

Case Study



Customer Name:
Massachusetts
Dept. of Elementary
and Secondary
Education

Headquarters:
Malden,
Massachusetts

**Number of
Students:**
954,000*

**Number of
Teachers:**
70,635*

<http://www.doe.mass.edu>

*School year 2012-
2013

IT Dept Synchronizes DB Development for District School System.

The Massachusetts Dept. of Elementary and Secondary Education overcomes the productivity drag of over-written changes, unsynchronized, multi-site development teams.

- A multisite IT team now synchronizes database development efforts through a strict check-out/check-in model, preventing developers from overwriting each other's changes.
- Team members and supervisors can now see who is working on which database objects, leaving a clear audit trail on all changes and a full version history.
- Software now automates impact analysis process and the generation of accurate deployment scripts that move schema and data changes.
- As project changes are ready for deployment, software assists in promoting the changes through development, QA, UAT and production.

Background

The Massachusetts Department of Elementary and Secondary Education (DOE) is guided by the goals of preparing every one of its over 950,000 students, in its own words, "to succeed in postsecondary education, compete in the global economy, and understand the rights and responsibilities of American citizens, and in so doing, to close all proficiency gaps." In that effort, its reporting depends on massive amounts of timely assessment and statistical data.

Its IT organization is chartered with effectively collecting that school data/information across a wide range of schools and districts, intelligently processing it and delivering it to all relevant educators and administrators. This requires advanced, custom built in-house systems supported by numerous databases and a data warehouse.

The Challenge

Like so many IT organizations in general and those in education in particular, the Massachusetts Dept. of Education's IT department is under heavy pressure to do more with less. In spite of a database team reduced in size by budget cuts, it must deliver on increasing demands from management for student performance and other data, within ever-shrinking timeframes.



"This is a solution that clearly benefits both DBAs and database developers, while providing supervision tools previously not available to management," said Dan Boyle. "It's been really great working with the DBmaestro team. They've provided quick response to our questions and needs. Any environment with multiple developers and custom [database] development projects really needs DBmaestro."

Dan Boyle

Supervisor of Database

Administration and

Development

Mass. Dept. of Elementary

and Secondary Education



The department also had to find a better way to deal with managing change. It ran into many problems in promoting changes from development to quality assurance (QA) to User Acceptance Testing (UAT) to production. Each developer had to create his or her own deployment scripts, while working independently from others. Some projects were being developed by third-party contractors, further complicating change management. Once all developers completed their development and scripts, the DOE needed a full-time developer to spend up to a month and a half merely consolidating all the scripts and preparing them for rollout. In addition to consuming an inordinate number of man hours, this manual step created potential quality issues. So did the manual effort required by all developers to try to ensure that they were not overwriting others' changes, while working on the same database objects. Sometimes they failed in this effort, requiring work to be done over. Having to redo what had already been successfully achieved cost time and lowered morale.

Forced to take people off important development projects to refine the scripts of previous projects, IT management realized they needed a better solution. "It was obvious to us that we needed to first refine our internal processes," said Dan Boyle. "We needed to introduce a better naming scheme and flow. It also became obvious to us that we needed an advanced database change management solution that would complement and enforce those internal processes while reducing the time spent moving changes through the development cycle."

The Solution

And so the search began. Dan Boyle: "Most products we found were basically merge & sync tools and didn't perform the type of process enforcement we needed. The only true solution we found to address our need DBmaestro."

Today, DBmaestro enables the Massachusetts DOE's IT team to synchronize their database development efforts through a strict check-out/check-in model, while a full version history and audit trail are recorded. Baselines and rollbacks are captured at any phase of development and testing. As project changes are ready for deployment, DBmaestro assists in moving the changes through development, QA, UAT and production environments. DBmaestro also automates the impact analysis process and the generation of accurate deployment scripts that move schema and data changes.

Results

Instead of devoting an entire developer's six weeks to consolidating scripts, the Massachusetts DOE IT department now has one person using DBmaestro do it in a fraction of the time, with better script quality. Team members and supervisors now see who is working on which objects, removing fruitless finger-pointing from quality assurance.

Productivity has gained and morale has risen, as developers no longer have to spend time retesting their scripts.