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Protected Email Attachment Repository

That is a long name for a web application so we just call it by its acronym, PEAR. Although the logo is pear-shaped, there is no connection between the PEAR app and the fruit. It's just an acronym.

PEAR is a closed webmail application available to anyone with a valid enterprise ID. It enables enterprise users to exchange information in cases where they cannot use unencrypted, non-secure (typical) email. Using PEAR is much more secure than using typical email to exchange information because unlike email, PEAR messages never pass thru any other servers other than the PEAR server and PEAR messages and attachments are encrypted during all transmissions and for storage. The messages are encrypted and stored on a single database in the administrative data center. Even if a PEAR message were stolen from storage, the data would be unreadable to the thief because it is encrypted and cannot be decrypted without the encryption key. The encryption key is stored in the secure password repository. It is known only to a very few staff with proper security credentials and is changed frequently.

PEAR messages are automatically deleted from the database after 60 days or anytime by the sender. When a PEAR message is deleted, it is removed from storage and lost forever. Any and all attachments are also deleted. Once a message is deleted, it is not possible to recover it later from PEAR or any database utility. The link to view a message that was sent to recipients in the email notification will no longer display the message once the message is deleted. Instead, it will indicate that the message is missing and most likely deleted.

Uses for PEAR

PEAR is a secure webmail application. It is designed for persons (students, faculty, staff and anyone with an enterprise ID) to exchange sensitive information in circumstances where non-secure email cannot be used.

For instance, when AITS Security resets a password for a user, they send the new password to the user in a PEAR message rather than in a non-encrypted email message.

In addition, University, State and Federal policies also prohibit the use of non-secure email to exchange many types of sensitive information such as university identification and social security numbers, certain protected portions of student, employee and patient records.

Alternatives to PEAR

The main limitation of PEAR is that it can't be used if the sender or an intended recipient does not have an enterprise ID. In that case you have might use one of several alternatives to PEAR, each of them with their own limitations.

- Secure E-Mail
- Box.Net
- Other file sharing services

Email Notifications

PEAR sends emails to recipients and senders of PEAR messages to notify them of certain events:

1. A person is sent an email when they are the recipient of a new pear message. A link to the message is included in the email.
2. The sender of a pear message is sent an email when a recipient views the message *for the first time*. This is called a 'view receipt'. The sender can disable the view receipt on a per recipient basis if desired.
3. A recipient of a pear message is sent an email when the sender recalls the message. Recalling a message renders it inaccessible to all recipients. The message is transferred from the sender's 'Sent' list to the 'Draft' list where it can be edited and resent, or deleted.

A sender can also send an email notification to any and all recipients using their own email client and account. Pear simplifies this by including a 'Notification' action in the 'Message View' page that links to the 'Message Notification' page. This page creates an email addressed to the recipients with a link to the PEAR message in the body using the default email client installed on the sender's computer or device. The sender can make any necessary adjustments before sending the email.

Email Addresses

PEAR sends email notifications, by default, to email addresses composed of the enterprise ID and each of the person's campus IDs. Most enterprise users have at least 2 IDs, the enterprise ID and the net ID of one of the campuses. Recipients receive at most one email notification, even if they have multiple IDs.

For instance, say a message is created by Sam for Jane. Jane's enterprise ID is jane@uillinois.edu and her campus IDs are jane@illinois.edu, because she is a UIUC employee, and janex@uis.edu, where she is enrolled as a student. Pear would create the following address line for the email notification for her:

To: jane@uillinois.edu, jane@illinois.edu, janex@uis.edu

Jane would still receive one email notification even though it is sent to three different email addresses. However, since campus and enterprise IDs do not always correspond to the correct email addresses, PEAR allows you to change the address for email notifications on a per recipient basis, or even skip sending the email notification to the recipient. If you choose not to notify the recipient by email, then they must know to go to their 'Inbox' list to retrieve the message in some other way as no new message link will be sent via email. Also, if the sender recalls the message, no recall notification will be sent to the recipient.

Requirements

PEAR is not usable if JavaScript processing is turned off in the user agent.

User Agents and Operating Systems

PEAR is tested using a slew of browsers, current and older versions, and screen readers. Tests are conducted on various devices including computers, tablets, and smart-phones. PEAR has passed all these tests. Nevertheless, if you have any problems using PEAR, contact the AITS Service Desk at 217-333-3102 (Urbana-Champaign or Springfield) or 312-996-4806 (Chicago).

Getting Around in PEAR

Navigating between pages is accomplished by following the links on the 'Navigation Bar' which appears above the first heading of each page. The navigation bar is a horizontal row of links grouped semantically by HTML5 syntax and visually as tabs of a file folder.

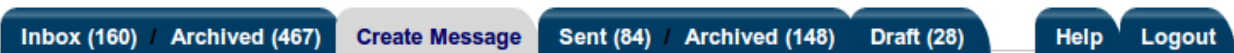


Figure 1 - Navigation Tabs

These links are grouped into tabs for the 'Inbox / Archive' list pages, the 'Create Message' page, the 'Sent / Archive' list pages, the 'Draft' list page and the 'Help' page and 'Logout' action link. The color of the tab of the current page will change when that page is displayed. The links to lists have the number of messages they contain displayed in parenthesis after the name of the list.

The 'Inbox / Archived' and 'Sent / Archived' tabs of the navigation bar contain 2 links each. Clicking on the 'Inbox' link will take you to the list of messages that have been sent to you but that you have not archived. Clicking on the 'Archive' link next to the 'Inbox' link on the same tab will take you to the list of archived, inbox messages. In the same way, clicking two tabs and three links over on the 'Archive' link next to the 'Sent' link will take you to the list of archived, sent messages.

Getting back to navigation, clicking on the 'Create Message' link/tab will open the 'Create Message' page.

Create Message

Addressing Type ID, UIN or at least the first 2 letters of the last name

To: -

Subject:

Body:

Attachments: No file chosen

Message Actions

Figure 2 - Create Message Page

The 'Message View', 'Message Notifications' and 'Edit Message' pages do not have links on the tabs.

You'll visit the 'Message View' when you follow the link in the subject of a message on the 'Inbox / Archive' or 'Sent / Archive' pages.




Figure 3 - Click on subject of message to open 'Message View'



Another way to get to the 'Message View' page is by following the link in the notification email that is sent to your email address when someone sends you a PEAR message.

Message View

Status: Sent

Date Sent: Thu 3/13/2014 10:34 AM CDT

From:  Thomas Cervenka (tcerven), UIC Chicago, Aits Admin

To:   User4 User4 (user4)

Subject: Secret

Body: 21341234

Attachments: No attachments

Message Actions

Reply

Reply All

Forward

Archive

[View in new window with navigation removed](#)

Figure 4 - Message View

The 'Message Notification' page will appear when you click the 'Notification' button from the 'Message View' page. The 'Notification' button is only visible if you are the sender of the message.

Message Notification

Date Sent: Tue 4/8/2014 1:16 PM CDT

From: Thomas Converka (Converka), UIC Chicago, Aits Admin

To: User1 User1 (user1)

Notification to default email addresses: user1@uillinois.edu

Notification to these emails addresses: user1@uillinois.edu

Do not send email notification to this recipient

Email Subject: PEAR Notification

Email Body: Please view the pear message that I've sent to you

Confirm:

Figure 5 - Message Notification Page

The 'Edit Message' page will be requested when you follow the link in the subject of one of the messages in the 'Draft' list.

Edit Message

[Addressing](#) ✓ valid recipient

To: Thomas Cervaska (cervaska) , UIC Chicago, Aits Admin + 👤 @ N

Subject: Test of address options none

Body:

Add Attachments: Choose File No file chosen + -

Message Actions

Resave Message To Drafts Send Message

Delete Message

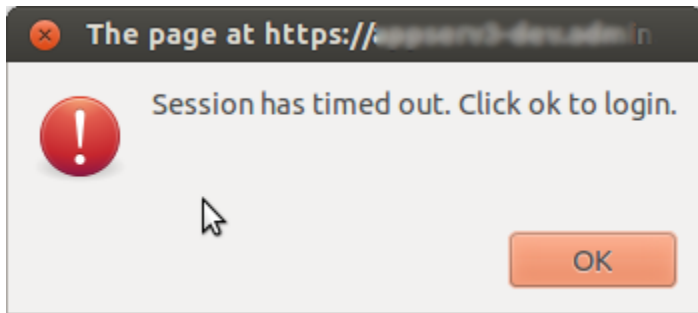
Figure 6 - Edit Message

Login / Logout / Idle Session

Every page requires authentication via login. When you login, a session is created for you. Your session will time out after about 30 minutes of inactivity. If you submit a request after the session times out, you will be asked to log in again, after which, you will be presented with the page you requested.

The last link on the navigation bar is 'Logout'. For maximum security, use the 'Logout' link when you are done.

If your session is idle for more than 30 minutes, you will be logged out automatically. If you click on any of the links, you'll be redirected to the login page. If you try to search for a recipient via the 'Create Message' or 'Edit Message' pages you'll see this error box:



After clicking 'OK' you'll be redirected to the login page.

Archive Lists

The 'Archive' lists only exist as places to put used messages that would normally have been deleted were PEAR a traditional email system where recipients get their own copies of email messages. In PEAR there is only one message. It is stored in a central database. Only the sender and recipients can see it. When a message is deleted there is nothing left for the sender or recipient to see so a PEAR message must remain in the system until the sender recalls it to the 'Draft' list (where it can be deleted), or, the message expires and a pruning process deletes it from the database.

Since most messages do not get recalled, many messages may accumulate and crowd the 'Inbox' or 'Sent' lists until they expire. The 'Archive' lists exist only as alternative places to put unwanted messages and get them out of the main lists of messages that are of current interest. Archived messages are no different than non-archived messages except that they appear in a different list. Recipients can still view, reply and forward them and senders can still view, forward, recall or create notifications with them.

List Pagination

Each list page has a pagination control toolbar of links situated both before (at right top) and after (at bottom left) of the table that contains the list of messages.

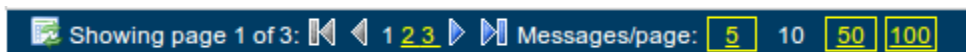







Figure 7 - Pagination control toolbar

From left to right, the toolbar contains the following controls for pagination:

Control

What it is and does

	A button that refreshes the current page when clicked.
Showing page 1 of 3:	Text that displays the current page and total number of pages in the list
	A button that brings up the first page in the list when clicked.
	A button that brings up the previous page in the list when clicked.
1 2 3	Links to go directly to any page in the list (the current page is not a link).
	A button that brings up the next page in the list when clicked.
	A button that brings up the last page in the list when clicked.
Messages/page:	This text is followed by links to change the number of messages per page.
5 10 50 100	Links to change the number of messages per page. The current number of messages per page is displayed but is not a link.

Some of these controls do not apply if there is only one page in the list. In this case, only the controls that apply will display.

Inbox / Archive List Pages

The ‘Inbox / Archive’ list pages are the pages where you see the lists of PEAR messages that you’ve received. The messages are displayed in a table that is sorted chronologically, most recent first.

Inbox / Archive List Page Column Descriptions

These pages are accessed by links in the first navigation tab.



Figure 8 - Inbox / Archive links on the first tab

The number of messages in the list is displayed in parenthesis next to the list name.

Both of the 'Inbox / Archive' list pages display a table that contains a list of all pear messages sent to the logged in pear user.

It is sorted in reverse chronological order of date that the message was sent so that the most recent message appears first or on top of the list.

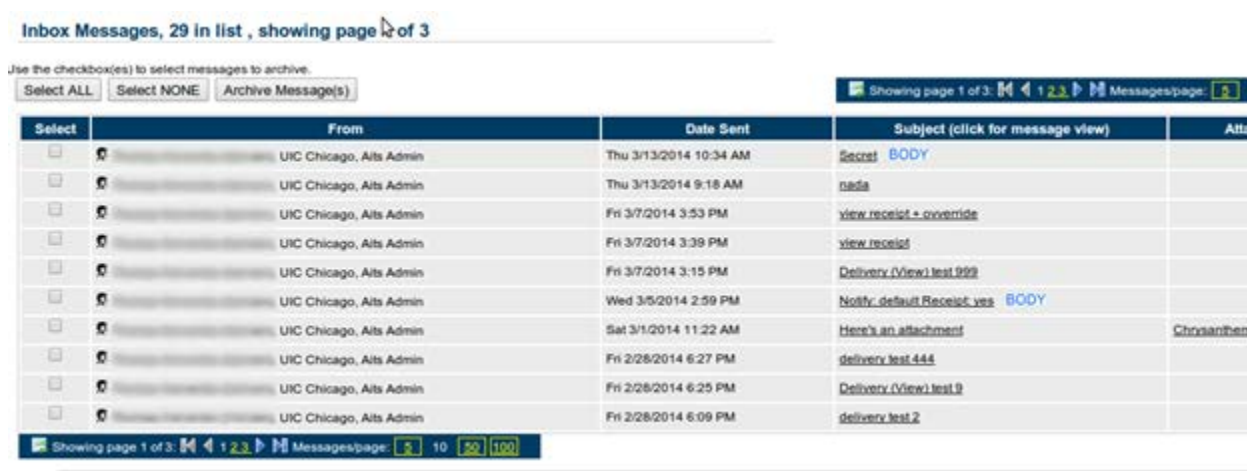


Figure 9 - Inbox List Page

The table's first column, labeled 'Select', is used to select the messages from the list for archiving or restoration.

The remainders of the table's columns display the parts of the message that are appropriate for the inbox / archive pages. These are labeled 'From', 'Date Sent', 'Subject (click for message view)' and 'Attachments'.

Table 1 - Inbox List Column Descriptions

Column Label	Description of cell contents
From	The full name and enterprise ID of the sender of the message. Until the message has been viewed in the 'Message View' page, the name will be enclosed in a tag and rendered in bold text. Once viewed in the 'Message View' page, the name will be rendered in the non-bold text. If the sender is an employee, the campus affiliation and department name will be included.

Date Sent	The date and time that the message was sent. This is the same as the date and time received because PEAR messages are simply saved to a database. All times are in the central time zone adjusted for daylight savings time.
Subject (click for message view)	<p>The subject of the message if present. If the message has no subject, the phrase '(no subject)' will be displayed in the cell.</p> <p>If a message has a body then the image BODY will be included in the cell after the subject text. The title attribute of the image will be set to the contents of the body of the message. Clicking on the image will display the contents of the body of the message in a browser alert box.</p> <p>The subject is also a link to the 'Message View' page from which the message may be replied to or forwarded. Viewing the message in the 'Message View' page will change its view status to 'read' and trigger a view receipt email for the sender if requested.</p>
Attachments	The names of all attachments to the message in a comma separated list. Each name is also a link to retrieve the attachment. If there are no attachments, this cell will be blank.

Archiving Messages from the Inbox List Page

To archive one or more messages, check the message's checkbox in the first column of the table, then click the 'Archive 1 selected message(s)' button that precedes the list. To select all message checkboxes, click the 'Select ALL' button. To clear all selections, click the 'Select NONE' button.

Restoring Messages from the Archived Inbox List Page

To restore one or more messages, check the message's checkbox in the first column of the table, then click the 'Restore 1 selected message(s)' button that precedes the list. To select all message checkboxes, click the 'Select ALL' button. To clear all selections, click the 'Select NONE' button.

Sent /Archive List Pages

The 'Sent / Archive' list pages are the pages where you see the lists of PEAR messages that you've sent.

These pages are accessed by links in the third navigation tab.



Figure 10 - Sent / Archive links on the third tab

The messages are displayed in a table that is sorted chronologically, most recent first.

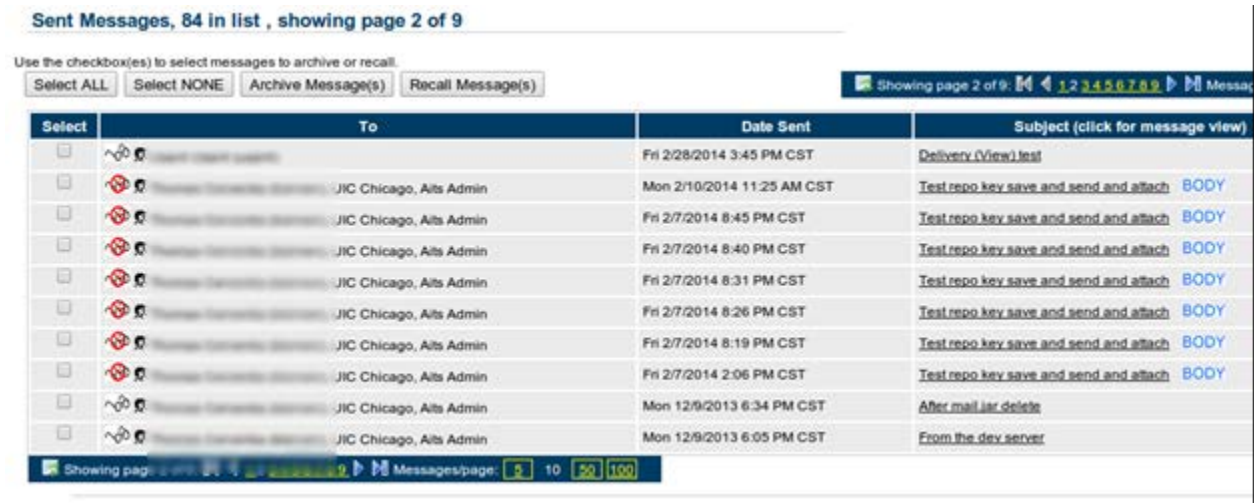


Figure 11 - Sent List Page


Sent / Archive List Column Descriptions

The table’s columns, with the exception of the first, display the parts of the message that are appropriate for the sent messages page. These are labeled 'To', 'Date Sent', 'Subject (click for message view)' and 'Attachments'.

The table’s first column, labeled ‘Select’, is used to select the message from the list for archiving or restoration.

Table 2 - Sent / Archive List Column Descriptions

Column Label	Description of cell contents
To	A list of the recipient of the message, one per line. The name and enterprise ID of the recipient is displayed along with a ‘view status indicator’. Also, if the recipient is an employee, the campus affiliation and department name

	are also displayed. Clicking on the  button will open a message box with a list of all the recipients IDs.
Date Sent	The date and time that the message was sent.
Subject (click for message view)	<p>The subject of the message if present. If the message has no subject, the phrase '(no subject)' will be displayed in the cell.</p> <p>If a message has a body then the image BODY will be included in the cell after the subject text. The title attribute of the image will be set to the contents of the body of the message. Clicking on the image will display the contents of the body of the message in a browser alert box.</p> <p>The subject is also a link to the 'Message View' page from which the message can be forwarded, archived or restored, recalled or email notifications can be sent.</p>
Attachments	The names of all attachments to the message in a comma separated list. Each name is also a link to retrieve the attachment. If there are no attachments, this cell will be blank.

Archiving Messages from the Sent List Page

To archive one or more messages, check the message's checkbox in the first column of the table, then click the 'Archive 1 selected message(s)' button that precedes the list. To select all message checkboxes, click the 'Select ALL' button. To clear all selections, click the 'Select NONE' button.

Restoring Messages from the Archived Sent List Page

To restore one or more messages, check the message's checkbox in the first column of the table, then click the 'Restore 1 selected message(s)' button that precedes the list. To select all message checkboxes, click the 'Select ALL' button. To clear all selections, click the 'Select NONE' button.

Draft List Page

This is the page where you see the list of PEAR messages that you've saved for editing or recalled after being sent.

These pages are accessed by the link in the fourth navigation tab.



Figure 12 - Draft link on the fourth tab

The messages are displayed in a table that is sorted chronologically, most recently saved first.

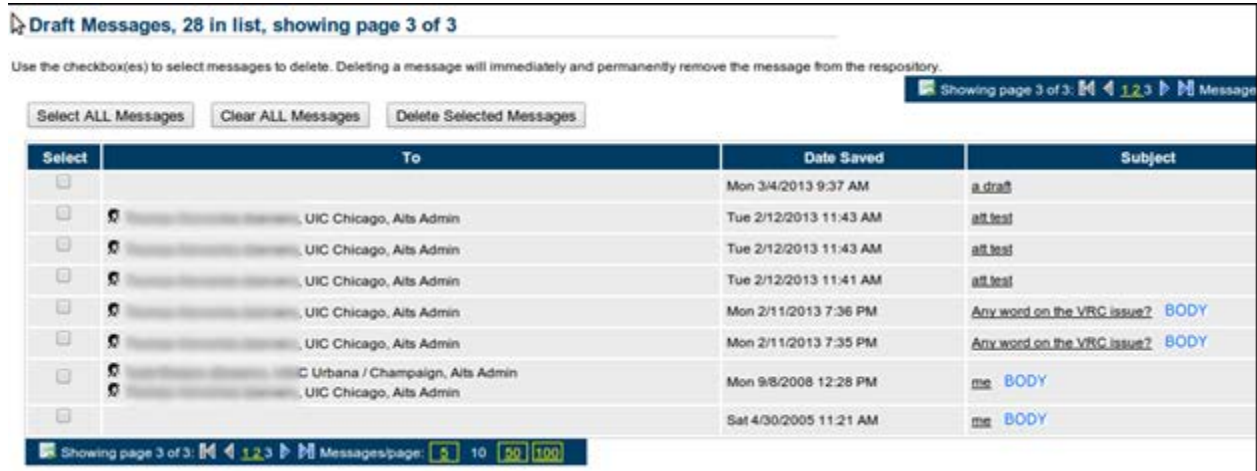


Figure 13 - Draft List Page

Draft Messages Page Column Descriptions

The table’s columns, with the exception of the first, display the parts of the message that are appropriate for the draft messages. These are labeled 'From', 'Date Sent', 'Subject (click for message edit)' and 'Attachments'.

The table’s first column, labeled ‘Select’, is used to select the message from the list for archiving or restoration.

Table 3 - Draft Messages Page Column Descriptions

Column Label	Description of cell contents
To	The full names, IDs, and statuses of all recipients of the message.
Date Saved	The date and time that the message was last saved.

Subject(click for message edit)	<p>The subject of the message if present. If the message has no subject, the phrase '(no subject)' will be displayed in the cell.</p> <p>If a message has a body then the image BODY will be included in the cell after the subject text. The title attribute of the image will be set to the contents of the body of the message. Clicking on the image will display the contents of the body of the message in a browser alert box.</p> <p>The subject is also a link to the 'Edit Message' page from which the message can be sent.</p>
Attachments	<p>The names of all attachments to the message in a comma separated list. Each name is also a link to retrieve the attachment. If there are no attachments, this cell will be blank.</p>

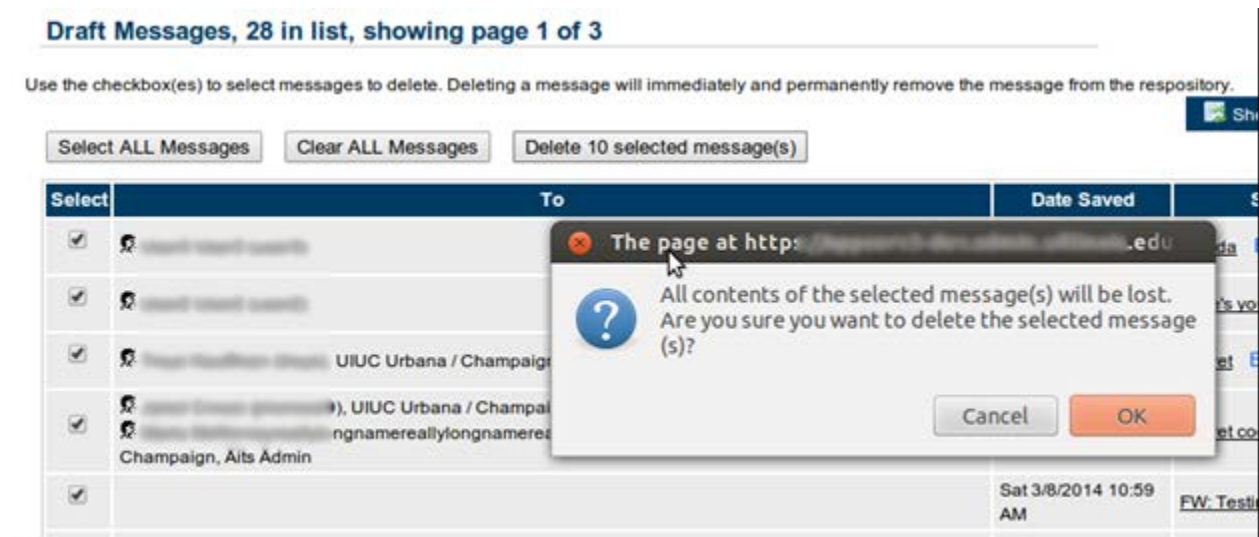


Figure 14 - Deleting messages from the 'Draft' list

Deleting Messages from the Draft Messages Page

To delete one or more messages, check the message's checkbox in the first column of the table, then trigger the 'Delete Selected Messages' button in the upper right, above Attachments. To select all message checkboxes, trigger the 'Select ALL Messages' button. To clear all selections, trigger the 'Clear ALL Messages' button.

Message View Page

The 'Message View' page displays all the information contained within the encrypted pear message as well as other details of a pear message, including attachments, if they exist. It also contains buttons for deleting, forwarding, replying, replying to all, notifications and recall.

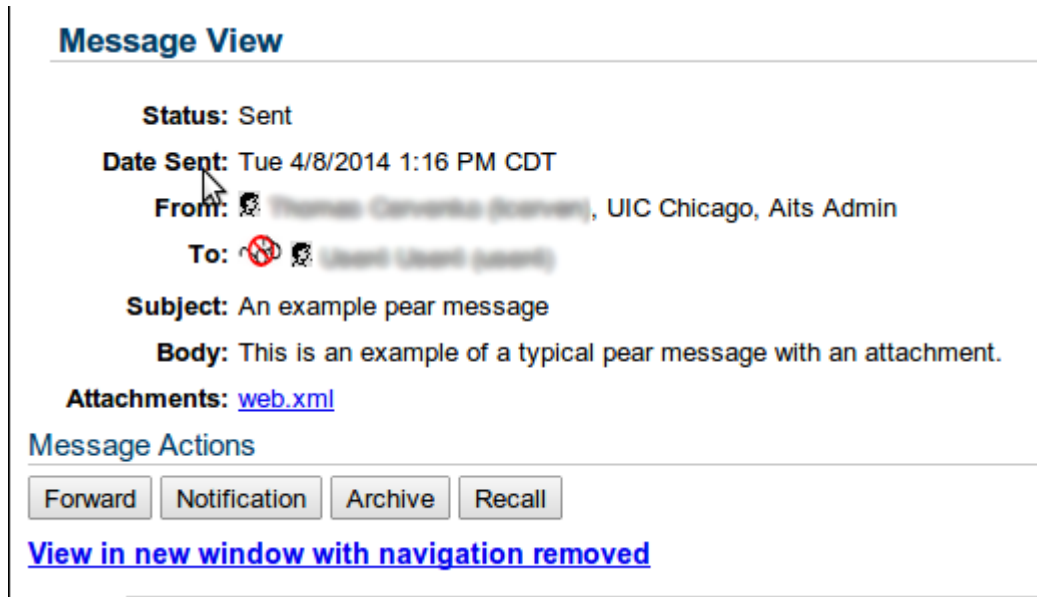




Figure 15 - Message View Page

This page is accessed by either the link in the email notification or by clicking on the text in the subject column of either the 'Inbox Messages' or 'Sent Messages' pages.

Table 4 - Message View Details

Item Label	Item Description
Status	One of two possibilities: SENT, if the message has been sent. SAVED, if the message has been saved but not sent.
Date Sent/Saved	The date and time that the message was last saved or sent.
From:	The name and enterprise ID of the sender of the message. Also, if the sender is an employee, the campus affiliation and department name are also

	displayed. Clicking on the  button will open a message box with a list of all the senders IDs.
To:	A list of the recipient of the message, one per line. The name and enterprise ID of the recipient is displayed along with a 'view status indicator' in the case of 'SENT' messages. Also, if the recipient is an employee, the campus affiliation and department name are also displayed. Clicking on the  button will open a message box with a list of all the recipients IDs.
Subject	The subject of the message if present.
Body	The body of the message if present.
Attachments	The names of all attachments to the message in a comma separated list. Each name is also a link to retrieve the attachment. If there are no attachments, this cell will contain the phrase, 'No attachments'.

Message View Actions

If you are the sender of a message, the 'Message View' page will have 5 buttons labeled 'Forward', 'Notification', 'Archive' or 'Restore', and 'Recall'. If you are not the sender of the message, you will have 4 buttons, 'Reply', 'Reply All', 'Forward', and 'Archive' or 'Restore'.

Table 5 - Message View Buttons



Button Label	Button Action
Archive	Removes the message from the 'Inbox' list, if you are a recipient and from the 'Sent' list if you are the sender. The message will now appear in the 'Archive' list.
Restore	Returns the message to the 'Inbox' list, if you are a recipient and to the 'Sent' list if you are the sender. The message is removed from the 'Archive' list.
Forward	A new draft message is created and the 'Edit Message' page is displayed. The message will have no recipients. Its subject will be 'FW:' plus the original subject. The original message will be appended to the body. If the original message contains attachments, they will be copied and attached. See the 'Edit Message' section for instructions to complete the forwarding of a message.

<p>Reply</p>	<p>Similar to 'Forward' except attachments are not copied and the subject starts with 'RE:'.</p> <p>A new draft message is created and the 'Edit Message' page is displayed. The message will have one recipient – the sender of the original message. The message subject will be 'RE: ' plus the original subject. The original message will be appended to the body. If the original message contains attachments, they ARE NOT copied and attached. Instead, the body of the message will contain name and size of the original messages attachment. See the 'Edit Message' section for instructions to complete the reply to a message.</p>
<p>Reply All</p>	<p>Same as 'Reply' except that the new draft message will contain each recipient of the original message plus the sender.</p>
<p>Recall</p>	<p>Removes the message from the 'Sent' list and adds it to the 'Draft' list where it can be edited. You must be the sender of the message to recall it. Any recipients who were sent email notifications when the message was sent will be sent another email notification that the message has been recalled and they no longer have access to it.</p>
<p>Notification</p>	<p>Navigates to the 'Message Notification' page where you can send email notifications to recipients of the message.</p>

View Status Indicator

A message is not considered to be 'viewed' until it has been displayed in the 'Message View' page by the recipient. This behavior is similar to the 'read receipt' of conventional email. In PEAR, the recipient will have 'viewed' the message once they have displayed it on the 'Message View' page.

Table 6 - View Status Indicators

View Status Indicator	Meaning
	<p>The recipient has NOT viewed the message</p>
	<p>The recipient has viewed the message</p>

An email notification is sent to the sender of the message the first time the recipient views the message if the message had the 'Send view receipt' option on, as by default. Only one view receipt is sent and only when the recipient views the message in the 'Message View' page, not in the 'Inbox' list.

Remove Navigation

The 'View in new window with navigation removed' link displays the message in a new browser window with the navigation pieces removed.

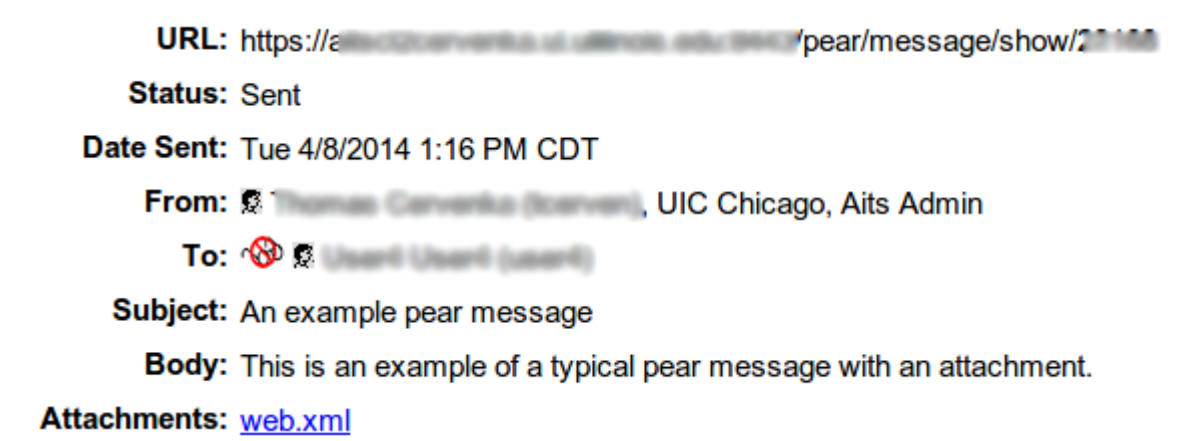


Figure 16 - Message View Page with navigation removed

Create and Edit Message

The 'Create Message' page is where you create new messages and send them or save them to the 'Draft' list. The 'Edit Message' page is for editing draft messages then resaving, sending or deleting them.

Create Message

The 'Create Message' page is accessed by a link in the second navigation tab.



Figure 17 - Create message link on the second tab

The 'Create Message' page contains a form that you use to create then save or send a pear message. The process is similar to composing a traditional email message. First you look up and choose one or more recipients for the message. Next you add 'Subject' and 'Body' content and

attachments if desired. You can save the message to the draft list at any time and edit it later. Or you can immediately send the message.

Finding and Adding Recipients

Pear only allows you to send messages to recipients who have enterprise IDs. Adding a recipient to a pear message is accomplished most commonly as follows. First, you search for the recipient by adding all or a portion of the recipient's last name into the search field. The case of the characters is not important.

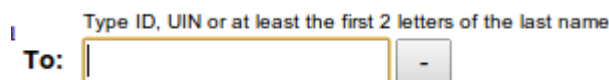


Figure 18 - Recipient Search Field on the To Line

After you stop adding at least two characters, pear will search for matches to the characters that you've added to the search field. The progress and number of results of the search are displayed above the 'To' search field in which you are typing.

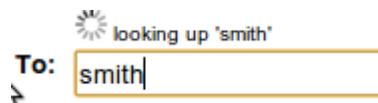


Figure 19 - recipient search in progress

There is no need to wait for search results to add more recipients or fill in other parts of the message. Searching is performed in the background and the page is updated as soon as results are provided.

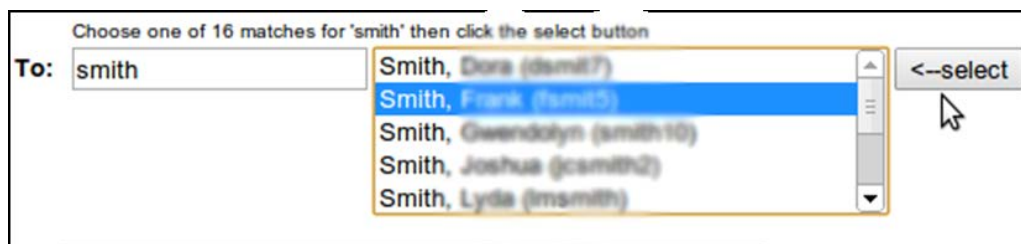


Figure 20 - recipient search results

The search results are displayed in a list box next to the search field. When you see the correct person in the list box, click it to highlight it then click the select button.

Once selected the recipient's full name, enterprise ID and other information will replace the list box. You should be careful to verify that this is the correct recipient (see 'Verifying Recipients'). If it is not, you can go back to searching for the correct person by clicking the 'Change Recipient' button: 🧑.

To add additional recipients to the messages, click the '+' button that follows the name and ID:

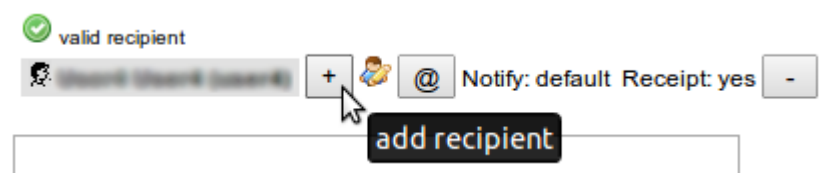


Figure 21 - Add Recipient button

Email notification settings

When you send a message, PEAR sends an email notification that contains a link to the message to all the recipients. You can turn off this feature, or change the email addresses to notify *before* you send the message. Once a message has been sent, you can no longer change the notification settings. Each recipient has their own email notification settings.

To show the email notification settings, click the '@' button displayed on the recipient line in the 'To' section of the page.

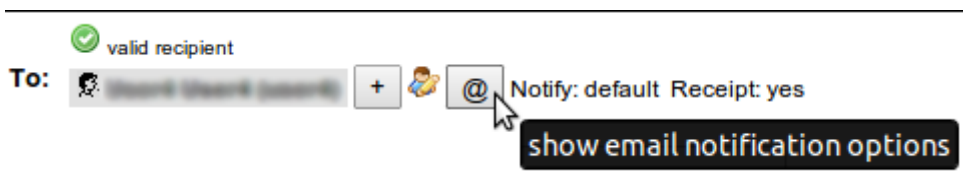


Figure 22 - Show or hide email notification options

There are three radio buttons that correspond to the three options for notifications.

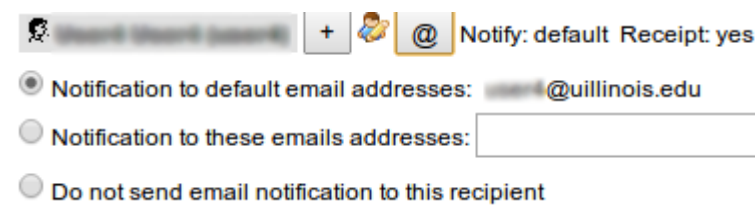


Figure 23 - recipient showing notification options

The default option is to send a notification by email and to use email addresses that correspond to the recipient's enterprise ID and all their net IDs.

Another option is to send the notification to an email address or list of address that you provide. This is the 'override' option. The email addresses go in the text box next to the option button.



Figure 24 - Override option for email notifications

You can add a single email address or multiple addresses separated by commas.

The final option is used if you do not want PEAR to send an email notification to this recipient.

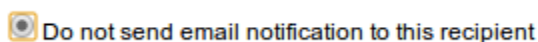


Figure 25 - Turn off email notification for recipient of a message

PEAR will not send email notifications to the recipient if you choose this option. You can still use the 'Notifications' button on the 'Message View' page if you want to send a notification to the recipient. Or you can send you own notification by email or text or phone or fax.

View receipts

PEAR will send an email notification to the sender of a message whenever a recipient views the message for the first time. This is a 'view receipt'. The sender can choose not to have PEAR send them a 'view receipt' on a per recipient basis.

The option is changed by the checkbox labeled 'Send view receipt' under the email notification options.

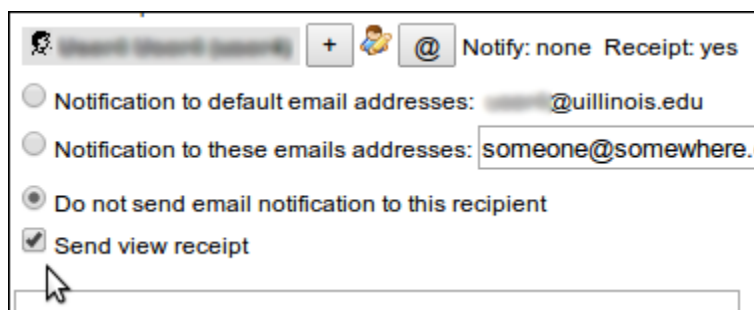


Figure 26 - Option to send a view receipt

When the box is checked, as by default, a 'view receipt' will be emailed to the sender of the message when this recipient views this message for the first time. Uncheck the box if you do not wish to receive a 'view receipt' by email.

The 'view receipt' option does not affect the 'view status indicator' which is set to show that the recipient has read the message. The 'view status indicator' is displayed the 'Sent' list page or in the 'Message View' and 'Message Notification' pages.

Adding attachments

Attachments are added using the file chooser of your browser. The look of this control depends on which browser you are using. For instance in IE10, it looks like this,



Figure 27 - IE file chooser control

In Chrome, it looks like this,

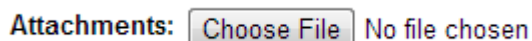


Figure 28 - Chrome file chooser control

To add an attachment, click the button on the line associated with the attachment to search for the file you wish to attach.

To change an attachment, click the button on the line associated with the attachment, then search for the file you wish to attach.

To add a new attachment line, click on any of the '+' buttons on any existing attachment line. To delete an attachment line, click on the '-' button on that line.

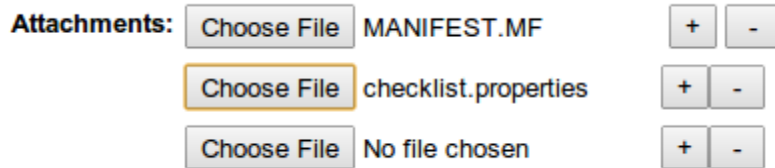


Figure 29 - Add and delete attachments

Sending or saving a message

Click the 'Send Message' button to send the message or the 'Save Message to Drafts' to save the message to the 'Draft' list .

Message Actions

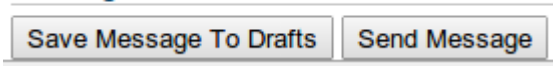


Figure 30 - Message actions for Create Message page

After you send or save the message, the 'Message View' page will display the message.

Edit Message

This page contains a form that you use to edit, then re-save or send a pear message. The process is similar to creating a pear message. To edit a message, first go to the 'Draft' list to locate it.

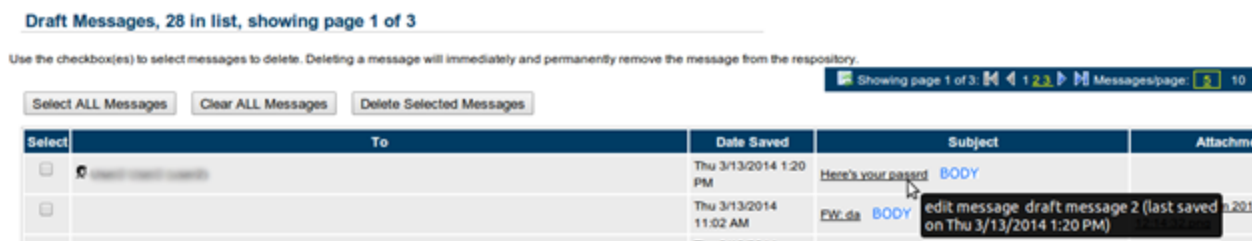


Figure 31 - the link to edit a message on the Draft list page

Then Click on the subject of the message to go to the 'Edit Message' page. Like the 'Create Message' page, you can add and remove recipients, change the subject and body and add or delete attachments

When you are done editing a message, click the 'Resave to Message To Drafts' button to re-save the message, or 'Send Message' to send it or 'Delete Message' to delete it from the database.

Message Actions

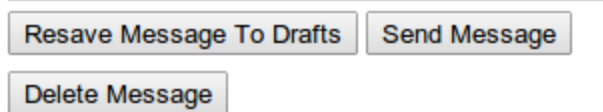


Figure 32 - message action for edit message page

Advanced Searching

The examples shown in this section are “made up” and will not produce the same results if you try them in PEAR.

The 'Create Message' section of this user guide described a simple and *basic* way of searching for a recipient. To recap and add to that discussion, in basic searching you start by adding characters from the last name of someone you wish to send a message into the search field. PEAR will check to see if anyone with an enterprise ID has a last name that begins with the search characters. If no results are returned, PEAR will try a different search to see if the search characters are something other than the start of a last name. If the results of the new search return nothing then another search is tried until results are returned or there is nothing left for which to search.

When PEAR tries the first basic search, 'last name starts with', and if it fails to return results, the next search tried is a 'full name starts with' search. For example, if the search characters are 'joe' and there are no results from the search for last names that begin with 'joe', then PEAR will search for all full names that begin with 'joe'. If this returns no results, PEAR moves on to the next search and if that fails to return results, it searches a different item and so on until it has run out of searchable items.

A wildcard (generic placeholder) are allowed in searches. The wildcard character is '*'. If you type the wildcard into the search edit, the lookup behaves differently than if the wildcard is not present.

The following table shows the order in which the searches are performed. If a search returns results, the lookup is done. If a search doesn't produce results, the next higher numbered search is tried, and so on, until all searches have been tried.

Table 7 - Searches performed by default addressing

Search	Type
1	last name (surname)
2	first + last name (common name)
3	group name

Then, if the search string DOES NOT contain a WILDCARD

4	UIN (only if a 9-digit number)
5	enterprise ID
6	Campus ID. The search characters must match a principal in one of these domains, uic.edu, Illinois.edu, uis.edu, or uiuc.edu. The domains are searched in this order as well so the first match is used and no further domains are searched.

Using Wildcards

The wildcard character, ‘*’, can be used to match any number of letters in a name.

NOTE: The examples shown in this section are “made up” and will not produce the same results if you try them in Pear.

Table 8 - Example of using wildcards in default searches

Search string	Description	Matches
pear*	All last names that begin with the letters, ‘pear’	Pearman Pear Peary Pearmen Pearman-Peachwoman Pearmandy Woolworth

pearm*n	All last names that begin with the letters, 'pearm', then any number of characters, then ending with 'n'	Pearman Pearmen Pearman-Peachwoman Permn
p*rm*n	All last names that begin with the letter, 'p', then any number of characters, then the characters 'rm', then any number of characters, then editing with the character 'n'	<all from above, plus> Prmn Prmyn Pittermin Purmitten

If the wildcard search on last name produces no results, pear will try it out on full name.

Table 9 - Examples of full name searches with wildcards

Search string	Description	Matches
Sam* Pearman	First name starts with 'sam' and last name is exact match	Sam Pearman Sam E. Pearman Samantha Pearman Samuel Pearman
Sam* Pearm*n	First name starts with 'sam' and last name starts with 'pearm' and ends with 'n'	<all from above, plus> Sam Pearmen Sammy Pearmoon

If the wildcard search on full name produces no results, pear will search for an enterprise group with a name that matches the search string.

Specific Addressing

The examples shown in this section are "made up" and will not produce the same results if you try them in Pear.

Pear allows you to specify which type of search to perform if you start and end the search with one of 5 special characters, ':', '@', '^', '#', or '~'. The special characters tell PEAR which search to perform. When you add the special character to the empty search field, PEAR waits while you add the search characters.

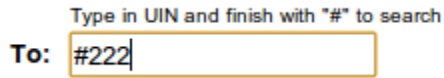


Figure 33 - UIN Searching

You then tell PEAR to perform the search by adding the same character at the end of the search field.

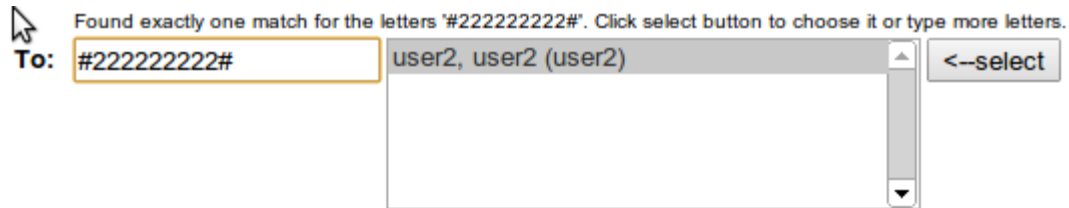


Figure 34 - Results of UIN Search

Searching for recipients by full name

Type ':' then the full name. Wildcards are allowed. Case does not matter. When done, type ':' to initiate a full name search.

Table 10 - Examples of searching for recipients by full name

Search string	Description	Matches
:Sam Pearman:	Exact match on full name	Sam Pearman
:Sam* Pearman:	First name starts with 'sam' and last name is exact match	Sam Pearman Sam E. Pearman Samantha Pearman Samuel Pearman
:Sam* Pearm*n:	First name starts with 'sam' and last name starts with 'pearm' and ends with 'n'	<all from above, plus> Sam Pearmen Sammy Pearmoon

Searching for recipients by enterprise ID

Type '@' then the enterprise ID. Wildcards are not allowed. Case does not matter. When done, type '@' to initiate an enterprise ID search.

For example, to search for the enterprise ID, 'spearman', type

@spearman@

Searching for recipients by campus Net ID

Type '^' then the net ID. Wildcards are not allowed. Case does not matter. When done, type '^' to initiate a campus net ID search.

For example, to search for the net ID, 'spearman@uis.edu', type

^spearman@uis.edu^

Searching for recipients by UIN

Type '#' then the 9 digit UIN. Wildcards are not allowed. When done, type '#' to initiate an UIN search.

For example, to search for the UIN, '123456789', type

#123456789#

Searching for enterprise groups

Enterprise groups contain lists of enterprise IDs. You can send a pear message to a group. To search for an enterprise group, type in the name of the group, e.g. EnterpriseUserAdmin. Case is not important.

Pear searches first for names, so if the group name matches one or more person's names, the results are boxed up and the group search never happens. In this case, you can search for a group by typing '~', then the group name. Wildcards are allowed. Case does not matter. When done, type '~' to initiate a group search.

Table 11 - Examples of searching for groups

Search string	Description	Matches
~PearUserAdmins~	Exact match	PearUserAdmins
~pear*admins~	Group name starts with 'pear' and ends with 'admins'	PearUserAdmins PearDataAdmins PearAdmins
~*admin*~	Group name contains 'admin'	<all from above, plus> AdminsForSomeApp AdministrativeInfoTechSystems SomeAppAdministrators

When you send or save a message with a group as a recipient, the group is expanded such that a recipient is created for each member of the group and the original group information is lost from the message.

Partial Results

The progress and number of results of address search are displayed above the 'To' search field in which the search string is typed. Let's call this the 'search status message', or 'ssm', for short. When a search is in progress, the 'ssm' will show a progress indicator and a message that says...

- looking up 'something'

...where 'something' is the same value as the search string that you've typed. When the results are received, the 'ssm' will display a count the results...

Choose one of 5 matches for 'something' then click the select button

...or, if there is only one result...

Found exactly one match for the letters 'something'.

..or, if there are no results...

no matches for 'something'

There is a limit to the number of results that can be returned from a search. There is also a limit to the time it takes to perform a search. If either of these two limits are surpassed by a search, a partial list of results will be returned, and, the 'sms' will display...

Partial Results: Choose one of 2 matches for 'something' then click the select button


...the string 'Partial Results:' means that one of the limits has been reached and you are not seeing some matches to your search. If you see this, narrow your search so as to avoid the limits. If you are doing a 'basic' search, type in more characters of the last name. If you have typed in the full last name, try an 'advanced' search for UIN or enterprise or net ID or full name.

The more specific your search, the better chance you'll find the recipient.

Verifying recipients

It is important that when using any email or webmail system, like PEAR, that you make sure that the right people, and only the right people, receive your message. It is the responsibility of the sender to verify that the recipients are correct before sending.

In PEAR, you'll see their names and enterprise IDs when you are searching for recipients. Pear gives you additional information about the recipient *after* you select it. Once selected, if the person is an employee, the person's department and campus affiliation are also displayed.

Also, all of person's netIDs can be displayed by hovering over or clicking on the 'person' icon, .

The members of a group can be seen by hovering over or clicking on the 'group' icon, .

Email addresses and notifications

Each recipient of a pear message gets an email notification that contains a link to the message in Pear. The notification goes out when the sender sends the pear message.

Email notifications are sent through conventional email. The sender of the email notification is 'PearApplication@uillinois.edu'.

Pear uses the recipients list of net IDs and their enterprise ID as email addresses for the notification email. Most recipients have at least two IDs, however, they will not receive multiple emails.

The subject line of an email notification will be:

[PEAR] Message from Name Name

where the names are the first and last name of the sender of the pear message.

The name of the sender of the pear message is the only information given out about the contents of the pear message. No other components of a pear message are revealed in the email notification. The subject, body and attachments of a pear message are not included in the email notification. Other recipients of the message are not included in the email notification.

The recipient can use the link in the email notification to go directly to the ‘Message View’ to see the PEAR message. The recipient will be required to log in if they have not yet done so.

Recipients may not receive an email notification for many reasons out of the control of PEAR. A recipient does not need the notification to view the message. All they need to do is view the ‘Inbox Messages’ page. PEAR messages are available for recipients to view the moment at which the sender sends it.

Recipients DO NOT need to wait for an email notification in order to view a pear message!

Table 12 - Reasons why recipients don't receive email notifications

Their email client or server is filtering or blacklisting the email
Their email account is locked, suspended, full, or otherwise fubar
Their patience is shorter than the transit time of the email (it comes later)
Their inbox is so full they just didn't see it
They accidentally deleted it and are lying so they don't have to "fess up"
Pear's email server isn't working, however, this is really rare
None of their net Ids are real email addresses, again, really rare
They are not using any of their enterprise email addresses

Message Notification Page

The ‘Message Notification’ page lets you create email notification messages on your computer or device for a PEAR message that has already been sent. PEAR will fill in the recipients, subject

and body of the email message based on the notification option settings and text from the 'Email Subject' and 'Email Body' fields.

When you click the 'Create Notification Email' button, PEAR will send your browser a response to open your email client program and create a new email with the recipients, subject and body that you specified in the page. In addition, a link to the pear message is appended to the body.

Message Notification

Date Sent: Tue 4/8/2014 1:16 PM CDT

From: Thomas Cervantes (jtcervan), UIC Chicago, Aits Admin

To: User User (user)

- Notification to default email addresses:
- Notification to these emails addresses:
- Do not send email notification to this recipient

Email Subject:

Email Body:

Confirm:

Pear Subject: An example pear message

Pear Body: This is an example of a typical pear message with an attachment.

Attachments: [web.xml](#)

Message Actions

Figure 35 - Message Notification Page

Item Label	Item Description
------------	------------------

Date Sent	The date and time that the message was sent.
From:	<p>The name and enterprise ID of the sender of the message. This should be you if you are viewing this message. Only the senders of messages can view this page.</p> <p>This is <i>*not*</i> the 'From:' address that will be in the email created on this page. Unlike the email notifications sent by PEAR, this email will use your computer or device's email client account as the sender, just like any other email you create.</p>
To:	<p>The recipients of the message, and their email notification options. The name and enterprise ID of the recipient is displayed along with a 'view status indicator' on line followed by three lines corresponding to the three notification options, default, override (with addresses provided) or none. In the case of 'override' the email address should be provided in the text field adjacent to the button. Multiple email addresses can be accommodated by separating them with commas. Example:</p> <p>person@email1.edu, person@email2.com, popcorn@uic.edu</p>
Email Subject	The subject of the email. Defaults to 'PEAR Notification'.
Email Body	<p>The body of the email. Defaults to 'Please view the PEAR message that I've sent to you.'</p> <p>PEAR will also append a link to the message so you don't have to.</p>
Create Notification Email	Clicking this button will send a response to your browser telling it to open up the system's email client and create an email message using the recipients, subject and body from this form. This may take several seconds depending on the speed of your system and whether or not your email software is already loaded. You should see a message appear just after the first heading page title:

	<p>Message Notification</p> <div style="border: 1px solid black; background-color: #00FF00; padding: 5px; margin: 10px 0;"> <p>The notification message will open in your email client. close this notice</p> </div> <p>For this to work, your system must have a working email client bound to the browser.</p>
Pear Subject	The subject of the message if present.
Pear Body	The body of the message if present.
Attachments	The names of all attachments to the message in a comma separated list. Each name is also a link to retrieve the attachment. If the there are no attachments, this cell will contains the phrase, 'No attachments'.

When you click the 'Create Email Notification' button, PEAR will send your browser a response with a "mailto:" URL. Instead of changing the page, your browser will open your system's email client app and create a new message. You can change it, save it, discard it, send it, whatever.

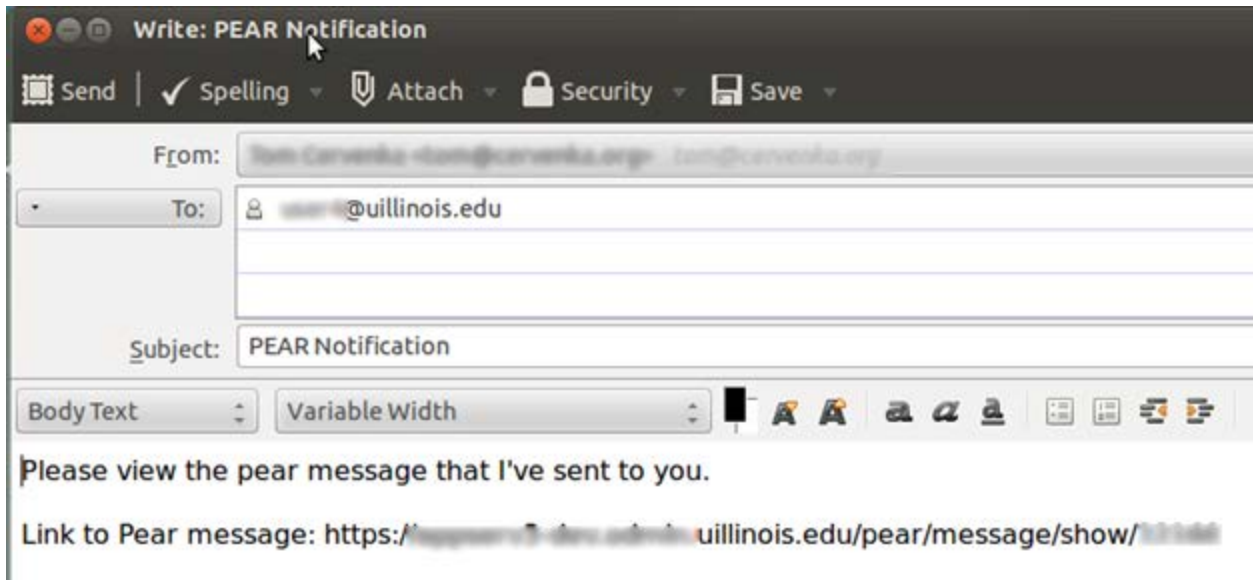


Figure 36- Email message created by computer or device

The 'Message Notification' page creates emails but does not send them. Your browser must be able to create new email messages on your system. Your system must have a working email client (i.e. you have to be able to create email messages on your computer or device) for this page to work properly.

Message Notification Actions

The 'Message View' page will have three buttons labeled 'Forward', 'Archive' or 'Restore' and 'Recall'.

Table 13 - Message Notification Action Buttons

Button Label	Button Action
Archive	Removes the message from the 'Sent' list (and the 'Inbox' list if you are also a recipient). The message will now appear in the 'Archive' list.
Restore	Returns the message to the 'Sent' list (and the 'Inbox' list if you are also a recipient). The message is removed from the 'Archive' list.
Forward	A new draft message is created and the 'Edit Message' page is displayed. The message will have no recipients. It's subject will be 'FW: ' plus the original subject. The original message will be appended to the body. If the original message contains attachments, they will be copied and attached. See the 'Edit Message' section for instructions to complete the forwarding of a message.
Recall	Removes the message from the 'Sent' list and adds it to the 'Draft' list where it can be edited. Any recipients who were sent email notifications when the message was sent will receive an email notification that the message has been recalled and they no longer have access to it.

Message Retention

Messages are kept in the database until an automated pruning process removed them, or, if they are in the 'Draft' list, they are deleted by the owner. The owner is the person who created and saved the message to the 'Draft' list. The owner is also the sender of a message. The sender

of a message can recall the message to the 'Draft' list and then delete it. Deleting a message removes all information about it and any attachments from the database, permanently.

The pruner deletes message that are at least 60 days old. All messages in all lists, even 'Archive' lists, are deleted by the pruner when then expire.

Message Pruning

Messages are retained until they become 60 days old. This is except in the case where an owner deletes a message in the 'Draft' list, in which case it and all its attachments are removed from the database immediately and without regard to the message's age.

An automated job runs each day. It deletes all messages in the database that are older than 60 days. In other words, once a message turns 60 days old, it, and its attachments, are removed from the database by the PEAR pruning job.

Messages in the 'Draft' list are also deleted when they turn 60 days.

Deleted messages cannot be restored by the system administrator.

Resources

See http://www.aitis.uillinois.edu/services/application_services/PEAR/

PEAR People

The people responsible for the design, coding and testing and documentation of PEAR Version 3.2 are listed in reverse alphabetical order by last name:

Mike Sharp, Jean Schaffner, Marla McKinney, Dan Lapp, Michelle DeYoung, Tom Cervenka, and Shirisha Balusani

Pear is also made possible thanks to the talents and efforts of these current and past contributors: Jeff Heckel, Todd Bickers, Charles Gibson, Charles Schultz, Sheila Brown, Jeremy Hawthorne, Sharon Zhu, Troye Kauffman, Susan Flannigan, Wolf Scherer, Kathi Gorrell, Keith Hays, HadiRangin, Mark Pollard, Steve Wheat and Todd Jackson, and countless other staff and clients who've supported PEAR in sometimes small but always important ways over the years.

Feedback

We value your opinion so if you have one you'd like to share, send it via PEAR to the 'PearDevelopers' group or conventional email to aitisPearFeedback@uillinois.edu.