ECE Graduate Admissions System

A Case Study

► **Process Improved:** DoIT’s E-Business group has created an online student management system for the Electrical & Computer Engineering department to analyze and approve prospective graduate students.

► **Unit(s):** Developed for Electrical & Computer Engineering (ECE) by the Division of Information Technology (DoIT), E-Business group.

► **Customers of the Process and Their Needs:** ECE staff was looking for a more intuitive, reliable and flexible graduate admissions system than their previous database systems. The system needed to incorporate applicant information submitted over the internet along with information contained in InfoAccess (data warehouse) and locally managed data.

► **Problem/Opportunity Statement:** ECE’s initial system for handling graduate admission was highly reliable with a simple and effective user interface. The system was limited, because it did not incorporate direct student input and as ECE’s requirements expanded, the limited capability of this initial system became apparent. The following system added a web interface and expanded the database from their initial system. Students could actively log on and see the status of their application along with any missing materials. While a great improvement, during the development of this secondary system, usability and data reliability were compromised. Our system is an attempt to incorporate additional applicant involvement and streamline the staff and applicant interfaces.

► **Changes Made:** We migrated the older code to an ASP.NET platform (written in VB.NET) to make code maintenance and extendibility drastically easier. We moved the previous database from Access into an enterprise-level system, MS SQL Server. Using a portal framework from Facilities, Planning & Management (FP&M), we created a clean, effective and flexible user interface for both the ECE staff and ECE graduate applicants. We also studied where staff felt they wasted the most time and which operations were most frustrating and we attempted to resolve these issues.

► **Results:** Staff confidence in the new system is much higher than previous systems. This is due to a much improved user interface, and greater trust of the underlying data. Nightly updates from InfoAccess along with better batch reporting and operations (mail merges) mean less time spent by staff performing tedious tasks.
► **Lessons Learned:** The framework used as the foundation of this project provided both an opportunity and a challenge. Development time was saved by using well tested components, but some time was spent modifying the portal framework and processes to fit our needs. We also learned that interoperability between different database systems can be awkward and slow, but by organizing nightly updates we managed to resolve this problem.

► **Next Steps:** Further testing and support with the possibility of extended functionality in the future.

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