Visions of Automation:
From Paper-based to Online Degree Certification

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Michigan State University

- Nation’s pioneer Land Grant institution
- Located in East Lansing, MI
- 45,500 students (35,800 undergrads)
- 16 Colleges, 3 Medical Schools, College of Law
- 6,000 students apply for graduation each Spring
- 2,000 students apply for graduation each Summer and Fall
Paper-based Degree Certification at MSU

- In place for 15 years
- "Deficiency List" – advisers detail student deficiencies
- 2 copies are printed, one on expensive sticker-stock, one on paper
“Deficiency List” Process

- Student applies for graduation on the Web
- Registrar’s Office (RO) generates Deficiency Lists at the 4th week of the semester (2nd week in Summer)
- Sticker-stock copy mailed to colleges
- Advisers write student requirement deficiencies on each sticker, keeping a copy for their records
- RO Degree Staff manually move the stickers to the paper copy kept in the RO.
“Deficiency List” Process (Continued)

- Internal transcript printed for each applied student at the end of the term
- Two Associate Registrars and two Assistant Registrars manually check each student’s transcript against the student’s sticker
- Degree Staff manually enter confer or deny decisions into SIS student-by-student
### “Deficiency List” Process: Pros and Cons

<table>
<thead>
<tr>
<th>THE GOOD</th>
<th>THE BAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requires input from the college / department</td>
<td>Expensive, Labor-intensive, Dated</td>
</tr>
<tr>
<td>Established process – end users are comfortable with it</td>
<td>Exposure for human error</td>
</tr>
<tr>
<td>Fairly efficient given the scale of the operation</td>
<td>“Reactive” certification model - advisers have to wait for information from the RO in order to take action</td>
</tr>
<tr>
<td></td>
<td>Rushed - advisers have to get the information back to the RO under a strict deadline</td>
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</table>
From Reactive to Proactive Certification: Degree Audit

- Student still applies for graduation on the web
- Advisers generate reports online for review and decision entry as soon as student applies
  - Up to two semesters in advance
  - No waiting for information from the RO
- Earlier interaction with potential graduates
- RO uses program to ‘macro-load’ decisions to SIS
What is Degree Audit?

- An online degree certification tool
- Brings together:
  - Student Information System (SIS)
  - Degree Navigator (DN)
  - College user input
    …via the Electronic Student Academic Folder (ESAF)
- Activate major-by-major, at the college’s discretion
  - “Test Mode” option available
- Is NOT “automatic”
  - Students must still apply for graduation
  - Advisers still in control of the decision for each student
More Info on ESAF

For additional information on the Electronic Student Academic Folder (ESAF) in use at Michigan State University, visit the “Conference Presentations” section of the “About Us” page on the MSU RO website:

http://www.reg.msu.edu/aboutus.asp
Degree Navigator’s Role

- DN evaluates student record – indicates if ALL university, college, and program requirements are complete
- Requirement accuracy: Advisers work with RO to ensure DN requirements coding is correct
- Substitutions/Exceptions: entered by advisers as needed
- DN Batch Database: data warehouse of student degree reports – the audit “answers”
The Degree Audit System

Advisers log into ESAF and select Degree Audit:
Generating a Report

Help

Timestamp

Term, College/Dept, Major
Three is a Magic Number

- Per SIS: Student has applied for graduation
  Degree Status (SIS) = APPL
- Per DN: Student requirements are complete
  Requirement Status (DN) = Done
- Per DA: No decision has been entered yet
  Decision Status (DA) = No Decision
Generating a Report (cont’d)

Of course the adviser can select many different combinations to get different reports…
Entering Decisions

Report header (not shown) has “quick guide” for decisions. Decisions entered in the radio buttons at the far left of the report.

<table>
<thead>
<tr>
<th>CONF</th>
<th>CONF OVER</th>
<th>DENY</th>
<th>UNDO</th>
<th>NONE</th>
<th>Comments</th>
<th>PID</th>
<th>Student Name</th>
<th>DA Major Code</th>
<th>Degree Name</th>
<th>Award Type</th>
<th>Award Status</th>
<th>Degree Audit Status Details</th>
<th>Degree Audit Comment Only</th>
<th>Requirements Complete</th>
<th>In Progress</th>
<th>Honors College</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>-</td>
<td>A</td>
<td>G</td>
<td>1450</td>
<td>Communicative Sciences and Disorders, BA</td>
<td>BA</td>
<td>APPL</td>
<td></td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>Comments required for DENY decisions.</td>
<td>A</td>
<td>C</td>
<td>1450</td>
<td>Communicative Sciences and Disorders, BA</td>
<td>BA</td>
<td>APPL</td>
<td></td>
<td></td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>Comments are available with NONE decisions.</td>
<td>A</td>
<td>L</td>
<td>1450</td>
<td>Communicative Sciences and Disorders, BA</td>
<td>BA</td>
<td>APPL</td>
<td></td>
<td></td>
<td>Yes</td>
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Submit Decisions
Decision Routing

DA System capable of “one-way” decision routing:

Typical route:
- Department generates report for students with no decision
- College generates report for students with Department decision
- Director generates report for students with College decision and applies “final” approval

* Director can submit decision at any time w/o prior decisions in system *
Decision Processing

Once Director enters final decision, RO process takes over:

- Decision to Deny – loaded to SIS immediately, email to student
- Decision to Confer
  - Wait until term is over
  - Student still in applied status
  - Check that DN still “done”
  - No “in-progress” courses
  - Miscellaneous last minute checks (120 credits, etc.)

  If all OK, conferral loaded to SIS, email to student
  If not OK, problem - needs review
Reviewing Student by Student

Reviewing Individual students is done on the Degree Audit Status Log page in the ESAF.

All activity captured in the log.
Problem Resolution

- After term, student still applied status in SIS
- RO immediately deny students with less than a 2.0 GPA or fewer than 120 credits
- Advisers generate reports to review students who were not conferred and take one of three actions:
  - Wait for a grade to be submitted
  - Enter a deny decision
  - Enter an “Override” decision
    - Ignore whether DN indicates done or not
    - Ignore in-progress courses – not needed for degree
Benefits and Statistics

**Benefits**
- System easy to use
- Information obtained earlier
- Decisions recorded at any time – less hurry up and wait
- Better tracking: system activity logged
- Reduced cost – fewer expensive sticker-stock and paper reports req’d
- Earlier intervention with “problem” students
- Consistent application of University rules
- Better reporting capabilities
- Less manual work from RO staff
- Less exposure for human error

**Statistics**
- Degree Audit went live in Summer ‘07 and conferred 273 programs in the College of Communication Arts and Sciences
- Spring 2008:
  - 93 major codes using DA
  - 2051 primary student degrees (45% of UN degrees)
  - 2445 total student programs (degrees, 2nd degrees, additional majors, minors, etc.)
- 61% of UN degrees are either live or in “test” mode
How Did We Get Here?

- Teamwork – Collaborative effort between the RO, RO IS, AIS, and the Colleges
- Iterative reviews of Degree Navigator requirements
- Engaged a committed College to pilot the program
  - Piggybacked on the success of ESAF
  - Technical development to meet the requirements of the new process (DN Batch db, DA interface, macro, new reports, etc.)
  - Lots of End-user Training
Questions and Answers

What questions do you have at this time?

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