Overview

ATLAS is a student-centric information system co-developed with Microsoft for Fresno Unified School District, a large urban district of 73,000 students and 10,000 employees in California. Fresno Unified needed to consolidate multiple Student Information Systems into a single enterprise-wide system that would provide the scalability, flexibility, and the analytical capability it required. ATLAS includes student attendance, transfers, behavior, formative assessment, analytics for teachers and school and district administrators, gradebook, lesson sharing repository, enrollment, external interfaces, parent and student portals and reporting systems.

Components

There are several major components in the ATLAS system, including:

1. **Attendance.** This includes the daily taking of attendance by teachers, the research and clearing of attendance issues by office staff, and a full complement of attendance and ADA reports.

2. **Student Information.** This includes demographics, enrollment information, schedule, local and state assessments, grade history, behavior, student services and engagement, contact information, and student analytics.

3. **Behavior.** The behavior module includes a new Positive Behavior section, based on Search Institute’s 40 Developmental Assets. It also includes the standard negative behavior capabilities including teacher-level discipline and admin-level suspension and expulsion processing and reporting.

4. **Gradebook.** A fully featured gradebook provides spreadsheet-like entry of scores for each class and posting of marked or permanent grades as well as the recording of an unlimited number of progress reports. It includes features like: weighting of categories, different grading scales by class and by student, sorting of columns, filtered and sorted views, auto fill, excluding-assignment capability, export and import of class templates, and combo classes. It also includes a number of reports that can export to Word, PDF, or Excel.

5. **Parent and Student Portals.** Parents can access their student’s information through the web-based Parent Portal. Information includes attendance, class schedule, class assignments and current calculated grade, units toward graduation, current GPA, and grade history.

6. **Reports.** An extensive reporting area provides numerous reports for teachers, principals, office staff, counselors, district administrators and other staff.
Currently in completed

1. **Master Scheduling.** Student scheduling is one of the district’s most critical annual processes. This process enables FUSD to deploy our nearly $400 million dollar teacher investment efficiently and effectively and it impacts every student in the district. Effective scheduling requires the collaboration of school leadership, human resources, fiscal and operations. When done well, scheduling directly supports the district’s equity and access strategic objective and ensures that students are taking the right classes at the right time in order to maximize their options as career ready graduates. The master schedule is a blueprint of a school’s essential resources—teachers, facilities, and school programs. The process of scheduling requires attention to detail, critical analysis, collaboration, and clear communication in order for the master schedule to meet the needs of ALL students. The focus ATLAS Master Scheduling tools and reports will support a systemic approach to scheduling. Over twelve tools and sixteen reports are currently in development (including a scheduling engine).

2. **Groups.** This component provides ATLAS users the ability to create and monitor specific groups of students by using criteria to develop the group. Groups can be generated statically or dynamically. Once students are in a group, attendance, data queries, and journal entries can be utilized to track a group of students involvement whether it is involvement in activities, interventions, athletics, etc.

3. **School and District Data Dashboards.** The data dashboards will provide high level analysis with drill down capability for ATLAS data. It will synthesize performance and target setting at the class, school, and district level in order to monitor and evaluate indicators that have an impact on student performance. The goal of the data dashboards is to deliver actionable information to the right audience in a timely manner, give a consistent view of the performance, build the cycle of continuous improvement, and generate urgency to tackle the most important issues.

Latest Development

1. **Student Journal.** This component will take the ATLAS behavior module and enhance the entries by creating entries for counseling, attendance, activities, negative and positive behaviors, and suspensions. Eventually work flows will be created to help inform school officials, parents, and students about student school involvement. Analytics and report development will be used to help evaluate and monitor student disproportionality.

2. **Parent and Student Portals.** Ongoing enhancements to the student and parent portals will continue in order to make the portals more interactive. The goal is to generate alerts and consistent communication that can be pushed out to parents and students via cell phones and email.

3. **Class, School, and District Profiles.** Aligned to the work of the data dashboard is the future development of class, school, and district profiles so that school officials have a landing page that comprehensively summarized essential data that will force attention to top priorities and initiatives.

4. **Foundations Formative Assessment Sharing.** This component will reinforce collaborative sharing of formative assessments throughout the district.
**Development**
Development on ATLAS began in June 2009 as a co-development project involving staff from Fresno Unified and Microsoft Consulting Services. ATLAS is built on the Microsoft SharePoint 2010 platform using Web parts, Silverlight 4, and .Net application components developed in C#. It was developed using the Microsoft Visual Studio and SQL Server Management Studio environment with the Microsoft SQL Server 2008 Database as its foundational data-store for both operational and data warehouse storage and access.

**Database**
The central component of the system is the ATLAS Database, designed by senior-level Microsoft architects who have worked on other large school systems including Miami-Dade, Charlotte-Mecklenburg, New York and Chicago. The enterprise-level database includes over 120 normalized tables with inferential integrity designed to input, retrieve and analyze information easily. Stored procedures provide ongoing maintenance of the data and access to commonly used information.

**Hardware Infrastructure**
In order to support 10,000 employees, 73,000 students and a similar number of parents, ATLAS runs in a hypervisor-based virtual server environment built using Microsoft’s Hyper-V High Availability fail-over clustering technology. HA clusters are built using Windows Server 2008 R2 Server Core virtual hosts running on a large HP 7000-series Blade Center. Microsoft’s Hyper-V provides our virtual environment using VLANs extending all the way up to the virtual switching level on the virtual host. The SharePoint server farm for the current instance of ATLAS consists of six hardware load-balanced (HLB) web front end servers, two HLB application and image servers, two mirrored SQL servers, a stand-alone central admin server, and a load-balanced farm of three SQL Reporting Services servers.

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ATLAS Teacher Attendance Screen

ATLAS Student Profile – Grade History Tab
ATLAS Student Profile – Behavior Tab

ATLAS Student Profile – Behavior Entry
ATLAS Gradebook

ATLAS Gradebook – Manage Assessment Screen
ATLAS Gradebook – Individual Student Scores

ATLAS Gradebook – Teacher Reports
ATLAS Parent and Student Portals
ATLAS—Data Dashboard

Monday, Feb 23, 2012, 9:23am, Period 2 (15 minutes left)
Alhambra Middle
Fresno Unified School District

At a Glance
857 - 6 Present Today  17 - 2 Sick  6 - 2 Unexcused  8 - 2 Tardies  15 - 2 Susp/Exp Incidents  76 School Days Left
- Today  o This week  o This month  o This year

Attendance
- Students with best attendance
- Students with attendance problems
- Teachers not taking attendance

Performance (Grades)
- Students with recent grade improvements
- Students with recent grade declines
- Gradebook statistics

Performance (Assessments)
- CST Math: 350A 352F 568 244B 168F6B
- CST ELA: 244A 329F 325B 158B 16670B
- California 595 217

A-G Tracking
- Students off track

Behavior / Discipline
- Top 20 student behavior problems
- Suspensions returning this week

Key Dates
- Progress grades: March 12
- CST Math: Feb 20th
- CAHSEE: April 4th
- End of semester: June 11th

News and Messages
- From Network Department
- Message from Susan Boll
- Message from Chris Evans
- Message from Superintendent
- Message from Facilities
- more...

Student ID or Last Name  ATLASIQ

Parent Portal Today: 254 - 8
Student Portal Today: 254 - 6

(DRAFT) School Year: 2010-2011

Number of suspension incidents per hundred students
- All Elementary Schools (excl. specialty schools)
# ATLAS Feature List

## Security
- Tied to Active Directory
- Role-based, Scope-based
- SharePoint Security
- Kerberos
- DB Replicas for Reporting/Queries

## Student
- Attendance & Attendance Clearing
- Behavior – Positive, Negative and Suspensions
- Demographics
- Contacts – Parents & Guardians
- Grade History – Add, Edit, Delete
- Student Services (Special Ed, Gate, ELD)
- ATLAS IQ Inquiry System
- Transfers
- ATLAS Parent Portal
- Alerts, Indicators

## Enrollment
- Student and Guardian information and relationships
- Federal Ethnicity and Race information
- Parent Education Level
- Special Programs – Gate, Special Ed, ELD
- Preferred Communication Language
- Home Language Survey

## Academics
- Report Cards – Secondary and Elementary (Multilanguage)
- Transcripts
- Augmented, Non-Augmented, Academic & Eligibility GPA, Class Rank, CAHSEE
- Graduation Requirements, Honors
- School Enrollment Log, Immunizations
- SAT, PSAT, ACT, CST

## Infrastructure
- Active Directory
- SharePoint 2010
- SQL Server 2008 R2
- Reporting Services 2008
- .NET Framework 4
- Visual Studio 2010

## Gradebook
- Multiple Grading Periods
- Spreadsheet entry and view
- Unlimited Assessments/Assignments
- Add/Delete/Weight Categories
- Multiple Views, Sort and Filter
- Copy/Fill default values, scores
- Rearrange and sort columns
- Calculated Grades and Final Grades
- Effort and Citizenship Scores
- Report Card and Private Comments
- View Previous Quarters/Semesters
- Show Dropped Students
- Export/Import Class Template
- Grading Scales by Class or by Student
- Extra Credit, Exclude from Grading
- Absent, Missing, Incomplete, Excused
- Credit/No Credit and Pass/Fail

## Parent Portal
- Attendance, Class Schedule, Current Class Work and Grades, Grade History
- Self-Help Login Information

## Student Portal
- Built into SharePoint Student Mysites
- Current Class Work and Assignments, Grade History, Attendance
<table>
<thead>
<tr>
<th>Scheduling</th>
<th>Reports and Analytics</th>
<th>Foundations</th>
</tr>
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<tbody>
<tr>
<td>• Building Requests</td>
<td>• ADA Reports for State Reporting</td>
<td>• Collaborative Lesson Collaborative Lessons</td>
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<td>o Request Builder</td>
<td>• Export to Excel, Word, PDF, CSV, XML</td>
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<td>o Individual Requests</td>
<td>• Search Capabilities</td>
<td></td>
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<tr>
<td>o Mass Request Editor</td>
<td>• ATLAS Explorer</td>
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<td>• Building Teacher Section Assignments</td>
<td>• Groups</td>
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<td>o Teacher Section Assignments</td>
<td>• Data Dashboard</td>
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