Committee: The objective of the Steering Committee is to keep the project on course to successful completion. Projects that span multiple offices or programs within IDE create a natural complexity requiring the direction of IDE's senior leadership. Committee members are decision-makers positioned to consider and resolve internal and external policy issues that surface as the project develops, and go beyond the authority of the Project Management Team. Currently, it includes partner agencies representing the data sources: special education, ITP, AEAs, and LEAs. As data are brought on from additional partner agencies, e.g., Iowa Workforce Development, the membership of the Steering Committee will be expanded to include them as well.

The Steering Committee serves to ensure the project reflects the overall objectives of the organization, taking into account the unique needs and challenges of individual programs and offices. It is the decision-making body regarding data governance, acting upon the recommendations of the Data Governance Committee. Finally, the Steering Committee coordinates the implementation of separate but related projects that may share issues and resources.

Advisory Committee: The Advisory Committee provides a practitioner's perspective to the design, architecture, and implementation of EdInsight, to ensure the project meets the needs of the clients. The group of subject matter experts, who were intentionally selected to represent various local and state stakeholder groups throughout the state, function as a technical advisory committee, providing input regarding the education systems data needs. Members of the committee shape the project by collectively and individually lending their expertise to defining the content of EdInsight education data reports and its functionality. They interact directly with the Project Management Team and provide feedback from the field regarding project developments prior to their release. In addition to being a chief source of information in the requirements process, they serve as a test group for user acceptance testing and are key to delineating professional development for clients and local information technology support staff. They are led by a member of the Project Management Team and generally work independently of the Steering Committee. The Advisory Committee serves solely in an advisory capacity, and is not expected to be a decision-making body.

Data Governance Committee: The Data Governance Committee serves as a separate and specialized advisory committee that defines the approach to master data management. The Data Governance Committee creates its mission statement, goals, and objectives, which ultimately define the data culture of IDE. The chief role of the Data Governance Committee is to identify data issues and propose recommended solutions. Currently, the Data Governance Committee provides the Steering Committee with the recommendations needed to adopt policies that ensure the quality, availability, security, and usability of Iowa education data for purposes of EdInsight. As has always been the plan, the Data Governance Committee's breadth would expand as more data sources are integrated into the longitudinal data system. The group is the subject matter authority regarding data processes. Members of the Data Governance Committee include a representative from each of the data sources. The Data Governance Committee identifies the business rules required to make certain data are current, consistent, and accurate. They maintain a log of critical data issues, including their status and resolution, and share the updated list with

the Project Management Team. While the Data Governance Committee receives issue referrals from the Project Management Team, it functions independently from the team, unlike the project's other two committees.

**Project Management Team:** The Project Management Team oversees the day-to-day operations of the planning, design, production, and implementation of EdInsight. It has decision-making authority for all policy that is exclusive to project implementation and maintenance. It combines the talents and expertise of IDE and contractors to develop a project vision, plan, and accompanying foundation documents that direct the steps and processes needed to fulfill the project<sup>2</sup>. The team functions as one unit to develop a detailed project plan and schedule that sets the pace of the project. It determines what resources are needed to complete tasks and provides the documentation of project work that allows the team to approve a task as satisfactorily completed.

The Project Management Team continuously evaluates the execution of the project, identifying potential risks to the project, and actions to mitigate them. The team engages both the Steering Committee and the Advisory Committee on a regular basis, and calls additional meetings of these groups as needed. Additionally, they refer data issues to the Data Governance Committee as they arise, and support the committee in developing a resolution. Ultimately, it is the responsibility of the Project Management Team to deliver.

The purview of three of the four committees will be extended to include the entire SLDS, when Iowa makes that step. The Steering Committee, being the broad policy based input instrument it is, will morph to consider implications of the entire SLDS. The Data Governance Committee would also expand to encompass all the areas of data being incorporated into the larger enterprise design, as well as EdInsight specifically. However, the EdInsight Advisory Committee would remain focused on its important task at hand: the development of the data warehouse itself and the reporting from it to stakeholders. Obviously, the project management team will also expand its role to encompass the additional components of the system the SLDS grant will be able to fund. In this instance, the expansion of responsibilities will come with additional human resources, in the form of contractors, for the implementation phase of these components.

#### **INSTITUTIONAL SUPPORT:**

Not only is there an institutional structure to govern and direct the program, there is also the institutional support to carry the initiative forward into the future. The membership of the various governing committees offer proof of engagement of key personnel from the director on down to the educators from the field representing the corners of the state, as well as, the breadth of positions in the field – teachers, principals, assessment individuals, information technology staff, AEA staff, and SEA staff. (See Appendix A for a list of committee membership.) Further, the Iowa State Board of Education has directly engaged in this discussion, as it was an agenda topic at their 2008 retreat. Beyond those directly linked to IDE, there is the commitment of stakeholder and partner organizations as is demonstrated from the letters of commitment in Appendix A. The inter- and intra-agency relationships that will help support the SLDS in Iowa will be delineated in the next section on institutional support.

The state of Iowa has made a significant commitment of both financial and human resources to its SLDS effort and plans to continue to do so. IDE plans to explicitly fund several components of its SLDS itself. The initial implementation of IDE's data warehouse, EdInsight, is expected to cost \$2.9 million of which the Legislature has already directly appropriated \$1.2 million and IDE has contributed additional federal assessment monies.

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<sup>2</sup> Currently, only Claraview is under contract for EdInsight. However, by the time the RFA is awarded, IDE will also have selected its e-transcript vendor, which is scheduled to happen in January 2009.

The Iowa High School Repository - Iowa's e-transcript project - is another example of the state's financial commitment. In state fiscal year (SFY) 07, IDE received \$506,000 through the Rebuild Iowa Infrastructure Funds appropriated by the Legislature and then distributed by the Technology Governance Board, an enterprise-wide governing structure. These monies were doubled by a \$500,000 appropriation from Senior Year Plus, an administration initiative to offer more opportunity for access to rigorous postsecondary classes for secondary students, in SFY08. IDE plans to use these monies to design and implement the e-transcript project without any financial assistance from NCEC; however, IDE welcomes technical assistance. Further, IDE would prefer to spend some of the e-transcript design money to engineer integration into the larger SLDS system vision we articulate here in the RFA as opposed to making a stand-alone repository.

In the Objectives for Proposed System Section of this narrative response, it was made clear that these monies from the Iowa Legislature have explicit uses per the legislation, and by-product benefits that accrue when the mandates are met are welcome: the mandates must be met though.

There has also been and will continue to be a significant commitment of financial resources to secure human resources. Most obvious would be the commitment of salaries. IDE has four full-time positions on staff in the Bureau of Information Technology Services already dedicated to EdInsight. In addition to these individuals, the core team extends to others in the Bureau of Planning, Research, Development, and Evaluation Services; and the administrator of the Division of School Support and Information. This core staff is further augmented by Claraview, the implementation contractors, which are a significant financial commitment. Finally, IDE has an internal development section in the Bureau of Information Technology Services that provides support to the team when needed. Beyond the salaries, there are the monies paid to train these individuals. Team members require specialized, expensive training.

#### **SUSTAINABILITY:**

The commitment made by the state of Iowa, IDE, and the educational stakeholders speak volumes to the sustainability of Iowa's SLDS. Two cornerstone pieces of the system are being undertaken by the state and IDE: e-transcripts and a data warehouse. As cornerstones, these will provide structure upon which to anchor the complementary pieces from the IES RFA.

The Iowa High School Transcript Repository, which includes e-transcripts, will be getting underway in January 2009 with the awarding of a contract to a bidder. The long-term commitment comes through in the appropriation, the RFP, the awarding of a contract, and the intent of the program: It is a *repository*. There is also some cost recovery potential for operating costs, as is the paradigm with public birth records available through the Iowa Department of Public Health.

Version 1.0 of EdInsight will be up and running in the same time frame as the awarding of the Iowa High School Transcript Repository contract. The simple fact, EdInsight will be working, means it is more likely to continue on into the future. Just mentioned in the last section, is the fact that four new EdInsight staff salaries have been moved onto IDE's administration budget along with other staff, showing the long-term commitment. Finally, EdInsight is written from an "off the shelf" application, so it will be easier for IDE to support when the contractor is gone; knowledge transfer is included in the contractor implementation.

## **2. TECHNICAL REQUIREMENTS**

#### **FEDERAL (EDFACTS) REPORTING REQUIREMENTS:**

The proposed solution will leverage a third party tool – eScholar Complete Data Warehouse (CDW), which contains a robust data model for education reporting. The CDW fully supports the hundreds of data submissions required by the USDE EDEN/EDFacts data collection program. This support includes

creation of all of the current year EDEN files, some prior year files, and all future files. The method of file creation is that eScholar provides ETL processes to the state on a scheduled and “as updated” basis. The state then has ownership of the ETL processes and can modify them when needed. As the data are ready in the eScholar CDW, IDE will run the ETL processes developed by eScholar that generate the EDEN/EDFacts files. Those files can then be uploaded to EDEN/EDFacts using the EDEN Submission System website.

Key technical components that translate into planned advantages in making the EDEN/EDFacts reporting easier include:

**Auditability:** One of the key capabilities designed into eScholar's support for EDEN/EDFacts and accountability reporting is auditability. One of the unique aspects of the eScholar CDW that makes this possible is its ability to manage both calculation logic and calculated results independently and store both persistently in the database. eScholar even supports the ability to store interim calculations involved in complex logic such as district level AYP. Using this capability, IDE will have the ability to look back on exactly what was submitted and understand exactly how it was calculated, who approved the data, who approved the calculation, and more.

**Efficiency:** eScholar can optimize the data calculation and submission process. Since eScholar has been doing this for multiple SEA customers for the past few years, they have developed a very efficient ability to leverage the standard portions of the process and still provide SEA's with the ability to perform state specific functions, such as the selection of populations, the calculation of AYP, and much more.

**Flexibility:** In addition to providing the ability to use state and timeframe specific selection and calculation logic, eScholar provides the ability to incorporate data into the process that may not yet reside within the eScholar data model.

Some data calculations require multiple years of data to produce and/or need the results of the previous year's calculations. SEAs need the ability to perform their data submissions on the timeframe required by the United States Department of Education (USDE), which may not coincide exactly with the data warehouse implementation timeline. eScholar accommodates this by providing the ability to integrate both data residing in the data warehouse with data sourced externally. This flexible data sourcing capability will allow IDE to implement eScholar's EDEN/EDFacts capabilities even if all of the data is not yet in the data warehouse. Over time, as more and more data reside in the eScholar CDW, these external data feeds can be eliminated.

**Integration Across the eScholar Platform:** The eScholar EDEN/EDFacts capability is fully exposed across the eScholar Data Manager, the ETL, the data model, and the eScholar framework for Cognos so data can be verified prior to submission as well as analyzed in the context of other data. This capability is one of the many benefits of the comprehensive metadata strategy employed by eScholar.

#### **PRIVACY PROTECTION AND DATA ACCESSIBILITY:**

To comply with FERPA, the solution will leverage appropriate third party tools including the business intelligence and reporting tool, Cognos, and the database and data model, eScholar. The Cognos Connection portal will provide a framework for the presentation of data to the user community. The planned data warehouse solution for Iowa is completely secured, ensuring the security of portal information at three different levels.

- Cognos Connection provides the first layer of authentication and security for the system.

- The application layer integrates directly with the portal to receive authentication data and provides additional role-based and rule-based security.
- Finally, the database layer will provide an additional layer of security, ensuring that data is only accessed through Cognos or authorized administrative tools in accordance with business rules.

The features of the security policy that will be employed include:

- Implementation of policies and rules for different data types and what combinations of them need to be redacted based on user permissions and redaction rules.
- Security architecture that quickly determines “on the fly” what access and permissions the current user has that will affect what that user is attempting to do in the system.
- Pre-defined BI logic that is able to dynamically redact data based upon the redaction rules and user security.

A categorization of data elements will assist in meeting FERPA guidelines:

- Confidential – Confidential data elements are elements which must always have redaction rules applied. Examples include student identifier, student name, scale score, and performance level. The elements directly reveal private information and the disclosure of these fields is governed by FERPA and other privacy laws and regulations.
- Sensitive – Sensitive fields are fields that must have redaction rules applied when they are combined with another sensitive or confidential field. Examples include ethnicity, gender, special education status, limited English proficiency status, and gifted status. These fields may be used to indirectly discover private information contained in the confidential data elements.
- Public – Public fields are fields that do not need redaction rules applied unless they are combined with confidential fields. Examples include student location, count of students, and subject matter tested. These fields cannot be used to determine private information.

Examples of rules that may be implemented include:

- Rule of Ten – Any row of ethnicities or disaggregated groups where the total count for the row is less than 10 should show the total student count (which is a public element) but redact each subtotal cell.
- 100 Percent Rule – Any row of ethnicities or disaggregated groups where all students fall into one achievement level should show the total count but redact each subtotal cell regardless of the total student count.
- Combination Rule – Redaction rules are applied based on the redaction category of the field. In the case of confidential fields, redaction rules are always applied. However in the case of sensitive and public fields, redaction is only applied when fields are combined in certain ways.

The solution vendors will leverage collective prior experience of implementing a comprehensive security model that meets FERPA.

As of March 24, 2008, USDE has proposed new regulations for FERPA that would impact the processes for disclosing student information and using student records to conduct research. The draft guidance includes some statements that recognize the legitimate role of research and evaluation, and, as such, the SLDS will need to clarify that the purpose of the SLDS is to strengthen research and evaluation for program improvement. Further, specific protocols for sharing information in the research and evaluation context will need to be created and followed. The proposed data warehouse for Iowa will consult the new regulations once they are finalized for specific guidance.

Documentation that clearly articulates what data will be accessible, to which users, and for what purposes is included in Appendix A. It is the beginning point for the EdInsight “Security Matrix” that explains how Iowa will manage the data access.

#### DATA QUALITY:

Clearly, the state of Iowa, IDE, and the educational stakeholders have demonstrated a firm, ongoing commitment to ensure the integrity, security, and quality of data.

Data dictionaries, with well-defined content and common definitions for data elements to assure the same definitions, codes, and periodicity have been distributed across the state by IDE. These exist and are documented for the current and previous years, published on the IDE web site (along with handbooks, guides, contact information, Frequently Asked Questions [FAQs], checklists, etc.), complemented with periodic training sessions conducted regionally.

Business rules for data format, acceptable values, missing data options, and logical comparisons to prior data; these exist and are documented, published and supported similarly to the data dictionaries.

Automated data edit processes to verify data quality and to ensure that rules are met before allowing data into the state’s data system; these exist and are implemented through a variety of mechanisms at multiple points in the data flows; in the LEA-level SIS, in the state-level data collections (e.g., Project EASIER), and in the EdInsight ETL processes.

Data collected and accumulated at the state level are necessarily analyzed, and reconciled appropriately, typically manually, by knowledgeable and skilled state staff working in conjunction with the LEAs, AEsAs, and other data providers; all prior to the data being loaded into the EdInsight data warehouse.

EdInsight has formalized, if not established, many of the essential components of a total data quality management program. At a high level, the Steering, Advisory, and Data Governance Committees direct, shape, and define, respectively, the various aspects of data quality. In the trenches, the Project Management Team oversees the day-to-day operations of the planning, design, production, and implementation.

With the advent of EdInsight, data which had previously existed only in disparate “private” systems, or had previously been viewed in only the context of a single year or an individual LEA, are receiving unprecedented exposure and hence, added scrutiny. Clearly, there is a growing awareness of, and appreciation for, the fact that “it’s all about the data.” (Actually, it’s all about the students, and related educational events and entities, that the data represent.) The bar has been raised for the quality, completeness, and timeliness of the data that providers submit; as has it been raised for the functionality, utility, and timeliness of the systems and services provided by the system developers and administrators.

Much has been accomplished. Ensuring the integrity, security, and quality of data is a journey; not a destination. Much remains to be done. Consistent with the intent and long-term goal of the IES SLDS Grant Program, monies made available through this award will be used to promote and advance data quality as it relates to the foundation and expansion activities previously identified, including, but not limited to:

- Development, implementation, and ongoing support of automated processes to verify the accuracy and completeness of data submitted by data providers (primarily LEAs and outside agencies).
- Professional development and training for data providers.
- Professional development and training for data consumers (users).
- Professional development and training for system developers and administrators.

### INTEROPERABILITY:

In the summer of 2008, multiple natural disasters hit the state of Iowa impacting tens of thousands of Iowans, displacing families, damaging homes, businesses, and schools. On May 25, 2008, an EF5 tornado hit Parkersburg, Iowa. This tornado destroyed the local high school serving the Parkersburg and Aplington communities. Severe weather in May and June caused a "500 year flood" displacing 40,000 citizens.

As a result of the natural disasters, thousands of students will be displaced for the 2008 school year. It will be months before the impact of the natural disasters on student mobility and school districts is known because of lack of adequate interoperability and outdated data collection mechanisms. Iowa is a strong local control state and does not have a single student information system making it difficult to track and transfer student information on students in an efficient and timely manner. Iowa's current statewide data collection system was built in 2000 and needs to be replaced. Often times these collections are months behind the period they represent.

Adequate interoperability and timely data collection is a prerequisite to using a SLDS in order to make data-driven decisions to impact student achievement. In the Needs Assessment Task Order, referred to earlier in this response, participants indicated the success of a SLDS would hinge on the currency of the data. Seventy-seven percent of participants indicated they use student information in their current role either daily or weekly. In order for Iowa to build a successful SLDS, the current collection of student information needs to be rebuilt to ensure wide spread adoption. Further, redesigning the backbone and movement of student information between LEA's and IDE will allow Iowa to handle disasters such as the flooding and tornados that impacted districts, schools, and students in 2008.

### Solution/Technical Requirements:

The state will use this SLDS grant opportunity to implement timely and accurate data exchange horizontally between LEAs as well as vertically to IDE. Iowa will implement standards-based approach using SIF in redesigning the backbone for transmission of student information across the state of Iowa. The SIF transport methodology will be employed to rebuild the education infrastructure and break down the multiple silos of education data that currently exist across the state. Specifically, Iowa will: 1) implement SIF student locator; 2) implement SIF horizontal student records exchange and SIF e-transcript; 3) implement SIF bar code automation for ITP testing; and 4) implement SIF vertical reporting infrastructure. Further, an Iowa specific SIF certification will be created and required for all student information vendors in order to ensure adequate interoperability and data transmission. A gap analysis will need to be completed in order to assess the feasibility of LEA and student information system vendors to implement SIF as a viable transport methodology. Each system and LEA will be assessed and an implementation plan designed to ensure compliance.

### ENTERPRISE-WIDE ARCHITECTURE:

Iowa's SLDS will be a true longitudinal data system. Iowa implemented unique state student identification numbers at the beginning of the 2004-2005 school year and thus already has four years of longitudinal data that can be linked across years at the student-level. Currently, Iowa stores much of its student-level data on several servers within many different tables. One critical focus of EdInsight is to merge this student-level data into one central repository, so that it can more easily be analyzed and used in decision making. In the initial implementation of EdInsight, three of our largest data collections will be merged, based on unique state student identification numbers. These data collections include Project EASIER (student-level demographic and program participation data), IMS (student-level special education data), and ITP (statewide student-level assessment data). Each of these data collections has its own data dictionary and business rules. As Iowa merges these data into EdInsight, an overarching data model and

business rules are being developed with input from technical data specialists and education stakeholders throughout the state. Funding received from this RFA would allow Iowa to include other important data sources such as data from our summer graduate and dropout applications. These data are necessary to compute accurate graduation and cohort dropout rates. Also, IDE plans to import data from our community college MIS as it has begun to use the unique state student identification number.

**d) Institutional Support:**

The “Institutional Support” and “Sustainability” requirements of Section IV. *Statewide Longitudinal Data System Requirements* have already been extensively addressed in the Project Design portion of this response. However, one piece remains that binds all these together which still needs mentioning, the constituency. Education has a long-standing position with Iowa’s general public as the number one public policy issue. Lawmakers in the Iowa Legislature are attuned to the issue. IDE has worked with many of the other stakeholders in the education community to bring forth a unified education data infrastructure.

For the sake of the record, some of the inter- and intra-agency relationships need to be made explicit to demonstrate the institutional support. Recall the two committees that worked with IDE on the specification of the e-transcript portion of the Iowa High School Repository: the postsecondary, which worked for over one-year, and the PK-12 Committee. Another is the relationship with IWD in the Iowa Education and Training Outcomes Analysis. IDE meets and plans with AEA technology directors, who have voiced overwhelming support at the “Data Cadre” quarterly meetings. There are also all those who serve as members on the current EdInsight Governance Committees: stakeholders in various roles from around the state. There is also a grassroots constituency as was evidenced by the 179 focus group attendees and 455 survey respondents. IDE continues to update the field with additional meetings and articles in regular communications.

**e) Project Management Plan:**

Achieving Project Objectives. The IDE team is comprised of subject matter expertise and industry experience in education, data warehousing, business intelligence, student record exchange, and management methods from across Iowa to ensure that our current and future projects meet their intended needs. As documented in several case studies and articles, SLDS projects are very complex and at times unfortunately fail. IDE believes that the executive sponsorship, stakeholders across the state, and vendors with exceptional credentials are committed to ensure this project is a success.

IDE has been utilizing the EdInsight vendor’s project management approach. The approach captures best practices derived from hundreds of Fortune 500 and government clients. The methodology is comprised of a series of stand-alone activities organized into four phases:

- Imagine: Creates the enterprise information strategy and a detailed roadmap to achieve desired results.
- Architect: Defines granular business data and systems requirements, and produces the implementation “blue-print,” including detailed architecture and system design specifications.
- Implement: Converts product designs into completely tested software products with agreed upon functionality and facilitates user training for the initial deployment.
- Utilize: Deploys fully functional and user accepted systems into the customer’s production environment, monitors and supports the system and users in daily operations, and facilitates information exchange between multiple functions at the appropriate level and the right time.

The approach unites proven business intelligence and data warehousing techniques with the project management guidelines adapted from the Project Management Institute's Guide to the Project Management Body of Knowledge (PMBOK). Claraview has augmented the PMBOK for IDE's use in managing data warehouse initiatives adding standard deliverables created during data warehouse projects to the Inputs, Tools and Techniques, and Outputs components of the PMBOK processes. PMBOK describes the following standard management processes for any project:

<u>Initiating:</u>	Identifying project requirements and authorizing the project phase.
<u>Planning:</u>	Defining objectives and selecting actionable tasks to attain the objectives.
<u>Implementing:</u>	Coordinating people and other resources to carry out the project.
<u>Controlling:</u>	Guiding to achieve project objectives by monitoring progress to identify variances from the plan so that corrective action can be taken when necessary.
<u>Closing:</u>	Formalizing acceptance of the project or phase.

A flow diagram map of the process may be found in Appendix A, as Flow Diagram Map 1.

This methodology will manage all activity (Statements of Work, Change Requests) authorized using the above standard practices. For each project/program phase, an initial Work Breakdown Structure (WBS) with appropriate plans – such as Scope Management, Costing, Project Management, and Resource and Risk Management plans – will be created prior to any work being started.

Management Tools: In addition, the below documents/tools establish a foundation for each project that increases the probability of cost-effective execution and success. This foundation is comprised of a clear designation of short- and long-term priorities, methodology tailored to the specific aspects of this project, a fully articulated process for project oversight and timely executive decision-making, the construction of a joint IDE and stakeholder team, and the implementation of a certified technical infrastructure. An example of these documents include: Resource Plan, Change Management Plan, Communication Plan, Implementation Plan, Risk Management Plan, and Quality Assurance Plan.

Project Personnel / Staff Resources: IDE has assembled an outstanding dedicated team focused on success. IDE has positioned senior level personnel with experience deploying similar type systems that we are requesting in lead roles. To ensure success, all of the proposed personnel for this RFA worked together on the EdInsight project. Not only does this provide the IES confidence in the project with personnel experienced with education data systems, it also brings the added benefit that these team members have worked together. Resumes of the team are provided in Appendix B.

Collaboration with all Iowa Stakeholders: As detailed in the "Governance" Section, several formal structures have been created with both state and local stakeholders (e.g., LEAs, AEAs, data stewards and owners, advisory council, etc.) to ensure that collaboration across the state occurs. These are in addition to existing collaborations on other projects that were also mentioned and the informal collaboration that goes on between stakeholders daily on a variety of other issues. All of this has proven to be very successful in driving requirements and ensuring buy-in from all users and stakeholders. These formal committees include: Steering Committee, Advisory Committee, Data Governance Committee, and finally the Project Management Team. As EdInsight moves into Phases 2 and beyond (as well as additional projects), the IDE understands that continued out-reach will be imperative.

#### **f) Project Personnel and Resources:**

The IDE team offers experience and perspective. Practically, the EdInsight team has the experience with the application specific tools - eScholar, Cognos, SSIS for ETL process – in the IDE environment. Therefore, it would only seem reasonable that these individuals would have the expertise to load additional data. Further, it would stand to reason that after implementing the system, they would have insight into how it would need to be augmented for such major adaptations as interoperability. The project leads have also honed their skills in the management of private vendors in a public project. Granted, the number of vendors will increase when the RFA is funded, but the experiences gained from the initial EdInsight contract have been meaningful.

The other important attribute the IDE team has to offer is perspective. From the inception of the data warehouse, it has been client focused. One underpinning objective of EdInsight has been to give meaningful data back to stakeholders. The customer focus was evident in the way the Needs Assessment was used in business requirements development. Some of this perspective can be credited to the fact that the project team is made of relatively new leaders to IDE. The rest of this could be credited to this is a long-held perspective as could be evidenced from the director's comments on being customer focused at the 2007 department-wide meeting.

The EdInsight project team partner is and will be Claraview, through calendar year 2009: they won a competitive RFP to implement EdInsight. The EdInsight implementation is based on leveraging their resources. Given the magnitude of the expansion of Iowa's SLDS in the RFA, additional work would need to be competitively bid.

Claraview was founded in 2001 and is a full service consultancy focused on strategy formation, design, delivery, and management of BI and decision support systems solutions that enable both commercial enterprises and government agencies to take full advantage of their data assets and use them to make better business decisions. Unlike general-purpose systems integrators who do not focus on BI and Decision Support System projects, Claraview's overwhelmingly relevant project experience uniquely positions it to meet the requirements of the EdInsight in a low-risk, cost-effective manner. This experience is reflected in their rich and proven history of delivering fully functional systems on-time and within-budget for companies and agencies such as Commonwealth of Kentucky, State of Iowa, Lowe's Home Improvement, Department of Defense, FedEx, U.S. House of Representatives, Missile Defense Agency, The Bank of New York, Law Library of Congress, Freddie Mac, Clayton Holdings, The Public Company Accounting Oversight Board (PCAOB), USDE, U.S. Department of Homeland Security, Janus, and the Federal Election Commission. Specifically, Claraview has deep K-12 and higher education subject matter experts who have built world-class solutions for: 1) State of North Dakota – BI Strategy and Roadmap to integrate K-12, higher education, and workforce data into SLDS; 2) Kentucky Department of Education – Full lifecycle development of the statewide K-12 longitudinal data system; 3) USDE – BI Strategy, Architecture, and Implementation for EDEN, which tracks school and district performance by state relative to federal funding; 4) USDE – Enterprise Data Warehouse requirements, design, and implementation; 5) Iowa Department of Education – Full lifecycle development of the Iowa statewide K-12 longitudinal data system; 6) Boston University – Data Warehouse Design and Development; 7) University of Virginia – Enterprise DW / BI Design and Development; 8) University of Michigan – Business Intelligence Education; and 9) American University – BI Strategy and Roadmap.

# **Project Narrative**

## **Other Narrative**

### Attachment 1:

**Title: Pages: Uploaded File: 1236-APPENDIX A.pdf**

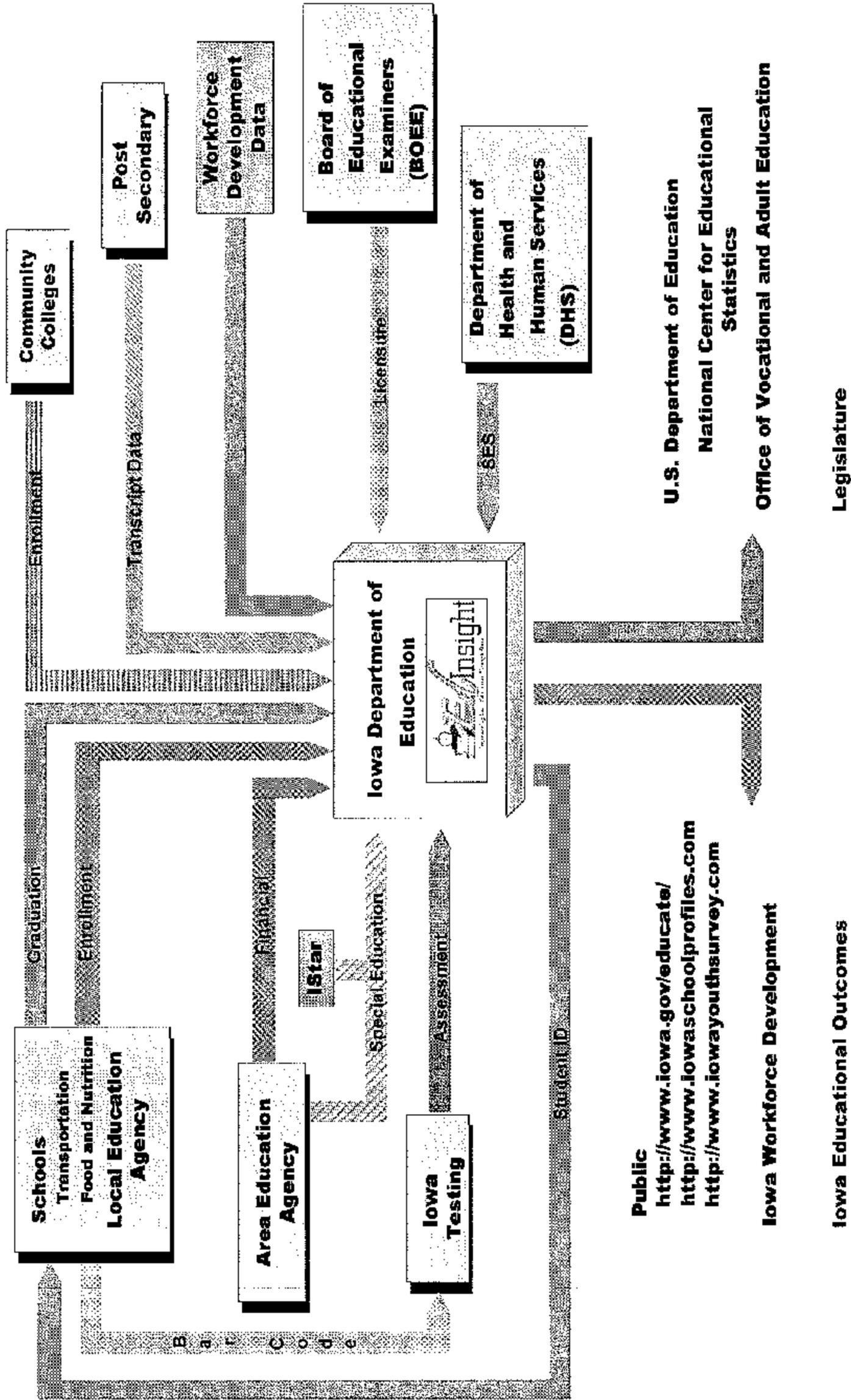
### Attachment 2:

**Title: Pages: Uploaded File: 1237-Final resumes IES Grant RESUMES.pdf**

### Attachment 3:

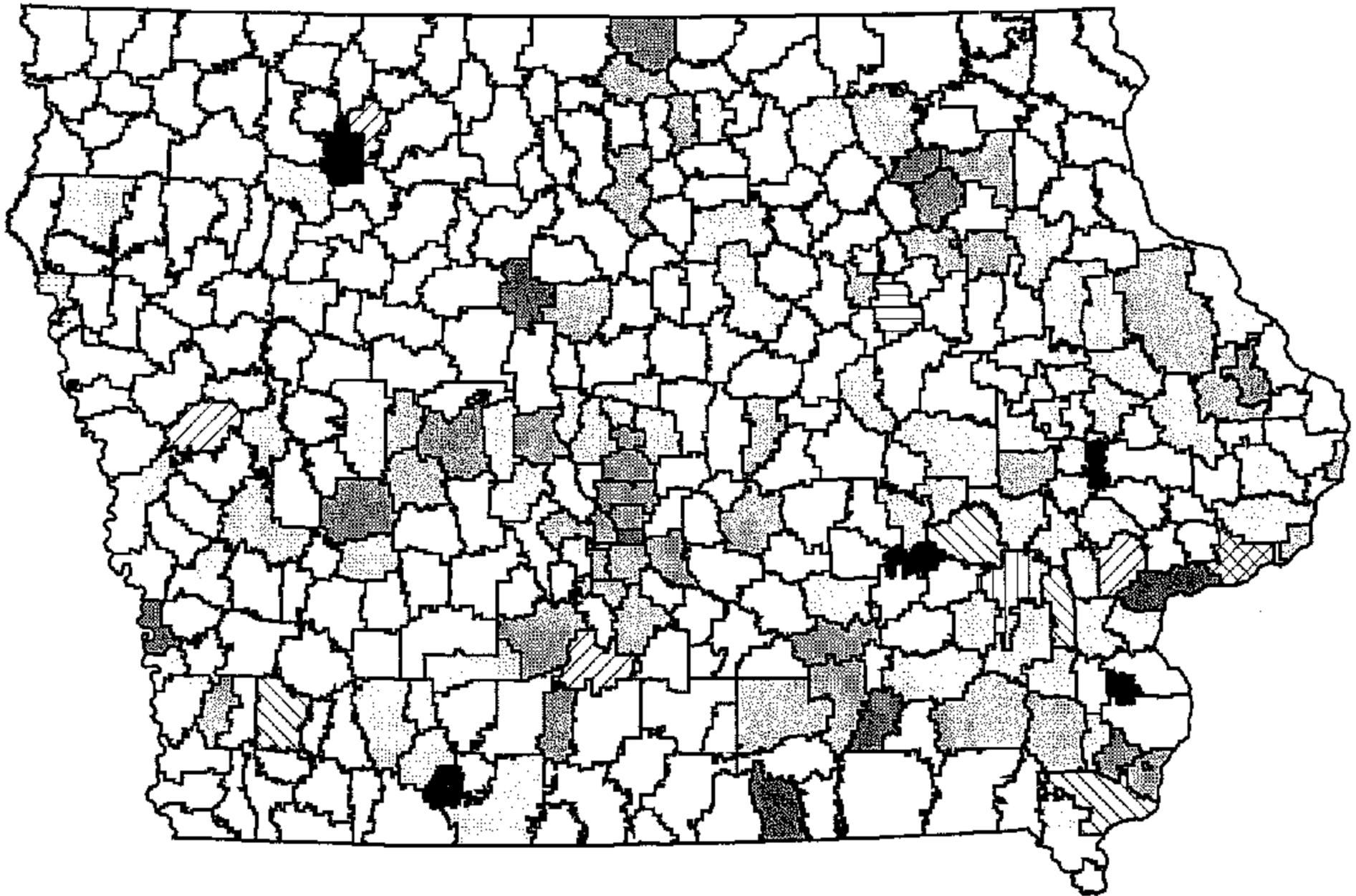
**Title: Pages: Uploaded File: 1238-Timeline.pdf**

# Appendix A, Graphic 1 – Schematic of the Current Environment





Appendix A, Map 1 - Map of Districts and Their Student Information Systems



**Legend**

 Administrators Plus (4)	 Infinite Campus (38)	 SAS!xp (6)
 AEA 10 Internet System (5)	 JMC (224)	 Schoolmaster (4)
 AEA 10 Internet System/JMC (1)	 MacSchool (8)	 School Matrix (1)
 CIMS (1)	 Pentamation (1)	
 eSIS (1)	 PowerSchool (71)	



# STATE OF IOWA

CHESTER J. CULVER, GOVERNOR  
PATTY JUDGE, LT. GOVERNOR

BOARD OF EDUCATIONAL EXAMINERS  
GEORGE J. MAURER, Ed.D., EXECUTIVE DIRECTOR

September 17, 2008

Statewide Longitudinal Data Systems Grant Review Committee  
Institute of Education Sciences  
1990 K Street NW  
Washington D.C. 20006

Dear Statewide Longitudinal Data Systems Grant Review Committee,

As the Executive Director of the Iowa Board of Educational Examiners, I would like to convey my support for and collaboration with the Iowa Department of Education's application for the Statewide Longitudinal Data Systems (SLDS) Grant. I believe that the Iowa Department of Education (IDE) recognizes the importance of quality data and its usefulness at the local and state levels as it relates to improving student achievement and evaluating the programs that are provided for students.

IDE is proposing to use a portion of the SLDS Grant funding for expanding its data warehouse, EdInsight, to include teacher licensure data such as a teacher's name, folder number, license type, assignments, and location. IDE plans to use this data to link teachers to classes, and classes to students. This powerful connection would allow IDE and local education stakeholders to evaluate programs and educational practices in a new way. School district personnel could use this data to understand which curricular and instructional choices improve achievement for students. At the state-level, this linkage would allow for thorough program evaluations of state-funded initiatives.

Again, I am very supportive of IDE's application for the SLDS Grant. I am eager to assist with providing teacher level data for loading into EdInsight. I think it is a critical piece needed to fully understand the educational environment in Iowa and make informed decisions about education in the state.

Sincerely,

A handwritten signature in black ink that reads "George J. Maurer".

George J. Maurer, Ed.D.  
Executive Director

## Appendix A, Table 1 –Third Party Assessments

<b>Top Four Third Party Assessments in Iowa: Prevalence of Use</b>				
<b>Third Party Assessment Type</b>	<b>Math</b>	<b>Reading</b>	<b>Science</b>	<b>Total</b>
2006-2007 School Year	Number of Schools			
ICAM – Iowa Collaborative Assessment Modules	371	320		691
NWEA (Northwest Evaluation Association)	79	85	59	223
SCASS (State Collaborative on Assessment and Student Standards)			215	215
Measures of Academic Progress	81	76	53	210

As reported from Iowa Annual Progress Report submissions



COLLEGE OF EDUCATION

**Iowa Testing Programs**

334A Lindquist Center South  
Iowa City, IA 52242-1529  
319-335-6010 Fax 319-335-6038  
itp@uiowa.edu  
www.uiowa.edu/~itp

September 23, 2008

Jim Addy, Administrator  
Division of School Support and Information  
Iowa Department of Education  
Grimes State Office Building  
Des Moines, Iowa 50319

Dear Jim:

I am writing to affirm the support of the Iowa Testing Programs (ITP) for the application of the Iowa Department of Education to the U.S. Department of Education for a grant that will fund the continued development and expansion of a statewide longitudinal student data system. ITP at the University of Iowa has a long-standing and excellent working relationship with the Department, and we are pleased to have the opportunity to be a working partner in this endeavor.

We have supported the Department's work with Project EASIER in the past, both through cooperative efforts in passing testing data among Iowa schools, the Department, and ITP, and by providing assessment data for federal accountability purposes to the Department. We agree that the development and enhancement of a statewide longitudinal data system will further opportunities for more ready access to assessment data of all types and will be beneficial to the state as a whole in its efforts to move schools toward successful implementation of the Iowa Core Curriculum. A statewide longitudinal data system is part and parcel to the improvement of student achievement and acquisition of skills important to workforce development and postsecondary education opportunity.

Iowa Testing Programs has been an active participant in governance activities led by the Department in connection with the EdInsight project through representation on the Steering and Advisory Committees. As a result of these activities, Iowa Testing Programs and the Department have developed strong working relationships and a shared understanding of the importance of collaboration on a project as ambitious as a longitudinal student data system. Many efficiencies in our joint work obtain from collaborative activities between our two units.

We believe that the system you are proposing will vastly improve education data collection, use, and reporting in the state. Such a system will complement other educational improvement initiatives in Iowa and will encourage data-informed decision-making throughout the process. We look forward to working with you

on this development and anticipate that this proposed system will greatly facilitate our joint efforts in the future

Sincerely,

A handwritten signature in black ink that reads "Stephen B. Dunbar". The signature is written in a cursive style with a large, prominent 'S' at the beginning.

Stephen B. Dunbar, Ph D  
Professor, Measurement and Statistics  
Director, Iowa Testing Programs

**Appendix A - Committee Membership**

<b>Steering Committee</b>		
<b>Representative</b>	<b>Title</b>	<b>Organization or District</b>
Steve Dunbar	Director	Iowa Testing Programs
Cathy Welch	Director	Iowa Statewide Testing Programs
Denise Philipp	Principal	IKM CSD
Luann Byerly	Curriculum	Central City & Alburnett CSD
Shirley Horstmann	Teacher	Dubuque CSD
Diane Jass	Information Technology	Fort Dodge CSD
Senator Wood	Legislator	Iowa Senate
Stephen Foster	Principal	North Tama CSD
Mariann Culver	Assessment	Area Education Agency 11
Todd Wessels	Curriculum	Holy Family Catholic Schools
Ron Fielder	Administrator	Grant Wood AEA
Karl H. Fahr	Information Technology	South Hamilton CSD
Judy Jeffrey	Director	Department of Education
Jim Addy	Program Manager	Department of Education
Jim Anderson	Project Co-Chair	Department of Education
Jay Pennington	Project Co-Chair	Department of Education
Mike Comiskey	Data Warehouse Analyst	Department of Education
Jason Grinstead	Data Warehouse Analyst	Department of Education
Janell Brandhorst	Consultant	Department of Education
Geoff Gu	Information Technology Specialist	Department of Education
Dick Skibbe	Information Technology Specialist	Department of Education
Lana Michelson	Chief	Department of Education
Carla Schimelfenig	Consultant	Department of Education
<b>Advisory Committee</b>		
Connor Hood	Assessment Consultant	Area Education Agency 11
Sara McInerney	Ed Services Director	Area Education Agency 267
Bob Nelly	Computer Consultant	Grantwood Area Education Agency 10
Debbie Boring	Administrative Consultant	Department of Education
Amy Williamson	Consultant	Department of Education
Vladimir Bassis	Consultant	Department of Education
Roger Hess	AEA Special Education Director	Northwest Area Education Agency
Cathy Welch	Director	Iowa Statewide Testing Program
Michelle Tressel	Information Management System	Grant Wood Area Education Agency 10
Robert Davis	Principal	West Des Moines CSD
Jane Lindaman	Assessment	Waterloo Schools
Ranae Sipma	Curriculum Director	Spirit Lake CSD
Valle Smith	Title I Teacher	Mount Ayr CSD
Russell Bush	Director of Technology	Mount Vernon CSD
Mary Ellen Becker	AEA Special Education Director	Great Prairie Area Education Agency
Lance W. Ridgely	Director of Curriculum and Assessment / IT Director	Earlham CSD
Brad McCauley	Curriculum Director	Sergeant Bluff-Luton
Gary Warner	Information Technology	Linn-Mar CSD
Andrew Ho	Assistant Professor	Iowa Testing Programs
Stuart Fuhs	Principal	Schaller-Crestland High School
Sherry Huffman	Assessment Consultant	Area Education Agency 13
Sally Rigeman	Secondary Math/Science Consultant	Area Education Agency 9
David Krieger	Information Technology Administrator	Department of Education
Jim Anderson	Chief	Department of Education
Mike Comiskey	Data Warehouse Analyst	Department of Education
Jay Pennington	Chief	Department of Education
Jim Addy	Administrator	Department of Education
Jason Grinstead	Data Warehouse Analyst	Department of Education
Dick Skibbe	Information Technology Specialist	Department of Education
Janella Brandhorst	Consultant	Department of Education
Geoff Gu	Information Technology Specialist	Department of Education
<b>Data Governance Committee</b>		
Jim Addy	Administrator	Department of Education
Jay Pennington	Chief	Department of Education
Jim Anderson	Chief	Department of Education
Jason Grinstead	Data Warehouse Analyst	Department of Education
Mike Comiskey	Data Warehouse Analyst	Department of Education
Janell Brandhorst	Consultant	Department of Education
Dennis Dykstra	Administrative Consultant	Department of Education
Tom Deeter	Consultant	Department of Education
Marty Ikeda	Administrative Consultant	Department of Education
Carla Schimelfenig	Consultant	Department of Education
Julie Curry	Consultant	Department of Education
Amy Williamson	Consultant	Department of Education
Dianne Chadwick	Administrative Consultant	Department of Education
Xiaoping Wang	Administrative Consultant	Department of Education
Gary Kirchhoff	Consultant	Department of Education
David Krieger	Information Technology Administrator	Department of Education



# STATE OF IOWA

CHESTER J. CULVER, GOVERNOR  
PATTY JUDGE, LT. GOVERNOR

DEPARTMENT OF EDUCATION  
JUDY A. JEFFREY, DIRECTOR

September 8, 2008

Institute of Education Sciences  
National Center for Education Statistics  
1990 K. Street, NW, Room 9023  
Washington, DC 20006-5651

Dear Statewide Longitudinal Data Systems Grant Review Committee:

As Director of the Iowa Department of Education, I would like to convey my strong support for the application for the Institute of Education Sciences (IES) Statewide Longitudinal Data Systems (SLDS) Grant.

Iowans are committed to continually improving the quality of education through data and empowering teachers with information to improve student achievement. This grant strengthens and extends many of the initiatives underway at the Iowa Department of Education.

This grant will allow us to strengthen our commitment to educational data warehousing and extend the capabilities of data acquisition and analysis programs, benefitting the state as a whole.

I applaud the institute's willingness to help states develop and support such systems. Funding as requested by my Department will help us to continue to be the leader in education.

Sincerely,

A handwritten signature in black ink that reads "Judy A. Jeffrey". The signature is written in a cursive, flowing style.

Judy Jeffrey  
Director

Grimes State Office Building - 400 E 14th St - Des Moines IA 50319-0146

PHONE (515) 281-5294 FAX (515) 242-5988

[www.iowa.gov/educate](http://www.iowa.gov/educate)

*Helping Communities Meet the Learning Needs of All Their Children and Adults*



CHESTER J. CULVER  
GOVERNOR

**OFFICE OF THE GOVERNOR**

PATTY JUDGE  
LT GOVERNOR

September 18, 2008

Institute of Education Sciences  
National Center for Education Statistics  
1990 K. Street, NW, Room 9023  
Washington, DC 20006-5651

Dear Statewide Longitudinal Data Systems Grant Review Committee:

As Governor, I would like to convey my strongest support for the Iowa Department of Education's (IDE) application for the Institute of Education Sciences (IES) Statewide Longitudinal Data Systems (SLDS) request for assistance.

Having been a part of the educational system as a former teacher, from delivering curriculum on the front line to making policy decisions as the state's top executive, I personally understand the difficulty in making and the value of data driven decisions. That is why Iowa has undertaken EdInsight, an educational data warehouse, and the Iowa High School Repository, which includes e-transcripts, both cornerstones of an SLDS. It is my hope you would award Iowa funding to augment our efforts, so that we may develop a more robust SLDS.

While all stakeholders may not have referred to it as an SLDS, Iowa is actively supporting the SLDS program. Beyond the monetary commitment, the Legislature and I are making policy changes – requiring unique K-12 student identification on community colleges' and regents' data systems – and requiring system-wide outcomes – the Iowa Education and Training Outcomes – that tie directly to SLDS.

The IES monies would help Iowa reach its policy goals, as well as, satisfying federal initiatives. I applaud IES' efforts to help states develop and support SLDS and encourage you to partner with us in our efforts.

Sincerely,

A handwritten signature in black ink, appearing to read "Chester J. Culver".

Chester J. Culver  
Governor, State of Iowa

Chester J. Culver, Governor

Patty Judge, Lt. Governor

Elisabeth Buck, Director



Institute of Education Sciences  
US Department of Education  
990 K Street NW, Room 9023  
Washington, DC 20006-5651

Dear Committee Member,

I am writing this letter to express my commitment to assisting with the development and success of the Iowa Department of Education's proposal for a Statewide Longitudinal Data System.

As the Division Administrator for the Labor Market & Workforce Information Division of Iowa Workforce Development, I have a strong interest in helping to build a comprehensive PK-20 Longitudinal Data System. The plan proposed here will help the state with relevant metrics on the effectiveness of K-12 systems, Community Colleges, and non-traditional education systems against the needs of the labor market. In turn this will assist elected officials and state policy makers in their decision making regarding the value and effectiveness of education at all levels.

Currently, the Iowa Department of Education and Iowa Workforce Development are working cooperatively on a Legislatively-mandated Iowa Education and Training Outcomes project. It produces outcomes based on analysis regarding education at all levels and it's affect on income and productivity of Iowa's workers. This proposal is a natural extension of that initiative. Community Colleges, a critical part of the job training infrastructure, are keenly interested in data-driven decision making to justify their outcomes for Perkins and Workforce Investment Act funding. The importance of comprehensive education data in obtaining competitive grants and discretionary funds offered through the Department of Commerce, USDA, and Department of Labor is becoming more apparent as Iowa pursues alternative program resources. The Iowa Department of Education's response to this funding opportunity will assist in all of these initiatives.

Iowa Workforce Development is excited about the outcomes that this proposal can achieve for the state. I urge full funding of this effort to create a comprehensive PK-20 Longitudinal Data System for the State of Iowa.

Sincerely,

Jude Igbokwe, Ph.D., Division Administrator  
Labor Market & Workforce Information Division  
Iowa Workforce Development

# United States Senate

WASHINGTON, DC 20510-1502

August 11, 2008

COMMITTEES:  
AGRICULTURE  
APPROPRIATIONS  
HEALTH, EDUCATION,  
LABOR AND PENSIONS  
SMALL BUSINESS

Statewide Longitudinal Data Systems Grant Review Committee  
Institute of Education Sciences  
1990 K Street NW  
Washington D.C. 20006

Dear Committee Members:

I am writing to express my support for a grant application submitted by the Iowa Department of Education (IDE). The department is applying for the Statewide Longitudinal Data System Grant to enhance and expand the data warehouse to provide meaningful information to the PK-16 educational community.

Funding would allow IDE to improve data collection and analysis in the state. The department has four primary goals:

- Implement interoperability between itself and the 352 school districts in Iowa,
- Improve the process used to gather and submit data to meet EDFacts reporting requirements,
- Expand types of data that are loaded into EdInsight,
- Integrate the PK-12 data system with our community college data system thus allowing for longitudinal analysis into post-secondary education.

I applaud the Institute for promoting the use of data to improve education systems, and hope you will give every consideration to this project. Please direct any correspondence regarding this matter to my grants office in Cedar Rapids. Thank you for this opportunity to express my views.

Sincerely,



Tom Harkin  
United States Senator

TH/kdt/crj

REPLY TO:

- 135 HART SENATE OFFICE BUILDING  
WASHINGTON, DC 20510-1501  
(202) 224-3744  
TTY: (202) 224-4479  
e-mail: chuck\_grassley@grassley.senate.gov
- 721 FEDERAL BUILDING  
210 WALNUT STREET  
DES MOINES, IA 50303-2140  
(515) 286-1145
- 206 FEDERAL BUILDING  
101 1ST STREET SE  
CEDAR RAPIDS, IA 52401-1227  
(319) 363-6832

# United States Senate

CHARLES E. GRASSLEY

WASHINGTON, DC 20510-1501  
September 4, 2008

REPLY TO:

- 103 FEDERAL COURTHOUSE BUILDING  
320 6TH STREET  
SIOUX CITY, IA 51301-1244  
(712) 233-1860
- 210 WATERLOO BUILDING  
531 COMMERCIAL STREET  
WATERLOO, IA 50701-5497  
(319) 232-8657
- 131 WEST 3RD STREET  
SUITE 180  
DAVENPORT, IA 52801-1419  
(563) 322-4331
- 307 FEDERAL BUILDING  
8 SOUTH 6TH STREET  
COUNCIL BLUFFS, IA 51501-1204  
(712) 322-7193

Mr. Jim Addy  
Administrator  
Division of School Support & Information  
State of Iowa Department of Education  
Grimes State Office Building  
400 East 14th Street  
Des Moines, Iowa 50319-0146

Dear Mr. Addy:

I have contacted the U.S. Department of Education expressing my support for the Statewide Longitudinal Data System Grant application submitted by the State of Iowa Department of Education. I asked that it be given all due consideration. When I receive a response from the U.S. Department of Education, I will relay the necessary information to you.

Thank you for allowing me to be of assistance to you. If you have any further questions regarding this, or any other federal matter, please do not hesitate to contact me again.

Sincerely,



Charles E. Grassley  
United States Senator

CEG/sk

RANKING MEMBER,  
FINANCE

Committee Assignments:

BUDGET  
JUDICIARY  
AGRICULTURE

CO-CHAIRMAN,  
INTERNATIONAL NARCOTICS  
CONTROL CAUCUS

PRINTED ON RECYCLED PAPER





## JAMES M. PENNINGTON

### EXPERIENCE

**State of Iowa, Department of Education, Des Moines, IA** **2007-2008**  
**Chief, Bureau of Planning, Research, Development and Evaluation**

- Responsible for management of all Bureau activities and staff of sixteen professionals.
- Outputs include analysis, writing and publication of the Department of Education *Annual Condition of Education Report* and the *State Report Card* for No Child Left Behind.
- Responsible for oversight of statewide calculations and determinations for Annual Yearly Progress for No Child Left Behind.
- Model and provide financial estimates and projections for Iowa's School Aid Formula. The School Aid Formula includes statewide financial calculations for over 3.2 billion for education funding.
- Direct Project EASIER team responsible for statewide student level data collection. Project EASIER is the Iowa Department of Education's initiative involving the transfer of individual student records. The mission of the project is to reduce data burden, encourage better decision-making by establishing and maintaining a cost effective method of accessing and transferring accurate and timely education information for state and federal reporting.
- Oversee Basic Educational Data Survey data collection. The Basic Educational Data Survey (BEDS) collects staffing, student and policy data from all K-12 public schools in Iowa plus accredited nonpublic K-12 schools. Staffing data is also collected from the state's area education agencies (AEAs). Data collection occurs twice a year in the fall and spring.
- Co-project manager of EdInsight. EdInsight is Iowa statewide education data warehouse. Oversee, day to day activities of the team. Manage business requirements, user interface, portal design and reporting and analytical requirements and functionality.
- Project team member for Iowa's statewide e-transcript initiative.
- Serve on multiple committees including Department of Education Management Council. Member of EdInsight Data Governance team, Advisory Board and Steering committee. Member of statewide AEA Data Quality Cadre committee.
- Bureau handles the bulk of Department requests for Education information including legislative requests and other Freedom of Information Acts Requests.

**University of Chicago, Harris School of Public Policy Studies, Chicago, IL** **2003-2007**  
**Director, Information Technology**

- Direct all aspects of information technology systems for the Harris School of Public Policy Studies to support its diverse research, education, and service activities. Responsibilities include strategic planning, project design, project management, human resource management, budgeting, and purchasing for all information technology initiatives within the Harris School.
- Initially directed the dissolution of existing computing infrastructure as well as hiring, budgeting, and the creation of new computing unit.
- Purchased, engineered and implemented a new network and client-server environment. Designed and implemented new active directory structure. Migrated existing workstation to new environment while replacing majority of workstations.
- Engineered and implemented new server/data center environment.
- Designed and implemented new high speed computational research environment to analyze substantial census sized datasets.

- Created a new website infrastructure. Switched existing site from static html to dynamic ASP and ASP.NET as well as integrated streaming media services. Implemented intranet web portals to provide single point of storage for internal information and data. Completed new site design and installed and customized web traffic reporting suite in order to view statistics in real time.
- Integrated administrative and research computing infrastructure across multiple operating systems (UNIX/ windows active directory). Implemented redundant storage environment as well as new backup strategy for over 5 terabytes of research data.
- Act as a liaison between the School and University-wide administrative computing units.

**University of Illinois at Chicago/University of Illinois Medical Center, Chicago, IL      1993–2003**

**Director, Information Systems      1998-2003**

- Directed all aspects of information systems for the Department of Psychiatry. Psychiatry is one of the largest units at the University of Illinois at Chicago with 500+ faculty and staff and \$33 million in annual budgets. Served as IS Director in the support of the nearly tenfold growth of the Department since being employed. Psychiatry was ranked at the top of the University in direct cost expenditures on sponsored research programs. Psychiatry had four major research areas (i.e. neuroscience, child prevention/ intervention, mental health services, and clinical/pharmaceutical) with over 100 funded projects, five graduate training programs and seven clinical divisions.
- Designed, implement and supported a billing system and clinical operation that includes approximately 70,000 clinical procedures and 3,000 new patients per year. Gross charges over \$7.4 million and collections over \$2.75 million in fee for service revenue in Fiscal Year 2002.
- Developed extensive administrative and financial web based reporting application including accounting, personnel, clinical, and research reports.
- Created and implemented at supplemental Hospital Based billing system that generated approximately \$1.2 million in additional revenue during Fiscal Year 2003.
- Designed, wrote and implemented Electronic Claim processing application which processed over 60% of billing transactions electronically.
- Duties included program development, help desk management, system backup, database management, database warehousing, and website development.
- Maintained Internet and Intranet with multiple business applications (clinical reporting, sick and vacation reporting, monthly grant account information, and multiple required self learning modules, and faculty education reporting).
- Developed Telepsychiatry project which provides clinical consultations to Department of Human Service clients at rural sites across the State of Illinois.
- Operated and maintained Exchange mail system.
- Maintained and supported multiple file servers including a network attached storage device with terabytes of user data.
- Provided and maintained remote dial in and satellite T1 lines.
- Designed and installed a 16 node beowulf cluster used for fMRI brain image analyses.
- Implemented and maintain and enterprise firewall system in complex network infrastructure.

**Network Analyst      1997–1998**

- Provide system maintenance and network support for a Wide Area Network running Windows NT, Novell NetWare, and UNIX environment.

- Implementation of system management server for inventory, remote troubleshooting and remote software installation.
- Migration from Ms Mail to Exchange 5.0 mail system environment.
- Phase out Novell network and fully implement NT environment. Implemented network domain, migrated desktops from Windows 95 to NT 4.0.
- Designed and maintained network security infrastructure.
- Supported a broad local and wide area computer network of hundreds of users and computers on a Windows NT server platform which more than tripled network size over two years.
- Managed Help Desk support.

### **Research Interventionist**

**1996–1997**

- Worked on a research project examining the impact of a multi-level intervention on children at-risk for severe aggression/delinquency and antisocial behavior.
- Responsible for the collection of research measures and facilitating family and groups sessions.
- Responsible for engaging families and delivering a 22 week Structural-Strategic intervention. The goal of the project was to deliver an intervention and evaluate its impact on changing the familial structure and patterns of interaction. Specifically, the intervention was meant to facilitate the emergence of more adaptive generational boundaries and alliances between family members and to assist family members in developing a more adaptive relationship to other systems, such as their child's school.

### **Research Data Analyst**

**1993–1995**

- Provided technical support for a Novell Local Area Network and various database management systems.
- Responsible for system and data management on funded suicide prevention project.
- Duties included: system maintenance, database creation and management, data analyses.
- Responsible for computer graphical presentation design and production.
- Assisted in writing numerous academic publications.
- Assisted in the creation and writing of *Team Up to Save Lives: What Your School Should Know About Preventing Youth Suicide*. This CD-Rom was distributed nationally to 35,000 High schools and Junior High schools.
- Responsible for coordination and management of human resources for project personnel.

## **EDUCATION**

1995–1997, University of Illinois at Chicago, Chicago, IL  
Master of Social Work - Concentration: Child and Family

1989–1993, University of Illinois at Chicago, Chicago, IL  
Bachelor of Psychology

## **PUBLICATIONS/ PRESENTATIONS**

### **Publications**

Grossman, J., Dontes, A., Kruesi, M, Pennington, J., & Fendrich, M. (2003). Emergency Nurses' Responses to a Survey About Means Restriction: An Adolescent Suicide Prevention Strategy. *Journal of the American Psychiatric Nurses Association*, 9(3), 77-85.

McKay, M., Pennington, J., Lynn, C., McCadam, K. (2001). Understanding Urban Child Mental Health Service Use: Two Studies of Child, Family, and Environmental Correlates. *Journal of Behavioral Health Services and Research*, 28(4), 475-482.

Kruesi, M., Grossman, J., Pennington, J., Woodward, P., Duda, D., & Hirsch, J. (1999). Suicide and Violence Prevention: Parent Education in the Emergency Department. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38(3), 250-255.

Grossman, J., Clark, D., Gross, D., Halstead, L., & Pennington, J. (1995). Child bereavement post paternal suicide. *Journal of Child and Adolescent Psychiatric Nursing*, 8(2), 5-17.

### **Selected Presentations**

McKay, M., Pennington, J., & Stone, S. (1997, April 5). Urban children receiving mental health services: What are their needs and how do we know? Paper presented at the Annual Conference of the Society for Research in Child Development. Washington, D.C.

McKay, M., Pennington, J., & McAddam, K. (1997, February 23). Predicting child mental health service utilization by urban families: A preliminary study of child, family, and environmental factors. A poster presentation at the 10th Annual Research Conference of A System of Care for Children's Mental Health: Expanding the Research Base. Tampa, Florida.

Pennington, J., McKay, M., & Stone, S. (1996, October 22). Factor analysis of conners parent rating scale with urban children. Poster for presentation at the Annual Conference of the American Academy of Child and Adolescent Psychiatry. Philadelphia, Pennsylvania.

## JAMES ANDERSON

### EXPERIENCE

#### **Chief, Bureau of Information Technology Services Iowa Department of Education**

**11/06 - present**

Responsible for overseeing all Bureau activities.

- Supervise information technology staff by conducting strategic and operational planning activities.
- Responsible for evaluation of current and future hardware and software needs.
- Coordinate information technology services both internally and externally.
- Plan future hardware, software, and application development.

#### **Manager, Data Center Recovery, Maytag Corporation, Newton, Iowa**

**2001 - 2006**

Administered and managed disaster recovery, change management, access controls and security awareness program for Sarbanes-Oxley requirements, hardware lease and maintenance processes, and system assurance functions for problem resolution and project evaluations.

- Reduced cost of hot site contract by 30% while maintaining the same level of coverage.
- Improved control of the department's change processes by leading a team to implement a formal change management system.
- Helped assure certification with Sarbanes-Oxley Act requirements by leading the implementation of company-wide access control processes.
- Improved department effectiveness by designing and managing the process for analysis of system availability metrics.

#### **Manager, Database Services, Maytag Corporation, Newton, Iowa**

**1998 - 2001**

Supervised team of 6 Data Analysts and Database Administrators ensuring timely support of data needs for development projects and efficient operation of production and test databases.

- Co-led a project to achieve revenue and savings opportunity of \$15 million by expanding the data warehouse from a single line of business to an enterprise level.
- Assured corporate readiness for Y2K by coordinating contingency plans for 6 manufacturing sites with multiple functions including production, logistics, accounting, information technology, and call centers.

#### **Manager, Sales Analysis Systems, Maytag Corporation, Newton, Iowa**

**1996 - 1998**

Directed team of 8 application developers (employees and contract personnel) that supported sales applications and the data warehouse for a major line of business.

- Provided the company with a single version of sales data by leading a team of developers to create a consolidated sales reporting system for merged business units under tight deadline and within budget.
- Developed a common source of financial reporting by leading a project with IT and business professionals to create the initial data warehouse for the company.

#### **Manager, I. S. Planning & Administration, Maytag Corporation, Newton, Iowa**

**1986 - 1996**

Managed staff of 6 professionals which provided I. S. with budget administration, planning functions, help desk, data security, and database administration.

**Development Staff, Maytag Corporation, Newton, Iowa** **1978 - 1986**  
As a programmer, system designer, and project leader, designed, wrote, tested, implemented, and supported multiple applications.

**Adjunct Faculty, Buena Vista University, Newton, Iowa** **2004 - 2006**  
Taught "Introduction to Management Information Systems" class to college juniors and seniors.

**Mathematics Teacher, Newton Community Schools, Newton, Iowa** **1975 - 1978**  
Taught junior and senior high mathematics classes.

**Mathematics Teacher, Austin Public Schools, Austin, Minnesota** **1972 - 1975**  
Taught junior and senior high mathematics classes.

## **EDUCATION**

Master of Business Administration, University of Iowa, Iowa City, IA, December, 1999

Graduate Mathematics and Statistics coursework, Iowa State University, Ames, IA, 1976 – 1977

Bachelor of Arts, Mathematics Education, Saint Olaf College, Northfield, MN, May 1972

## JASON GRINSTEAD

### EXPERIENCE

**Iowa Department of Education** 2007 – 2008

**Data Warehouse Analyst, Des Moines, IA**

- Collect, document and refine requirements and specifications for an Educational Data Warehouse.

**AutoKam Automotive Group** 2007 – 2007

**Chief Information Officer, Scottsdale, AZ**

- Directed the design and delivery of information systems for a start-up automobile importer.
- Managed contracts, vendors and timelines.

**Meredith Corporation** 2005 – 2007

**Category Manager, Home Depot, Des Moines, IA**

- Optimized sales and profitability for books and magazines within Home Depot through data analysis.
- Managed financial forecasting, budgeting and score cards for publication sales.
- Conducted In-Market testing for promotions and pricing.

**Product Manager, Newsstand, Des Moines, IA**

- Designed and implemented marketing effectiveness processes.
- Managed Profit and Loss on marketing campaigns and retailers.

**Target Corporation, Independent Contractor** 2005 - 2005

**Business Analyst, Database Warehousing, Minneapolis, MN**

- Elicited, documented, prioritized and gained support for Data Warehouse deliverables.
- Managed project timelines and deliverables for a division-wide Data Warehouse initiative.
- Developed and implemented SEI process and technical specifications.
- Managed test plans and results for project quality assurance.

**Suzuki Motor Corporation** 2001 - 2005

**Regional Training Manager, Minneapolis, MN**

- Designed, managed and implemented programs to increase regional sales efficiency.
- Developed and implemented cross-training processes for regional personnel.
- Developed and implemented processes for new dealer advertising and marketing.

**District Sales Manager, Minneapolis, MN**

- Increased sales through auto dealership retailers by 23 percent.
- Initiated, developed and managed marketing programs for automotive franchisees.
- Managed advertising budgets and inventory requirements for all dealers.
- Recruited new dealership candidates and increased coverage 31 percent.

**Automatic Data Processing (ADP) Hollander** 1997 - 2001

**Product Manager - Network Products, Plymouth, MN**

- Developed new and managed existing MS SQL-based network products.

- Chaired an Arbitration Board designed to resolve disputes and provide member performance feedback.
- Managed vendor relationships and RFP's for internet products.
- Increased revenue 25% through new products, increased system membership and utilization.

**General Motors – Electronic Data Systems Service Technology Group**

**1990 - 1997**

**Product Manager, Warren, MI**

- Directed programs that improved the effectiveness of the U.S. and Canadian field organization.
- Planned hardware and software releases, technical documentation, supplier communication, marketing and service planning for a wide range of customers.
- Managed vendor relationships with Hewlett Packard, Bosch and SPX Corp.

**Technical Product Sales, Boston, MA**

- Performed technical product sales and service for auto dealership diagnostic equipment in the New England territory. Responsibilities included territory management, customer management and problem resolution.

**EDUCATION**

University of St Thomas – Minneapolis, MN, 2001 - 2004  
 Master's of Business Administration - Cumulative GPA: 3.6

Iowa State University - Ames, IA, 1985 - 1989  
 Bachelor of Business Administration Major: Marketing; Emphases: English, Speech

**PROFESSIONAL DEVELOPMENT**

- SQL Fundamentals and Advanced Querying
- Cognos Report Studio
- Escholar Data Warehouse – Educational Data Warehouse implementation
- Zachman Framework – Data warehouse requirements structure
- TDWI Hands On Data Warehousing – Data Warehousing techniques
- Capability Maturity Model – Software Development Process Methodology
- Advanced Microsoft Access 2002/2003
- Microsoft Certification Courses – Windows NT, IIS and all major Microsoft desktop applications
- Mastering Telecommunication Fundamentals – Data and Voice network training
- Pragmatic Marketing - Technical Product Management Philosophy
- "Butterfield Speaks!" - Professional Business Speaking Coach

**BOARDS & ASSOCIATIONS/PROFESSIONAL MEMBERSHIPS**

- Des Moines Public Library Board Member
- Greater Des Moines "Everybody Wins" tutoring project member
- Iowa State Alumni Board Member

## **AWARDS/CERTIFICATIONS**

- Project Management Institute (PMI) Certifications – Candidate
- Suzuki Pacesetter Award - 2004
- Automotive Service Excellence (ASE) Certifications - 1996
- General Motors President's Council Award – 1995

## DICK SKIBBE

### EXPERIENCE

#### Iowa Department of Education Information Technology Specialist 5

2008 – present

- Provide technical IT support for data movement processes.
- Insure the quality and consistency of data moved between environments to enhance the overall value of the data.
- Develop and support Department application systems.

#### Iowa Department of Human Services Information Technology Specialist 4

2006 - 2008

- Designed, developed, maintained and enhanced web apps – ASP.NET, VB.NET and SQL Server 2005, including stored procedures. Designed, developed, maintained and enhanced SQL Server 2005 Integration Services packages, including stored procedures.
- Provided development, programming and analysis on various IT projects. Developed, maintained and enhanced web apps - ASP.NET, VB.NET and SQL Server 2005. Developed, maintained and enhanced web apps - Classic ASP, VBScript, JScript, VB6 and SQL Server 2000. Coordinated migration through DEV, TEST and PROD environments.

#### DCS Netlink

2001 – 2006

##### Lead Programmer

- Designed, developed and maintained database-driven, web-based applications.
- Designed, implemented and maintained databases.
- Designed, developed and maintained data import/export/transformation applications.
- Managed patches on server farm.

#### Emerald Systems

1999 – 2001

##### Technician/Programmer

- Built, installed, maintained and repaired servers, PCs, networks and peripherals.
- Developed, deployed and maintained database-driven, web-based applications.

#### Goss/Rockwell Graphic Systems

1994 – 1999

##### Senior Data Communications Specialist

- Provided 24x7x365¼ hour on-call diagnosis and resolution of PC/LAN/WAN hardware and software problems.
- Network administrator for Novell NetWare 4.1x/3.1x LAN consisting of 8 servers and 300 clients.
- Information Systems Security Officer (ISSO) for mainframe services.
- Developed, enhanced and maintained Windows applications, using MS-Visual Basic 3.0, ODBC and Oracle7.
- System manager for DEC VAX/VMS 5.5 system supporting 24 clients.
- Database administrator (DBA) for Oracle7 server and database on Novell NetWare.
- Database administrator (DBA) for Oracle6 server and database on DEC VAX/VMS.
- Enhanced and maintained applications, using VAX-C and Oracle6.

Assumed responsibility for several complex, mission-critical, undocumented systems and applications after the departure of the previous staff. Developed and documented startup/shutdown and diagnostic procedures which resulted in significantly improved system availability. Performance rated as exceeding requirements for the position, continually contributing to increased business results and to improved or innovative work practices; rated outstanding in adaptability.

**Goss/Rockwell Graphic Systems**

**1991 – 1994**

**Process/Manufacturing/Industrial Engineer**

- Programmed machine tools. Developed process sheets (routings). Developed machine tool setup instructions and tool layouts.
- Designed, developed and maintained PC-based and mainframe software applications.
- Played a key role in the successful startup of operations which were transferred from another facility. Provided extensive training and assistance to manufacturing engineers/programmers, production staff (both supervisory and hourly/union) and management.

**Goss/Rockwell Graphic Systems**

**1990 – 1991**

**Programming/Systems**

- Developed and maintained new and existing NC/CNC programs. Co-managed local area network (LAN), distributed numerical control (DNC) system and traditional data processing activities (report generation and distribution, etc.)
- Designed and developed PC-based software applications.
- Selected for a key role on a small "technology transfer and startup" team when all operations were transferred to another facility.

**Devlieg-Sundstrand**

**1985 – 1990**

**Senior Analyst/Programmer**

- Key member of a small team which designed, developed, documented, installed and maintained control system software for multi-million dollar manufacturing systems; customers were leaders in the aerospace and nuclear industries.

The team received written commendation for "exceptional work" and "performing ahead of milestones", enabling "originally unplanned activities to be incorporated into the schedule without a change in delivery date".

**Rockwell Graphic Systems**

**1976 – 1985**

**Systems/Product/Manufacturing/Industrial Engineer**

- Coordinated the design and development of a purchased distributed control system for an automated gear manufacturing cell.
- Designed, developed and maintained software applications.
- Coordinated the evaluation and procurement of new capital equipment for the entire division. Coordinated the redeployment/sale of surplus capital equipment for the entire division. Administered the corporate leased vehicle program for the entire division.
- Programmed NC/CNC machine tools. Developed process sheets (routings). Selected cutting tools. Developed setup instructions and tool layouts.

- Developed a comprehensive library of macros in APT. Implemented migration of NC programming from time sharing system to batch processing via corporate data center.

## **PROFESSIONAL DEVELOPMENT**

- SQL Server 2005 Reporting Services, Spindustry Training 2007
- ASP.NET Using Visual Basic 2005, Spindustry Training 2007
- Learning to Program in Visual Basic 2005, Spindustry Training 2007
- Novell NetWare 4.1 - 4.11 Update, Iowa Electronics 1998
- Novell NetWare 4.1 Administration, Iowa Electronics 1996
- Oracle Forms (V4.5) I, Oracle Corporation 1995
- Oracle Developer/2000 Foundation, Oracle Corporation 1995
- Administer the Oracle7 Database I, Oracle Corporation 1995
- Introduction to Oracle: SQL, SQL\*PLUS and PL/SQL, Oracle Corporation 1995
- Novell NetWare 3.1x Advanced Administration, Iowa Electronics 1995
- Novell NetWare 3.1x Administration, Iowa Electronics 1995
- C++ Programming, Kirkwood Community College 1994
- Introduction to Windows Programming in C, Kirkwood Community College 1994
- Various courses and seminars including COBOL, relational database performance improvement, time management, quality improvement and robotics

## **BOARDS AND ASSOCIATIONS/PROFESSIONAL MEMBERSHIPS**

Secured Member (past) - InfraGard, Minneapolis, MN Chapter

## MICHAEL J. COMISKEY

### EXPERIENCE

#### **Data Warehouse Analyst**

**Department of Education, Des Moines, Iowa**

**Nov. 2007 – Present**

- Facilitate implementation of statewide Educational data warehouse.
- Prepare documentation within existing project management framework; create new documentation and processes when needed.
- Assist with establishing the framework and data sources for the data warehouse.
- Develop reports for multiple customer types based on requirements determined in Focus Groups and Needs Assessment.

#### **Senior Business Analyst, Financial Services**

**American Republic Insurance, Des Moines, Iowa**

**Aug. 2006 – Oct. 2007**

- Facilitated implementation of General Ledger Conversion Project.
- Analyzed data and prepare reports to increase financial department productivity.
- Streamlined processes of report deployment.
- Managed the Business Objects centralized reporting tool.

#### **Senior Business Analyst, New Business and Underwriting**

**American Republic Insurance, Des Moines, Iowa**

**1999 - 2006**

- Developed department metrics and implemented reporting and distribution system.
- Prepared reports and analyzed trends based on report results.
- Compiled business requirements for Enterprise New Business Entry System.
- Documented report requirements from users and developed repeating or ad hoc reports which satisfied business needs, including both detailed reports and executive summaries with graphical representation.
- Defined business requirements for system enhancements.
- Developed and reported cost-benefit analyses.
- Tested system changes and enhancements to determine proper functionality.
- Coordinated departmental and interdepartmental project activities to facilitate project completion.

#### **Underwriter**

**American Republic Insurance, Des Moines, Iowa**

**1997 – 1999**

- Determined eligibility of applicants for insurance by requesting and reviewing underwriting information from physicians, hospitals, inspections reports, and phone surveys to applicants.
- Worked daily with agents to increase approval rates and decrease turnaround times.

### EDUCATION

Bachelor of Arts, Philosophy, 3.55 GPA

Aug 1988– May 1992, Iowa State University, Ames, IA

## **COMPUTER/TECHNICAL SKILLS**

- Crystal Reports and Business Objects
- SQL Query Analyzer
- Cognos Report Studio, Query Studio, Framework Manager
- Microsoft Office and Microsoft Visio
- Macromedia Dreamweaver and MS Frontpage
- Familiarity with basic programming concepts and the software development life cycle; classroom programming experience in C++ and Cobol
- Lucent CentreVu Supervisor

## **PROFESSIONAL DEVELOPMENT**

- 13 semester hours coursework in Computer Science 3.93 GPA  
Aug 2000 – May 2002, Simpson College, Indianola, IA
- Completed 7 courses in Business Analysis and Project Management  
Mar 2004 – June 2004, American Republic Insurance Company
- 80 CPE Units (75 ICCP Units) completed in Cognos software training  
June 2008 – Aug 2008

## JANELL M. BRANDHORST

### EXPERIENCE

**Iowa Department of Education, Des Moines, Iowa** **2005 – Present**  
**Education Program Consultant, Bureau of Planning, Research, Development, and Evaluation**

- Member of Data Warehouse Project Management Team actively working on needs assessment, data modeling, requirements gathering, report creation, prototyping, and quality assurance for the implementation of education data warehouse.
- Data warehouse quality assurance lead in charge of managing user acceptance testing, maintaining defect resolution log, and participating in system and user acceptance testing.
- Participate in the collection, management, and analysis of statewide educational data.
- Provide training and technical assistance to local and regional education agencies on state data collection efforts.
- Participate in Core Research Group working to advance thoughtful analysis of educational data in Iowa.
- Chair of the multi-agency Iowa Collaboration for Youth Development Data Committee producing cross-cutting data reports in support of youth development.
- Education representative for the Iowa Youth Survey data collection, analysis, and reporting.
- Use descriptive and predictive statistical procedures to complete routine and ad hoc data requests for government agencies, Legislature, and public.

**Peoria Unified School District #11, Glendale, Arizona** **2001 – 2005**  
**Research and Assessment Specialist, Office of Research, Planning and Assessment**

- Interpreted and presented state assessment results to Governing Board, District personnel, and community members.
- Performed item analyses on local course assessments, created assessment reports for Decision Support System, and trained district personnel on the importance of data-driven decision-making.
- Devised, implemented, and provided technical support for District-wide program evaluations.
- Tracked residential growth and partnered with city officials in managing growth from an education perspective.
- Performed predictive statistical procedures relating to enrollment projections.
- Used GIS technology to manage district growth and led district-wide boundary change committee.
- Managed all aspects of survey research projects including survey development, administration, and analyses.

**Tempe Community Council, Tempe, Tempe, Arizona** **2000 – 2004**

- Program Evaluation Consultant: Tempe/Kyrene Communities in Schools.
- Collected and analyzed pre- and post-test scores to evaluate the effectiveness of youth drug and violence prevention programs.
- Gathered and presented youth development community scorecard indicators.
- Wrote quarterly evaluation reports submitted to the federal government.

**Arizona State University, Tempe, Arizona**

**1999 – 2001**

Graduate Research Assistant: School of Public Affairs

- Used research methodologies to investigate topics including the employment of women and minorities in government, tax structures, and initiatives and referenda.
- Used statistical and database software to organize and analyze research data.

**EDUCATION**

Arizona State University, Tempe, Arizona, 1999 – 2001

Master of Public Administration

Pi Alpha Alpha Honor Society

University of Iowa, Iowa City, Iowa, 1995 – 1999

Bachelor of Arts in Sociology with Honors, 1999

Bachelor of Arts in Psychology, 1999

**COMPUTER/TECHNICAL SKILLS**

- Microsoft Windows/Office
- SPSS
- SAS
- SQL
- MapInfo
- ArcGIS
- Rascal
- IteMan

## JAMES ADDY

### EXPERIENCE

**Iowa Department of Education, School Support and Information Division Administrator** **2007 - Present**

The division consists of three bureaus – 1) Planning, Research, Development and Evaluation, 2) Information Technology Services, and 3) Health, Nutrition, and Transportation – for which the position provides administrative oversight and leadership. The position also directs the overall work of the Finance, Facilities, and Operational Services section. This translates into several specific position tasks: serve as a legislative liaison; provide guidance in the implementation and evaluation of new federal and state legislation and grants within the division's purview; chair certain department initiatives; serve as a representative on national committees; and provide fiscal and policy analysis within the division's purview.

**State Public Policy Group, Inc., Des Moines, Iowa** **1999 – 2007**  
**Vice President Research and Evaluation**

This position is a member of the management team with general management responsibilities. Its specific responsibilities are for all aspects of research project management. As the principle investigator, one is in charge of research design, analysis, and presentation of findings. This is for all modes of delivery – phone, mail, Internet, and face-to-face. Hence, beyond the responsibility for research itself, the position needs to hire, train, and direct staff, as well as budget for these activities and contract with necessary vendors.

**The Eden Company, Inc., Des Moines, Iowa** **2004 – 2007**  
**President**

As the principal in the operation, this position is responsible for providing direct campaign services and managing the company. During this cycle, the Iowa Senate Caucus purchased publications services for their Senate Incumbent protection plan and Neighbor-to-Neighbor program, which included data matching services. Beyond the publication services, which were also provided to the United Auto Workers and Central Iowa Building and Construction Trade Council, a substantial, perennial matching between membership and the voter file was done for statewide building trades.

**Institute for Public Policy, University of New Mexico** **1997 – 1999**  
**Quantitative Analyst**

A member of a team with a university research satellite that provided survey opinion research to federal agencies (Los Alamos and Sandia National Laboratories) on risk and to state agencies (New Mexico Health Policy Commission) on health care issues.

**Iowa House of Representatives, Des Moines, Iowa** **1992 – 1997**  
**Research Analyst**

The primary responsibilities of the position were to staff the Commerce, Transportation, and Transportation and Infrastructure Committees. This translated into supporting the members with strategy and fulfilling various procedural requirements of the legislative process. Many written deliverables were produced to aid members in this task and to communicate with constituents.

### **Assistant Chief Clerk**

Second in the hierarchy of the office, this position is responsible to fulfill the responsibilities of the Chief Clerk in his/her absence: calendar development, ordering of amendments, and House parliamentarian. Special assignments undertaken were the development of an Americans with Disabilities policy for the House, which required legal input, stakeholder input, and vendor management. The other major special assignment was administration of the House phone system, a contentious issue at the time as the Secretary of the Senate was engaged in a lawsuit over phone records.

### **Office Manager**

Ensuring the smooth operation of the office by directly supporting the director and research analysts. This included tracking and filing legislation, assembling and distributing materials, supporting legislators with personal requests, and remaining flexible to address unforeseen needs.

Iowa Commerce Department, Utilities Division, Bureau of Rates and Safety Evaluation (1990 – 1992)

### **Utility Analyst Intern**

Worked on financial models to determine cost of capital for Iowa Utilities Board proceedings.

## **EDUCATION**

Drake University, Des Moines, IA, M.P.A., 1992, Research Methods  
Cornell College, Mt Vernon, IA, B.S.S., 1989, Economics and Philosophy

## **PUBLICATIONS/PRESENTATIONS**

### Publications

- "Intense Case Management for Behavioral Health Jail Diversion: The Lancaster County, Nebraska Approach." Part I and II in January/February and March/April 2008 *American Jails*.
- "Structuring a Meaningful Program Evaluation." *Journal of Rural Mental Health* Volume 31, Number 2, Spring 2007.
- "The Lancaster County, Nebraska Mental Health Jail Diversion Project." March/April 2006 *American Jails*.
- "Structuring a Meaningful Program Evaluation: Iowa Recovers Experience." Winter 2006, *The Dialogue*, The Disaster Technical Assistance Center for SAMHSA Quarterly Newsletter.

### Selected Presentations

- "Attitudes of the Electorate," 2004 United Auto Workers Iowa C.A.P. Convention.
- "Health Needs and Disparities of Immigrant Populations," 2003 Iowa Public Health Conference.
- "Recruitment and Retention Strategies Based on Outcomes Evaluation," 2002 National Foster/Adoptive Parent Association, National Conference, Las Vegas, NV.
- "Voters' Perceptions of Persons with Mental Illness: What It Means for Parity," 2002 Iowa Mental Health Consortium.

## GEOFFREY GANG GU

### EXPERIENCE

#### Department of Education, State of Iowa IT Specialist 5 (Database Administrator)

6/06 – present

- Managed about 50 databases for the department ranging from 20 MB to 6 GB.
- Reverse engineered SQL and documented Department's databases using ERWIN data modeler.
- Upgraded SQL server 7.0 and 2000 to SQL server 2005.
- Worked on the Department's data warehouse project as an OLAP developer.

#### Department of Natural Resources, State of Iowa IT Specialist 5 (Data Steward)

6/06 – 6/07

- Developed and maintained a .Net/SQL Server Data warehouse application for the Department.
- Developed stored procedures to support the web front end.
- Created SQL server DTS packages to extract data from different sources and stored it in the SQL server database.
- Assisted in developing reports using SQL server 2005 reporting services.
- Created SQL Server programming and administration guidelines for internal developers and external consultants.
- Implemented and maintain a web service application to exchange environmental data with EPA.
- Enhanced and maintained existing .net web applications in the Department.

#### Division of Vocational Rehabilitation Services, State of Iowa IT Specialist 4

1/03 – 6/06

- Designed and developed Iowa Rehabilitation Services System project (IRSS). Skills and tools implemented include:  
SQL 2000/SQL 2000 Reporting Services; DTS; ASP.Net; C#.Net; MS Data Access Application block; Web Service; MS Viso.
  - Designed SQL 2000 database schema using ERWin.
  - Designed table and matrix report templates and created reporting solutions for the agency using SQL Reporting Services.
  - Prototyped how to access reports on reporting server from ASP.Net application using Reportviewer control and Web Service.
  - Administered the SQL reporting service server.
  - Transferred data from flat files to SQL server using DTS.
  - Created stored procedures with transaction management, error handling and performance tuning based on execution plans.
  - Designed and Prototyped the application framework.
  - Designed and implemented data access layer for the front end using ADO.Net.
  - Deployed .net application, migrated database and reports from the development server to the integration/staging server.
- Designed and implemented an Intranet Helpdesk application for the ITS department using ASP.Net, VB.Net and ADO.Net.

**The University of Nebraska at Lincoln, NE**  
**Research Assistant**

**5/01 – 12/02**

- Developed National Agricultural Decision Support System (NADSS) for the USDA's Risk Management Agency (<http://nadss.unl.edu/>).
  - Architected and developed CORBA-based applications for geospatial analysis using Java Applet on the client side, Java 2 ORB and OmniORB.
  - Installed and configured the server (Linux) for NADSS and maintained the website.
  - Designed database schema for Oracle 9i database.
  - Wrote Perl scripts and Python CORBA client code to retrieve climate data from remote database of the Unified Climate Access Network.
  - Developed GIS applications using ArcInfo, AML and Grass.

**The University of Nebraska at Lincoln, NE**  
**Teaching Assistant**

**6/00 – 5/01**

- Instructor of CSE 251U *Unix Programming*.
- Lab instructor of CSE 251Y *GUI Programming* and CSE 155H *C++*.

**The State University of New York at Stony Brook, Stony Brook, NY**  
**Research Assistant**

**8/99 – 5/00**

- Developed Long Island Sound phytoplankton database and GIS system.

**The National University of Singapore, Singapore**  
**Research Associate**

**4/98 – 7/99**

- Implemented computer modeling and simulation of physical, chemical and biological processes of Singapore's coastal waters.
- Developed an Environmental Management Information System for the Maritime Port Authority of Singapore.

**Dames and Moore Shanghai Office, Shanghai, PRC**  
**Consultant**

**8/92 – 1/96**

- Participated in the development of the Shanghai Environmental Information Management System.
- Evaluated environmental risks and liabilities for American-China joint ventures; clients included mostly Fortune 500 companies.

**EDUCATION**

12/02 The University of Nebraska at Lincoln, Lincoln, NE, M.Sc., Computer Science.  
4/98 The National University of Singapore, Singapore, M.Sc., Civil Engineering.  
7/92 East China Normal University, Shanghai, China.

B.Sc., Environmental Science, (Minor in Computer Science).

## COMPUTER/TECHNICAL SKILLS

- Databases: Logical/Physical Database Design (ERWIN 4.1.5, VISIO); MS SQL Administration (2000/2005); DTS; SQL 2000/2005 Reporting Services; Stored Procedure; ADO.Net; Data Mining; Oracle; MySQL; JDBC; ODBC
- Programming Languages: C#; VB.NET; JAVA; C/C++; Perl; Python; SQL
- Internet Technology: Html; JavaScript; XML; ASP.NET/ASP.NET 2.0; Windows SharePoint Services/SharePoint Server; Web Service; SOAP; CORBA; TCP/IP; PHP; CGI scripting; JSP, Java servlets and applets; RMI
- Systems Administration: Win2000/2003; UNIX; Linux
- Others: Visual SourceSafe Administration; Object modeling with Rational Rose; MS VISIO; GIS(ARC/INFO); SAS

## PROFESSIONAL DEVELOPMENT

- 1/07 Microsoft Training Course #2234 – Core Web Application Technologies with Microsoft Visual Studio 2005
- 6/05 Microsoft Training Course #2806B – Microsoft Security Guidance Training for Developers
- 2/05 Microsoft Training Course #2072 – Creating Reporting Solutions using MS SQL Server 2003 Reporting Services
- 8/04 Microsoft Training Course #2072 – Administering Microsoft SQL Server 2000 Database
- 4/04 Microsoft Training Course #2014 – Customizing MS SharePoint Server
- 2/04 XML level 1
- 9/03 Microsoft Training Course #2073 – Programming a Microsoft SQL Server 2000 Database
- 6/03 Microsoft Training Course #2310 – Developing Microsoft ASP.NET Web Applications using Visual Studio .NET

## BRYCE VANDIVER

### SUMMARY

- Over six years of hands-on experience with analytics and financial management tools in a wide range of platforms and technologies.
- Experience in client facilitation and consensus building, business process analysis, and BI strategy and design.
- Project experience in various business verticals including financial services, commercial, and government organizations.
- Certified Business Intelligence Professional (CBIP).
  - Passed 3 exams that focused on following content areas:
    - Information Systems
    - Data Warehousing
    - Business Analytics
  - Maintained by Total Data Warehouse Institute (TDWI)

### CLARAVIEW PROJECT HISTORY HIGHLIGHTS

#### Kentucky Department of Education – Kentucky Instructional Data System (KIDS)

- **Project Description:** KIDS is a longitudinal reporting system initiative designed to improve information retrieval and decision-making in education. The project will provide analytic support to over 800,000 users, with subsequent phases building additional analytic capabilities. The vision for KIDS is to become an enterprise reporting, information management, and predictive analytics tool for structured and unstructured content.
- **Role Description:** As the lead Reporting and Requirements Analyst for KIDS, participated in the assessment of the source systems and made recommendations for a business intelligence infrastructure. Conducted over 30 facilitated requirements discovery and analysis sessions. Specifically, these sessions identified reporting and analytical tools to align user job functions and role-based strategies with the appropriate success tracking measures. In addition, investigated, developed, and documented enterprise architecture, business process, and BI strategy and report design deliverables.
- **Impact:** The vision of KIDS is to become the enterprise reporting system for educators of the commonwealth. The successful delivery of the phase 1 business intelligence tools for KIDS has provided accessibility to data that could not be accessed previously. State and district users are using KIDS to analyze education related data.

#### Department of Education – Education Data Exchange Network (EDEN)

- **Project Description:** EDEN is a Department of Education initiative designed to meet the need for accurate and timely performance indicators, particularly in relation to the “No Child Left Behind” (NCLB) act. It was an effort to build an enterprise reporting system called EDFacts using EDEN data and in conjunction with the Enterprise Data Warehouse (EDW) project.
- **Role Description:** Responsible for creating an enterprise strategy to move transactional data into a query-based format for reporting purposes. Created and maintained report build documentation, which outlined all report-specific business rule applications, for future EDFacts business users and internal

stakeholders. As a report developer, used Cognos ReportNet 1.1 to develop and administer BI reports for the ED Facts reporting system. In addition, provided troubleshooting and problem solving support as it related to the project and Cognos.

- **Impact:** The reports provided an analytical tool to better understand the grants and performance management process. By having access to real-time data the Department of Education can more effectively manage their constituents in the financial transaction arena.

## **PRIOR EMPLOYMENT EXPERIENCE**

### **Consultant**

**Deloitte (Data Analysis Group), Mclean, VA**

**2006 to 2007**

#### **Freddie Mac – Multi-year Financial Restatement**

- **Project Description:** Freddie Mac overstated company earnings by \$10 billion dollars. Deloitte was the external auditor and we provided analytics support for all work streams in the audit.
- **Role Description:** Provided statistical analysis and data analytics, in conjunction with audit team, for multi-year financial restatement. Work streams included the Mortgage Backed Securities (MBS), Commercial Mortgage Backed Securities (CMBS), and Capital Markets desks.
- **Impact:** The analysis and consultative work done validated the company's internal risk controls. Subsequently, the restatement was completed on time which restored investor confidence in the company and stock price.

#### **Freddie Mac – Basel II Financial Data Warehouse**

- **Project Description:** Consolidated all reporting data to better comply with Basel II accords. A financial data warehouse was created to act as a centralized reporting tool for all end users of financial data.
- **Role Description:** Performed data manipulations and statistical tests to validate financial data that was being brought into the warehouse, such as securities pricing data from Bloomberg and the Federal Reserve. Customized reports and discovery prototypes were created for executive management to assess key operational risk metrics. In addition, a list of recommendations centered on information flow and analysis of system alternatives to improve information quality was documented.
- **Impact:** The warehouse increased the company's financial transparency. It provided an enterprise wide reporting tool for credit systems, compliance requirements, and ad-hoc reports. Moreover, it allowed business users to access financial data through one system to better assess operational and risk metrics.

### **Sr. Management Analyst**

**BearingPoint (CFO Practice), Mclean, VA**

**2005 to 2006**

#### **Defense Finance & Accounting Services (DFAS) - ERP Requirements**

- **Project Description:** DFAS migrated from multiple independent financial applications to a single enterprise-wide application. Performed a current state analysis and worked with DFAS business users to identify future state systems requirements. After this, a GAPS analysis was conducted to identify key areas of change.
- **Role Description:** Created system processes diagrams to illustrate the flow of information. Participated in consensus building sessions with DFAS employees to identify business uses and operational

efficiencies. In addition, assisted in change management functions to help DFAS employees better understand the technology and its purpose.

- **Impact:** After the requirements were completed they were used in the vendor selection process. We also addressed employee concerns over the role and challenges of using a new technology.

### **Department of Health & Human Services (DHHS) – ERP Project Management**

- **Project Description:** DHHS implemented an Oracle ERP solution to bring each of the major public health service agencies into a unified financial reporting system. Prior to the project, DHHS and each of its subsidiaries used their own internal systems. This was a multi-year project, with significant software customization, that utilized the waterfall SDLC.
- **Role Description:** I worked out of the project management office (PMO) where I was responsible for weekly and monthly client status updates. I was responsible for calculating and updating the earned value measurements (EVM). Specifically, this involved updating ROI, NPV, and Life Cycle Cost estimates.
- **Impact:** Met all project releases and updates during my time on the project. DHHS went live with 2 agencies while I was there.

### **Financial Analyst**

**Freddie Mac (Strategy & Economics), Mclean, VA**

**2004 to 2005**

- Acted as internal consultant for various business units, including sales and marketing, regulatory reporting, and capital markets groups.
- Supported Chief Economists Office and other PHD economists in econometrics and policy analysis.
- Performed customer segmentation market research for financial institutions.
- Controlled stress tests on financial forecasting models.

### **Associate Director of Analytical Services**

**Mortgage Insurance Companies of America, Washington DC**

**2003 to 2004**

- Acted as financial policy and legislative consultant for member companies, including Genworth Financial and PMI Group.
- Attended House and Senate Financial Services Committee hearings.
- Responsible for calculating annual budget dues and monthly financial metrics.

### **EDUCATION**

B.A. – Economics

Lehigh University, Bethlehem, PA 2002

## COMPUTER/TECHNICAL SKILLS

### Clearance

- DOD Final Secret Clearance
- Positions of Public Trust

### Skills Overview

#### ETL

Microsoft SQL Server 2005 Integration Services, SQL Server 2000 DTS, Hummingbird

#### OLAP/BI

SAS, Cognos 8, Cognos ReportNet 1.1

#### Database

Oracle 10g, SQL Server 2005, 2000, Microsoft Access

#### Database Modeling

VISIO

#### Development Tools

SQL

#### Operating Systems

UNIX, SunOS, IBM AIX, Windows 95, Windows NT 3.5/ 4.0., Windows 2000, XP, 2003 Server

### Other

- Cognos 8 BI Report Authoring Part 1
- Cognos 8 BI Report Authoring Part 2
- SAS Programming I: Essentials
- SAS Programming II: Manipulating Data
- SAS Macro Language

## PETER PACK

### SUMMARY

- Involved in all phases of system development life-cycle including requirements gathering, analysis, design, build, and unit and system testing.
- Performed a variety of project management duties including developing work estimates, work breakdown structure, activity identification, and project plan development and tracking. He has designed, implemented, and managed various technical solutions including product integration, data transformation, reporting, database design, and process automation.
- Extensive experience in Activity-Based Costing principles and techniques. Developed financial models that are used to perform business process re-engineering and cost estimation.
- Authored various technical and marketing whitepapers. Has participated in various business development proposals.
- MBA in finance from George Washington University and is a Project Management Professional (PMP).

### PRIOR EMPLOYMENT EXPERIENCE

#### Senior Consultant, IBM, Fairfax, VA

2006 to Present

- Provide technical lead duties for project including managing: upgrade of server and software process, financial staging process for ABC models, rollout of web-based survey application, predictive planning utilizing historical activity based costing data.
- Develop WBS, activity estimates, and project schedule for a server and software upgrade project.
- Develop a prototype web-based survey application to capture labor, non-labor, and contract surveys to be used as input into activity-based costing models. Develop a project schedule for implementation of the application in MS Project.
- Provide financial modeling support for activity-based costing models.
- Write technical whitepapers: IBM marketing whitepaper for activity-based costing project, activity system design for a web-based portal, whitepaper on technical approach for systems.
- Manage an internal development project team for budget formulation using Cognos Planning. Created the work breakdown structure for the overall project. Led and coordinate the development and assign tasks to members.
- Determine technical objectives and identify tasks/activities that are required to complete objectives. Identify technical risks and generate an overall risk assessment using IBM risk methodology. Assist in the technical evaluation of various vendors in product selection process. Develop work breakdown structure, activity identification, activity estimates, and project plan for proposals.
- Manage external vendor training relationship for internal IBM staff, and market IBM at the vendor conferences.
- Design the server architecture for an internal development server with various vendor applications sitting on many virtual machines. Development server is to be used to increase staff development as well as for marketing demos.
- Participate in internal business performance management strategy-setting meetings.

**Consultant, Bearing Point, Washington, DC****2003 to 2005**

- Design/Implement an automation tool that automatically updates ABC models using Visual Basic, SQL Server, OROS COM, and MS Access. The tool automates the Activity Based Costing model build and quarterly update process that also reduces the manual process that was needed previously. The tool processes include: scrubs data in SQL Server; creates the OROS (ABC) model structure based off information residing in SQL Server; imports model data from SQL Server into OROS Models using Visual Basic, OROS COM object, OROS Links, and SQL Server views.
- Design/Implement an ASP.NET application to extract driver data from SQL Server to be used as internal inputs to Activity-Based Costing Models, as well as an external reporting tool for the client. This system improved efficiency in performing model updates as well as providing report data. (<https://www.sc-ppbe.net/PBCDrivers/driverindex.aspx>)
- Manage the quality control process of a web-based ASP application. Design quality test procedure that enables step-by-step instructions for functional tests of a web-based ASP application by both internal and external clients. Manage the process including testing, documentation of problems, and recommended/required actions.
- Design, update a performance metrics database and report application. Perform quarterly data updates. Develop reports for internal and external clients. Application helps client in cost analysis, budget, and planning.
- Define/develop functional and business rules and requirements documentation for a web-based activity survey application to meet the functional requirements.
- Train/mentor incoming staff in ABC methodology and ABC software.
- Create and provide Training in Online Analytical Processing (OLAP) Tools, i.e. Cognos, to end-users to assist in data analysis of Activity Based Costing models and data.
- Update Activity Based Costing Models using OROS Modeler on a quarterly basis to assist with the Planning/Budgeting process.
- Create and provide training in Activity Based Costing (ABC) methodology.
- Create simulations in MS Excel/Vensim to model the Foreign Military Sales process to better assist with resource and funding allocation among System Commands.
- Analyze data and create reports from various sources including: ABC data, OLAP data, and MS Excel to provide client with value-added information that can be used to make better decisions.
- Create overall project schedule in MS project. Determine activity duration estimates for the individual activities by estimating, using historical information, and interviewing other team members.
- Monitor and control the progress of the project schedule which was used as an input to the monthly status reports.

**System Analyst, IV, CACI Federal, Chantilly, VA****1999 - 2000**

- Design/Develop/Implement a web-based input and reporting tool that was used by field offices around the world. This tool uses the Internet to allow the field offices to input their case data into the system, whereas previously the report was provided in hard copy format to Headquarters. The new system decreases the processing required to input the data, as well as providing a central repository for all field offices. Field Office quarterly/annual reports are automatically scheduled using Lotus Notes scripts/agents. This reduces the need for manual creation of field office reports. In addition, the field office reports are rolled up into a Central Repository/Database and the scripts automatically generate headquarters rollup reports.
- Update existing Lotus Notes Databases and Scripts based on new and/or changing customer requirements.

**System Analyst, RMSI Consulting, Arlington, VA**

**1998 - 1999**

- Supported over 1000 users with new and existing Lotus Notes application support. Duties included analysis of user requirements, troubleshooting applications, assisting users with applications, and creating new Lotus Notes Databases.

**System Analyst II, CACI, Fairfax, VA**

**1997 - 1998**

- Assist in design/development of a MS Access business database application. Supported a customized, database application suite, duties included: developing new Lotus Notes database applications and modules, adding functionality to existing databases, providing end-user support, and troubleshooting applications.

**EDUCATION**

M.B.A., Finance Concentration, George Washington University, Washington, DC 2003

B.S., Decision Science, George Mason University, Fairfax, VA, 1997

**COMPUTER/TECHNICAL SKILLS**

Skills Overview

Software

MS Office Suite, MS Project, Lotus Notes, ExpertChoice

OLAP/BI

OLAP Cube Design (COGNOS), OLAP Data Mart (Database) Design, Activity Based Costing implementation and design, Competent in SQL data manipulation (queries, views, and stored procedures), Relational Database theory and design, SAS ABM, Business Objects EPM

Database

MS SQL Server, MS Access

Database Modeling

ERWin

Development Tools

Visual Basic, Lotus Notes/Domino, VBScript, Lotus Script, JavaScript

Operating Systems

Windows

Other

- Certified Lotus Notes Professional R4, Principal Lotus Notes Application Developer R4, and Certified Lotus Notes Application Developer R5
- Microsoft Certified Solutions Developer
- Oracle9i Database Administrator Certified Associate and Oracle9i Database Administrator Certified Professional
- PMP, Project Management Professional Certification

## **AWARDS**

- Computer Sciences Corporation Scholarship Award
- George Washington University MBA Scholarship Award
- United States Marine Corps Certificate of Appreciation Ambassador of Quality
- BearingPoint Compass Award
- Golden Key National Honor Society Member

## TODD SCHUMAN

### SUMMARY

- Over five years of Business Intelligence experience focusing on Cognos 8/Impromptu BI and Enterprise Planner, as well as custom built web applications.
- Experience consists of Full Systems Development Life Cycle (SDLC) business and technical management responsibilities including implementation, analysis, design, development, testing, evaluation and maintenance.

### CLARAVIEW PROJECT HISTORY HIGHLIGHTS

#### Kentucky Department of Education (KDE) – Kentucky Instruction Data System (KIDS) Program

- **Project Description:** KIDS is a longitudinal reporting system initiative designed to improve information retrieval and decision-making in education. The phase 1 reports will provide assessment data to state and district users, with subsequent phases building additional analytic capabilities and developing SharePoint into a knowledge management portal. The vision for KIDS is to become an enterprise reporting, information management, and predictive analytics tool for structured and unstructured content.
- **Role Description:** Mr. Schuman led the Cognos reporting team in Phase 1. During this time he was able to complete all of the following both on-time and within budget:
  - 20+ professional prompted reports
  - Ad-hoc reporting tool
  - Role Based Security with license, role, and row level permissions using Access Manager with Active Directory
  - Created custom views to display data that was not normalized
  - Provided user training to 50+ users
  - Performed database, server, and report tuning to enhance report speed
- **Impact:** The Cognos reports and tools deployed will enable KIDS to support analytical reporting capabilities that better facilitate the analysis of student, school, district, and state data.

### PRIOR EMPLOYMENT EXPERIENCE

#### Senior Consultant, Technology Consulting Division (TCD)

#### Morgan Franklin Corporation (MFC), McLean, VA

2005 - 2007

- Developed Cognos 8 reports for Verizon Business focusing on Labor Utilization, Timesheet reporting, Invoicing, Deferred Revenue, Transaction Details, Segment P&L and Commissions. Set up custom metadata models for sales and materials reporting using Framework Manager. Implemented user security via Active Directory.
- Successfully migrated and combined 30+ Impromptu 7.3 reports into Cognos 8.2 for Blackwell Consulting client in a very short time frame. Set up user security for all users and dashboards for executives. Developed custom metadata models to pull specific tables and fields necessary for custom reports.

- Completed Cognos 8 Report Authoring and Modeling classes Parts 1&2 for each. Learned and applied Cognos best practices for design, development, and deployment. Currently preparing for Cognos Certification exams.
- Set up, created, modified, and developed internal reports for MorganFranklin using Cognos Impromptu on Deltek Costpoint database. Work involved developing G/L, AR, AP, Utilization, and HR reports. Aim of the engagements was to improve standard reporting to promote consistency and improve internal financial processes while also enhancing internal analysis and adhoc reporting capabilities.
- Analyzed cost and features of Cognos 8 vs. Impromptu Web Reports to address current and future reporting needs.
- Developed Cognos training and methodology roadmaps for the internal practice.
- Developed Client Impromptu reports and macros for SI International (SI) to retrieve HR data from a Deltek/Oracle database and format it to meet HR benefit provider specifications. Created macros and batch file scripts to facilitate the creation of benefit provider reports for end users. Created user manuals and provided training to client as well as technical support.
- Developed custom Cognos Impromptu project report for Sealaska to allow them to track and monitor all active and inactive reports in their Costpoint ERP system. Currently preparing to upgrade the report to Cognos 8.2 as well as other Impromptu reports developed in-house.
- Setup MFC Bid and Proposal Capture Management roadmap and process diagrams and assisted Deltek client's with GovWin implementations.

**Senior Management Analyst, Office of the Secretary of Defense (OSD)**

**Bearing Point, Inc. (BE), Springfield, VA**

**2003 - 2005**

- Served as Senior Management Analysis on a Activity Based Costing (ABC) budgeting engagement for a DoD Agency. Work involved developing a web based data collection tool with a SQL Server backend that would collect data at the lowest levels by program element and roll up the values to the highest level for reporting requirements. "Homegrown" application was later replaced by Cognos Enterprise Planning software and a successful implementation was completed. Aim of the engagement was to determine the cost of each program/activity and to provide adhoc reporting to allow comptrollers and MILDEPS to make better decisions in their forecasts. Cognos Report Net was implemented and custom reports were built to address all reporting requirements.

**Webmaster/Developer**

**Legal Services Corp. (LSC), Washington, DC**

**2002 - 2003**

- Served as a webmaster/developer for a nonprofit government law firm. Work involved developing a web based milestone reporting tool to collect status updates for grant work projects from over 100 pro-bono legal services location all over the US while also performing maintenance and technical support. Aim of the project was to centralize reporting milestones and to facilitate sharing of successful grant projects.

**Webmaster/Developer**

**Corporate Communications Group (CCG), Cooperstown, PA**

**2002 - 2003**

- Served as a webmaster/developer while creating an online shopping mall that included inventory, shipping costs, pricing, and personalized settings.

**EDUCATION**

Lehigh University 1997-2002

## COMPUTER/TECHNICAL SKILLS

### Clearance

Top Secret Clearance – June 2006

### Skills Overview

#### BI

Cognos (Cognos8/ReportNet, Impromptu/IWR, Enterprise Planner, Access Manager), Hyperion  
ERP Systems

Deltek Costpoint/GovWin/Vision

#### Programming Languages

ASP/ASP.NET, SQL, C/C++/C#, Java/JavaScript/SWING, CognosScript, Batch File Scripting

#### Databases

Microsoft SQL Server, Oracle

#### Microsoft

Access, Excel, Word, Visio, Project, and PowerPoint

#### Operating Systems

Windows 3.1/95/98/XP/2000/Vista, UNIX/LINUX

#### Other

Dreamweaver MX

Cognos Level II – Series 7 BI Administrator

## VLADIMIR ENTIN

### SUMMARY

- Senior consultant with over 19 years of progressive experience in software design, development, troubleshooting and support.
- Full life cycle development.
- Strong background in telecommunications and embedded systems.
- Capable of carrying out all aspects of system specification, design and implementation for commercial and government organizations.

### CLARAVIEW PROJECT HISTORY HIGHLIGHTS

#### DLIS

- **Project Description:** The DLIS Cataloging Directorate (DLIS-K) is the centralized and consolidated cataloging activity for all DoD cataloging. The purpose of the project is the development of Business Intelligence solution capable of performing evaluation of current and future workload, production of schedules and tracking of resource utilization, evaluation of required skill sets and resources, forecasting production capacity through historical trend analysis by customer and work type and reporting anticipated workload over days, weeks, and months. The solution was developed using Business Objects and SQL Server 2005.
- **Role Description:** Designed and developed ETL software module using SSIS with SQL Server Business Intelligence Development Studio also responsible for Business Objects and SQL Server 2005 installation, administration and maintenance.

#### BorderNet

- **Project Description:** Development and integration of various technologies involving data access, data fusion, scene awareness, and wireless communications into a system of systems that facilitates the detection, apprehension and processing of illegal entrants to the U.S. The technologies extend the capabilities of border patrol agents by providing geospatial-oriented situational awareness in the form of GPS tracking, sensor alerts, and incident notifications. The implementation platform is J2EE-based and makes use of many attendant technologies including Servlets, JMS, EJB, JSP, JavaServer Faces, Web Services, SOAP, XML, JAXRPC, Tomcat, Axis, JBoss and the NetBeans integrated development environment.
- **Role Description:** Working on system specification, requirements gathering, design and development. Developed requirements specification and interface control document for integrating into BorderNet a sensor alarm fusion capability. Developed and deployed the corresponding web services-based implementation using Tomcat/Axis. Designed and developed a multimedia distribution layer deployed on JBoss application server. Responsible for development and support of a Federated Query capability that consolidates the results of queries to a variety of law enforcement data sources. The application makes use of Servlet and web services-based technologies in combination with JavaServer Faces user interface component model and request processing lifecycle framework.
- **Impact:** Leveraging information technology to secure the US border.

## **PRIOR EMPLOYMENT EXPERIENCE**

### **Senior Consultant, IVI Solutions, LLC., Reston, VA**

**2005 - 2006**

- Architected designed and developed the cognitive layer of JEOD project. System components include Lucene search engine based information retrieval and Natural Language Processing (NLP) systems. The software implementation is in Java 2 using Eclipse integrated development environment.
- Environments/tools: J2EE, Eclipse, Apache Web Server, Java 2; MS SQL Server; XML; XMLSpyhere.

### **Senior Consultant, Daston, Inc., McLean, VA**

**2004 - 2005**

- Augmented design of the Judge Advocate General (JAG) data collection and reporting system. Implemented front end solutions for the JAG data collection system utilizing ColdFusion IDE.
- Environments/tools: ColdFusion; Dreamweaver MX 2004.

### **Project Engineer, AT&T Government Solutions, Vienna, VA**

**2002 - 2004**

#### **VNS Project**

- **Project Description:** Provided development and production support for the VNS project using VBA and PerfectScript.
- **Role Description:** Contributed to proposals and actively supported business development in progress for 'Do not call' and Invizion-IMobile projects. Supported business development for CEO Com Link and proposal development for the Entry/Exit project. Environments/tools: VBA in MS-Word; PerfectScript in WordPerfect; .NET C#; Rational ClearQuest; Microsoft Visual Source Safe; Microsoft Visio; XML; XMLSpy.

### **Systems Designer, SAIC, Arlington, VA**

**1995 - 2002**

- Designed and developed server side processes and stored procedures to provide new features and enhancements for the Envirofacts Warehouse system at "<http://www.epa.gov/enviro>". Worked with clients on all aspects of specification and scheduling. Duties also include research into the current and developing state of Internet and Intranet Web applications for the future generation of the product. The Envirofacts database resides in Oracle RDBMS. Data publishing on the WEB implemented using Oracle WEB server, PL/SQL and ColdFusion. Envirofacts Warehouse development team achieved SEI level 3 in 1998.
- Worked on specification, design and implementation of the GATEWAY/SQL subsystem of the GATEWAY system. GATEWAY/SQL is a client-server database query and reporting application that runs under Microsoft Windows. The application has been implemented using Microsoft Visual C++ with Microsoft Foundation Classes (MFC) and ODBC. This application accesses the ENVIROFACTS database residing in Oracle RDBMS.
- Environments/tools: Microsoft Visual Studio; Microsoft Visual Source Safe; Oracle WEB server; Netscape WEB server; PL/SQL; SQL Navigator; ODBC, ColdFusion; C/C++ (Visual C++, MFC); Pro\*C.

### **Software Engineer, Syntek Systems Corporation, Inc. Bethesda, MD**

**1990 - 1995**

- Designed and implemented GUI, accomplished system integration and delivery of the network client-server application running over the TCP/IP protocol. The application is the network client that runs in the MS-Windows 3.11 environment. The client provides RPC, FTP and TELNET connections to the server. Microsoft Visual C++ with MFC was used as a development tool.
- Developed specification, design and code of the switchover redundancy task process for the Universal Modem project. Operational software was implemented as embedded multitask system, running on 80186 platform under OSS86 (VRTX32/86) operating system. The software was developed using C

cross-compiler on an HP UNIX platform. Modem is designated for use with INTELSAT and EUTELSAT digital data networks.

- Member of a team implementing channel quality monitoring software for VSAT based telephony system. Designed and implemented VAX workstation control software for a quality assurance test application. The system under test was the Earth Station of a satellite telecommunications network. The project was implemented on a DEC VAX platform using "C" language in VMS environment.
- Development and implementation of an electronic mail synchronization system using X.400 as the underlying transport mechanism. Modified electronic mail subsystem by implementing YMODEM protocol and incorporating it into the poster process. This modification allows support of binary file delivery to selected locations. Development was done on multiprocessor fault-tolerant TANDEM platform using TAL and TACL languages in Guardian 90 operating environment.
- Member of a team that developed all firmware for a mobile communications device to be used on the INMARSAT satellite network. Specific duties included the design, implementation and test of the memory management system and keyboard interface. Developed a test program for testing the communications protocols at the link level, command level, and application level. The development platform was IBM PC running Franklin C cross compiler in a DOS environment. The target was 8051 processor based, embedded real-time system.

Environments/tools: HP UNIX; TANDEM; TAL; TACL; DEC VAX VMS; OSS86 (VRTX32/86); Franklin C cross compiler; Intel ICE; Nohau ICE; Microsoft Visual C++, MFC.

**Systems Programmer/Analyst, Electronics Cooperative Society, Kiev, Ukraine**

**1988 - 1999**

- Designed and developed embedded I/O system software for a microprocessor based simulator-amplifier for biological research.
- Designed real time embedded software for the 8080 controlled instrument that stimulated neural cells and detected their responses. 8086 IBM PC and 8080 in-circuit emulator were used. The software was developed using 8080 macro assembler language in CPM environment.

**Senior Programmer/Analyst  
Programmer/Analyst  
Engineer**

**1987 - 1988**

**1984 - 1987**

**1981 - 1984**

- Developed BIOS programs for microprocessor based equipment. Implemented custom data transfer protocol with error correcting codes and packetized data stream from specialized hardware. Developed hardware and software for data collection, filtering and analysis of biological signals. Designed and implemented physical and link levels for error-detecting data transmission.

**EDUCATION**

MSEE, Leningrad University, USSR, 1983

BS, Mechanical Engineering, Kiev Radiotechnical College, USSR, 1975

## COMPUTER/TECHNICAL SKILLS

### Clearance

- Full BI DHS/CBP – active
- DOJ – inactive

### Skills Overview

#### Application Development

Java, J2EE, Java Swing, C#, .NET, VBA, PerfectScript, Tandem TAL, TACL, HP C and Franklin C cross compilers, Assemblers for INTEL and DEC.

#### Web Development

XML, XSLT, HTML, CSS, JSP, JavaServer Faces, JavaScript, JBoss, Tomcat/Axis, ColdFusion, Dreamweaver MX 2004

#### Data Warehousing

Oracle 8/9/10, Microsoft SQL Server 2000, 2005, SSIS, ETL, SQL Navigator, PL/SQL, Stored Procedures, Pro\*C.

#### Tools

ClearQuest, Subversion, Microsoft Project and Visio, Intel ICE, Nohau ICE, 80xxx family in embedded systems: 8086, 80186, 8031, 8051

#### Operating Systems

Windows NT/2000/2003/XP, UNIX (Sun Solaris & HP), Tandem NonStop

#### Languages

English, Ukrainian (fluent), Russian (native)

## MICHAEL CARVER

### SUMMARY

- Seasoned education industry veteran having led large scale projects including student information system replacements, data warehouses, and ERP solutions.
- Over 13 years of experience in managing, scoping, developing and implementing large-scale complex information systems. Extensive experience in all phases of SDLC for Enterprise-wide Data Warehouses, Business Intelligence solutions, Custom client/server and Web Applications.
- Extensive experience in project management, requirements gathering and analysis, business analysis, design, development, and administration of data warehouse solutions.
- Proven ability to successfully lead teams in the development of high-quality client solutions.
- Project experience in various business verticals including education, finance, energy human resources and technology for commercial and government organizations.

### CLARAVIEW PROJECT HISTORY HIGHLIGHTS

#### Teradata (Claraview Division)

2008 – present

- Manage a team of consultants in implementing a state education data warehouse solution for Iowa.
- Provide education data subject matter expertise to organization.
- Review, edit, and write content for responses to RFP's.
- Manage project budget (approx \$1.9 million).
- Provide regular forecasting for cost projection and revenue for division.
- Manage all phases of software development life cycle ensuring timely delivery within scope and budget.
- Actively participate and lead in education data requirements gathering.
- Manage client relationship including project staffing, budget, schedule, contract, work orders, and invoicing.

### PRIOR EMPLOYMENT EXPERIENCE

#### Director, Technology Services

#### Arlington Public Schools, Arlington, VA

2005 - 2008

- Responsible for department of 64 staff comprising the following office units – Information Systems, Network and Infrastructure Services, Technology Training and Support Services, Engineering and Technical Services, Technology Integration Solutions, and Network Architecture.
- Managed implementation of two major system replacements for the student information system upgrade and the Oracle ERP to replace the Finance and HR systems.
- Directed project planning to ensure staff embraces best practices of project management improving ability for existing staff to support ever growing and changing technology direction.
- Developed support infrastructure and implemented software tool HEAT to manage support calls and process for providing technology support.
- Directed the positioning of the data architecture to support the plans to build a comprehensive data warehouse.

- Participated in and presented at School Board meetings as needed and led efforts with community advisory groups to support mission of the school system.
- Worked collaboratively with Principals to deploy effective technology strategies for schools to support instruction.

### **Senior Product Manager/Project Manager**

**Fairfax County Public Schools, Fairfax, VA**

**2002 - 2005**

- Analyzed current marketplace to position and launch data warehouse/decision support system product into public and private sectors.
- Created product release notes, marketing collateral, and training materials to market product both internally and externally.
- Analyzed technical and business solutions of 3rd party vendors to assess potential partnerships to enhance product offering.
- Worked with Leadership Team, Senior Management Team, and other key decision makers by managing decision support projects from requirements definition through implementation.
- Analyzed customer needs to provide technical solutions.
- Facilitated and directed multi-discipline teams.
- Managed decision support system/data warehouse product.
- Drove development schedule to correspond with product release goals.
- Researched potential vendors and partner relationships for product enhancement, marketing, and selling opportunities.

### **Director, Product Management and Marketing**

**SiteSafe, Inc., (Div of Crown Castle Communications), Arlington, VA**

**2001**

- Managed Product Managers and directed strategic vision of all products.
- Implemented processes and procedures for new product introduction and entry to market.

### **Global Product Manager**

**GE Global eXchange Services, Gaithersburg, MD**

**2000 - 2001**

- Managed product delivery for Integration Broker (intelligent messaging and data transformation middleware) software in EAI marketplace.
- Supported GXS B2B market position and product offerings with technical enhancements to integration broker/data transformation product; situated integration broker product into existing B2B strategy.
- Supported technology strategy of incorporating integration broker, InterLinx, into Intelligent Adapters and Intelligent Adapter ADK to interface with AI and SonicMQ.
- Provided technological vision for product plans incorporating customer requirements and market trends based on competitive analysis and market research.
- Realized a 488% revenue growth with an install base growth of over 5 times or 522%.
- Created and disseminated product roadmaps, technical specifications, product release notes, and marketing collateral to internal and external audiences.
- Conducted global sales and marketing training – work locally in Hong Kong, Singapore, Tokyo, Sydney, and mainland China (Shanghai and Beijing).

**Senior Product Marketing/Programs Manager**  
**MERANT Software, Inc., Rockville, MD** **1999 to 2000**

**Product Manager**  
**ABB Power T&D Company, Inc. (Westinghouse) Raleigh, NC** **1996 - 1999**  
**Information Developer / Design Specialist**

**Consultant, RTP, NC** **1987 - 1996**  
**Clients: U.S. Postal Service, Glaxo Wellcome, NC State Computing Center**

**Senior Mortgage Loan Officer**  
**State Employees' Credit Union, NC** **1987 - 1995**  
**(While attending graduate school and consulting in IT)**

## **EDUCATION**

Master of Science, Technical Communication, Usability and Interface Design  
(GPA 4.0), North Carolina State University, 1996

Bachelor of Arts, Business Communication, University of North Carolina, Chapel Hill, NC, 1987

## **COMPUTER/TECHNICAL SKILLS**

### Skills Overview

#### Market Knowledge

BI, B2B, EAI, e-commerce

#### Integration Broker Software

Data transformation, XML (RosettaNet, ebXML, cXML), JMS messaging, Internet Protocols (secure HTTP, secure FTP, SMTP with S/MIME), digital certificate management

#### Other

Product Management, Project Management, Requirements, Gathering and Analysis, Customer Presenting and Negotiations, Pre-Sales Support, Usability Testing, Interface Design

#### Development Tools

MS Project, DOORS, HTML Transit, FrontPage, Basic UNIX, RoboHelp, Doc-To-Help, MS Office, Visio

### Other

- J2EE by Sun, Washington, DC 2001
- DOORS Requirements Management, Rockville, MD 2001
- Object-Oriented Technologies, Raleigh, 1998
- Client-Server Technologies, Raleigh 1996
- Object-Oriented Development, Raleigh, 1996
- Say It In Pictures: Visual Literacy with Bill Horton, Atlanta, 1995

## ASSOCIATIONS

- Society for Technical Communication
- Association for Computing Machinery (SIGDOC)
- Association for Computing Machinery (SIGCHI)

## PUBLICATIONS & PAPERS

- “Managing Meter Data in a Deregulated and Competitive Environment”, 1999 Proceedings of the American Power Conference, Illinois Institute of Technology, Chicago
- “Finding a Home for Technical Communication in the Academy”, 1998
- Proceedings of the 16th Annual Conference on Computer Documentation, Quebec City
- “Shaping the Future of Meter Readings: An Examination of Automated Meter Reading Technologies in the U.S.”, 1997, Conference Paper for Distribution 2000, Sydney, Australia
- “The Uneasy Marriage Between Academia and Industry: Improving the Research in Technical Communication”, 1996, Panel Discussion for the 44th Society for Technical Communication, Toronto
- “Characterizing User Cognition in Online Environments”, 1995, SIGDOC '95 Savannah
- “The Role of Authoring Tools in Developing Online Help Systems”, 1995, STC Regional Conference, Atlanta
- “Collaboration: A Tool for Multiple Audience Accommodation in Corporate Writing”, 1994 Southern Writing Association, Myrtle Beach, SC

## HONORS

- Adjunct Faculty, Virginia Tech, Summer 2005
- Received CIO Magazine Enterprise Value Award for Data Warehouse project, 2005
- Received President’s Service Award for Outstanding Service Provided to Schools and Principals, Fairfax County 2004
- Received Virginia Governor’s Technology Award, 2003
- Received Outstanding International Software Training Award, GE, September, 2000
- Accepted as an Author for an Anthology Textbook in Technical Communication, 2000
- Elected to Board of Directors (Vice-Chair), SIGDOC, sponsored by Association of Computing Machinery, 1999
- Appointed to Utility Deregulation Task Force, ABB, for national utility restructuring meetings to guide state legislators in policy making for industry restructuring, 1998
- Judge for Research Triangle Park STC Online Design Competition, 1996
- Phi Kappa Phi National Honor Society (4.0 GPA required), 1995

## DAVID GRATTAN

### SUMMARY

- Over 21 years of professional consulting experience with a track record of success leading projects related to business intelligence, decision support, database design, data modeling, custom application development, and business process workflow.
- Demonstrated ability to solve business problems, identify and deliver effective solutions, develop strategic relationships, build effective teams, and mentor team members.
- Most effective when working with others in a team environment to set strategy and work collaboratively to achieve a shared goal.
- Professional areas of interest and expertise include managing and directing teams of people to deliver solutions related to business intelligence, data management, and data strategy.
- Excellent interpersonal, administrative, and communication skills.

### CLARAVIEW PROJECT HISTORY HIGHLIGHTS

#### North Dakota Information Technology Department – Longitudinal Data System Strategic Roadmap

- **Project Description:** Develop and present a strategic roadmap including recommendations and budget estimates to establishing a statewide longitudinal data system for sharing education and workforce information.
- **Role Description:** Project Manager responsible for all aspects of solution delivery, project staffing, client management, PMO support, and contract compliance.
- **Impact:** The strategic roadmap will inform the legislature and other policy makers of the industry best practices and funding requirements to establishing an optimized multi-agency statewide longitudinal data system.

#### Iowa Department of Education – EdInsight

- **Project Description:** Create and deploy a statewide longitudinal data system that serves as a statewide repository of education data with analytic capabilities to better inform instructional practices and to support the state in meeting NCLB reporting requirements.
- **Role Description:** As the Program Manager, responsible for all aspects of solution delivery, project staffing, client management, PMO support, and contract compliance.
- **Impact:** Working as the prime contractor on a team integrated with state employees, Claraview and Iowa are delivering a state-level data warehouse solution that will enable the state to consolidate data from multiple sources, implement impactful reporting functionality, and promote opportunities for positive business process re-engineering.

#### Kentucky Department of Education – Kentucky Instructional Data System

- **Project Description:** Create and deploy a statewide longitudinal data system that serves as a statewide repository of education data with analytic capabilities to better inform instructional practices and to support the Commonwealth in meeting NCLB and EDEN requirements.
- **Role Description:** As the Program Manager, responsible for all aspects of solution delivery, project staffing, client management, PMO support, and contract compliance.
- **Impact:** The KIDS project provides the following benefits to the Kentucky Department of Education:

- 1) Implements a web-based, centralized information management portal of K-12 education data that reduces the commonwealth's burden (financial and staff) required to provide accurate, comprehensive data to its stakeholders for reporting, research, and in-depth analysis.
- 2) Provides easy access to actionable data by educators and administrators at all levels of the KDE organization (SEA, LEA, and Schools).
- 3) Increases the speed and accuracy of the commonwealth's state and federal data reporting capabilities.
- 4) Provides overall improvement of KDE's understanding of its business processes which allows opportunities for business process reengineering.

### **U.S. Department of Education – Merger of Common Core Data (CCD) into Education Data Exchange Network (EDEN)**

- **Project Description:** One of the objectives of the EDEN project is to retire legacy data collection efforts and consolidate those collections into EDEN. In 2007, non-fiscal data of the CCD system, managed by the National Center for Education Statistics (NCES), was integrated into the EDEN system.
- **Role Description:** As project release manager, responsible for defining the overall project schedule, coordinating project resources, identifying and resolving project issues, and ensuring the successful delivery of production software releases. Coordinated activities between multiple stakeholder groups.
- **Impact:** The phased implementation of the CCD into EDEN have improved the level of quality data collected by EDEN and increased the level of state participation in the EDEN system. The project implemented over 500 new business rules into the EDEN collection system to validate the accuracy and validity of the data. As a result, higher quality data is available to the ED*FACTS* reporting system. Additionally, by consolidating the collection of CCD data into EDEN, states can eliminate the work required to support data submission into both EDEN and CCD.

### **U.S. Department of Education – Education Data Exchange Network (EDEN) and ED*FACTS* Reporting System**

- **Project Description:** The EDEN system and ED*FACTS* reporting platform are designed to address the critical need for accurate, timely, relevant performance information about education, specifically as it relates to “No Child Left Behind” (NCLB).
- **Role Description:** Coordinated all major production releases of updates to the EDEN application. This role required coordination of multiple, geographically dispersed team members responsible for requirements, design, development, testing, and deployment. Responsible for developing the data quality strategy and data collection strategy plans. These plans were defined and implemented to ensure a continuous improvement of data quality and maturity of data collections over time.
- **Impact:** The ongoing improvements to the ED*FACTS* platform have helped to increase the accuracy, reliability, and usability of key performance data for the Department of Education. Improvements in data collection tools and processes have enhanced the state’s ability to provide timely, valid, and accurate data. Additionally, both the Department of Education and states have access to data through the reporting system that was never available before.

## PRIOR EMPLOYMENT EXPERIENCE

### **Solutions Director**

**Idea Integration, Fairfax, VA**

**2002 - 2005**

Defined the strategic goals for the Database Management and Application Development units of the Fairfax, VA office.

- Led a team of database consultants to define technical programs, strategic initiatives, training curriculums, and marketing programs.
- Defined personal goal plans and implemented performance evaluation process for all employees in the organization.
- Led ongoing efforts to evaluate and implement data-related technologies and tools including relational database products, extract transform and load tools, object relational mapping tools, and business intelligence tools.
- Presented strategic recommendations to executive management and gained buy-in and approval to implement annual strategic plans.

### **Sr. Project Manager**

**Idea Integration, Fairfax, VA**

**1998 - 2002**

#### **Marriott International- Workflow Management**

- **Project Description:** The project was to conduct a proof of concept of a workflow management system to manage Marriott's internal, operational processes including employee on-boarding, employee off-boarding, IT resource requests, etc. Proof of concept resulted in a production implementation of Siebel 2000, Siebel Workflow, and Siebel SmartScripts.
- **Role Description:** Responsible for managing a technical team from proof of concept initiation through implementation. Conducted requirements interviews, documented as-is process flows, developed to-be process flows, and developed technical design specifications to implement in the Siebel Workflow tool. Presented results of the proof of concept to Marriott executive stakeholders resulting in additional investment in workflow automation.
- **Impact:** Automation of the internal process was estimated to save Marriott up to 2 headcount of staff. Additionally, the proof of concept leveraged existing Siebel tools and required no additional software license investment.

#### **Freddie Mac- Loan Origination and Servicing**

- **Project Description:** The project involved building the initial phase of a loan origination and loan servicing application that integrated custom Java development and functionality from multiple vendors to provide a complete loan fulfillment system.
- **Role Description:** Managed a ten-person team of Java developers and testers. Responsible for overall success of software development and delivery. Managed project resources, project schedule, and project deliverables.
- **Impact:** The project resulted in a fully automated, online loan fulfillment system that simplified the loan fulfillment process.

### **Technical Team Lead**

**Idea Integration, Fairfax, VA**

**1990 - 1998**

- Led a variety of technical teams to implement client-server based financial solutions including ERP implementations, departmental budgeting solutions, and executive decision support systems.
- Led a technical team to implement custom GUI interfaces to Computron Financials Accounts Payable and General Ledger
- Implemented mainframe-based software development applications supporting customer service and marketing applications for MCI.

### **Application Team Lead**

**C3 Incorporated, Hendon, VA**

**1987 - 1990**

## **EDUCATION**

Bachelor of Science in Commerce, Concentrations in Management Information Systems and Marketing, McIntire School of Commerce, University of Virginia, Charlottesville, VA, 1986

## **COMPUTER/TECHNICAL SKILLS**

### Skills Overview

#### OLAP/BI

Cognos Enterprise (8.0, 7.x)

#### Database

Oracle, Sybase, DB2

#### Data Modeling

ERWin, VISIO

#### Development Tools

SQL\*Plus, PL\*SQL

#### Operating Systems

UNIX, Windows NT 3.5/ 4.0., Windows 2000, XP, Vista

## DARLA MARBURGER

### SUMMARY

- Values-driven individual with a desire to serve.
- Elementary and Secondary Education Policy: No Child Left Behind Act, Assessment and Accountability, Bilingual Education, Indian Education, Educational Technology, Federal Title I programs, and Teacher Recruitment, Certification and Retention.
- Higher Education Policy: P-16 Initiatives, Access, Equity and Participation in Higher Education, Affordability, Post Affirmative Action, Post-Tenure Review, Articulation, and Developmental Education.

### CLARAVIEW PROJECT HISTORY HIGHLIGHTS

#### Kentucky Department of Education – Kentucky Instructional Data System

- **Project Description:** Create and deploy a statewide longitudinal data system that serves as a statewide repository of education data with analytic capabilities to better inform instructional practices and to support the Commonwealth in meeting NCLB and EDEN requirements.
- **Role Description:** Provide education subject matter expertise in project planning, developing project requirements, and delivering KIDS user training.
- **Impact:** Claraview and KDE have successfully implemented initial phases of the project on schedule. The technical architecture and framework for the application is in place to enable KDE stakeholders to have better access to student assessment data. Ongoing phases of implementation are continuing on schedule.

#### Iowa Department of Education – Iowa Data Warehouse Solution

- **Project Description:** Create and deploy a statewide longitudinal data system that serves as a statewide repository of education data. The initiative focuses on data integration, data quality, data architecture, report development, training and rollout to key stakeholders in the Iowa DE. The project also includes implementing key aspects of a data governance strategy.
- **Role Description:** Business analyst providing subject matter expertise related to education policy and education data analytics. Specific duties include facilitating reporting requirements processes, defining data usage requirements, and delivering user training.
- **Impact:** The IDWS is progressing through its initial phases on schedule. Through Ms. Marburger's leadership, project leadership committees to institute data governance and the decision framework needed to implement and maintain the IDWS were established. Upon completion, the IDWS will provide education stakeholders with actionable information to shape policy and improve the delivery of education for Iowa school children.

#### North Dakota Information Technology Department – Longitudinal Data System Strategic Roadmap

- **Project Description:** Develop and present a strategic roadmap including recommendations and budget estimates to establishing a statewide longitudinal data system for sharing education and workforce information.
- **Role Description:** Business analyst providing subject matter expertise related to education policy and education data analytics. Specific duties include analyzing current data practices for K-12 education and developing recommendations for data governance, sharing, and analytics.

- **Impact:** The strategic roadmap will inform the legislature and other policy makers of the industry best practices and funding requirements to establishing an optimized multi-agency statewide longitudinal data system.

## **PRIOR EMPLOYMENT EXPERIENCE**

### **President**

**SabiaWorks, Alexandria, VA**

**2007 - 2007**

- Established and managed consulting company specializing in education policy and services.
- Developed and maintained client list and accounts. Assisted educational organizations and businesses in using wise policy practices to extend education's reach for all students.

### **Deputy Assistant Secretary U.S. Dept. of Education, Office of Elementary and Secondary Education (OESE)**

**2002 - 2006**

- Advised the Assistant Secretary on policy issues related to the enactment of the No Child Left Behind Act (NCLB) including standards, assessment, accountability, teacher quality, school choice, and supplemental educational services.
- Directed the OESE Policy Team in the formulation of policy and guidance required to implement NCLB, and in the peer review and approval of each state's education accountability plan.
- Served as the OESE liaison to Department leadership, the White House, and key congressional offices regarding major policy findings and decisions.
- Led interagency task force on Indian Education. Served as a source for press inquiries.
- Addressed professional and student groups as requested.

### **Various Positions – Sr. Policy Analyst, Policy Analyst, Assistant Policy Analyst Texas Senate Education Committee**

**1997 - 2002**

#### **Senior Policy Analyst (2000 -2002)**

- Advised Committee Chair as member of the Governor's Special Commission on 21st Century Colleges and Universities, and the Public Advisory Committee of the Texas Higher Education Opportunity Project of Princeton University.
- Represented Texas Senate on the state's Public Education / Higher Education Coordinating Group laying the groundwork for the state's formal P-16 Council, and the unification of the state's three education agencies.
- Addressed professional and education interest organizations. Assisted in development of high school exit-level exam.
- Monitored implementation of statewide higher education awareness campaign, and mandated college bound partnerships.
- Spearheaded studies on residency policy, incentives to increase college participation of low-income students, and traditional versus alternative teacher preparation programs. Mentored new policy analysts. Upheld former responsibilities.

#### **Policy Analyst (1998-1999)**

- Advised Chair of anticipated social, political and economic impact of proposed legislation. Apprised Chair of local, state and national education issues. Researched school policy on drug-free schools and education programs for special student populations.

- Developed Committee's legislative recommendations.
- Supervised legislative drafting, filing and enactment of key legislation (Texas Assessment of Knowledge and Skills, TEXAS Grant and Teach for Texas Grant, Field of Study Curriculum).
- Shepherded public and higher education bills through legislative process. Built consensus among diverse stakeholders to facilitate the legislative process.

#### Assistant Policy Analyst (1997)

- Independently managed school transportation legislation.
- Drafted legislative backgrounds and summaries, and assisted Committee Director with the analysis of higher education legislation (Top Ten Percent Admissions, Common Core Curriculum, Common Application, Post-Tenure Review, TASP College Readiness Exam).

#### **Program Coordinator Graduate Assistantship**

**The Texas A&M System Agriculture Program, College Station, TX**

**1966 - 1967**

- Administered the congressional intern and legislative briefing programs.
- Prepped interns for congressional office duties.
- Drafted special budget requests. Coordinated legislative briefings. Drafted correspondence to state officials, national officials and agricultural organizations.

#### **Administrative Technician**

**Texas Employment Commission, Austin, TX**

**1995**

- Established the mission of the new Agricultural Services Division of the Texas Employment Commission.
- Publicized and promoted division services.

#### **Assistant Clerk**

**Texas House of Rep. Committee on Agriculture & Livestock, Austin, TX**

**1995**

- Processed and evaluated agricultural legislation for the State House of Representatives, 74th Legislature. Prepared analyses for 50 percent of bills sent to committee. Recorded hearings and maintained witness lists.

#### **Agricultural and Natural Resource Policy Intern**

**United States Congressman Jim Chapman, Washington, DC**

**1994**

- Monitored agricultural legislation and issues. Corresponded with constituents and advanced dairy legislation.
- Researched proposed legislation. Briefed legislative director on Committee on Agriculture hearings.

#### **EDUCATION**

Master of Science, Agricultural Economics, A&M University, College Station, Texas, 1997

Bachelor of Science, Agricultural Journalism Texas A&M University, College Station, Texas, 1995

## **PROFESSIONAL DEVELOPMENT**

- Conflict Resolution & Mediation Skills Training - 2007
- La Experiencia Spanish Language School - 1999
- The Leadership Institute, Youth Leadership School - 1999
- The Church of Jesus Christ of Latter-Day Saints Institute of Religion, Advanced Graduate - 1991-96

## **SPEAKING ENGAGEMENTS**

- Education Commission of the States
- Council of Chief State School Officers
- National Association of State Title I Directors
- State Education Technology Directors Association
- Tennessee High School Summit
- National Association of State Boards of Education
- Utility Business Education Coalition
- Arizona Association of School Business Officials
- The Friday Institute,
- Western Interstate Commission for Higher Education, State Higher Education Executive Officers
- National Foundation for Women Legislators
- National Conference of State Legislatures
- Texas Association of Collegiate Registrars and Admissions Officers
- Texas Association of School Personnel Administrators
- Texas Association of Gifted and Talented

## HARISH PARAMESWARAN

### SUMMARY

- Over 11 years of experience in requirements gathering, scoping, developing and implementing wide complex information systems for Government and Commercial sector clients.
- Extensive experience in ETL, business analysis, design, development, and administration of Data Warehouses supporting Large Databases and BI systems.
- Have provided data integration solutions over a wide range of platforms and delivery methodologies.
- Proficient in relational and dimensional data modeling concepts including Star schema and Snow-flake schema.
- Project experience in various business verticals including Government, Banking and Retail.

### CLARAVIEW PROJECT HISTORY HIGHLIGHTS

#### Department of Education (EDFacts)

- **Project Description:** EDFacts provides a number of parameter driven reports and limited ad-hoc capability primarily focusing on state file submission statistics, CSPR, and grants data which has provided significant value to some of the user groups. However, the ultimate goal of EDFacts, which is easier access to all data, is yet to be realized. ED would like to empower the policy makers and other users with tools to get to the data collected through ESS and EST in a timely manner, so it drives more informed, data driven decision making. The data complexities in the ESS data have thus far required that a development resource get involved every time ED users request a particular piece of data. ESS Data mart is designed with a goal to facilitate effective, efficient, accurate, and secure retrieval of EDFacts data to support the reporting and analytical efforts of various user groups.
- **Role Description:** Mr. Parameswaran was responsible for analyzing ETL requirements and develops ETL jobs. Provided ETL specification documents and methods for tracking flow of data from source systems to target. Ensured ETL specification documents could be traced back successfully to the requirements defined by Dept. of Education. Developed Jobs, Sequences and scripts to execute jobs. As part of performance optimizing created in partitions in Datastage jobs and also in the database. The partition was also applied on the indexes, so that faster running of queries from Adhoc reports.
- **Impact:** This is resulted in creating a metadata driven data mart, so any users with minimum experience of the information can retrieve any information from this database.

#### Massachusetts General Hospital (MGH) - Leading Research Hospital – Integrated Outcomes Data Warehouse (IODW)

- **Project Description:** Claraview is currently providing strategy, design, development, and implementation services to a leading research hospital's Center for Quality and Safety (CQS) at MGH. The purpose of the project is to establish a common data model and data integration infrastructure for use across applications that require access to data from the same or similar data sets. The data integration infrastructure integrates data from disparate systems and loads that data into the hospital's Integrated Outcomes Data Warehouse (IODW).
- **Role Description:** Mr. Parameswaran was responsible for providing expertise in data profiling and ETL development. Used Information Server' Information Analyzer to profile multiple healthcare data sources. The profiling report analysis provides factual "as-is" information to the client about their

current state of the data. Other profiling information includes Field frequency reports, Primary/Foreign Key analysis, Domain analysis, and more. The profiling reports directly impact iterative lines of ETL development because the findings are directly used to build and define business logic and Oracle schemas. On the ETL front, Developed ETL specification documents and methods for tracking flow of data from source systems to target, Created jobs, Sequences and scripts. Took initiative to partition the jobs and target tables this resulted in faster loading of data into the target database.

- **Impact:** As a result of the effort, the MGH expects to minimize duplication of effort and data inconsistencies across applications. . In addition, it is positioned to begin delivery of a variety of applications that support hospital objectives such as improving the quality and safety of health care delivery, increasing pay-for-performance related revenue, improving outcomes through increased adherence to evidence based medicine, and reducing costs associated with regulatory non-compliance.

#### **US Federal Election Commission (Map Application)**

- **Project Description:** The purpose of the project is to facilitate summarized financial information disclosed by each active candidate who has reported at least \$10,000 in contributions from individuals other than the candidate. This information is provided using a National Map.
- **Role Description:** Responsible for the Designing the Data Model for reporting, wrote technical interface specifications to create new mappings using Informatica and modify existing mappings based on functional specifications to meet business requirements.
- **Impact:** This resulted in a flexible and efficient database and enabled faster retrieval of information.

#### **US Federal Election Commission (1032 Application)**

- **Project Description:** The 1032 Offload Project has two phases; Phase One identified the applications and data running on the VMS/1032 mainframe system; Phase Two involves transitioning those applications to a client-server environment.
- **Role Description:** Played key role in design and implementation of a business-driven dimensional data warehouse model that is optimized to the reporting needs of several data sources. Automated various nightly data warehouse load processes using Informatica PowerCenter version 6.2.
- **Impact:** The 1032 Offload project addresses a congressionally mandated technology upgrade, achieves functional upgrades across multiple systems, and positions the client to take advantage of newer hardware and software technologies in the future. Moreover, it enables shutdown of the legacy mainframe system, realizing greatly reduced costs. , Offloading mainframe, Providing Business users with simple and easy user interface and process Management.

#### **US Federal Election Commission (Disclosure Enhancement)**

- **Project Description:** This Project involves upgrading of Informatica Powercenter from version 4.7 to 6.2, optimization of dimensional and fact table mappings; and maintenance of the existing database.
- **Role Description:** Upgraded Informatica repository from 4.7 to 6.2; reviewed referential historical integrity of DW data, validated all mappings/sessions and optimized existing Mapping of Dimensional and Fact tables; tested mapping, sessions, batch pre/post processing scripts and executables.
- **Impact:** Implementation of the ETL upgrade increased nightly batch processing efficiency from 50 to 70 percent.

## PRIOR EMPLOYMENT EXPERIENCE

### Senior Consultant

iORMYX - Herndon, VA

2000 - 2004

#### US Federal Election Commission (BCRA Implementation)

- **Project Description:** This project involved implementation of Bipartisan Campaign Reform Act of 2002 (BCRA) to the existing public Disclosure system at FEC.
- **Role Description:** Conducted GAP analysis in the existing disclosure system, Designed and developed new mappings/session using Informatica Powercenter 4.7. Constructed test plans for mappings/sessions, batches, pre/post processing scripts and executables. Reviewed and validated referential and historical integrity of DW data.
- **Impact:** Implementation of new business policies met critical client requirements; the ETL optimization process increased data accuracy and end-user productivity.

#### Risk Management - Dresdner Bank (Germany)

- **Project Description:** The project involved development of DataMart for a data warehousing application used to integrate operational data from various sources into a single and consistent architecture that supported analysis and decision-making within the enterprise.
- **Role Description:** As part of the team, created star-schema model that integrated and transformed data received from operational systems and the central Data Warehouse. Designed Informatica mappings, sessions, batches, refresh strategies, procedures, and pre/post batch processing. Reviewed and validated referential and historical integrity of DW data. Designed and developed multidimensional cubes.
- **Impact:** The implementation of the DataMart was set as an example for development of other projects which involved operational data.

### DBA

PDIP - Bangalore

1999 - 2000

- **Project Description:** This project involved implementation of Supply Chain Management System, including Design/Administration of Database and implementation of OLTP services.
- **Role Description:** Responsible for Database Analysis, Design, Implementation, Administration and stored procedures; set up Replication Servers and OLAP services; developed Stored Procedures; designed and conducted hot/cold system backups.
- **Impact:** Accurately build databases, and then managed data quality, integrity and security, which provided a thorough understanding of the data from a business perspective.

Hindustan Aeronautics Ltd., Bangalore

1997 - 1999

## EDUCATION

Bachelor of Commerce, Bangalore University, 1996

Higher Diploma in System Engineering, 1997

Diploma in Computer Applications

## COMPUTER/TECHNICAL SKILLS

### Skills Overview

#### Data Integration /ETL

Informatica PowerCenter 7.x.8.x, DataStage, SQL Server 2005 Integration: Services, SQL Server 2000 DTS, IBM Information Server

#### OLAP/BI

Business Objects, Cognos Enterprise (7.x), Microstrategy 7.x

#### Data Modeling

ERWin, VISIO

#### Database

Oracle (10g, 8i), SQL Server (2005,2000), DB2, MS Access, MySQL

#### Database Development

PL/SQL, Transact-SQL

#### Development Tools

Toad, Lotus Notes 7, QMF, WINSQL

#### Operating Systems

UNIX - AIX, Linux, Windows NT 3.5/ 4.0., Windows 2000, 2003, XP, IBMMVS

### Other Training

- Cognos Series 7 – ReportNet and PowerPlay
- Microstrategy 7.0
- Advance Course in Informatica PowerCenter

## HIRAM RODRIGUEZ

### SUMMARY

- Consultant with 6+ years of data warehousing implementation experience including ETL development, ETL QA testing, Cognos report development
- MicroStrategy testing, and MicroStrategy 8x certifications.
- Data analysis and data profiling of new and existing data sources
- Designing logical and physical schema
- Enforcing data standardization rules
- Developing mappings responsible for populating reporting target tables
- Upgrading MicroStrategy system from 7i to 8x
- Maintaining and creating a Narrowcast report delivery system
- Designing, developing and unit testing Cognos reports
- QA experience includes developing test plans, execution of tests and generation of testing results reports in ETL and reporting projects
- Industry expertise includes telecommunications, finance, education and government

### CLARAVIEW PROJECT HISTORY HIGHLIGHTS

#### Iowa Department of Education – EdInsight

- **Project Description:** : eDInsight is an educational system that will be designed to join three different sources into a single data warehouse. This will provide the capabilities of reporting across different education domains.
- **Role Description:** : ETL developer – Data mapping advisor. Responsible for:
  - Analyzing of data sources and accommodating them into the eScholar data warehouse
  - Organizing the ETL team in the steps needed to map data sources into the eScholar data warehouse
- **Impact:** eDInsight project will have the correct data fields loaded in the proper eScholar columns. That will provide ETL and reporting developers the confidence of working with the correct data both in the back end and the front end sides.

#### Kentucky Department of Education – Kentucky Instructional Data System Phase 2

- **Project Description:** KIDS is a longitudinal reporting system initiative designed to improve information retrieval and decision-making in education. The phase 2 reports will provide assessment, financial and staff data to state and district users. The vision for KIDS is to become an enterprise reporting, information management, and predictive analytics tool for structured and unstructured content.
- **Role Description:** ETL developer. Responsible for:
  - Designing, developing and unit testing the loading of staff data from source to eScholar tables
  - Data profiling of relevant fields for the Phase 2 data sources
- **Impact:** Educators of the Commonwealth will be able to analyze assessment, staff and financial data at state, district and school levels.

#### Kentucky Department of Education – Kentucky Instructional Data System Phase 1

- **Project Description:** KIDS is a longitudinal reporting system initiative designed to improve information retrieval and decision-making in education. The phase 1 reports will provide assessment data to state

and district users, with subsequent phases building additional analytic capabilities and developing sharepoint into a knowledge management portal. The vision for KIDS is to become an enterprise reporting, information management, and predictive analytics tool for structured and unstructured content.

- **Role Description:** Cognos developer. Responsible for:
  - Giving input for a work breakdown structure in ETL, QA and reporting
  - Calculating time estimates for the project in ETL, QA and reporting
  - Creating demos for requirements sessions
  - Translating requirements into report mockups
  - Refining report mockups with the client
  - Writing functional and technical specifications
  - Writing and refining the metadata schematic matrix, which includes the mapping of columns from the eScholar source tables to the Cognos report attributes
  - Working with ETL developer identifying report data elements in the client source tables/files and mapping them to the eScholar tables and the Cognos attributes
- **Impact:** Educators of the Commonwealth are able to analyze assessment data at state, district, school, grade and student levels.

#### **PCAOB - Risk Analysis**

- **Project Description:** Risk Analysis provides a system for PCAOB's Office of Research and Analysis to generate reports for distribution to field inspectors. These reports provide potential areas for accounting irregularities at the issuer level which become the focus of the field inspections.
- **Role Description:**
  - Informatica ETL developer for Risk Analysis 3.0. Responsible for:
    - Data analysis and data profiling of the financial source files.
    - Standardization of values for matching purposes between different sources.
    - Incorporating additional target tables in an existing schema.
    - Designing and creating mappings which insert and update rows in new and previously populated tables.
    - Creation of development unit test plans which was responsible for reducing the number of bugs deployed to the QA environment and therefore reduced QA testing cycles.
  - Informatica ETL QA for Risk Analysis 3.0.
  - Risk Analysis 2.0 ETL testing and MicroStrategy report testing. Responsible for:
    - Helped in creation and review of project plan, defining QA tasks and estimating times for those tasks.
    - Achieved on time or early delivery of all assigned tasks.
- **Impact:** The inspectors are able to determine possible areas for risk within accounting for public companies faster and more accurately than the previous reporting system in MS Access. The current reporting system provides them advanced functionality and additional information that was not previously available including drilling to detailed information and integration of information across more than 25 different data sources.

#### **PCAOB – Funding**

- **Project Description:** Generate the list of billable issuers and their corresponding PCAOB fees, according to a set of rules defined in the Sarbanes-Oxley Act of 2002.

- **Role Description:**
  - Informatica ETL developer for Funding 4.0. Responsible for: Data analysis and data profiling of the financial source files.
    - Designing and creating mappings which insert and update rows in new and previously populated tables.
    - Data analysis
  - Mentored two other quality engineers on: Risk Analysis 2.0 ETL testing
    - Best practices for QA testing strategy for the ETL process in Funding 4.0.
    - The flow of data in the Funding system, rules involved in every step and results expected when the Funding process is completed.
  - Responsible for Funding 2.0 and 3.0 ETL testing and MicroStrategy report testing.
    - Performed tests in the ETL process and MicroStrategy reports.
    - Analyzed the ETL process created in Informatica, developed SQL queries and tables which replicated the ETL, and compared the SQL results with the Informatica tables.
    - Created test plans for both ETL and reporting.
    - Had exposure to integration of data across more than 15 sources in an ETL process, versioning, manual correction of tables, address correction.
  - **Impact:** The four versions of Funding have been the backbone of the billing system which has provided the annual financial operating budget to PCAOB.

## PRIOR EMPLOYMENT EXPERIENCE

<b>Research Assistant</b> Rice University, Houston, TX	<b>2002 - 2002</b>
<b>Software Quality Engineer</b> Strategy.com-Microstrategy Inc, McLean, VA	<b>2000 – 2001</b>
<b>Surveillance Engineer (Switching and Signaling Area)</b> Avantel (MCI Mexico), Monterrey, NL MEXICO	<b>1999 – 1999</b>

## EDUCATION

Masters in Electrical Engineering, Rice University, Houston, TX, 2002  
 Bachelors of Science in Electronics and Communications Engineering  
 Exchange student, University of Illinois at Urbana-Champaign, Urbana, IL, 1996

## COMPUTER/TECHNICAL SKILLS

### Skills Overview

#### ETL

Informatica (6.x, 7.x, 8.x), Ascential, Microsoft SSIS

#### OLAP/BI

Microstrategy (8, 7, 6), Cognos 8

#### Database

SQL, Oracle (9i), DB2, SQL Server 2000/2005, Teradata

#### Database Modeling

ERWin, VISIO, eScholar data model

#### Development Tools

SQL\*Plus, Visual SourceSafe, TOAD, Queryman, Microsoft Sharepoint, Documentum, QMF

#### Application Development

C, C++, Fortran

#### Operating Systems

Windows, UNIX

#### Web Development

HTML, XML/XSL

#### Languages

English (fluent), Spanish (native), French (basic)

#### Other

- Cognos 8 – Reston, VA – June 2007
  - Cognos 8 BI Report Authoring Part 1
  - Cognos 8 BI Metadata Modeling Part 1
- Mastering IT Projects Certificate, 32 Hours, Management Concepts, Reston, VA – Sept 2006
- Ascential DataStage v7.x Certificate of Accomplishment, Ascential, Falls Church, VA - 2004
- MicroStrategy Certified Engineer (Version 8x), MicroStrategy University, Falls Church, VA – May 2007
  - MicroStrategy Engine Essential, Engine Tuning and VLDB Properties, Advanced Data Warehousing (One week training on improving MicroStrategy reports performance)
- MicroStrategy Certified Engineer – June 2006
- Certified Project Designer: Includes MSTR Reporting Essentials, MSTR Architect (Project Design) – 2006
- Certified Report Developer: Includes MSTR Desktop Advanced Reporting, MSTR Report Services Essentials - 2006
- Certified Platform Administrator: Includes MSTR Intelligence Server Administration, MSTR Narrowcasting Essentials – 2006
- MicroStrategy Technical Bootcamp Certification, MicroStrategy University, Falls Church, VA – June 2000
  - Six week course including data warehousing, SQL, MicroStrategy components, HTML, XML, XSL



Overview of Iowa Unified Longitudinal Data System Education Infrastructure

ID	Task Name	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	
28	Import workforce data from other sources to assess the extent to which high school graduates are adequately prepared for work or further education (Activity 6)																				
30	K-12 data linked with CC data to assess preparation and earnings after obtaining an associate of arts degree																				
31	Wage studies of the existing markets for consideration in curriculum planning																				
32	IWD and IDE arrive at an agreement where IWD would link select data into EdInsight and have analyst access																				
33	IDE gains linkage with the many IWD joint-agency job training initiatives partners																				
34	Interoperability between SEA and LEA data systems (Activity 2)																				
35	RFP																				
36	Implement a standards-based approach as the backbone for transmission of student information across the state of Iowa																				
37	Governance																				
38	SIF Association																				
39	Implement SIF e-transcript																				
40	Implement SIF vertical reporting infrastructure																				
41	Implement SIF student records exchange (horizontal reporting)																				
42	Implement Student Interoperability Framework (SIF) student locator																				
43	Improve the timeliness of the data filings and certifications																				
44	Send and receive transcripts of students applying to postsecondary educational institutions and/or moving across state lines. (Activity 7)																				
45	RFP process																				
46	A high school transcript repository:																				
47	Disaster recovery and mitigation; centralized records allow continuity of education and records recovery																				
48	ICC mandate and 8th Grade Plan mandated by the Iowa Legislature can be evaluated																				
49	High school Iowa Core Curriculum																				
50	Elementary Iowa Core Curriculum																				
51	Postsecondary benefits; reduced processing time, reduced labor costs, increased data quality, and ease in calculation of the RAI																				
52	Sending high school transcript data electronically to colleges and universities																				
53	Enabling school districts to electronically exchange student records within the state of Iowa																				

Project: Timeliness  
Date: Wed 9/24/09

Task Split

Progress Milestone

Summary Profile Summary

External Tasks External Milestones

Deadline

Page 2

The above Gant Chart is an overview timeline for Iowa's Unified Longitudinal Data System Infrastructure program proposed in response to the the Institute of Education Sciences (IES) RFA. The chart sets out all the proposed activities listed in the project narrative and each of the outcomes for that activity. Specific dates could be offered for all events that will occur in each general area represented on the chart; however, they would not be very reliable this far in advance; there are many factors to take into consideration. Instead, the remainder of the section will explain the general processes that fall within those tasks and summary bars on the chart, which represent Iowa's proposed activities and outcomes. In considering all the tasks accomplished to institute Iowa's Unified Longitudinal Data System Infrastructure, they can functionally be lumped into three categories:

- Adding additional data to EdInsight (Iowa's data warehouse – version 1.0 release projected February 2009);
- Interoperability between entities in Iowa's educational infrastructure; and
- Collecting new data, in addition to both the former categories (aka e-transcripts)

This functional grouping is reflected in the ordering of events on the chart and nesting of those that would add data to the Statewide Longitudinal Data Systems (SLDS) under EdInsight. Also, many of these bars would continue beyond the 2014 end mark, but have been truncated to reflect the approximate end date of the IES assistance.

#### **Additional Data Sets**

The additional data sets that would be included are:

- Teacher/Staff data;
- Dropout and graduation data;
- Finance data;
- Community college (CC) data;
- PK-16/20 data (Freshman Report);
- Workforce data (and certain partner agencies); and
- Additional assessment data (including end-of-course assessments to meet Iowa Core Curriculum [ICC] requirements)

It has not been stated explicitly, but it should be noted because it is reflected in the budget narrative: it is assumed additional reports from existing data sets will be developed while these new data are being integrated into EdInsight; hence, only a portion of time for some Iowa Department of Education (IDE) staff that work on EdInsight has been allocated for additional work due to the IES funding, which affects the general timeline.

The phases for the additional data sets are:

- Phase I – Project planning and develop infrastructure, define data sets, map data, and load data from source systems;
- Phase II – Develop analytics and reporting road map (Requirements);
- Phase III – District and area education agency (AEA) reporting and analytical tools (Development); and
- Phase IV - Develop strategy for public information and dashboards

The project phases occur using the PMBOK methodology (explained in the project narrative) to ensure an appropriate software development process results in a quality solution, new functionality, and program enhancements for EdInsight. Some of these initiatives are large scale and long-term efforts and investments of time, resources, and precious funding. Data quality initiatives, including a robust Data

Governance and Master Data Management program, will be ongoing throughout all future phases of the data warehouse

Phase I includes the following activities:

- Design and develop technical architecture (including appropriate security infrastructure);
- Identify source system elements and verify with source system owners;
- Perform mapping analysis linking source system data to data warehouse templates;
- Design and develop Extract, Transform, and Load (ETL) packages for data transformation and loading; and
- Load data elements

Included in Phase I work is the establishment or refinement of additional project governance infrastructure to manage all aspects of the project. The project team will research the technical attributes, examine data source documentation, and interact with Subject Matter Experts (SMEs) as needed to determine the best design approach. The eScholar Complete Data Warehouse (CDW) has 36 data domains that group data elements based on specific content areas. Having these domains pre-defined in the data warehouse substantially reduces the design time because the required data structures and relationships are already defined. However, in some instances such as that mentioned in other sections about the uniqueness of certain architecture, such as Community College Division's Management Information System, additional design time is required to re-engineer eScholar templates.

The logical process described in the ETL design document will serve as the basis for development. These design artifacts will be used as a starting point to readily transform the content of this document into executable code or a procedure that can be implemented. It is reasonable that the information upon which the design development document is based can be simultaneously used to jump start the requirements development process. Hence, though Phase I and Phase II are distinct phases, certain activities within these phases will be occurring at the same time. This will aid in expediting delivery to the customer.

Phase II includes Requirements gathering for all new data areas. The project team will leverage experience and subject matter expertise in facilitating and eliciting education-specific solution requirements. The requirements list will serve as the high-level input to the design of reports.

Phase III includes the development of reporting and analytical tools based on the requirements. The project team will expose data elements in the Cognos Framework for ad hoc reporting in Query Studio, a component of the Cognos BI reporting solution. The logical processes described in the design document will serve as the basis for development. These design artifacts will be used as a starting point to readily transform the content of this document into executable code or an implementable procedure. The BI solution proposes an authentication and authorization strategy based on role based permissions. These permissions will be captured in the security matrix artifact (Appendix A, EdInsight Data Security Matrix). The purpose of the role based security matrix is to specify all roles with all associated permissions and clarify the components used in determining each user's individual security profile.

Phase IV includes the execution and launch of reports and all data warehouse functionality to the end-users (including the public as defined in the requirements). Phase IV also includes training and support processes. Included in Phase IV of the project is transition of any processes, procedures, daily work routines, and knowledge developed by any contractor staff. The assessment of the project and the need for project support and system optimization will be realized in Phase IV. The project team's focus will be in building more mature capabilities from the data warehouse including prompted and more advanced analytical routines. Additional end user capabilities like parameterized reports will also be available based on previously identified requirements.

## **Interoperability**

In addition to data quality efforts, there is a need to provide greater integration between source systems at the local education agency (LEA) and school level. Leveraging the Student Interoperability Framework (SIF), much work will be done to unify the entire educational infrastructure in Iowa: LEA, AEA, CC, IDE, Regent institutions, private colleges, and Iowa Testing Programs (ITP). Bringing each of these entities online with automated data flow would be phased in over the five-year period.

The first consideration is the e-transcript contract award timing. The vendor will be selected in January 2009. It is anticipated that the awards for the RFA will be announced as the contract between IDE and the vendor are being negotiated (February), so terms of the contract can take into account whether e-transcript will be part of the larger unified LDS and need to be integrated. After that, the next priority would be linking LEAs to IDE, then would come CCs and followed lastly by ITP.

Given the planning that will be required, including an RFP for the implementation of SIF, the work will not physically begin until nearly the second year of the grant. Much of the purchasing will be front loaded. Servers for IDE and zone integration servers for LEAs will need to be purchased and installed. SIF enabling every LEA will also be a significant commitment of resources. As noted, the vendor with the largest volume of LEAs is not SIF compliant and will require programming changes to their SIS to deliver the service to our mutual client: the LEAs.

The process will also bring other improvements to the system, which likewise must be implemented on the front end before stakeholders can be brought onto the network. IDE has outdated data collection systems architecture. A directory and report manager as part of SIF implementation would be the best way to address the long term state systemic need, while providing a system that more robustly addresses federal requirements.

Both the SIF and Data Governance initiatives will begin in 2009 and go toward and beyond the five-year mark at 2014. To support the data quality efforts, an increase in the frequency of data loading from source systems must occur. The increase in load frequency should occur at the beginning of the project in 2009 paving the way for the larger efforts like data quality and data integration via SIF. This will allow for a better monitoring of data quality through data audits of the various source systems.

## **Collecting and storing new data – Iowa High School Repository**

The RFP for Iowa's High School Transcript Repository, which includes e-transcripts, is being written at the same time as this response to the RFA. The intent is that the entire RFP process would be done by the end of January 2009. This would allow work to begin on Phase I of the implementation: moving transcripts to Iowa Regent Institutions so that they may with much greater ease calculate the Regents Admissions Index (RAI), which is to be required for admission in the fall of 2009. Any relief the newly implemented system could offer would greatly reduce the workload for the Regent institutions.

The larger transmission of e-transcripts would follow: secondary to CC; CC to Regent institutions and Iowa private colleges; and finally exchange of records between LEAs. These transmissions will be captured (protocol yet to be determined) and stored (in a location yet to be determined) to begin the accumulation of records for the Iowa High School Repository. The ICC and evaluating students' 8<sup>th</sup> Grade Plans would be done with the data captured for the Iowa High School Transcript Repository. The ICC core mandate phases in FY 2012 for secondary and 2014 for elementary; the 8<sup>th</sup> Grade Plan mandate applies to the FY 09 8<sup>th</sup> graders; hence, a cohort will not have gone through and become available for analysis until 2012. As the Repository captures records moved between LEAs or uploaded during evacuation, it would provide for continuity of education, too. Obviously, whether IDE receives the IES grant and is planning SIF interoperability affects the transmission means and therefore the implementation timing.

# Budget Narrative

## Budget Narrative

Attachment 1:

Title: Pages: Uploaded File: 1235-ED 524 Section C - Budget Narrative - final.pdf

## ED 524 Section C – a.k.a. Budget Narrative

Section C of Form 524							
Federal Budget	%	Year 1	Year 2	Year 3	Year 4	Year 5	
Budget Categories	Effort					Total	
<b>1. Personnel</b>							
Executive Sponsor - Jim Addy	5%	\$5,309	\$5,468	\$5,632	\$5,801	\$5,975	\$28,186
Program Manager - Co-Lead Jim Anderson	20%	\$19,489	\$20,074	\$20,676	\$21,296	\$21,935	\$103,470
Program Manager - Co-Lead Jay Pennington	20%	\$18,043	\$18,584	\$19,142	\$19,716	\$20,308	\$95,794
Director of Data Quality - New	100%	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	\$350,000
Data Stewards (10 Subject Matter Experts [SMEs] on Data Governance Committee)	5%	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000
IT Engineer (hosting and portal support) ITE contracting	50%	\$38,355	\$39,506	\$40,691	\$41,912	\$43,169	\$203,632
Data Analyst (SIF), QA, & Testing - New	100%	\$68,588	\$70,646	\$72,765	\$74,948	\$77,196	\$364,143
Business Analyst – Janell Brandhorst	25%	\$17,147	\$17,661	\$18,191	\$18,737	\$19,299	\$91,036
DBA - Geoff Gu	65%	\$0	\$0	\$0	\$0	\$0	\$0
ETL developer - Dick Skibbe	75%	\$0	\$0	\$0	\$0	\$0	\$0
Report developer - Jason Grinstead	50%	\$0	\$0	\$0	\$0	\$0	\$0
Report developer - Mike Comiskey	50%	\$0	\$0	\$0	\$0	\$0	\$0
District Help Desk – New	100%	\$0	\$50,000	\$51,500	\$53,045	\$54,636	\$209,181
<b>2. Fringe Benefits</b>							
Executive Sponsor - Jim Addy		\$1,433	\$1,476	\$1,521	\$1,566	\$1,613	\$7,610
Program Manager - Co-Lead Jim Anderson		\$5,262	\$5,420	\$5,582	\$5,750	\$5,922	\$27,937
Program Manager - Co-Lead Jay Pennington		\$4,872	\$5,018	\$5,168	\$5,323	\$5,483	\$25,864
Director of Data Quality - New		\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$94,500
Data Stewards (10 SMEs on Data Governance Committee)		\$1,350	\$1,350	\$1,350	\$1,350	\$1,350	\$6,750
IT Engineer (hosting and portal support) - ITE contracting		\$0	\$0	\$0	\$0	\$0	\$0
Data Analyst (SIF), QA, & Testing - New		\$18,519	\$19,074	\$19,647	\$20,236	\$20,843	\$98,319
Business Analyst – Janell Brandhorst		\$0	\$4,630	\$4,769	\$4,912	\$5,059	\$19,369

DBA - Geoff Gu		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ETL developer - Dick Skibbe		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Report developer - Jason Grinstead		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Report developer - Mike Comiskey		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
District Help Desk – New		\$0	\$13,500	\$13,905	\$14,322	\$14,752				\$56,479
<b>3. Travel</b>										
Annual Out of State Trip #1 (3 people)										
Airfare		\$2,400	\$2,400	\$2,400	\$2,400	\$2,400			\$2,400	\$12,000
Lodging (3 nights)		\$1,620	\$1,620	\$1,620	\$1,620	\$1,620			\$1,620	\$8,100
Transportation / Parking		\$300	\$300	\$300	\$300	\$300			\$300	\$1,500
Meals / Incidentals		\$450	\$450	\$450	\$450	\$450			\$450	\$2,250
Annual Out of State Trip #2 (3 people)										\$0
Airfare		\$2,400	\$2,400	\$2,400	\$2,400	\$2,400			\$2,400	\$12,000
Lodging (3 nights)		\$1,620	\$1,620	\$1,620	\$1,620	\$1,620			\$1,620	\$8,100
Transportation / Parking		\$300	\$300	\$300	\$300	\$300			\$300	\$1,500
Meals / Incidentals		\$450	\$450	\$450	\$450	\$450			\$450	\$2,250
In state travel										\$0
Project Team travel		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000			\$10,000	\$50,000
External Committee members reimbursement		\$4,500	\$4,500	\$4,500	\$4,500	\$4,500			\$4,500	\$22,500
<b>4. Equipment</b>										
Servers										
Servers Data Warehouse		\$0	\$200,000	\$0	\$0	\$0			\$0	\$200,000
Servers SIF		\$0	\$100,000	\$0	\$0	\$0			\$0	\$100,000
PCs		\$0	\$0	\$0	\$0	\$0			\$0	\$0
Laptops		\$0	\$0	\$0	\$0	\$0			\$0	\$0
Network Switches / Firewalls		\$0	\$10,000	\$0	\$0	\$0			\$0	\$10,000
Disk Storage		\$0	\$10,000	\$0	\$0	\$0			\$0	\$10,000
DW Software (eScholar - template work)		\$0	\$100,000	\$100,000	\$100,000	\$50,000			\$50,000	\$350,000
DW Software (Cognos - User Licenses: BOEE, IWD, Regents, CC)		\$0	\$0	\$50,000	\$100,000	\$125,000			\$125,000	\$275,000
SIF ZIS		\$0	\$600,000	\$60,000	\$60,000	\$60,000			\$60,000	\$780,000
SIF Student Locator Framework (SLF)		\$0	\$150,000	\$30,000	\$30,000	\$30,000			\$30,000	\$240,000

SIF eTranscript Framework (ETF)		\$0	\$150,000	\$30,000	\$30,000	\$30,000	\$30,000	\$240,000
SIF Vertical Reporting Framework (VRF)		\$0	\$0	\$300,000	\$60,000	\$60,000	\$60,000	\$420,000
<b>5. Supplies</b>								
General Office Supplies		\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$20,000
Training expenses - room rentals, materials, etc		\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
<b>6. Contractual</b>								
RFP Writer		\$15,000	\$0	\$0	\$0	\$0	\$0	\$15,000
Data Analyst - Data Quality		\$133,000	\$0	\$0	\$0	\$0	\$0	\$133,000
Data Analyst - Data Integration		\$133,000	\$0	\$0	\$0	\$0	\$0	\$133,000
SLDS Labor								\$0
DW Project Manager		\$0	\$68,400	\$68,400	\$68,400	\$68,400	\$68,400	\$273,600
SME		\$0	\$80,750	\$80,750	\$80,750	\$80,750	\$80,750	\$323,000
DW ETL Engineer		\$0	\$68,875	\$68,875	\$68,875	\$68,875	\$68,875	\$275,500
DW BI Developer		\$0	\$66,500	\$66,500	\$66,500	\$66,500	\$66,500	\$266,000
DW Training		\$0	\$133,000	\$66,500	\$66,500	\$66,500	\$66,500	\$332,500
SIF Labor								\$0
SIF LEA Implementation & Training		\$0	\$225,000	\$0	\$0	\$0	\$0	\$225,000
SIF SEA Implementation & Training		\$0	\$20,000	\$0	\$0	\$0	\$0	\$20,000
SIF SLF Adapter Development		\$0	\$30,000	\$0	\$0	\$0	\$0	\$30,000
SIF VRF Adapter Development		\$0	\$0	\$50,000	\$0	\$0	\$0	\$50,000
SIF VRF Report Development		\$0	\$0	\$90,000	\$0	\$0	\$0	\$90,000
SIF Barcode		\$0	\$0	\$90,000	\$0	\$0	\$0	\$90,000
Portal with Directory Management Structure		\$0	\$250,000	\$250,000	\$0	\$0	\$0	\$500,000
Iowa Testing Programs								\$0
Metrics development - report statistics		\$120,000	\$123,600	\$127,308	\$131,127	\$135,061	\$135,061	\$637,096
Data governance/quality/mapping		\$0	\$30,000	\$60,000	\$60,000	\$60,000	\$60,000	\$210,000
Market Research Firm - Business requirements development		\$0	\$60,000	\$60,000	\$0	\$0	\$0	\$120,000
<b>7. Construction</b>								
		\$0	\$0	\$0	\$0	\$0	\$0	\$0

<b>8. Other</b>									
SIFA Membership Fee		\$2,500	\$0	\$0	\$0	\$0	\$0	\$0	\$2,500
<b>9. Total Direct Costs (lines 1-8)</b>		<b>\$748,807</b>	<b>\$2,895,472</b>	<b>\$2,075,812</b>	<b>\$1,358,007</b>	<b>\$1,345,568</b>			<b>\$8,423,666</b>
<b>10. Indirect Costs</b>		\$31,450	\$121,610	\$87,184	\$57,036	\$56,514			<b>\$353,794</b>
<b>11. Training Stipends</b>		\$0	\$0	\$0	\$0	\$0			<b>\$0</b>
<b>12. Total Costs (lines 9-11)</b>		<b>\$780,257</b>	<b>\$3,017,082</b>	<b>\$2,162,996</b>	<b>\$1,415,043</b>	<b>\$1,402,082</b>			<b>\$8,777,460</b>

**Personnel**

From reviewing previous awards, the Iowa Department of Education (IDE) knows that Institute for Education Sciences (IES) request for assistance (RFA) dollars has been used for funding new positions. Further, through extension, it is IDE’s understanding that IES RFA dollars may be used for funding portions of positions for the new responsibilities added to those positions. Given that the human capital support for Iowa’s Unified Longitudinal Data System Proposal comes from the following areas: 1) three additional FTEs from RFA funding, 2) adding various portions of FTEs to other’s responsibilities, 3) contractors (to be discussed in a later section), and 4) in-kind IDE staff contribution of roughly \$355,000 per year, or \$1.8 million for the life of the assistance.

**New Positions:**

- Director of data quality What this position would tackle is a pressing issue for IDE and the entire educational data infrastructure. IDE has undertaken several initiatives using time from staff already fully allocated. It is anecdotal, but a fair observation to state, that if those efforts had dedicated staff, they would have been more effective. The magnitude and intricacy of the problem require it. This would be a position that senior staff at IDE would look for ways to continue after the assistance.
- SIF data analyst for QA and testing For the planning, implementation, and initial operation it will be crucial to have another data analyst. A considerable portion of the SLDS relies on interoperability. It will be necessary to have more resources with these skills on staff, as well as from contractors during this phase. Ultimately, after the IES assistance, there should be less need for dedicated support in this way and responsibilities can be assumed by EdInsight staff.
- District help desk This necessary human resource may take the shape of an employee or it may not. IDE could also contract either with the selected vendor or Iowa’s own state agency that provides enterprise wide information technology services. Realistically, after the first few years of stakeholder learning curve with the architecture it should be established and support can be mostly offered via the Internet or Iowa Communications Network (fiber optic voice-audio-data transmission).

Various portions of FTEs:

- Executive sponsor - While many have come together to create Iowa's unified vision, the integration of technology creates many administrative concerns. Working with Regents', CCs', AEA's', and LEAs' concerns and fears will be a crucial part of launching Iowa's SLDS and require extra effort from the sponsor.
- Program Managers - Both program managers will experience an increased workload beyond what had been initially envisioned for them. First, like the executive sponsor, there will be more need to interact with stakeholders to address their concerns and fears. Second, there will also be significantly more work for the pair to shepherd over. The chiefs for the Information Technology Services (IT) and the Planning, Research, Development, and Evaluation (PRDE) Bureaus are currently co-program managers of EdInsight and will assume the same responsibility for Iowa's SLDS.
- Data Stewards - Integrating disparate data sets cannot be done without the help of knowledgeable SMEs. The additional work these SMEs, who are internal and external to the department, are required to perform would be covered by this amount.
- IT engineering - As mentioned earlier, the state of Iowa has a state enterprise-wide IT service within its Department of Administrative Services (ITE). Planning and implementing the interoperability and the expansion of EdInsight will require these services; however, once these are in place there should not be the same level of need for these services. Hence, there is a high probability these may come from ITE, which is the reason no fringe benefits were associated for asking for position.
- Business analyst - This person has been supporting the development of EdInsight reports due to her knowledge of the SISs and data, but is assigned as a research analyst. The expanded scope of the RFA would require additional use of her time. The bureau that she is assigned to has an individual that works less than full-time. This person's State responsibilities could be transferred to the other bureau employee, and the grant could pay for dedicated attention from the original employee to the federal initiative.

In-Kind contributions:

	Effort	Year 1	Year 2	Year 3	Year 4	Year 5	Total
<b>1. Personnel</b>							
DBA - Geoff Gu	65%	\$68,840	\$70,906	\$73,033	\$75,224	\$77,481	\$365,483
ETL developer - Dick Skibbe	75%	\$68,899	\$70,966	\$73,095	\$75,288	\$77,546	\$365,793
Report developer - Jason Grinstead	50%	\$73,402	\$75,604	\$77,872	\$80,208	\$82,614	\$389,699
Report developer - Mike Comiskey	50%	\$68,767	\$70,830	\$72,955	\$75,144	\$77,398	\$365,096
<b>2. Fringe Benefits</b>							
DBA - Geoff Gu		\$18,587	\$19,145	\$19,719	\$20,310	\$20,920	\$98,681

ETL developer - Dick Skibbe	\$18,603	\$19,161	\$19,736	\$20,328	\$20,937	\$98,764
Report developer - Jason Grinstead	\$19,818	\$20,413	\$21,025	\$21,656	\$22,306	\$105,219
Report developer - Mike Comiskey	\$18,567	\$19,124	\$19,698	\$20,289	\$20,898	\$98,576
<b>Total</b>	\$355,484	\$366,148	\$377,132	\$388,446	\$400,100	\$1,887,310

As was mentioned several times in the project narrative, especially in reference to IDE’s commitment to sustainability, the EdInsight staff were moved onto the administration portion of IDE’s budget this year: they have the same probability of being funded by the Legislature next year as do all other permanent staff at IDE. As employees of IDE they have job responsibilities for EdInsight that are allocated to fill 100 percent of their time. (These are all hourly staff.) If Iowa were to get the RFA, their specific assignments would be significantly altered, but the broader intent would remain the same. The amount of time envisioned to be directed at other SLDS activities beyond implementing and supporting the current EdInsight have been listed above as documentation of soft in-kind.

**Travel**

It is envisioned there will be two out-of-state trips per year. It seems reasonable to assume there will be at least one grantees meeting per year of the grant. IDE would send the executive sponsor and the co-program managers: 3 individuals. One additional trip per year is also envisioned for each of those principles. The trips would be to a conference for either professional development on SLDSs or to present about Iowa’s SLDS.

There will be significant in-state travel for the SLDS program. The project team, all members, will be traveling throughout Iowa for the life of the assistance for IES. The principals of the project will be selling the project to the educational community at meetings. Various members from the team will travel 1) with market research firm in developing business requirements, 2) to deliver professional development, and 3) if necessary, provide on-site support in implementation.

Another portion of in-state travel would be to reimburse governance committee members for travel. As delineated in the project narrative, Iowa’s SLDS would have four committees of stakeholders with governance implications; three are already in existence. IES assistance would be used to reimburse these individuals, or their organizations, for travel expense. Given the skyrocketing fuel prices, and future predictions, covering these costs in the RFA are necessary so that face-to-face discussions can be held. It is these face-to-face discussions that cement relationships and empower the project.

**Equipment**

Servers will be purchased for both EdInsight (Iowa’s data warehouse) and for interoperability between entities. As a crude barometer, EdInsight has purchased 20 servers for initial data storage; hence, it seemed reasonable to double the number given the amount of expanded data that will be housed there with the IES assistance. Also included in this item are the actual servers, just the machines, for SIF zone integration. The intent would be to have one per AEA, hence there would be 10 servers.

There will be additional EdInsight software needed beyond the license and the yearly maintenance fee IDE is currently paying. First, eScholar, the “back-end” of EdInsight will need additional non-standard templates for loading of data. Some of the additional templates needed to load the data into may be released in a later version of the software. It would seem reasonable that the company will work with Iowa and other states to include disaster data as suggested by NCES; so the cost could be less. However, some of the data, such as that in the community colleges (CC) management information system (MIS), are unique and will require customized templates. Second, more licenses will need to be purchased for access to the “front-end” of EdInsight, the Cognos software. Adding all these data, translates into adding access to those data for its owners (a.k.a licenses): Board of Educational Examiners, Regents, CC, and Iowa Workforce Development. It is assumed that the number of licenses ramp up as data are loaded and reports are generated for users to access them.

The remaining costs in the equipment section are for interoperability between IDE and Regent Institutions, CCs, AEAs, LEAs, and Iowa Testing Programs. As was stated in the RFA, precise costs are not known because of bidding requirements: IDE would be required to bid these out. However, IDE consulted with several states at the NCES conference and was also given rough estimates from two vendors. Also, minimal incidental costs have been anticipated for firewalls and storage.

### **Supplies**

A substantial amount of training or professional development will need to occur with the SLDS. The project narrative discusses the professional development for all the different kinds of user from classroom teacher to LEA IT staff. There will be costs for room rental, materials development, and other costs associated with meetings. There are also incidental costs included for office supplies: toner, color copies, central printing of materials, etc.

### **Contractual**

There are two primary contracts that deal directly with Iowa’s SLDS system itself: the contract for expanding data and interoperability between entities. The data warehouse labor is based on previous experience from instituting EdInsight up to this point, so the numbers should be relatively accurate. The costs for contracted services to engineer, plan, and implement an interoperability system are less precise. As stated earlier, these estimates are the amalgamation of input from several entities and may change in the public bidding process. That said, the line items in the spreadsheet at the beginning of the narrative provide reasonable estimates for each of the component activities.

Iowa Testing Programs (ITP) is the purveyor of the “state test” for Iowa. They are also involved in many other statewide K-12 assessments. In the near future they will be designing the end of course assessment for the Iowa Core Curriculum. This contract amount would go for establishing a link to ITP data through mapping for SIF Barcode interoperability and for loading into EdInsight.

The contract would also go for ITP's expertise. Thus far ITP's knowledge of metrics has been invaluable in designing reports for end users. For instance not all assessment metrics can be compared across testing entities and over time with meaning. ITP has worked with ITP to "repackage" such data in ways so that it has utility for end users. As more assessment data are loaded, there will be more need for this service to meet the demand of the customers (the education community stakeholders).

There is money set aside for a market research firm to engage in business requirements development. IDE received NCES Task Order money to do just this for EdInsight. The NCES Needs Assessment Task Order was used to conduct focus groups, a survey, and take committee input. The process was highly effective to guide initial development and would be repeated for 1) the additional types of data being loaded in the SLDS and 2) for interoperability needs of entities.

Contracting for an RFP writer will also be necessary to ensure that securing vendors for the work occurs in a timely manner. In the recent past, IDE has used writers employed by the AEA's and Regent Institutions. This would be the plan as there are existing agreements with these entities that facilitate this.

In-Kind contributions:

Iowa is also making a significant in-kind contribution for equipment and contractual costs. As was stated in the project narrative, IDE is implementing a data warehouse of limited scope at a projected cost of \$2.9 million and will be letting a request for proposals for the Iowa High School Transcript Repository, which includes e-transcripts and has a budget of \$1 million.

### **Construction**

There are no construction costs associated with this RFA.

### **Other**

It seemed reasonable to include a SIFA (SIF Association) membership, since such great lengths were being taken to be SIF compliant.

### **Indirect costs**

IDE's indirect cost rate is 4.2 percent. The calculations in the detail budget reflect this ratio.

### **Training Stipends**

IDE is offering no stipends, but is instead spending IES assistance money only on reimbursement of expenses, meeting expenses, and training materials.