Database Designs for Library Information Access

CEAL Statistics and NAECCO

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April 4, 2002

CEAL Statistics Database

The **purpose** of the CEAL Statistics Database is two fold:

- First to **store** statistical data electronically
- Second to allow **online data entry**.

CEAL Statistics Database

(Introduction)

The format of the new database was designed

- For **ease** of data entry,

- For **integrity** of data storage, and

- For **access** to multiple years of digital information.

CEAL Statistics Database

(Introduction)

Beginning Nov. 2001 the CEAL database allowed each participating institution to **enter** its statistical data **electronically** for 2000/2001 statistics.

The CEAL database **stores** multiple years and the user can request data according to year, multiple year, institution, and form topic.

CEAL Database Design

Constant Categories

- **Institutional information** form and the **statistical survey forms** (volume holdings, volume additions, funds, appropriations, personnel, etc.).

Variable Annual Data

- **Statistical data** for every participating institution in each category.

CEAL Database Design (Continued)

CEAL Annual Statistics Survey forms

1.   Total Volume Holdings
2.   Acquisition of East Asian Materials
3.   Serial Subscriptions
4.   Holdings of Other Materials
5.   Total East Asian Collections and Unprocessed Materials
6.   Fiscal Support
7.   Personnel Support
8.   Public Services
9.   Electronic Resources.

CEAL Database Design (Continued)

- Each **survey form** is a separate **table**.

- Every table includes all **participating** CEAL institutions.

- **CEAL institutions** are used to link all the tables together for each statistical year.

CEAL Database Design (Continued)

MicroSoft Access 2000

- Is a relational database. All data is placed in tables and related by common fields.

- It has **table**, **form**, and **query** functions, with **reports** for output.

- The data is stored in tables by fields.

- Forms are designed to collect data for the tables.

- Queries are designed to list options, sort data, and display output reports according to user choice from the data stored in tables.

CEAL Database Design (Continued)

CEAL Database Tables

- The design of each CEAL database **table** is based on a statistics **survey form category**.

- Each **survey form** has its own **table**.

- The **institution/year field** in each **table** identifies each institution/year data. Multiple years of the same survey category are stored in one table.

CEAL Database Design (Continued)

- The CEAL Database has 14 tables.

- The **institution/year** field, as the combination of library number and year of collection, is the **field** that **connects** all the different tables.

- The CEAL annual statistics survey form data is placed in 9 statistical tables.

- Institutional data is placed in the Participating_ Library table.

- Reference and administrative tables include LibraryRegion, LibraryType, Entry_Status, and Open_Close tables.

Table Name	Data Function
Electronic	Stores electronic data collection.
Entry_Status	Stores table completion status.
Fiscal_Support	Stores fiscal support data collection.
Monographic_Acquisitions	Stores monographic acquisitions data collection.
Open_Close	Stores online input and edit time frame.
Other_Materials_Holdings	Stores holdings of other material data collection.
Participating_Libraries	Stores participating libraries information.
Personnel_Support_FTE	Stores personnel support data collection.
Public_Services	Stores public services data collection.
refLibraryRegion	Assigns an index number for geographic region.
refLibraryType	Assigns an index number for library type.
Serials_Subscriptions	Stores serials subscription and non-purchased serials data collection.
Unprocessed_Backlog_Materials	Stores unprocessed backlog materials data collection.
Volume_Holdings	Stores total volume holdings data collection.

Library Region

LibraryRegion
New England
Middle Atlantic
East North Central
West North Central
South Atlantic
East South Central
West South Central
Mountain
Pacific
Canada

LibraryType
Canadian University
U.S. Non-University
Private U.S. University
Public U.S. University
Canadian Non-University

CEAL Database Design (Continued)

CEAL Administrative Tables

- **Entry_Status Table**: Shows each year's participating libraries, with information on Library, year, and which form is filled out (check marked yes or no).

- **Open_Close Table**: Controls the online access forms open and closing date for each year.

CEAL Database Design (Continued)

CEAL Database Queries

- The CEAL queries were designed to gain easy access to necessary data and create desired reports.

- Each of the 9 **category queries** pull data from the 9 statistical **tables.**

- Each of the statistical category queries is related to a corresponding statistical **table** (what), the **Participating_Libraries** (which) table, and the **Entry_Status** table (when).

CEAL Database Design (Continued)

CEAL Database Queries (cont.)

- All queries are ascending sorted by library names

- All query criteria are **Year** and **EntryStatus** labeled.

- Some of the queries have **automatic calculation** totals, which eliminates the need for externally calculated numbers in the tables. This helps guarantee data **integrity**.
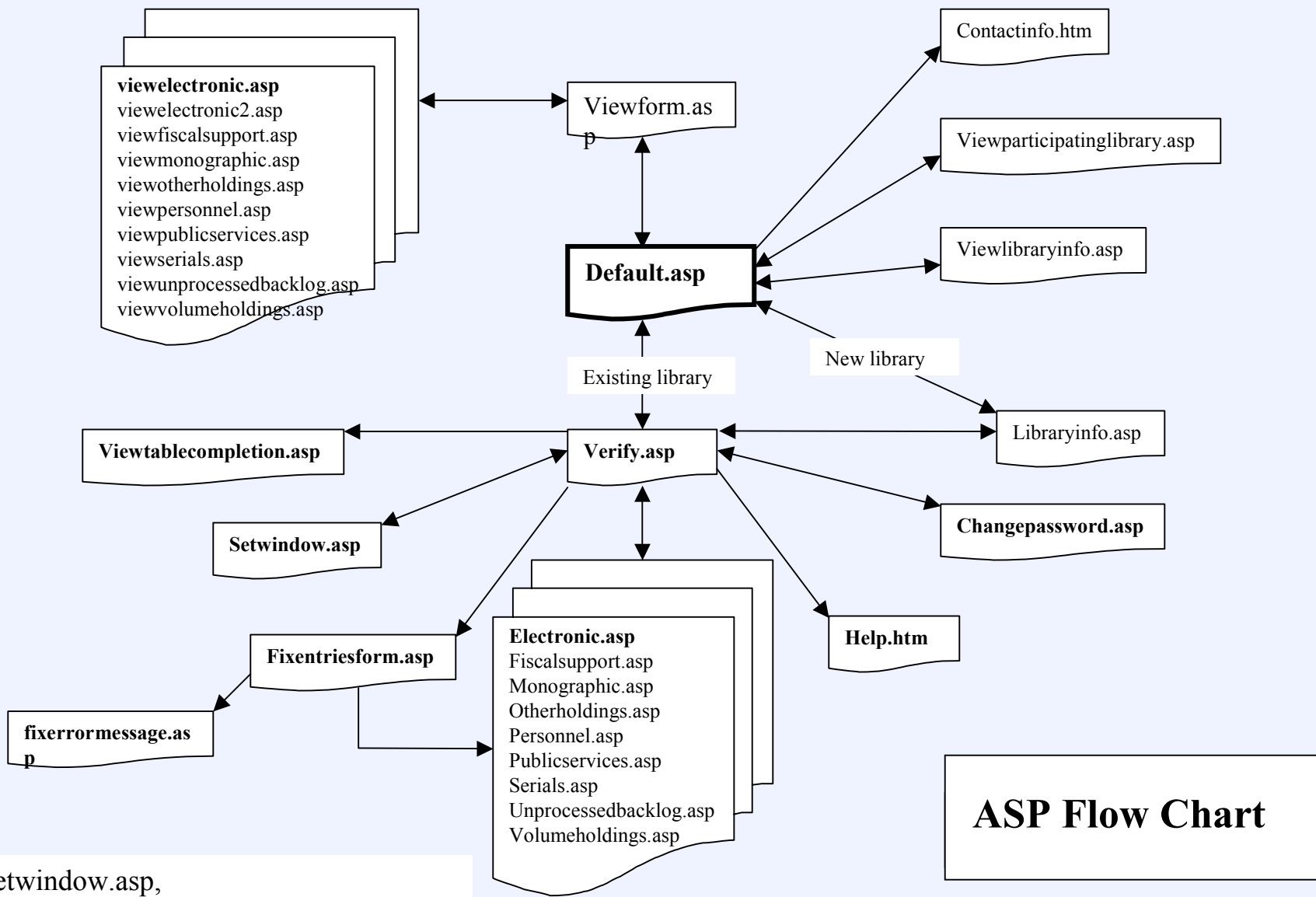
CEAL Database Design (Continued)

CEAL Database Reports

- The CEAL reports are also based on **statistical categories**. In each category report, the data is drawn from its corresponding category **query**.

- The table number and page number on each report are hard coded by use of Access page function and addition abilities.

CEAL Database Design (Continued)

ASP Web Access

- **ASP (Active Server Page)** is the program used for web access to the database.

- The designated ASP pages are linked to each MS Access table to control data entry from the web.

- One set ASP **form** pages work as tools to put/store online input data into the proper CEAL statistical tables.

- Another set of ASP **view** pages pull out and display data according to online queries.

viewelectronic.asp
viewelectronic2.asp
viewfiscalsupport.asp
viewmonographic.asp
viewotherholdings.asp
viewpersonnel.asp
viewpublicservices.asp
viewserials.asp
viewunprocessedbacklog.asp
viewvolumeholdings.asp

Viewform.asp

Contactinfo.htm

Viewparticipatinglibrary.asp

Viewlibraryinfo.asp

Default.asp

New library

Existing library

Librayinfo.asp

Viewtablecompletion.asp

Verify.asp

Changepassword.asp

Setwindow.asp

Fixentriesform.asp

Electronic.asp
Fiscalsupport.asp
Monographic.asp
Otherholdings.asp
Personnel.asp
Publicservices.asp
Serials.asp
Unprocessedbacklog.asp
Volumeholdings.asp

Help.htm

fixerrormessage.asp

ASP Flow Chart

Setwindow.asp,
viewtablecompletions.asp, and
fixentriesform.asp are only available to
KU administrator.

Active Server Page

CEAL Statistics Database
http://www2.lib.ku.edu/ceal

- ## Online Query

  http://www2.lib.ukans.edu/ceal/viewform.asp

  View CEAL Statistics Data
  This page contains library statistics data already entered. Select a combination of form, instistution(s), and year(s) for display of data.

- ## Online Input Forms

  http://www2.lib.ukans.edu/ceal/verify.asp/

CEAL Online Input Forms

Monographic Acquisitions Form **Incomplete**

Total Volume Holdings Form **Incomplete**

Serials Subscriptions and Non Purchased Serials Form (Titles) **Incomplete**

Holdings of Other Materials Form **Incomplete**

Unprocessed Backlog Materials Form (volumes or pieces) **Incomplete**

Fiscal Support Form **Incomplete**

Personnel Support Form **Incomplete**

Public Services Form **Incomplete**

Electronic Resources Form **Incomplete**

Conclusions on the CEAL Statistics Database

- CEAL Database provides **easy access** to yearly CEAL statistical data.

- Provides a **value added service** to CEAL community.

- Ensures **long-term** success for CEAL Annual Statistics.

Conclusions on the CEAL Statistics Database (Continued)

Easy Access

- Summarizes **library operation**, **collection development** and **public services** of CEAL participating libraries.

- It identifies **strengths** of collections and also **gaps** where information needs are not being met.

Conclusions on the CEAL Statistics Database (Continued)

Value Added Service

- The CEAL Statistics Database should be recognized as a value added service for relevant **data collection**, administrative **peer comparison** of annual budget and collection development, and for **scholarly research** of historical trends.

Conclusions on the CEAL Statistics Database (Continued)

Long-Term Success for CEAL Annual Statistics

- The CEAL Statistic Database provides **ease** of **data entry**, ease of **search**, and general **user satisfaction**, along with data **integrity** and comprehensiveness of **content** in all the database functions, in order to deliver **long-term** success for CEAL annual statistics.

North America and Europe Chinese Collections Database
(NAECCO)

The **N**orth **A**merica and **E**urope **C**hinese **Co**llection Database

- A new project sponsored by the 2000-2001 Publication Committee of the **C**hinese-**A**merican **L**ibrarians **A**ssociation (CALA) under the supervision of CALA immediate past President Margaret Yu-lan Chou (2000-2001).

NAECCO

The NAECCO Database is a tool designed to help users locate information on

- **Chinese studies programs** and

- **Chinese language collections**

- At institutions of higher learning in **North America** and **Europe**.

NAECCO Database

http://www2.lib.ku.edu/naecco/

- Each organizational program and each library will be given a **user ID** and **password** which will allow you to **input** necessary information.

- Once the information is submitted, the result can be displayed online through database searches.

NAECCO

Publication Committee, 2000-2001

Chinese-American Librarians Association

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Web Based System Usability: Special Challenges

- A highly **diverse user** population, which cannot be easily predicted or measured.

- A highly diverse set of **end-user computer configurations**, including hardware, systems software, browsers, and a wide range in **connectivity speed** and **performance**.

Web Based System Usability: Special Challenges (Continued)

- A distinction must be made between **site design** and the **capability of the browser** used to access the site content.

- The Web site administrator must have **support** from the **hosting institution** for **server** hardware and software maintenance.

- The Web site administrator must have **support** from **database software** and **Web software** corporations.

Electronic Access to Library Materials

Virtual Library Service

- Must be an **open-access** source of electronic data with **comprehensive** coverage of **contents**.

- Must have a digital format that enables the sharing of **quantitative** and **qualitative** scholarly research data.

Electronic Access to Library Materials
(Continued)

Virtual Library Service

- Must provide **easy access** through a **reliable portal** with a comprehensive **search mechanism** for users to obtain virtual documents and statistical data via the Internet.

- Electronic access reduces the **physical limitations** of traditional libraries.

Examples of Online Library Data

Statistics:

ARL Statistics and Measurement Program

http://www.arl.org/stats/arlstat/index.html

- The ARL statistics represent the oldest continuing library statistical series in North America, and serve as a comprehensive resource on trends in academic and research libraries. The website statistics provide users with an opportunity to conduct analyses and create data sets of academic research library statistics to address local needs.

Examples of Online Library Data
(Continued)

Statistics

- **Academic Library Statistics (ACRL)**

  http://www.ala.org/acrl/statshp.html

  Provides recent statistical summaries for academic libraries in the areas of collections, expenditures, personnel, enrollment, etc.

Examples of Online Library Data
(Continued)

Statistics

- **Academic Library Peer Comparison Tool**

  http://www.nces.ed.gov/surveys/libraries/academicpeer/

  The Academic Library Peer Comparison Tool allows the user to get information on a particular library, or to customize a peer group by selecting the key variables that are used to define it. The user can then view customized reports of the comparison between the library of interest and its peers, on a variety of variables as selected by the user.

Examples of Online Library Data
(Continued)

Library Directory

- **Public Library Locator**

  http://nces.ed.gov/surveys/libraries/liblocator/library.asp

  Provides Identifying Information; Organizational **Characteristics**; Paid Full-Time Equivalent (FTE) **Staff**; Operating Income; Operating **Expenditures** and Capital Outlay Expenditures; Size of Library **Collections**; **Services**; **Electronic Measures**.

Examples of Online Library Data
(Continued)

Data Research Collection Data

- **Data on the Net**
  http://odwin.ucsd.edu/idata/

  Lists "850 Internet sites of numeric Social Science statistical data, data catalogs, data libraries, social science gateways, addresses and more." -- Title page

Examples of Online Library Data
(Continued)

Membership Directory

- **OCLC Membership Directory Database (coming soon)**

  http://www2.lib.ku.edu/eastasia/OCLCmembership

Questions?

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