the University’s Heart...
with a Robotic Arm

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- Part of the University of Missouri System
- Two urban campuses
- 3 Libraries:
  - Miller Nichols Library
    - Music/Media Library
    - LaBudde Special Collections
    - Marr Sound Archives
  - Health Sciences Library
  - Dental Library
Miller Nichols Library

- 3 floors built in 1969
- 2 floors added in 1991
- Building was full by 1999
- Information Commons created in 2000
  - Set the tone for the type of public spaces needed for the future
Project Genesis

- Six years ago new plan for main library expansion and renovation
- Design focused on student learning
- Designed for innovation and collaboration and included traditional stack space
- Then...budget was cut
Project Genesis: Dilemma

- We needed to:
  - Reduce size of the project and space for collections
  - Determine where to put the books as print and electronic collections continued to grow
  - Create collaborative learning spaces
Project Genesis: Solution

- Remote storage
  - Would require a two-day delivery time

- Alternative solutions
  - Robotic automated high density storage and retrieval system (ASRS)
Technology Creates New Path

- Selection of the robotic system which stores books and other items and retrieves them quickly using the online catalog

- This technology, “The Robot”, allowed us to move ahead to achieve our vision

- Strengthened the Libraries’ role in the Campus Master Plan
"The Robot"
“Physical” Heart: Historical Centrality of University Libraries

“The emerging prominence of the library as a central building of special importance on campus can be traced in several ways -- growth in acquisitions, improvements in methods of operation because of technological advances, and changes in attitudes toward planning and designing library buildings.”

Historic Precedent: Low Library, Columbia University

“...the most beautiful building on campus, clearly reflected by its symmetry and balance, the triumph of the architect over the librarian.”

UMKC Library History

1933: Scofield Hall

1936: Newcomb Hall

1969: Miller Nichols Library

1991: Miller Nichols Library Addition

2009: Miller Nichols Library “Robot” Addition and Renovations
UMKC Miller Nichols Library Master Plan: From Vault to Beacon

View of the Fully Renovated Miller Nichols Library from the North.
Integrated Learning and Student Success

Phase II Integrated Learning Classroom Addition

Student Success Center

Renovations for Information Commons and Student Learning

Phase I “Robot” Addition
Integrated Learning and Student Success
Technology Opportunity #1: Collaborative Learning Spaces
Technology Opportunity #2: Sustainability-Robot Addition Storage Environment and Green Roof
Implementing the Robot

- Major collection decisions:
  - Most of the collection in Robot stored in bins
  - Special Collections and Sound Archives in a shelving solution, creating a hybrid system
  - Browsing collection on traditional shelves consisting of most recent acquisitions and high circulating items
How the Robot Works
The Robot as a Catalyst for Change

- It is a technology that created a variety of opportunities for all of the UMKC libraries
- It has enabled us to design innovative, flexible spaces for student and faculty use
- It has enabled us to make use of new technologies
- It serves as a model for future renovations of other floors and libraries
Collaborative Learning Spaces
Collaborative Learning Spaces
Flexible Spaces
iX (Information Exchange) Theatre
Robot Café
Shared Service Desk
“Psychological” Heart: The Robot Inspires Creativity
Miller Nichols Library Robot Addition
Robot Naming Contest: the Winner
“Robots in the Social Landscape” art exhibition
Guinness Book World Record Winning Robot Dance
Questions?

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