

U.S. Department of Education

Washington, D.C. 20202-5335



APPLICATION FOR GRANTS UNDER THE

STATEWIDE LONGITUDINAL DATA SYSTEMS

CFDA # 84.372A

PR/Award # R372A070015

Grants.gov Tracking#: GRANT00233637

Closing Date: MAR 15, 2007

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Application for Federal Assistance SF-424

Version 02

* 1. Type of Submission:

- Preapplication
- Application
- Changed/Corrected Application

* 2. Type of Application:

- New
- Continuation
- Revision

* If Revision, select appropriate letter(s):

* Other (Specify)

* 3. Date Received:

03/15/2007

4. Applicant Identifier:

5a. Federal Entity Identifier:

* 5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier: UTG070226-020

8. APPLICANT INFORMATION:

* a. Legal Name: Utah State Office of Education

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

87-6000545

* c. Organizational DUNS:

029999372

d. Address:

* Street1: 250 East 500 South

Street2: PO Box 144200

* City: Salt Lake City

County:

* State: UT: Utah

Province:

* Country: USA: UNITED STATES

* Zip / Postal Code: 84114-4200

e. Organizational Unit:

Department Name:

Division Name:

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

Prefix: Dr.

* First Name: John

Middle Name:

* Last Name: Brandt

Suffix:

Title:

Organizational Affiliation:

* Telephone Number: 801-538-7953

Fax Number:

* Email: john.brandt@schools.utah.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-121806-001

* Title:

Statewide Longitudinal Data Systems CFDA 84.372A

13. Competition Identification Number:

84-372A2007-1

Title:

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

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

Utah Student Records Exchange

Attach supporting documents as specified in agency instructions.

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.

17. Proposed Project:

* a. Start Date:

* b. End Date:

18. Estimated Funding (\$):

* a. Federal	<input type="text" value="4,516,963.00"/>
* b. Applicant	<input type="text" value="0.00"/>
* c. State	<input type="text" value="0.00"/>
* 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="4,516,963.00"/>

*** 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:

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Standard Form 424 (Revised 10/2005)
Prescribed by OMB Circular A-102

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.

Attachments

AdditionalCongressionalDistricts

File Name

Mime Type

AdditionalProjectTitle

File Name

Mime Type



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

OMB Control Number: 1890-0004

Expiration Date: 06/30/2005

Name of Institution/Organization:
 Utah State Office 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	S 120,000	S 120,000	S 0	S 0	S 0	S 240,000
2. Fringe Benefits	S 60,000	S 60,000	S 0	S 0	S 0	S 120,000
3. Travel	S 136,333	S 45,080	S 215,960	S 0	S 0	S 397,373
4. Equipment	S 0	S 130,000	S 300,000	S 0	S 0	S 430,000
5. Supplies	S 0	S 0	S 0	S 0	S 0	S 0
6. Contractual	S 440,217	S 2,129,160	S 673,613	S 0	S 0	S 3,242,990
7. Construction	S 0	S 0	S 0	S 0	S 0	S 0
8. Other	S 7,000	S 28,000	S 51,600	S 0	S 0	S 86,600
9. Total Direct Costs (lines 1-8)	S 763,550	S 2,512,240	S 1,241,173	S 0	S 0	S 4,516,963
10. Indirect Costs*	S 22,400	S 22,400	S 0	S 0	S 0	S 44,800
11. Training Stipends	S 0	S 0	S 0	S 0	S 0	S 0
12. Total Costs (lines 9-11)	S 785,950	S 2,534,640	S 1,241,173	S 0	S 0	S 4,561,763

***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: 7/1/2006 To: 6/30/2007 (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:
 Utah State Office 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	S 0	S 0	S 0	S 0	S 0	S 0
2. Fringe Benefits	S 0	S 0	S 0	S 0	S 0	S 0
3. Travel	S 0	S 0	S 0	S 0	S 0	S 0
4. Equipment	S 0	S 0	S 0	S 0	S 0	S 0
5. Supplies	S 0	S 0	S 0	S 0	S 0	S 0
6. Contractual	S 0	S 0	S 0	S 0	S 0	S 0
7. Construction	S 0	S 0	S 0	S 0	S 0	S 0
8. Other	S 0	S 0	S 0	S 0	S 0	S 0
9. Total Direct Costs (lines 1-8)	S 0	S 0	S 0	S 0	S 0	S 0
10. Indirect Costs	S 0	S 0	S 0	S 0	S 0	S 0
11. Training Stipends	S 0	S 0	S 0	S 0	S 0	S 0
12. Total Costs (lines 9-11)	S 0	S 0	S 0	S 0	S 0	S 0

ASSURANCES - NON-CONSTRUCTION PROGRAMS

OMB Approval No. 4040-0007
Expiration Date 04/30/2008

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

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

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

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

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

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Prescribed by OMB Circular A-102

Tracking Number: GRANT00233637

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.

* SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL Randy Raphael	* TITLE Statistician
* APPLICANT ORGANIZATION Utah State Office of Education	* DATE SUBMITTED 03-15-2007

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

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

Approved by OMB

0348-0046

<p>1. * Type of Federal Action:</p> <p><input type="checkbox"/> a. contract</p> <p><input checked="" type="checkbox"/> b. grant</p> <p><input type="checkbox"/> c. cooperative agreement</p> <p><input type="checkbox"/> d. loan</p> <p><input type="checkbox"/> e. loan guarantee</p> <p><input type="checkbox"/> f. loan insurance</p>	<p>2. * Status of Federal Action:</p> <p><input type="checkbox"/> a. bid/offer/application</p> <p><input checked="" type="checkbox"/> b. initial award</p> <p><input type="checkbox"/> c. post-award</p>	<p>3. * Report Type:</p> <p><input checked="" type="checkbox"/> a. initial filing</p> <p><input type="checkbox"/> b. material change</p> <p>For Material Change Only:</p> <p>year quarter</p> <p>date of last report</p>
<p>4. Name and Address of Reporting Entity:</p> <p><input checked="" type="checkbox"/> Prime <input type="checkbox"/> SubAwardee Tier if known:</p> <p>* Name: Utah State Office of Education</p> <p>* Address: 250 East 500 South PO Box 144200 Salt Lake City UT: Utah 84114-4200</p> <p>Congressional District, if known:</p>	<p>5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime:</p>	
<p>6. * Federal Department/Agency:</p> <p>U.S. Department of Education</p>	<p>7. * Federal Program Name/Description: Statewide Data Systems</p> <p>CFDA Number, if applicable: 84.372</p>	
<p>8. Federal Action Number, if known:</p>	<p>9. Award Amount, if known:</p>	
<p>10. a. Name and Address of Lobbying Registrant (if individual, complete name):</p> <p>* Name: None</p> <p>None</p> <p>* Address:</p>	<p>b. Individual Performing Services (including address if different from No. 10a):</p> <p>* Name: None</p> <p>None</p>	
<p>11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</p>		<p>* Signature: Randy Raphael</p> <p>* Name: None</p> <p>None</p> <p>Title:</p> <p>Telephone No.:</p>

	Date: 03-15-2007
Federal Use Only:	Authorized for Local Reproduction Standard Form - LLL (Rev. 7-97)

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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.

<p>* APPLICANT'S ORGANIZATION Utah State Office of Education</p>
<p>* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE Prefix: Mr. * First Name: Randy Middle Name: * Last Name: Raphael Suffix: * Title: Statistician</p>
<p>* SIGNATURE: Randy Raphael * DATE: 03/15/2007</p>

SUPPLEMENTAL INFORMATION REQUIRED FOR DEPARTMENT OF EDUCATION GRANTS

1. Project Director

* Name:

Dr.

John

Brandt

* Address:

250 East 500 South

P O Box 144200

Salt Lake City

UT: Utah

84114-4200

USA: UNITED STATES

* Phone Number:

801-538-7953

Fax Number:

Email:

john.brandt@schools.utah.gov

2. Applicant Experience:

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:

FileName

MimeType

Project Narrative

Abstract Narrative

Attachment 1:

Title: Pages: Uploaded File: **6188-Project_Abstract.pdf**

Project Abstract: Utah Student Record/Transcript Exchange (USRE)

Background and Needs

For the past two school years, Utah has had a fully functioning statewide longitudinal data system (SLDS) employing the eight key components prescribed by Institute of Education Sciences' (IES) National Center for Education Statistics (NCES). The system has also fulfilled nine of ten data quality components specified by the Data Quality Campaign jointly sponsored by the Council of Chief State School Officials (CCSSO). The tenth component, the integration of the statewide student identifier with postsecondary schools is also now implemented in a limited manner but will be fully realized with the advent of the USRE.

A vital SLDS depends more than anything on the efficient and accurate exchange of student level data. However, student records/transcript exchanges as students move from one local education agency (LEA) to another is neither automated nor uniform in Utah. Currently, LEAs must deal with paper transcripts hand carried by the new student or sent by the former LEA. This process is error prone, labor intensive and requires judgments about meanings and accuracy of data. It is crucial for these data to be timely and of high quality for good school accountability and student performance/achievement measures. Currently, student records are collected four times a year by the Utah State Office of Education (USOE) in electronic batches of data. While this is done in a uniform and controlled manner, the process would greatly benefit from a more standards based and automated architecture for greater speed and flexibility. Fast, quality student records/transcripts are also important for postsecondary applications and registrations. Today, this process is only automated for some applications.

Services and Benefits

The USRE system would produce the following services and benefits for Utah's SLDS by relying on national and international standards such as the School Interoperability Frame (SIF) to integrate Utah's LEAs, postsecondary institutions and the USOE:

- All stakeholders will be able to use national standards for student record/transcript exchanges. Doing so will improve data quality on all levels and for all processes, reporting, and research.
- Each LEA's student information system (SIS) and the USOE Data Clearinghouse and Warehouse will be enabled with software, servers and trained staff that will allow for rapid (non-batch) and on-demand exchange of student records between any two LEAs or between the LEAs and the USOE. This can be accomplished with any subset of students.
- Through a transcript broker/server service LEAs will be able to electronically send a transcript to any Utah public postsecondary institution and most out of state postsecondary institutions. It will also allow for the exchange of transcripts/records with out of state LEAs.
- Currently, states send EDFacts data through the Education Data Exchange Network (EDEN) which is a very large collection of aggregate or computed data points. The USOE proposes to work with the EDFacts to submit student level data in SIF objects instead of these complex files.

Electronic records/transcripts will result in a higher rate of notification and accuracy about transfer students as well as dropouts and students exiting for other reasons. Receiving complete electronic transcripts with course taking records and grades will also improve student placements and interventions.

Project Narrative

Project Narrative

Attachment 1:

Title: Pages: Uploaded File: **7201-Mandatory_project_narrative.pdf**

Utah Student Record/Transcript Exchange (USRE)

Project Narrative

Section 1 - Need for the Project

1.1 Status of Utah's Statewide Longitudinal Data System

Introduction

From the beginning of the 2005-06 school years Utah has had a fully functional statewide longitudinal data system (SLDS) complete with statewide student identifier (SSID). Before that time it was missing an SSID. This system now fulfills the requirements of all key components of a statewide longitudinal data system prescribed by Institute of Education Sciences' (IES) National Center for Education Statistics NCES except for the capacity to automate the exchange of student records exchange between LEAs and to postsecondary schools. Utah's current SLDS also satisfies all ten Data Quality Campaign (DQC) components including: statewide student identifier, student level data (e.g. enrollments, courses, grades, assessments, assessment non-participation codes, exit statuses), collection mechanisms, statewide teacher ID, a longitudinal warehouse with multi-year assessment and demographic integration, uniform school/local education agency (LEA) directories, and decision support tools. As addressed later in this document tracking a student from secondary to postsecondary is only partially complete, but will be fully functional with the completion of this Utah Student Record/Transcript Exchange (USRE) project. "Record" and "transcript" are both used somewhat interchangeably in this application. A "record" can refer to a broader assortment of data than are normally found in the more traditionally defined "transcript". "Transcript" is usually used for the official document of student information sent from one school to another or to a postsecondary institution for admission purposes.

For a more complete description of the current status of Utah's statewide longitudinal data system please refer to Appendix B: Exhibit 1, *The Current Status of Utah's SLDS*. This will describe in detail Utah's fulfillment of the SLDS core elements.

1.2 Limitations, Needs, Capacity and Goals (also see: 2.9 - Governance, 5 - Management Plan)

Key Stakeholders

There are many stakeholders in the data produced by the system. Among them are: public school educators at the LEA (Local Education Agency), building and classroom levels, legislators, federal organizations like USED and NCES, the State School Board and the State Office of Education and the Utah State Board of Regents representing postsecondary education. Beginning in 2003 Utah began collecting quality student level data from all LEAs. It is expected that these data will be maintained indefinitely.

As described in Appendix B: Exhibit 1, Utah current statewide longitudinal data system current encompasses what are considered to be the core elements of such a system. However, Utah's statewide longitudinal data system has not been without its weaknesses. Besides missing strong integration with postsecondary or higher education systems via a statewide student identifier (matching is initially done by student attributes), the exchange of student data as students move from one LEA to another is neither automated nor uniform. At best, a student will come to a new

school with a paper record/transcript or the new school will contact the former school for the student's record/transcript. At worst the student will have neither a student record/transcript nor provide information about former enrollments in Utah public or out of state schools.

Regardless of how the new school eventually receives the student record/transcript data, it is usually transcribed at least in part or re-solicited from the student/parent for inclusion in the student information system (SIS) at the new school. This process is often error prone and incomplete leaving at least some inaccuracies in the student's academic history. It is also very labor intensive and at times different LEAs have different meanings for data elements with the same names.

Possibly the most critical part of this exchange is the determination of the student's statewide student identifier (SSID). If this identifier exists in an acquired student record/transcript, the new school can more easily verify the identity of the student against the state's master SSID database. If only student attributes like name and date of birth are available, the process is more laborious and less accurate. As with most statewide longitudinal data systems (SLDSs), the quality of the data in Utah's system, and specifically in the Utah State Office of Education (USOE) data Warehouse, depends on the reliability of this number.

Statewide data model

The processes, schedules, data definitions and business rules incorporated in the USOE Clearinghouse and Warehouse (from here on to be known as the "Clearinghouse" and the "Warehouse") plus extracted datasets provide the current statewide data model. However, there is currently no unified data model as such that encompasses all of the data described in Appendix B: Exhibit 1 along with all LEA data. Inclusion of LEA data might be possible if the definition of the Clearinghouse were expanded to be all encompassing. However, this might not be practical under current circumstances since some definitions at the LEA level may not always exactly align with Clearinghouse definitions. LEAs must compensate for these situations when producing data for the Clearinghouse.

There currently are USOE Data Warehouse definitions of the relationships between its data items and external systems (e.g. the USOE Clearinghouse and assessments database) to allow for efficient maintenance and retrieval of data. Over time, more and more data collections are being integrated into the USOE Data Warehouse.

Student Information Systems

Since most of the data that are collected through the USOE Clearinghouse originate in LEA SISs, the LEAs are limited only in their ability to participate by the flexibility of those SISs. When Clearinghouse specifications change so too must the software that is used to extract data from those SISs before those data can be submitted to the USOE via the Clearinghouse. If a new data element that one or more LEAs has never maintained before is introduced, it may take as long as two years before the new data are available to the USOE. This includes one year to allow the LEAs to change their SISs and related systems and up to an additional year to collect the data for the first time if a full school year's worth of data is required. Such a schedule usually commences following a change mandated by the Utah State Legislature whose session ends in early March of each year or following a new requirement by the NCES.

For decades Utah has provided a complete SIS free of charge with support to any LEA desiring to

use it. If a change is made to the Clearinghouse that will impact this SIS, the USOE takes responsibility for changes to the state supported SIS. However, having changes made to other SISs is more problematic and as mentioned above can take considerable time. For these reasons Utah should move toward a more flexible and standard architecture for extracting data from SISs. The School Interoperability Framework (SIF) standard objects should fulfill this need in the future.

Even with all the effort put into communicating Clearinghouse definitions, structures, schedules and the inevitable change cycle, miscommunications do occur. The USOE needs to require (not suggest) that each LEA designate their own local data coordinator/steward to serve as a primary liaison to the state for any and all changes in any data collection, Clearinghouse or otherwise. This person is responsible for communicating all new and changed data requirements and verifying that they are fully implemented according to specification and on schedule. In doing so this person will not only need to work with technical staff but also with those responsible for actual data collection and entry, such as building level registrars and counselors.

Updating Schedules

Utah is currently collecting and updating almost all its longitudinal student level data through electronically submitted data files on a periodic basis. This has proven to be adequate and cost effective in the past. But some updates such as disciplinary data and new student attributes used for disaggregation may have to be done more quickly. So, the way that student level data will be collected more dynamically in the future is through School Interoperability Framework (SIF) standards and an electronic student record/transcript as described in this application plan.

Once all necessary end year data are available, Utah has found it takes about a month to extract, transform and load data into the Warehouse and produce: NCLB AYP reports, Utah Performance Assessment System for Students (U-PASS) reports and individual student test profiles and summary reports. So long as delivery schedules are met all schools can have their raw end-of-level test results returned prior to their last day of school. However since accountability reports such as AYP depend on: scaled scores (can take up to 3-4 weeks for contractors to calculate); student attributes from the Clearinghouse (submitted by rule by July 15) and year-round school test results (aren't all available until the end of June) it is difficult to produce reports and data extracts prior to mid-August.

If the whole state were administering assessments online, assessment pre-equating were employed, and student attributes were more immediately available, then reports such as AYP and U-PASS could be produced earlier. Another limiting factor to earlier end-of-year reporting is year round schools that do not end until July. This ability to report earlier also assumes that LEAs have been maintaining accurate student attributes in their SISs throughout the year. Instead, some LEAs wait until the end of a term or the end of the school year to catch up with SIS data entry. A prime example is the Title III director only providing ELL levels to IT once a year.

Training and auditing practices

USOE has a functioning student level SLDS collection system that allows for the collection and maintenance of multi-year student datasets. However, there are numerous areas in which improvements can be made. Most of these involve the data quality standards of: accuracy, consistency, completeness, validity and timeliness. Utah proposes to put into place a number of processes, roles and procedures in order to insure that data collected at the LEA level more fully

meets these standards of data quality. This type of training is in addition to that training described and planned for the implementation of the USRE system.

Such activities will not only encompass quality assurance in the actual data exchange processes and technologies but will also focus on training at the level of original data entry. A new statewide data dictionary will be widely publicized with the requirement that all SISs conform to its standards when collecting, storing and exchanging data. This dictionary, among other aspects of data quality, will emphasize data consistency (data elements are clearly defined and understood) and data validity (data values fall within acceptable ranges).

Two examples of needed training at the data entry level are what actually counts as an excused absence and student names. It must be clearly communicated that the student's last name be restricted to the legal name and nothing but the legal name. Without this understanding data consistency and validity is easily compromised.

Ongoing Training of Key Users

Training for existing Utah longitudinal functions are currently being done through the USOE Data Warehouse Group and scheduled meetings as described in Appendix B, *The Current Status of Utah's SLDS*. Training for the new USRE system will be conducted as described in section 2.8 below. However, ongoing training for both existing systems and the new system will require a more formal and dedicated effort than has occurred in the past.

The proposal is that a perpetual series of workshops be established for all aspects of the longitudinal data system and the USRE in particular. Some workshops will be targeted towards LEA and state level researchers and analysts while the bulk of the workshops will be directed towards classroom teachers and building level office personnel. The classroom teacher workshops will be outgrowths of the ad hoc training currently being done by the USOE Assessment and Accountability Section's Results Team and our Utah Public Education Cognos Users Group.

Workshops for the use and maintenance of the USRE system will be directed more towards district/school office and technical personnel. The content will be much as described in section 2.8 below but the actual scheduling will vary. While section 2.7 describes initial training to be done in conjunction with system testing, a more continuous schedule must also be developed.

For all types of ongoing training, Utah anticipates working with the Utah Education Network's (UEN) Professional Development group. This group currently develops and delivers technology courses for educators, both classroom based and online.

Goal: Improve Achievement

The overarching goal of the USRE is the improvement of student achievement. Without timely and accurate data both informed instruction interventions as well as reliable measurement and monitoring of student performance are not possible.

With the electronic student record/transcript as the primary component of Utah Student Records Exchange widely used in LEA to LEA, LEA to state education agency (SEA) and LEA to postsecondary institution transfers of a student's record/transcript will occur in a much more timely and accurate manner. This in turn will result in more informed instructional decisions and better student achievement.

Goal: Improve Efficiency, Timeliness and Overall Data Quality

The USOE sees that by supporting LEAs and postsecondary schools in the creation of the USRE system, student record/transcript exchanges within Utah, interstate, and from secondary to postsecondary institutions, the USOE also addresses many educational needs. These needs include improving the quality and timeliness of the education data collected for state funding formulas, U-PASS, No Child Left Behind's (NCLB) adequate yearly progress determinations (AYP), and submissions to Education Data Exchange Network (EDEN). The USRE system will also include SIF zones which can be accessed for the population of student demographic and course taking components of the Warehouse.

The student transcript is the most frequently exchanged education record across states and from LEAs to postsecondary schools. So much depends upon the integrity and timeliness of the student transcript, that it vital to improving the data quality of any SLDS. However, LEAs cannot build an intrastate or interstate process for exchanging electronic student records on their own because there are too many differences in SISs, postsecondary data systems and the State's Warehouse.

An electronic student record/transcript exchange can significantly improve the creation of quality and timely longitudinal records which can be used to document program participation, course taking patterns, mobility, teacher quality, instructional/assessment effectiveness and other important trends. The student record/transcript receives much attention by schools, educators, researchers, IT professionals, students, and parents. However, most of what goes into a student record/transcript must be standardized, authenticated, exchanged securely, and processed in a timely manner to give it true value.

Goal: Assist and Improve Decision Making and Research

The USRE will provide the data necessary to meet reporting requirements; support decision-making at State, district, school, and classroom levels and facilitate research needed to eliminate achievement gaps and improve learning of all students. It will also promote linkages across states to allow sharing of historical data on individual students.

Goal: Assist Postsecondary Applications Admissions and all Student Transfers

Such a service/system will enable Utah postsecondary schools; both public and private, to further automate their application and registration processing of all in-state students; but since the proposed system will be standards based it can allow for the transfer of a student record/transcript for an out-of-state student as well. Besides allowing for automated intrastate transmissions of a student record/transcript, LEAs may also benefit from having a means of forwarding a record/transcript of at least some students to out-of-state LEAs as well.

The electronic student record/transcript can also help schools resolve the disposition of transfer students both in-state and out-of-state. With electronic student record/transcript requests there will be a higher rate of notification and accuracy about transfer students. This will result in higher levels of accuracy for reported exit statuses and dropout counts. Receiving an electronic student record/transcript complete with detailed course taking records and a detailed performance history will also improve student placements and any interventions. This system can also be made available to Utah private schools if they so choose to participate.

Needed Components

In order to succeed such a system will need a number of carefully constructed and deployed

components. All major activities to these ends will require involvement of LEAs, the USOE, and Utah postsecondary schools are outlined below.

- **Defining what content will be included in the student record/transcript definition.** National student record/transcript standards help promote common definitions and content while offering options for customization/extension. Since the School Interoperability Framework (SIF) is extensively used in and designed for the K-12 environment it should serve as at least the content standard of the USRE.
- **Enabling all SISs in the state with interfaces that can interact with a central student transcript brokerage service.** Utah LEAs use ten different SISs compared to dozens in use within some other local control states; but completing this task will still be a challenge and come at significant expense.
- **Develop architecture for a new interface to allow the student record/transcript to be directly useable by Clearinghouse and indirectly by the Warehouse.** Utah currently collects much of the data that one would anticipate to be included in a standard electronic student record/transcript. A new interface including any extract, transform and load processes will need to be developed. When complete this new architecture will allow more frequent data collections, possibly on demand or even on a continual basis. It will also be a more flexible allowing for more expeditious changes and higher quality data.
- **Utah postsecondary schools will need to have their SISs enabled to interface to a student transcript brokerage service.** Utah is in a good position for accomplishing this since there are just two SISs in use within Utah public postsecondary schools.

USRE Steering Committee

The steering committee for the proposed Utah Student record/transcript Exchange (USRE) system will work through the project contractors to disseminate information about the system to contacts in all key stakeholder groups including: the Utah Association of Superintendents, LEA administrations, postsecondary admissions and registration officers, school building level personnel including principals, counselors and teachers and USOE staff. They will be depending on those key contacts to disseminate information throughout the various groups, sometimes all the way to classroom and cubicle levels. See the *Management Plan* below for more details.

Section 2 - Project Design

Utah public education seeks to provide a uniform and integrated Utah Student Record/transcript Exchange (USRE) system definition and transport service to all public schools including postsecondary schools. This section does not describe in detail all of the components of Utah's statewide longitudinal data system. Section 1 and Appendix B, Exhibit 1, *The Current Status of Utah's SLDS* describe the current state of Utah's SLDS. Only the details of those key components involved in the USRE project's design are further described here in Section 2. See Appendix B: Exhibit 4 for a diagram of the overall USRE system.

2.1 –Improving the Data Infrastructure

Determine what is needed from SIF objects, in particular student record and transcript objects, and determine if any extensions are needed. Determine the architectural statuses and needs of LEAs.

Gap Analyses: School Interoperability Framework (SIF)

A contractor selected through a competitive process will work with the USOE and LEAs to perform a gap analyses to determine how well the current SIF v2 standard fulfills the needs of LEA to LEA, LEA to postsecondary, LEA to USOE, and USOE to ED Facts data exchanges. If the SIF standard does not meet all student data exchange needs or does not provide the data necessary to produce various accountability reports (e.g. AYP, U-PASS), then decisions must be made about how to use extensions within the SIF standard.

Utah postsecondary data needs will also be considered, but since postsecondary needs are generally restricted to transcript standards already in use by most postsecondary schools and defined by the Postsecondary Electronic Standards Council (PESC) and Electronic Data Interchange/Standards for Postsecondary Education Electronic Data Exchange (EDI/Speede), this will be a much smaller effort. One content area where special consideration may need to be given is concurrent enrollment data. Utah postsecondary schools currently report such data back to USOE after the end of a school year. If some or all of that data could be exchanged between LEA, postsecondary and USOE via standard transcript rather than through a separate system, new efficiencies and accuracies in the concurrent enrollment process may be possible.

Data Transport

The SIF standard is made up of content and data transport specifications. As described above the first focus of the gap analysis will be on data content. Subsequent sections of this project design will address the transport architecture, both hardware and software, used for moving a student record/transcript. The transport architecture to be used within all LEAs will be the SIF transport standard known as zone integration servers/services or ZIS.

However, some intermediate USRE transport components for LEA to LEA and LEA to postsecondary student record/transcript exchanges may not be entirely SIF/ZIS standards based. These can rely at least in part on other technologies such as web services, PESC/XML or EDI/Speede to route data. Regardless, the content of the data must always include the required LEA, USOE and postsecondary student elements. When discussing the transport components and services for LEA to LEA or LEA to postsecondary student transcript exchanges in this application they will be referred to as the "brokerage service". "Routing services" could also apply but "routing" is used in too many other contexts within information technology; and such services often do more than just orchestrate the movement of data from point A to point B. They often do considerable format translations such as from SIF to PESC or EDI/Speede.

For the LEA to USOE Clearinghouse vertical integration part of USRE the SIF/ZIS architecture will be relied on. Regardless of the brokerage service ultimately used for LEA to LEA or LEA to postsecondary transcript exchanges each LEA's SIS will need to have a SIF agent that is capable of supporting all SIF objects needed within the USRE system. Even for the student transcript going between LEAs or to postsecondary schools, the SIF/ZIS architecture must coordinate the data exchange between the LEA and the brokerage service. With many commercial SISs already providing SIF agents and ZIS to some degree, student record/transcript exchanges can be greatly facilitated with the use of already existing software.

SIF Agents

A primary concept in understanding the proposed USRE and the SIF standard is the concept of an "agent." An agent is simply a go-between that facilitates information transfer between disparate

systems. According to the SIF standard, the disparate information systems do not communicate directly with one another but through their agents. For example, an SIS communicates with its agent which transforms student data into standard data objects and then transmits those standard objects through the ZIS to the agent of the receiving system such as a transcript brokerage service.

In the USRE system the receiving agent can also belong to the USOE Clearinghouse. SIF agents can also work in a horizontal manner such as when the sending system is a SIS and the receiving system at the LEA level is a school foods or library system. Such architecture also makes it possible for a central organization like the USOE to pull student records directly from an LEA SIS assuming the appropriate security and access agreements has been established. All such exchanges can be configured to happen automatically for one student at a time or for groups of students.

SIF specification is a high-level specification; one is free to implement it using different hardware, operating systems, and database management systems as desired. This feature can lower the cost of implementation because off-the-shelf components from a number of vendors can be used to satisfy each requirement.

The chosen implementation plan must also comply with FERPA, and be cost effective for student record/transcript transmission to and from Utah LEA'S.

SIF Advisory Committee (see Appendix B: Exhibit 5 for its relationship to other project personnel)

These gap analysis activities will span many months and begin with the definition of a working advisory committee made up of the voluntary and non-compensated participant roles listed below.

- Contractor project manager and 2 analysts
- 2 USOE IT Analysts (SIS & Warehouse/Clearinghouse)
- 5 IT specialists and 5 student data specialists (drawn from districts with various SISs)
 - 1 pair from the SIS2000 user's group (SIS2000 is the USOE supported SIS)
 - 1 pair from the Powerschool user's group (most popular commercial SIS in Utah)
 - 1 pair from a large district using neither SIS2000 nor Powerschool
 - 1 pair from a medium district using neither SIS2000 nor Powerschool
 - 1 pair from a small district using neither SIS2000 nor Powerschool

The advisory committee will initially meet to understand what is included in SIF and potential brokerage service technologies. At the same time the committee members will construct a list of student data elements needed for the USRE. The contractor will look at the details of the USRE requirements for the USOE Clearinghouse, postsecondary and ED Facts compared to the SIF content specification to determine what differences need to be resolved. In follow-up meetings the contractor will present issues or concerns about how SIF matches up with the USRE requirements.

After this committee has been identified it will conduct four regional focus group meetings to be attended by all LEAs (districts and charters) within the respective region. The purpose of these meetings will be to present the proposed content of the SIF objects needed to be included in the USRE and a general overview of the entire USRE system. If participants indicate the need for additional data elements those will be noted along with questions or disagreements with already proposed data elements. The committee members conducting the presentations will make detailed

notes of these proposals and suggestions to be used for reviews and status reports in follow-up design meetings.

SIS Questionnaire

These meetings will also be a source of suggestions for interface design. The information gathered will include the status of the LEA's SISs in regards to supporting the SIF objects needed by the USRE system. Each LEA will need to supply information about the vendor of their SIS and what SIF capabilities are available. Both the production of the electronic student record/transcript from the LEA's SISs and the importing of student record/transcript into the LEA's SIS will be considered. These LEA technical representatives will be alerted before hand via a formal questionnaire about the information that is needed. Included in the questionnaire will be: SIS vendor, size of vendor's customer base, financial report, length of contract, database management system, hosting environment, programming language, user interface, SIF objects supported, support agreement.

With information gathered from the regional meetings and as summarized by the advisory committee, the contractor will proceed to assemble a report of all the LEAs describing their readiness for participation in the USRE project. For each LEA a sub-plan must be constructed for how their SIS and supporting processes and practices need to be altered to accommodate the USRE project.

If any SIS is found not to be capable of supplying any fields for population of the required SIF objects, the LEA will be allowed until the beginning of the next school year or at least 12 months to modify data collection processes and systems to include those fields. As in all cases project funding will be used to help LEAs implement these changes.

2.2 – LEA to LEA

Assuming the data elements and SIF objects needed for the USRE have been identified and the readiness of the LEA's SISs has been assured, the next process to be preformed is the development/installation of the technology infrastructure that allows for the smooth flow of these data between LEAs.

Besides a SIF agent on the sending and receiving end of a data transmission of a student record/transcript there must also be the central brokerage service that coordinates the flow of a student record/transcript form point A to point B. These points need to be well established and verifiable sites that are capable of sending and receiving the desired data.

Transcript Brokerage Service

USRE will be relying entirely on SIF/ZIS architecture for LEA to USOE Clearinghouse records/transcript transport. However, the USRE project must identify a brokerage service provider that can exchange SIF student records/transcripts between it and Utah LEAs and exchange either PESC/XML or EDI/Speede student records/records between it and postsecondary schools. This service must also be able to translate SIF objects to PESC/XML or EDI/Speede objects. Regardless of where this brokerage service is geographically located the USRE project requires that an unlimited yearly transaction subscription for in-state exchanges be negotiated. If this service is able to be installed within Utah it will become part of the Utah Education Network (UEN). The UEN is a broadband, publicly funded network that connects all the Utah public

schools including K12, postsecondary and the Utah State Office of Education. The best location to install such brokerage service technology to support the transport of electronic student transcripts within Utah will be at the University of Utah which is UEN's technical center and on the Internet backbone. However, Utah will contract with the brokerage service provider for support and maintenance functions.

When a student transfers from out-of-state into a Utah LEA or to an out-of-state LEA, the student's transcript transport may need to be accomplished in conjunction with an external commercial, pay-per-transaction brokerage service. Any additional fee per-transaction will be paid by the receiving/requesting school.

Data Volume

The brokerage service will need to be capable of supporting the estimated volume of student records/transcripts that will typically flow between LEAs and from LEAs to postsecondary schools. It will be incumbent on the Utah steering committee, the contractor and its project manager to insure the acquired server resources and bandwidth are adequate for the projected load.

2.3 - LEA to USOE Warehouse

Once a robust transcript brokerage service to support the required SIF objects has been identified the project has completed a major portion of the work to be done for the specification of how the LEAs will transport transcripts, between each other, and postsecondary schools. By specifying that all LEAs will support SIF agents and ZIS they will also be able to flexibly submit a student record/transcript to the USOE data Warehouse.

Collection Timeliness

By having SIF/ZIS integrated into USOE operations the Clearinghouse and then the Warehouse can receive a record/transcript of any student in the state at any time. Since Utah is doing major collections in October, December and July, the SIF zone integration servers (ZIS) will be most heavily taxed at those times. However, the USOE may decide to collect student record/transcript of all students or a subset of the entire student population, on-demand, at other times throughout the year. If LEAs maintain their student data in a timely manner the USRE system can make all such data available at any time during the year.

The integrated student record/transcript system also makes possible an environment in which student records/transcripts can be transmitted through the SIF/ZIS zones to the USOE on a continuous basis. Every time any data element of interest to the state is changed in the SIS record of a student an event can be triggered that will automatically send an update of that student's student record/transcript to the USOE data Warehouse. There must be built-in checks for validity, integrity and completeness of the data throughout the process.

USOE SIF Agent

One significant task that must be completed is the design and later construction of the SIF agent for the USOE Clearinghouse. This agent must be able to process the SIF student record/transcript objects coming from to it from LEAs' agents via the SIF/ZIS zones of the USRE system. As a student record/transcript arrives either at predefined times of the year, on-demand throughout the year, or continuously, the data values in each student record/transcript must be validated and the student record/transcript either added to the data Clearinghouse.

Having such an agent not only allows the Warehouse to receive a student record/transcript but also provides the opportunity to send SIF student record/transcript or other education records back to the LEAs or any other qualified recipient. Currently, such data returns are being completed through the secure FTP downloads of various relational and flat data files. These are continuing to serve Utah well and LEAs have built processing software for them. However at some time Utah may consider sending student data (often assessment results) back to the LEAs or other destinations via the USRE system.

Exchange Rules

There are some other technical steps that must be completed for either periodic, on demand or continuous collections/transmission of student records/transcripts through the ZIS zone(s) to the USOE Clearinghouse. First definitions of periodic, on-demand and continuous collections must be made. The periodic definitions already exist but rules must be made that define what occurs during all of these exchanges. In general, when an LEA has all its student data in order, the LEA will initiate an event in its SIS, and the SIF agent will contact the SIF agent at the USOE to alert it that the LEA's student records/transcripts are being queued for transmission through the ZIS. These actions will then cause the Clearinghouse SIF agent to begin receiving the student records/transcripts as they arrive and, after validation, add them to the Clearinghouse if they are new students or update existing students' records.

2.4 - LEA to Postsecondary schools

Postsecondary Agents/Interfaces

Just as the USOE needs an SIF agent for receiving student records/transcripts from LEAs, postsecondary schools within Utah must also have the capacity to interact with brokerage service. Such capacity will allow the student transcript to be imported into the postsecondary school's SIS or at least into an admissions system. Just as there are multiple SISs in Utah's LEAs where the student record/transcript is produced, so there are multiple SISs on the postsecondary level where the student record/transcript must be consumed or brought into the postsecondary institution.

Similar to the survey work done with LEAs to determine data requirements and interface issues, a group lead by the Utah State Board of Regents and made up primarily of postsecondary registrars and admissions staff will need to survey the various postsecondary SISs and admissions systems used throughout the state. Since there are only fourteen public postsecondary/higher education institutions in Utah and most use the same SIS (Banner) this is anticipated to be a straight-forward gap analysis.

Each higher education institution will also supply information for the discussion of interface issues. The information gathered will concern the status of the postsecondary institution's SIS in regards to supporting the student object data produced by the USRE system. Each institution will need to supply information about the vendor of their SIS and what capabilities are available for importing transcripts from the USRE brokerage service. EDI/Speede and PESC transcript standards are widely used in postsecondary education.

Role of PESC and EDI/Speede

If any of the postsecondary SISs used by Utah postsecondary schools are not capable of importing PESC/XML or EDI/Speede student transcripts from the USRE brokerage service those

postsecondary schools will need to have modifications made to their SISs in order to participate in the USRE.

If a postsecondary institution can not electronically import either PESC/XML, EDI/Speede or any other format produced by the USRE brokerage, it will be acceptable to have the USRE brokerage service forward a SIF based transcript to another transcript brokerage service that will be able to translate it into an electronic transcript that can be forwarded and imported into postsecondary institutions.

Utah public school students are much more likely to apply to in-state postsecondary schools than to out-of-state ones. In those cases where a student applies to and possibly registers at an out-of-state postsecondary school, the student's record/transcript may need to be submitted through a brokerage service outside the USRE system. Any costs of doing so will need to be borne by the student.

Once the USRE architecture has been defined for public postsecondary schools, private postsecondary schools within Utah will also be invited to participate. While no special accommodations will be made for them, Utah anticipates such participation to occur given widespread support of PESC/XML and EDI/Speede standards.

2.5 – Submission of ED Facts data via SIF Objects

In past EDEN/ED Facts meetings and conferences, USOE staff has expressed interest in submitting student level data to ED Facts rather than through the complex set of files containing hundreds of aggregate and computed/derived counts and statistics. Other states have expressed similar interest and the idea appears to getting at least some attention by the NCES/Ed Facts.

Student level data would greatly reduce reporting burdens on the states and would result in more accurate and timely national data. NCES would be able to apply common business rules and algorithms to aggregate and compute state and national information directly from lower level de-identified student data. The problem with this approach is settling on a complete, robust standard for such large collections. With the advent of SIF 2.0 that standard is now available.

The USOE will approach NCES' EDEN/ED Facts staff about entering into a pilot or proof-of-concept program in which the USOE will submit all data that's possible via SIF 2.0 objects to ED Facts and bypassing EDEN. Grant funds will be used to pay for development costs at the USOE as well as planning and design activities with the NCES/ED Facts.

The architecture for producing the necessary SIF objects to develop a prototype/proof-of-concept EDEN submission in conjunction with NCES will be SIF/ZIS based. All data currently needed to produce EDEN files are in the USOE Data Warehouse. Analysis and work will need to be done to extract all data that are currently provided to EDEN as fixed format files to be extracted and sent as XML based SIF objects. There may be EDEN data elements that are not part of any SIF object. Other data are not currently available in the Warehouse. These include: some LEA directory data, some educator data, college preparedness student data and disciplinary incidents. There is a possibility that new or expanded SIF objects will need to be defined or the ED Facts submission process may need to be a combination of SIF and existing EDEN files.

If this proof-of-concept is successful Utah will share their project plan and what they've learned with other states. Regardless Utah proposes to share everything they've learned from this USRE project with other states. Utah will be happy to present during any national forum or conference.

2.6– Implementation of USRE

Note: Work on many of these tasks can be carried out in parallel. Until one gets to the integration testing and monitoring phases, strict sequences of tasks are not required. The sequencing of the projects tasks will be described more fully in the project schedule section.

LEAs

SIS's at each LEA will fall into one of four general categories. These are listed below along with a description of how each one will need to be treated. In all cases it is assumed that all K-12 Utah SISs contain the data elements/fields needed to populate the necessary portions of the required SIF objects. As noted in section 2.1, if any SIS is found not to be capable of supplying any fields for population of the needed SIF objects, the LEA will have until the beginning of the next school year or at least 12 months to modify data collection processes and systems to included those elements. The tasks that need to be completed to install or modify SIF agents at the LEA will be the most time consuming parts of the project.

When considering the SIF agents necessary for all LEAs to participate particular notice must be given to the validation functions needed in the SIF agents. Having a SIF agent for the specified SIF objects necessary for USRE involves more than just constructing the necessary objects according to the XML schema structure and data types, the schema also has some build-in validation rules; valid values for race is an example. Utah also has some student data integrity requirements that must also be considered. For example, English language learners at a certain level of proficiency must also have an indicated instruction type.

- 1.** A SIF agent and ZIS are already installed with the SIS and ready for production of all the required SIF objects and data elements needed for USRE. In these cases the least amount of work will need to be done at the LEA. Still some modifications may need to be made to the existing SIF agent. New event handlers in the SIF agent may need to be programmed to allow for expanded transactions and objects triggered by events generated in the SIS.
- 2.** A SIF agent and ZIS are installed for the SIS but only partially ready for production of all the required SIF objects needed for the USRE system. For these LEAs the SIF agent and SIS need to be modified to accommodate any new USRE SIF objects and SIS generated events. The agent may also need to be programmed to be able to send and receive to and from the ZIS any modified or added SIF objects and elements incomplete or missing from existing agents.
- 3.** No SIF agent is installed with the SIS but the data elements are available for the production of all the required SIF objects needed for the USRE system. This case will involve the much work and will require that a SIF agent be developed and/or installed for the SIS in question. Both must be able to accommodate all required SIF objects and data elements. Then the agent and SIS will need to be able to perform all the functions and event handling as described in category 1 and 2 above. This many require significant work on the SIS. In addition, for the transport of SIF objects, a ZIS zone will also need to be installed at the LEA.

4. There is no SIF agent and the SIS does not contain all the required data elements. In this case all the tasks described in 3 need completion along with the addition of more data elements to the SIS. This will take at least a year for the completion at any of these LEAs.

USOE Clearinghouse

Currently student data in the USOE Warehouse, except for assessment scores which come directly from test scoring systems, are transported to the Warehouse through an extract, transform and load (ETL) process known as the USOE Clearinghouse. This Clearinghouse is made of a hierarchical and multiple record text file specification and a relational data base used as a staging area and in some cases (e.g. special education) as a source of actual reports. The LEA's SISs is required to be able to produce the specified text file. The relational database is loaded with data from the text file submitted by the LEAs three to four times as year. All data in these files are checked for completeness, validity and row integrity at the LEA before they are submitted and again at the USOE before they are loaded into the relational database. After this database is populated by submissions from each LEA and validated the data are imported into the USOE Data Warehouse.

What will change with the advent of USRE is that the structured text file will be replaced with a SIF agent to handle the production of SIF objects being transported to the USOE through SIF/ZIS zones. Modifications will need to be made to the Clearinghouse relational database and its load functions to capture those objects. After those objects have been captured and validated for a given cycle then the student records will be imported into the existing data Warehouse. Capability must also exist for statewide batch, on-demand and/or continuous submission of SIF objects from the LEAs to the USOE if that proves to be necessary to increase the timeliness of the data in the Warehouse. Therefore, the major tasks to be completed for the integration of the USRE with the USOE Warehouse are:

- As needed, modify the current Clearinghouse database so that it is compatible with the SIF objects being submitted. This also requires a ZIS and SIF zone for receiving of the SIF objects from the LEAs.
- Also required is the design, creation and installation of a SIF agent to process the arrival of the SIF objects from the LEAs via the SIF zone.
- Build software that can, on demand, update the permanent student records/rows in the USOE Warehouse with data from the revised Clearinghouse database. This should have two modes of operation, on-demand and continuous.

Student transcript Brokerage Service

The actual implementation of the brokerage service that will allow a student transcript to be transmitted between LEAs and from LEAs to postsecondary schools, will be performed by the vendor chosen by the contractor and steering committee. Although the actual service must meet the specified requirements, most notably being able to receive the prescribed SIF objects and providing PESC and EDI/Speede transcripts, the actual architecture will be dependent on the supplying vendor.

Postsecondary Schools

The extent of postsecondary schools' contribution to and involvement in the project will be determined largely by each schools' willingness to ensure their student information systems are capable of importing standard transcripts, PESC/XML or EDI/Speede. Since most public postsecondary schools in Utah use the same Banner SIS software which currently supports these

standards, it is anticipated that the labor savings, data accuracy and time benefits will be so attractive that these postsecondary schools will work together to make any other modifications to systems or procedures that might be necessary to use the USRE.

All brokerage services proposed to fulfill the LEA to postsecondary transcript requirements of the USRE must include functions that will convert a SIF based transcript to a PESC/XLM or EDI/Speede transcript. This will negate the need for any modifications to most if not all postsecondary systems. This assumes they can already be able to import PESC/XML or EDI/Speede transcripts.

2.7 – System Testing

Although there will be extensive component or unit testing throughout the implementation processes, careful integration testing will have to be conducted over a period of time. Training of personnel at all levels will need to be addressed. While it is not practical to outline all such testing and training in great detail it is necessary to describe goals, general areas of work and the sequencing of tasks. There needs to be awareness of overlap between some testing and training activities. Both LEA and USOE staffs must be involved with integration testing. The overriding objectives are to avoid any user frustration, confusion or malfunctioning software once the system goes into production. Good testing and training are both required to meet this goal.

Integration Testing

The primary goal of the system integration testing is to provide an opportunity for business analysts to test processes end-to-end. This will help ensure that all issues are documented, resolved properly, and that the system is ready for user acceptance testing.

Testing is done to assure quality. The specific goals of this testing effort are to define testing requirements. Defining the test requirements up-front ensures that all have agreed on what it means to have a stable, tested system that is ready for production.

Assumptions and Goals

- Testing will occur in a controlled environment.
- Since software development and implementation will be staggered, LEAs will begin testing whenever they are ready and resources are available.
- Testing cycles will be case, script and scenario driven for systematic testing control.
- LEA, USOE and postsecondary users will be available for applicable testing.
- These users will and LEA technical staff will assist in subsequent training.
- Test LEA submission of records/transcripts including: SIS agent/ZIS integration, LEA to the USOE and postsecondary, working of SIF zone(s); and update of the USOE Warehouse.
- Users in LEAs and postsecondary IT staffs are recruited to help setup test cases.
- Test transcript movement to all participating postsecondary institution in the state of Utah.
- Confirm that performance under load, and ensure security processes.
- Validate that all functions work in each cycle; document and correct issues.

2.8 - Training

LEA IT Staff

Within the LEAs, the USOE, and postsecondary schools it is vital that IT staff be provided the necessary training. Besides the necessity of their existing business knowledge for the proper functioning of the USRE, these persons will invariably be called on to provide front-line assistance to staff members in other roles.

All of these staffs need to be schooled in the basics of XML and SIF technologies. They will also need exposure to the fundamentals of the SIF objects being employed in this project. Of particular interest are the SIF agents that work in conjunction with the SISs.

LEA Student Records Personnel

If the testing process and the project in general are to succeed all must do a good job of training district and building level staff. The districts and charter schools will have no choice but to submit their student level data to the USOE through USRE. However, there will be nothing preventing them and others from reverting to old practices of sending and receiving transcripts to and from other LEAs and postsecondary schools if the system does not perform or training is inadequate.

The assumption is that the new electronic system will be so attractive and time saving that it will sell itself. However, based on past experience, unless there is buy-in from these individuals the system will not be fully utilized. Buy-in actually starts with good training about the system's functions and its benefits. While some of this training must begin early in the project it is especially critical that there is a thorough understanding of what the system does and how it is used by the time it goes into production.

School Principals

Everything that applies to district level personnel also applies to school building principals. While they may be less directly involved, principals will need to understand the benefits of the system in order to help sell it to their building staffs. One very important selling point, besides convenience, will be the benefit of higher quality data.

Counselors and Building Level Clerical Staff

Sufficient resources and time must also be devoted to this group of users. While the transmission of a student record/transcript from the LEA to the state will be primarily the responsibility of district level staff, one must assume that in most cases a student record/transcript going to postsecondary schools will be originating at the building level. As students transfer from school to school these are also the individuals who will be either asking for or providing records/transcripts. Not only must the workings of the system be presented thoroughly and clearly, but ample instructions must be provided for trouble shooting and where to get support.

USOE IT Staff

This will be some of the most intensive training because the contractor will be leaving the USOE with new software which they will have to maintain afterwards. This excludes any LEA software except for the state provided SIS2000 system and any Utah maintainable brokerage service software. General training on SIF will be conducted for those staff members (4-5) closely involved in the project. These individuals will be on staff before the project begins and may be funded

outside of the actual project budget. They will attend the SIF University sponsored by the SIF Association or SIFA.

Other USOE Staff

Most notably these are staff from the Assessment and Accountability, Curriculum, and School Finance and Statistics sections. These staff members must become familiar with the general architecture and functioning of the USRE system but will not be required to obtain in-depth technical understanding. For the most part they will continue to interact with the data Clearinghouse and Warehouse as before.

Postsecondary/Higher Education IT Staff

Depending on how the student transcript technology is installed at the postsecondary level, IT staff will be more or less involved and in need of training. Those that already have an electronic transcript interface should not experience as much involvement as those who do not. Assuming the transcript brokerage service can perform translations of one transcript format to another, from SIF to PESC/XML or EDI/Speede, and the postsecondary school can import PESC/XML or EDI/Speede, then a relatively minor number of modifications and training will be necessary.

If such modifications are necessary then contractors for at least some systems (applications, registration, SIS) will do all the modifications. The postsecondary IT staff will only need to know what is necessary to use and support the contractor developed software that will allow for the electronic import of electronic a student record/transcript into the postsecondary SIS. Such costs will be borne by the postsecondary institution and not the USRE project which will focus its resources on analysis and coordination.

Postsecondary/Higher Education Admissions/Registrar's Staff

The main burden on the admissions/registrar's administration is to communicate the need for the change to electronic high school student transcripts. Since the clerical staff will no longer be transcribing or photocopying print records, they will have to understand and know how to interact with and control the flow and management of student transcripts within an electronic interface. The assumption is they do not need any form of paper transcripts.

Board of Regents IT Staff

The Utah State Board of Regents, and its IT staff in particular, will benefit from more accurate data with electronic student transcripts coming into Utah postsecondary schools, there should be little if no change to the interfaces that already exist between those postsecondary schools and the State Board of Regents. However, the State Board of Regents will benefit from higher quality K12 data for all of its records of higher education data on students who attended Utah's K12 schools.

Trainers

Individuals involved in the modification of LEA SISs and postsecondary processes as well as the testing of those systems will be recruited to lead the training of others. Typically, these individuals will actually be part of the LEA and postsecondary IT staffs and will also be assisting in the training of other IT staff who were not as involved with the design and testing of the actual systems. In all IT training sessions contractors will be present to lend their guidance and expertise.

Locations

Since there will be differences in high school SISs and postsecondary school interfaces to the

USRE depending on the SIS system in use, those with the same SISs will participate in the same training sessions. When at all possible training will take place in district and school media labs. This will allow for hands-on training as well as minimizing costs. All training will be hands-on with different content and class lengths depending on the group being trained.

If there are so many institutions using the same SIS that the training group becomes too large (more than 30), then multiple sites and/or sessions will be considered. Multiple sites will also be needed for institutions in more remote locations due to travel distances. When possible, different groups of trainees will train at the same sites, but not necessarily on the same days because of capacity and trainer limitations.

Timing

Most end-user training will occur following all development, testing and installation is completed. Training will be delayed for as long as possible abiding to a just-in-time strategy. LEA IT staff will receive their training first because they will, in turn, be asked to help lead the training scheduled later for their LEA and other LEAs using the same SIS.

If not all LEAs and postsecondary schools are ready to go into production at approximately the same time (within a few months span), two or more complete series of training sessions will need to be conducted. This will add cost but will also benefit from others having already had experience with the system.

Groups

Different groups may receive training on different days depending on availability of trainers and sites. They will train for different lengths of time owing to the variability of content.

- Regional training for LEA IT staff will need to be conducted by SIS type (e.g. SIS2000, Powerschool) with all IT staff using the same SIS attending at least one day sessions. Contractors, USOE IT and LEA staff already involved in testing will lead these initial technical training sessions. Since IT staffs along with contractors will be leading the training for district and school level student records personnel in a train-the-trainer strategy this training will need to precede the training of those other groups.
- When building level student records staff, either at the district office or the high school receive training, the logistics of getting everyone trained becomes more problematic. In the case of training building level staff one day sessions may be dedicated to one district. In larger districts where there may be eight or more high schools as well as dozens of middle and elementary schools all using the same SIS. Remember that elementary and middle school records will also need to be exchanges.

For smaller districts the strategy will be to group the remaining schools and district offices into groups of 30-40 persons so long as they are all using the same SIS. If possible, an attempt will be made to keep the number of separate training sessions to approximately 20. However, in more sparsely populated areas of the state it may be necessary to schedule smaller groups of offices and schools. In all cases charter schools will be included, along with any of their support service providers.

- Since the number of postsecondary schools is more limited, only 14 with only two SISs, there will be only three training sessions, again lead by IT staff. One training session will be held for the one non-Banner institution, the University of Utah; and two other sessions will be held for the others (Banner users) with one session occurring in Northern Utah and the other in Southern Utah.

2.9 – Governance

Governance Structure

In addition to existing Utah SLDS governing bodies described in Appendix B: Exhibit 1, a steering committee made up of IT and student records representatives from LEAs, the USOE, the Utah State Board of Regents and Utah postsecondary schools a USRE steering committee will be established. As the project progresses, this group will be involved in the RFP as well as providing overall governance functions for the entire initiative. The operation of this committee including communication activities is described in Section 5, *Management Plan*.

Facilitation of Rigorous Analyses

Since the scope of the USRE system is mostly data collection/transport focused, the overall Utah longitudinal system is depending on existing structures for analysis services.

2.10 - Capacity to Sustain USRE

Long-term Sustaining Plan

For sustaining the USRE system after the first three implementation years Utah will be depending on funding from the Utah State Board of Education and the Utah State Legislature. Both the Board and the Legislature have traditionally been very supportive of funding for more timely and accurate data along with improving longitudinal student data systems. Other funding is specifically targeted at decision support and sharing of student records. It is anticipated that these funds will become ongoing and be a valuable resource to sustain the USRE system over time.

Such state funding of approximately \$475,000 per year should be adequate for USRE technology support including: software license and subscription fees, software and hardware support and maintenance costs as well as limited training. These funds will begin after the third year of the grant project. This amount can be broken down to approximately \$75,000 support and maintenance on the transcript brokerage service; \$100,000 per year for SIF/ZIS licensing support and maintenance; and \$200,000 per year for custom SIF agent support and maintenance. Training, both initial and ongoing, are also very important items which will also need to rely on state funding over time. The same will be true of eventual server replacements. An amount of \$100,000 per year is estimated for these activities.

As has been the case with existing components of the Utah student longitudinal data system, recruitment for support personnel will be decentralized. The USOE will provide leadership and recruitment assistance but personnel hired on the LEA and postsecondary levels will be the responsibility of those schools.

2.11 – Evaluation of the USRE Project

Evaluation

The USRE project, under supervision of the USRE-SC, will contract for evaluation services. The RFP will stipulate that bidders need to be independent research and evaluation consulting firms. They must provide evaluations, research, and design support with experience in IT strategic and business planning, project management, quality assurance, system assessment, data management and systems development for human services or educational initiatives. This contractor must be independent of the primary USRE project contractor.

Formative Evaluation

In the first and second years this contractor will conduct a formative evaluation of the USRE system project and will furnish the USRE-SC periodic reports addressing the extent to which the system has been developed and implemented in accordance with the RFP and design.

The contractor will work with the USRE-SC to identify evaluation criteria for determining if development and implementation objectives have been met while maintaining data and project quality. This evaluation will examine the system's objectives/goals from the perspective of various users to determine if the system:

- Makes the exchange of data easier, faster, and more reliable to the degrees expected.
- Is reliable
- Allows various types of users to participate in training at the expected levels
- Makes good post-training support available
- Is widely used and not by-passed
- Provides higher quality data

Data for most of these questions will be collected through individual and group interviews. As the implementation progresses the levels of interviewing will go further down into the building level.

In regards to reliability, speed, and data quality measures like system availability, latency of exchange, and error rates, measurements will be made to compare current system status to benchmarks measured before the USRE was implemented. Additionally such analytic data will also be compared to benchmarks established for the system during the analysis and design phases of the project.

Summative Evaluation

The same contractor will also need to perform the summative evaluation. This evaluation will generally be developed between the second and third years of the project and implemented during the third. It will measure the effectiveness of the system in improving the overall or strategic quality and timeliness of the data, especially for student and school assessment and performance as well as accountability and analysis/research reports. The larger goal that must be supported is the efficient improvement student achievement.

Finally, the extent of transcript sharing between Utah LEAs, Utah LEAs and postsecondary schools (including out-of-state) and between Utah LEAs and LEAs in other states will be assessed.

Any methods, processes or protocols used for the summative evaluation will be chosen based on the evaluation design. Such methods could, among others, include: pools/surveys, forums, and actual metrics of speed, accuracy and reliability as describe in some of the formative evaluation design. An additional factor to consider will be what impact the USRE system has on EDEN an other national level data initiatives.

Section 3 – Personnel Descriptions

Resumes for the following key staff already involved with USRE steering committee follow the project narrative. This list identifies main organizational affiliations and gives a brief description of the individuals' areas of contribution.

- Davis Arcilesi (USOE, IT Analyst) Chief architect and developer of USOE EDEN technology.
- Dale Bills (Nebo City SD, IT Director) State leader in education technology including innovative decision support. Past chairperson of Technology Coordinator Council (TCC).
- Jerry Bracken (AACRAO and PESC Board Member) Broad understanding and involvement in postsecondary transcripts; will focus on transcript brokerage and postsecondary integration.
- John Brandt (USOE Computer Services IT Director) Leads development of Utah SLDS and EIMAC SLDS Task Force member; will chair the USRE Steering Committee.
- Jared Ferguson (Provo SD, Principal) LEA leader in school level management technology.
- Mike Jensen (Iron SD, Technology Director) One of Utah's most innovative districts.
- Clyde Mason (Jordan School District, Assessment and Accountability Director) Prominent member of Utah Assessment Directors Committees; School District of 80,000 students.
- Brian McGill - (Utah System of Higher Education, School, Student and Outreach Services)
- Grady McNett (USOE, Lead IT Analyst) Team leader of SIS2000 technical team; has extensive understanding of numerous development environments including ASP and C# .Net.
- Jeanette Ormond (Southern Utah University, Registrar's Office) Prominent Utah higher education registrations leader and policy maker.
- Judy Park (USOE, Associate Superintendent of Data, Assessment and Accountability)
- Randy Raphael (USOE, School Finance and Statistics Education Specialist/Statistician) Instrumental in establishment of the USOE Data Warehouse and Clearinghouse.
- Gary Smith (Salt Lake City SD, IT Director) Innovative local district technologist. Extensive understanding of SISs both technical and functional.
- Tom Suchse (USOE Counseling Specialist) Has extensive experience working with school level counselors.
- Suzanne Wayment - (University of Utah Registrar's Office, Project Manager) Has substantial experience and technical knowledge of higher education application and registration processes.
- Jerry Winkler (USOE, IT Manager) Chief architect of USOE the USOE Warehouse including reporting and integration of student, teacher, school and assessment data.

Section 4 – Resources

As outlined in section 1.1 Utah already has a fairly mature SLDS but adding a fully integrated student record/transcript exchange system will make it a much smoother and precise process, if not a model for other states. Utah already supports its existing SLDS with funding for numerous USOE staff, as well as hardware and software at the state and LEAs levels.

Utah's LEAs and USOE have always been progressive in their approach to both administrative and classroom technology. The commitment to technology at the district and school level has been high but funding has not always been equal to the enthusiasm. Even with highly dedicated IT staff at our LEAs and at the USOE there are only so many system changes and new initiatives the LEAs and USOE can address in a reasonable amount of time.

However, if IES funding were used to integrate the USRE into local SISs, postsecondary schools and the USOE, additional support is anticipated. The 2007 legislature appropriated significant funding for building education technology capacity at the classroom level. It is anticipated that these funds will become ongoing and be a valuable resource to sustain the USRE system over time. Such ongoing funding will provide for software maintenance, licensing, hardware upgrades and training at all levels of system use.

As mentioned before in this application, Utah already has a number of very active technical groups, teams and committees involved with student data. They include:

- UEN (Utah Education Network)
- TCC (Technology Coordinator Council)
- USOE Computer Services SIS2000 Users Group
- USOE Public Education Cognos Users Group
- USOE Data Clearinghouse & Warehouse Group
- USOE Semi-annual Data Conference

All of these groups have high levels of LEA participation. In many cases such as the TCC, the SIS2000 Users Group, and the Cognos Users Group most of the leadership is provided by LEA staff members, not the USOE.

It appears that the 2007 Utah Legislature will provide additional funding to help with existing SLDS initiatives. However, enabling all LEAs to fully participate in USRE overtime may require additional funding that, at this time, seems only to be available from the IES/NCES SLDS grant program.

In addition to IES/NCES Grant funding and new legislative appropriations, Utah public education agencies will continue to make significant commitments of staff time and infrastructure resources from their regular budgets towards Utah's SLDS and the USRE. As discussed elsewhere in this application, statewide longitudinal data system projects have been under way for over five years with many of the key components including: vertical integration of local and state data collections and the Clearinghouse/Warehouse already in operation.

Because existing SLDS components are already included in the ongoing operation of the state's educational processes, it is often difficult to fully quantify the value of all non-IES grant-funded resources that will be used to carry out USRE work. For example, it would be difficult to value current network infrastructure and facilities that are already providing support of SLDS functions. Therefore Utah seeks to leverage these existing resources to ensure the success of an IES/NCES funded USRE project in a much broader way than previously understood by Utah public education. The Utah public education technology infrastructure is already doing much to support Utah's SLDS, but IES/NCES funding will enable Utah to take the next big steps.

Section 5 - Management plan

5.1 Project Management

As described in the section 2.9 - Governance a new steering committee has been formed with members from the USOE, LEAs, USBR, and postsecondary schools. This steering committee team will report directly to the Utah State Board of Education/Utah State Office of Education and the Utah State Board of Regents/Utah System of Higher Education. At the completion of the initial project, after all LEAs are able to exchange electronic student records/transcripts with each other and submit student records/transcripts to the USOE and Utah postsecondary schools, the continual oversight of the USRE system will be folded into the Technology Coordinator Council (TCC). Within TCC the USRE Steering Committee will become a fully functioning sub-committee which will meet at least quarterly.

Technical staff will be added to USOE to maintain/coordinate technical maintenance and support through contracts with software vendors whose products contribute to the USRE infrastructure.

The first task the USRE steering committee (USRE-SC) will need to address is the writing of the RFP for a general contractor that will fulfill the requirements of the USRE project. Once the RFP has been awarded, the USRE-SC will delegate all technical analysis, design, development and implementation tasks over to this contractor and any needed second-level sub-contractors.

However, the USRE-SC will maintain a very active role in the project. It will meet at least monthly and more frequently if necessary with the contractor and participating agencies such as LEAs, USOE and postsecondary schools. These meetings will be able to be arranged quickly since all of these agencies have representatives on the USRE-SC who will have access to key personnel in each agency. To improve the efficiency of these processes the USRE-SC will be divided into two sub-committees. One will oversee the SIS-FIS-SIF/ZIS and the USOE Clearinghouse/Warehouse projects while the other will oversee the transcript brokerage and ED Facts/SIF pilot.

5.2 Project Management Team Structure (see: Appendix B: Exhibit 5)

- Project Director (overall responsibility, budget control/reporting, project scheduling)
- Project Manager A (LEA-SIS-SIF/ZIS compatibility modifications, Clearinghouse Integration)
- Project Manager B (brokerage service implementation, ED Facts/SIF Pilot)

Following analysis and design phases as discussed in section 2 the project manager will determine both detailed schedules for work to be completed in LEA SISs, the USOE Clearinghouse, Warehouse and postsecondary SISs. Since some SISs are commercially purchased systems, these project managers will need to coordinate efforts with other vendors, especially if some of the work needs to be sub-contracted to the SIS vendor itself. Project managers will also need to determine staffing requirements, both skills and levels. It is anticipated these staffs will require a combination of analysts, developers, database specialists and network engineers.

The final project management structure, including composition of teams and subgroups, will be deferred until the general contract is awarded and the actual project director and project managers

are designated. Working within the general project organization and plan found in this document, the ensuing RFP and subsequent contract statement of work, these individuals will be able to prepare a more precise project organization structure and schedule. Such a proposed structure is depicted in Appendix B: Exhibit 5. Please note that some boxes may represent the same individual depending on the final scheduling of certain project tasks and how those tasks are assigned.

5.3 Project Oversight

Risk Management

The USRE system can be characterized as a high payoff but low to moderate risk project. The savings in labor and time coupled with the significantly increased quality of data are very high payoffs for the Utah SLDS. On the other hand, aside from the potential of a late or over-budget project the risks are moderate. A phase-in term that is longer than expected is more likely, but given the small number of LEAs and SISs in Utah this not expected to last much beyond the three years of the project. The USRE project management team will be continually monitoring each sub-component of the project to assure that all tasks and conversions are completed within the schedule.

The USRE system does not need to go into production all at once. LEAs can be phased-in as their USRE infrastructures are completed and support and local personnel become ready to use the USRE. For LEAs that are slow in total conversion it will mean hard copy for many of the transcript transfers and staying with the existing Clearinghouse interface file for LEA to USOE data submissions as long as necessary. The old system will be able to serve as backup solutions for a period of time following the full implementation of USRE. However, such backup processes will not be available indefinitely as specifications, staff, practices and other systems change.

Some of the potential risk areas that may need attention and possible mitigation include: negative LEA perception of SIF/ZIS (to be addressed with training session about SIF and vendor consultation; local resistance to do records/transcripts electronically (obtain active support of district and building level administration); local concerns about funding and sustainability (distribute letters of commitment, including financial, from USOE and USBR); and security concerns (emphasize FERPA compliance and risks of paper exchange).

Project Coordination

The USRE-SC will act through the project director and the contracted project managers and teams. The USRE-SC will have executive control of the project while the contractors will have responsibility for ensuring that components of the USRE are coordinated and user functions are introduced in a planned manner.

Attention must be given to the need for secure data; an adequate computing and telecommunications environment; data products that have passed end-to-end testing and have been approved by the USRE-SC. In addition the USRE-SC will review the impact of any shortfalls in expected budget allocations or delays in the completion of project activities and adjust plans/schedules as necessary and make adjustments to keep the project on track. In general, delays or longer phase-in periods are more acceptable than incomplete LEA participation.

The USRE-SC along with contractors and USOE, LEA and postsecondary staffs will consult, collaborate, partner and cooperate with Federal personnel and others to ensure achievement of IES

goals. The USRE-SC will approve plans, oversee and guide development and implementation of quality assurance so that is built into the USRE system. The USRE-SC will receive feedback from the testing and training processes concerning problems found by end users and will ensure that appropriate action is taken.

Once the system is operational LEAs, USOE and postsecondary schools will be responsible for its day-to-day management. Problems will be forwarded to a project help desk maintained at the USOE and supported by USOE and contractor staff.

The project director will ensure that change management processes are in place and complied with; and this project director will intervene if significant problems occur that may jeopardize the success of the project.

The USRE-SC will recruit technical and student records personnel from LEAs, USOE and postsecondary schools to form a project evaluation team. Once implementation work is begun, the USRE-SC will receive quarterly reports from the project evaluation team and will initiate corrective action to adjust project elements as appropriate to improve the quality and effectiveness of the system in meeting USRE needs.

At the beginning of the third year, the USRE-SC will receive a final evaluation report which will serve as a basis for development of a multi-year plan for maintaining and enhancing the system to address any deficiencies and to assure continued improvement.

Assignments

Representing the USRE-SC, the project director and managers will perform all project management office functions for the project and will be responsible to ensure project activities are appropriately planned, scheduled and carried out in accordance with established standards. The two project managers will be responsible for project management tasks, including: assisting the project director in the design and implementation of a more formal project organizational structure, developing detailed project plans and schedules, managing those plans, addressing project risk management, and project reporting.

Organization and Team Structure

The project's higher level management structure was described above. More detailed project management structure, including composition of teams and subgroups will be deferred until the general contract is awarded and the actual project director and project managers are designated. Working with the general project organization and plan found in this document, the RFP and subsequent contract statement of work, these individuals will be able to prepare a more precise project organization structure and schedule. Following initial analysis and design activities this organization structure and schedule will inevitably need to undergo additional refinements.

Timetable

A schedule outline for the USRE project is found in Appendix A. It should be considered only to be a general timeline for this project, as it orders and describes the planned milestones and accomplishments within an approximate month in each of the three grant years. As the management team comes on board and begins to complete more detailed analysis and design tasks more detailed and comprehensive plans and schedules will evolve.

Résumés of Key Personnel (alphabetical)

David J. Arcilesi

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EDUCATION

Utah State University, B.S. in Accounting with a minor in Business Administration, June 1981.

EMPLOYMENT HISTORY

UTAH STATE GOVERNMENT – Utah State Office of Education (USOE) - Programmer/Analyst - DBA
Employee, January 2006 to present

Performed program development, modification, and documentation for the state's EDEN (Education Data Exchange Network) which submits data through the United States Department of Education's EDFacts data repository (PowerBuilder, Sybase ASE). Additionally, Performed program development, modification, and documentation for the state's Student Data Warehouse for public school students (PowerBuilder, Sybase ASE). Also, Performed database model changes, schema changes and database backups/clones for multiple USOE databases. (MS Server 2003, CA Erwin and CA Desktop DBA).

Hardware:

MS Networks, MS Server 2003, Dell Servers

Software:

PowerBuilder 10.5, Sybase ASE, Microsoft Windows XP, Microsoft Office, CA Erwin, CA Desktop DBA.

UTAH STATE GOVERNMENT - Tax Commission - Application DBA
Employee, October 1999 to January 2006

Performed program development, modification, and documentation for the state's MVA Motor Vehicle system (PowerBuilder, Oracle). This included work on the database (Stored Procedures, Packages, Functions, Triggers, Tables, Indexes, etc.), PowerBuilder Front End and on the UNIX server (UNIX Shells, Scripts and Menu's). Responsibilities also include the training of application developer's in the use of the database and the related software.

Hardware:

PC Networks, HP UNIX

Software:

PowerBuilder, Oracle, Microsoft Windows XP, Microsoft Word, Microsoft Excel, Novell Groupwise, SQL Navigator, TOAD, SQL*Plus.

UTAH STATE GOVERNMENT - Tax Commission - Contractor, February 1998 to October 1999

Performed program development, modification, and documentation for the following systems: IFTA (International Fuel Tax Agreement) (Adabase Natural), MV (Motor Vehicle System) (IBM Mainframe COBOL / CICS COBOL).

Hardware:

IBM Mainframe, IBM PC, PC Networks

Software:

COBOL, Adabase, Natural, MVS JCL, TSO, Microsoft Windows XP, Microsoft Word, Microsoft Excel, Novell Groupwise.

IDAHO STATE GOVERNMENT - Department of Health & Welfare - Contractor, August 1997 to February 1998

Performed program development, modification, and documentation for the following systems: FOCUS (Family Oriented Care Support System) (Adabase Natural), EAS (Energy Assistance System) (IBM Mainframe COBOL), and Vital Statistics (Natural/COBOL).

Hardware:

IBM Mainframe, IBM PC, PC Networks

Software:

COBOL, Adabase, Natural, Natural for Windows (Lightstorm), Construct, MVS JCL, TSO, WordPerfect for Windows.

SYSTEMS MANAGEMENT SPECIALISTS - Business Analyst, September 1996 to August 1997.

Responsible for implementation, modification, analysis, and documentation of the CINCOM MRP Manufacturing System. System is written in VAX COBOL and processes on a DEC VAX. Performed modifications to AMAPS MRP Manufacturing System which interfaces with the CINCOM System. The AMAPS system is written in COBOL and processes on an IBM Mainframe.

Hardware:

IBM Mainframe, IBM PC, PC Networks, DEC VAX

Software:

VAX COBOL, PATHWORKS, DOS, Microsoft Windows 95, Microsoft Word, Microsoft Excel, Microsoft Exchange, Microsoft Schedule +, CICS COBOL, VMS, JCL

SL SYSTEMS TECHNOLOGY - Contractor, September 1991 to September 1996.

Contracted to Stone Container Corporation to perform system administration and program maintenance and development for the IBM AS400 / RPGIII / RPG400 / BPCS Manufacturing software.

Contracted to Price Waterhouse to perform analytical and programming support for the MMSPC System. Developed on a PC LAN using Microfocus COBOL.

Contracted to Utah Department of Transportation (UDOT) to perform the following:

Design, develop, implement, and document a Data Processing Charge Back (DPCB) System. System is written in VAX COBOL and processing on a DEC VAX. This system included many interfaces to other systems to collect processing costs for the distribution of charges to consuming departments.

Perform various modifications to the Equipment Maintenance System (EMS) written in Microfocus COBOL processing on a PC LAN.

Design, develop, implement, and document the conversion from the FIRMS Financial Reporting System to the FI-NET Financial Reporting System. The project involved the conversion of ten (10) subsystems from interfacing with FIRMS to FI-NET. These subsystems were written in CICS COBOL and ADABAS Natural 2.0 processing on the IBM Mainframe.

Contracted to Quality Tire to complete modification of the Point of Sale System written in Microfocus COBOL.

Hardware:

IBM Mainframe, IBM PC, PC Networks, DEC VAX 6320.

Software:

TSO, NATURAL 2.0, ADABAS, NATURAL Connection, COBOL, dBASE IV, NETWARE, DOS, Lotus 1-2-3, WordPerfect (versions 5.2), WordPerfect for Windows (versions 5.2, 6.0, 6.0a, 6.1), Microsoft Windows V3.1, Quattro Pro for Windows, Microsoft Word, Microsoft Excel, Microsoft Visual Basic, PowerBuilder, CICS COBOL, VMS.

SMITH MEGA DIAMOND - Manager of Finance and MIS - January 1991 to January 1992.

Responsible for reporting financial results of a \$30M manufacturing plant. Managed a MIS department consisting of Network Administrator, and Two (2) Programmers.

Hardware:

IBM RS6000, PC Networks, IBM PC.

Software:

NETWARE, DOS, UNIX, Lotus 1-2-3, Progress, WordPerfect (versions 4.2, 5.0), WordPerfect for Windows (versions 5.2), Microsoft Windows V3.0, Quattro Pro.

STRAND ELECTRO CONTROLS - Manager of Cost Accounting - April 1989 to August 1991.

Responsibilities included the following:

Installation of a 50-Station PC Network using Novell SFT 2.15c and ARCNET topology. Also, the installation of a 4-station CAD/CAMPC Network using Novell 2.2 10 user and Ethernet Topology.

Conversion of the single user version of MAX Material Requirements Planning system to the Network Version of Expandable MRP system.

Completed an extensive hardware analysis that included the comparison of the IBM AS400 Computer running MAPICS and a Novell Network using Expandable software. This review included hardware and software cost analysis including recurring costs and potential system growth.

Hardware:

IBM AS400, IBM PC, PC Networks.

Software:

BASIC, NETWARE, DOS, Lotus 1-2-3, Volkswriter, WordPerfect (versions 4.2), Microsoft Windows V3.1, Dataflex.

Course Work:

Novell: System Manager - Novell Inc.
Novell: Hardware and Installation - Novell Inc.
Novell: NETWARE 386 Feature Review - Compunet
DATAFLEX: Concepts - Data Access Corporation
DATAFLEX: Advanced Concepts - Data Access Corporation

NATTER MANUFACTURING - Plant Accountant - March 1985 to April 1989.

Responsible for reporting financial results of a \$14M manufacturing operation. Also, System Administrator for HP 3000 Series 68 / 70 and ASK MANMAN MRP System.

Hardware:

HP3000 Series 68 / 70, IBM PC.

Software:

COBOL, FORTRAN, BASIC, QUIZ, DOS, Lotus 1-2-3, Volkswriter, WordPerfect (versions 4.2).

Course Work:

MANMAN: Manufacturing/HP3000 - ASK Computer Systems

BEEHIVE MACHINERY - Office Manager and General Accountant - July 1984 to March 1985.

Responsible for various financial and system functions, including program maintenance and development.

Hardware:

IBM System 36 / 38, IBM PC.

Software:

MAPICS, COBOL, BASIC, Lotus 1-2-3, Volkswriter, WordPerfect (versions 4.2).

JC PENNEY COMPANY - Section Supervisor - June 1981 to July 1984.

Responsible for System Analysis with end users.

Hardware:

IBM Mainframe, IBM PC.

Software:

COBOL, BASIC, DOS, Lotus 1-2-3.

Dale Seth Bills

(b)(6)

(801) 354-7402 ext. 1404

Dale.bills@nebo.edu

Education

- Brigham Young University, Master of Science in Instructional Science, 1983
- Brigham Young University, Bachelor of Arts in Mathematics Education, 1977
- Ricks College, Associate Degree, 1975

Employment

- 1989 to Present – Nebo School District Technical Services Supervisor
 - Established the Technical Services Department bringing technical staff from four separate departments
 - Supervise programmers, network engineers, IT specialists, software specialists, a curriculum specialist, and repair technicians
 - Manage the district's technology budget
- 1983 to 1989 – Nebo School District math and computer science teacher at Spanish Fork High School
- 1977 to 1983 – Nebo School District math and science teacher at Spanish Fork Junior High School

Organizations

- 2007 to Present – State of Utah Registry for Internet Numbers board member
 - Working on bylaws for the new organization
 - Participating in making policies for the assignment of Internet Addresses controlled by the Utah Education Network
- 2005 to Present – UEN Public Education Advisory Committee member
 - Encouraged and supported the development of a television program to inform parents of Internet safety issues
 - Recommended changes to improve the annual process of creating the strategic plan for the Utah Education Network
- 2003 to 2006 – Utah Technology Coordinator Council board member (co-chair for two years)
 - Helped establish the organization
 - Participated in the creation of the organization's bylaws
 - Worked to improve communication between school districts and the Utah State Office of Education
 - Worked to improve communication between school districts and the Utah Education Network
 - Helped organize the Cognos Users Group
 - Served as a member of the Instructional Services subcommittee of the Utah Education Network
- Long-standing member of Utah Collation for Educational Technology
- Recently joined the International Society for Technology in Education

Jerald D. Bracken, MBA

March 14, 2007

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jdbracke@byu.edu

Employment

Software Engineer – 2000 to Present. Application Engineering, Brigham Young University (BYU).
Co-architect for BYU's new, re-engineered student information system. Chief Engineer for Teaching and Learning.

Admissions and Records Project Lead — 1988 to 2000. Brigham Young University (BYU).
Led the analysis, design and implementation of systems and projects, which have included Year 2000 compliancy, Web applications, office automation and groupware, Electronic Data Interchange (EDI), Business Process Re-engineering, PC and server support, data base design, data warehousing, and a variety of system conversions.

Admissions and Records Production Manager — 1981 to 1988. Admission and Records, BYU.
Managed the day-to-day operation, maintenance, and co-managed development activities of BYU's Student Information System.

System Analyst — 1979 to 1981. Computer Services, BYU.

Programmer Analyst — 1977 to 1979. Computer Services, BYU.

Professional Experience

Bracken Consulting -- 1981 to Present.

Established a consulting practice, focused on higher education and small business, that provides expertise in electronic commerce, standards development and business process re-engineering. Contracts include:

- Electronic Data Interchange (EDI) and XML Standards development, EDI implementations in education, and EDI over the Internet.
- Business process re-engineering, work flow analysis and operational improvement.
- Student Information Systems design, implementation and project management.
- Web site design, user and system interfaces, design and development, and training.

Bracken Tax Service – 2001 to Present. Established a small tax practice.

Instructor – 1995. Peterson's Guide.

Taught seminars on using the Web for recruiting, marketing, and electronic admission application for colleges and universities.

Adjunct Faculty – 1984 to 1992. Computer and Information Systems, Utah Valley State College.

Taught Systems analysis and design, programming and introductory computer courses.

Contract Consultant – 1989. Sage Analytics, Inc.

Analysis and consulting based on "Fault Tree Analysis" techniques developed by Sage Analytics.

Education

MBA, Brigham Young University, 1988.

BS, Accounting (Information Management), Brigham Young University, 1977.

BS, Sociology, Brigham Young University, 1974.

Professional Organizations and Associations

American National Standards Institute (ANSI), Accredited Standards Committee (ASC) X12, Subcommittee A, Education Administration — 1993 to Present. X12 is the national standards setting body for Electronic Data Interchange (EDI) and XML data standards.

- **Chair, X12A** – October 2002 to present.

- **Member**, Post-Secondary Education Task Group – June 1993 to present.
- **Chair**, Post-Secondary Education Task Group – June 1998 to June 2000.
- **Chair**, Technical Assessment Task Group — June 1996 to October 1998.
- **Principal developer**, Transaction Set 189, Application for Admission to Educational Institutions.
- **Co-developer**, Transaction Set 138, Testing Results Request and Report.
- Professional presentations as listed below.

American Association of Collegiate Registrars and Admissions Officers (AACRAO) – 1993 to Present.

- **Vice President for Information Technology**, 2005 to present.
- **SPEEDE Committee** (Standardization of Postsecondary Education Electronic Data Exchange Committee) – 1993 to 2005
- **SPEEDE Committee Vice Chair** – October 1997 to April 1998.
- **SPEEDE Committee Chair** – April 1998 to April 2000.

Responsibilities and activities while on the SPEEDE Committee include:

1. Developing and promoting national (ANSI ASC X12) EDI standards for transcripts, admission applications, verifications of enrollment, financial aid transcripts, and other electronic documents used in education.
2. Developing and promoting XML and Web Services standards for inter-operability between systems and system components.
3. Sponsoring and planning an annual 3 day conference on EDI in Education which up to 350 people attend.
4. Working with the Internet Engineering Task Force (IETF) to develop standards for transmitting EDI over the Internet.
5. Maintaining membership in ANSI ASC X12 Subcommittee A and participating in the X12 standards development process.
6. Developing and maintaining a World Wide Web site that contains Implementation Guides for the EDI standards used in education — such as, the Transcript Transaction Set (TS 130), Admission Application Transaction Set (TS 189), among others.

- **Co-Founder**, Postsecondary Electronic Standards Council (PESC).
- **Inter-Association Representative** to Postsecondary Electronic Standards Council (PESC) – November 1997 to present.
- **Technology Center Committee**, AACRAO 1997 National Conference — April 1996 to April 1997. Committee is responsible for setup and operation of a 50 workstation computer resource center that provides e-mail, word processing, Internet and Web access, and a variety of classes and workshops at the annual meeting.
- **Evaluation Team**, AACRAO National Office financial and technical evaluation – May 1998.
- Professional presentations as listed below.

Postsecondary Electronic Standards Council (PESC)

PESC is a nonprofit association made up of other associations, government agencies, commercial organizations, higher education institutions, etc. that have an interest in developing and promoting the use of electronic data standards, EDI as well as XML based, in higher education.

- **Chair of the Board of Directors**, PESC – June 1998 to June 2000.
- **Member of Board of Directors and Treasurer**, PESC – June 2000 to June 2003.
- Professional presentations as listed below.

Utah Association of Collegiate Registrars and Admissions Officers (UACRAO)

- **Technology Task Force** — June 1995 to 1999. The task force is responsible for coordinating and promoting the use of technology at the institutions in Utah. These technologies include EDI, the Internet and the World Wide Web.
- Professional presentations as listed below.

Articles, Papers and Professional Presentations

Electronic Data Interchange (EDI) and XML Standards

- § **"A Case Study of a SPEEDE Implementation: A Nuts and Bolts Presentation,"** Presentation at the AACRAO sponsored SPEEDE Workshop, October 1992 and at UACRAO, February 1993.

- § **"Finding a Better Way: Implementing the Exchange of Electronic Transcripts,"** Co-author with Gloria Andrus, College and University Computer Conference (CUMREC), May 1993, AACRAO Sponsored SPEEDE Workshop, October 1993, and Ontario, Canada, SPEEDE Workshop, November 1993.
- § **"Experiences Implementing the SPEEDE Electronic Transcript,"** AACRAO National Conference, April 1993.
- § **"An EDI Transcript Implementation,"** Co-presenter with Rex Pugmire, Tom Gourley, and Jeff Tanner, Brigham Young University's Annual Technology Conference, June 1993.
- § **"Proposed Admission Application Transaction Set (189),"** AACRAO Sponsored SPEEDE Workshop, October 1993.
- § **"EDI Security Considerations: Internet vs VAN's,"** Ontario, Canada, SPEEDE Workshop, November 1993.
- § **"Network Issues and SPEED/ExPRESS: Getting Down to the Wire,"** AACRAO National Conference, April 1994 and at the AACRAO Sponsored SPEEDE Workshop, October 1994.
- § **"Electronic Data Exchange (EDI) and SPEEDE/ExPRESS: Sending and Receiving High School Transcripts and Applications for Admissions Without Paper,"** National Association of College Admissions Counselors, September 1994.
- § **"Using Internet for EDI,"** ANSI ASC X12 Meeting, October 1994.
- § **"Electronic Admission Applications and Transaction Set 189,"** AACRAO Sponsored SPEEDE Conference, October 1994.
- § **"Evaluating EDI Translation Software,"** AACRAO Sponsored SPEEDE Conference, October 1994.
- § **"The Internet and Electronic Commerce,"** Utah EDI Users' Group, January 1995.
- § **"EDI Over the Internet,"** AACRAO National Conference, April 1995.
- § **"Electronic Admission Applications,"** AACRAO National Conference, April 1995.
- § **"Electronic Admission Applications and the TS 189,"** AACRAO Sponsored SPEEDE Conference, October 1995.
- § **"Encryption,"** AACRAO Sponsored SPEEDE Conference, October 1995.
- § **"EDI Over the Internet,"** AACRAO Sponsored SPEEDE Conference, October 1995.
- § **"Getting Started with Electronic Transcripts: A Guide to Implementing SPEEDE/ExPRERSS,"** CUMREC, May 1996.
- § **"Electronic Data Interchange (EDI): Transferring Educational Records Across the Nation,"** Chapter 5 of Transforming Academic Advising Through the Use of Information Technology, National Academic Advising Association (NCADA), Monograph Series Number 4, 1996 pages 51-62.
- § **"Technical Issues of Security,"** AACRAO Sponsored SPEEDE Conference, October 1996.
- § **"Technical View of EDI,"** AACRAO Sponsored SPEEDE Conference, October 1996.
- § **"The Future of TS 189,"** AACRAO Sponsored SPEEDE Conference, October 1996.
- § **"Partnering with High Schools to Implement EDI Transcripts,"** AACRAO National Conference, April 1997.
- § **"Internet EDI and Electronic Commerce in Higher Education,"** Data Interchange Standards Association (DISA) Annual Conference, May 1997.
- § **"Technical View of EDI,"** AACRAO Sponsored SPEEDE Conference, October 1997.
- § **"Implementation of TS 189,"** AACRAO Sponsored SPEEDE Conference, October 1996.

- § **"XML, EDI, E-Sign and More: Standards for Higher Education,"** CUMREC Conference, April 2002.
- § **"XML and X12 Update,"** Utah EDI User Group, July 2003.
- § **"XML Advanced Training,"** PESC Annual Meeting, May 2004.

Business Process Re-Engineering and Reducing Organizational/Administrative Complexity

- § **"Principles for Reducing Organizational Complexity,"** Presentation based on "Combining 'Peopleware' and 'Software' . . ." article at CUMREC, May 1991.
- § **"Combining 'Peopleware' and 'Software' in the Admissions Office: A Case Study in Change,"** Co-author with Douglas J. Bell, College & University, Winter 1992. *Received best paper of the year award.*
- § **"Technology and the Admission Process,"** American Association of Colleges of Osteopathic Medicine Annual Meeting, February 1996.
- § **"Electronic Admission Applications and Re-engineering,"** Co-Presenter with Mary Neary, AACRAO National Conference, April 1996.
- § **"Business Process Re-Engineering,"** AACRAO Sponsored SPEEDE Conference, October 1996 and October 2000. AACRAO National Conference, April 2000. SPEEDE Conference, October 2002.
- § **"Business Process Re-Engineering Workshop,"** AACRAO Technology Conference, October 2003, 2004, 2005, July 2006 and AACRAO National Conference, April 2004, 2005, 2006, 2007.
- § **"Future of Student Information Systems,"** AACRAO Technology Conference, October 2005, July 2006.

Management and Implementation of Information Technologies

- § **"Computer Simulation and the Social Sciences,"** Brigham Young University's Annual Family Relations Conference, 1974.
- § **"A Security System for Maintaining On-line Data Integrity,"** Co-author with Barbara L. Ruffe, CUMREC, May 1979.
- § **"Curriculum Management and Class Scheduling Systems to Support an Automated Student Records System,"** Co-author with Garth Rasband, CUMREC, May 1981.
- § **"Managing Change,"** CUMREC, May 1982.

Internet, Security and World Wide Web

- § **"World Wide Web Now and Future,"** Utah ACRAO, January 1996.
- § **"Meeting the Challenge of Really Useful, Client Friendly Sites,"** Part of session on the World Wide Web and Admissions Application at BYU's Exploring Technologies Conference, June 1996.
- § **"HTML 101,"** A 3 hour workshop at AACRAO National Conference, April 1997.
- § **"Demystifying Encryption,"** Co-Presenter with Wally Reeves for a 3 hour workshop at AACRAO National Conference, April 1997.
- § **"Internet Security Issues I & II,"** AACRAO Sponsored SPEEDE Conference, October 1997, 1998, 1999, 2000, 2001. AACRAO National Conference, April 1998, 1999, 2000, 2001, 2002.
- § **"Future of XML in EDI,"** AACRAO Sponsored SPEEDE Conference, October 2000.
- § **"Internet Security Issues for Registrars,"** AACRAO Technology Conference, October 2003, 2004 and AACRAO National Conference, April 2004, 2005, 2007.

John Brandt, Ph.D.

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Experience

2002–Present Utah State Office of Education

Information Technology Director

Provides leadership for the planning, implementation and support of information systems, policies and processes for the USOE. Works with other state agencies and LEAs on wide-ranging IT initiatives and systems integration.

Oversees agency network infrastructure including a state-of-the-art LAN with gigabit WAN/Internet connections, virtualization, four-hundred desktop/notebook computers and printers, firewalls, routers, and dozens of specialized servers with appropriate security, inventory and backup technologies.

Supervises a staff of fifty plus professional programmer/analysts, LAN administrators and data control/entry personnel for performance of related technology functions and operations. This includes scanning of over two million standardized tests per year.

Assesses technology and agency needs to determine and implement technology plans and budgets for the agency and LEAs, and directs commercial and custom software acquisitions and development.

Major Project/Initiatives:

- Lead implementation of NCLB data collection and reporting.
- Managed development of new test scanning, scoring and reporting systems.
- Established statewide data conferences.
- Lead RFP development teams for testing systems.
- Lead consolidation of USOE’s agency and district IT groups.
- Initiated EDEN implementation.
- Oversaw the development of new grade book for SIS2000.
- Initiated SIF Integration of SIS2000 and Goalview for IEPs .
- Initiated Web Services for LEA personnel teacher licensing integration.
- Managed Statewide Student Identifier (SSID) system development.

1994–2002 Utah State Office of Education

Information Technology Manager, Agency Computer Services

Designed, managed, and supported information systems within the Utah State Office of Education and data collection systems that interfaced with all LEAs

Supervised a staff of professional programmer/analysts, LAN administrators and data control/entry personnel for performance of related technology functions and

operations.

Assessed technology and agency needs to determine and implement technology plans and budgets for the agency; including: definition of new positions, procedures, and data integration. Worked closely with District Computer Services, school districts, and other state agencies to share data.

Major Project/Initiatives:

- Helped design and managed USOE Data Warehouse project.
- Assisted in development of USOE Data Clearinghouse.
- Lead development of new educator licensing system.
- Managed development of vocational rehabilitation system.
- Managed development of instructional materials system.
- Managed new financial reporting system project.
- Lead development of USOE budgeting and accounting system for education.
- Initiated migration of all agency data to relational data base platform.
- Wrote school activities data collection system.
- Established first Web presence for agency (1995), brokered agreement to be a partner in the newly formed Utah Education Network.
- Managed physical relocation of entire network twice in one year.
- Moved network to managed servers and switched infrastructure.

1983–1993 Utah State Office of Education

Applications Programmer/Analyst IV

Performed programmer/analyst functions while managing a team of other programmer/analysts whose assignments were the development and support of numerous agency systems.

Major Project/Initiatives:

- Consolidated small workgroups into one large LAN.
- Rewrote old COBOL State teacher certification system.
- Assisted in moving SIS to client server.
- Maintained vocational rehabilitation client system.
- Converted old school finance system to Excel with extensive macros.
- Developed payroll projection system and integrated it with agency finance and budgeting system.
- Produced new school enrollment and attendance accounting reporting.

1978–1983 Utah State Office of Education

Applications Programmer/Analyst II,III

Worked with customers within the office of education and local school districts in designing and maintaining agency and school district accounting systems. Was involved in all phases of system design and implementation from customer interviews to writing and testing of systems.

Major Project/Initiatives:

- Rewrote LEA finance system to be Handbook II compliant.
- Developed agency accounting system.
- Maintained teacher licensing system.
- Maintained vocational rehabilitation client system.

1977–1979 University of Utah, Department of Educational Administration

Research Assistant

Assist in design of research and analysis of data collected within school finance projects. Worked on state staffing and enrollment projection projects.

1976–1978 University of Utah, Computer Center

Programmer

Helped develop and implement computer based instructional systems, including: tutorials, simulations, computer literacy courses, and programmable learning aids.

1975 Granite School District, Kearns Junior High (Kearns, UT)

Math Teacher

Consumer math.

1973–1974 Annville-Cleona High School (Annville PA.)

Math Teacher

Algebra II, trigonometry, geometry, pre-calculus.

1972–1973 Central Dauphin High School (Harrisburg PA.)

Math Teacher

Algebra I, consumer math.

Education

- 1983 University of Utah

Doctor of Philosophy

Educational administration, computer science, operations management and research, school finance and accounting. Dissertation addressed resource utilization simulation.

- 1972 Pennsylvania State University

Bachelor of Science

Mathematics and secondary education.

Affiliations

- Utah Technology Coordinator Council (TCC)
- Council of Chief States School Officials/Education Information Management Advisory Committee (CCSSO/EIMAC)
- CCSSO Longitudinal Student Data Systems Task Force
- Government Information Technology Leadership Council (State of Utah)

RESUME

EDUCATION

Master of Education Degree (M.Ed.) August 1983
Public School Administration
Brigham Young University

Bachelor of Science Degree (B.S.) May 1979
Health Science / Chemistry Graduated: Magna Cum Laude
University of Utah

Associate of Science (A.S.) May 1975
General Education
Snow College

CERTIFICATION

Administrative /Supervisory (Utah) K-12 Current through June 2011
Professional Teaching Certificate (Utah) Level 2
Endorsements: Health Education 7-12
Chemistry 7-12
Physics 7-12
Math 7-12 (Level IV)

ADMINISTRATIVE EXPERIENCE

Accountability and Program Services 3 Year
Jordan School District Director
Sandy, Utah 84070

Lone Peak Elementary 3 Years
Jordan School District Principal
Sandy, Utah 84070 (Year-Round Calendar)

East Sandy Elementary 3 Years
Jordan School District Principal
Sandy, Utah 84070 (Traditional Calendar)

West Jordan High School 5 Years
Jordan School District Assistant Principal
Sandy, Utah 84070

Jordan High School 6 Years
Jordan School District Assistant Principal
Sandy, Utah 84070

INSTRUCTIONAL EXPERIENCE

Jordan High School 9 Years
Jordan School District Chemistry, Physics, & Algebra
Sandy, Utah 84070

Jordan School District Adult High School 11 Years
Jordan School District Math & Science
Sandy, Utah 84070

(continued)

**Instructional
Experience (cont.)**

Weber State University
Division of Continuing Education
Ogden, Utah 84408

5 Years
Algebra & Chemistry

Salt Lake Community College
Division of Continuing Education
Salt Lake City, Utah

3 Years
Math & Physics

**PROFESSIONAL
RECOGNITIONS**

- State of Utah Governor's Award
- Most Influential Teacher, Weber State University
- Certificate of Excellence, The White House Commission on Presidential Scholars

**SERVICE/
TECHNOLOGY
EXPERIENCE**

- Served as site facilitator for the Utah Coalition For Educational Technology (UCET) annual conference (1995 and 1996)
- Designed and supervised a project to network all instructional classrooms within an existing high school
- Organized and chaired high school and elementary technology committees to govern and direct decisions regarding the incorporation of technology into the schools' instructional processes
- Designed and supervised facilities preparations requisite to establish a high school distance learning site.
- Working with private business, established foundation work on utilizing internet resources, provided through UtahLink, to keep parents informed of student attendance and academic performance.
- Supervised high school and elementary inservice programs to promote and encourage the use of Internet resources in student instruction.
- Chaired the development and implementation of high school and elementary schools' 5-year instructional technology plan.
- Facilitated development of community support for educational technology
- Restructured school committee organization to improve efficiency and effectiveness

**PROFESSIONAL
SKILLS**

- ★ Organization leadership - the ability to encourage and enhance human resources and focus individual human resources on the accomplishment of organizational goals
- ★ Project development and management - the ability to create, organize, implement, direct, and monitor progress to the timely completion of predetermined tasks and/or goals
- ★ Communication - the ability to carefully listen to, and effectively articulate, through oral and written means, the needs, concerns, policies, and possible courses of action, affecting a given situation
- ★ Resource Management - the ability to organize, manage, and accurately account for, the resources needed to complete predetermined tasks

**PROFESSIONAL
REFERENCES**

Brenda Hales
Executive Director

Dave Stoddard
Executive Director

Jordan School District
(801) 567-8362

Craig Stark
Executive Director
Jordan School District
(801) 567-8232

Jordan School District
(801) 567-8167

Frank Shaw
Executive Director
Jordan School District
(801) 567-8342

Brian McGill

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bmcgill@utahsbr.edu

Profile

A solid foundation in public and higher education, with years of experience working with and advising thousands of Utah students as a middle/high school counselor in the two largest school districts in Utah. I have worked for the Utah System of Higher Education the past 3 ½ years, involved in several strategic educational developments, programs, and planning committees at the state and national level. A primary emphasis on college access and the successful promotion and transition of current and prospective students preparing, participating, and completing higher education in Utah.

Responsible for state wide involvement, administration, advocacy, policy, training, and program support for student and institutional advancement in Financial Aid, Admissions, Student Services, TRIO, School Relations, Alumni, and relations between public and higher education.

I have a high interest in applying my passion, enthusiasm, dedication, academic and work related experiences, ensuring student and institutional growth, expansion, support, and success.

Education

M.Ed., Educational Advisement/Counseling, University of Phoenix

Oct 1999

MMHC – Clinical Counseling (LPC), Bridged Program with M.Ed.

May 1999

B.S. Psychology, University of Utah

June 1996

Alta High School Graduate, Sandy, UT – 3.9 GPA

June 1991

Awards

“Educator of the Year”

Jordan School District

2003

“Coach of the Year”

Tennis – Utah/UHSAA

Career

Experience

Present

Manager of School, Student, and Outreach Services

Utah System of Higher Education/UHEAA

- State wide involvement, administration, advocacy, policy development, maintenance, oversight, coordination, and program support for various Title IV programs, relating to Financial Aid, Admissions, Student Services, TRIO (GEARUP, ETS, UB), School Relations, and Alumni, for USHE/UHEAA.
- Manage five-member professional team.
- Coordination with Commissioner’s Office for Higher Education, Utah State Office of Education, School Districts/LEA’s, and middle/high schools, ensuring school and student success, and Outreach to Utah’s state wide communities.

Manager of Outreach Services

USHE / UHEAA

Creation, Formation, Re-Design, & Implementation of UtahMentor.org, Utah’s Premier Web Site for Career Exploration, College Planning, Campus Selection, Admissions, and Financial Aid.

Outreach Services Officer

USHE / UHEAA

- Report to Manager of Outreach Services.
- Coordination and implementation of USHE/UHEAA's College Access efforts (UtahMentor), support, training, and advocacy to Utah's public education system (counselors, teachers, and administrators).
- Monthly reports, statistics, and analysis of site usage.
- Needs assessment and creation of site tools and utilities needed for proper college access planning and preparation:

Explore, Plan & Prepare, Select, Apply, and Pay for College

*Feb. '05–
July '06*

High School Counselor / Tennis Coach

Riverton High School / Jordan District

- Oversight and coordination for school wide Comprehensive Guidance Counseling Program.
- Test Coordinator: ACT, SAT, PSAT, PLAN, UBSCT, CRT, AP.
- School Improvement Plan Representative.
- School Accreditation Committee Chair.
- Oversight of Trust Lands Budget.
- Oversight of Comprehensive Guidance Budget.
- Grant author and recipient – Small Learning Academies.
- Boys and Girls Tennis Coach.
- Educator of the Year, 2002 – 2003.
- Coach of the Year, 2003.

Middle School Counselor

*Oquirrh Hills Middle School / Jordan District
North Layton Jr. High / Davis District*

*Nov. '03–
Feb. '05*

Oversight and coordination of school wide Comprehensive Guidance Model, Testing, Student Groups, School Improvement Committee, At-Risk Committee, and Master Schedule.

Family Therapist

Jordan Family Education Center

Mental Health and Substance Abuse Clinician aiding Jordan District students and their families with requested services.

Employee Assistance Counselor

Highland Ridge Hospital

Assessment, intake, and referral for treatment, for substance use. One on one, and family intervention counseling.

Consulting Experience

Consultant – Utah Board of Education

Utah State Office of Education / CGP

- Co-author, editor, instructor, and state wide implementation of Comprehensive Guidance Counseling Program
- Formation of new Model for Career and College Counseling in Secondary Education.
- Established 12 Standards of competence and rubric scale for annual site program reviews for

*June '03–
Aug '03*

secondary counseling programs.

June '05-
Oct. '05

Consultant – Xap Corporation
Bridges – Choices and Xap – Mentor, Web Product Integration

- Created 50 pages “White Sheet” report for Xap Corporation, regarding Bridges/Choices acquisition at 12 million dollars.
- Xap acquired Bridges July '06, as a result of the report.
- Report included corporate background and marketing strategies for both companies, and product evaluation/rating.
- The acquisition outcome leverages an opportunity for the national premier product integration of the best college planning and career planning utilities in the world.

UtahMentor.org

- Utah’s Premier Resource for Career, College, and Financial Aid Planning.
- Created current design used statewide for traditional and non-traditional students.
- Formation of Admissions Index Calculator.
- Formation of Career Assessment Tools (Interests/WorkValues/Personality/WorkSkills).
- Formation of statewide student AP and Concurrent Enrollment Transfer/ Articulation guide.
- Formation of site navigation and methodology: Explore Careers, Plan and Prepare, Select, Apply, and Pay for College – www.utahmentor.org

Utah State Office of Education – CGP Model & Review

**Web
Publications**

- Created state wide model, currently found on USOE’s Comprehensive Guidance Counseling home page. <http://www.schools.utah.gov/ate/compguide/review.htm>

Riverton High School – Counseling Center

- Formation of first state wide high school counseling center home page for students, parents, and faculty. <http://www.rhs.jordan.k12.ut.us/counseling/index.htm>

Going2College.org

- Created Utah’s customized information for national college planning website in collaboration with NCHelp and MYF. www.going2college.org

USHE’s - Commissioner’s Report

- *Monthly:* Update and Report relating to School, Student, and Outreach Services.

USHE’s – Commissioner’s Newsletter

- *Quarterly:* Updates, developments, and newsworthy items relating to college access and student aid.

National College Access Network

- *Quarterly:* Copper Hills HS College Night

Utah School Counselor Association Journal

- *Quarterly:* Proper College Test Preparation, UtahMentor.org, Online Career Exploration Utilities

Utah’s Career and Workforce Magazine

- *Annual:* Financial Aid and College Comparisons

Utah's Prospective Student College Guidebook

- *Annual:* 2004, 2005, 2006 – All Utah HS Seniors

“Preparing for Life After High School”

- *Annual:* USOE's SEOP / Student Planning Guide

Literary Publications

“Are You Ready for College”

- *Annual:* Utah's Middle School College Planning Guide

“It's Never too Early to Plan for College”

- *Annual:* UtahMentor.org planning tri-fold, for Utah's middle and high school students and parents.

“The 7 A's and Ways to Pay for College”

- *Annual:* High school counselor resource for financial aid.

“Ahead of the Class”

- SUU Early Awareness Publication for Middle School
-

Committees & Presentation (National)

- **Advisory Committee for Student Financial Assistance**
- **United States Congress**
- **National Council on Higher Education Loan Programs**
- **K-16 Alliance: Co-Chair, Guidance Committee**
- **Ethnic Minority Graduation State Task Force**
- **Utah Scholars Initiative**
- **New Century Scholarship**
- **Comprehensive Guidance State Wide Advisory**
- **Utah Career and College Access Alliance Network (UCCAAN)**
- **e-Transcript State Wide Committee**
- **UASFAA Program Committee**
- **UtahCouncil Executive Committee**
- **Annual Federal Student Aid Conference: Utah's Model for College Access and Web Resources for Title IV Changes.**

Committees & Presentation (National)

-
- **College Access in Rural Communities**
 - **Meeting new Federal Regulations of 2005 Deficit Reduction Act. Emphasis on Higher Education Title IV Changes.**
 - **Utah's Model for College Access.**

GRADY MCNETT

(b)(6)

(801) 538-7524 (work)
gmcnett@usoe.k12.ut.us

SUMMARY OF QUALIFICATIONS:

25+ years of experience in business information system analysis, design, programming and project management. Experience with many platforms, operating systems, programming languages and development tools, including Visual Foxpro 3.0, C++, Paradox, Natural 2, Cobol, CICS, TSO, ISPF, JCL, SQL, HTML, HP Unix shell script, Java, Powerbuilder, and MS Access. Database design experience with MS SQL Server, Sybase, Adabas, Paradox, and IMS. Demonstrated capabilities include data analysis, object modeling, relational database design, application programming, programmer supervision, and project management.

EXPERIENCE:

UTAH STATE OFFICE OF EDUCATION, Salt Lake City, UT

October 1998 to present

Programming team lead for Student Information System (SIS) area. Assist and supervise other programmers in software development for school use using Microsoft .Net development tools, Visual Foxpro and SQL Server. Assist with support of mainframe legacy systems using Cobol and Natural languages. Participated in mainframe changes and testing for Y2K.

UTAH STATE TAX COMMISSION, Salt Lake City, UT

August 1983 to October 1998

Positions included: CACSG interface development technical lead, UTAX project technical lead, project manager for Corporate Tax System release, project manager for Document Control System development, project manager for Corporate Tax System development, and senior application programmer/analyst.

Assisted with the implementation of the collections component of the UTAX project (CACSG). Helped with the design, development and implementation of the interface between the legacy tax systems and new collections software using Powerbuilder for the client and Cobol/C for HP Unix server side processing.

Participated in issuance and evaluation of Request for Proposal for multi-million dollar integrated technical solution (UTAX project). Published UTAX project home page and supporting project documents on Internet web server. Modeled enterprise data and defined requirements using Bachman Groundworks CASE tool. Explored Internet technologies including HTML, TCP/IP, and Java.

Performed all phases of project management while continuing to function as systems analyst and programmer using Borland C++, Zinc Application Framework, Paradox for DOS and Windows, SQL, Unix shell script, Natural 2, Natural Construct, Cobol, TSO, ISPF, and JCL with both the Sybase and Adabas DBMS.

Developed and maintained many application programs related to all of the major tax systems, document tracking, revenue accounting, tax appeal tracking, bonding, remittance processing, refund processing, microfilm capture, microfilm retrieval and data entry.

AMERICAN EXPRESS COMPANY, Salt Lake City, UT

May 1982 to August 1983

Application Programmer/Analyst. Developed financial business applications in Cobol with IMS DB/DC, TSO, ISPF and JCL.

FIRST SECURITY BANK, Salt Lake City, Utah

February 1981 to May 1982

Programmer/Analyst. Developed and maintained bank card tracking and billing application programs in Cobol, and assembler language, with CICS, TSO and JCL.

SAFECO INSURANCE COMPANY, Seattle, Washington

February 1978 to February 1981

Programmer/Analyst. Developed and maintained accounting, insurance agent tracking, and human resource systems in Cobol with IMS DB/DC, TSO and JCL.

EDUCATION:

B.A. in Economics from Brigham Young University, Provo, Utah

▶Jeanette N. Ormond

(b)(6)

E-mail: Ormond@suu.edu

Objectives

Continue my career in managing the technical aspects of University Administrative Systems

Education

BS in Computer Science from Utah State University (June 1975)

MBA from Southern Utah University (May 2002)- High Distinction

Experience

Programmer Analyst (August 1975 – June 1978)

Utah State University (Logan, Utah)

Created new programs and maintained existing programs for the university's finance system.

Programmer Analyst (1981 – 1985)

University of Illinois College of Medicine at Peoria (Peoria, IL)

Maintain all computer equipment. Help researchers organize and analyze data for publications.

Programmer Analyst (September 1986 – August 1987)

Dixie College (St. George, UT)

Worked in the Administrative Computing Department. Applied patches, wrote reports, solved problems, in the Student Information System (used IA-Plus products.)

Programmer/Analyst (September 1987 – June 1994)

Southern Utah University (Cedar City, UT)

Only Programmer at SUU until 1992. Maintained all patches for Student, Finance, and HR systems. Instrumental in the acquisition of FOCUS 4gl reporting language and development of many reporting sub-systems. As other programmers were hired, responsibilities were centered around troubleshooting and managing the Student System (including financial aid). All systems were IA-Plus software.

Director of Administrative Systems (July 1994 – Present)

Southern Utah University (Cedar City, UT)

Manage Systems/Analysts, System Administrator, Database Administrator, and Network specialist in the support and maintenance of university administrative systems, including Student, Finance, HR, and Alumni Development. Maintain hands-on contact with the student system, including patches, reporting, implementing new features. Implemented web registration, admissions, and fee payment. Also implemented Touchnet Cashiering suite, Astra Scheduling, and Blackboard transactional system.

Banner Project Manager (2002 – Present)

Southern Utah University (Cedar City, UT)

While continuing my responsibilities as Director of Administrative Systems, added the responsibility of Banner Project Manager for the conversion of all IA-Plus systems to Sungardhe Banner system. Began with Finance go-live in July 2003, HR December 2004, Admissions September 2004, Registration April 2005, Financial Aid March 2005, and Alumni Development June 2006. Attended most training, both functional and technical. Due to staff turn-over, actually ran all of the finance and student conversions. Worked with various offices to resolve differences and find ways to make Banner work effectively at SUU.

Randy Raphael

randy.raaphael@schools.utah.gov | 801-538-7802 | fax 801-538-7729

- CURRENT APPOINTMENTS** **Statistician (2001) & Research Administrator (2006)**
Financial and Business Services Division, Utah State Office of Education.
- Adjunct Instructor (2007)**
Department of Educational Leadership and Policy, University of Utah.
- EDUCATION** **Ph.D. Coursework in Educational Studies**
University of Utah, 1995-1997. Equivalent to doctoral minor in educational research methodology.
- ML.I.S. (ALA-Accredited), Library and Information Sciences**
Brigham Young University, 1988. Project in Finnish studies bibliography.
- B.A. summa cum laude, Russian**
California State University, Fresno, 1986. Emphasis in Soviet regional studies.
- EMPLOYMENT HISTORY** **2001 – Present: Transferred to Financial & Business Services**
1999 – 2001: Transferred to Evaluation & Assessment
1995 – Present: Promoted to Education Specialist (similar to Research Consultant III)
1994 – 1995: Promoted to Research Analyst III in Planning & Project Services
1989 – 1994: Promoted to Librarian III
1988 – 1989: Entered as Librarian II in Research & Development
- CERTIFICATIONS** **Certified Public Manager**
Utah Department of Human Resource Management, 2005.
- Professional Educator License — Business Information Technology**
Utah State Board of Education, 2002. (Access, Excel, SPSS, SQL, XML Schema)
- SCHOLARSHIP** **Data on the Web: From Relations to XML and Semistructured Data** [book review]. In *Journal of the American Society for Information Science*, 53 (12) [Oct. 2000], 1150-1152.
- Schooling the Poor: A Social Inquiry into the American Educational Experience** [book review]. In *Educational Studies*, 27 (1) [Spring 1996], 27-33.
- COLLEGE TEACHING** **Introduction to Research Design** [instructor]. Educational Leadership and Policy (ELP 6030), University of Utah, Summer 2007.
- Statistical Modeling for Educational Planning** [annual guest lecturer]. Urban and Regional Planning Analysis (URBPL 5020), University of Utah, 2006-Present.
- PROFESSIONAL SERVICE** **National Education Statistics Agenda Committee**
National Cooperative Education Statistics System, 2002-Present.
- Utah Population Estimates Committee**
Governors Office of Planning and Budget, 2006-Present.

**RESEARCH
ADMINISTRATION
TRAINING**

Clinical Research and Post Award Certificates

University of Utah, Research Administration Training Series, 2006-07.

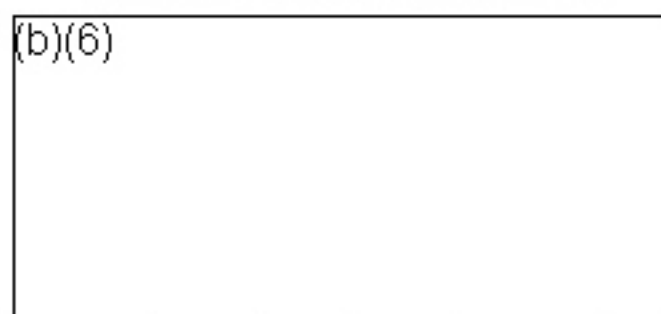
Protection of Human Research Subjects

Collaborative IRB Training Initiative (CITI) via University of Utah, 2006.

Research Administration Body of Knowledge

Research Administrators Certification Council, 2004.

Thomas H. Sachse



tom.sachse@schools.utah.gov

Work Record Analysis

- August 2004 - Present
and Guidance **Utah State Office of Education**, Salt Lake City, Utah
Education Specialist, Secondary Comprehensive Counseling
- February 2001 - August 2004 **Davis Applied Technology College**, Kaysville, Utah
Student Services -College Counselor
Project Coordinator, January, 2002 - July, 2002
- January 1973 - February 2001 **Davis School District**, Farmington, Utah
- Layton High School**, Layton, Utah, 1988 - 2001
Director of Guidance, Counselor.
- Mueller Park Junior High**, Bountiful, Utah, 1981-1988
Counselor (1986-1988). Teacher (1981-1986).
- Millcreek Junior High School**, Bountiful, Utah, 1973- 1981.
Teacher.
- September 1974 - May 1975 **Utah Department of Corrections**
Salt Lake Probation Halfway House
Counselor-intern.

Education

- 1972-1975 **University of Utah**, Salt Lake City, Utah
M.S., 1975, Educational Psychology;
- 1968-1971 **William Paterson University of New Jersey**,
Wayne, New Jersey
B.A., 1971, Social Studies Secondary Education

Gary D. Smith

(b)(6)

Objective:

Employment:

Salt Lake City School District	
Programmer Analyst	1974-1976
Supervisor of Systems and Programming	1976-1979
Supervisor of Data Processing	1979-1982
Director of Data Processing	1982-1996
Director of Information Systems	1996-2003
Executive Director of Information Systems/CIO	2003-Present

Highlight of Employment Accomplishments:

During my thirty plus year career with the Salt Lake City School District I have been directly involved in and responsible for many changes and improvements made to our Business Support Systems.

I have had lead responsibility in leading the District through three major computer system changes with the last one in 2004. Each of these changes resulted in expanded personal opportunity and responsibility as well as an increased opportunity to use of data and information in the operation of the District.

Through the years I have assumed the responsibility for three additional departments and associated functions in addition to the original responsibility of Data Processing.

In 1989 I assumed the responsibility of our Child Accounting Department and merged it with our Data Processing Department. This merger allowed me to establish a higher standard of information usage and reporting in the District. The merger resulted in saving over four full time staff positions including one administrative position. The combining of these two departments allowed for better reporting capability for State, Federal, and District reports. With the enhancements to our information reporting capability the District has taken a leadership role within the State in the use of data for making decisions.

In 1999 I assumed the responsibility for the District Printing and Graphic Department. The department is operated as a small internal service fund of about \$250,000. This Department had been operating at a loss for the prior seven years with losses as high as \$30,000 in a single year. As I integrated this department into Information Systems by making changes in operations and utilizing staff in a more appropriate way I was able to balance the fund and at the same time have provided a more responsive print shop as well strengthened the printing functions of Information Systems.

In 2003 I assumed the responsibility for the District Computer Technology Department.

This department has responsibility for the support, maintenance and replacement of 7000 desktop computers, 80 servers, and all associated network communication equipment and communication lines. The department also supports system wide applications such as e-mail.

I have been responsible for implementing a Geography Information System. The GIS system has allowed me the ability to link our Student Information to graphic mapping system. I have used this GIS system to support the District's efforts in grant writing, boundary changes, and the recent school closure decision.

I have helped create and support much of the school based reporting of assessment and demographic data. Much of this data has been used by the individual schools in the development of their school profiles used in the Eccles/Annenberg reform process.

For a short period of time I was asked to assume the responsibility of Program Evaluation for the District. This assignment required that I contract with outside Evaluators for evaluation Services for the Eccles/Anneberg Challenge Grant, Secondary Schedules, Elementary Literacy and Twenty First Century Learning Plus. The outcome of this responsibility has helped support the Board of Education in reaching decisions that are based on data.

I have served on many shared governance committees during my career with the District. These committees have included but were not limited to Boundary Committees, Facilities Committees, Leadership Academy Planning Committee as well as committees that were formed for the selection of new hardware and software computerized systems.

I have been elected and served as President of the Salt Lake City School District Administrators Association.

Education:

Bachelor of Science Degree in Data Processing from Weber State College 1974
Associate Degree in Information Technologies from Rick College 1971

Professional Associations:

Member of Utah Association of School Business Officials (UASBO)

Suzanne Wayment

(b)(6)

swayment@sa.utah.edu

Summary

- Represents the University of Utah as the transfer articulation specialist.
- Creates, develops, and maintains reference materials used by students, staff, and faculty from the University of Utah, the Board of Regents, and faculty and staff from other USHE colleges and universities in Utah in printed form and on two separate web sites.
- Reviews and organizes relevant data and facilitates discussions and agreements between the University of Utah and the other institutions.
- Supports, evaluates, automates, and streamlines Admissions Office processes.
- Analyzes and tests computer and web related issues affecting the Admissions Office, including testing computer processes for upgrades and fix cycles.

Education

B.F.A. Degree in Art 2000
University of Utah, Salt Lake City, UT

Professional Experience

Project Coordinator, Admissions Office, University of Utah 2000-
Present

- Developed and currently maintains two sets of transfer articulation guides, working with the Board of Regents and representatives from the University of Utah and the other USHE colleges and universities.
- Coordinates, maintains, and updates all information and articulation agreements for the University of Utah in the State Board of Regents website.
- Spearheaded the streamlining of the transfer admissions process by developing the automatic articulation process in PeopleSoft computer system. Maintains the current system.

Committees

USHE State Transfer Articulation Committee

- Represents University of Utah at USHE State Transfer Articulation Meetings
- Web site Subcommittee member

University Academic Advising Committee

- Represents the Admissions Office and collaborates with University College advisors and departmental academic advisors to develop tools to help transfer students.
- Technology Subcommittee member

Trainings

Higher Education User Group Conference – PeopleSoft/Oracle

- Las Vegas, NV March 2005
- Las Vegas, NV March 2002

PeopleSoft Query Training

- Pleasanton, CA September 2004

Affiliations

Member of Utah Association of Collegiate Registrar's and Admissions Officers

Jerry J. Winkler

(b)(6)

EXPERIENCE

August 1997 to Present – Information Technology Manager, State of Utah - Utah State Office of Education

Job Responsibilities: Administrative responsibility for software development, warehouse design as well as state and federal reporting. Coordinate and oversee the development of systems used within the Utah State Office of Education (USOE) including Utah Performance Assessment System for Students (U-PASS), Educator Licensing (CACTUS), Vocational Rehabilitation (IRIS), Program Approval (PATI), Instructional Materials (AIMS) systems and USOE's accounting software (BASE). Manage external systems programming teams. Maintain relationships with Curriculum, Assessment & Accountability, work with District IT offices to facilitate streamlined data collection from each of the public schools districts and charter schools. Work with Federal counterparts to submit state data to US Department of Education (US ED), National Center for Education Statistics (NCES), and many other federal agencies. Work with National MIS reporting committee responsible for defining data elements and format for collection by organizations such as Standard & Poors, School Matters, Bill & Melinda Gates Foundation, etc. Work with administration for creating Requests for Proposal (RFP's) for outside (contractor) system development. Documentation and auditing methods for use in validating all federal and state reporting systems, external school districts and remote rehabilitation sites in order to proactively manage application support and development.

October 1995 to August 1997 – Programmer Analyst, State of Utah – Department of Natural Resources

Job Responsibilities: Project management of several database applications being ported from the mainframe to client/server applications. Perform database analysis and design to determine direction for each application. Develop object oriented code in Visual FoxPro utilizing MS SQL Server for new systems. Design and develop internet accessible world wide web site for the Division of Oil, Gas & Mining. Also porting applications to the web for public access to oil and gas data. LAN Administration of Division servers and software including remote locations across Utah. Design and implement plan for network conversion from NetWare 3.12 to 4.1

January 1995 to October 1995 – Computer Services Director, University of Utah – College of Law

Job Responsibilities: LAN Administration of the College of Law's file servers running Netware. Designed and directed installation of network cabling, hubs, wiring closets, etc. for approximately 400 student desktops. First cabling to student desktops at the University! Coordinated network enhancements with campus-wide LAN Administrators, router managers and the Computer Center. Strategic planning and development for the law

schools admissions, registration and donor client/server applications. Work with campus computer center on UNIX configurations and applications for both e-mail and internet apps.

May 1994 to January 1995 – Senior LAN Administrator/Site Lead for Salt Lake City, Fidelity Investments

Job Responsibilities: Systems administration of twenty-five plus servers for Fidelity's Salt Lake City site. This was a 24 X 7 X 365 shop. Responsible for proactive LAN and WAN management, planning and network system upgrades. Work with Site Lead personnel in Cincinnati, Dallas and Boston centers for strategic planning and development. Project management of roll-outs for new Retail Workstation software, contingency planning, backup and upgrades. Develop and maintain relationships with internal Telecommunications department, Internet Engineering and external vendors. Manage service level agreements with all areas including contracts with Digital, IBM, AST, etc. Write reports on network performance as well as personnel appraisals for Boston management team's review. Coordinate application software evaluation, installation, maintenance and training.

May 1991 to May 1994 – Programmer Analyst, State of Utah – Division of Oil, Gas & Mining

Job Responsibilities: Design, develop and implement programs in FoxPro and other xBase languages for various applications within the division. Develop systems that would replace mainframe and Wang applications. Write custom applications for technical engineering staff working on systems from UNIX to Windows. Hardware and software installation, configuration, training and setup. Maintained backups of all systems. Maintained LAN running on NetWare 3.11 across an Ethernet Network. Manage connections to Office of Surface Mining and other Federal agencies through T1, TCP/IP internet connections.

June 1990 to May 1991 – Systems Administrator, Racore Computer Products

Job Responsibilities: Maintain Racore's seven network servers running NetWare 386 v3.0 and NetWare 286 v2.12. Troubleshoot software and hardware problems. Maintain routers, hubs and wiring running on Token Ring and Arcnet topologies. Write custom programs for inventory and engineering personnel using Clipper, FoxPro and other xBase languages. Trained in-house personnel on network software. Setup modem communications programs for customers to dial in and download driver information.

August 1989 to May 1990 – Software Testing, WordPerfect Corporation

Job Responsibilities: Resolve technical calls on WordPerfect, PlanPerfect, DataPerfect, Library and Office, Specializing in laser printers. Develop documentation for help database. Perform regular training sessions for in-house personnel regarding use of new software and peripherals.

August 1983 to July 1989 – Microcomputer Specialist/Programmer, McGraw-Hill, Inc.

Job Responsibilities: Design, develop and program legal applications software using C, Pascal and Basic languages. Coordinated development of various legal applications within the programming staff (Lead Programmer). Developed tracking systems in dBase for technical support staff. Installed the department's first local area network system. Performed training classes on legal software, spreadsheets, word processors and DOS for technical support group. Coordinate the training effort of McGraw-Hill's field sales force regarding the use of microcomputers and software. Wrote custom applications for other departments using relational database management systems (RDBMS) software. Wrote Job Control Language to implement COBOL and Pascal programs on mainframe. Also worked with CICS and IDMS.

EDUCATION

University of Utah – BS Anthropology

Training in Powerbuilder, Sybase SQL Server (ASE), Windows, Visual FoxPro, Visual Studio, Visual Basic, Visual C++, COGNOS, ASP, .NET

Zenger-Miller Frontline Leadership Classes

Novell Network Management classes

Seminars on Security, Network Management, Software Development Life Cycle, Mainframe JCL, IDMS, CICS, Natural

SKILLS

Programming - Object Oriented programming, Client/Server, PowerBuilder, Visual Studio, .NET, Web Services, XML, Warehouse development, Visual Basic, FoxPro, C++, SQL Server, Java, xBase languages

Extensive knowledge of networks, PCs and peripherals

Local Area Networks - Novell NetWare, Cisco Routers, TCP/IP, SNMP, Ethernet, IPX/SPX, Backup and Recovery procedures

Miscellaneous Software – FrontPage, Word, WordPerfect, MS Project, Office, Outlook, etc.

REFERENCES

Available upon request

Appendix A – USRE Timeline

Project Start: Mon 10/1/07
Project Finish: Fri 12/31/10

ID	Task Name	Duration	Start	Finish
1	RFP Process	200 days	Mon 5/28/07	Fri 2/29/08
2	Develop RFP	45 days	Mon 5/28/07	Fri 7/27/07
3	State Purchasing Review	25 days	Mon 7/30/07	Fri 8/31/07
4	Vendor Review and Selection	75 days	Mon 9/3/07	Fri 12/14/07
5	Final Contract	52 days	Thu 12/20/07	Fri 2/29/08
6	LEA SIS	620 days	Mon 3/31/08	Fri 8/13/10
7	LEA SIS Gap Analysis	165 days	Mon 3/31/08	Fri 11/14/08
8	Data Elements/Objects Analysis	60 days	Mon 3/31/08	Fri 6/20/08
9	SIF infrastructure/ZIS Analysis & Design	25 days	Mon 6/23/08	Fri 7/25/08
10	SIF Agent Analysis & Design	105 days	Mon 6/23/08	Fri 11/14/08
11	SIS Modifications Analysis & Design	105 days	Mon 6/23/08	Fri 11/14/08
12	LEA SIS Development I	500 days	Mon 7/7/08	Fri 6/4/10
13	SIF Agent/ZIS Development	500 days	Mon 7/7/08	Fri 6/4/10
14	SIS Modifications/events	500 days	Mon 7/7/08	Fri 6/4/10
15	LEA SIS Development II	535 days	Mon 7/28/08	Fri 8/13/10
16	ZIS Installation/testing	390 days	Mon 7/28/08	Fri 1/22/10
17	SIF Agent Installation	490 days	Mon 8/18/08	Fri 7/2/10
18	Integration Testing (Agent, Brokerage, ZIS)	490 days	Mon 9/8/08	Fri 7/23/10
19	LEA Training 16 days * 10 SISs	480 days	Mon 10/13/08	Fri 8/13/10
20	Agent/ZIS Stress Testing (Agent, Brokerage, ZIS)	45 days	Mon 2/1/10	Fri 4/2/10
21	Transcript Brokerage Service	370 days	Mon 11/10/08	Fri 4/9/10
22	Transcript Brokerage service I	50 days	Mon 11/10/08	Fri 1/16/09
23	Evaluation of Options	10 days	Mon 11/10/08	Fri 11/21/08
24	Design of Infrastructure	15 days	Mon 11/24/08	Fri 12/12/08
25	Design of Brokerage service	25 days	Mon 12/15/08	Fri 1/16/09
26	Transcript Brokerage service II	35 days	Mon 1/26/09	Fri 3/13/09
27	Installation and configuration	15 days	Mon 1/26/09	Fri 2/13/09
28	Integration Testing of LEA to LEA transactions	20 days	Mon 2/16/09	Fri 3/13/09
29	Transcript Brokerage service III	50 days	Mon 2/1/10	Fri 4/9/10
30	Stress Testing/tuning	50 days	Mon 2/1/10	Fri 4/9/10
31	USOE Clearinghouse	245 days	Mon 6/30/08	Fri 6/5/09
32	USOE Clearinghouse I	49 days	Mon 6/30/08	Thu 9/4/08
33	Database Analysis & Design	15 days	Mon 6/30/08	Fri 7/18/08

34	SIF Infrastructure/ZIS Analysis & Design	3 days	Mon 7/21/08	Wed 7/23/08
35	SIF Agent Analysis & Design	24 days	Mon 8/4/08	Thu 9/4/08
36	USOE Clearinghouse II	165 days	Mon 7/28/08	Fri 3/13/09
37	SIF Agent Development	100 days	Mon 9/8/08	Fri 1/23/09
38	Clearinghouse Database Modifications/events	130 days	Mon 7/28/08	Fri 1/23/09
39	SIF Agent Installation	15 days	Mon 1/26/09	Fri 2/13/09
40	Integration Testing (Agent, ZIS, LEAs)	20 days	Mon 2/16/09	Fri 3/13/09
41	USOE Clearinghouse III	60 days	Mon 3/16/09	Fri 6/5/09
42	Staff Training	10 days	Mon 3/16/09	Fri 3/27/09
43	ZIS/Agent Stress Testing	10 days	Mon 4/6/09	Fri 4/17/09
44	Clearinghouse/Warehouse Integration testing	15 days	Mon 4/20/09	Fri 5/8/09
45	Clearinghouse/Warehouse Q/A reporting	20 days	Mon 5/11/09	Fri 6/5/09
46	Utah Postsecondary Institutions	405 days	Mon 9/1/08	Fri 3/19/10
47	Utah Postsecondary Institutions Survey	55 days	Mon 9/1/08	Fri 11/14/08
48	Assessment & Inventory of SIS readiness for e-transcripts	35 days	Mon 9/1/08	Fri 10/17/08
49	Development of plan for e-transcript accommodations	20 days	Mon 10/20/08	Fri 11/14/08
50	Utah Postsecondary Institutions I	15 days	Mon 8/3/09	Fri 8/21/09
51	Integration Testing of LEA to postsecondary transactions	10 days	Mon 8/3/09	Fri 8/14/09
52	Integration Testing of postsecondary to USOE Transactions	5 days	Mon 8/17/09	Fri 8/21/09
53	Utah Postsecondary Institutions II	15 days	Mon 3/1/10	Fri 3/19/10
54	Full Production Monitoring & Evaluation	15 days	Mon 3/1/10	Fri 3/19/10
55	EDFacts SIF Interface	300 days	Mon 10/6/08	Fri 11/27/09
56	EDFacts SIF interface I	65 days	Mon 10/6/08	Fri 1/2/09
57	Meeting with USED/NCES	12 days	Mon 10/6/08	Tue 10/21/08
58	Assess Agent Requirements	28 days	Wed 10/22/08	Fri 11/28/08
59	Assess SIF Infrastructure USOE & NCES	25 days	Mon 12/1/08	Fri 1/2/09
60	EDFacts SIF interface II	40 days	Mon 9/14/09	Fri 11/6/09
61	USOE to EDFacts/UEN batch transaction testing	25 days	Mon 9/14/09	Fri 10/16/09
62	EDFacts Results/Reports Q/C	15 days	Mon 10/19/09	Fri 11/6/09
63	EDFacts SIF interface (Utah only)	15 days	Mon 11/9/09	Fri 11/27/09
64	Full Production Monitoring & Evaluation	15 days	Mon 11/9/09	Fri 11/27/09
65	Evaluations	588 days	Wed 10/1/08	Fri 12/31/10
66	Formative Evaluations	261 days	Wed 10/1/08	Wed 9/30/09
67	Summative Evaluations	1 day	Fri 12/31/10	Fri 12/31/10

Appendix B

Exhibit 1 The Current Status of Utah's SLDS

Technical

1 Data Quality Components

1.1 Creating and Tracking a Unique, Permanent Statewide Student Identifier

All Utah local education agencies (LEAs) are required to acquire or look-up existing statewide student identifiers (SSIDs) for all their students. Every time a student enrolls in an LEA the LEA must retrieve an existing SSID for the student or create a new SSID in the event of a student that is new to Utah public education. Every time a primary student attribute changes the LEA must also change that attribute in the state master database. At various times in the year all of an LEA's students SSIDs are validated against the master database to ensure all attributes still match. All student level data (e.g. enrollments, courses, assessments) submitted to the USOE must contain the SSID for each student.

1.2 Based on Needs at All Levels

Since Utah's longitudinal enterprise architecture has evolved over a span of seven years there was never an initial single point in time at which a comprehensive analysis was performed. However as components of the current complete system have been added on comprehensive analyses have been performed.

1.3 Data Elements

Included are all data elements required for reporting under the Elementary and Secondary Education Act (ESEA) of 1965, including all data elements required for NCLB, the ED Facts reporting system. Utah has continually met ESEA and NCLB reporting requirements. Utah is continuing to build its EDEN/ED Facts capacity and expects to be fully compliant by the 2008-09 school year.

1.4 Data Collection

The majority of the student level data collecting is done via the USOE Clearinghouse and assessment results/scores from numerous standardized testing instruments. Other datasets such as USOE School Finance and Statistics (aka S3) Website and Computer Assisted Credentials for Teachers in Utah Schools (CACTUS) system serve vital functions as well. There are all other minor data collecting activities and mechanisms of the USOE. Some of these minor datasets are already included in the USOE Data Warehouse, eventually most if not all will be.

1.5 Longitudinal Analysis

Utah's system allows for longitudinal analysis of student achievement growth and program evaluations. All Utah enterprise data is stored in the USOE Data Warehouse as annual collections. Using statewide student and educator IDs and common code sets such as the core curriculum, the Warehouse is well positioned to allow for analyses over time.

1.6 Relational Database

All Warehouse data are stored in normalized, relational table structures with high levels of referential integrity. These tables offer great flexibility in linking or joining data from many sources. Data from all feeder-systems (e.g. assessments, USOE Clearinghouse) are either entered into the Warehouse as periodic individual student level datasets or are accessible

through cross-database joins. This is the case with the educator licensing database called CACTUS.

1.7 Data Model and Dictionary, Business Rules, Quality Assurance

1.7.1 Data Dictionary

The Clearinghouse Update Transactions document serves as the data dictionary at the LEA level while the USOE Data Warehouse data model and dictionary at the USOE level describes all Warehouse data sets that are collected throughout the year as well as the schedules for those collections. There are highly defined interfaces through which the collected data are defined along with the mechanisms for doing such collections. All database loads are controlled by numerous quality assurance procedures. Errors that are reported must be addressed by responsible parties either within the USOE or at the LEAs

1.7.2 Business Rules

All of the data collections have definitions, data formats, acceptable values, and missing data options. Most are sufficiently rigorous and do not allow for free-form input of data. The Warehouse dictionary has an extensive collection of referential integrity rules and business rules as does the Clearinghouse.

1.7.3 Data Editing

Automatic data editing is employed by all online data entry systems. The collections that use batch updating all require that data pass through edit programs that produce lists of error reports. In some cases these reports are run both at the LEA and USOE levels. Comparisons to prior year data within the USOE Data Warehouse which combines many of these data sets into one set of central databases are available.

1.7.4 Correct Utilization of Data by Users

The USOE currently provides detailed student level data sets extracted from the data Warehouse. These are relational tables that are easier to understand and manipulate than the complex data Warehouse and thus provide part of the presentation layer for that Warehouse. All fields provided in such data sets are defined in an accompanying data dictionary and table documentation.

2 Security and Confidentiality

2.1 FERPA

Procedures are in place for protecting the security, confidentiality, and integrity of data, which includes ensuring that individually identifiable information about staff and students remains confidential in accordance with the Family Educational Rights and Privacy Act (FERPA) and Utah's Government Records Access Management Act or GRAMA.

The USOE has published FERPA policies established by the USOE Computer Service's Section in conjunction with the USOE legal staff. These policies are based on the National Confidentiality Guide of the National Forum on Education and on the Technology Security Standards of the National Forum on Education. Copies of the "Confidentiality Guide have been widely distributed through Utah's LEAs and training seminars have been conducted by USOE staff on these topics.

2.2 Relational Database Security

The USOE data Warehouse is based on a secure Sybase database management system which allows only limited direct access by select IT staff (some USOE Computer Services and Assessment and Accountability staff) to confidential data. Anyone else must be commissioned for some type of research project by the USOE in order to acquire confidential data. Any such

requests must be approved in writing by an associate superintendent. All data that is transmitted between the LEAs and the USOE are done so via secure FTP services.

Such policies coupled with FERPA awareness training at both the state and LEA levels ensure the security of the data. The statistical reliability of reports and quality assurance of any released data are major objectives of the Results Team in the Assessment and Accountability section of the USOE.

2.3 Student Records Exchange

At the present time the capacity to exchange student data across institutions within the State and with institutions in other States, is limited but is in conformance with FERPA.

At the current time student records are electronically exchanged only between the LEAs and USOE.

3 Data Warehouse

3.1 Linked Data

A data Warehouse for managing and storing longitudinally linked data and making them accessible to teachers, schools, districts, and researchers has been maintained by Utah since 2002-03. This is a custom Warehouse build to meet Utah's needs and is continually evolving. Not all state level public education data are maintained in the Warehouse, but the larger more integrated datasets are. Collection of data at an individual level greatly improves data consistency since business rules can be applied uniformly to all detailed data.

3.2 Data Collection

The data Warehouse helps to minimize the frequency and complexity of data collection, improve data quality, reduce redundancy and provide a foundation for useful information. The foundation of the Warehouse is a staging database into which all datasets are imported and joined relationally. The raw data are fully normalized and strict integrity rules are enforced. There are no "orphan" records or rows. The data Clearinghouse, also described above, is a major source of data contributing to the content of the Warehouse.

3.3 Key activities

A number of key activities must take place for the Warehouse to operate successfully. These include:

- 3.3.1** Clearly communicate to all data providers what data are expected and at what times during the year.
- 3.3.2** Defined each data element must to be clear and unambiguous.
- 3.3.3** Coordinate the accurate, timely and complete collection of data from numerous sources.
- 3.3.4** Maintain a secure and useable infrastructure to house and share the data.
- 3.3.5** Provide these data, along with tools, for research and analysis.

3.4 Referential Integrity

Data in the Warehouse are related in many ways. For example, every course record is linked to some student and every test concept and objective has a test. For each student in each class taught in a school year, the Warehouse stores: teacher, credits attempted, entry date, school, section, period, days attended and core code. For each student in the state over 30 enrollment characteristics are tracked. These include: entry date, exit date, SSID, local student id, exit code(s), migrant status, LEP codes, membership days and chronically absent information, to name a few.

3.5 Testing Profile

A complete historical statewide testing profile is maintained for each student including:

proficiencies, participation codes, scaled scores, raw scores, test language, all test concepts with concept scores and all objectives with objective scores.

3.6 Aggregate Data

For each school the Warehouse contains such data as: aggregate and disaggregated enrollments, staff counts and qualifications, disciplinary counts, fee waiver statistics, various aggregated standardized test scores (e.g. CRT, SAT, ACT), and class sizes.

3.7 Versatility

The data are organized in such a way that there are hundreds of possibilities for additional sorting, filtering, joins and intersections of the data. In some cases de-normalization is done for performance purposes as reports and exports are produced. The Warehouse architecture is also very expandable in both content and size.

3.8 The data Warehouse was tested internally and externally in the summer of 2003. Internally, extensive validation efforts were carried out by developers who conducted walkthroughs of all code and manually cross checked random samples of output. The data that was extracted along with reports were sent to LEAs for further analysis and validation.

3.9 History

The Warehouse went live in the summer of 2003 and began producing reports such as AYP, U-PASS and CRT profiles in the fall of 2003. As of October 1, 2004 the Warehouse was fully populated with 2002-2003 and 2003-2004 data. AYP and U-PASS reports, district reports and other research extracts are made available to the LEAs and others as required. The data Warehouse now contains over 45 tables, 300 million rows, with approximately 3 billion pieces of data.

4 Secure Data Marts and Other Data Extracts (see Appendix B: Exhibit 2)

4.1 The USOE provides secure access to data marts (Cognos Cubes, data extracts and Websites) as well as the means for providing data, reports, and ad hoc analyses to inform decision-making of key stakeholders, including: teachers, administrators, state and local officials. Utah currently maintains a public Website with district and school level data available for school to school comparisons and comparisons across years. This Website can be entered at the LEA school level where data can be analyzed and drilled into for aggregate and more detailed levels of data. LEAs are provided numerous data files from the Warehouse that LEAs integrate with other student information system (SIS) data to assist with classroom management and student achievement. Utah also produces Cognos cubes, custom file extracts and relational table structures for internal and external researchers.

4.2 While the USOE data Warehouse is a highly normalized relational database. A number of Cognos OLAP cubes at the state and LEAs have been constructed to form the data mart components of the presentation layer. Besides the cubes, there are also fixed format and relational extracts that provide data directly to LEAs for use as they see fit. Often the LEAs make use of the same dimensional modeling tool (Cognos) for which Utah has a statewide public education license.

4.3 LEAs within Utah have formed a healthy data driven decision support users group (the Cognos Users Group) led by the USOE's Results Team to share best practices for the use of longitudinal student level data employing Cognos or other applicable tools. The Results Team and user's group also construct models and templates for Cognos cubes and reports for use by LEAs and the USOE. These analysis tools combine data sets from both the LEA and USOE at the student levels. Assessments are a pivotal component of these data collections.

5 Reporting

Automated reporting, with a well defined calendar and formats ensures timely and accurate data for local, State, and Federal reporting. Utah has committed to ED Facts reporting. Utah has developed sophisticated software to produce many accountability reports, including AYP, EDEN, U-PASS, as well as AMAO and other NCES reports from the Warehouse. Various calendars of data collection schedules from Utah LEAs are published by the USOE. Where applicable, all local, State and Federal reports are made from the same data sources. In all cases these data collections are maintained for multiple years.

6 Research and Analysis (see Appendix B: Exhibit 3)

- 6.1** Utah Code 53A-1-301(3)(e) requires the State Superintendent of Public Instruction to organize data into a system to facilitate the “evaluation of educational policy and program effectiveness and to sponsor research on improved methods of analyzing education data.” To this end, the Superintendent has appointed a research administrator, who is nearing completion of negotiation of a cooperative agreement with the Utah Education Policy Center at the University of Utah to utilize the SLDS in building and managing a set of SPSS data files, a codebook, and a Research Associates program to support multilevel longitudinal research on Utah public education.
- 6.2** The USOE longitudinal data has the ability to support analyses and research to evaluate the effectiveness of education related programs and thereby improve student learning and close achievement gaps. Numerous data sets such as those mentioned above are used at all levels from the legislative analysis’s office to the classroom to measure individual and state level performance.
- 6.3** Utah is continually constructing an ever expanding presentation layer of data tables OLAP cubes, reports and extracts that are used for construction of analytic and additional reporting purposes. What this presentation layer represents is the same data that are in the Warehouse, but in a format that’s easier to understand for a person (often a non-programmer) needing to construct reports, do analyses or extract data. These data are securely available to qualified persons in the USOE, LEAs, and other research organizations. School, LEA and state level data are available to the public.

Governance and Policy

1 Governance Structure (also see Section 5, *Management Plan* in the Project Narrative)

Since Utah has had some operational components of a statewide longitudinal data system since 2002-03. Overall governance is lead by the USOE Data Warehouse Group at the USOE with input from the LEAs. All LEAs are invited to provide input during the last Warehouse Group weekly meeting of the month. All LEAs gather and are formally represented during two semi-annual data conferences jointly sponsored by the USOE and the Technology Coordinator Council (TCC). Besides IT leaders, all of these meetings are frequented by curriculum and assessment personnel from both the USOE and LEAs.

2 Communication Infrastructure: USOE

2.1 Data Warehouse Group

From its beginning in year 2000, the Clearinghouse and later the Warehouse have been managed around dynamic and collaborative processes. Weekly Thursday afternoon meetings of the Data Warehouse Group take place among USOE staff to discuss data needs including new business rules, new data definitions, requirements and their relationships.

2.2 Cost Sectional Meetings

While monthly meetings and semi-annual data conferences provide much of the communication infrastructure for current statewide longitudinal data systems activity, members of the USOE Data Warehouse Group frequently attend meetings of Assessment, Curriculum, and Special Education directors to discuss and explain longitudinal system principles, goals and improvement projects.

3 Communication Infrastructure: LEA

3.1 Clearinghouse Specification

Currently, there are three major ways of communicating with the LEAs concerning the collection and dissemination of all data describing students, classrooms, and schools. The first is via the USOE Computer Services' Clearinghouse specification which, among other data elements, describes in detail, how data such as individual student enrollment, membership and individual course taking records including grades, credits membership and attendance are collected. It also describes the validation process, formatting, transmission and reporting schedules for such data. Since they are so closely related, the Warehouse website also contains important information about the Clearinghouse and data collection in general, including all the business rules and a detailed Warehouse data dictionary.

3.2 Meetings Conferences

The second method of collaboration is with fall and spring data meetings or conferences during which all data collection methods and processes are presented to districts along with important changes. Such meetings are intended to be idea and information gathering in nature as much as a forum for the USOE to disseminate technical change information to the LEAs. Here, the USOE tries to understand various LEA needs and limitations in order to make the data collection process as efficient as possible for all concerned while at the same time collecting quality data in a timely manner. The USOE Warehouse website contains links to the agendas and the content of all such meetings since they were begun in the fall of 2002.

3.3 Expanded Data Warehouse Group Meetings

Third, on the last Thursday of the month an expanded meeting is held to which LEA IT staff and others have a standing invitation. Although these are called Warehouse meetings, the Clearinghouse is very prominent in discussions since it is the source of all of the Warehouse's student level demographic, enrollment and course data. Those discussions usually center on business rules, data sufficiency, data formats, collection schedules and the conversion of statutes and board rules into data collection rules and processes.

3.4 Results Team

The USOE's Assessment and Accountability Section contains a Results Team group. This Results Team works closely with LEAs to provide consultation and value added data from the USOE's data Warehouse to assist in district and building level data driven decision support reporting and analysis.

4 Communication Infrastructure: Postsecondary

The USOE Computer Services section along with the USOE Curriculum section works closely with the Utah State Board of Regents to facilitate student records exchanges between LEAs and postsecondary schools as well as the Utah Board of Regents (USBOR) and the USOE. The USBOR houses a Warehouse for Utah postsecondary student data. Unfortunately matching between these database is currently not done by Utah SSID but instead on student attributes such as name, date of birth and school of enrollment numbers.

5 Facilitation of Rigorous Analyses

5.1 Research Disks Data are accessed for analyses from three major directions. First, LEAs are provided all the detailed data available from the Warehouse that are applicable to current and former students of the LEA. These extracts are known as “research disks” Once the LEA securely transfers and stores the data they use it in a variety of ways. While they generally parse it into datasets for individual schools and classrooms, often after being combined with LEA level SIS data, these data may also be used as a rich resource for LEA-wide data analyses. In this mode, LEAs may also request special dataset extracts from the USOE including but not limited to statewide data.

5.2 USOE Data Stewards & Commissioned Research

Second, USOE staff and commissioned researchers can either directly extract data from the Warehouse or request qualified USOE staff to do so for them. Some USOE staff, generally sectional data stewards, have continuous access to these data while others, including commissioned researchers must complete a formal request. If any data are provided in these ways individually identified data are always de-identified unless the Superintendent’s approval is obtained to conduct some type of survey with the aid of such data.

5.3 Independent Research

Third, independent research groups, think tanks and national reporting services can ask for Warehouse data. No individually identifiable data are ever given to such entities and such entities must be given formal approval by the Superintendent for any individual but de-identified data.

6 Long-term Sustaining Plan

Currently, the technical components of Utah’s SLDS are being sustained with state and local funding.

7 Evaluation

Currently there are few formal review procedures in place for the overall Utah SLDS. The project in this application will address some important additions to those procedures. Currently data validation and evaluation of the entire process are done via intermediate edit reports that internally check data within the USOE Data Warehouse for consistency. There are also various assurance reports and documents produced for the LEA so they can verify data. Just general overall process audits are performed.

Appendix B: Exhibit 2

USOE Decision Support & Data Warehousing

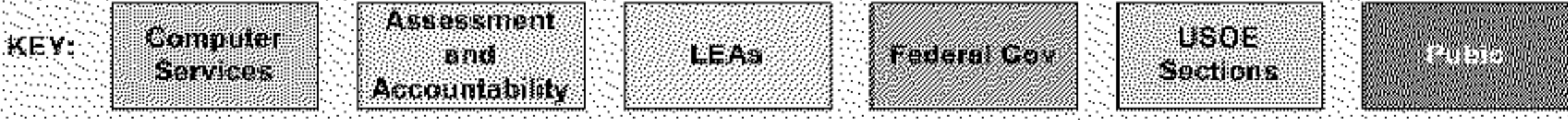
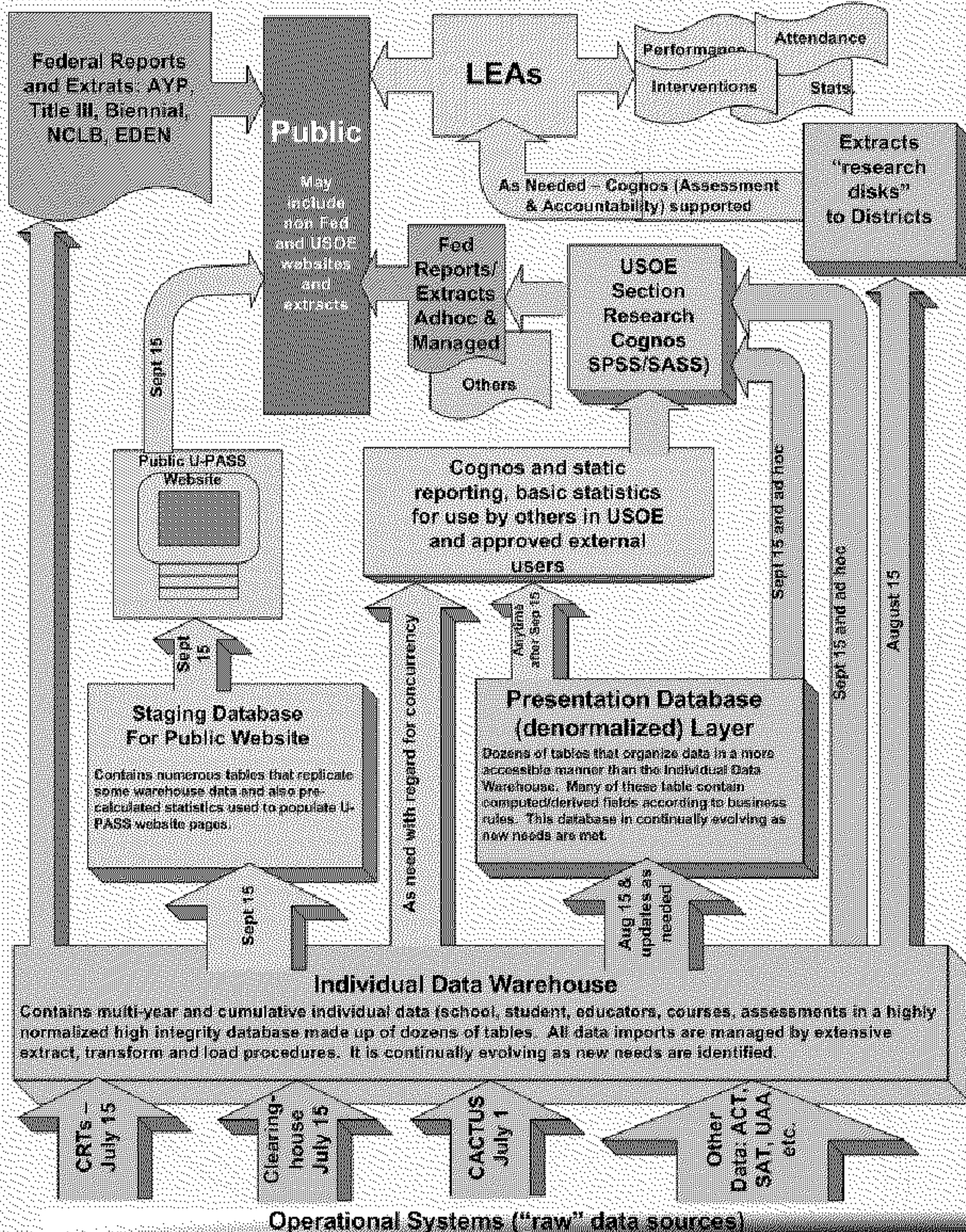


Exhibit 3 Utah SLDS High Level Data Flows for Decision Support

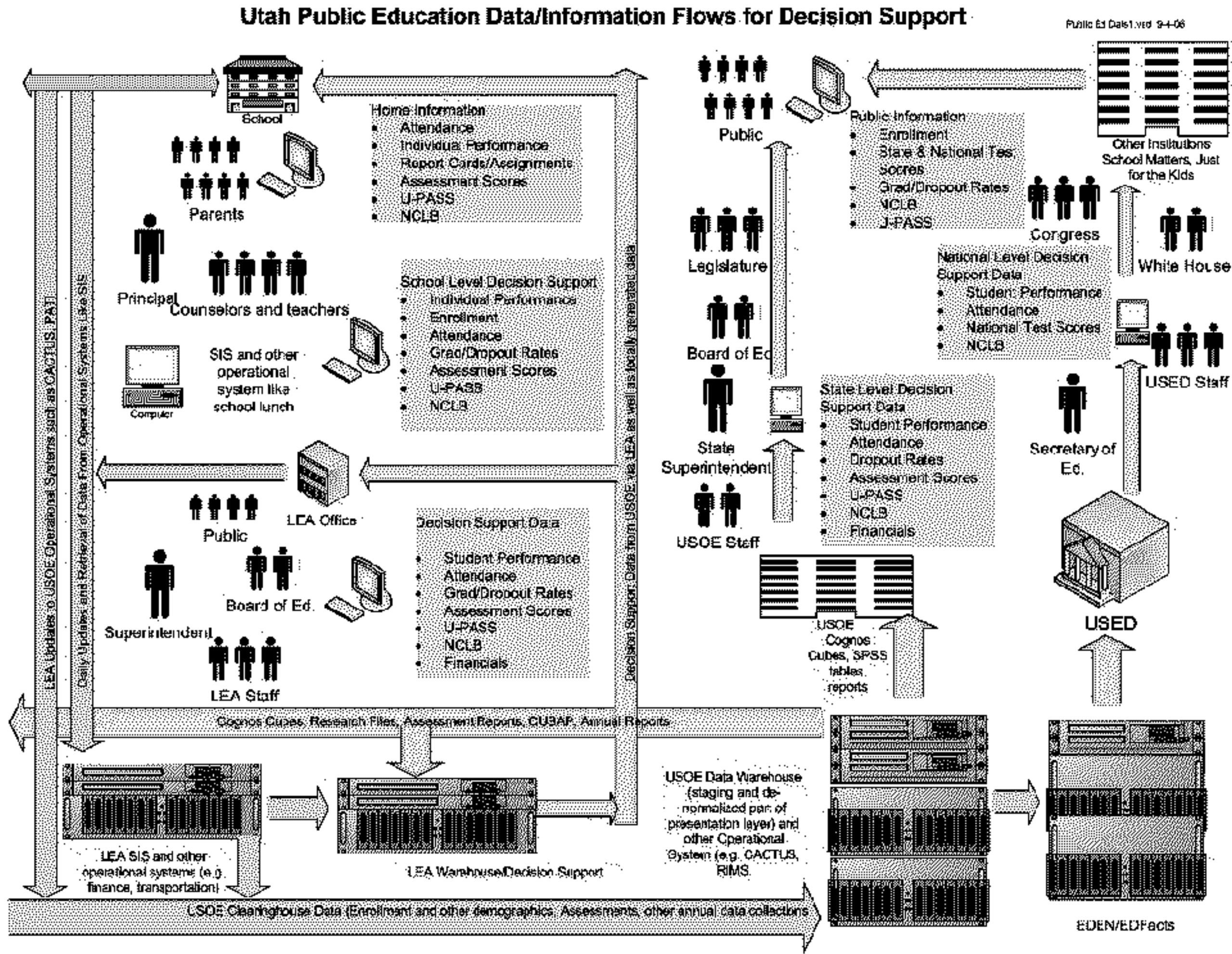


Exhibit 4 High Level USRE Model

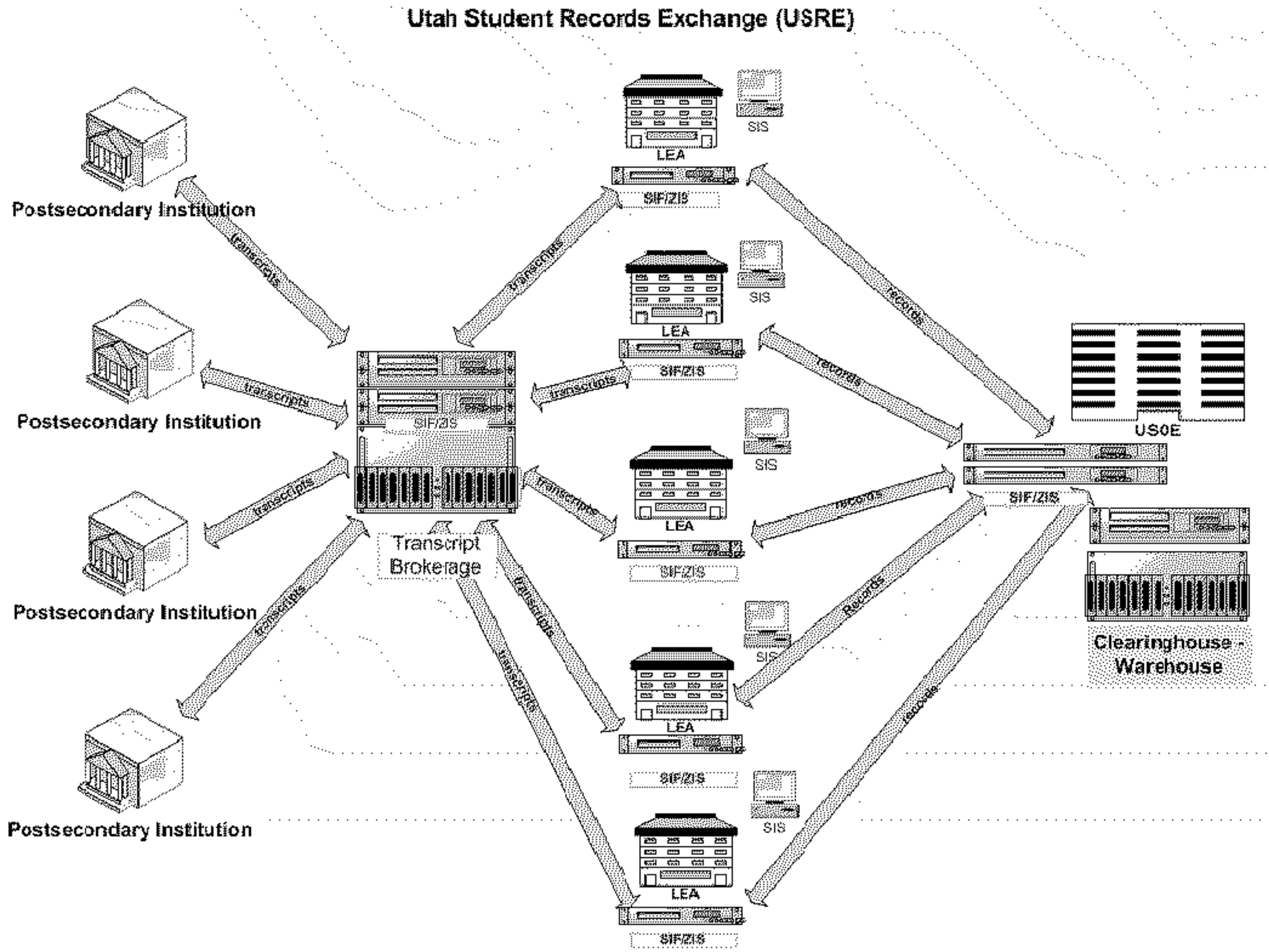


Exhibit 5

USRE SYSTEM MANAGEMENT ORGANIZATION ACTUAL PERSONNEL ASSIGNMENTS SUBJECT TO MORE DETAILED ANALYSES

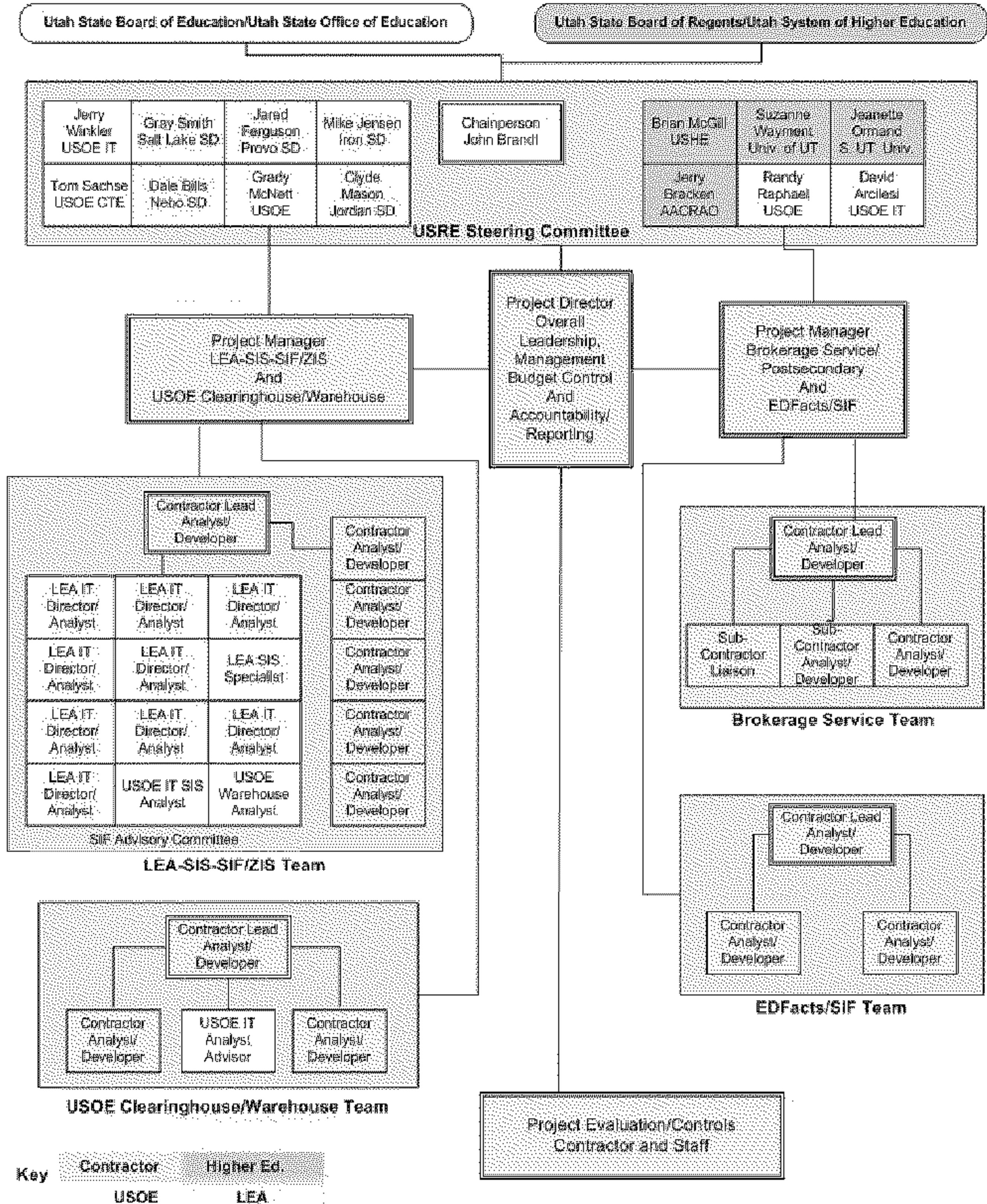


Exhibit 6
Letters of Support

UTAH STATE OFFICE OF EDUCATION

Leadership... Service... Accountability

Patti Harrington, Ed.D., State Superintendent of Public Instruction
Voice: (801) 538-7500 Fax: (801) 538-7521 TDD: (801) 538-7878
250 East Cesar E. Chavez Blvd. (500 South) P.O. Box 144200 Salt Lake City, UT 84114-4200

March 1, 2007

Dr. Patti Harrington
State Superintendent of Public Instruction
PO Box 144200
Salt Lake City, UT 84114

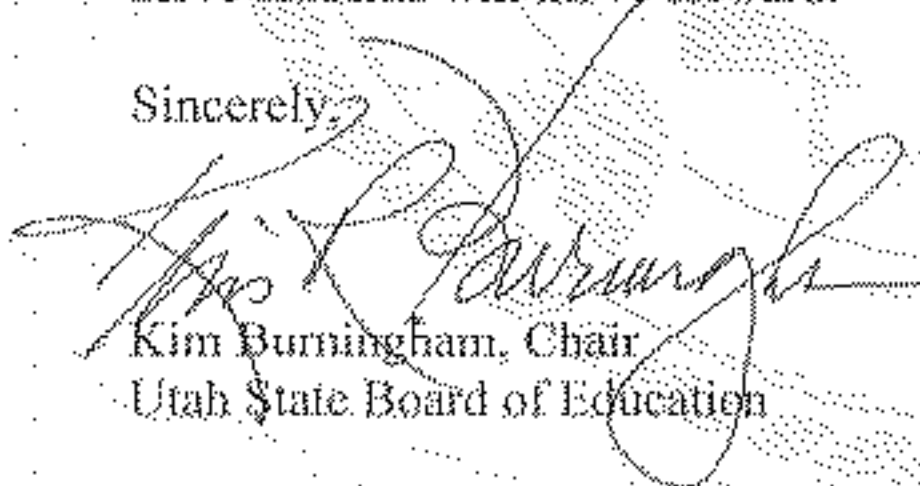
Dear Dr. Harrington:

The Utah State Board of Education is pleased to support the Utah Student Records Exchange initiative. The USRE system will provide valuable services and benefits for Utah's statewide longitudinal student data. Such services will have a positive impact on LEAs, postsecondary institutions, the Utah State Board of Regents and Utah State Office of Education.

We understand the USRE will improve data quality, allow for more accurate and efficient exchange of student records within the public education system, and allow the electronic transfer of transcripts to Utah postsecondary institutions and most other private and public postsecondary institutions. In addition, the system will facilitate more accurate reporting and information about transfer students, dropouts, student placements, and interventions.

The State Board wholeheartedly supports the application for the Statewide Longitudinal Data Systems/Utah Student Records Exchange grant, and is hopeful this effort to better serve students will move forward.

Sincerely,


Kim Burningham, Chair
Utah State Board of Education

UTAH STATE BOARD OF EDUCATION

12.20

Kim R. Burningham, Chair • Janet A. Cannon, Vice Chair • Dixie Allen • Laurel Brown • Mark Cluff • Bill Colbert • Tispnas A. Gregory • Greg W. Haws • Michael G. Jensen
Randall A. Mackey • Cyndee Miya • Dennis R. Merrill • Richard Moss • Josh M. Reid • Debra G. Roberts • Richard Sadler • Marlon C. Snow • Terese L. Theurer



State Board of Regents
Board of Regents Building, The Gateway
60 South 600 West
Salt Lake City, Utah 84101-1289

Phone 801.321.7101
Fax 801.321.7199
TDD 801.321.7130
www.utahsbr.edu

March 13, 2007

Dr. Patti Harrington
State Superintendent for Public Instruction
Utah State Office of Education
P O Box 144200
Salt Lake City, UT 84114-4200

Dear Superintendent Harrington:

On behalf of the Utah System of Higher Education and State Board of Regents, I would like to express support of the Utah Student Records Exchange project. We understand the USRE system will provide valuable services and benefits for collecting and retrieving student data, which will be useful for the colleges and universities in Utah, as well as the public (K-12) schools.

In particular, the common transcript brokerage service will allow the State Board of Regents to electronically capture Utah State Office of Education student identifiers as we move to integrate secondary and postsecondary data warehouses/information systems.

Accuracy of data, as well as the ability to quickly retrieve that information, is a high priority for the State Board of Regents. We are very pleased to support the USRE project because it will enable Utah's students to experience a true continuum of education from kindergarten through college.

Sincerely,

Richard E. Kendell
Commissioner of Higher Education

REK:jc



UTAH EDUCATION NETWORK
WWW.UEN.ORG

March 8, 2007

Dr. Patti Harrington
State Superintendent of Public Instruction
Utah State Office of Education
250 East 500 South
Salt Lake City, UT 84114-4200

Dear Dr. Harrington,

As the state's educational network, the Utah Education Network (UEN) strongly endorses and supports the efforts of the Utah State Office of Education to expand and improve the Utah Student Records Exchange (USRE). The benefits that would result from the USRE will be advantageous for students, parents, teachers, administrators, and for Utah higher education.

Specifically, we know that the USRE will assure that national standards and standard software, servers and trained staff will be employed for student record/transcript exchanges that will result in more accurate, timely and efficient exchange of student records within the public education system. USRE will also provide a common transcript brokerage service that will allow Utah K-12 public education to electronically send transcripts to any Utah public postsecondary institution and most other private and public postsecondary institutions both within the state of Utah and out of state. Additional benefits will also result from expanding and improving USRE.

Services provided by UEN will contribute to the success of this project. UEN manages the statewide Wide Area Network connecting all public universities, colleges, K-12 schools and libraries in the state of Utah. This powerful, reliable, and secure network provides high speed connectivity to the Internet for all public schools and universities and colleges. The network will allow schools districts, the Utah State Office of Education and Utah's colleges and universities to share student records as proposed in the grant application.

We also believe that UEN serves as a key organizational focal point that will aid in the development and implementation of the USRE. UEN builds strong collaborative partnerships around projects that are mutually beneficial to education stakeholders by convening public education, higher education, and state government to serve the technical and instructional needs of the state. Our governing board, the UEN Steering Committee, is appointed by the Governor, and we benefit from managing a public TV station, KUEN which brings national connections to our organizational partnerships.

Sincerely,

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

Michael Petersen
Executive Director

DOLORES DORE ECCLES BROADCAST CENTER UNIVERSITY OF UTAH 101 WASATCH DRIVE SALT
LAKE CITY, UTAH 84112-1792



Utah School Superintendents Association

Steven H. Peterson, Ed.D., Executive Director
860 East 9085 South • Sandy, UT 84094
(801) 566-1207 • Fax (801) 561-4579
email address: speterson@usba.cc

March 1, 2007

Dr. Patti Harrington
State Superintendent of Public Instruction
PO Box 144200
Salt Lake City UT 84114

Dear Dr. Harrington:

As a major stakeholder in the Utah Student Records Exchange initiative the Utah School Superintendents Association would like to express its full support of the project. The USRE system will provide valuable services and benefits for Utah's statewide longitudinal student data. Such services will have a positive impact on LEAs, postsecondary institutions, the Utah State Board of Regents, and Utah State Office of Education.

We understand the USRE will improve data quality, allow for more accurate and efficient exchange of student records within the public education system, and allow the electronic transfer of transcripts to Utah postsecondary institutions and most other private and public postsecondary institutions. In addition, the system will facilitate more accurate reporting and information about transfer students, dropouts, student placements, and interventions.

The Superintendents Association wholeheartedly supports Utah's application for the Statewide Longitudinal Data Systems/Utah Student Records Exchange grant, and is hopeful this effort to better serve students will move forward.

Sincerely,

UTAH SCHOOL SUPERINTENDENTS ASSOCIATION

Steven H. Peterson
Executive Director

SHP/al

Project Narrative

Other Narrative

Attachment 1:

Title: Pages: Uploaded File: **3068-Mandatory_524_Section_C.pdf**

ED 524 Section C - Budget Information Non-Construction Programs

Sub-Projects	FY/SY 2007-08	FY/SY 2008-09	FY/SY 2009-10	Grand Total
Salaries				
LEA Development Activities				
Transcript Broker Service				
USOE Data Clearinghouse				
Postsecondary Participation				
EDFacts Integration Pilot	\$120,000.00	\$120,000.00		\$240,000.00
Project Evaluation				
Total Salaries	\$120,000.00	\$120,000.00		\$240,000.00
Benefits				
LEA Development Activities				
Transcript Broker Service				
USOE Data Clearinghouse				
Postsecondary Participation				
EDFacts Integration Pilot	\$60,000.00	\$60,000.00		\$120,000.00
Project Evaluation				
Total Benefits	\$60,000.00	\$60,000.00		\$120,000.00
Travel & Training				
LEA Development Activities	\$68,167.00	\$22,540.00	\$193,420.00	\$284,127.00
Transcript Broker Service	\$6,817.00	\$2,254.00	\$2,254.00	\$11,325.00
USOE Data Clearinghouse	\$27,267.00	\$9,016.00	\$9,016.00	\$45,299.00
Postsecondary Participation	\$20,450.00	\$6,762.00	\$6,762.00	\$33,974.00
EDFacts Integration Pilot	\$13,633.00	\$4,508.00	\$4,508.00	\$22,649.00
Project Evaluation				
Total Travel & Training	\$136,334.00	\$45,080.00	\$215,960.00	\$397,374.00
Equipment				
LEA Development Activities		\$90,000.00	\$300,000.00	\$390,000.00
Transcript Broker Service		\$20,000.00		\$20,000.00
USOE Data Clearinghouse		\$20,000.00		\$20,000.00
Postsecondary Participation				
EDFacts Integration Pilot				
Project Evaluation				
Total Equipment		\$130,000.00	\$300,000.00	\$430,000.00
Contracts				
LEA Development Activities	\$224,280.00	\$1,708,800.00	\$260,592.00	\$2,193,672.00
Transcript Broker Service	\$24,600.00	\$26,700.00	\$305,340.00	\$356,640.00
USOE Data Clearinghouse	\$34,176.00	\$240,260.00	\$36,321.00	\$310,757.00
Postsecondary Participation	\$48,420.00	21,360	\$12,816.00	\$82,596.00
EDFacts Integration Pilot	\$58,740.00	\$32,040.00	\$8,544.00	\$99,324.00
Project Evaluation	\$50,000.00	\$100,000.00	\$50,000.00	\$200,000.00
Total Contracts	\$440,216.00	\$2,129,160.00	\$673,613.00	\$3,242,989.00

Other

LEA Development Activities	\$3,000.00	\$25,000.00	\$50,000.00	\$78,000.00
Transcript Broker Service	\$1,000.00	\$750.00	\$400.00	\$2,150.00
USOE Data Clearinghouse	\$1,000.00	\$750.00	\$400.00	\$2,150.00
Postsecondary Participation	\$1,000.00	\$750.00	\$400.00	\$2,150.00
EDFacts Integration Pilot	\$1,000.00	\$750.00	\$400.00	\$2,150.00
Project Evaluation				
Total Other	\$7,000.00	\$28,000.00	\$51,600.00	\$86,600.00

Totals for Sub-Projects

LEA Development Activities	\$295,447.00	\$1,846,340.00	\$804,012.00	\$2,945,799.00
Transcript Broker Service	\$32,417.00	\$49,704.00	\$307,994.00	\$390,115.00
USOE Data Clearinghouse	\$62,443.00	\$270,026.00	\$45,737.00	\$378,206.00
Postsecondary Participation	\$69,870.00	\$28,872.00	\$19,978.00	\$118,720.00
EDFacts Integration Pilot	\$253,373.00	\$217,298.00	\$13,452.00	\$484,123.00
Project Evaluation	\$50,000.00	\$100,000.00	\$50,000.00	\$200,000.00
Grand Totals	\$763,550.00	\$2,512,240.00	\$1,241,173.00	\$4,516,963.00

Budget Narrative

Budget Narrative

Attachment 1:

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Budget Narrative and Justification

Budget Narrative Summary

The shaded amounts below match the major sub-project area totals in the shaded bottom-right cells of the Budget Information – Non-Construction Program 524, Section C spreadsheet.

These amounts are explained in more detail following **Budget Methodology section**.

Estimated costs for sustaining the USRE system over time beyond the first three years in not included in this Budget Narrative. See section 2.10, *Capacity to Sustain USRE* in the Project Narrative for more information about ongoing costs.

1. \$2,945,799 to support one-time systems integration costs at the LEA level including gap analyses and implementation of SIF agents and ZIS infrastructure to support the development of the Utah Student Records Exchange system (USRE)
2. \$390,115 to purchase services that will enable the transport of student records from LEA to LEA and LEA to postsecondary schools via some transcript brokerage.
3. \$378,206 to support one-time costs to modify the USOE data Warehouse to be able to import SIF student objects for the implementation of the USRE
4. \$118,720 to survey and help Utah postsecondary schools to identify areas where they may need assistance to accommodate receiving of transcripts via USRE from LEAs in Utah.
5. \$484,123 to support one-time activities required to submit data for the federal EDFacts program through student level SIF objects as opposed to the summarized/aggregated data structures within the Education Data Exchange Network (EDEN).
6. \$200,000 to contract with an independent consulting firm for both formative and summative evaluations of the USRE project's effectiveness.

4,517,962 Total

Budget Methodology

This section presents data detailing: (1) existing system costs of Utah's current SLDS; and (2) proposed USRE costs. Most of this narrative provides details for amounts included in Non-Construction Program 524, Section C spreadsheet. Costs are for fiscal years 2007-08 through 2009-10. Projected costs of sustaining the system are summarized in the Project Narrative; Section 2.10, *Capacity to Sustain USRE*. This methodology section presents the assumptions made to prepare the subsequent estimates.

Assuming a grant award and the projected schedule proposed, USOE anticipates beginning the USRE system and necessary contracts for the development of USRE after sometime in October of 2007. The USOE expects that USRE will be fully implemented by December 31, 2009.

This methodology part of the narrative also presents cost estimates for sustaining existing components of the current Utah SLDS. The estimates for existing systems are based on current USOE staffing and operating information and do not include current expenditures of local LEAs to participate in current systems. It is assumed that USRE services will not add any long term costs to LEA operations. If anything costs may be reduced.

In order to estimate existing Utah SLDS and one-time costs for development of the USRE, levels of effort in number of days were estimated for the completion of various sub-projects/tasks such as SIF agent development. For the existing Utah SLDS the days worked by a typical state government IT employee in a person-year (PY) is 225 (365 days in a year - 104 weekend days - 12 holidays - 18 days annual - 6 sick days taken).

This grant application uses a cost per state IT employee day to estimate state personnel costs per day for a project task. A typical Utah government IT employee costs \$400 per day (\$90,000 per year for wages, benefits, training, travel, and per diems / 225 work days). This daily cost is assumed to remain constant for the project period of three years. The USOE based its estimate on the yearly cost for a typical USOE staff member that currently supports the collection, maintenance and reporting/extracting for the USOE data Warehouse.

The cost of a contract employee is estimated to be \$1068 per day. This estimate is based on assumptions made about the average hourly billing rate for IT vendors in Utah, the percent of time the vendor team will incur travel and lodging expenses, the rates now allowed by Utah State guidelines for lodging and per diem, and assumed rates for transportation. This daily cost remains constant for the entire projection period.

The detail for the calculation is summarized here:

\$ 800 (\$100 per hour x 8 hours per work day)
\$ 102 (\$510 per roundtrip flight/5 days in a work week)
\$ 22 (\$50 miles ground travel using Utah government's \$0.44/mile allowance) +
\$ 144 (per diem with lodging from GSA schedules for contractors costs.
\$1068

The estimated personnel days and staff costs used in the budget analysis for each fiscal year are based on the proposed project schedule presented in the Management Plan section and

appendix A of this application. Estimates were made about which of the project’s scheduled tasks will be performed in each fiscal year. Tasks can cross fiscal years. If the project schedule changes and this schedule change proves to be significant, then the timing of expenditures may also change,.

Continuing USOE Information Technology Costs

Approximately eight USOE information technology (IT) positions currently provide some level of IT services for USOE applications that support Utah’s SLDS. Since the proposed USRE system is isolated to data exchange/collections and Warehouse imports the following analysis does not include current USOE staffing for NCLB and other Utah accountability and performance reporting. Naturally, there are existing and ongoing staff and material costs in those areas. If that staffing for NCLB and accountability and performance reporting are also include there is a total of 17 FTEs involved and approximately 12 PYs. The following figure provides a roll-up of the personnel classifications the nine data positions, the annual cost for each classification, and the estimated PYs for each classification.

Continuing Information Technology Support

Classification	Annual Salary + Benefits	PYs
IT Analyst	(b)(4)	
IT Database Analyst		
Computer Support Specialist		
IT Manager		
IT Director		
Total Personnel Years (PYs)		

With estimated annual operating and equipment costs of \$210,000 per fiscal year (FY) for SLDS related work and annual existing information technology PYs at 8.3, the current cost for annual operating and equipment costs and staff for SLDS \$945,500.

Collection, maintenance, extraction (from local student information systems), review, correct, prepare, and submit student information required for the current Utah Clearinghouse costs an estimated \$400,000 (92 LEAs x 50 hours x 400/hour) annually when LEA effort is included. Note that this amount should decrease with the advent of USRE since the USRE will result in a system that will be more timely, flexible and accurate than the current Clearinghouse methodology.

Budget for LEA Development (SIF agents and ZIS)

As described in the Management Plan of the Project Narrative the major impact USRE will have on the LEA is the modification of their SISs. Specifically, each of those SISs must have an up to date SIF 2.0 compliant agent capable of handling the SIF student objects and events necessary for USRE. As outlined in the Project Plan, gap analyses will be completed for each SIS to determine what work needs to be done and then what project contractors or SIS vendors will need to do to complete such work. USOE's estimates for key project costs (excluding travel, material, etc.) in this part of the USRE system are listed below.

- Perform gap analyses for the 10 SISs used in 40 districts and 52 charter schools to determine what work needs to be done to have a SIF agent installed in each of the LEAs to conform to USRE requirements: **\$224,280**. This includes the analysis and design of SIS modifications and ZIS integration needs.
- Do the development and installation of SIF agents and zone integration servers (ZIS) needed to ensure that each SIS in each LEA conforms to USRE requirements: **\$640,800**.
- Modify SISs to produce the events and data needed to fulfill the necessary SIF objects needed by USRE. This includes installation and testing. **\$1,328,592**.
- Servers and software licenses needed to support SIF agents and ZIS infrastructure statewide: **\$390,000**.
- Other costs including, labor, travel, training (extensive LEA), and other supplies are estimated to be: **\$362,127**.

Total Project Budget for LEA Development (SIF agents and ZIS): **\$2,945,799**

Budget for Transcript Brokerage Service

The USRE project will identify a provider with a brokerage service that can both exchange SIF student records/transcripts between it and LEAs but also exchange either PESC/XML or EDI/Speede student transcripts between it and postsecondary schools. Since the USRE project requires that an unlimited transaction yearly subscription for in-state exchanges such costs will not be reliably estimated until after RFP proposals are received. Rather than pay a per-transaction fee for one transfer of a set of one student's in-state records Utah prefers to license software or service to be supported jointly by a contractor and UEN and/or USOE staff. Doing so will allow Utah LEAs, USOE and postsecondary schools to make unlimited intrastate exchanges of student transcripts. At this point in the time the best informed estimate is **\$356,640** per year beginning in year three of USRE. Within the USRE infrastructure the brokerage service will not be used for mass collections of student level data by the USOE Clearinghouse. Those processes will take place entirely within the SIF agent/ZIS infrastructure and will be free of any potential vendor subscription or transaction costs.

In the first two years of the project, during development of USRE, it is assumed the vendor will not charge for service usage during the first two development years. If the service is able to be installed within Utah such as at the UEN, hardware may also need to be acquired. These will need to be a medium to high-end server(s) estimated at a total cost of **\$20,000**. Other costs including, travel, training, equipment and supplies are estimated to be: **\$13,475**

Total Budget Transcript Brokerage Service: **\$390,115**

Budget for Development of Clearinghouse SIF Agents and ZIS (Zone Integration Server)

A significant part of the USRE project will be the re-engineering of the IT operations at the USOE to accommodate SIF based student records and the extracting, transforming and loading of those data into the USOE Warehouse. The anticipated costs of such a process are outlined below.

A SIF agent must be developed for the existing Clearinghouse database so that student records as SIF objects coming from LEAs can be loaded into this database. This Clearinghouse database is used as a staging area for the USOE Data Warehouse. In this Clearinghouse database final quality controls are applied before loading data into the Warehouse proper. Besides loading of the student records into the Clearinghouse this SIF agent must also be able to handle request/provide events generated by the Clearinghouse and fulfilled by LEAs for the harvesting or various student data objects from the LEAs throughout the state. The estimated cost for the development of this Clearinghouse agent and related ZIS and database integration and testing is \$171,917.

Due to the high load/performance requirements of student records exchanges between the LEAs and USOE, additional ZISs will also need to be installed and configured. In doing so the estimated cost of this component of the system is \$20,000.

By moving from a multi-record, hierarchical text file for the collection of student level course data based on classrooms to SIF student objects the internal organization of the Clearinghouse database and the USOE Warehouse itself will need to be modified. These changes will also require modifications to some of the Warehouse's load processes. It is estimated that approximately \$138,840 needs to be budgeted for both Clearinghouse and Warehouse changes.

Other costs including, travel, training, and miscellaneous supplies are estimated to be: \$47,449.

Total Budget for Development of USOE Clearinghouse SIF Agents and ZIS: \$378,206

Budget for Assuring Utah Public Postsecondary Participation

Since most, if not all, of Utah's postsecondary schools already have some method of receiving, if not requesting, electronic student transcripts from other postsecondary schools, the only expense that is certain will be for the analysis that needs to be done for each public postsecondary school to determine what still needs to be done to have it participate in the USRE.

A study of each Utah public postsecondary school's readiness to participate in USRE will be conducted by consultants reporting to the USRE-SC (steering committee). Two consultant days will be allotted to interviewing personnel and perform analyses at each postsecondary schools. This also includes the possibility of having to consult with some of the institution's software vendors. Finally the consultants will analyze the overall results of their work with the postsecondary schools deliver reports to the USRE-SC. These reports will be used to determine final costs of what is needed to bring the Utah public postsecondary schools into USRE. The estimated cost of these activities is: \$48,420.

In some scenarios all 14 postsecondary schools will be ready to participate in the USRE system. This could occur if the final USRE architecture makes use of the American Association of College Registrars and Admissions Officers (AACRAO) transcript center in Austin Texas and if USRE directly or indirectly interfaces with the AACRAO center. Another scenario would be if all postsecondary schools have the capability to interface with another server architecture that would message them about the arrival of transcripts to be transported to the postsecondary in a transcript format, PESC/XML or EDI/Speede, they are already prepared to handle.

If one of the prior scenarios does not exist, then modifications may need to be made to at least some postsecondary systems. It is possible that many if not all of Utah's postsecondary schools can receive transcripts from the AACRAO center, via PESC or EDI formats, or import at least PESC transcripts in some other manner. Since the brokerage service used by USRE will be required to produce both PESC/XML and EDI/Speede transcripts for postsecondary schools significant modification costs in postsecondary systems are not anticipated. If such modifications are necessary it will up to the individual postsecondary schools to fund those modifications. This type of activity would be outside the scope of USRE. There will be significant monetary, timeliness, and data accuracies incentives to do so in order to eliminate paper transcripts from Utah students entering from high school.

As the public postsecondary schools come online in a test environment with USRE an integration testing plan will be developed and results monitored over time before the each institution is determined to be ready to use the system in a production/operation environment. \$34,176 has been budgeted for these activities. An additional \$36,124 has been budgeted for costs including, travel, supplies and training.

A standards and interface document will also be developed. This will be an additional but minor expense that will result in the publishing of architectural standards for private postsecondary schools to inform them what will be required of their system to allow them to participate in USRE. This type of publication can be developed by the same contractor that analyzed the readiness of the public postsecondary schools.

It will be up to the public postsecondary institution to test and validate their ability to participate with USRE. Some coordination between the private postsecondary schools and LEAs will have to be provided by the same USRE project staff.

Budget for Assuring Utah Public Postsecondary Participation: \$118,720.

Budget for ED Facts Integration via SIF Student Objects

Assuming NCES/ED Facts will participate in a pilot project for moving student level and possibly other public education data from SEAs to ED Facts via standard SIF objects, there will be numerous costs.

- One of the first tasks will be determining if all EDEN data can be acquired via SIF 2.0 objects. This will require not just analysis and the matching of discrete data items but also the need to address the completeness of data in SIF objects. They

must allow what are now aggregate and computed data in EDEN to be derived from more detailed data in SIF student objects. The work to be done for the analyses of whether SIF objects are able to replace EDEN files will be fulfilled by USRE contractors in consultation with the USOE and NCES and its contractors. SIF/ZIS infrastructure requirements and capability will also need to be considered. Based on the current number of existing EDEN files and data elements the estimated cost for this work is **\$68,740**.

- Based on the analyses NCES/EDFacts will be able to determine the feasibility of continuing and an estimated cost of conversion to SIF. The costs for this conversion will be significant since it will require retooling of the software that imports data into EDFacts to accommodate SIF rather than the current EDEN design. The NCES would bear these costs. Assuming the project will proceed from this point, after NCES has modified EDFacts to import SIF objects, USRE has budgeted for testing and monitoring the exchange of SIF objects between the USOE and EDFacts. This estimated amount is: **\$40,584**. An additional **\$14,799** has been budgeted for other costs including travel. The USOE will assume the responsibility of modifying its Warehouse to produce the required SIF objects. Costs for these processes are described in the next bullet.
- During this pilot project and until the time actual submission of EDEN data for EDFacts can be accomplished through SIF objects, the USOE will still need to be doing EDEN submissions. In order to continue to do both the current EDEN based data development and support while working on the new SIF based pilot project proposed in this application. The USOE estimates the need for two additional IT analysts during the first and second years of the USRE project with one becoming a permanent IT analyst position on USOE's staff. The cost of this staff member would be covered by state funding after the first two years. The cost for the first two years for the two IT analysts is estimated to be **\$360,000**

Total Budget for EDFacts Integration via SIF Objects: \$484,123

Budget for Evaluation of the Overall Project's Effectiveness

It is incumbent on the USRE project to determine the effectiveness of the USRE. An independent evaluation of the project must be conducted that is both formative and summative in nature. In order to contract with an independent research and evaluation consulting firm for such services \$200,000 has been budgeted.

Total Budget for Evaluation of the Overall Project's Effectiveness: \$200,000

Budget 2007-2008

The USOE will be responsible for all costs of RFP development, review and contract writing.

Personnel	120,000
Fringe Benefits	60,000
Travel & Training	
RFP meetings - 10 USRE-SC staff x 5 x 1 day	2,360
5 Project directors meetings x 3 staff x 2 days	36,690
SIF Nat'l conference - 3 USOE staff + 2 contract x 3 days	14,508
SIF University - 3 USOE staff + 2 contract x 5 days	24,180
5 Advisory group/PM meetings x 3 contract staff x 10 USRE-SC staff x 1 day	8,390
2 NCES meetings 5 contract staff x 1 day	12,230
Contractor's routine ground travel - \$155 x 245 days	37,975
Equipment	0
Supplies/Other	
Consumable office and meeting supplies	3,000
Training supplies \$100 x 15 participants	1,500
Resources (reference reports, etc.)	2,500
Contractual	
LEA SIS Gap Analysis	
Data elements/objects analysis - 4 days x 10 SISs	42,720
SIF infrastructure/ZIS analysis & design - 2 x 10 SISs	21,360
SIF agent analysis & design - 5 x 10 SIS	53,400
SIS modifications analysis & design - 10 x 10 SISs	106,800
Transcript Brokerage service	
Evaluation of options - 3 days	3,240
Design of infrastructure - 5 days	5,340
Design of brokerage service - 15 days	16,020
USOE Clearinghouse	
Database Analysis & Design - 10 days	10,680
SIF Infrastructure/ZIS analysis & design - 2 days	2,136
SIF agent analysis & design - 20 days	21,360
Utah Postsecondary schools Survey	
Assessment & inventory of SISs' readiness for e-transcripts - 30 days	32,400
Development of plan for e-transcript accommodations -15	16,020
EDFacts SIF interface	
Meetings with USED/NCES - 10 days	10,680
Assess agent requirements - 25 days	26,700
Assess SIF/ZIS infrastructure USOE & NCES - 20 days	21,360
Project formative and summative evaluations	50,000
TOTAL 2007-2008	\$763,550

Budget 2008-2009

Personnel	120,000
Fringe Benefits	60,000
Travel & Training	
5 Project directors meetings x 3 staff x 2 days	36,690
5 Advisory group/PM meetings x 3 contract staff x 10 USRE-SC staff x 1 day	8,390
Equipment	
ZIS Servers - 4 x \$10,000 (test, later production)	40,000
Clearinghouse servers 2 x \$10,000	20,000
SIF/ZIS software licenses statewide	50,000
Transcript brokerage servers - 2 x 10,000	20,000
Supplies/Other	
Consumable office and meeting supplies	1,500
Training supplies - \$50 x 500 participants	25,000
Resources (reference reports, etc.)	1,500
Contractual	
LEA SIS Development	
SIF Agent/ZIS development - 60 days x 10 SISs	640,800
SIS modifications/events - 100 days x 10 SISs	1,068,000
Transcript Brokerage service	
Installation and configuration - 10 days	10,680
Integration Testing of LEA to LEA transactions - 15 days	16,020
USOE Clearinghouse	
SIF agent development - 80 days	85,440
Clearinghouse database modifications/events - 120 days	128,160
SIF Agent Installation -10 days	10,680
Integration testing (agent, ZIS, LEAs) - 15 days	16,020
Utah Postsecondary schools	
Integration testing LEA to postsecondary transactions -15	16,020
Integration testing postsecondary to USOE transactions - 5	5,340
EDFacts SIF interface	
USOE to EDFacts/UEN batch transaction testing - 20 days	21,360
EDFacts results/reports Q/C - 10 days	10,680
Project formative and summative evaluations	100,000
TOTAL 2008-2009	\$2,512,240

Budget 2009-2010

Personnel	0
Fringe Benefits	0
Travel & Training	
SIF/ZIS LEA training - 16 days x 10 SISs	170,880
5 Project directors meetings x 3 staff x 2 days	36,690
5 Advisory group/PM meetings x 3 contract staff x 10 UT advisory staff x 1 day	8,390
Equipment	
ZIS Servers - 20 x 10,000	200,000
SIF/ZIS software licenses statewide	100,000
Supplies/Other	
Consumable office and meeting supplies	1,000
Training supplies \$50 x 1000 participants	50,000
Resources (reference reports, etc.)	600
Contractual	
LEA SIS Development	
ZIS Installation/testing 4 days x 41 LEAs (some share)	89,712
SIF Agent Installation 10 days x 10 SISs	106,800
Integration testing (agent, brokerage, ZIS) x 20 days	21,360
Agent/ZIS brokerage trans. stress testing 4 days x 10 SISs	42,720
Transcript Brokerage service	
Stress Testing/tuning 5 days	5,340
Annual Service Subscription	300,000
USOE Clearinghouse	
ZIS/Agent Stress Testing & Staff handoff - 5 days	9,621
Clearinghouse/Warehouse Integration testing -10 days	10,680
Clearinghouse/Warehouse Q/A reporting 15 - days	16,020
Utah Postsecondary schools	
Full production monitoring 12 - days	12,816
EDFacts SIF interface (Utah only)	
Full production monitoring 8 - days	8,544
Project formative and summative evaluations	50,000
TOTAL 2009-2010	\$1,241,173
TOTAL 2007-2008	763,550
TOTAL 2008-2009	\$2,499,460
TOTAL 2009-2010	\$1,241,173
TOTAL GRANT FUNDS APPLICATION	\$4,516,963