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Do It Yourself E-Resources Management: Basics of Information Architecture NASIG Webinar Report

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The NASIG Continuing Education Committee host introduced Sarah Hartman-Caverly from Delaware County Community College as the presenter for this webinar. Sarah has experience creating and using a homegrown electronic resource management (ERM) system for the Tri-College Consortium when she worked at Bryn Mawr College. She also has taken some courses in human-computer interaction, but she is not a software development, database engineer, or information architect.

Why a Homegrown Solution?

First, Hartman-Caverly explained the rationale for creating a homegrown solution. One common theme for librarians who manage e-resources is how to organize the many disparate tasks involved, particularly when the work is distributed among several people. Storing digitized paper files and managing resources within a coherent system is challenging. While a commercial ERM system may resolve some of these issues, there is often no budget to purchase library tools or insufficient staff to support an open-access product. Then, the only choice would be to build a solution in-house.

Hartman-Caverly explained that an important concept to understand is the difference between a flat file

database and a relational file database. An example of a flat file is the traditional integrated library system (ILS) where all of the data resides in one table and has limited interoperability. Commercial ERM systems are an example of a relational structure where the tables share the same data and each piece of data is stored only once.

Database Design Tools

Hartman-Caverly introduced the webinar by sharing three principles of good systems design:

- Minimize user effort
- Minimize user error
- Maximize user output

When you maximize user output, the result is happy users!

Then, Hartman-Caverly reviewed the characteristics of some of the tools that you might use to develop your system:

- Use case analysis
 - What do users need to accomplish?
 - Develop a step by step narrative describing user interactions with the system
 - User perspective in each use case should be based on a user goal
 - Techniques for use case analysis
 - Role playing
 - Focus groups
 - Interviews
 - Workshops

Note that use case analysis is an event driven model that can reveal most functional requirements (including exceptions and priorities).

- Card sorting
 - How do users expect data to be stored and structured?
 - Create cards based on entities (person, place, event or things) and attributes (information about entities)
 - Each card represents a piece of information you want to track
 - Users sort cards into categories that make sense to them
 - 30-100 items is ideal for card sorting and will result in broad trends
 - Techniques:
 - Randomize cards
 - Moderate participants but don't lead them
 - Mechanism to record results

Card sorting is a user-centered technique that is quick, inexpensive, and inclusive.

- Data Analysis
 - What data does the system needs to store?
 - With relational databases, use an Entity Relationship Diagram (ERD)
 - An ERD shows types of information in the system, and how they are organized and related to each other
 - Specify the relationships between entities (high level business rules or logic)
 - Look for the presence of unique identifiers

In data analysis, the emphasis is still on the user's perspective.

- Tables and Relationships
 - How will that data be stored (structured)?
 - Avoid duplicate or redundant data storage (input and correct once!)
 - Tables can share information
 - Entities become tables
 - Attributes become fields

- A unique identifier for every instance of an entity (assigned or system generated) is needed

Examples

Hartman-Caverly solicited help from the participants to create a list of tools to develop an ERM system.

- Use case analyses for e-resources management
 - Managing due dates
 - Alerts
 - Managing usage statistics
 - Tracking access problems
 - Platform changes (URLs, access still available, etc.)
- Card sort
 - Document analysis to identify entities
 - Free online tool at <http://www.optimalworkshop.com/optimalsort.htm> (limited participants and cards)
- Entities
 - Vendors, license types (negotiated/click-on), ILL terms, and contact information
- Tables and Relationships
 - Customer service contact—vendor (name or Tax ID #) is the parent entity and person's name would be the child entity.
 - Vendor (parent) and subscription (child)
 - Package name or ID (parent) and specific e-resource (child)

Creating Forms in MS Access

Hartman-Caverly noted that forms can integrate information from multiple tables to generate a cleaner view on a single screen. This makes the system more user-friendly. She advised webinar participants to:

- Establish tables, table relationships and queries first
- Use Forms wizard in the Create Toolbar Ribbon or use the Query table function in Excel
- Create two backup copies (one is the true back up while the other is your sandbox/test region)

Hartman-Caverly presented a lot of material in the time allotted for this webinar, and therefore, was only able to scratch the surface on some of the topics. She provided a list of references and resources that participants (and now other NASIG members) can refer to in their quest to develop an effective and efficient homegrown ERM system.

References and Resources

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Also Microsoft Office support sections on Access (<http://office.microsoft.com>).