

Compliance at a Click

New Web-Based Software Solution Streamlines Compliance Process for Charter School Authorizers and Charter Schools

Jim Goenner

Executive Director
Charter Schools Office
Central Michigan University

Larry Brannan

President
Corporate Computer, Inc.

June 2002

Copyright 2002 Corporate Computer, Inc.
All rights reserved.
Printed in the United States of America.

Corporate Computer, Inc.
6095 28th Street SE
Grand Rapids, Michigan 49546

phone (616) 942-8865
fax (616) 942-5650
www.corpcomp.com

The Authorizers Oversight Information System (AOIS)
is owned and licensed by Central Michigan University
Charter Schools Office, 2520 South University Park,
Mt. Pleasant, Michigan 48859.

Other companies and products mentioned herein are
trademarks or registered trademarks of their respective
trademark owners.

Compliance at a Click

Executive Summary

A decade ago, the inception of chartered public schools forever changed America's educational landscape. Born of our nation's belief that competition and a free-market society yield innovation and positive change, parents of school-age children embraced the array of academic choices made possible by the charter school movement. Today, over 2,000 chartered public schools serve over half a million grade school and high school students in 38 states.

The state of Michigan – a leader in the charter school movement – has 189 chartered public schools that educate approximately 66,000 students. Michigan's charter school law has been ranked the third strongest in the nation. A recent report to the state legislature and pending legislation propose additional accountability requirements for charter schools.

In Michigan, measures for tracking such compliance and performance requirements exist not at the state level but at the authorizer level. When the Michigan Legislature in 1993 enacted the state's charter school law, it gave four educational entities – school district boards, intermediate school district boards, community college boards, and state public university boards – the authority to authorize charter schools. Today, Central Michigan University (CMU) is the largest authorizer of chartered public schools in the state and the largest university authorizer in the nation.

Recognizing its leadership role and responsibility to the public, CMU's Charter Schools Office (CSO) took the lead in using technology to ensure that the schools it authorizes are held to the highest standards of accountability. Working with Grand Rapids, Michigan-based Corporate Computer, Inc., CMU developed the **Authorizers Oversight Information System (AOIS)**, a sophisticated software system that streamlines the compliance process and enables users to track the performance of chartered public schools.

Specifically, AOIS offers a day-by-day account of each CMU-authorized charter school's compliance status. A visual mechanism similar in concept to a stoplight allows users to view each school's status: a green light means a school is in compliance; a yellow light means there are one to two unresolved compliance issues; and a red light means a school is not in compliance. Additionally, a series of Web-based "Digital Dashboards" enable users to easily process required documents as well as immediately view and retrieve specific compliance information about each school going back five years. The system efficiently organizes and manages vast amounts of information, yet it is flexible and expandable. Soon, some of its functions will be made directly available to CMU-authorized charter schools.

CMU is not the only authorizer that recognizes the benefits of an automated oversight system. Other universities, including Ferris State University, are considering implementing AOIS. "We've looked at and evaluated AOIS and believe there is great value, both to the university as an authorizer and to the charter schools as they seek to be in compliance," said Ferris State University Charter School Office Director Jimmie Rodgers.

The Charter School Concept

Chartered public schools are held accountable for improving the academic performance of students.

As a result, chartered public schools are held to the highest accountability standards – to the market, to the public authority, and to the state.

Chartered public schools receive the same state aid per student as the local school district where the charter school is located, or a maximum of \$6,800 per student. All chartered public school boards must conduct their meetings in accordance with the Open Meetings Act. They also are required to comply with the Freedom of Information Act.

In Michigan, a charter school is:

- a public school governed by public officials
- free (prohibited from charging tuition)
- open to all based on availability
 - required to employ certified teachers
 - required to administer state standardized tests
 - subject to health and safety codes, just like all other public schools

Introduction

Central Michigan University's Role

Back in the 1800s, Central Michigan University (CMU) was the first college in the state to educate public school teachers for their vocation.

In 1995, CMU became the first Michigan university to license a charter school. Today, CMU is the largest authorizer of chartered public schools in the state and the largest university authorizer in the nation.

The Charter Schools Office of Central Michigan University currently oversees the compliance and performance of 57 of the state's 189 chartered public schools. (Of these 189 schools, universities authorize a total of 150 – a cap set by the state legislature in 1996. The legislature is considering increasing the number of university-authorized charter schools in Michigan.)

CMU's 57 charter schools educated a total of 25,256 students during the 2001-2002 school year. CMU works to ensure that its schools comply with requirements surrounding the educational, governance and financial areas of the charter contract.
continued, next page

By launching AOIS, authorizers can ensure that their charter schools are not only accountable but also that authorizer staff consistently enforce compliance across all charters. In other words, AOIS is revolutionizing school reporting – with the potential to expand beyond charter schools and into the realm of all educational institutions that ultimately are accountable to the public.

Harry E. Ross, Ph.D., knows paperwork. As associate director for Central Michigan University's Charter Schools Office, he is responsible for the staff who, among their many oversight duties, process the multitudes of forms that schools must submit to comply with the law.

But the flurry of forms that besieged the Central Michigan University office frustrated even the most organized of authorizers. "Vast amounts of paper were going into files, binders, and cabinets," Dr. Ross said. "It was becoming a logistical nightmare to file all that paper and retrieve it when needed."

Of even greater concern, the paper method made it exceedingly difficult to ensure that staff consistently enforced compliance across all charters.

Finally, a school could be in compliance one day and out the next – for as simple a reason as failing to turn in school board meeting minutes on time – and it was impossible to know each school's status on a daily basis.

"Authorizers should be working with schools to develop and refine programs," said CMU Director of Oversight Cindy Schumacher. "Instead, we were spending too much time dealing with paper."

Dr. Ross, Ms. Schumacher, and their staff were – and are – not alone. Indeed, all charter school authorizers and the schools they oversee face not only increasing loads of paperwork but also public scrutiny as they strive to stay in compliance with local, state, and federal requirements. In Florida, for example, it was reported that a charter school teacher spent a week on a Freedom of Information Act request. In Michigan, most charter schools must submit more paperwork to their authorizer and other government agencies than do entire public school districts. Meanwhile, a recently released report to the Michigan Legislature recommends additional compliance procedures.

The media often acts as another layer of accountability by reporting on the charter school movement. Often, the media coverage is positive – charter schools are praised for the choices that they provide to parents of school-age children. But other times, the coverage is negative – portrayed through a prism that questions and sometimes distorts charter schools' accountability to students, parents, and the taxpaying public.

Thus, faced with increasing regulatory and public pressure, Dr. Ross and his associates turned to technology to streamline the compliance and performance process – as well as to

**Central Michigan
University's Role
*continued***

All CMU-authorized charter schools are required to submit an annual budget and amendments, quarterly financial statements, and an annual financial audit.

Additionally, CMU-authorized charter schools must submit an annual education report and annual school calendar, plus must comply with teacher-certification and special-education requirements.

In accordance with CMU charter policies, CMU-authorized charter schools are required to administer a standardized nationally norm-referenced test to all grades, including kindergarten.

CMU has contracted with Standard & Poors School Evaluation Services to conduct a three-year analysis of the academic and financial performance of CMU-authorized charter schools.

stay one step ahead of those who challenge charter schools' accountability. "Simply put, we came to the conclusion that filing cabinets full of information were not the best way to ensure that our schools were in compliance," Dr. Ross said.

Central Michigan University in December 1999 issued Requests for Proposals to perform application software development and offer hosting services. Fifteen bidders responded. Corporate Computer was selected in April 2000 for recommending a combination of scanning, database, and networking solutions, including a design using MichNet – a very large, very fast data-transmission network in Michigan available to schools at low cost.

Corporate Computer project managers spent that month of April identifying how Central Michigan University staff conducted their oversight responsibilities. In addition to solving the primary problems already mentioned, staff also were seeking ways to better document compliance issues, streamline Freedom of Information Act requests, and easily train new staff members.

In studying the problems and work patterns, Corporate Computer's project managers identified 30 separate workflow processes and, from these processes, created a series of flow charts depicting how Central Michigan University monitored its schools. In some cases, these processes were re-engineered to increase efficiencies. The flow charts became the basis for AOIS.

Using the information gathered in the fact-finding phase, Corporate Computer began the next part of the project in June 2000, noting six defined deliverables to the client: project team formation and roles; systems analysis of user requirements; detailed requirements; evaluation of alternatives; systems design (final specification); and implementation.

Corporate Computer delivered the AOIS solution in December 2001, and the product went live shortly thereafter.

AOIS - Phase I

A customized Web-based solution, AOIS resides on servers at Corporate Computer's Grand Rapids facility and is "served up" to Central Michigan University staff who can connect to the system from any location with Internet access. Data is industry-standard encrypted and transmitted via the high-speed MichNet data pipes.

Currently, only CSO staff can access AOIS, either from networked computers at Central Michigan University in Mt. Pleasant or from laptop computers when traveling on business; soon, CMU-authorized charter schools all over Michigan will be able to connect to AOIS and access their specific compliance information.

*Providing Information,
Access to Tools*

AOIS is a series of **Microsoft Windows-based Digital Dashboards** – visually similar in concept to a car dashboard. The function of the latter is to provide information (car speed, gasoline balance, oil pressure, etc.) that enables a driver to operate a vehicle. Similarly,

AOIS's Digital Dashboards enable CSO staff to determine – with the click of a mouse – if their charter schools are “driving within the limits” established by Central Michigan University.

Each Digital Dashboard consolidates personal, team, and external information, and provides access to analytical and collaborative tools. Users simply launch the AOIS program and select one of the Digital Dashboards available to them depending on their clearance level:

1. Home Dashboard
2. Charter School Dashboard
3. Documents Dashboard
4. Add Documents Dashboard
5. Tables Dashboard
6. Reports Dashboard
7. Search Dashboard
8. Application Request Dashboard
9. Administrative Dashboard
10. Help Desk Dashboard

Web-based information is delivered to these Digital Dashboards via Web Parts, which integrate Central Michigan University's existing systems and databases for viewing and usage during compliance processes.

Electronically Filing Paperwork

Before AOIS existed, Central Michigan University's CSO receptionist would manually date- and time-stamp every single piece of paper that the office received; the paperwork would be distributed to the appropriate staff; and these staff members would process and file the paperwork.

With AOIS's inception, this process is automated. Electronic documents (those sent via email or fax) now are digitally date- and time-stamped by the receptionist. Non-electronic documents still are manually date- and time-stamped, and then they are scanned by document image specialists trained by Corporate Computer. First, the specialists eliminate any blank pages. Then, using specialized software, they apply an optical character recognition (OCR) engine to make documents computer-readable for keyword and phrase searches. The OCR function has been especially useful in streamlining Freedom of Information Act requests.

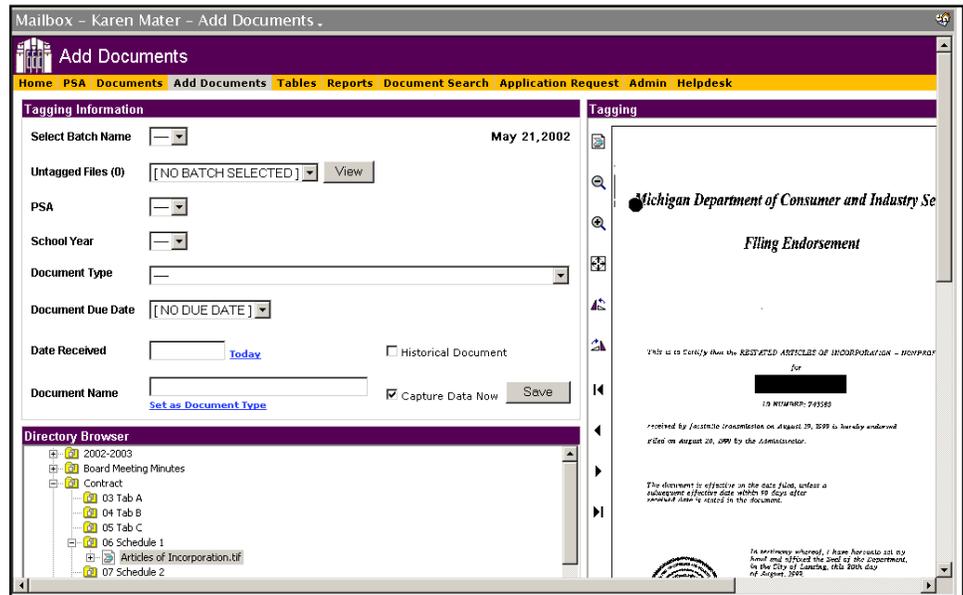
Next, the specialists launch the AOIS program and access the **Add Documents Dashboard**. This dashboard only can be accessed by the document image specialists and authorized staff.

Under the *Tagging Information Web Part*, specialists load scanned images and tag them by:

Forms Online

Separate from AOIS, Central Michigan University and Corporate Computer created a Website that contains and provides links to all of the required forms that Michigan public schools must submit to remain in compliance.

Users find the forms they need, print them out, complete them, and fax or mail them to Central Michigan University.



- charter school name
- school year
- document type
- document due date
- document name

As information is entered into the Tagging Information Web Part, the *Directory Browser Web Part* makes a “best guess” as to where that document should reside in a charter school’s directory, or, a user can override the best guess and upload the document into a selected directory.

The *Tagging Web Part* is an area where a document that is being tagged and applied to a charter school directory can be viewed. This Web Part provides such basic image-viewer functionality as enlarging or reducing the size of the image, rotating it, and viewing different pages.

In all, five years’ worth of archived documents for each Central Michigan University-authorized charter school were scanned, tagged, and made available to AOIS users – nearly 500,000 documents total. Documents continue to be scanned, added, and tagged daily for use and archiving in AOIS. Although Central Michigan University currently has chosen to save all documents, a mechanism can be built into AOIS to automatically delete documents after a pre-approved expiration date.

Following “Best Practices”

The **Workflow Instructions** section of AOIS (not a dashboard but a behind-the-scenes custom-written workflow engine) facilitates the flow of documents in AOIS by automatically moving electronically processed documents to the next applicable user. For example, when a document has been added to a directory, AOIS sends an email to applicable staff that a new document has arrived and is available to be viewed.

If a document is the basis for initiating a compliance process, AOIS will send the appropriate staff member instructions – essentially, a “best-practices” check sheet – via an email message. These instructions show the staff member exactly how to process the document according to Central Michigan University’s standards, including determining if the document is on time, accurate, and complete.

If the user clicks to accept the document, AOIS automatically records who accepted the document as well as the date and time of acceptance. Built-in “date ticklers” prompt applicable staff to take action on particular documents and keep the process moving to the next staff member. All documents are managed by Microsoft’s SharePoint portal server, which ensures that only one user at a time makes changes to a document.

This quality-control system has several benefits:

- documents are rarely misfiled or lost
- staff consistently enforce compliance from school to school
- a staff member can be a brand-new employee – yet still know how to efficiently process documents and meet compliance requirements

Board meeting minutes are among the most common documents that schools must submit regularly to remain in compliance. AOIS calculates a 14-day lead time for board minutes reporting from each school’s board meeting dates. If meeting dates are changed, AOIS recalculates new due dates for the minutes. Moreover, AOIS tracks minutes on two levels: those that have been submitted but not yet approved by the school board, and minutes that have been approved by the school board. In addition, Corporate Computer has enhanced AOIS to allow for a three-day grace period for board meeting minutes. In other words, the system will acknowledge that Central Michigan University has received but not yet processed the minutes and will give staff three days to process the documents. This way, schools will not be unfairly tagged in AOIS as “out of compliance” because a staff member has not yet accepted the minutes. In a few months, this process will be further streamlined when the system is enhanced to allow schools to directly submit their minutes to AOIS.

At the end of each day, AOIS backs up all data and duplicates it for off-site storage. The system then performs a “sweep” of all documents received from each school and compares it to Central Michigan University CSO’s Master Calendar of Reporting Requirements to check for timely receipt of required documents. (Specifically, the Master Calendar of Reporting Requirements is a function designed by Central Michigan University and

Benefits of AOIS:

Documents are rarely misfiled or lost, resulting in significant time- and cost-savings.

Paper storage costs are eliminated.

Data is shared by multiple users.

Records are permanently archived and can be searched in seconds.

*Source: Central Michigan University
Charter Schools Office*

Disadvantages of the paper method:

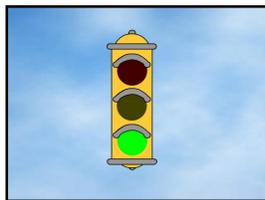
Three to five percent of all paper documents are misfiled or lost.

The average cost to research and recreate a lost paper document is \$200.

An average executive spends up to three hours per week searching for paper files.

*Source: Information Managers
Associates*

Using the Stoplight to Check for Compliance



embedded in AOIS that establishes a standard due date for 44 forms that each charter school must submit to be in compliance.) Unresolved compliance problems are highlighted for the appropriate staff to resolve. By design, staff personally contact their schools about compliance problems – as opposed to an impersonal, computer-generated email – thus ensuring not only better problem resolution but also better customer service.

The **Home Dashboard** is the main location where users automatically can see – via the stoplight feature – whether or not a school is in compliance.

The *Charter School Selector Web Part* provides a listing of all charter schools. Attached to each charter school is the main phone number to that school as well as the stoplight feature, also known as a status indicator. This Web Part enables users to click on column headers to sort schools:

- by green light (those in compliance)
- by yellow light (those with one to two unresolved compliance problems)
- by red light (those with three or more compliance problems)
- alphabetically

The Home Dashboard

School (Red)	Business Phone
A Demo PSA	616-555-1212
Academy of Detroit West	616-555-1212
Academy of Flint	616-555-1212
Academy of Inkster	616-555-1212
Academy of Oak Park	616-555-1212
Academy of Southfield	616-555-1212
Academy of Westland	616-555-1212
Cherry Hill Academy of Performing Arts	616-555-1212
Countryside Charter School	616-555-1212
International Academy of Flint	616-555-1212
Island City Academy	616-555-1212
Livingston Developmental Academy	616-555-1212
Livingston Technical Academy	616-555-1212
Michigan Early Elementary Center	616-555-1212

By moving the cursor over the status indicator, a tool tip appears that displays what the most recent compliance issue is for that particular school. Users also have the ability to toggle between viewing only the schools for which they are responsible or viewing all Central Michigan University-authorized charter schools. There also are Web Parts that

provide links to users' personal inboxes in Microsoft Outlook, to their personal calendars, and to Central Michigan University's Master Calendar of Reporting Requirements. Once in the Master Calendar of Reporting Requirements, users can view the calendar in weekly, monthly, current school year, upcoming school year, and custom formats. In AOIS, the Master Calendar only can be edited by authorized users in the Administrative Dashboard function.

Accessing Detailed Information

The **Charter School Dashboard** provides easy access to all information about a Central Michigan University-authorized charter school.

Users can access the stoplight function Web Part to quickly peruse compliance issues. Additionally, users can access a Web Part that shows a school's compliance history for current and past school years – including documents' due dates, and whether or not they were received on time and were accurate and complete. A green check indicates if a particular document was received on time and a red check indicates if it was not received or was late. Users can click to open specific documents in this Web Part.

Users can create a note regarding a particular charter school (such as details of a phone conversation), as well as view notes created by other users; however, they cannot edit others' notes. In some cases, only authorized users can read certain notes.

Users can access basic contact information, such as a school's mailing address, phone number, driving directions, and a photo of the school. Finally, users can access compliance problems for their specific charter schools. Problems are separated into "active" and "resolved" categories.

The Charter School Dashboard

The screenshot displays the Charter School Dashboard interface. At the top, there is a navigation bar with tabs for Home, PSA, Documents, Add Documents, Tables, Reports, Document Search, Application Request, Admin, and Helpdesk. The main content area is divided into several sections:

- PSA Selector:** A table listing various charter schools and their business phone numbers. The schools listed include Academy of Detroit West, Academy of Flint, Academy of Inkster, Academy of Oak Park, Academy of Southfield, Academy of Westland, Cherry Hill Academy of Performing Arts, Countryside Charter School, International Academy of Flint, Island City Academy, Livingston Developmental Academy, Livingston Technical Academy, and Michigan Early Elementary Center.
- Compliance History:** A table showing document compliance records. Columns include Document, Type, Due Date, Date Received, On Time, Accurate, and Complete. Red 'X' marks indicate non-compliance, while green checkmarks indicate compliance.
- PSA Notes:** A section for creating and viewing notes. A note is shown with the date 02/05/2002 17:09PM, author Administrator, and subject Board Meeting Minutes.
- Compliance Problems:** A section showing active problems for the 2001-2002 school year. A summary indicates 11% on time. Two active problems are listed:

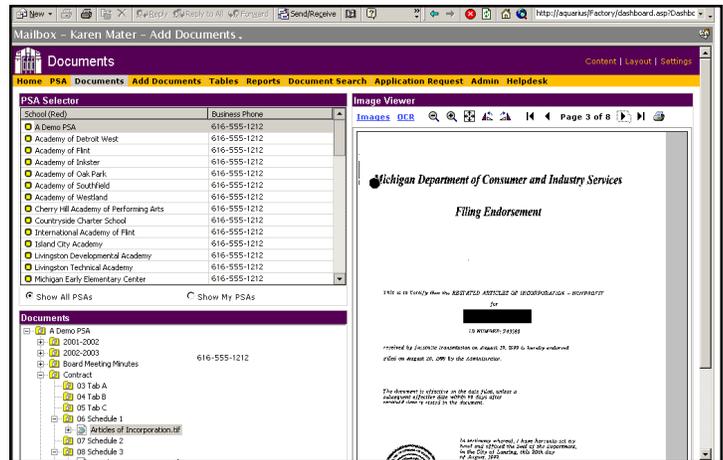
Date Found	Problem Text
4/5/2002 3:14:26 PM	The document Board Meeting Minutes - Proposed Regular was not received by its due date (4/4/2002 3:14:26 PM).
4/16/2002	The document DS-41688 Clock Hours Report was not received by its due date (4/15/2002).

Viewing Archived Documents

The **Documents Dashboard** lets staff view documents for a selected charter school.

As with the Home and Charter School dashboards, the Documents Dashboard provides a Web Part that enables users to access the stoplight function. Another Web Part displays an index of folders containing imaged documents as well as non-imaged documents (such as Word documents). Built on

Microsoft's standard "folder-tree" system, users can click on a folder to view its entire contents. Clicking on an imaged document opens it for viewing and offers the same image-viewer functionality as in the Add Documents Dashboard; clicking on a non-imaged document launches the appropriate application and opens the selected document.



The Documents Dashboard

Changing Information

The **Tables Dashboard**, a restricted Web page, provides authorized users the ability to view and change information in the CSO system database.

Generating Reports, Mass Emailings

The **Reports Dashboard** helps track school performance and academic achievement by generating such reports as school mission statements, progress-against-goals reports, total school enrollment reports, and school facilities updates.

In all, there are approximately 50 different reports that cover many of the standard reporting functions required by CSO staff.

This dashboard also lists unresolved issues for schools not currently in compliance. Additionally, from this dashboard, users can initiate mass emailings, such as notices to charter schools reminding them that a particular document is due.

Conducting Keyword Searches

The **Search Dashboard** gives users the ability to search OCR-scanned documents by specific text or predefined properties – including by keywords or phrases, by charter school, by document name or type, or by school year.

This function makes searching the 500,000 AOIS-archived documents – say, for a Freedom of Information Act request – a quick and simple as opposed to daunting task. As with the Add Documents and Documents dashboards, basic image-viewer functionality is available: Documents can be enlarged, reduced, rotated, and printed. Moreover, they can be attached to email messages or downloaded to a user’s hard drive.

Processing Applications

The **Application Request Dashboard** allows users to enter data received from a potential charter school applicant.

Handling Administrative Functions

The **Administrative Dashboard** is restricted to CSO system administrators. Here, they can:

- approve new AOIS users
- add, delete, or restrict existing users’ access to AOIS
- edit the Master Calendar of Reporting Requirements
- determine who should be notified when a document arrives
- start or stop any business process
- add new schools into the system
- administer compliance problems

Accessing Help Online

The **Help Desk Dashboard** enables users to inform Corporate Computer staff of technical problems with the system, ask technical questions, and make enhancement suggestions.

A user fills out a password-protected, network-based “ticket,” which automatically is assigned a tracking number and sent to a preassigned technical specialist as well as Corporate Computer’s receptionist (to ensure that applicable staff are alerted). A user can mark the ticket “urgent” for immediate response. Also, a user can track progress via the tracking number.

Corporate Computer worked with CMU staff to develop a process that channels problems, questions, and suggestions to appropriate staff. Corporate Computer and CMU staff teleconference weekly to discuss the latest technical issues.

AOIS - Phase II

Over the next few months, Corporate Computer will enhance AOIS with the goal of making many of its functions directly available to Central Michigan University-authorized chartered public schools.

Offering Direct Access

Beginning with a pilot project of schools selected by Central Michigan University, Corporate Computer and CSO staff will meet with school staff to listen to their compliance needs. The working plan then is to install computer equipment at each pilot school and train applicable staff members in AOIS.

By using the system, schools on a daily basis immediately will know if they are in or out of compliance. Schools only will be able to access their own compliance information via password-protected access.

Streamlining Compliance

Potentially, schools might take on some of the scanning functions currently handled by Central Michigan University's document image specialists – thus streamlining the compliance process. However, schools would not have to place scanned documents in the correct directories; these documents automatically would be transmitted via MichNet to a "holding folder" within AOIS; from there, Central Michigan University's document image specialists would file the forms as usual. By design, Central Michigan University staff would continue to directly work with schools to resolve compliance issues.

Tracking Resources

An additional enhancement of AOIS at the Central Michigan University level will enable administrators to better track personnel resources. Specifically, Corporate Computer is creating a function that will show which staff are going to which schools for meetings, why they are going, and how often.

Expanding Servicing

Finally, Corporate Computer is expanding AOIS to include servicing other authorizers and their schools – in Michigan and throughout the United States – with Web-based compliance solutions. Additionally, Corporate Computer will offer in-house tagging-and-filing services. New authorizers that subscribe to AOIS will not need to hire or train document image specialists because Corporate Computer will manage that function.

Conclusion

Ensuring that 57 different charter schools – each with a distinct focus – comply with a myriad of local, state, and federal regulations is no small task. Central Michigan University recognized this important responsibility when it embarked on its mission to redesign the way it handles compliance processes. Today, the results of these efforts are yielding new efficiencies for charter schools throughout Michigan.

The benefits include:

1. Reduced paperwork efforts when reviewing charter schools for compliance.
2. Improved communication of information between CSO staff and their charter schools.
3. Streamlined access to compliance information and the ability to quickly analyze data from any location with Internet access.
4. Increased compliance of charter schools through automated compliance procedures.

"With AOIS, time previously spent dealing with paperwork now is used helping schools develop new programs to better serve their students," Dr. Ross said. "Our mission is to lead the way in assisting charter schools with their goal of creating and maintaining strong educational alternatives in Michigan."

About the Principals

James N. Goenner, Executive Director

Jim is responsible for planning, organizing, and directing the Charter Schools Office at Central Michigan University, the nation's leading university authorizer. Jim has served as executive director since February 1998 and formerly served as president of the Michigan Association of Public School Academies (MAPSA). He now serves on MAPSA's board of directors. Jim is a founding member of the National Association of Charter School Authorizers and the Michigan Council of Charter School Authorizers. He is a graduate faculty member at Central Michigan University and recently received a gubernatorial appointment to serve on the Michigan Higher Education Facility Authority.

Larry G. Brannan, President

Larry is owner and president of Grand Rapids, Michigan-based Corporate Computer, Inc. Larry graduated from Ohio University with a bachelor of science degree in industrial technology and a minor in mathematics. He served in the U.S. Navy as a supply officer on the USS Liberty (AGTR-5). After military service, he joined IBM Corporation and held various sales, marketing, and sales-management positions over an 11-year period. In 1989, he founded Corporate Computer, a company specializing in developing custom systems utilizing wide-area networks for education, government, and commercial clients. Larry is a member of the Project Management Institute.