Membership Database Business Rules

2019-05-30

These are the business rules I know about for the membership database. Some of this duplicates comments in the data description. I don’t know of a good formal notation for this, so I’m going to try formal English.

The visibility of data items is described in terms of the four roles defined in the “Roles” document: administrator, clerk, pastor, member. Generally administrator, clerk, and pastor can see all the data; members see only a subset.

References to the “directory” should be understood as the directory information available to all members

# User Roles

The church membership database has several kinds of users, with differing needs for data and operations.

## Clerk

* Who: the clerk for the church who keeps the database up to date with routine changes. At New Hope the Clerk of Session has somehow failed to delegate this role to somebody else. In most churches of any size there is a membership clerk who does this.
* What: The clerk can create, update, or delete any data, *according to the business rules*. The clerk has access to all the data. Probably only want one person in an organization making changes.
* How: Through an application that runs on their desktop, perhaps in a browser. Need to be able to cut and paste into and out of the application.

## Administrator

* Who: some tech-savvy member who can repair problems with the db.
* What: Unlike the clerk, who can change the db only by using one of the defined set of transactions, the administrator can perform CRUD on any data.
* How: Through an application that runs on their desktop, perhaps in a browser

## Pastor

* Who: the pastor(s).
* What: typically the pastor(s) read data but don’t modify it. In addition to reading raw data, the pastors run a variety of queries, to be described elsewhere.
* How: Need desktop access, so can copy data out to other applications.

## Members

* Who: everybody else
* What: Members read the kind of data in the present printed directory. **They do not have access to other data.** For example, they see member-chosen nicknames and don’t have access to people’s full names (folks are twitchy about that); they don’t have access to dates of birth, especially for children (one of our members has refused to give that data); they don’t have access to other personal information.
* How: Although the “printed directory” is no longer printed by the church (it’s passed around as a PDF), the “printed directory” remains the directory members use. Web access is a good idea; a mobile app would be cool; but we’ll always have to support a printed directory. (Actually I’m less sure of that than I was. But then perhaps not all members will want to get member contact info through the web or an app.)

## Security

It’s worth reflecting on the security requirements that arise from the foregoing.

* This system contains personal data. When our members give us that data, the church promises to protect it. A failure here could be an extinction event.
* The assumption is that this system will be accessed via the public Internet, so the chosen platform must be robust.
* We have several roles, with varying requirements of access.

# Data Descriptions

## Member

1. A Member represents a communing or non-communing member, past or present.[[1]](#footnote-1) Members are created by birth (or adoption), or by being received into membership.
2. Members are never deleted: they may leave active membership (EXCOMMUNICATED, DISMISSED, REMOVED, DEAD).
3. A Member may become active again, e.g., restored from excommunication, rejoined after absence.
4. A Member’s identity is independent of their name, which can change, e.g., upon marriage.
5. A Member’s name must contain a last name and first name. Other name components may be nil.[[2]](#footnote-2)
6. Middle and maiden names are at the member’s discretion.
7. The nickname is the way the member’s first name appears in public. The first name, middle, and maiden names are NOT visible to users.
8. Every Member has exactly one Household. That Household can change, e.g., upon marriage or leaving home.
9. Temp Address is used for a Member who is not changing Household but has a different address temporarily, e.g., college students. It is usually nil.
10. Email, etc., for a Member is intended for their private, rather than family, email.
11. Ex directory: for rare cases in which a Member should be excluded from the directory.
12. The Resident flag indicates whether the member lives “in the area” and is to be counted as “resident” for BCO purposes. Should be updated when Household or Temp Address changes.
13. Baptism is free-form text, typically containing date and place of administration. A non-nil entry indicates the Member has been baptized.
14. Father and Mother references to other Members are to establish covenant relationships that justify infant baptism. Nil otherwise.
15. Transactions are records that record the date and circumstances of a change in membership status. Typically when a Member’s status changes, that causes a change in the Status field, and the creation of a Transaction. Transactions are never deleted.
16. Service records record a Member’s service as an officer in this or another church.
17. Date Last Changed is a holdover from the predecessor database. It’s useful to the pastors, perhaps to the clerk. Should be maintained by software, not entered by hand.

### Member Status

This enumeration reflects the BCO.

1. NONCOMMUNING: for a covenant child not yet admitted to the Lord’s Supper. Such children are members of the church. As soon as a child is born to a parent who is a COMMUNING member, the child is entered on the roll. NONCOMMUNING members are transferred in and out with their parents. Adult NONCOMMUNING members are retained as members, unless their parents are transferred or removed.
2. COMMUNING: the status of a regular member of the church. For statistical purposes we count COMMUNING members (and NONCOMMUNING separately).
3. We retain EXCOMMUNICATED members on the rolls, with the hope of restoration.
4. A member is SUSPENDED only after action by the Session, with the hope of restoration.
5. New Hope has a policy, when a member moves out of the area, of writing them a letter of dismissal good for a year. DISMISSAL\_PENDING is a way to remind the Session that they need to keep track of such folks. They are out of the statistics and the directory.
6. A member is REMOVED from the roll as the result of Session action, typically because we have lost contact with them. The reason or authority for a removal must be documented in a Transaction.
7. A PASTOR is not a member of a local congregation, but of his Presbytery. However, to include pastors in the directory, we have this category.
8. ASSOCIATE: Person is an associate member.

### PMDate

Some sort of date representation. Must sort properly against blanks or nulls. Should support partial dates, e.g. year defined but not month or day.[[3]](#footnote-3)

### Transaction

The Transaction was introduced to record a time-sequenced series of member status changes. In general, when a Member's status changes, a new Transaction should be recorded. (The current system doesn’t do this exactly, which leads to problems.)[[4]](#footnote-4)

### ServiceType

You might think that service as a Teaching Elder (TE) would never appear in our records, but it’s possible for a man to have been ordained a TE and have served as a TE, and later demit the office, and be a regular member.

### TempAdress

Temp Address is an optional attribute of Member that contains the Member’s temporary address away from their household, e.g., for college students.[[5]](#footnote-5) The Address data it contains is the same as for Household.

## Household

1. Households have a unique identity apart from their address. (In the current system I make up a unique name like “Rich Kilmer” or “Mark Leone”.)
2. Households are created when a family or member joins.
3. Households are never deleted. (However, if a single person marries someone from the congregation, thus joining their Household, the original Household can become empty, and could be removed.)
4. The relation of Household to Member is one-to-many: a Household must always have a Member who is the head; it may have a Member who is the spouse; it may have zero or more “Others” who are underage children or others residing in the household.
5. A child reaching adulthood can be represented as moving to a new Household which happens to have the same address as her parents’. (I’m lookin’ at you, Liz and Kondaiah.)

### Address

1. The postal address is probably adequate for overseas addresses as well as domestic. (Apple Contacts has no more elaborate set of fields.) The present system has no logic for validating overseas addresses. Generally I have not entered a country field; that should be remedied with a default.
2. The email and phone fields are intended for email addresses for an entire family (from the AOL era), and a phone instrument for the entire family (from the Verizon era)—these are usually blank these days but should be retained.

### Phone

The current system makes the illegitimate assumption that all phone numbers are 10-digit North American. Presently there is no accommodation of country codes. Shame on me. [Let’s fix that!]

# Use Cases

## Use Cases for the Clerk

Business rules for the clerk. In the design of the new system the clerk’s interface should be defined by these transactions, and the clerk should have no access to CRUD operations. These transactions will be implemented by CRUD calls.

### Add a family

These steps needn’t be accomplished in this order.

1. Create a Member for the head of the household, leaving the household field blank. Add a RECEIVED Transaction to the Member.
2. Create a new Household for the family, set the head, and set the head’s Member’s household field.
3. Create a Member for the spouse, including the spouse’s household; add the spouse to the Household. Add a RECEIVED Transaction to the Member.
4. Create a Member for each child. Add a RECEIVED Transaction to each Member. Add each Member to the Others of the Household.

### Add a single person

Same steps as above, for one person.

### New family member

Create a new Member, and add the Member to a Household. Add a BIRTH transaction, if appropriate, to the Member.

Fill in parents.

### Covenant child professes faith

“Members | Edit member…” Add “profession” transaction. Change status to communing.

### Transfer a family

For each member of the family, change their membership status and resident flag, and add a Transaction.

### Excommunicate or suspend member

Change the Member’s status to EXCOMMUNICATED. Add a Transaction to the Member.[[6]](#footnote-6)

### Member family moves away (and is granted II.C.3 letter)

Change status to DISMISSAL\_PENDING and non-resident.  
Add transaction for DISMISSAL\_PENDING. For noncommuning, add “noncommuning” note

### Dismissal to another church

Change status to DISMISSED and non-resident.  
Add transaction for DISMISSED. Date and “church to”.   
For noncommuning, add “noncommuning” note

### Other removals from rolls

Change status to REMOVED and non-resident.  
Add transaction for REMOVED\_ADMIN. Date and “BCO authority”.   
For noncommuning, add “noncommuning” note

### Remove member on death:

Change member status to DEAD. Add transaction of type DIED. No longer resident.

If was head of household, adjust to widow/widower as necessary.

### Update household info

Change of address, telephone, etc.

### Update member data

Change name, e.g., on marriage  
Phone, email, etc.

### Change assignment to household

E.g., someone gets married.

### Officer service

Ordination, installation

### Assign temporary address

E.g., for college student

### Remove temporary address

Ditto

### Export “printed” directory

Clerk probably will have to generate some form of this even in the new system.

### Export CSV member director for contacts apps?

Does this become obsolete in new system? What’s the connection between members’ web app or native app and contacts on their devices?

## Use Cases for the Administrator

CRUD on every type of data.

## Use Case for pastors: Queries

The system supports a number of queries, which are needed either by the clerk (for statistics) or the pastors. Generally the resulting display contains row numbers, so the number of entries is obvious. The resulting data are available as CSV on the clipboard.

### Birthdays

For a given month, extract all active (communing or noncommuning) members whose birthday falls in the month, ordered by day of the month. From the results view, support a copy-paste into the system clipboard of the members’ public names (nickname and last name) with day of month—what you’re used to seeing in the bulletin, e.g., “Joe Schmoe (1), Ralph Blow (8)”

### Members by status

Extract members whose status is specified; filter by resident, non-resident, or both. The display contains row numbers, so the number of entries is obvious.

### Members by age

Show members whose age as of a specified date is less than (or other relations) is a specified number of years. Filter optionally to include only active members.

### Transactions for statistics

List in date order all Transactions on any members within a range of dates.

* + number of communing (exclude suspended and excommunicated members) and non-communing members
  + number of resident communing members
  + number of professions since date
  + number of receptions, dismissals, baptisms, etc., since date

### Baptisms

List all baptisms occurring within a date range.

### Active households

List all active households.

1. And if you get our Eklektoi™ feature, available as in-app purchase, you can know your future members too! [↑](#footnote-ref-1)
2. This scheme does not accommodate the Hispanic pattern of family name followed by mother’s family name, e.g., the name of the former president of Mexico, Enrique Peña Nieto. [↑](#footnote-ref-2)
3. We have had one head of household who declined to give us his children’s full birth dates, in the name of security. Presently they’re in the system as Jan 1. I wonder what will happen when we run the “Birthdays in January” query. [↑](#footnote-ref-3)
4. And I apologize that not all the TransactionTypes have the same grammatical form. They should all be past participles, as most of them are. [We’ll fix that!] [↑](#footnote-ref-4)
5. This was a big deal 15-20 years ago when a student’s temporary postal address and dorm phone number were important. (And it was a huge maintenance burden for the clerk.) Nowadays if the student’s mobile number and email are current, nobody cares about the rest, except perhaps their parents. I’ve largely quit chasing college addresses, and nobody seems to care. Happily I haven’t been pressured to add Twitter handle, Instagram account, or any of the rest. Just Say No. [↑](#footnote-ref-5)
6. A problem arises if the member is the head of a household and does not move to a new Household, perhaps their own: the logic for creating a directory will skip the entire family if the head is not active. This could be overcome artificially by putting the excommunicated head into his own household. [↑](#footnote-ref-6)