

# BANNER Email Migration Technical Specification

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# BANNER Email Migration Technical Specification

## Specification for Using BANNER Email Tables And Forms

### Overview

At one point in time, the most logical place to house email addresses in BANNER was the address table, SPRADDR. There were no email tables and email forms. As email became more important to the world, SCT created two new tables and three new forms intended to handle better the storage of email addresses. These are GOREMAL, GTVEMAL, APAEMAL, GOAEMAL, and GTVEMAL respectively. These tables and the forms permitting their population are the ones SCT's other processes and systems expect to be populated, i.e. where these processes and systems look for email addresses.

Wellesley College currently uses both the address table and the email tables and forms to house email addresses. Whereas the Admissions Office, the Alumnae Office, Resources and to some extent the Registrar's Office use the email tables and forms, the rest of the college uses the address table. The Data Standards Committee would like to see the entire college begin to use the email tables and forms for several reasons. First, the email tables and forms are a more logical place to house email addresses. They were specifically designed for that purpose. Second, it is only email addresses housed in email tables that will be recognized by SCT's processes and systems. The "Web For" products, for example, only display email addresses as found in GOREMAL.

The purpose of this document is officially to endorse the use of the BANNER email forms and tables, to detail the way in which we expect those forms and tables to be used. The document also provide some general specifications for how the migration from email addresses in the address table to the email tables should probably happen.

### Email Types

The following two email types should be used and should be stored in the BANNER GTVEMAL email type table accessed using the BANNER GTVEMAL email type form.

GEN – General Email Address – This email type is assigned to all internet email addresses. Examples include [jsmith@aol.com](mailto:jsmith@aol.com), [kjones@wellesley.edu](mailto:kjones@wellesley.edu), [agreen2@wellesley.edu](mailto:agreen2@wellesley.edu) etc.. Internet email addresses are characterized by the "@" sign used. The expectation is that there would be no more than a few email addresses of this kind per person or organization and that if more prove necessary, it may be desirable to create additional email types in order to differentiate email addresses more easily.

FC – First Class Name – This email type is assigned to names as used in posting within the First Class email system. Examples include "John Smith" and "Katherine Jones".

At this point, the thought is that no other email types will be needed, including email types owned by particular offices or departments at Wellesley College. The hope is that departments and offices will be able to work together to sustain the currency of email addresses as people's circumstances and relationships to offices at the college change.

### Active versus Inactive Email Addresses

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Email addresses are designated active and inactive in the BANNER APAEMAL and GOAEMAL forms. Active email addresses are email addresses to which email can be sent successfully. Active email addresses are **not** necessarily ones at which recipients check their email. Not merely active, but active and preferred email addresses are ones at which it is reasonable to assume recipients can and do check their email. See “Preferred Email Addresses” below.

The Data Standards Committee endorses the idea that inactive email addresses in BANNER be kept to a minimum in the GOREMAL table. For the most part, inactive email addresses now present in the table should be deleted or reactivated. The committee’s opinion comes from experience in managing email addresses. To date, with the exception of inactive Wellesley College email addresses (see “Wellesley Email Addresses” section below), inactive email addresses have proven to be essentially useless to committee members. Once someone changes an email address, there is little reason to retain the old one. In fact, because internet service providers often reassign old email addresses to different people, retaining inactive email addresses permits the possibility that email wind up delivered to the wrong people.

Email addresses which bounce email back to senders repeatedly, consistently and without explanation are not active and generally speaking should ultimately be deleted, subject to the particular policies of the Wellesley College departments which maintain the email addresses. If for some reason, these addresses are required still to be in the database, at a minimum they should be flagged as inactive and not preferred .

## Preferred Email Addresses

Email addresses are designated preferred and not preferred in the BANNER APAEMAL and GOAEMAL forms. Preferred email addresses are email addresses through which Wellesley College and the people to whom Wellesley College sends email “prefer” to communicate. More than other email addresses, these email addresses are official Wellesley College vehicles for communicating via email. The hope is that individuals would review email sent to these email addresses more regularly than email sent to any other email addresses accessible to those individuals. BANNER permits only one email address to be flagged as preferred per person.

Preferred email addresses are Wellesley College’s email addresses of choice; however, they are **not** necessarily the addresses of choice for the people with whom Wellesley College communicates. Individuals might arrange to have email forwarded from preferred email addresses to their own email addresses of choice. These other email addresses may or may not be known to Wellesley College.

The fact that an email address is flagged as preferred should not necessarily be interpreted to mean that an individual will definitely review email sent to that email address or that s/he will do so in a timely fashion. It is probably fair to say that, at this point in time, there are other vehicles of communication more likely to guarantee receipt and timely response than email. Certified mail is one such vehicle. Not everyone has access to email; and many people who do use email take it less seriously than mail, telephone calls etc.. The implication is that people needing to communicate with other people on behalf of Wellesley College in a particular circumstance should consider carefully whether email, even email sent to preferred email addresses, is the best communication vehicle in that circumstance.

The Data Standards Committee endorses the idea that it be a requirement for anyone with active email addresses to have one of those email addresses flagged as preferred. If an effort is made to determine for an individual which email address is preferred and no determination can be made, than one of the individual’s active email addresses should be flagged as preferred at random. This will ensure that it is possible to identify which one of someone’s email addresses is the one generally to use when emailing to only one email addresses. This same email address will be the one to specify when it is desired to send email to the email address most likely to be checked. As discussed below in the section on Wellesley College email addresses, the Standards Committee proposes that, generally speaking, for people that have them, it be Wellesley College email addresses which are flagged as preferred.

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## Active and Inactive, Preferred and not Preferred Email Addresses

Based on the preceding discussion of active and inactive email addresses and preferred and not preferred email addresses, it follows that email addresses can be characterized as follows:

*Active and Preferred* – These email addresses receive email and are the ones where recipients are most likely to review email.

*Active and not Preferred* – These email addresses receive email but may be ones at which recipients review email only occasionally or at infrequent intervals. Wellesley College email addresses created for the incoming Fall first year class fall into this category prior to orientation. The accounts are active but not preferred because the first year class is not yet able to access them. See the “Wellesley Email Addresses” section below.

*Inactive and Preferred* – Email addresses should generally **not** be characterized in this way. It makes little sense to flag an email address as incapable of receiving email and as the place where recipients are likely to review their email.

*Inactive and not Preferred* – These email addresses do not receive email and are not locations where recipients are most likely to review email. Relatively few email addresses should be characterized in this way because the expectation is that most email addresses found to be inactive will be deleted from the database.

## FC – First Class Name

The Standards Committee endorses the creation of the FC (First Class Name) email type and of active BANNER email records with that type for all people having active Wellesley College First Class accounts. One reason to create these records is that doing so will facilitate distribution of email within First Class. First Class names could be extracted from BANNER, stored in a .txt file, opened as an attachment within First Class and dragged into distribution lists used for mailings. These distribution lists when used within First Class permit email messages to take full advantage of First Class formatting and history functionality.

This is not the case with distribution lists created using email addresses, even ones at Wellesley. In other words, within First Class, sending email via distribution lists containing entries like [msulliva@wellesley.edu](mailto:msulliva@wellesley.edu) or [kgreen2@wellesley.edu](mailto:kgreen2@wellesley.edu) produces very different results than sending email via distribution lists containing entries like “Michael L. Sullivan” or “Katherine A. Green”. The former approach retains First Class formatting and history and leaves email sent within the First Class system. The latter approach loses First Class formatting and history and actually routes email out of First Class and back by way of the mail server.

It would be the responsibility of the First Class Account Manager to maintain the First Class email names in BANNER through data entry in the GOAEMAL form or through some BANNER-First Class interface to be developed.

The expectation is that individuals at Wellesley College would be assigned no more than one First Class account. Each individual would be assigned one First Class name, and it is this name that is entered for the individual’s pidm in the GOREMAL table under the FC email type. It is also true that individuals at Wellesley College sometimes have access to First Class accounts assigned to groups, to a First Class account for the Alumnae Office, for example. The expectation is that these First Class accounts will not be entered in BANNER either for individuals in the group or for the group itself.

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Inactive First Class names, like most other inactive email records, would be deleted under the proposal being advanced.

## Wellesley Email Addresses

The Data Standards Committee endorses the idea that anyone with active and inactive email accounts at Wellesley College should have their corresponding Wellesley College email addresses entered in BANNER in the GOREMAL email table. These entries would generally be of the form [xyyyyyyy@wellesley.edu](mailto:xyyyyyyy@wellesley.edu), where 'x' is the first initial of the individual and 'yyyyyyy' is the first 7 characters of the individual's last name. For example, [msulliva@wellesley.edu](mailto:msulliva@wellesley.edu) might be the Wellesley email address for Michael Sullivan.

Some people may have Wellesley College email addresses that violate this rule. For example, if Katherine Green is one of several people at Wellesley College whose last name is "Green" and whose first name begins with "K", then in order that she might have a unique Wellesley College email address, Katherine's email address might be [kgreen2@wellesley.edu](mailto:kgreen2@wellesley.edu) instead of [kgreen@wellesley.edu](mailto:kgreen@wellesley.edu). Alternately, relatively longtime Wellesley College faculty and staff may have been grandfathered email aliases permitting them to be contacted through email addresses including much more of their last names. For example, [msullivan@wellesley.edu](mailto:msullivan@wellesley.edu) could be an alias for [msulliva@wellesley.edu](mailto:msulliva@wellesley.edu). Both designations could result in mail being routed to Michael Sullivan's actual [msulliva@wellesley.edu](mailto:msulliva@wellesley.edu) email account.

Wellesley College email addresses should be assigned "GEN" email types and will be maintained by the Wellesley College First Class Account Manager. Active Wellesley College email addresses would be flagged as active. Inactive Wellesley College email addresses would be flagged as inactive and would be retained in the BANNER email table because of their value to the First Class Administrator in account management and reconciliation. For active Wellesley email addresses, the start date of the email address should be entered in the BANNER comment field whereas for inactive Wellesley email addresses, both the start date and the end date of the email address should be entered in the BANNER comment field. This information will not only be useful to the First Class Administrator but will also facilitate the synchronization of ES BANNER addresses until the BANNER email implementation is complete (See the section below on "Migration Steps")

Active Wellesley College email addresses should generally be flagged as preferred and inactive Wellesley College email addresses as not preferred. The reason for this is that, by definition, preferred email addresses are the ones through which Wellesley College will generally do official business and it is reasonable to expect anyone doing business with Wellesley College and having an active Wellesley College email address to receive communications through that email address. This is particularly so given that First Class accounts can be accessed through web browsers anywhere in the world with no special client software required to be installed. Moreover, because it is possible to forward email to different email addresses, even people not otherwise inclined to access their Wellesley College email accounts can receive email issued by Wellesley College routed through their Wellesley College email accounts to the email addresses of their choice. Such forwarding is recommended for faculty emeritae, students on leave and anyone else not likely to access Wellesley College email at their Wellesley College email addresses.

When Wellesley email addresses and First Class accounts are set up for new faculty, staff and Summer students, active BANNER email records should generally be created and immediately flagged as preferred. In these cases, people will be able to access their email accounts at roughly the same time as those accounts are created. It is therefore logical that the accounts be flagged as preferred right away. Because BANNER only permits one email address to be flagged as preferred, flagging Wellesley College email addresses as preferred means flagging all other email addresses available to people as not preferred. This will be the responsibility of the First Class Administrator.

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On the other hand, when Wellesley email addresses and First Class accounts are set up for the majority of the incoming Fall student class, active BANNER records should be created and flagged initially as **not** preferred. These accounts are active in that email can successfully be sent to them. In fact, email is sent to the accounts early on in expectation that students will eventually gain access to their accounts and review their email. Initially, however, these email addresses and First Class accounts are not preferred because they have been established weeks before orientation when students arrive on campus, learn First Class and are told their First Class userids and passwords. The email addresses are not preferred because they are unavailable to students and being unavailable can not represent where the students are most likely to check for email. By orientation, the BANNER email records should be changed to preferred by the First Class Administrator. By then, it is reasonable to assume that students may well consider their First Class accounts and Wellesley College email addresses first and foremost the mechanisms to use to check for Wellesley College email.

It is important to note that the committee debated whether someone's First Class name or Wellesley College email address should be required to be preferred. Convincing arguments can be advanced for either position depending on one's perspective. Factors which matter in deciding on a position include the extent to which the community uses email systems other than First Class (like Worldcast or Eudora), whether one considers First Class names or Wellesley internet addresses more official or enduring, how one envisions selecting an email population etc.. In the end, there is no clear-cut winner. Either position is tenable; but the committee opted for making Wellesley College email addresses preferred.

## Examples of BANNER Email Records

Sarah Johnson might have the following four BANNER email records:

1. Email type: FC                      Email Address: Sarah A. Johnson    Active = Yes   Preferred = No  
Comment:

- This is Sarah's name as found in the First Class directory.
- It will be active in BANNER virtually as soon as the First Class account is created whether or not Sarah has become able to access First Class.
- It is never flagged as preferred. By policy, only Wellesley College email addresses and not First Class names may be flagged as preferred.
- In itself, Sarah's active First Class name record is not adequate to guarantee that she can access First Class, although this almost certainly would be the case unless it were July or early August and she were in the incoming Fall class. Nonetheless, something other than just Sarah's First Class name record would need to be considered to ensure access to First Class. For example, if Sarah were an active employee, it would probably be reasonable to assume she could access her First Class account. Similarly if Sarah were found to have an active, preferred Wellesley College email address, it would again probably be reasonable to assume she could access her First Class account.
- No comment is required for this email type.
- The First Class Administrator will maintain this kind of email record.

2. Email type: GEN                      Email Address: sjohnson@wellesley.edu    Active = Yes   Preferred = Yes  
Comment: Start Date = 01/16/1999

- This is Sarah's currently active Wellesley College email address. It is identifiable as such by the "GEN" email type, by the "@wellesley.edu" ending to the email address and by the value of the active indicator.

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- The email record is flagged as preferred, meaning that the assumption by Wellesley College is that Sarah is more likely to access Wellesley College email at this email address than at any other email address.
- The Comment Field indicates that the email address began on January 16<sup>th</sup>, 1999. This information is useful to the First Class Account Administrator in account management and reconciliation. It also facilitates synchronization with Sarah's BANNER ES address record that also will be active and will have address start date 01/16/1999 (See "BANNER ES Addresses" section below).
- The First Class Administrator will maintain this kind of email record.

3. Email type:GEN      Email Address: sbriggs@wellesley.edu      Active = No   Preferred = No  
Comment: Start Date = 09/25/1993   End Date = 01/16/1999

- This is Sarah's former Wellesley College email address, e.g. the Wellesley College email address she held before getting married and changing her name. It is identifiable as a former Wellesley College email address by its "GEN" email type, its "@wellesley.edu" ending and by the value of its active indicator.
- The Comment Field indicates that the email address began on September 25th, 1993 and ended on January 16<sup>th</sup>, 1999. This information is useful to the First Class Account Administrator in account management and reconciliation. It also facilitates synchronization with one of Sarah's BANNER ES address records, namely one that is inactive and effective between 9/25/1993 and 1/16/1999.
- The First Class Administrator will maintain this kind of email record.

4. Email type:GEN      Email Address: sarah251@yahoo.com      Active = Yes   Preferred = No  
Comment:

- This is an active email address held by Sarah that is different than her Wellesley College email address.
- Like all true email addresses, its email type is GEN.
- The email address is not preferred. Email addresses other than Wellesley College email addresses will generally not be preferred for people who also have active Wellesley College email addresses. There are exceptions, as stated above. For example, email addresses not assigned by Wellesley College and held by the incoming Fall Class prior to orientation will generally be preferred until orientation.
- The Comment Field is blank. Start and end dates are not required for email addresses other than Wellesley College email addresses.
- Generally, people other than the First Class Administrator and in offices not in Information Services will be responsible for maintaining this kind of email record. The First Class Administrator will be responsible only for setting preferred address values to "No" as s/he makes First Class accounts available.

## URL's

The Data Standards Committee endorses the idea that Wellesley College not use the BANNER email forms and tables as vehicles for storing corporate and individual URL's. Although the BANNER email forms and tables permit the entry of URL's, the Standards Committee believes that these forms and tables are not the right vehicles for their entry. In any case, at this point in time, there has been very little cause to store personal and corporate URL's in BANNER at all, anywhere.

## BANNER EL Addresses

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At present, the BANNER address table includes EL (Long Email) addresses. These represent former Wellesley College email addresses longer than 22 characters (i.e. email addresses having more than eight characters preceding @wellesley.edu). Certain people used to have these email addresses as their official Wellesley College email addresses. Whether they know it or not, these same people now have official email addresses which are abridged versions of their original email addresses. These new email addresses are generally of the form [xyyyyyyy@wellesley.edu](mailto:xyyyyyyy@wellesley.edu), where x is the first character of a person's first name and the y's represent the first seven characters of the person's last name. People can always be emailed at their official Wellesley College email addresses; but people with EL addresses generally can also be emailed at these addresses. EL addresses represent aliases that on the mail server translate the longer, fuller former email addresses to the shorter, abridged current and official ones.

At one point in time, as historical information, EL addresses were probably useful to First Class Account administrators in account reconciliation. They may also have been somewhat useful in indicating who has email aliases. At this point in time, however, it is clear that the mail server is actually the definitive source of email aliases. Moreover, the current First Class Administrator, has not found EL addresses to be useful and recommends they be downloaded to a desktop or network file as a precaution and then deleted from BANNER. Before the records are deleted, a comprehensive search for programs that access them would have to be completed, and those programs would have to be changed.

In the mean time, the Data Standards Committee endorses the idea that email addresses formulated from EL addresses not be stored in the GOREMAL email table by a conversion program or entered there by Wellesley College staff.

## BANNER ES Addresses

At present, the BANNER address table includes ES (Short Email) addresses. These represent current and former Wellesley College email addresses shorter than or equal to 22 characters in length (i.e. email addresses having up to eight characters preceding @wellesley.edu.). The email addresses in question are generally of the form [xyyyyyyy@wellesley.edu](mailto:xyyyyyyy@wellesley.edu), where x is the first character of a person's first name and the y's represent the first seven characters of the person's last name. What is actually stored in the ES address, however, is not the actual email address but only the portion preceding "@wellesley.edu", e.g. ksmith not [ksmith@wellesley.edu](mailto:ksmith@wellesley.edu). As such, what is stored generally corresponds to people's accounts on various systems. For example, [msulliva@wellesley.edu](mailto:msulliva@wellesley.edu) is now represented in an ES address record as "msulliva" which is Michael Sullivan's Oracle and UNIX usernames.

The Data Standards Committee expects active ES address records to be copied to the BANNER email table as active and preferred GEN email records. It expects inactive ES address records to be copied as inactive and not preferred GEN email records. The comment field in the email table records would be populated with the start and end dates of the ES address records. In addition, "@wellesley.edu" would be appended to what amount to partial email addresses in the course of establishing the new email records. This effort would occur one time and be part of the migration process from email information in BANNER address records to email information in BANNER email records. (See **Migration Steps below**).

Ultimately, it is expected that ES address records would no longer be needed in BANNER. The email information they include could be found in the BANNER email table. The userids they represent could always be parsed from BANNER email records; and, in any case, BANNER is not now an absolute source of information on usernames. Some people have different usernames in different systems. Moreover, it is likely that a new Oracle name server much more than BANNER will become the definitive source of usernames.

Even though information in ES address records will become redundant once the BANNER email records are populated, the Data Standards Committee expects that the ES records will remain intact in BANNER

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for years to come until all programs expecting email information in those records are changed. At that point in time, ES address records should be deleted for two reasons. First, no one new to Wellesley College would ever expect email information to be found in address records (whereas they would expect email information to be found in email records). Second, retaining the ES addresses means housing email information in two places and this would be a source of confusion.

*After email records are populated from ES address records and before all programs have been changed to access the email records instead of the address records, it will be necessary to keep the email and address records synchronized. It is expected that synchronization will be done using database triggers placed on the BANNER email table. Although the precise details of this synchronization will be left to Database Systems, the idea would be to connect email to address records using the pidm column, the active column, and start and end date information.*

## Migration Steps

### Definitions

- Active ES addresses – spraddr records having spraddr\_atyp\_code = ‘ES’ and spraddr\_status\_ind IS NULL
  - Inactive ES addresses – spraddr records having spraddr\_atyp\_code = ‘ES’ and spraddr\_status\_ind = ‘I’
1. The Admissions Office must modify its reports and report vehicles to expect email addresses of email type “GEN” and not “ADM” (Admission Applicant Email Address). This may or may not require Admissions to alter its population selections so as to be based on criteria other than email type. Status: done.
  2. SQL must be written and run to change email records with the ADM email type to have the GEN email type. Status: done.
  3. The GTVEMAL email type table will require additions for the FC address type and deletions for the ADM, SOL, and WCAA email types. Status: ADM, SOL, WCAA have been deleted, and FC needs to be added.
  4. A one time conversion load program should be written to populate the GOREMAL table with email records based on active and inactive ES address records. In other words, the program must populate GOREMAL with active and inactive Wellesley College email addresses. Status: pending.

Step A – Identify Wellesley College email addresses already in the GOREMAL table that probably should not be there because they do not match data found in existing ES address records. Produce a report on these Wellesley College email addresses. Distribute the report to end-users who last updated the records. Tell these people that the records are going to be deleted from the GOREMAL table. Errant records in GOREMAL will have the following characteristics:

They will have pidm values different than those found in ES address records and yet have goremal\_email\_address values like ‘%@wellesley.edu’

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OR

They will have pidm values equal to those found in ES address records and have goremal\_email\_address values like '@wellesley.edu' but not have goremal\_email\_code equal to 'GEN' and goremal\_disp\_web\_ind equal to Y.

OR

They will have pidm values equal to those found in ES address records and have goremal\_email\_address values like '@wellesley.edu' and have goremal\_email\_code equal to 'GEN' and have goremal\_disp\_web\_ind equal to Y but not correspond to an existing ES address. This will be true unless an ES address record can be found satisfying all of the following criteria:

- the ES address record is active and goremal\_status\_ind equals A OR the ES address record is inactive and goremal\_status\_ind equals I
- the ES address record is active and goremal\_preferred\_ind equals Y OR the ES address record is inactive and goremal\_preferred\_ind equals N
- the ES address record is active and goremal\_comment equals "Start Date = MM/DD/YYYY" or the ES address record is inactive and goremal\_comment equals "Start Date = MM/DD/YYYY End Date = MM/DD/YYYY". "MM/DD/YYYY" should be equal to the value of spraddr\_start\_date for "Start Date = MM/DD/YYYY", and "MM/DD/YYYY" should be equal to the value of spraddr\_end\_date for "End Date = MM/DD/YYYY".
- The ES address record has the value of spraddr\_street\_line1 equal to the value of goremal\_email\_address with "@wellesley.edu" stripped off the end.

Step B – Create a report on non-Wellesley College GOREMAL email records to have preferred email indicator set to 'N'. These will be goremal records having goremal\_preferred\_ind = 'Y' and goremal\_email\_address not like '@wellesley.edu' for pidms that have active ES addresses.

Step C – Delete from the GOREMAL email table all Wellesley College email addresses. These will have goremal\_email\_code equal to GEN and goremal\_email\_address values like '@wellesley.edu'.

Step D – Set preferred email indicator ( goremal\_preferred\_ind) values to 'N' in certain non-Wellesley College GOREMAL email records. The goremal records to affect will have goremal\_preferred\_ind = 'Y' and goremal\_email\_address not like '@wellesley.edu' and pidms with active ES addresses.

Step E - Create GOREMAL email table records for all active and inactive ES address records

For each new record created, GOREMAL fields should be populated as follows:

- goremal\_pidm – this should be the pidm as found in spraddr\_pidm.
- goremal\_email\_code – this should be GEN
- goremal\_email\_address – this should be the value in spraddr\_street\_line1 appended with @wellesley.edu.
- goremal\_status\_ind – this should be A for active records and I for inactive records.
- goremal\_preferred\_ind – this should be Y for active records and N for inactive records.
- goremal\_activity\_date- this should be the date the record was inserted.
- goremal\_user\_id – this should be the userid of the user running the programs.
- goremal\_comment – this should contain "Start Date = MM/DD/YYYY End Date = MM/DD/YYYY", where "MM/DD/YYYY" is spraddr\_start\_date for "Start Date = MM/DD/YYYY" and where

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“MM/DD/YYYY” is spraddr\_end\_date for “End Date = MM/DD/YYYY”. Active ES spraddr records should always have non-null spraddr\_start\_date values and NULL spraddr\_end\_date values. Inactive spraddr ES records should always have non-null spraddr\_start\_date values and spraddr\_end\_date values.

- goremal\_disp\_web\_ind – this should be Y.
5. An interface must be written to ensure that changes made to active and inactive Wellesley College email addresses in the GOREMAL email table are applied automatically to ES address records in the SPRADDR address table. Status: pending

In other words, mechanisms should be created to ensure ongoing one to one correspondence between Wellesley College email records and ES address records. DML activity against GOREMAL email records having goremal\_email\_code = ‘GEN’ and goremal\_email\_address like ‘%@wellesley.edu’ must be mirrored in SPRADDR ES address records as follows:

If the DML activity is insertion, than a new SPRADDR address record should be inserted with the following column values:

- spraddr\_pidm should be set to the value of goremal\_pidm
- spraddr\_atyp\_code should be set to ‘ES’
- spraddr\_seqno should be set to one more than the maximum spraddr\_seqno found for the pidm and spraddr\_atyp\_code ES
- spraddr\_from\_date should be set to a date/time built from the date character string parsed from the value of goremal\_comment. Specifically, ‘Start Date = MM/DD/YYYY’ should be searched for in the comment and the MM/DD/YYYY string extracted. This is a date represented as characters with date type MM/DD/YYYY. The time used in composing the date/time to be inserted should be 12:00:01 a.m.. If no start date is found, than set the column value to NULL.
- spraddr\_to\_date should be set to a date/time built from the date character string parsed from the value of goremal\_comment. Specifically, ‘End Date = MM/DD/YYYY’ should be searched for in the comment and the MM/DD/YYYY string extracted. This is a date represented as characters with date type MM/DD/YYYY. The time used in composing the date/time to be inserted should be 12:00 midnight. If no end date is found, than set the column value to NULL.
- spraddr\_street\_line1 should be set to the value of goremal\_email\_address without the ‘@wellesley.edu’ suffix
- spraddr\_street\_line2 should be set to NULL
- spraddr\_street\_line3 should be set to NULL
- spraddr\_city should be set to ‘Wellesley’
- spraddr\_stat\_code should be set to ‘MA’
- spraddr\_zip should be set to ‘02481’
- spraddr\_cnty\_code should be set to NULL
- spraddr\_natn\_code should be set to NULL
- spraddr\_phone\_area should be set to NULL
- spraddr\_phone\_number should be set to NULL
- spraddr\_phone\_ext should be set to NULL
- spraddr\_status\_ind should be set to NULL if goremal\_status\_ind is ‘Y’ and to ‘I’ if goremal\_status\_ind = ‘N’
- spraddr\_activity\_date should be set to the value of goremal\_activity\_date
- spraddr\_user should be set to the value of goremal\_user\_id
- spraddr\_asrc\_code should be set to NULL
- spraddr\_delivery\_point should be set to NULL

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- spraddr\_correction\_digit should be set to NULL
- spraddr\_carrier\_route should be set to NULL
- spraddr\_gst\_tax\_id should be set to NULL
- spraddr\_reviewed\_ind should be set to NULL
- spraddr\_reviewed\_user should be set to NULL

If the DML activity against a GOREMAL Wellesley College email record is deletion, then exactly one SPRADDR ES address record should be deleted. Specifically, the SPRADDR ES address record to be deleted should satisfy the criteria below. If more than one such SPRADDR ES address record is found, the first such record found should be deleted at random. This circumstance will only be true if data has been entered or stored incorrectly. If no corresponding SPRADDR ES address record is found, do nothing. Again, this circumstance will only be true if data has been entered or stored incorrectly.

- spraddr\_pidm should equal the value of goremal\_pidm
- spraddr\_atyp\_code should equal 'ES'
- spraddr\_from\_date should equal a date/time built from the date character string parsed from the value of goremal\_comment. Specifically, 'Start Date = MM/DD/YYYY' should be searched for in the comment and the MM/DD/YYYY string extracted. This is a date represented as characters with date type MM/DD/YYYY. The time used in composing the date/time to be inserted should be 12:00:01 a.m.. If no start date is found, then spraddr\_from\_date should be null.
- spraddr\_to\_date should equal a date/time built from the date character string parsed from the value of goremal\_comment. Specifically, 'End Date = MM/DD/YYYY' should be searched for in the comment and the MM/DD/YYYY string extracted. This is a date represented as characters with date type MM/DD/YYYY. The time used in composing the date/time to be inserted should be 12:00 midnight. If no end date is found, then spraddr\_to\_date should be NULL.
- spraddr\_street\_line1 should equal the value of goremal\_email\_address without the '@wellesley.edu' suffix

If the DML activity against a GOREMAL Wellesley College email record is an update, then exactly one SPRADDR ES address record should be updated. Specifically, the SPRADDR ES address record to be updated should satisfy the criteria below. If more than one such SPRADDR ES address record is found, the first such record found should be updated at random. This circumstance will only be true if data has been entered or stored incorrectly. If no corresponding SPRADDR ES address record is found, do nothing. Again, this circumstance will only be true if data has been entered or stored incorrectly.

- spraddr\_pidm should equal the value of goremal\_pidm
- spraddr\_atyp\_code should equal 'ES'
- spraddr\_from\_date should equal a date/time built from the date character string parsed from the old value of goremal\_comment. Specifically, 'Start Date = MM/DD/YYYY' should be searched for in the comment and the MM/DD/YYYY string extracted. This is a date represented as characters with date type MM/DD/YYYY. The time used in composing the date/time to be inserted should be 12:00:01 a.m.. If no start date is found, then spraddr\_from\_date should be null.
- spraddr\_to\_date should equal a date/time built from the date character string parsed from the old value of goremal\_comment. Specifically, 'End Date = MM/DD/YYYY' should be searched for in the comment and the MM/DD/YYYY string extracted. This is a date represented as characters with date type MM/DD/YYYY. The time used in composing the date/time to be inserted should be 12:00 midnight. If no end date is found, then spraddr\_to\_date should be NULL.

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- spraddr\_street\_line1 should equal the old value of goremal\_email\_address without the '@wellesley.edu' suffix

Once the SPRADDR ES address record to be updated has been identified, its values should be changed as follows

- spraddr\_pidm should retain the value of goremal\_pidm
- spraddr\_atyp\_code should retain the value 'ES'
- spraddr\_seqno should retain its old value
- spraddr\_from\_date should be set to a date/time built from the date character string parsed from the new value of goremal\_comment. Specifically, 'Start Date = MM/DD/YYYY' should be searched for in the comment and the MM/DD/YYYY string extracted. This is a date represented as characters with date type MM/DD/YYYY. The time used in composing the date/time to be inserted should be 12:00:01 a.m.. If no start date is found, than set the column value to NULL.
- spraddr\_to\_date should be set to a date/time built from the date character string parsed from the new value of goremal\_comment. Specifically, 'End Date = MM/DD/YYYY' should be searched for in the comment and the MM/DD/YYYY string extracted. This is a date represented as characters with date type MM/DD/YYYY. The time used in composing the date/time to be inserted should be 12:00 midnight. If no end date is found, than set the column value to NULL.
- spraddr\_street\_line1 should be set to the new value of goremal\_email\_address without the '@wellesley.edu' suffix
- spraddr\_street\_line2 should be set to NULL
- spraddr\_street\_line3 should be set to NULL
- spraddr\_city should be set to 'Wellesley'
- spraddr\_stat\_code should be set to 'MA'
- spraddr\_zip should be set to '02481'
- spraddr\_cnty\_code should be set to NULL
- spraddr\_natn\_code should be set to NULL
- spraddr\_phone\_area should be set to NULL
- spraddr\_phone\_number should be set to NULL
- spraddr\_phone\_ext should be set to NULL
- spraddr\_status\_ind should be set to NULL if the new value of goremal\_status\_ind is 'Y' and to 'I' if the new value of goremal\_status\_ind is 'N'
- spraddr\_activity\_date should be set to the new value of goremal\_activity\_date
- spraddr\_user should be set to the new value of goremal\_user\_id
- spraddr\_asrc\_code should be set to NULL
- spraddr\_delivery\_point should be set to NULL
- spraddr\_correction\_digit should be set to NULL
- spraddr\_carrier\_route should be set to NULL
- spraddr\_gst\_tax\_id should be set to NULL
- spraddr\_reviewed\_ind should be set to NULL
- spraddr\_reviewed\_user should be set to NULL

Note that as specified, the interface between the GOREMAL email table and the SPRADDR address table does no error checking on data entered in GOREMAL. Because only the First Class Administrator will be updating Wellesley College email addresses in GOREMAL and there will be relatively few cases where people have more than one Wellesley College email address records in GOREMAL, the risk is minimal. Nonetheless, problems like the following could result from data entry error.

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- If two identical records are mistakenly entered into GOREMAL, they will both be stored in SPRADDR, with only values in spraddr\_seqno distinguishing them.
  - If, by mistake, no start date is entered for an active GOREMAL record, the corresponding active SPRADDR record will have no start date.
  - If, by mistake, no end date is entered for an inactive GOREMAL record, the corresponding inactive SPRADDR record will have no end date.
  - If two Wellesley College email records are mistakenly entered into GOREMAL for the same pidm, status indicator, start date and end date, two records will mistakenly be entered into SPRADDR. Subsequent updates and deletes to one of the GOREMAL records will affect only one of the spraddr records. If the two records have different email addresses, than the one with the matching email address in SPRADDR will be affected. Otherwise, one of the two records in SPRADDR will be affected at random.
6. The process and programs now used twice a year to inactivate and create large numbers of BANNER ES addresses will need to be modified. This process when revised will be termed the First Class to BANNER interface process. Status: pending

## Existing ES Address Update Process and Programs

Presently, a process is in place whereby ES addresses are inactivated programmatically (instead of manually by the First Class Administrator) for most graduating seniors. This happens relatively soon following graduation. Similarly, a process is in place whereby ES addresses are created programmatically for the incoming Fall first year class. This takes place a month or two before orientation in the fall. The last step in both cases is running a program or programs to update the database. In the past, it has been Maureen Williams that has run the program(s).

Other details of the process are sketchy and need to be fleshed out. Terry Ballantyne has apparently been involved in the extraction of the pidms and BANNER ids to be updated. Leo Martins has apparently been involved in adding Wellesley College email addresses to the file of pidms and ids delivered by Terry. In doing so, Leo has been leaving out the '@wellesley.edu' suffix not being stored in ES addresses. Maureen has received the file and used sql\*loader against it to update the database. In doing that, Maureen has had to be told things like the address start date; and which date to use has always been subject to discussion.

## General Purposes of Process to Replace the Existing ES Address Update Process

- A. The existing ES address update process should be revised not to update or insert ES addresses. Instead, ES addresses will be updated automatically by database triggers on GOREMAL email records or by whatever interface is established to keep ES addresses and Wellesley College email record synchronized.
- B. The existing ES address update process should be changed to accommodate the inactivation of GOREMAL email records for a variable population selection, people who have graduated, for example. For each pidm in the population of pidms to be updated, an attempt should be made to identify the corresponding GOREMAL record.

The corresponding GOREMAL record will have the following column values

- Goremal\_pidm will equal the pidm to have its Wellesley College email address inactivated
- Goremal\_email\_code will equal 'GEN'
- Goremal\_email\_address will be like '@wellesley.edu'
- Goremal\_status\_ind will equal 'A'

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The corresponding GOREMAL record should be updated as follows:

- Goremal\_status\_ind should be set to 'I'
- Goremal\_preferred\_ind should be set to 'N'
- Goremal\_comment should have its value appended with ' End Date = MM/DD/YYYY'. MM/DD/YYYY is a date format for the date everyone agrees should be used as the inactivation date of Wellesley College email addresses, for example, the inactivation date to apply to graduates in a particular year.
- Goremal\_activity\_date should be set to the date the change was made
- Goremal\_user\_id should be set to the userid of the user running the programs

C. The existing ES address update process should be changed to accommodate the deletion of GOREMAL First Class name records for a variable population selection, people who have graduated, for example. For each pidm in the population of pidms to have First Class names deleted, an attempt should be made to identify the corresponding GOREMAL record.

The corresponding GOREMAL record will have the following column values

- Goremal\_pidm will equal the pidm to have its First Class name deleted
- Goremal\_email\_code will equal 'FC'

The corresponding GOREMAL record should be deleted.

D. The existing ES address update process should be changed to accommodate the creation of Wellesley College email addresses for for a variable population selection, students in the incoming Fall first year class, for example. A parameter should be included which permits the specification at run time of whether or not the value of the preferred email address indicator should be Y (yes) or N (no). For each pidm in the population of pidms to have Wellesley College email addresses created, the following steps should be undertaken:

It should be ensured that the pidm does not already have an active Wellesley College email address. If such an address is found to exist, than no new email address should be created and an exception should be reported to the First Class Administrator. Specifically, an active Wellesley College email address exists if a GOREMAL record is found satisfying these criteria:

- Goremal\_pidm equals the pidm to have a Wellesley College email address inserted
- Goremal\_email\_code equals 'GEN'
- Goremal\_email\_address is like '%@wellesley.edu'
- Goremal\_status\_ind equals 'A'

If no other active Wellesley College email address is found to exist, than a new Wellesley College email address should be created and should have the following column values:

- goremal\_pidm – this should be the pidm under consideration in the population of pidms to have new Wellesley College email addresses
- goremal\_email\_code – this should be GEN
- goremal\_email\_address – this should be the partial email address supplied by the First Class Administrator and associated with the pidm under

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consideration appended with @wellesley.edu (for example, msulliva appended with @wellesley.edu)

- goremal\_status\_ind – this should be A
- goremal\_preferred\_ind – this should be set to the parameter value specified at run time for the value of preferred email address indicator
- goremal\_activity\_date- this should be the date the record was inserted
- goremal\_user\_id – this should be the userid of the user running the programs
- goremal\_comment – this should contain “Start Date = MM/DD/YYYY, where MM/DD/YYYY is a date format for the date everyone agrees should be used as the effective date for the new Wellesley College email addresses
- goremal\_disp\_web\_ind – this should be Y

- E. The existing ES address update process should be changed to accommodate the creation of Wellesley College First Class names for a variable population selection, students in the incoming Fall first year class, for example. For each pidm in the population of pidms to have First Class names created, the following steps should be undertaken:

It should be ensured that the pidm does not already have a Wellesley College First Class name. If such a name is found to exist, than no new First Class name should be created and an exception should be reported to the First Class Administrator. Specifically, a First Class name exists if a GOREMAL record is found satisfying these criteria:

- Goremal\_pidm equals the pidm to have a First Class name inserted
- Goremal\_emal\_code equals ‘FC’

If no other First Class name is found to exist, than a new First Class name should be created and should have the following column values:

- goremal\_pidm – this should be the pidm under consideration in the population of pidms to have new First Class names
- goremal\_emal\_code – this should be FC
- goremal\_email\_address – this should be the First Class name supplied by the First Class Administrator and associated with the pidm under consideration.
- goremal\_status\_ind – this should be A
- goremal\_preferred\_ind – this should be N
- goremal\_activity\_date- this should be the date the record was inserted
- goremal\_user\_id – this should be the userid of the user running the programs
- goremal\_comment – this should be Null
- goremal\_disp\_web\_ind – this should be Y

- F. The existing ES address update process should be changed to accommodate the update of preferred email indicator values for a variable population selection, the fall first year class just before orientation, for example. This population should have their Wellesley College email addresses flagged as preferred at that time and all of their other email records in GOREMAL flagged as not preferred. Specifically, for the population of pidms under consideration, the following steps should be taken:

If the person does not already have an active and preferred Wellesley College email address, report the person as an exception to the First Class Administrator. People with such email addresses will have GOREMAL records characterized as follows:

- Goremal\_pidm equals pidm under consideration

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- Goremal\_email\_code equals 'GEN'
- Goremal\_status\_ind = 'A'
- Goremal\_preferred\_ind = 'Y'
- Goremal\_email\_address like '%@wellesley.edu'

Otherwise, identify the email address record satisfying the preceding criteria and update

the column values in that GOREMAL record as follows:

- Goremal\_pidm – retain current value
- Goremal\_email\_code – retain current value
- Goremal\_email\_address – retain current value
- Goremal\_status\_ind – retain current value
- Goremal\_preferred\_ind – set to 'Y'
- Goremal\_activity\_date- set to the date the record was updated
- Goremal\_user\_id – set to the userid of the user running the programs
- Goremal\_comment – retain current value
- Goremal\_disp\_web\_ind – retain current value

For all other email records belonging to the person, ensure that the value of preferred email address indicator is set to no. Specifically, any other GOREMAL record having goremal\_preferred\_ind = 'Y' should be updated with the following column values:

- Goremal\_pidm – retain current value
- Goremal\_email\_code – retain current value
- Goremal\_email\_address – retain current value
- Goremal\_status\_ind – retain current value
- Goremal\_preferred\_ind – set to 'N'
- Goremal\_activity\_date- set to the date the record was updated
- Goremal\_user\_id – set to the userid of the user running the programs
- Goremal\_comment – retain current value
- Goremal\_disp\_web\_ind – retain current value

7. People must stop entering, changing and deleting email information in the SPRADDR address table. Status: pending
8. People should temporarily refrain from entering, changing and deleting information in the GOREMAL email table. Status: pending
9. The conversion load program must be run to populate GOREMAL email address information from SPRADDR ES address information. Status: pending
10. The interface ensuring one to one correspondence between GOREMAL email addresses and SPRADDR ES addresses must be put into place. Status: pending
11. People may resume entering, changing and deleting information in the GOREMAL table. All email information should be entered by human beings only in GOREMAL and not as ES addresses in SPRADDR. Status: pending
12. Only the First Class Administrator should be entering, updating or deleting Wellesley College email addresses from this point forward. Status: pending

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13. By approximately November of 2002, Liz Lieberman would like First Class names to be available in BANNER. Accommodating Liz would mean that revision of part of the First Class to BANNER interface process would need to be completed and that people like Debbie, Terry, Leo and Maureen would need to commit to the time table given that part of the process may well continue to be manual. Status: pending.
14. Only the First Class Administrator should be entering, updating or deleting First Class names in BANNER from this point forward. Status: pending
15. After graduation, the First Class to BANNER interface process should be followed to inactivate the graduate's Wellesley College email addresses in BANNER. The inactivation date will need to be supplied. Status: pending
16. After graduation, the First Class to BANNER interface process should be followed to delete the graduate's Wellesley College email addresses in BANNER. Status: pending
17. Weeks before Fall orientation, the First Class to BANNER interface process should be followed to create new Wellesley College email addresses for the incoming Fall first year class. The preferred email address indicator parameter value should be valued 'N' (for no). Status: pending
18. Weeks before Fall orientation, the First Class to BANNER interface process should be followed to create new First Class names for the incoming Fall first year class. Status: pending
19. Just before Fall orientation, the First Class to BANNER interface process should be followed to update email records for the incoming Fall first year class to ensure that active Wellesley College email addresses are flagged as preferred and all other email addresses are flagged as not preferred. Status: pending
20. All programs, reports and shadow systems retrieving email information from the address table must be changed to retrieve email information for the email table. This is expected to be complete by late Spring or so in 2004 when FOCUS is scheduled to retire. Status: pending