MEMORANDUM

TO: Members, Utah State Board of Education

FROM: Martell Menlove, Ph.D.
Chief Executive Officer

DATE: February 7, 2014

ACTION: R277-484-5 *Data Standards* (Petition to Amend and Repeal)

Background:
Board rule R277-484 *Data Standards* provides the standards, requirements and deadlines for submitting data to the USOE data warehouse. All districts and charter schools are required to submit a UTREx complete update for current year no later than seven business days after October 1.

Legacy Preparatory Academy failed to submit a UTREx complete update required for current year by the deadline. In November 2013, Legacy Preparatory Academy was placed on warning status and received a notification letter from USOE Charter Schools Director. Legacy submitted the minimum requirements in November.

In December 2013 Superintendent Martell Menlove received a request from Nathan M. Andelin, President, Relational Data Corporation to amend and repeal R277-484-5. Relational Data Corporation provides the student information system, One Point, for Legacy Preparatory Academy.

In its January 2014 meeting, the Standards and Assessment Committee reviewed the petition submitted by Mr. Andelin, reviewed R277-484, and the USOE response to the petition. The Committee requested this be returned in February for further discussion and decision regarding changes to R277-484.

Key Points:
Utah State Office of Education staff has worked with Legacy Preparatory Academy and its student information system vendor, One Point, for the past 18 months to assist them in meeting the standards, requirements, and deadlines included in R277-484.

Anticipated Action:
The Standards and Assessment Committee will consider proposed amendments to R277-484, and if approved by the Committee on first reading, the Board will consider approving the rule on second reading.

Contact: Judy Park, 801-538-7550
Jerry Winkler, 801-538-7842

R277. Education, Administration.

R277-484. Data Standards.

R277-484-5. Official Data Source and Required LEA Compatibility.

A. The USOE shall load operational data collections into the Data Warehouse as of the submission deadlines specified.

B. The Data Warehouse shall be the sole official source of data for annual:

(1) school performance reports required under Section 53A-3-602.5;

(2) determination of adequate yearly progress as required under the Utah Comprehensive Accountability System (UCAS); and

(3) submission of data files to the U.S. Department of Education via EDEN.

C. LEAs shall use a USOE-approved SIS to ensure compatibility with USOE data collection systems. The USOE maintains a list of approved student information systems.

(1) Prior to the USOE granting approval for an LEA to initiate or replace a student information system that was not previously approved, the LEA shall comply with the following:

(a) LEA shall send written request for approval to USOE's Director of Information Technology;

(b) LEA shall submit documentation to the USOE that the new or modified student information system is School Interoperability Framework (SIF) certified;

(c) LEA shall submit documentation to the USOE that a SIF agent can meet the UTREx specifications profile for Vertical Reporting Framework (VRF), and eTranscripts;

(d) LEA shall ensure that a new student information system can generate valid data collection by submitting an actual file to the USOE for review;

(e) LEA shall ensure that the new student information

system can generate the Statewide Student Identifier (SSID) request file by submitting an actual file to the USOE for review.

(2) The USOE shall review documentation and grant or deny requests within 30 calendar days.

(3) LEA requests and approval shall be completed by January 15 of the school year prior to the year the LEA proposes to use the software for production data. Approved replacement systems shall run in parallel for a period of at least three months to a state-approved system and be able to generate duplicate reports to previously generated information.

D. No later than October 1, 2013, all public education LEAs shall begin submitting daily updates to the USOE Clearinghouse using all School Interoperability Framework (SIF) objects defined in the UTREx Clearinghouse specification. Noncompliance with this requirement may result in interruption of MSP funds consistent with R277-484-8.

E. All public high school transcripts requested by public education post-secondary schools shall be electronically submitted to those public education post-secondary schools if the post-secondary schools are capable of receiving transcripts through the electronic transcript service designated by the USOE. This process is mandatory for all public high schools as of October 1, 2013.

KEY: data standards, reports, deadlines

Date of Enactment or Last Substantive Amendment: August 7, 2013

Notice of Continuation: December 31, 2012

Authorizing, and Implemented or Interpreted Law: Art X Sec 3; 53A-1-401(3); 53A-1-301(3)(d) and (e)

Petition to Amend and Repeal Board Rules

December 2, 2013

Petitioner:

Nathan M. Andelin
President, Relational Data Corporation
9226 South 2490 West
West Jordan, Utah 84088

This petition is for an amendment to and repeal of certain rules pertaining to **R277-484-5. Official Data Source and Required LEA Compatibility** which were approved in May 2013.

The Utah State Board of Education has the legal authority to act on this petition based on Utah Administrative Code http://www.rules.utah.gov/publicat/code/r277/r277-100.htm.

Reasons for the proposal:

1. The repeal of board rules is needed because they:
    - Are significant undue barriers against competition and the operation of free markets in Utah.
    - Enable the Utah State Office of Education (USOE) to engage in unfair competition against free enterprise in the student information system business.
    - Are significant undue barriers against LEA choice of student information systems which should be completely unnecessary, given the implementation of appropriate USOE data validation.
    - Cause USOE to be placed in a conflict of interest position regarding the approval of student information systems which compete against USOE's SIS2000+ student information system.
    - Enable USOE to misrepresent board rules and to arbitrarily disqualify the use of student information systems from the state.
    - Appear to be unlawful with respect to "small business" per Utah Code Title 63G-3-102 - "Definitions" and 63G-3-301 - "Rulemaking procedure".
    - Place undue time and cost burdens on LEAs and vendors of student information systems.
    - Raise barriers that make it practically impossible for new student information systems to gain a foothold in the state.
2. New definitions and rules are needed which:
    - Clearly define the meaning of Compatible Student Information Systems.
    - More clearly define USOE and LEA responsibilities for ensuring that Compatible Student Information Systems are used in the state.

This petition includes two (2) proposal options; one which specifies the use of Table Structured Data transmitted via Secure File Transfer Protocol “SFTP” and a nearly identical option which specifies the use of School Interoperability Framework “SIF” Data Objects transmitted via SIF Agents using the HTTPS protocol.

The reason for two (2) proposals is because we anticipate significant opposition from USOE against the use of Table Structured Data and SFTP for data interchange, due to USOE's multi-year multi-million dollar investment in SIF architecture and interfaces, which Relational Data Corporation's software is also compatible with, and which we can and do provide to Utah schools. However we suggest that Table Structured Data and SFTP are much better suited for state reporting than SIF Data Objects and SIF Agents for the reasons specified in Exhibit A at the end of this document.

There don't appear to be any benefits to using SIF Data Objects and SIF Agents for state reporting from technical or economic perspectives; Table Structure Data and SFTP are much better suited for it. However it appears that USOE accrues benefit by using SIF interfaces primarily as a barrier against businesses which may offer student information systems for public schools which have difficulty with SIF interfaces which might otherwise be able to compete against USOE's SIS2000+ offering.

USOE has spent millions of dollars of taxpayer monies on SIF interfaces which in and of themselves are barriers to LEA state reporting while fomenting the adoption of board rules which are also significant barriers against business and the operation of free markets in Utah and against new student information systems from entering the state, which suggests a profound lack of accountability of the USOE IT Department to the Utah State Board of Education and to taxpayers.

These proposals redress the problem by changing the focus from USOE approval of student information systems to a focus on what constitutes a compatible student information system, and what roles USOE and LEAs have in ensuring compatibility.

Exhibit A

Reasons for using Table Structured Data and Secure File Transfer Protocol as opposed to SIF Data Objects and a SIF Agent include:

1. Data residing in LEA student information systems is Table Structured Data, and data residing in USOE data warehouses is Table Structured Data.
2. SIF Data Objects are complex data formats which contain both XML data elements and XML attributes containing up to approximately 10 levels of hierarchical structure.
3. The coding required to generate SIF Data Objects is significantly more work than the coding required to generate Table Structured Data.
4. The coding required to parse and consume SIF Data Objects is significantly more work than the coding required to parse and consume Table Structured Data.
5. The coding required to produce appropriate error listings containing meaningful error messages is much less complex for Table Structured Data; row number and column names precisely identify errors in format or content. In contrast SIF Data Objects require substantial complex code to provide appropriate references to XML elements and attributes which involve complex "paths" to data as opposed to simple rows.
6. SIF interfaces don't take into account "code page" differences between Microsoft and IBM systems, therefore substantial extra coding is required to translate data transmissions from one character set to another; otherwise the data appears scrambled. The HTTP protocol and mainstream HTTP servers provide for automatic translation, but the SIF specification calls for a content-type of "application", which means "don't translate".
7. SIF Data Objects are approximately 10 times larger than Table Structured Data due to verbose XML tag enclosures which surround all data elements.
8. Standard SIF Data Objects are inadequate for Utah state reporting; USOE was forced to specify their own "Extended Data Elements" to accommodate these inadequacies.
9. USOE SIF interfaces require the use of a mapping document known as the USOE SIF Profile which provides mapping between LEA Table Structured Data known as clearinghouse files, to SIF Data Objects, and back to USOE Table Structured Data – all of which are specified by USOE.
10. SIF Data Objects require approximately 10 times more network bandwidth than Table Structured Data, and require even much larger amounts of CPU and computer memory to generate and consume them.
11. SIF Agents that parse and consume SIF Data Objects are generally incapable of handling large data sets. USOE claims that the USOE SIF interfaces have problems processing files greater than 4 megabytes in size. In contrast, programs that process Table Structured Data have no practical file size limits.
12. Given file size restrictions in USOE's SIF interfaces, SIF Agents that produce SIF Data Objects must include additional complex code to split SIF Data Objects into multiple

files prior to transmitting them to USOE, which would be unnecessary for programs that produce Table Structured Data.

13. SIF Agents which provide SIF Data Objects may communicate with SIF Zone Integration Servers according to a SIF specification known as “pull-mode”. USOE asserts that the PowerSchool and Skyward SIF Agents running in Utah communicate via “pull-mode” which calls for the Agent to transmit messages to the Zone Integration Server at repeating intervals. The developer of the Skyward Agent indicated that his Agent transmits pull-mode messages every 10 seconds asking for USOE Data Collector requests, even though data collections may be scheduled only once per day or longer intervals, thus wasting computer resources and network bandwidth.
14. SIF Zone Integration Servers are costly to operate in terms of annually renewable software licensing fees, maintenance, and computer hardware resources.
15. SIF Zone Integration Servers are unnecessary, and even pose bottlenecks for bulk file transfers. And USOE state reporting interfaces consist entirely of bulk file transfers.
16. SFTP client and server utilities are generally free or very low cost and are much better suited for bulk file transfers.
17. Commercial companies such as Clever (http:\\www.getclever.com) provide data clearinghouse services for LEAs similar to USOE's services, but at a fraction of the cost by using Table Structured Data and SFTP and other innovative data interchange options.
18. The use of Table Structured Data and SFTP is inline with Utah Code Title 63G-3-301 - “Rulemaking procedure” which states “If the agency reasonably expects that a proposed rule will have a measurable negative fiscal impact on small businesses, the agency shall consider, as allowed by federal law, each of the following methods of reducing the impact of the rule on small businesses: (a) - (e);”
19. USOE clearinghouse data is purged and reloaded daily under a common model known as Extract Transmit Load or “ETL”. USOE chose to NOT use SIF interfaces for internal ETL operations between USOE data warehouses, but requires SIF interfaces for LEA state reporting.
20. The SIF Association boasts having a membership of 3,200 - consisting mostly of schools, school districts and software vendors. But that number is a tiny fraction of the total number of organizations in all industries using Table Structured Data and SFTP for ETL operations similar to LEA state reporting.
21. SIF interfaces were originally designed for and are primarily intended for exchanging messages based on database add, change, and delete events – not ETL operations. SIF interfaces are extremely ill suited for ETL operations. State reporting is a classic ETL operation.
22. USOE's SIF interfaces don't provide appropriate data validation against SIF Data Objects nor error listings which reference SIF Data Objects, which is a very significant barrier against data interchange.
23. USOE's SIF interfaces have inadequate support for SIF specifications; the software fails

with SQL errors while processing properly formatted SIF Data Objects containing valid data.

24. USOE's software requires SIF data elements which are listed as optional per SIF specifications.
25. USOE's software varies from USOE's published SIF Profile.
26. Conflicts exist between the SIF specification and the USOE clearinghouse file specification which have not been resolved.
27. USOE's SIF interfaces have material defects and inadequacies; nevertheless USOE still uses SIF related board rules to disqualify LEA submission of SIF Data Objects, disapprove LEA student information systems, and interfere with LEA contractual relations with SIS providers.

Analysis in Support of Repealing Board Rules Pertaining to USOE Approval of LEA Student Information Systems

This document offers a line by line review, analysis, and rebuttal of Board rules R277-484-5 which were proposed by the USOE IT Department and approved in May 2013.

"LEAs shall use a USOE-approved SIS to ensure compatibility with USOE data collection systems."

1. *The most effective way and perhaps the only effective way of USOE ensuring compatibility between student information systems and USOE data collection systems is to have USOE publish clear specifications of USOE's data interchange requirements and to have programming logic in place which validates LEA provided data formats and data elements against the specifications and provides error listings with meaningful error messages in accordance with the specifications and for LEAs and/or SIS providers to test their data submissions via UTREx (USOE provided software).*
2. *The process for testing compatibility as delineated in #1 are primarily the responsibility of LEAs and SIS providers, and shouldn't require much USOE involvement other than USOE providing timely access to UTREx.*
3. *Any other process that USOE may entertain for "approving" student information systems would be subjective and arbitrary and would divert attention from USOE and LEA roles of ensuring compatibility via specifications and automated validation procedures.*

"The USOE maintains a list of approved student information systems."

1. *The word "approved" implies that USOE might have authority to make subjective decisions concerning LEA use of student information systems as opposed to having implicit USOE approval by having a student information system demonstrate compatibility by passing all relevant UTREx validation tests.*
2. *A USOE IT technical support specialist alleged in the Spring of 2012 that USOE had a list of approved systems and that USOE was not planning on adding to the list and added "why would anyone want to buy your system when they could have ours for free".*
3. *USOE should maintain and publish a list of "compatible student information systems" including the names of the SIS providers in order to support LEA choice.*

"Prior to the USOE granting approval for an LEA to initiate or replace a student information system that was not previously approved, the LEA shall comply with the following:"

1. *Note the number of times the word "approve" or derivatives of it are used in Board rules R277-484-5; emphasizing the idea that the USOE IT Department might have broad authority over the decisions of LEAs pertaining to the use of student information systems*

including authority to make subjective decisions concerning the approval of student information systems.

2. *Note also the absence of language defining the meaning of compatible student information systems; which suggest that USOE might have authority to make arbitrary decisions concerning the approval of student information systems.*
3. *The language in this rule extends the USOE approval process to the **initial** steps that LEA's might take to replace a student information system; USOE might interpret LEA steps to evaluate new student information systems as initiating replacement and therefore subject to USOE monitoring and control.*
4. *Each LEA in Utah is a separate legal entity with its own board of directors.*
5. *USOE's approval process is incongruent with Utah Code Title 53A-1-706 - "Purchases of educational technology" which authorizes and protects LEA rights to acquire their own educational technology through their own purchasing programs.*

"LEA shall send written request for approval to USOE's Director of Information Technology;"

1. *The USOE IT Director is seeking for authority to approve student information systems, the Board is granting it, and the IT Director is accepting this responsibility even though it is an obvious personal conflict of interest for the IT Director to grant approval;*
2. *The USOE IT Department is vested in and highly engaged in the the development and support of its own student information system which competes against outside student information systems.*
3. *The USOE IT Director's position, authority, influence, control, personal status, pay grade, career interest, and most likely even job satisfaction are based significantly on the IT department providing its own student information system and related operations which compete against outside student information systems.*
4. *The USOE IT Director is materially and financially incentivized to NOT approve student information systems which compete against USOE's student information system.*
5. *The USOE IT Director requests legislative funding including new funding increases for SIS2000 and related operations which unfairly compete against private enterprise.*
6. *Rather than an approval process, USOE needs to provide specific and objective criteria for validating data provided by LEAs in order to test compatibility.*

"LEA shall submit documentation to the USOE that the new or modified student information system is School Interoperability Framework (SIF) certified;"

1. *The requirement for SIF certification from the SIF Association is an additional undue cost and programming burden for providers of student information systems and is especially burdensome for small businesses. Certification requires the implementation of two separate code bases entailing man months of effort for each; one code base to satisfy the requirements*

of the SIF Association and another to satisfy the requirements of USOE. And only the USOE code base would be deployed in Utah.

2. *The USOE IT Department asserts that SIF certification ensures that a student information system will be compatible with Utah state reporting interfaces, however that is untrue and very misleading. USOE lacks in-house expertise concerning SIF agent development and is not qualified to make that assertion. USOE's contracts with NCS Pearson to assist with the development of custom SIF agents for SIS2000, PowerSchool, and Skyward; and to provide support for a pilot program for the same which spanned more than a year - offer substantial evidence against the assertion. The value of the contract awarded to NCS Pearson for this purpose exceeded $1 million even though PowerSchool and Skyward already had SIF certifications dating back to the year 2008.*
3. *USOE requires Extended SIF Elements which are not validated nor certified by the SIF Association.*
4. *The database designs and programming code required for student information systems to be compatible with Utah state reporting are significantly different from those required to implement interfaces to pass SIF certification tests.*
5. *USOE is using SIF interfaces exclusively for bulk file transfers while SIF certification focus primarily on transactional messaging triggered by database add, change, and delete events; The process flows are materially different.*
6. *The SIF Association awards certificates for student information systems and associated SIF agents. However neither USOE's own SIS2000 nor the SIS2000 SIF agent are "SIF certified".*
7. *It appears that the Board intended SIF certification as a pre-qualifier for new student information system approval. However USOE uses it as a dis-qualifier and basis for disapproving student information systems which have been running in the state for over a year and have proven compatibility with USOE's systems. Such actions appear to be a material misrepresentation of Board rules in addition to wrongful enforcement.*
8. *While USOE disqualifies and disapproves commercial student information systems which are not SIF certified, USOE does not apply the rule to its own systems, nor to student information systems which are sponsored and funded by public school districts for use in their districts (Weber, Davis, Granite, etc.) Applying and enforcing rules in such manner appears to be unlawful per Utah Code Title 63G-3 Rulemaking Procedure.*
9. *Enforcing rules against providers of commercial student information systems while effectively applying rule waivers for USOE and school districts is a good example of "unfair competition" and when applied to "small business" appears to be wrongful, harmful, and unlawful per Utah Code Tile 63G-3 Rulemaking Procedure.*
10. *Implementing SIF interfaces entails extraordinary cost and complexity for both USOE and SIS providers. SIF raises barriers against commercial student information systems which would otherwise be able to compete against USOE's SIS2000 product, but have trouble coming up with the significant resources required to implement SIF. And SIF interfaces are*

poorly suited for state reporting.

"LEA shall submit documentation to the USOE that a SIF agent can meet the UTREx specifications profile for Vertical Reporting Framework (VRF), and eTranscripts;"

1. *It would be extremely imprudent for SIS providers to make and document such assurances and to raise expectations of LEA SIS subscribers prior to testing their SIF agents against USOE's SIF interfaces.*
2. *USOE does not publish the format nor content of their SIF data collection requests; The SIF agent developer can't be certain of what USOE's software may transmit, nor know how to parse and process requests until they are actually received and seen.*
3. *USOE's SIF interfaces vary materially from the SIF specification; USOE requires XML elements which are specified in SIF as optional.*
4. *USOE's SIF interfaces vary materially from the published USOE SIF profile.*
5. *USOE's published SIF profile is based on USOE "clearinghouse file" specification which has material conflicts with the SIF specification which have not been resolved nor published.*
6. *USOE's software irrecoverably fails while processing properly formatted SIF Data Objects containing valid data and completely discards all LEA student records submitted.*
7. *USOE's SIF interfaces do not provide appropriate error handling nor error reporting against SIF Data Objects.*
8. *The error reporting provided upstream in the routines that load data into the USOE data warehouse are extremely misleading.*
9. *Neither USOE nor the SIS provider are able to understand the error messages reported.*
10. *Passing validations is a matter of iteratively **guessing** what may be causing the errors and retesting to overcome USOE software defects and inadequacies.*
11. *Working through validation errors provides opportunity for the USOE IT Director to allege that the SIS provider has wrongfully asserted that they can meet USOE specification.*
12. *The USOE IT Director does not take responsibility for USOE software defects nor inadequacies – he just disapproves the student information system, imposes deadlines for LEAs to migrate to another SIS, advocates for and facilitates a return to SIS2000.*

"LEA shall ensure that a new student information system can generate valid data collection by submitting an actual file to the USOE for review;"

1. *Most SIF data objects are quite entailed and difficult to read and USOE does not need to review them prior to LEAs processing them via UTREx; In our experience, USOE lacks the expertise to say whether SIF Data Objects are well-formed, or if they will be mapped correctly to USOE databases.*
2. *This requirement diverts attention from the real issues of needing clear specifications and automated computer procedures within UTREx which properly validate SIF Data Objects and report errors, which LEAs and SIS providers can use on their own to test validity without interference from USOE.*

3. *The validation process is labor intensive for LEAs and SIS providers; It is iterative by nature, spanning a period of days or weeks and normally requires adjustments to LEA submissions. USOE software defects, deficiencies, and inadequate specifications further complicate the process.*

"LEA shall ensure that the new student information system can generate the Statewide Student Identifier (SSID) request file by submitting an actual file to the USOE for review."

1. *This requirement appears to be out-dated; however whether that be the case or not, the requirement is easy to satisfy and covered by proposed new language.*
2. *LEA's are able to provide SSID request files. However in our experience it appears that USOE may not have automated systems in place or trained personnel in order to update SSIDs and provide SSID response files; thus rendering the entire interface useless.*

"The USOE shall review documentation and grant or deny requests within 30 calendar days."

1. *This requirement is a red herring; USOE should provide access to UTREx in a timely manner upon LEA request so that student information system providers can test data submissions without undue delay.*

"LEA requests and approval shall be completed by January 15 of the school year prior to the year the LEA proposes to use the software for production data."

1. *This requirement appears to imply that USOE needs time for evaluating and approving student information systems credentials.*
2. *USOE should simply provide access to UTREx for SIS providers to test their data submissions upon request.*
3. *This requirement raises a barrier against LEAs which may desire to change student information systems during the year.*
4. *This requirement raises undue barriers against businesses desiring and needing to market and promote their student information systems throughout the year.*

"Approved replacement systems shall run in parallel for a period of at least three months to a state-approved system and be able to generate duplicate reports to previously generated information."

1. *This requirement for running parallel systems is so entailed and costly in terms of LEA and SIS provider resources that it would be practically impossible for any LEA to consider switching to any new student information system which might try to enter the state.*
2. *This requirement is contrived and completely unnecessary. USOE's data store is entirely and iteratively replaced with each LEA data collection submission, and all data and each data-collection iteration should be subject to USOE validation.*

3. *This requirement suggests that data provided by LEAs may be transactional in nature (like accounting transactions; However that is not the case. All the data is stateful (like student demographic data) taken as a snapshot; where running parallel systems would simply prove that different data might be entered in each - which has nothing to do with compatibility.*
4. *Data is maintained by LEA administrators, teachers, parents, and students who would not be able to maintain two parallel systems.*
5. *It would be equally improbable that data could be extracted from one system to another.*
6. *Once a student information system has proven compatibility by passing all relevant validations there is no need for prolonged testing; neither the software nor the data formats are likely to change after compatibility has been established.*

"No later than October 1, 2013, all public education LEAs shall begin submitting daily updates to the USOE Clearinghouse using all School Interoperability Framework (SIF) objects defined in the UTREx Clearinghouse specification."

1. *The state would be well served to drop SIF interfaces used for state reporting and replace them with support for Table Structured Data, Secure File Transfer Protocol, and REST Web Services.*
2. *The requirement for daily updates appears to be incongruent with other rules in this section which specify deadlines for state reporting at more lengthy intervals.*
3. *Only a relatively small percentage of total student data changes daily and those changes do not materially impact the types of aggregate analysis that USOE may perform against it.*
4. *It appears that monthly updates would satisfy USOE data warehouse requirements and needs.*
5. *Clearinghouse data (particularly SIF Formatted Data Objects) provided to USOE should NOT be considered an appropriate backup of LEA data because it is only a small fraction of student information data contained in most student information systems and cannot be easily restored.*
6. *LEA employees and parents of students who are authorized to review individual student data are much more likely to get it from an LEA-operated SIS, rather than a USOE data warehouse.*
7. *It appears that most LEA's believe that the requirement for daily uploads is overkill. This concern has been expressed at USOE data conferences, where the USOE IT Director has asserted that daily uploads are a requirement of the Utah legislature, which appears to be a material misrepresentation.*

"Noncompliance with this requirement may result in interruption of MSP funds consistent with R277-484-8."

1. *It appears that Board sanctioned penalties against LEA funding were originally intended to enforce reporting deadlines which are specific and clear. However the USOE IT department pushed for the additional threat of penalties against LEAs which might not comply with the*

IT department's approval process for student information systems.

2. *The threat of funding penalties has a profound and detrimental psychological effect on LEA decision making concerning student information system choice.*
3. *The approval process is a barrier against providers of student information systems and appears to be unlawful. The associated penalties appear to be draconian. Both should be repealed.*

In May 2013, USOE provided the following assurance to the Utah State Board of Education to induce adoption of these rules; These statements which are published in state Rule Bulletins are material misrepresentations; USOE has spent millions of dollars on its own SIF interfaces.

"SMALL BUSINESSES: There is no anticipated cost or savings to small businesses. This rule and the amendments apply to public education and do not affect businesses."

"COMMENTS BY THE DEPARTMENT HEAD ON THE FISCAL IMPACT THE RULE MAY HAVE ON BUSINESSES: I have reviewed this rule and I see no fiscal impact on businesses."

The USOE IT Department has asserted to LEAs and Board members that SIF certification ensures compatibility with Utah state reporting interfaces which is a material misrepresentation. USOE contracts awarded to Digital Bridge and NCS Pearson and other sources provide substantial evidence to the contrary. Developers of Skyward worked on their SIF agent during a USOE funded pilot program lasting approximately one year and continued working on it up to approximately the October 10, 2013 deadline in order to complete required submissions including validations. As of December 13, 2013 – developers were still working on the SIF agent in order to provide SIF Data Objects pertaining to e-Transcripts - even though Skyward's SIF certification dates back to 2008.

Much of the information provided in this petition and appeal was known by the USOE IT Department at the time they moved to have these Board rules adopted. However it appears that the information was withheld from Board members.

The information provided in this analysis clarifies that the true purpose of these rules has little or nothing to do with the USOE ensuring that LEA data submissions are complete, accurate, valid and compatible; but have much to do with the USOE IT Department raising contrived barriers that prevent LEA choice of student information systems which compete against USOE's SIS2000 and frustrates free enterprise from working in the student information system market in Utah.

In summary, these rules are not only incongruent with Utah Code Title 53A-1-706 - "Purchases of educational technology" and Utah Code Title 63G-3 - "Rulemaking Procedure"; they materially ***interfere*** *with LEA rights to acquire educational technology via their own purchasing programs.*

R277. Education, Administration.
R277-484. Data Standards.
R277-484-1. Definitions.

A. "Annual Financial Report" means an account of LEA revenue and expenditures by source and fund sufficient to meet the reporting requirements specified in Section 53A-1-301(3)(d) and (e).

B. "Annual Program Report" means an account of LEA revenue and expenditures by source and program sufficient to meet the reporting requirements specified in Section 53A-1-301(3)(d) and (e).

C. "Board" means the Utah State Board of Education.

D. "Comprehensive Administration of Credentials for Teachers in Utah Schools (CACTUS)" means the database maintained on all licensed Utah educators. The database includes information such as:

(1) personal directory information;
(2) educational background;
(3) endorsements;
(4) employment history;
(5) professional development information;
(6) completion of employee background checks; and
(7) a record of disciplinary action taken against the educator.

E. "Data Warehouse" means the database of demographic information, course taking, and test results maintained by the USOE on all students enrolled in Utah schools.

F. "EDEN" means the Education Data Exchange Network, the mechanism by which state education agencies are mandated to submit data to the U.S. Department of Education.

G. "ESEA" means the federal Elementary and Secondary Education Act, also known as the No Child Left Behind Act.

H. "LEA" means local education agency, including local school boards/public school districts, charter schools, and, for purposes of this rule, the Utah Schools for the Deaf and the Blind.

I. "MSP" means Minimum School Program, the set of state support K-12 public school funding programs.

J. "MST" means Mountain Standard Time.

K. "Schools interoperability framework (SIF)" means an open global standard for seamless, real time data transfer and usage for Utah public schools.

L. "Student information system (SIS)" means a student data collection system used for Utah public schools.

M. "USOE" means Utah State Office of Education.

N. "Utah eTranscript and Record Exchange (UTREx)" means a system that allows individual detailed student records to be

exchanged electronically between public education LEAs and the USOE, and allows electronic transcripts to be sent to any post-secondary institution, private or public, in-state or out-of-state, that participates in the e-transcript service.

O. "Year" means both the school year and the fiscal year for LEAs in Utah, which runs from July 1 through June 30.

P. "SIF Data Objects" means data formats which are defined by the SIF Association which are multi-level hierarchically structured data using XML formatting which may include USOE defined extensions.

Q. "Data Element" means discrete data such as a birth date contained within SIF Data Objects.

R. "Compatible Student Information System" means a student information system which has demonstrated the ability to provide SIF Data Objects required by the USOE via a SIF agent, where the SIF Data Objects and Data Elements pass all validation checks specified and implemented by the USOE.

S. "Clearinghouse Updates" means digital data files containing SIF Data Objects provided by LEAs to the USOE as specified by the USOE to be included in monthly updates.

T. "eTranscript Updates" means digital data files containing SIF Data Objects provided by LEAs to the USOE as specified by the USOE which are provided after the completion of school grading terms.

R277-484-2. Authority and Purpose.

A. This rule is authorized by Utah Constitution Article X, Section 3 which vests general control and supervision of public education in the Board, and by Section 53A-1-401(3) which permits the Board to adopt rules in accordance with its responsibilities and specifically allows the Board to interrupt disbursements of state aid to any LEA which fails to comply with rules.

B. The Board, through its chief executive officer, the State Superintendent of Public Instruction, is required to perform certain data collection related duties essential to the operation of statewide educational accountability and financial systems as mandated in state and federal law.

C. The purpose of this rule is to support the operation of required educational accountability and financial systems by ensuring timely submission of data by LEAs.

R277-484-3. Deadlines for Data Submission.

For the purpose of submission of student level data, each Utah LEA shall participate in UTREx. LEAs shall submit data to the USOE as directed by the USOE through the following reports by 5:00 p.m. MST on the date and in the format specified by the USOE:

A. February 28 - Community Development and Renewal Agency and/or Redevelopment Agency Taxing Entity Committee Representative

List.

B. June 15

(1) Immunization Status Report (to Utah Department of Health) - final;

(2) Safe School Incidents Report - for current year.

C. June 29 - CACTUS - final update for current year.

D. July 1

(1) Fire Drill Compliance Statement - for prior year;

(2) Other Emergency (Earthquake and School Violence) Drills Compliance Statement - for prior year;

(3) Emergency Preparedness Compliance Statement - for prior year;

(4) Emergency Response Plan - for prior year.

E. July 7 - UTREx - final comprehensive update for prior year.

F. July 15

(1) Adult Education - final report for prior year;

(2) Classified Personnel Report - for prior year;

(3) Driver Education Report - for prior year;

(4) ESEA Choice and Supplemental Services Report - for prior year;

(5) Fee Waivers Report - for prior year;

(6) Home Schooled Students Report - for prior year;

(7) Teacher Benefits Report - for prior year;

(8) Pupil Transportation Statistics - for prior year:

(a) Bus Inventory Report;

(b) Year End Pupil Transportation Statistics Reports;

(9) Copy of local school board-adopted budget - for next fiscal year, unless the local school board provides documentation of planned truth-in-taxation process.

G. August 15 - copy of the local school board-adopted budget - for next fiscal year, if the local school board provides documentation of planned truth-in-taxation process.

H. September 15

(1) Membership Audit Report - for prior year;

(2) Adult Education - Financial Audit for prior year.

I. October 1

(1) Annual Financial Report (AFR) - for prior year;

(2) Annual Program Report (APR) - for prior year;

(3) Annual assurance letter required for compliance information and documentation for identified programs and funds, pursuant to R277-108.

J. Seven business days after October 1 - UTREx - complete update required as of October 1 for current year.

K. October 15 - UTREx - revised update as of October 1 for current year, if significant errors are identified by the USOE or the LEA.

L. November 1

(1) Enrollment and Transfer Student Documentation Audit Report - for current year;

(2) Immunization Status Report - for current year;

(3) Pupil Transportation Statistics for state funding:

(a) Schedule A1 (Miles, Minutes, Students Report) - projected for current year;

(b) Schedule B (Miscellaneous Expenditure Report) - for prior year;

(4) Negotiations report - for current year.

M. November 15

(1) CACTUS - update for current year; and

(2) Free and Reduced Price Lunch Enrollment Survey - as of October 31 for current year.

N. November 30 - Financial Audit Report - for prior year.

O. Seven business days after December 1 - UTREx - complete update required as of December 1 for current year.

P. December 15 - Bus Driver Credentials Report - for current year.

M. December 15 - UTREx - revised update as of December 1 for current year if significant errors are identified by the USOE or the LEA.

R277-484-4. Adjustments to Deadlines.

A. Deadlines in R277-484 that fall on a weekend or state holiday in a given year shall be moved to the first workday after the date specified for that year.

B. An LEA may seek an extension of a deadline to ensure continuation of funding and provide more accurate information to allocation formulas by submitting a written request to the USOE. The request shall be received by the USOE Director of School Finance at least 24 hours before the specified deadline in Section 3 and include:

(1) The reason(s) for the extension request;

(2) The signatures of the LEA business administrator and LEA superintendent/director; and

(3) The date by which the LEA shall submit the report.

C. In processing the request for the extension, the USOE Director of School Finance shall:

(1) Take into consideration the pattern of LEA compliance with reporting deadlines and the urgency of the need for the data to be submitted; and either

(2) Approve the request and allow the MSP fund transfer process to continue; or

(3) Recommend denial of the request and forward it to the USOE Associate Superintendent for Business and Operations for a final decision on whether or not to stop the MSP fund transfer

process.

D. If, after receiving an extension, the LEA fails to submit the report by the designated date, the MSP fund transfer process shall be stopped and the procedure described in Section 8 shall apply.

E. Extensions shall apply only to the report(s) and date(s) specified in the request.

F. Exceptions - Deadlines for the following reports may not be extended:

(1) CACTUS Update:

(a) June 29;

(b) November 15.

(2) UTREx Update:

(a) July 7 UTREx - final comprehensive update for prior year;

(b) Seven business days after October 1 UTREx - complete update required as of October 1;

(c) October 15 UTREx - revised update as of October 1;

(d) Seven business days after December 1 UTREx - complete update required as of December 1;

(e) December 15 UTREx - revised update as of December 15.

R277-484-5. Official Data Source and Required LEA Compatibility.

A. The USOE shall load operational data collections into the Data Warehouse as of the submission deadlines specified.

B. The Data Warehouse shall be the sole official source of data for annual:

(1) school performance reports required under Section 53A-3-602.5;

(2) determination of adequate yearly progress as required under the Utah Comprehensive Accountability System (UCAS); and

(3) submission of data files to the U.S. Department of Education via EDEN.

C. Rules pertaining to student information systems.

(1) The USOE shall provide clear specifications of all SIF Data Objects, SIF Data Object validation checks, Data Elements, and Data Element validation checks required by the USOE for a student information system to maintain compatibility with UTREx.

(2) The USOE shall implement SIF Data Object and Data Element validation checks against SIF Data Objects and Data Elements provided by student information systems as specified by the USOE and shall provide appropriately formatted reports including error listings containing meaningful error messages which reference the SIF Data Objects and Data Elements by name and hierarchical path.

(3) Prior to implementing changes to SIF Data Objects,

SIF Data Object validation checks, Data Elements, or Data Element validation checks, the USOE shall notify LEAs and their student information system providers of scheduled changes and shall publish changes of USOE's specifications for a reasonable period of time not less than 60 days to enable LEAs to make changes to their student information systems to be in sync with UTREx.

(4) The USOE shall maintain and publish a list of all Compatible Student Information Systems on USOE's web site.

(5) LEA's shall use a Compatible Student Information System.

(6) Prior to dropping a Compatible Student Information System for a new student information system or adopting a new student information system for the first time, LEAs shall ensure that the new system is also a Compatible Student Information System by using UTREx to test compatibility.

(7) Upon request of an LEA, the USOE shall provide a credentialed environment for SIS providers to test compatibility of their software.

(8) The USOE shall provide facilities for LEAs to transmit SIF Data Objects to USOE via SIF agents provided by USOE or owners of student information systems.

(9) LEAs shall transmit clearinghouse updates to USOE at least monthly on the first day of each month, and eTranscript updates within 10 business days of issuing student report cards after term completion.

C.~~LEAs shall use a USOE-approved SIS to ensure compatibility with USOE data collection systems. The USOE maintains a list of approved student information systems.~~

~~(1) Prior to the USOE granting approval for an LEA to initiate or replace a student information system that was not previously approved, the LEA shall comply with the following:~~

~~(a) LEA shall send written request for approval to USOE's Director of Information Technology;~~

~~(b) LEA shall submit documentation to the USOE that the new or modified student information system is School Interoperability Framework (SIF) certified;~~

~~(c) LEA shall submit documentation to the USOE that a SIF agent can meet the UTREx specifications profile for Vertical Reporting Framework (VRF), and eTranscripts;~~

~~(d) LEA shall ensure that a new student information system can generate valid data collection by submitting an actual file to~~

~~the USOE for review;~~

~~(c) LEA shall ensure that the new student information system can generate the Statewide Student Identifier (SSID) request file by submitting an actual file to the USOE for review.~~

~~(2) The USOE shall review documentation and grant or deny requests within 30 calendar days.~~

~~(3) LEA requests and approval shall be completed by January 15 of the school year prior to the year the LEA proposes to use the software for production data. Approved replacement systems shall run in parallel for a period of at least three months to a state-approved system and be able to generate duplicate reports to previously generated information.~~

~~D. No later than October 1, 2013, all public education LEAs shall begin submitting daily updates to the USOE Clearinghouse using all School Interoperability Framework (SIF) objects defined in the UTREx Clearinghouse specification. Noncompliance with this requirement may result in interruption of MSP funds consistent with R277-484-8.~~

D. For digital data provided by USOE, such as student transcripts, student school transfer information and SSID assignments; such data shall be provided via tabular formatted files transmitted via Secure File Transfer Protocol (SFTP), via USOE's MoveIT site, or via SIF Data Objects transmitted via a SIF agent.

E. All public high school transcripts requested by public education post-secondary schools shall be electronically submitted to those public education post-secondary schools if the post-secondary schools are capable of receiving transcripts through the electronic transcript service designated by the USOE. ~~This process is mandatory for all public high schools as of October 1, 2013.~~

R277-484-6. Use of Data for Allocation of Funds.

The USOE School Finance Section shall publish by June 30 annually on its website a description of how data shall be used to allocate funds to LEAs in each MSP program in the following fiscal year.

R277-484-7. Adjustments to Summary Statistics Based on Compliance Audits.

A. For the purpose of allocating MSP funds and projecting enrollment, LEA level aggregate membership and fall enrollment counts may be modified by the USOE on the basis of the values in the Membership and Enrollment audit reports, respectively, when a USOE audit report review team agrees that an adjustment is warranted by the evidence of an audit:

(1) the audit report review team shall make its

determination within 60 working days of the authorized audit report deadline;

(2) values can only be adjusted downward when audit reports are received after the authorized deadlines.

R277-484-8. Financial Consequences of Failure to Submit Reports on Time.

A. If an LEA fails to submit a report by its deadline as specified in Section 3, consistent with procedures outlined in R277-114, the USOE shall stop the MSP fund transfer process on the day after the deadline, unless the LEA has obtained an extension of the deadline in accordance with the procedure described in Section 4, to the following extent:

(1) 10% of the total monthly MSP transfer amount in the first month, 25% in the second month, and 50% in the third and subsequent months for any report other than June 15 Immunization Status report.

(2) Loss of up to 1.0 WPU from Kindergarten or Grades 1-12 programs, depending on the grade level and aggregate membership of the student, in the current year Mid Year Update for each student whose prior year immunization status was not accounted for in accordance with Utah Code 53A-11-301 as of June 15.

B. If the USOE has stopped the MSP fund transfer process for an LEA, the USOE shall:

(1) upon receipt of a late report from that LEA, restart the transfer process within the month (if the report is submitted by 10:00 a.m. on or before the tenth working day of the month) or in the following month (if the report is submitted after 10:00 a.m. on or after the tenth working day of the month); and

(2) appropriately inform the Board at its next regularly scheduled meeting.

(3) inform the chair of the governing board if LEA staff are not responsive in correcting ongoing problems with data.

KEY: data standards, reports, deadlines
Date of Enactment or Last Substantive Amendment: August 7, 2013
Notice of Continuation: December 31, 2012
Authorizing, and Implemented or Interpreted Law: Art X Sec 3; 53A-1-401(3); 53A-1-301(3)(d) and (e)

R277. Education, Administration.
R277-484. Data Standards.
R277-484-1. Definitions.

A. "Annual Financial Report" means an account of LEA revenue and expenditures by source and fund sufficient to meet the reporting requirements specified in Section 53A-1-301(3)(d) and (e).

B. "Annual Program Report" means an account of LEA revenue and expenditures by source and program sufficient to meet the reporting requirements specified in Section 53A-1-301(3)(d) and (e).

C. "Board" means the Utah State Board of Education.

D. "Comprehensive Administration of Credentials for Teachers in Utah Schools (CACTUS)" means the database maintained on all licensed Utah educators. The database includes information such as:

(1) personal directory information;
(2) educational background;
(3) endorsements;
(4) employment history;
(5) professional development information;
(6) completion of employee background checks; and
(7) a record of disciplinary action taken against the educator.

E. "Data Warehouse" means the database of demographic information, course taking, and test results maintained by the USOE on all students enrolled in Utah schools.

F. "EDEN" means the Education Data Exchange Network, the mechanism by which state education agencies are mandated to submit data to the U.S. Department of Education.

G. "ESEA" means the federal Elementary and Secondary Education Act, also known as the No Child Left Behind Act.

H. "LEA" means local education agency, including local school boards/public school districts, charter schools, and, for purposes of this rule, the Utah Schools for the Deaf and the Blind.

I. "MSP" means Minimum School Program, the set of state support K-12 public school funding programs.

J. "MST" means Mountain Standard Time.

K. "Schools interoperability framework (SIF)" means an open global standard for seamless, real time data transfer and usage for Utah public schools.

L. "Student information system (SIS)" means a student data collection system used for Utah public schools.

M. "USOE" means Utah State Office of Education.

N. "Utah eTranscript and Record Exchange (UTREx)" means a system that allows individual detailed student records to be

exchanged electronically between public education LEAs and the USOE, and allows electronic transcripts to be sent to any post-secondary institution, private or public, in-state or out-of-state, that participates in the e-transcript service.

O. "Year" means both the school year and the fiscal year for LEAs in Utah, which runs from July 1 through June 30.

P. "Records" means digital data which are defined by the USOE in table structured formats.

Q. "Data Elements" means discrete data such as a birth date contained within Record columns.

R. "Compatible Student Information System" means a student information system which has demonstrated the ability to provide Records required by the USOE via Secure File Transfer Protocol (SFTP), where the Records and Data Elements pass all Record and Data Element validation checks specified and implemented by the USOE.

S. "Clearinghouse Updates" means digital data files containing Records provided by LEAs to the USOE as specified by the USOE to be included in monthly updates.

T. "eTranscript Updates" means digital data files containing Records provided by LEAs to the USOE as specified by the USOE which are provided after the completion of school grading terms.

R277-484-2. Authority and Purpose.

A. This rule is authorized by Utah Constitution Article X, Section 3 which vests general control and supervision of public education in the Board, and by Section 53A-1-401(3) which permits the Board to adopt rules in accordance with its responsibilities and specifically allows the Board to interrupt disbursements of state aid to any LEA which fails to comply with rules.

B. The Board, through its chief executive officer, the State Superintendent of Public Instruction, is required to perform certain data collection related duties essential to the operation of statewide educational accountability and financial systems as mandated in state and federal law.

C. The purpose of this rule is to support the operation of required educational accountability and financial systems by ensuring timely submission of data by LEAs.

R277-484-3. Deadlines for Data Submission.

For the purpose of submission of student level data, each Utah LEA shall participate in UTREx. LEAs shall submit data to the USOE as directed by the USOE through the following reports by 5:00 p.m. MST on the date and in the format specified by the USOE:

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B. June 15

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C. June 29 - CACTUS - final update for current year.

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E. July 7 - UTREx - final comprehensive update for prior year.

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(4) ESEA Choice and Supplemental Services Report - for prior year;

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(7) Teacher Benefits Report - for prior year;

(8) Pupil Transportation Statistics - for prior year:

(a) Bus Inventory Report;

(b) Year End Pupil Transportation Statistics Reports;

(9) Copy of local school board-adopted budget - for next fiscal year, unless the local school board provides documentation of planned truth-in-taxation process.

G. August 15 - copy of the local school board-adopted budget - for next fiscal year, if the local school board provides documentation of planned truth-in-taxation process.

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(4) Negotiations report - for current year.

M. November 15

(1) CACTUS - update for current year; and

(2) Free and Reduced Price Lunch Enrollment Survey - as of October 31 for current year.

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R277-484-4. Adjustments to Deadlines.

A. Deadlines in R277-484 that fall on a weekend or state holiday in a given year shall be moved to the first workday after the date specified for that year.

B. An LEA may seek an extension of a deadline to ensure continuation of funding and provide more accurate information to allocation formulas by submitting a written request to the USOE. The request shall be received by the USOE Director of School Finance at least 24 hours before the specified deadline in Section 3 and include:

(1) The reason(s) for the extension request;

(2) The signatures of the LEA business administrator and LEA superintendent/director; and

(3) The date by which the LEA shall submit the report.

C. In processing the request for the extension, the USOE Director of School Finance shall:

(1) Take into consideration the pattern of LEA compliance with reporting deadlines and the urgency of the need for the data to be submitted; and either

(2) Approve the request and allow the MSP fund transfer process to continue; or

(3) Recommend denial of the request and forward it to the USOE Associate Superintendent for Business and Operations for a final decision on whether or not to stop the MSP fund transfer process.

D. If, after receiving an extension, the LEA fails to submit the report by the designated date, the MSP fund transfer process shall be stopped and the procedure described in Section 8 shall apply.

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A. The USOE shall load operational data collections into the Data Warehouse as of the submission deadlines specified.

B. The Data Warehouse shall be the sole official source of data for annual:

(1) school performance reports required under Section 53A-3-602.5;

(2) determination of adequate yearly progress as required under the Utah Comprehensive Accountability System (UCAS); and

(3) submission of data files to the U.S. Department of Education via EDEN.

C. Rules pertaining to student information systems.

(1) The USOE shall provide clear specifications of all Records, Record validation checks, Data Elements, and Data Element validation checks required by the USOE for a student information system to maintain compatibility with UTREx.

(2) The USOE shall implement Record and Data Element validation checks against Records and Data Elements provided by student information systems as specified by the USOE and shall provide appropriately formatted reports including error listings containing meaningful error messages which reference the Records and Data Elements by row number and column name.

(3) Prior to implementing changes to Records, Record validation checks, Data Elements, or Data Element

validation checks, the USOE shall notify LEAs and their student information system providers of scheduled changes and shall publish changes of USOE's specifications for a reasonable period time not less than 60 days to enable LEAs to make changes to their student information systems to be in sync with UTREx.

(4) The USOE shall maintain and publish a list of all Compatible Student Information Systems on USOE's web site.

(5) LEA's shall use a Compatible Student Information System.

(6) Prior to dropping a Compatible Student Information System for a new student information system or adopting a new student information system for the first time, LEAs shall ensure that the new system is also a Compatible Student Information System by using UTREx to test compatibility.

(7) Upon request of an LEA, the USOE shall provide a credentialed environment for SIS providers to test compatibility of their software.

(8) The USOE shall provide facilities for LEAs to transmit Records to USOE via SFTP clients provided by owners of student information systems.

(9) LEAs shall transmit clearinghouse updates to USOE at least monthly on the first day of each month, and eTranscript updates within 10 business days of issuing student report cards after term completion.

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~~(a) LEA shall send written request for approval to USOE's Director of Information Technology;~~

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~~(c) LEA shall submit documentation to the USOE that a SIF agent can meet the UTREx specifications profile for Vertical Reporting Framework (VRF), and eTranscripts;~~

~~(d) LEA shall ensure that a new student information system can generate valid data collection by submitting an actual file to the USOE for review;~~

~~(e) LEA shall ensure that the new student information system can generate the Statewide Student Identifier (SSID) request file~~

~~by submitting an actual file to the USOE for review.~~

~~(2) The USOE shall review documentation and grant or deny requests within 30 calendar days.~~

~~(3) LEA requests and approval shall be completed by January 15 of the school year prior to the year the LEA proposes to use the software for production data. Approved replacement systems shall run in parallel for a period of at least three months to a state-approved system and be able to generate duplicate reports to previously generated information.~~

~~D. No later than October 1, 2013, all public education LEAs shall begin submitting daily updates to the USOE Clearinghouse using all School Interoperability Framework (SIF) objects defined in the UTREx Clearinghouse specification. Noncompliance with this requirement may result in interruption of MSP funds consistent with R277-484-8.~~

D. For digital data provided by USOE, such as student transcripts, student school transfer information and SSID assignments; such data shall be provided via Records transmitted via Secure File Transfer Protocol (SFTP), via USOE's MoveIT site, or via XML or JSON formatted messages transmitted via HTTPS REST web service.

E. All public high school transcripts requested by public education post-secondary schools shall be electronically submitted to those public education post-secondary schools if the post-secondary schools are capable of receiving transcripts through the electronic transcript service designated by the USOE. ~~This process is mandatory for all public high schools as of October 1, 2013.~~

R277-484-6. Use of Data for Allocation of Funds.

The USOE School Finance Section shall publish by June 30 annually on its website a description of how data shall be used to allocate funds to LEAs in each MSP program in the following fiscal year.

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A. For the purpose of allocating MSP funds and projecting enrollment, LEA level aggregate membership and fall enrollment counts may be modified by the USOE on the basis of the values in the Membership and Enrollment audit reports, respectively, when a USOE audit report review team agrees that an adjustment is warranted by the evidence of an audit:

(1) the audit report review team shall make its determination within 60 working days of the authorized audit report deadline;

(2) values can only be adjusted downward when audit reports

are received after the authorized deadlines.

R277-484-8. Financial Consequences of Failure to Submit Reports on Time.

A. If an LEA fails to submit a report by its deadline as specified in Section 3, consistent with procedures outlined in R277-114, the USOE shall stop the MSP fund transfer process on the day after the deadline, unless the LEA has obtained an extension of the deadline in accordance with the procedure described in Section 4, to the following extent:

(1) 10% of the total monthly MSP transfer amount in the first month, 25% in the second month, and 50% in the third and subsequent months for any report other than June 15 Immunization Status report.

(2) Loss of up to 1.0 WPU from Kindergarten or Grades 1-12 programs, depending on the grade level and aggregate membership of the student, in the current year Mid Year Update for each student whose prior year immunization status was not accounted for in accordance with Utah Code 53A-11-301 as of June 15.

B. If the USOE has stopped the MSP fund transfer process for an LEA, the USOE shall:

(1) upon receipt of a late report from that LEA, restart the transfer process within the month (if the report is submitted by 10:00 a.m. on or before the tenth working day of the month) or in the following month (if the report is submitted after 10:00 a.m. on or after the tenth working day of the month); and

(2) appropriately inform the Board at its next regularly scheduled meeting.

(3) inform the chair of the governing board if LEA staff are not responsive in correcting ongoing problems with data.

KEY: data standards, reports, deadlines
Date of Enactment or Last Substantive Amendment: August 7, 2013
Notice of Continuation: December 31, 2012
Authorizing, and Implemented or Interpreted Law: Art X Sec 3; 53A-1-401(3); 53A-1-301(3)(d) and (e)

USOE RESPONSE

MEMORANDUM

TO: Utah State Board of Education

FROM: Judy Park, Associate Superintendent

DATE: February 7, 2014

SUBJECT: Petition to Revise R277-484

After careful review of all of the information and following meetings with Mr. Kendall Andelin and Mr. Nathan Andelin, I am requesting that the Board deny the request to revise R277-484. This Board rule includes best practices and industry standards that are currently in place in other states. This rule reflects the best policy for the state of Utah. Changing a Board rule to accommodate a specific vendor, while creating hardship for LEAs, is not advisable. Below I have listed specific rationale for the request to deny the petition.

1. The request to only submit data on a monthly basis for data files and end-of-term basis for transcripts would prevent important functions from occurring. Current policy and practice includes daily submission of data from LEAs. This daily submission allows LEAs to electronically share data for mobile students and to comply with 53A-1-413 (student achievement backpack). It also feeds the SAGE formative system so that student access to the system is current with student course enrollment. It is essential to our processes that the current practice of submitting data daily continue.

2. The request for "USOE to provide a credentialed environment for SIS providers to test compatibility of their software" is not currently possible. USOE's limited resources need to stay focused on supporting LEAs and their contracted vendors. The current Board rule and USOE policies and procedures provide extensive information and specifications for other vendors interested in seeking opportunities in Utah.

3. The request to transfer data via tabular files in place of the current format of SIF would result in costly changes for LEAs as well as reverting to older technologies that are not current industry standards. The use of SIF is now implemented in all 50 states as well as internationally. Utah would not be served to use older technology solutions. USOE began implementation of SIF three years ago. It has been in the Board rule for several years.

4. The request to not require SIF certification is not in the best interest of the state. USOE is committed to continuing to support and assist LEAs in meeting this requirement. SIF certification represents best practice and industry standard for data transfer.

5. The request to give LEAs 60 day notice of changes to specifications is inadequate. USOE current practice gives LEAs 18 months minimum notice of required changes. Exceptions would be state legislation requiring a shorter timeline.

During a very successful meeting with the Andelins, they provided suggestions and recommendations for improving IT policies and procedures. Based on their input, USOE will be making the following policy and procedure changes:

Issue / Concern – More information exchange needed with vendors regarding changes required by federal and state statute as well as Board rule.

- USOE will sponsor a meeting with all SIS Vendors to discuss changes needed after the legislative session has ended.

Issue / Concern – Relational Data had difficulty deciphering error messages from UTREx software.

- USOE will update documentation to reflect experiences learned during the release and rollout of UTREx.

- USOE will create/change error messages to be more specific and clearly point to error locations (SIF data object, etc.).

- USOE will add additional reports for LEAs (and vendors) to perform data comparisons across multiple years.

- USOE will work to enhance the current UTREx software with better error-handling and reporting.

Issue / Concern – SIF direction in the future.

- USOE will publicize and market the direction for future development using SIF with federal, state and LEA visions in mind.

- USOE will add additional functionality to record exchange to reduce workload for LEAs.

USOE RESPONSE

Petition to Amend and Repeal Board Rules
December 2, 2013

Petitioner:
Nathan M. Andelin
President, Relational Data Corporation
9226 South 2490 West
West Jordan, Utah 84088

This petition is for an amendment to and repeal of certain rules pertaining to **R277-484-5. Official Data Source and Required LEA Compatibility** which were approved in May 2013.
The Utah State Board of Education has the legal authority to act on this petition based on Utah Administrative Code http://www.rules.utah.gov/publicat/code/r277/r277-100.htm.
Reasons for the proposal:

1. The repeal of board rules is needed because they:

    - Are significant undue barriers against competition and the operation of free markets in Utah.

    - Enable the Utah State Office of Education (USOE) to engage in unfair competition against free enterprise in the student information system business.

    Currently, there are nine student information vendors (several of which are local) in Utah. The other eight have not expressed concerns regarding Board Rules and have successfully complied with all standard and process requirements. Standards are necessary and required to provide timely, accurate student data. They are not undue barriers.

    - Are significant undue barriers against LEA choice of student information systems which should be completely unnecessary, given the implementation of appropriate USOE data validation.

    In the past, and currently, LEAs have chosen a variety of SIS vendors. USOE only requires that chosen vendors comply with Board rule requirements, standards and processes.

    - Cause USOE to be placed in a conflict of interest position regarding the approval of student information systems which compete against USOE's SIS2000+ student information system.

    Board rules and the approval process are in place to protect LEAs and vendors while helping them follow state and federal guidelines.

- Enable USOE to misrepresent board rules and to arbitrarily disqualify the use of student information systems from the state.

Rules are clearly stated and have been followed to date. USOE has not arbitrarily disqualified any student information systems from the state.

- Appear to be unlawful with respect to "small business" per Utah Code Title 63G-3-102 - "Definitions" and 63G-3-301 - "Rulemaking procedure".

Subsection 5 Official Data Source and Required LEA Compatibility, requires only that "LEAs shall use a USOE-approved SIS to ensure compatibility with USOE data collection systems." [R277-484-5C] This requirement is followed by several documentation requirements for LEAs using new or changing SIS systems.

- Place undue time and cost burdens on LEAs and vendors of student information systems.

Rules and standards are required to provide accurate and timely reporting required by the Board (R277-484-2)

- Raise barriers that make it practically impossible for new student information systems to gain a foothold in the state.

Through the years, many SIS vendors have been in place in Utah. Some of these have been local vendors, some have been developed by the LEAs, some have been larger vendors outside of Utah.

2. New definitions and rules are needed which:
    - Clearly define the meaning of Compatible Student Information Systems.

They are currently defined:
http://schools.utah.gov/computerservices/Services/Data-Clearinghouse.aspx

- More clearly define USOE and LEA responsibilities for ensuring that Compatible Student Information Systems are used in the state.

We are always receptive to making definitions more clear. The USOE IT section formally meets twice each year with LEAs as well as monthly meetings and ad hoc responses and collaboration.

This petition includes two (2) proposal options; one which specifies the use of Table Structured Data transmitted via Secure File Transfer Protocol "SFTP" and a nearly identical option which specifies the use of School Interoperability Framework "SIF" Data Objects transmitted via SIF Agents using the HTTPS protocol.

The reason for two (2) proposals is because we anticipate significant opposition from USOE against the use of Table Structured Data and SFTP for data interchange, due to USOE's multi-year multi-million dollar investment in SIF architecture and interface, which Relational Data Corporation's software is also compatible with, and which we can and do provide to Utah schools. However we suggest that Table Structured Data and SFTP are much better suited for state reporting than SIF Data Objects and SIF Agents for the reasons specified in Exhibit A at the end of this document.

There don't appear to be any benefits to using SIF Data Objects and SIF Agents for state reporting from technical or economic perspectives; Table Structure Data and SFTP are much better suited for it. However it appears that USOE accrues benefit by using SIF interfaces primarily as a barrier against businesses which may offer student information systems for public schools which have difficulty with SIF interfaces which might otherwise be able to compete against USOE's SIS2000+ offering.

USOE has spent millions of dollars of taxpayer monies on SIF interfaces which in and of themselves are barriers to LEA state reporting while fomenting the adoption of board rules which are also significant barriers against business and the operation of free markets in Utah and against new student information systems from entering the state, which suggests a profound lack of accountability of the USOE IT Department to the Utah State Board of Education and to taxpayers.

These proposals redress the problem by changing the focus from USOE approval of student information systems to a focus on what constitutes a compatible student information system, and what roles USOE and LEAs have in ensuring compatibility.

Exhibit A

Reasons for using Table Structured Data and Secure File Transfer Protocol as opposed to SIF Data Objects and a SIF Agent include:

1. Data residing in LEA student information systems is Table Structured Data, and data residing in USOE data warehouses is Table Structured Data.
   Storage and exchange are different. How data is stored in each of the LEAs can be different. SIF puts everyone on the same playing field for data exchange.

2. SIF Data Objects are complex data formats which contain both XML data elements and XML attributes containing up to approximately 10 levels of hierarchical structure.
   This is a feature, not a bug. XML is more readable and is an industry standard. There are reasons we're no longer using COBOL

3. The coding required to generate SIF Data Objects is significantly more work than the coding required to generate Table Structured Data.
   In order to facilitate the exchange of data between dissimilar systems, more coding is required.

4. The coding required to parse and consume SIF Data Objects is significantly more work than the coding required to parse and consume Table Structured Data.
   SIF Data Objects are required in order to exchange data.

5. The coding required to produce appropriate error listings containing meaningful error messages is much less complex for Table Structured Data; row number and column names precisely identify errors in format or content. In contrast SIF Data Objects require substantial complex code to provide appropriate references to XML elements and attributes which involve complex "paths" to data as opposed to simple rows.
   Invalid point and untrue.

6. SIF interfaces don't take into account "code page" differences between Microsoft and IBM systems, therefore substantial extra coding is required to translate data transmissions from one character set to another; otherwise the data appears scrambled. The HTTP protocol and mainstream HTTP servers provide for automatic translation, but the SIF specification calls for a content-type of "application", which means "don't translate".
   Can be resolved – First we've heard of it. SIF interfaces do take into account code pages.

7. SIF Data Objects are approximately 10 times larger than Table Structured Data due to verbose XML tag enclosures which surround all data elements.

This is a feature, not a bug. It's helpful (and a standard) to use XML which is why most of the world uses it.

8. Standard SIF Data Objects are inadequate for Utah state reporting; USOE was forced to specify their own "Extended Data Elements" to accommodate these inadequacies.
   Extended data elements are a part of the SIF specification. SIF, or any standard, cannot anticipate every possible element at a point in time. Many of the elements may be incorporated in future versions of SIF.

9. USOE SIF interfaces require the use of a mapping document known as the USOE SIF Profile which provides mapping between LEA Table Structured Data known as clearinghouse files, to SIF Data Objects, and back to USOE Table Structured Data – all of which are specified by USOE.
   USOE defined Clearinghouse files are no longer used. SIF is used to transform data from various SIS tables to a common data structure housed at the USOE.
10. SIF Data Objects require approximately 10 times more network bandwidth than Table Structured Data, and require even much larger amounts of CPU and computer memory to generate and consume them.
    SIF Data Objects are in line with best practices across all 50 states as well as numerable applications that share data using the SIF specification.

11. SIF Agents that parse and consume SIF Data Objects are generally incapable of handling large data sets. USOE claims that the USOE SIF interfaces have problems processing files greater than 4 megabytes in size. In contrast, programs that process Table Structured Data have no practical file size limits.
    Granite, Alpine, Jordan, Canyons and Davis are able to submit large data sets without issue.

12. Given file size restrictions in USOE's SIF interfaces, SIF Agents that produce SIF Data Objects must include additional complex code to split SIF Data Objects into multiple files prior to transmitting them to USOE, which would be unnecessary for programs that produce Table Structured Data.
    Unaware of file size restrictions

13. SIF Agents which provide SIF Data Objects may communicate with SIF Zone Integration Servers according to a SIF specification known as "pull-mode". USOE asserts that the PowerSchool and Skyward SIF Agents running in Utah communicate via "pull-mode" which calls for the Agent to transmit messages to the Zone Integration Server at repeating intervals. The developer of the Skyward Agent indicated that his Agent transmits pull-mode messages every 10 seconds asking for USOE Data Collector requests, even though data collections may be scheduled only once per day or longer intervals, thus wasting computer resources and network bandwidth.
    The amount of data being exchanged is so minimal, this is not a concern.

14. SIF Zone Integration Servers are costly to operate in terms of annually renewable software licensing fees, maintenance, and computer hardware resources.
    Included in our standard maintenance agreement with Pearson.

15. SIF Zone Integration Servers are unnecessary, and even pose bottlenecks for bulk file transfers. And USOE state reporting interfaces consist entirely of bulk file transfers.
    There are no bottlenecks being created by the ZIS as data transfers occur quickly.

16. SFTP client and server utilities are generally free or very low cost and are much better suited for bulk file transfers.
    They also require more time and resources to monitor and automate.

17. Commercial companies such as Clever (http:\\www.getclever.com) provide data clearinghouse services for LEAs similar to USOE's services, but at a fraction of the cost by using Table Structured Data and SFTP and other innovative data interchange options.
    Currently using best practices as used by other SEAs and LEAs.

18. The use of Table Structured Data and SFTP is in line with Utah Code Title 63G-3-301 - "Rulemaking procedure" which states "If the agency reasonably expects that a proposed rule will have a measurable negative fiscal impact on small businesses, the agency shall consider, as allowed by federal law, each of the following methods of reducing the impact of the rule on small businesses: (a) - (e);"
    7. Aggregate anticipated cost or savings to: (C) small businesses: There is no anticipated cost or savings to small businesses. This rule and the amendments apply to public education and do not affect businesses."

    This form was filed (along with the amended rule) on June 14, 2013. In addition, Subsection 5 Official Data Source and Required LEA Compatibility, requires only that " LEAs shall use a USOE-approved SIS to ensure compatibility with USOE data collection systems." [R277-484-5C] This requirement is followed by several documentation requirements for LEAs using new or changing SIS systems.

19. USOE clearinghouse data is purged and reloaded daily under a common model known as Extract Transmit Load or "ETL". USOE chose to NOT use SIF interfaces for internal ETL operations between USOE data warehouses, but requires SIF interfaces for LEA state reporting.
    ETL – Extract, Transform & Load
    SIF is used for exchange not storage.

20. The SIF Association boasts having a membership of 3,200 - consisting mostly of schools, school districts and software vendors. But that number is a tiny fraction of

the total number of organizations in all industries using Table Structured Data and SFTP for ETL operations similar to LEA state reporting

SIF – Schools Interoperabiltiy Framework – Educational standard
All 50 states have SIF implementations

21. SIF interfaces were originally designed for and are primarily intended for exchanging messages based on database add, change, and delete events – not ETL operations. SIF interfaces are extremely ill suited for ETL operations. State reporting is a classic ETL operation.

22. USOE's SIF interfaces don't provide appropriate data validation against SIF Data Objects nor error listings which reference SIF Data Objects, which is a very significant barrier against data interchange.

23. USOE's SIF interfaces have inadequate support for SIF specifications; the software fails with SQL errors while processing properly formatted SIF Data Objects containing valid data.

    There may have been bugs during the initial implementation, but no known issues exist currently relating to this item.

24. USOE's software requires SIF data elements which are listed as optional per SIF specifications.

    The SIF specification is intentionally flexible and can expand for Utah's purposes in collecting secondary, post-secondary and other data.

25. USOE's software varies from USOE's published SIF Profile.

    Not sure what the issue is here?

26. Conflicts exist between the SIF specification and the USOE clearinghouse file specification which have not been resolved.

    As mentioned above, we no longer use or support the clearinghouse file specification.

27. USOE's SIF interfaces have material defects and inadequacies; nevertheless USOE still uses SIF related board rules to disqualify LEA submission of SIF Data Objects, disapprove LEA student information systems, and interfere with LEA contractual relations with SIS providers.

    The approval process for LEA SISs is clearly stated above and on the website.

R277-484-5 Data Standards (Petition to Amend and Repeal)

USOE Response

USOE is responsible for:

- Accurate, timely data collection
- Data transfer between LEAs, to the state data warehouse and to the federal government
- Data standards for accurate data collection and data transfer
- Supporting districts in best practices for data collection and transfer
- Accurate and timely data reporting
- Complying with board rules, state law and federal law
- Supporting LEAs in complying with board rules, state law and federal law

USOE has data standards because:

- Aggregate data reports are only accurate if the data collection and transfer is based on the same standard
- Accountability systems that compare schools require data standards for accurate comparisons
- State data standards represent best practices for data collection, transfer and reporting
- Federal requirements include data standards for accurate, comparable data
- Longitudinal data requires specification versioning with strict adherence to data standards

USOE follows data standards best practices in concert with other states and national data systems because:

- Federal reporting that compares states is most accurate when best practices are followed across states
- Best practices ensure that Utah data standards are current and represent the best practices for data quality and security

USOE has chosen the SIF specification because:

- SIF is the most comprehensive and well defined framework in existence for education data exchange
- There are advantages in being part of the collaboration defining data elements across the nation (Peer review, resources, expanded elements for future data collection and exchange with other applications and markets)
- The US Dept. of Ed has been a member of the SIF Association for more than 10 years as have many other states.
- The US Department of Education continues to be a major supporter of SIF specification

USOE does not use a Table Structured Data and Secure File Transfer Protocol because:

- SIS's use table structured data for data storage, not data transfer
- Using SIF promotes open source SIS development

USOE controls the data transfer process and protocols to protect:

- Security of student-level data
- Consistency of data elements
- Efficiency of resources

All Utah Student Information Systems (SISs) must comply with standards because:

- Each LEA must collect and transfer data in a consistent way to allow for accurate data collection and reporting
- With the current direction of the legislature, it's essential for all SISs to adhere to clearly defined standards

There are nine SISs currently in Utah:

- COMPASS – Utah based company
- One Point Relational Data – Utah based company
- Davis District – in house developed system
- Sevier District – in house developed system
- Weber District – in house developed system
- ASPIRE – USOE developed system
- Discovery – company outside of Utah
- PowerSchool – company outside of Utah (originated in Alpine District)
- Skyward – company outside of Utah

The USOE sponsored SIS (ASPIRE) meets the following needs:

- Small LEAs, with limited resources, need the same quality of SIS as larger LEAs (Daggett)
- LEAs that choose to provide limited in-house IT support benefit from ASPIRE (Carbon)
- Developed in response to the 1991 State Board of Education Task Force recommendations

USOE has a documented process to approve each SIS because:

- The need to support LEAs in their SIS decision making process for data systems
- Ease of access for those without any IT support
- Simple steps include:
    - Be requested by an LEA (in writing no later than July 31 prior to the start of the school year)
    - Be SIF certified (not just SIF compliant)
    - Have a SIF agent that can meet the UTREx specs/profile for VRF and eTranscripts (proof must be submitted to the USOE prior to September 1)
    - Be able to generate the SSID request file (an actual file must be submitted to the USOE for review no later than July 31 prior to the start of the school year)

USOE provides support, expertise and consultation to LEAs because:

- Protection is needed from inadequate systems that could result in costly data errors and loss of funding
- Providing assistance to LEAs ultimately improves LEA efficiency in providing required data

SIF Utilization and Impact Information

SIF – Student Interoperability Framework

- **Definition**
  - The Schools Interoperability Framework (SIF), is a data sharing open specification for academic institutions from kindergarten through workforce. Until recently, it has been used primarily in the United States alone; however, it is increasingly being implemented in Australia, the UK, India and elsewhere.
  - The specification is composed of two parts: an XML specification for modeling educational data, and a Service-Oriented Architecture (SOA) specification for sharing that data between institutions.
  - SIF is not a product, but an industry initiative that enables diverse applications to interact and share data. As of March 2007, SIF is estimated to have been used in more than 48 states and 6 countries, supporting millions of students.
  - The specification is actively maintained by its specification body, the SIF Association.
  - SIF is an XML standard that exists built *entirely and specifically for the exchange of K-12 education-related information*
  - Case studies show significant dollar savings for schools and districts

SIF LEA Impacts

- **Districts SIF Utilization**

  The non-profit SIF Community does not develop or sell products but try to gauge implementations of SIF-enabled products from marketplace providers. Due to competitive concerns, vendors are not 100% transparent with their product usage information due to competition concerns with other providers. In aggregate form, we can validate the following usage information - again these would be on just implementations we know of and numbers can only be greater.

  - All 50 states have SIF Implementations
  - Over 85% of LEA SIS use the SIF Data Model (may or may not be infrastructure)
  - 80-90% of LEAs SIS have SIF Agents built
  - Over 3,200 LEAs have implemented SIF horizontally (Data Model and Infrastructure within institution)
  - Over 15 million students currently being served via SIF interoperability globally

SIF SEA Impacts **(see SEA Specific Activities Appendix)**

- **States that have the largest SIF implementations**

  At this time, 29 states have indicated they "are" or "are planning" to use SIF – and 75% of SLDS grantees are using SIF to successfully implement their grant applications – 4 in just the last round! Right now states have implemented SIF in a variety of different manners according to their needs. Some states use it for one function (i.e. student ID generation) and some use for the entire student management and reporting (State Longitudinal Data System). Large statewide implementations in place include OH / VA / UT / OK / WY / MA /AK / WA / SC / PA with other large implementation underway right now including NY / MN / IL / ME / WA / HI / IA.

SIF Marketplace Impacts

- **SIF data domains are most broadly used by application vendors and districts**

  This can vary greatly whether the standard is being used at a school, district or state level – which is a key design feature to its scalable success. Generally at the school and district level the priority is to link the SIS with another high "pain point" duplication/usage application. This is usually the HR, transportation, foodservice, accounts management, library and/or grade book software. Many SIS have varied features and functionalities so some of this can be accomplished within an application. At the state level the focus is more on the unique student ID generation, mandated state reporting from the local SIS, and soon to be assessment information transfer.

- **Approximate number of application vendors supporting SIF**
  There are, at any given time, over 100 Certified Applications but we have over 200 developer members across the globe in the SIF community – and the number is growing due to end user demands. Since SIF is an open standard, we know that many vendors in the education space use the Specification for its mature data model but do not get involved in the initiative. We are expecting those numbers to jump exponentially with the recent v3.0 release.

SIF Technology Leveling

- **The usage of openly developed standards has been shown to:**
  - Assist in the development of sound educational policies at all levels and permit the comparison of educational processes across communities and states
  - Improve the quality of instruction and increase student achievement by integrating instruction, assessment, and outcome reporting as well as easy discovery, access, and use of learning materials.
  - Improve the accuracy, timeliness and communication of nationwide reporting summaries of condition and progress of education via local, state, and nationwide education research.
  - Allow for access to data that various educational stakeholders require when they require it – and future access to data they have yet to identify
- **The usage of openly developed standards directly allows for:**
  - An "even playing field" between small and large developers by providing a baseline they all can develop to and then allow for uniqueness to their products and services.
  - Empowerment by consumers to choose "best of breed" solutions for their needs allowing for choice among customized, personalized learning experiences
  - Scalability demands of schools and states that oftentimes is dependent on funding cycles
  - Easier comparison of provider capability and quality
  - Prevent "vendor lock-in" by allowing for platform independent and vendor neutral environments that allow for easy plug and play of applications
- **The SIF Specifications now reflect:**
  - A separation of data model from infrastructure allowing for the "tailoring" of data needs and transport.
  - Usage of the most updated and common transport technologies (HTTPS, SOAP, REST, etc.) to allow for any developer to use their existing development tools and strategies
  - The linkages to various developer tools (REST Sandbox, Data Model Extension Tools, etc.) that make it easier than ever to test against and support their product development cycles.
  - A reduced fee Certification Program that has been developed to address the growing demand of customers allowing for huge return on investments for marketplace providers.

Appendix - Detailed SEA Activities Appendix

SIF State-level implementations are now underway statewide in numerous states – meaning automated reporting in most if not all required LEA to SEA reporting information. Numerous others are planning SIF implementations and included it in most of the successful State Longitudinal Data System Grant (SLDS) applications submitted to the National Center for Educational Statistics. Several federal agencies and programs have recommended data interoperability by utilizing applications adhering to the SIF Specification. This has caused additional SEA's to stand up and take notice of the benefits of interoperability. Programs that mention using the SIF Specification are:

- U.S. Department of Education National Educational Technology Plan
- Migrant Education Student Data Exchange
- Child Nutrition Act Re-Authorization Bill of 2004
- IES State Longitudinal Data Grants Program
- National Center of Education Statistics Common Education Data Standards Program
- Several State Legislative Activities

Data collection and analysis are not only critical at the LEA level but also at the SEA level. Without accurate and timely data collection, it is burdensome for the SEA to collect data and prepare their federal reports. Every state now consumes many hours of manual data manipulation to merge the LEA's information into a format that the SEA can use. This process causes delays which could impede educational funding allocations for SEA's and LEA's.

States are joining the SIF community because they recognize the advantages of being a part of the collaboration that develops the SIF Specification as the pK-12 Data Standard. Many states understand that their needs can be addressed in the specification and have recognized that SIF is playing an important role in encouraging partnerships and collaboration among educators, policy-making and vendor organizations--as well as other standards bodies.

The announcement of the NCES State Longitudinal Data Systems Grants Program awards in November 2005 underscored the desire at all levels to improve data interoperability. Forty Five (45) states applied and 14 were awards grants totaling $25 million dollars – nine of which are SIFA members with most applications making SIF utilization a vital component of their projects.

Statewide SIF Implementations:

Alaska – One of the IES grantee states that has been working on designing their longitudinal data system with SIF vertical reporting as the backbone. After finalizing the needs analysis phase of the grant Alaska is in the final implementation stages of this system. Alaska has also been working closely with their districts and the Association in SIF awareness activities.

Iowa – Statewide SIF implementation utilizing SIF to populate a cloud based service structure. SIF is also being used in their transcript exchange and statewide portal development.

Massachusetts – State-wide SIF implementation underway including the mandated requirement for marketplace providers to be both "SIF Certified" but also certified to a "MA SIF Profile". This will automate almost all LEA to SEA reporting requirements but also enable the LEAs to address their locale-specific interoperability challenges but standardizing their data management processes.

New York – The state is utilizing SIF identity management and vertical reporting functionality to populate their statewide Race to the Top project including using SIF to populate their inBloom statewide implementation project.

Ohio – Another SLDS grantee winner has successfully implemented SIF to replace their outdated statewide reporting system. The project has streamlined and automated data reporting and now is being utilized to develop a statewide financial reporting system for end-to-end LEA to SEA reporting systems. There is interest in a new project that is taking a different approach in the use of the SIF Implementation Specification in that the project is geared to moving and sharing instructional content to the teacher desktop to improve teaching and learning.

Oklahoma – Vertical Reporting for all 540 districts as part of the states WAVE Project. This project is unique in the disparate student information systems and the size of the districts--ranging from the smallest (with 13 students) to the largest (with 42,000 students).

Pennsylvania - was the first state to conduct the first proof of concept pilot for SIF Vertical Reporting. Pennsylvania purchased SIF memberships for their 29 IU's and is finding significant value.

South Carolina – Vertical Reporting with student locator framework. Implemented horizontal implementations for all 85 districts and is enabling eTranscripts using the SIF Student Record Exchange Objects. The total SIF vertical implementation was accomplished in a matter of seven short months.

Utah – Has a state student information system (SIS) and has just completed its state SIS to Special Education Application for Vertical Reporting. This will allow for 100% Vertical Reporting for all districts and charter schools to the state and utilizes SIF to populate their statewide student data warehouse.

Virginia – The Department of Education has successfully completed the statewide rollout of the SIF Student Locator Framework and statewide SIF vertical reporting functionality. The Student Records Exchange framework is being used to support their transcript functionality needs. Virginia continues to lead the way with providing creative incentives and funding for the divisions as they strive to reach their goal of statewide SIF.

Washington – The Washington School Information Processing Cooperative (WSIPC) serves over 600,000 students in 282 K-12 schools. As the state's largest provider of school administrative systems for student and business administration, they actively manage the majority of the state's K-12 population and over $6B in annual district budgets. SIF has become an integral part of the cooperative's long-term strategy to scale difficult solutions for a vast population in a conforming, economical manner. WSIPC's implementation of SIF currently serves a population of approximately 50,000 students and has met with much success as they deploy SIF to additional schools. The State Department of Education also is in the implementation stage of student locator and student records exchange through this WSIPC partnership.

Wyoming – Vertical Reporting and horizontal implementations for all 48 districts. Each district will have up to 10 applications in the horizontal implementation. The scale of the SIF project is impressive - as is the state's forethought in assisting the LEA's with planning and implementing. Wyoming is also undertaking SIF student record exchange as a second phase of their SIF implementation to support the state Hathaway Scholarship program. Wyoming also found value in offering SIF memberships for its 48 districts.

<u>Some of the states utilizing the SIF Specification in various forms:</u>

Alabama – student locator framework

Delaware - state data collection project includes use of the SIF Implementation Specification.

Nevada – allows SIF Implementations to feed local data repositories utilizing the SIF Implementation Specification.

South Dakota – using the SIF Specifications to move data locally and vertically

California – utilizing SIF student records exchange in their work implementing their transcript exchange functionality.

Indiana – engaged in a SIF Student Locator Framework Proof of Concept Project and plans to expand this project to include vertical reporting.

California / Texas / West Virginia - utilizing SIF student records exchange in their work implementing their transcript exchange functionality

Missouri, Maine, Rhode Island, Minnesota, Wisconsin, Michigan, Kentucky, Arkansas, Florida, California and **Oregon** are all working on various phases of incorporating SIF into vertical reporting activities and/or their longitudinal data system. These activities include, needs analysis, phased planning and RFP writing. The Association has been supporting these states via consulting with them on their plans to use the SIF Implementation Specification. Many more states are looking to SIF as a solution of choice for data interoperability needs.

All SEA and LEA Success Stories can be found at: https://www.sifassociation.org/NewsRoom/Pages/Success-Stories.aspx