Draft Vision and Scope

[client abbreviation] Database Development Project

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September 27, 2003

Purpose

This document outlines a preliminary, draft vision and scope of the project.

1 Business requirements

1.1 Background

The [client name] ([client abbreviation]) [LB – insert mission description here.]

The organization primary operations are performed from it's Portland, Oregon office. A small group of employees (10 or fewer) work at this office. Computers used by workers are a variety of ages, running different versions of the Windows operating system (Windows 95, 98, 2000, XP). All computers have versions of Microsoft Office installed, but different versions of that software are used on different computers. There are no immediate plans to install standard versions of operating systems or productivity software on all computers used by employees or volunteers. All computers are linked in a local area network using [LB – what is the LAN technology being used?].

The organization's current database employs an implementation of Microsoft SQL Server with Microsoft Access clients. The system does not perform all functions required by the organization and in many cases performs needed functions in a fashion that is inefficient for database workers.

Although individual employees typically specialize in working with one type of data, these restrictions are not typically based on the person involved, but rather on the type of work they are doing. Employees relatively commonly switch from one type of work to another, requiring that most employees have the ability to access nearly all data and functions provided by the data management system.

The nature of the work done by the organization necessitates a quick transition from old to new system. There is little or no opportunity to make use of a period of time where data entry tasks are suspended while a new system is brought on-line.

1.2 Business opportunity

Increased functionality would be very useful in the time period of the 2004 elections. Consequently, it seems that a current system change would provide considerable benefit with relatively short turn-around.

1.3 Business objectives

The organization desires increased comprehensiveness and completeness of data stored in their data management system.

The organization desires increased flexibility in generation of a number of frequently performed, similar reports.

The organization desires increased accessibility to the data system from both in-office and remote locations.

1.4 Customer or market requirements

Links between the data management system and web-based sign-ups for mailing lists is desirable.

1.5 Value provided to customer

The client expects to realize efficiency gains in both data entry and ability to generate common reports. Additional benefits may be realized in terms of report accuracy if reporting and data entry/tracking functions are properly designed.

1.6 Business risks

Development of custom database solutions to an organization's data management needs always carries some risks. The most typical risks when a development is undertaken include:

- Unexpectedly long development times

  This typically results from the addition of requirements or features that are not outlined at the beginning of the development, or from an inadequate evaluation of the project at it's onset. Because [client abbreviation] staff have made a significant effort to detail the functions required of their system already, this risk is probably low.

- Critical functions may not operate correctly at first delivery

  Many of the underlying "business rules" that govern the application of functions within the new system are not yet outlined in documents provided by [client abbreviation]. To ensure that this risk is minimized, these rules should be outlined early in the development process to ensure their correct incorporation into system development plans. The work done already by [client abbreviation] staff goes a long way towards allowing the developer to identify which rules must be outlined in greater detail. As a consequence, this risk is probably low if initial development covers this need promptly.

- Increased workload during transition from existing systems to new system

  Of particular concern here is the migration of data from the existing system to the new system. A fast transition implies that tools for automated data migration should be provided as part of the development process. This requires a thorough analysis of the existing data holdings and a detailed map of how those data transfer into the new system. Analysis of data transformations that may be required is also a need. Because the developer has not yet reviewed the existing system's data holdings in detail, it is currently possible to estimate the magnitude of this task or the resources that will be required to complete it. Consequently, this risk is probably the highest under a new system development.

2 Vision of the solution

2.1 Vision statement

The system will improve on both usability features and the scope and completeness of data stored in the organization's current data management system.

2.2 Major features

2.2.1 Functional Requirements

Data Storage

A PDF presentation of a preliminary logical data model is provided to represent the interpretation of inherent relationships within data items expected within the proposed system. Information about the following entities will be tracked:

A. Persons

   Major subcategories of information include:

   a. Email addresses

      The ability to associate multiple email addresses with a "relation" will be provided.

      The number of email address that may be associated with a "relation" will be unlimited, unless the client specifies business rules that establish a limit. (For example, a business rule that only one each of "home", "work", "vacation" emails may be stored.)

   b. Phone numbers

      Phone numbers may be associated with either a "location" or a "relation". (Hard-wired phones might be best associated with a location, mobile phones with a "relation" used to represent a person.)

B. Relations

   a. A "relation" may be used to represent either an individual, a family, or an organization for which the client desires the maintenance of information about a relationship.

   b. The ability to designate one or multiple persons associated with a "relation" will be provided. (This provides capacity for storing individual information related to a "relation" representing a family, etc.)

   c. The ability to designate an organization as a "relation" will be provided.

   d. The ability to categorize a "relation" by assigning an arbitrary number of pre-defined "categorization" codes will be provided.

   [Note to LB – Add field to indicate contact preference. Code list "email", "phone", "surface mail", etc.]

C. Organizations

   Organizations may be entered purely to allow entry of a record associating the organization with a person (for example, to represent an employment relationship), or to allow the use of the organization as a "relation".

D. Person-Organization Relationships

   The ability to enter a "role" code characterizing the nature of the person-organization relationship will be provided.

E. Locations

   Major subcategories of information include:

   a. Street addresses

   b. Geographical voter information

   c. Association of phone numbers to locations

   d. Association of locations with relations

  e. Association of a “region” code with a location. (A region may be defined to represent any land unit the client wishes – a county, a municipality, etc.)

Multiple locations may be associated with a single “relation”.

F. Communication projects

G. 0Communication project staffing

The ability to store a record of staff members assigned to a communication project, and the roles they play in that project will be provided.

H. Communication expenses

The ability to store a record of expenses resulting from the implementation of a communication project will be provided. In addition the ability to enter remarks concerning each expense will be provided.

I. Contacts

A “contact” may be used to represent any of a direct conversation, an email, or a letter to a “relation”.

The ability to categorize the subjects covered during a contact into a single selection from a set of applicable categorizations will be provided. (For example: “solicitation”, “volunteer action request”, “in-kind donation”, “political action”, etc.) This set of values will be capable of arbitrary modification by the client and multiple values may be assigned to a single contact.

The ability to categorize the contact method (i.e. “phone”, “meeting”, “letter”, “email”, etc.) will be provided.

The ability to associate a “contact” with a “communication project” will be provided.

J. Donations

  a. The ability to track association with a precipitating staff contact or communication contact will be provided
  b. The ability to indicate a donation record as an expected future fulfillment of a pledge will be provided.
  c. The ability to indicate whether a pledge has been fulfilled will be provided.
  d. The ability to indicate both the original and a proxy donor will be provided.
  e. The ability to categorize a donation into one of a set of mutually exclusive categorizations will be provided (for example “in-kind”, “service”, “fund transfer”, “material donation”, etc.)
  f. The ability to store the assessed value of a service or provided materials will be provided.
  g. The ability to indicate a single “fund” out of a pre-defined set of “funds” as the recipient of the donation will be provided. (For example, a “fund” code might represent a political action committee, a specific bank account, a specific chapter of the organization, etc.)

K. Pledges

The ability to store the date on which a pledge was placed will be provided

The ability to link "donation" records (either fulfilled or expected future donations) to the pledge record will be provided.

L. Staff members

The ability to track staff members is provided separately from tracking of other individuals to allow more flexible application of associations of staff with contacts, communication projects, etc.

M. Group membership

The ability to define an arbitrary number of groups to which a "relation" might be assigned will be provided. (For example, groups might represent committee membership, newsletter recipients, major donors, active volunteers, board members, etc.)

N. Volunteer preferences

The ability to track an arbitrary number of activity types that a person is willing to undertake for the client will be provided. The ability to readily add new codes to the system will be provided. The ability to delete codes already used by the organization will depend on business rules established by the organization concerning "orphaned" volunteer preference records.

O. Volunteer actions

The ability to track information about a volunteer action taken by a person on behalf of the client will be provided.

The ability to indicate which chapter of the client's organization the volunteer action was taken for will be provided.

The ability to indicate a "contact" that solicited the volunteer actions will be provided. [Note to LB – add to data model. How about "value"?]

The ability to track both completed and expected future volunteer actions will be provided.

P. Membership records

Details of the business rules provided in the client's "RFP" and "database functions" documents did not provide sufficient detail about handling of membership to allow construction of portions of the data model dealing with this information area. It seems likely that information required for the specified reports may be derived directly from donation records. If correct, this would indicate that no explicit storage of membership records is required.

Q. Household

The ability to track individual "relations" who wish to be designated as a household will be provided.

Reporting Tools

R. Persons Report

This tool will provide the ability to select a set of individuals for whom information is to be reported. Tools will be provided to allow selection of individuals using a combination of the following variables:

a. A time period (start date and end date)

b. The presence of donations of user-specified types provided by that individual during the specified time period

c. The presence of donations to user-specified funds provided by that individual during the specified time period

d. The presence of completed volunteer action records for that individual during the specified time period and representing user-specified volunteer action types (multiple selections allowed)

e. The presence of completed volunteer action records for that individual during the specified time period on behalf of a user-specified chapter of the organization.

f. The presence of "contact" records representing contacts with the individual during the specified time period.

g. The categorization of the individual into one of a set of relation categories.

h. The donor name (user-specified text search pattern)

i. The presence of one or more location records associated with the person categorized to be within selected regions (multiple selections possible)

j. Group membership in any user-selected group

k. Absence of group membership in any user-selected group

l. Membership status

Information characterizing the select group of individuals may be output in a variety of formats, based on the user's specification:

m. Mail merge file

n. Mailing labels

o. Phone list

p. Phone list with donation summary

q. Mailing service file

r. Bulk email for selected persons (a number of important details remain to be investigated concerning how to provide this output function)

S. Donations Report

The tool will provide the ability to select a set of donations of interest. Tools will be provided to allow selection of donations using a combination of the following variables:

a. The time period of the donation (defined by start date and end date)

b. The size of the donation (defined by user-specified range)

c. The donation type (could be "in-kind", "fund transfer", "materials", etc. – possible selection of multiple values)

d. The preferred contact method for the "relation" providing the donation (for example, might be "email", "phone", etc.)

e. A selection of "funds" which were the recipients of the donation (a "fund" may represent a bank account, a chapter, a committee, etc. - possible multiple selections)

f. The donor name (user-specified text search pattern)

g. And indication of whether the report should be restricted to "proxy" donations

h. An indication of whether the report should include “all pledge records”, “fulfilled pledges” or “unfulfilled pledges”.

i. A selection of communication project types that may be associated with the donations (possible multiple values)

Information detailing all donations that fit the selection criteria may be output in a number of formats, based on the user’s specification:

j. Donation detail by person

k. Donation summary by donation type

l. Donation summary by communication project

m. Donation summary by communication project type

n. Donation summary by chapter

o. Individual donations meeting the selection criteria

p. Phone list for persons providing the selected donations

q. Mail merge file for persons providing the selected donations

r. Mailing labels for persons providing the selected donations

s. email for selected persons (a number of important details remain to be investigated concerning how to provide this output function)

T. Volunteer Report

The tool will provide the ability to select a set of persons of interest based on volunteer records. Tools will be provided to allow selection of persons using a combination of the following variables:

a. Time period to be used to search volunteer action records (start date and end date)

b. Volunteer action types taken within the specified time period (possible multiple selections)

c. Volunteer action types that are absent within the specified time period

d. Presence of planned volunteer actions that were never completed within the specified time period.

e. Region within which the volunteer has a stored location record

A concise list of the selected group of individuals will be provided, with the ability to review the volunteer records of a selected individual readily.

Information detailing all persons that fit the selection criteria may be output in a number of formats, based on the user’s specification:

f. Report of promised volunteer actions never completed

g. Phone list for persons represented with summary statistics for volunteer actions

h. Mail merge file for persons represented.

i. Email for persons represented. (a number of important details remain to be investigated concerning how to provide this output function)

U. Group Membership Report

The tool will provide the ability to select a set of donations of interest. Tools will be provided to allow selection of donations using a combination of the following variables:

a. An effective date at which membership is to be checked

b. A selection of groups to which the individual must be a member.

Information characterizing the individual that fit the selection criteria may be output in a number of formats, based on the user's specification:

c. Mailing labels

d. Letter merge file

e. Phone list (will include end date of group membership)

f. Email (a number of important details remain to be investigated concerning how to provide this output function)

g. File to be sent to mailing house

V. Communications Project Expense Report

The tool will provide the ability to select a set of communication expense records of interest. Tools will be provided to allow selection of records using a combination of the following variables:

a. A time period for expenses to be reported (start date and end date)

b. A selection of communication projects (possible multiple selections)

c. A selection of communication project types associated with the project (possible multiple selection, with provision for "union" or "intersection" selection)

Information detailing all communication project expenses that fit the selection criteria may be output in a number of formats, based on the user's specification:

d. Detailed output of each expense record, ordered by project and date, with summaries

e. Summaries of expenses by project

f. Summary of combined expenses for all projects selected.

W. Communications Project Report

The tool will provide the ability to select communication projects of interest. Tools will be provided to allow selection of donations using a combination of the following variables:

a. A time period for records to be reported (start date and end date)

b. A selection of communication projects (possible multiple selections)

c. A selection of communication project types associated with the project (possible multiple selection, with provision for "union" or "intersection" selection)

Information detailing all donations that fit the selection criteria may be output in a number of formats, based on the user's specification:

d. Summary of contacts resulting from the project during the specified time period.

e. Summary of donations associated with the project during the specified time period.

Data Entry/Editing Tools

X. Donation Entry

The user will be provided the ability to search for a record to be edited using a combination of search criteria including:

a. Time period in which the donation was made (start date and end date)

b. Text patterns in first name and last name of donor

c. Ability to indicate “contact associated with the donation

d. Ability to indicate “relation” associated with the donation

e. Ability to indicate “chapter” associated with the donation

f. Ability to indicate “fund” to which the donation was provided

g. The “donation type” of the donation (“in-kind”, “financial donation”, “service”, etc.)

h. Ability to indicate whether the “donation” record represents a pledge, and whether this pledge has been fulfilled or remains unfulfilled.

The use selects the donation record to be modified, or indicates a new record will be entered.

Y. Person Data Entry

The ability to edit data characterizing a person, associated locations, associated phone numbers, associated email addresses, appropriate categorizations will be provided

The user will be provided the ability to search for a record to be edited using a combination of search criteria including:

a. text patterns in first name and last name

b. text patterns in email address

c. text patterns in city

d. text patterns in street address

The user will also be provided the capacity to readily send an email to an individual directly from this tool, while viewing their records.

Z. Communications Project Data Entry

The ability to edit data characterizing a communication project will be provided.

The user will be provided the ability to search for a record to be editing using a combination of search criteria including:

a. text pattern search for communication project name

b. time period in which the communication project was active

c. category codes associated with the communication project

AA. Duplicate Record Merge Tool

This tool will facilitate merge of records identified as representing duplicates.

Some mechanism will be provided for assisting the user in resolving differences between records to be merged, and for deciding what action to take with related donation records, etc.

BB. Relation-Splitting Tool

This tool will facilitate separation of records previously stored within a single relation into separate representations in the system.

Business rules outlining the methods to be used in representing donations and other records previously attributable to the shared record must be developed during further development analysis.

CC. Volunteer Information Entry

The ability to edit data characterizing an individual’s volunteer preferences and volunteer actions will be provided.

The user will be provided the ability to search for a record to be editing using a combination of search criteria including:

a. text pattern search for name
b. time period in which the action was taken
c. volunteer action category for the action taken
d. volunteer preferences entered for the person

DD. Contact Data Entry

The ability to edit data characterizing a communication project contact with an individual will be provided.

The user will be provided the ability to search for a record to be editing using a combination of search criteria including:

a. text pattern search for name
b. time period in which the contact was made
c. text pattern search for communication project name
d. category codes associated with the communication project

EE. Code Set Editing

The ability to edit code sets defined to limit the assignment of values such as volunteer preferences, communication project codes, etc. will be provided.

FF. Group Membership Entry

The ability to edit data characterizing a “group membership” will be provided.

The user will be provided the ability to search for a record to be editing using a combination of search criteria including:

a. text pattern search for name
b. ability to indicate the group for which membership is to be modified

Data Manipulation Tools

GG. Voter Enhancement Data Import Tool

More information on type of information and format to be imported is required to detail this part of the document.

HH. Data export to handheld computing devices

II. Electronic Fund Transfer Bulk Data Import Tool

More information on type of information and format to be imported is required to detail this part of the document.

2.2.2 Non-Functional Requirements

JJ. Ease of use

Ease of use will be evaluated in test deliveries throughout the course of system implementation. The client will be involved in decisions where ease of use may only be attained at substantially higher expense.

KK. Email links

LL. Simultaneous use by multiple users

MM. Individual accounts/privileges

NN. Accessibility from non-office locations

The system will be accessible minimally using software that allows a remote computer to run sessions on an in-office computer (software such as PC Anywhere, etc.). Web-based access may also be employed.

OO. Tracking of data modifications

The system at a minimum will store the name of the account making the last modification to each table row in the system. More rigorous modification logging will only be implemented if further requirements analysis reveals a need.

2.2.3 System Architecture

The system will be designed with a client/server architecture to facilitate good performance during simultaneous use by multiple persons. The extremes to which this emphasis is carried may be altered by later clarification of the type of work to be done, the number of simultaneous users, expected, etc.

The system will be accessible from Windows-based computers connected to the server via local area network.

The system will be constructed using tools (DBMS, programming languages, etc.) that are in widespread use to facilitate the client's ability to obtain administration and development support as needed.

2.2.4 System Documentation

The system will be documented using at least the following mechanisms to facilitate the client's later maintenance and development of the system:

PP. Physical data model representing the data structures implemented within the system's central server

QQ. Documents outlining indexing, table and row characteristics established in the system's central server, provided in "report" format.

RR. Copies of all development documentation used to outline program execution flow, etc.

SS. Logical data model representing the inherent logical relationships of the data held in the system.

TT. Documents outlining recommended system maintenance activities, security procedures, account establishment and maintenance procedures. These will be targeted towards the system administrator.

UU. A "user's guide" to the system.

All documentation will be provided in PDF format to provide a permanent record of system features as implemented at final product delivery. Documentation will also be provided in word processor and other formats that will allow continued modification and development of the documentation in response to later modifications by the client.

2.3 Assumptions and dependencies

Migration of data from the organization's existing database into the new system will be outlined in a separate project or subproject requiring a detailed examination of existing data structures and their contents and development of a system designed to automate data transformations and reorganization as required by the new system.

3 Scope and limitations

3.1 Scope of initial release

The initial release will include all features except those noted for subsequent releases in section 3.2 below.

3.2 Scope of subsequent releases

The following features will not be delivered in the initial release:

A. Data export to handheld computing devices (feature HH),

B. electronic fund transfer bulk import tool (feature II),

C. ability to initiate bulk email directly from reports (feature KK),

D. web-based access to system (feature NN – dependent on further evaluations of need),

E. detailed data modification logging (feature OO – if evaluation reveals appropriate need),final versions of system documentation (features PP, QQ, RR, TT, UU) will be provided in subsequent releases.

3.3 Limitations and exclusions

There are no specific limitations and exclusions at this time.

4 Business context

The system will be used by ONRC staff for generation of reports, and entry/modification of contained data.

4.1 Customer profiles

"Customer" is here defined as anyone who actually uses the system directly.

4.1.1 System Administrator

These individuals will be involved in performing maintenance activities for the system. This might include setting up accounts and access privileges for users, running maintenance procedures and backups, etc.

4.1.1.1 Major Benefits

Benefits cannot be determined without a detailed examination of the current system.

4.1.1.2 Likely Attitudes Towards the Product

Likely attitudes cannot be determined without a detailed examination of the current system.

4.1.1.3 Key Product Features of Interest

System documentation.

Account establishment/access restriction capacities and procedures.

Features related to tracking of who has modified data, etc.

Data importing tools

4.1.1.4 Success Drivers

Accuracy and usability of system documentation.

Stability and reliability of the system.

Ability of the system to deliver required or superior performance with a minimum of administrative interventions.

4.1.1.5 Known Complaints That Must Be Addressed

Because a detailed evaluation of the current system has not yet been undertaken, no information is available for entry in this section.

4.1.2 Staff User

These individuals will be involved in day-to-day use of the system for assistance in required job functions. They will use the system for entry/modification of contained data, for generation of reports, for generation of communications, for organization of volunteers, for tracking of projects undertaken by the organization, and for analysis of the organization's effectiveness in fundraising and volunteer organization. Each individual staff user may specialize in working with one particular area of the system, but may make occasional use of any or all other information areas provided by the system.

4.1.2.1 Major Benefits

The new system should provide more comprehensive, complete information of assistance to these individuals during their routine work tasks. The new system should also streamline a number of processes that are now difficult/awkward under the current system.

4.1.2.2 Likely Attitudes Towards the Product

Largely dependent on "ease of use" features.

Because there has currently been very limited contact with the organization's staff, further summary of the likely attitudes of this user group is not possible.

4.1.2.3 Key Product Features of Interest

Data entry tools

Reporting tools

4.1.2.4 Success Drivers

"Ease of use"

4.1.2.5 Known Complaints That Must Be Addressed

Portions of the current system that provide essential functions are in many cases awkward/difficult to use.

4.1.3 Volunteer

The individuals are engaged for various data entry tasks. At the current level of understanding of the organization, no further description can be offered.

4.1.3.1 Major Benefits

Based on a shallow understanding of the existing system, it seems likely that this group will perceive the following benefits:

A. They may gain abilities to perform their work outside of the organization's "office" locations, which will provide convenience to them.

B. It is likely the current system will be easier to use for data entry in many respects.

C. Descriptions of the current system indicate that the new system will provide enhanced capabilities for restricting access based on individual user accounts. This will provide a measure of safety for volunteers who will not need to be unduly concerned with their use resulting in accidental damage to areas they are not authorized to work in.

4.1.3.2 Likely Attitudes Towards the Product

The attitude of this group will probably be based largely on "ease of use" and the fashion in which a volunteer is engaged in data entry tasks by the organization. If volunteers are engaged intensely in a single data entry area, their evaluation of "ease of use" is likely to emphasize features that increase the efficiency of an "expert" data entry worker. If instead a volunteer is engaged in a variety of data entry areas, each for relatively short periods of time, or for only small amounts of work, then "ease-of-use" features that emphasize ease of interpretation will be emphasized.

4.1.3.3 Key Product Features of Interest

Data entry tools

4.1.3.4 Success Drivers

"Ease of use" features appropriate to the working model under which volunteers are engaged must be appropriately emphasized.

4.1.3.5 Known Complaints That Must Be Addressed

The current small amount of interaction with the organization's staff is insufficient to allow this section to be completed.

4.2 Project priorities

No more specific priorities can be summarized.

5 Product success Factors

The delivery timeline is critical.

The ability to quickly implement a transition from the existing system to the new system is also very important.