

Homebrew Databases:

Complexities of Everyday Information Management in Nonprofit Organizations



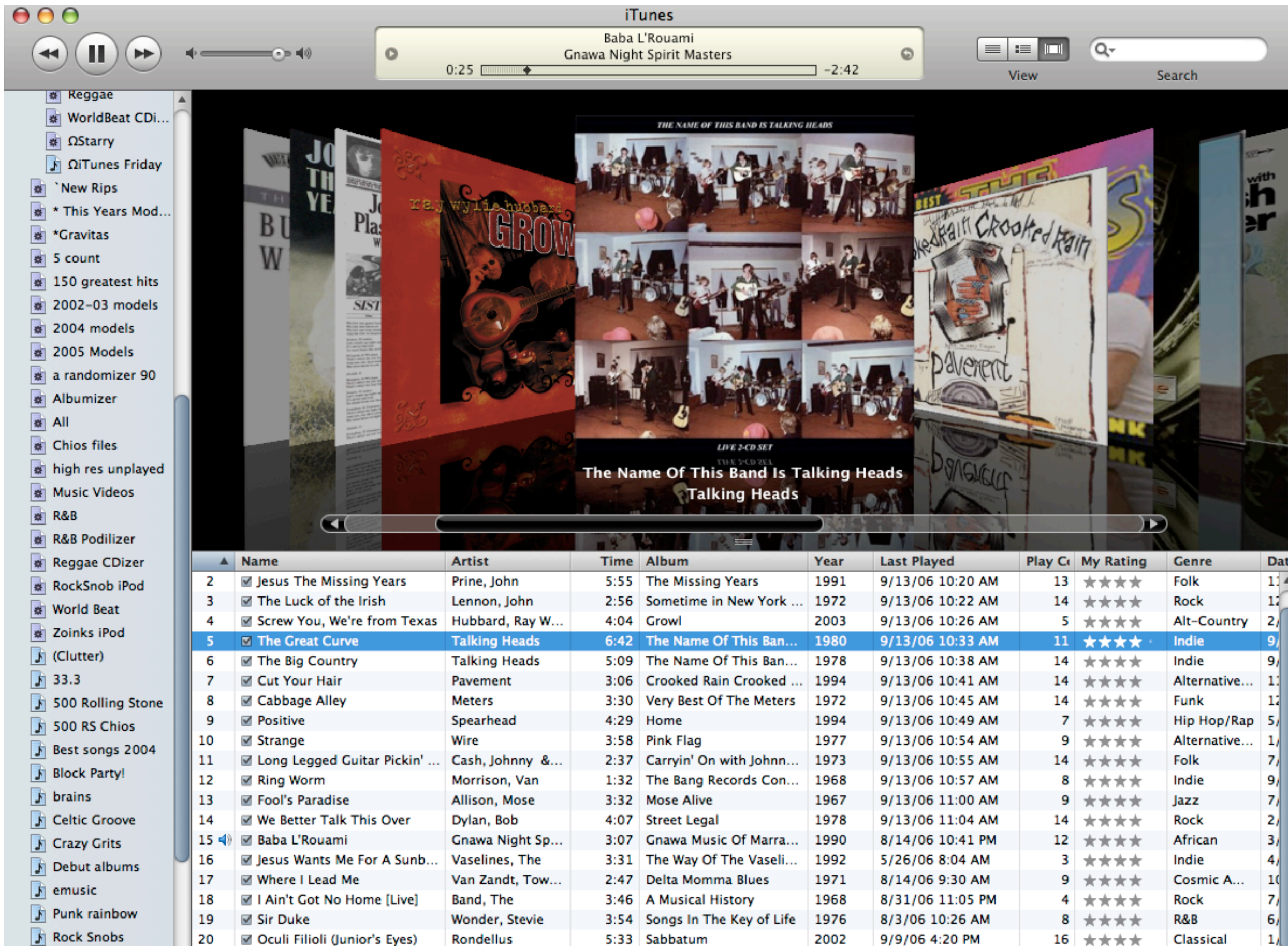
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UC Irvine



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Generic Templates - Windows Internet Explorer provided by Cherokee Nation Entertainment

http://srv-dev-psfwb01.cnent.com:10020/psp/FS90DEV/EMPLOYEE/EDD/-/WORKFLOW_ADMINISTRATOR_WI...T

File Edit View Favorites Tools Help

Generic Templates

ORACLE

Below is the list of available variables for this template.
You can use template variables within your subject or message.
The following variables can also be used:
%Date, %DateTime, %Time, %ServerTimeZone, %Email
%NotificationToList, %NotificationCCList

Template Variables

*Value	*Description
%1	URL
%2	EMPLID
%3	EMPLNAME
%4	SUBMISSION_DATE
%5	SHEET_ID
%6	SHEET_NAME
%7	BUSINESS_PURPOSE
%8	TOTAL_AMOUNT
%9	TOTAL_REIMB_AMT
%10	CURRENCY_CD
%11	HI_THERE_I_SEE_YOU

Application Designer - Untitled - [EX_SHEET_HDR_SEL.0.GBL.1900-01-01 (SQL Definition)]

File Edit View Insert Build Debug Tools Go Window Help

Untitled

[default]

```
SELECT A.EMPLID
, B.NAME EMPLNAME
, %DateOut(A.SUBMISSION_DATE)
, A.SHEET_ID
, A.SHEET_NAME
, C.DESCR BUSINESS_PURPOSE
, A.TOTAL_AMT
, SUM(CASE WHEN E.REIMBURSEMENT_CD = 'R'
AND F.EXPEND_MTHD_EDIT = 'EMP' THEN E.MON
END) - A.ADVANCE_AMT
, A.CURRENCY_CD
, Z.HI THERE I SEE YOU
FROM PS_EX_SHEET_HDR A
, PS_PERSONAL_DATA B
, PS_EX_PURPOSE_TBL C
, PS_EX_SHEET_LINE E
, PS_EX_EXP_MTHD_TBL F
```

Development Upgrade

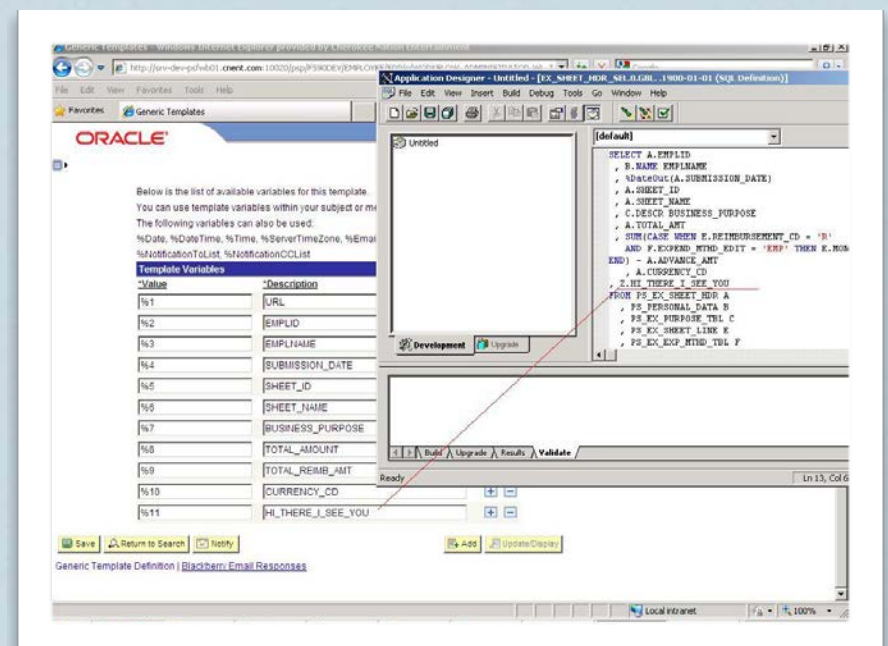
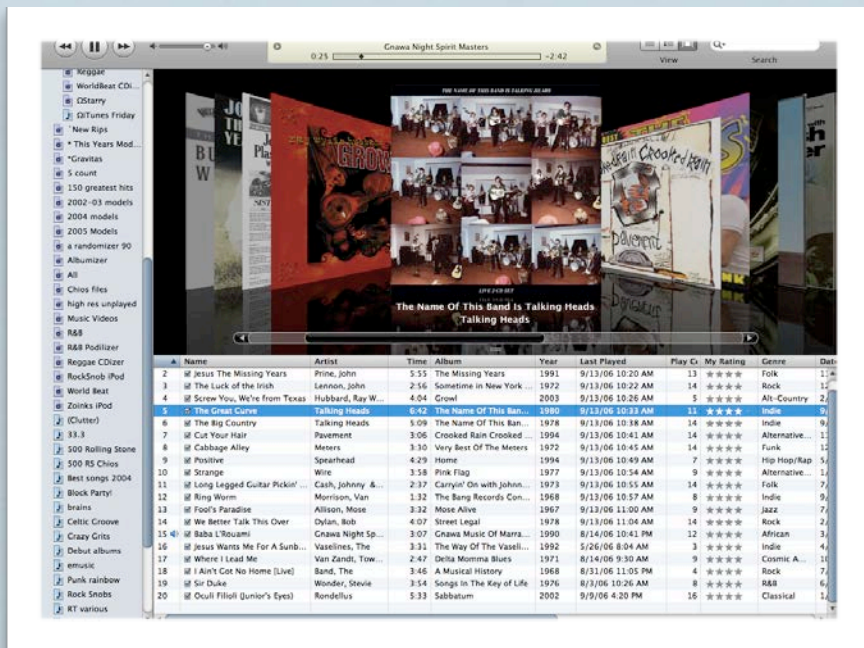
Build Upgrade Results Validate

Ready Ln 13, Col 6

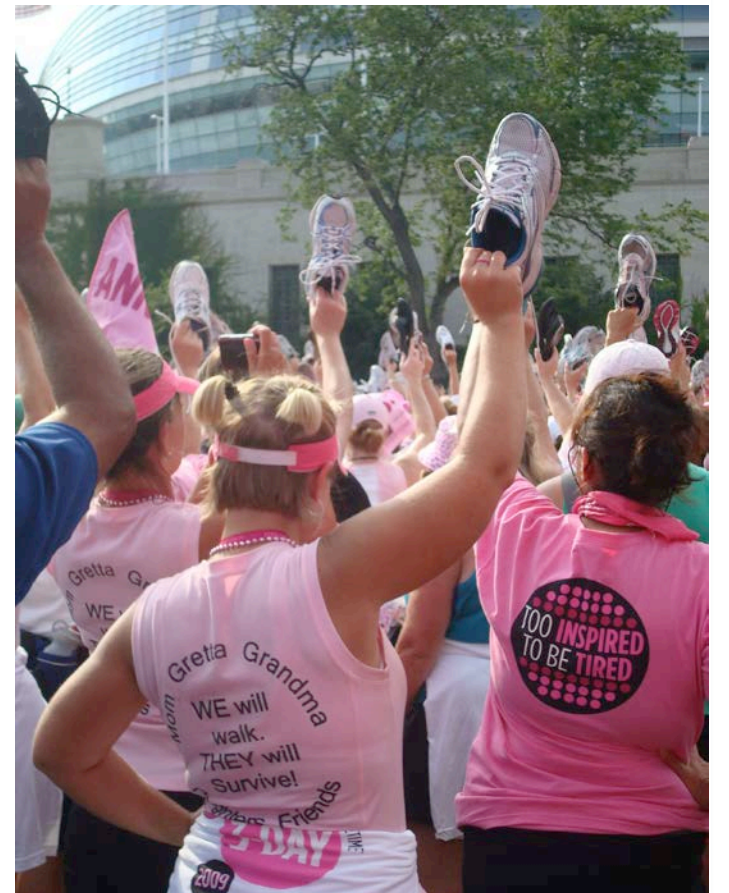
Save Return to Search Notify Add Update/Display

Generic Template Definition | [Blackberry Email Responses](#)

Local intranet 100%











❖ This is where we get crazy. This is nuts. We actually—we don't have a database of our volunteers.... I shouldn't say that. We have probably seven databases for volunteers. All of them have different information. It took us three to four months to even figure out who had what databases.

❖ - Volunteer Coordinator at a Human Services Nonprofit (P1)

Your Whirlwind Tour of Homebrew Databases

- ❖ Method
- ❖ Homebrew Databases: Example & Definition
- ❖ Homebrew Databases: Configurations & Challenges
 - ❖ Personal Office Applications as “Databases”
 - ❖ Paper-Based “Databases”
 - ❖ Enterprise & Custom Databases

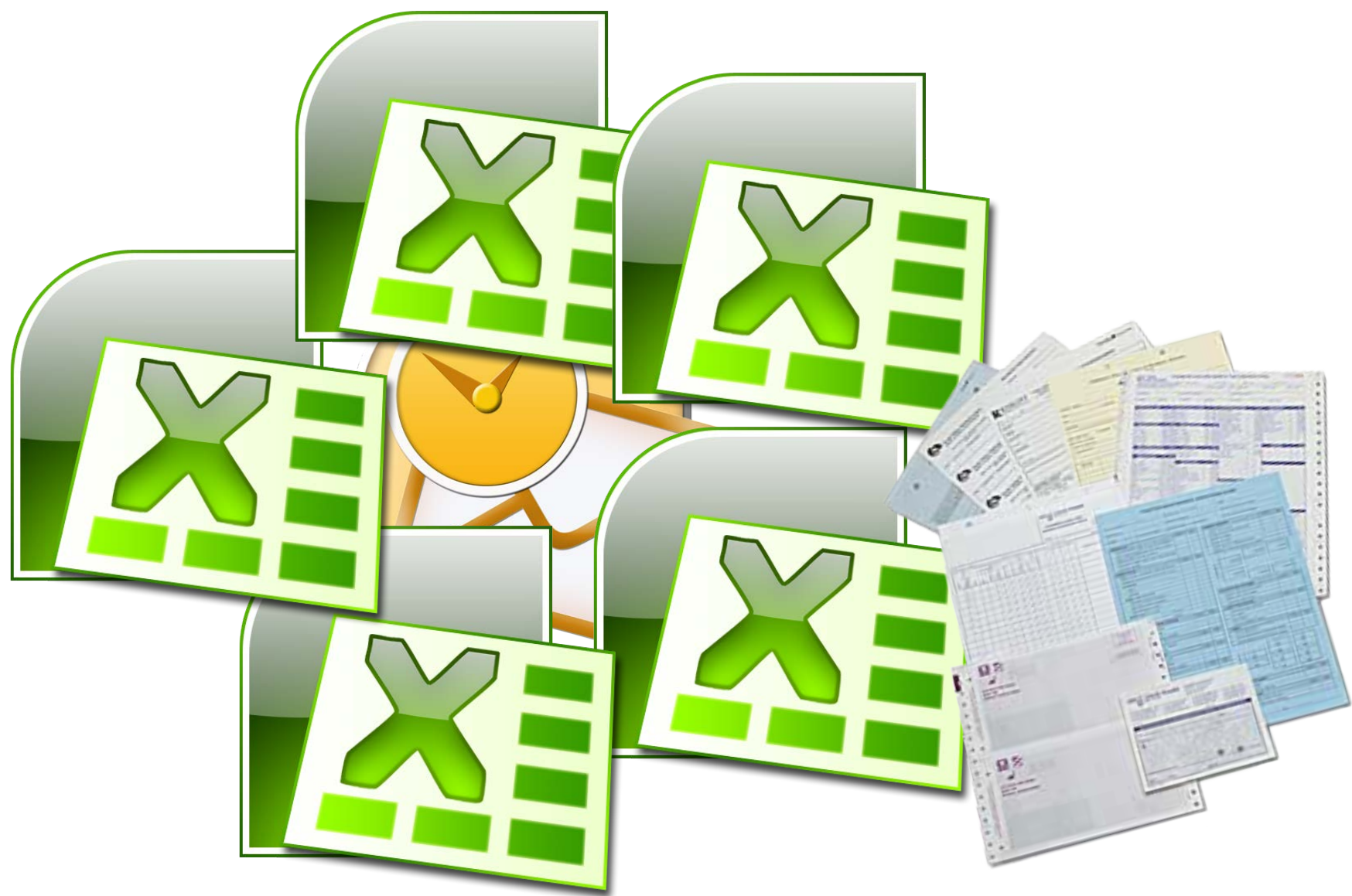
Method

- ❖ Semi-structured Interviews
- ❖ 23 Volunteer Coordinators
 - ❖ Variety of Job Titles, Locations within the Organization
 - ❖ Variety of Sizes (& Maturity) of Volunteer Programs
 - ❖ Variety of Domains for Nonprofit Work
- ❖ Iterative, Inductive Data Analysis



















Challenges with a Multiplicity of Systems

- ❖ Redundant data entry... have to (manually) re-enter a different subset of the data in every system
- ❖ Version control issues... information falls out of sync across multiple “databases”
- ❖ Information management systems are abandoned

❖ ...and at the point when you have to do multiple entries is when you don't do entries. You know, it just is so time-consuming and redundant that you have so many other things to do, that you just don't have the time to enter it.

❖ - Volunteer Coordinator at a Housing & Shelter Nonprofit (L2)

Homebrew Database

- ❖ An assemblage of information management resources that people have pieced together to satisfy their information management needs.
- ❖ Involved multiple systems
- ❖ Sometimes included actual database software but more typically consisted of other resources
- ❖ Participants referred to it as their “database” or “databases”

Types of Systems in the Homebrew Databases

- ❖ Personal office applications as “databases”
- ❖ Paper-based “databases”
- ❖ Enterprise or custom databases

Personal Office Applications as Databases

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- ❖ The allure...
- ❖ Readily available
- ❖ Already familiar
- ❖ Can be used flexibly

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The problems that arise...

- ❖ Failure to scale
 - ❖ Number of users
 - ❖ Number of records
 - ❖ Dimensions of data
- ❖ Inaccessibility
 - ❖ Access and aggregation
 - ❖ From off-site locations

- ❖ We were crashing the system for a year and a half and no one told us. Our network would go down every time we sent an email out to all the volunteers, but there was never the connection made. And one day I was pulled over to the data room and, “Do you recognize these email addresses?” I’m like, “Yes, those are our volunteers!”
 - ❖ - Volunteer Coordinator at an Animal Welfare Nonprofit (D2)

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Paper-Based Databases

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- ❖ Tangible “master” copy doesn’t fall out of sync
- ❖ Serves as a lowest common denominator
- ❖ Provides a shared awareness of process

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...but magnified!

Enterprise or Custom Databases

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The allure...

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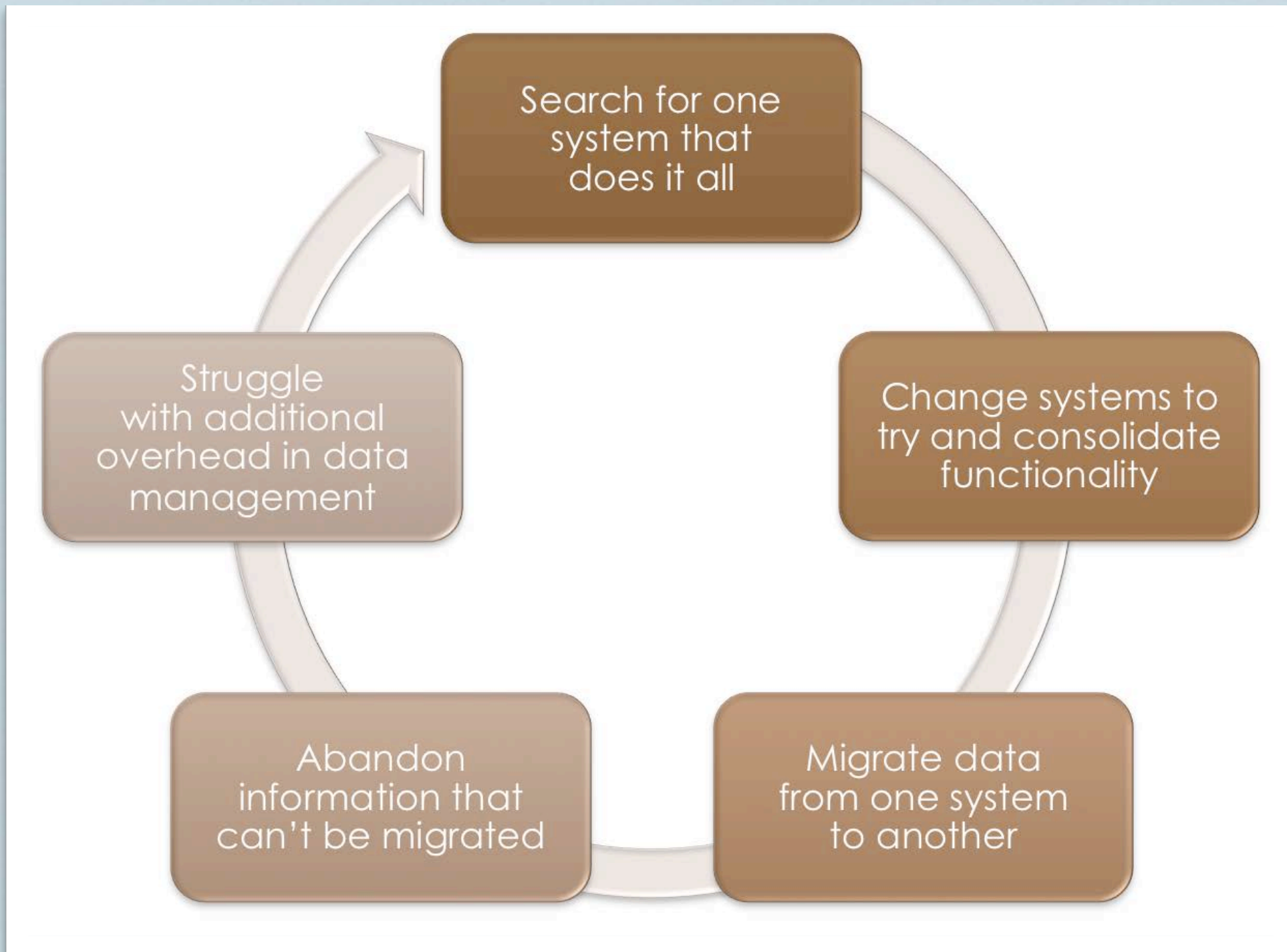
The problems that arise...

- ❖ Overhead & setup cost
 - ❖ Developing the system
 - ❖ Training people to use the system
 - ❖ Initial data entry
- ❖ Inaccessibility of the data
- ❖ Ongoing overhead with data entry

❖ So, I guess that's part of the daily [work], too, is the input of the night before's volunteer hours, which is a little backed up right now... My volunteer who does that has been sick for a while.... We try to keep up with it and it just gets away from you. We could use extra hands, but that means extra computers and extra spots to sit.

❖ - Volunteer Coordinator at a Food & Nutrition Nonprofit (K1)

The Cycle of Reconfiguration





Improving the Human Factors Aspect of Database Interactions

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University of Maryland

The widespread dissemination of computer and information systems to nontechnically trained individuals requires a new approach to the design and development of database interfaces. This paper provides the motivational background for controlled psychological experimentation in exploring the person/machine interface. Frameworks for the reductionist approach are given, research methods discussed, research issues presented, and a small experiment is offered as an example of what can be accomplished. This experiment is a comparison of natural and artificial language query facilities. Although subjects posed approximately equal numbers of valid queries with either facility, natural language users made significantly more invalid queries which could not be answered from the database that was described.

Key Words and Phrases: human factors, database systems, data models, query languages, natural language interfaces, psychology, experimentation
CR Categories: 4.33, 4.6, 3.72

1. INTRODUCTION

As questions of technical feasibility and performance of database systems are resolved, increased attention is being paid to human factors. There is widespread recognition that future systems will be commercially viable only if the user interface is in harmony with user skills and task requirements. Management increasingly focuses on human factors, but technical professionals have shown little predilection to go beyond introspection and their own experience. Unfortunately, the background of a systems or language designer may be profoundly different from the background of the intended users. Even if this were not the case, casual introspection hardly seems an adequate basis to develop costly and widely used computer and information systems.

The programming language community has begun to take a more psychologically oriented approach to studying programmer behavior and utilization of language facilities [1-6]. Research in this area is leading to improved guidelines

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