InkuMail 1.0 – User Manual

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1 What is InkuMail?

InkuMail is an program for generating HTML/plain-text email into a pre-specified template, and sending it. The template is designed with mass newsletters in mind, with the target of improving the reading experience of the average reader for these newsletters.

The template is optimized for the Aalto University Webmail environment, and designed to be used ecspecially by guild informants. Subject topics in the template are automatically categorizable to custom categories. It is made to function well with mobile reading devices, and is also aesthetically somewhat customizable. InkuMail also includes a feature for archiving all the emails that are sent with it.

2 Why use InkuMail?

With any newsletter of this nature there exists a trade-off on how many subjects should be included. On one hand, you want your newsletter to be as diverse as possible to cater to the largest possible portion of your reading audience. On the other hand, if you include too many subjects, your message will become cluttered and people are less willing to read through it.

InkuMail was developed to address this dilemma by making the reading experience of the newsletter as easy and efficient as possible, thus making it possible to include more topics without added stress to the recipient. The reading experience is streamlined with HTML anchor links, which allow the reader to simply browse the subject headers, and access the full text of any topic that interests them with a click of a button.

Also, more and more people are using their mobile devices for reading their email. Long plain-text mails are far from a pleasant reading experience on these platforms. Depending on if they use Aalto Webmail or some sort of app to read their mail, the process might include a lot of sideways scrolling or zooming in and out to get the text to be a readable size.

The InkuMail email template is restriced in width to a size which most of the current popular mobile devices can display without a problem, both in horizontal and vertical mode. A sample view of an example newsletter made with InkuMail is seen in Figure 1

Figure 1: A sample view of a newsletter made with InkuMail.

There are often cases where the same informant needs to send newsletters in multiple different formats. For example, most guilds send their weekly newsletters both in Finnish, and in English for the international students. Most of the time, these different letters include some of the same topics.

With the modular way InkuMail articles are handled, the texts for these topics can be easily shared via any file sharing service, e.g. Dropbox. Using a common email generator allows for these different letters to be aesthetically unified aswell, even if different people are writing them.

3 How to use InkuMail?

3.1 File structure

The file structure and folder hierarchy is essential for the functionality of Inkumail. In this portion is presented which files should be included in each of the folders.

The top folder of InkuMail should include at least the following contents:

- code - folder

  This folder includes the python code required for running the program. The contents of this folder should not modified unless the modifier knows what he is doing, or they may risk resulting in the program not working afterwards.

  That said, the code is fully commented and available to be viewed or developed further by anyone who is interested.

- InkuMail.pyw file

  The InkuMail.pyw file is the file used to initiate the program. More on the use of this file is explained in section 3.2.

- InkuMail_manual.pdf

  This is the file you are currently reading.

In addition to these, the top folder may contain any number of other folders, each of which represent the different presets which may be configured in InkuMail. More on these presets in section 3.4

Inside each of the different preset folders, there exist the following three subfolders:

- active

  This folder includes the currently compiled, or the most recently sent files for the newsletter. This folder may be accessed for viewing the completed newsletter files after compiling them, and before sending them.

- archive

  The letters which are sent with InkuMail with the specified preset are stored here. Each archive entry is categorized into subfolders according to the year and intro heading of the letter.

- articles

  This folder houses all the articles which are included in this letter preset, and is the folder with which the user will have the most interaction. The format of the articles is explained in detail in section 3.5

Any additional user-created folders or subfolders will be ignored by the program, so such may created without any concern for functionality.

3.2   Running the program

InkuMail 1.0 runs with Python 3.2 or newer, which means you need to have it installed on your computer if you don't have it already. Once you have it, you should be able to run the InkuMail.pyw file in Linux or Windows simply by double clicking the icon (and choosing "Run" on any dialog box that might follow). On a Mac you might have to run it via the terminal, by entering the command `python3 InkuMail.pyw` (if using Python 3) while in the appropriate folder.

3.3   Overview of the program

The program is divided into two compartment nodes, named *Main* (Figure 2) and *Layout* (Figure 4). These can be accessed either by clicking one of the two tabs in the upper half of the view, or with a shortcut Ctrl+Tab. Active widgets within the window can be browsed using Tab.

The *Main*-node is used for configuring the sender and recipient addresses of the letter, compiling the letter, previewing it, and sending it. The *Layout*-node is used for customizing any aspect of the letter, including an optional banner image, HTML colors, custom subject categories and custom link icons. More on letter customization in section 3.6.
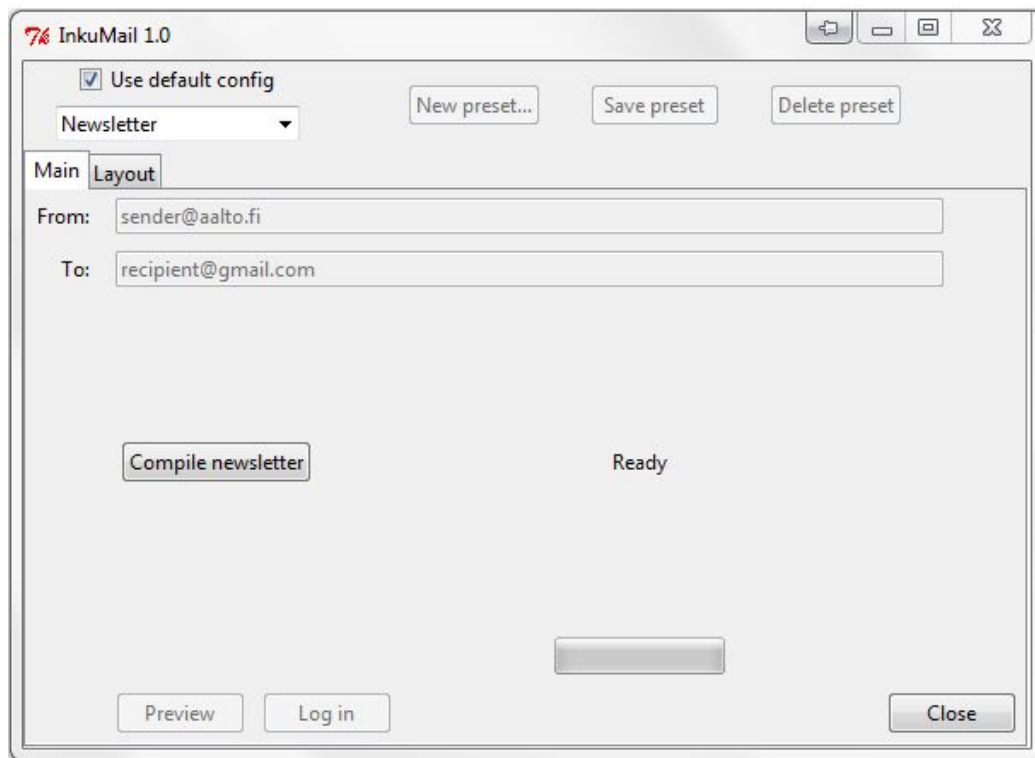
Figure 2: A sample view of the *Main* -node.

At the very top of the window there is a checkmark labeled "Use default config", which is on by default. This needs to be unchecked before any changes to the layout of the current preset can be made. Below that is the dropdown list of available presets and the buttons for handling presets, which are covered in the next section.

3.4   Presets

A *preset* in InkuMail is a set of layout customizations, which have been saved under a name. The user is able to create, delete and switch between different presets.

The purpose of the presets is to enable sending multiple different kinds of newsletters using the same instance of InkuMail. One might, for example, have a preset called "Finnish" and another called "International", meant for Finnish and international newsletters, respectively. These presets will have separate folders for their articles, but any shared articles are easy to copy

from one folder to the other. They may also have either similar or completely different customization options.

When a preset is created using the *New Preset...*-button, InkuMail saves the set of current layout and address options under a name provided by the user. InkuMail also creates a new preset folder in the top directory with the appropriate name and with all the necessary subfolders.

The *Save preset*-button saves the set of current layout and address options under the currently selected preset, overwriting any options that were saved there previously.

The *Delete preset*-button deletes the currently selected preset from the list of available presets. It does not, however, delete the preset folder or any of the subfolders related to that preset, for safety reasons. If those need to be deleted, it has to be done by hand.

3.5 Articles

Articles are what hold the actual content of the letter. They are held in the `articles`-subfolder of any given preset, as individual .txt-files. Any further subfolders or files of another format in the `articles`-folder will be ignored by InkuMail.

An example of a couple of article files can be seen in Figure 3. A single article-file is comprised of the following three parts:

- A section name. The first non-whitespace line of the .txt-file will be interpreted by InkuMail to be the name of the category that the article is supposed to be included in. This needs to match one of the section names on the *Layout*-page of that preset, otherwise that article will be ignored when compiling the letter. The section name in the article file is case-insensitive.

  In addition to the custom categories specified on the *Layout* -panel, there exist two in-built section names `INTRO` and `OUTRO` (case-insensitive), which may be used as category names in the .txt-files, although they aren't visible in the category list on the *Layout* -panel.

  The article with section name `INTRO` will be inserted at the very beginning of the letter, before the table of contents. The title of the `INTRO` will be considered as the title of the whole letter. It will be used as the subject heading of the email and as the foldername under which the letter is archived.

  The article with section name `OUTRO` will be inserted at the very end after the very last article. The title of the `OUTRO` will no be used or displayed anywhere, but some kind of title still needs to exist in the .txt-file for InkuMail to read the file at all.

- A title for the article. The very next non-whitespace line after the section name will be interpreted by InkuMail to be the title for that article.

- The article text body. All the remaining content after the title in the .txt-file will be interpreted by InkuMail to be part of the text body for the article.

If any of these parts is missing or empty, that article will be ignored when compiling the letter.

The article file may contain normal html-formatting within the title and text body, such as text size, coloring and images. All newline-characters in the bodytext are automatically converted into linebreaks in the html-file, so paragraph division doesn't need to be done using <p>-tags, but can be done directly in the .txt-file as plain text. All URL-links are also formatted automatically in the compilation process, so they don't need any <a> -tags. The one exception to this are URLs-addresses inside <img>-tags, which will be left alone by InkuMail.

In general, all html-tags and any other text surrounded by <>-tags will be removed when generating the plain-text version of the letter. There are, however, a few exceptions:

- `<b>` and `</b>` -tags are converted to "*"

- `<i>` and `</i>` -tags are converted to "/"

- `<u>` and `</u>` -tags are converted to "_"

- `<li>` -tags are converted to "- "

There is also some function to the naming of the article files. The category order is determined by the settings in each preset's layout, but the order of articles within each category is determined by the alphabetical order of the .txt -files containing those articles.

NOTE: When detecting URL-addresses, InkuMail will ignore any trailing punctuation `.,:!?` and trailing closing parentheses `)`. This is because often people will enclose their URL-addresses in parentheses like this: (`www.ayy.fi`) or with punctuation like this: `The link is www.ayy.fi.`

So in these kinds of cases, InkuMail will correctly change the URL into a working link. However, some URL addresses might legitimately end with a closing parentesis, in which case InkuMail will produce an incorrect link with that parenthesis missing.

The solution to this is to replace the trailing `)` with its url-encoding `%29`, such that for example the address
`www.wikipedia.org/wiki/Wave_(disambiguation)`
becomes
`www.wikipedia.org/wiki/Wave_(disambiguation%29` .

InkuMail is designed to be used with UTF-8 encoded text. If it is given text encoded with something else, it will try to guess the encoding of the file

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Figure 3: Two samples of valid article files.

and convert the file into UTF-8. If it is unsuccessful, it will still include the article but the quality of the output can't be guaranteed. An error message will be printed to the terminal, but InkuMail needs to be run in the terminal to see it. So it is advised to use UTF-8 as your text editor's default setting to avoid any problems.

3.6 Customization

This section of the manual goes through the purpose and use of each of the parts on the *Layout* -panel. Below in Figure 4 is the view of the panel. Before any of the settings may be changed, the "Use default config" -checkmark needs to be unchecked.

Note that any changes made in this panel will only be temporary, until InkuMail is closed or another preset is selected. To make the changes permanent, remember to press the "Save preset" -button.
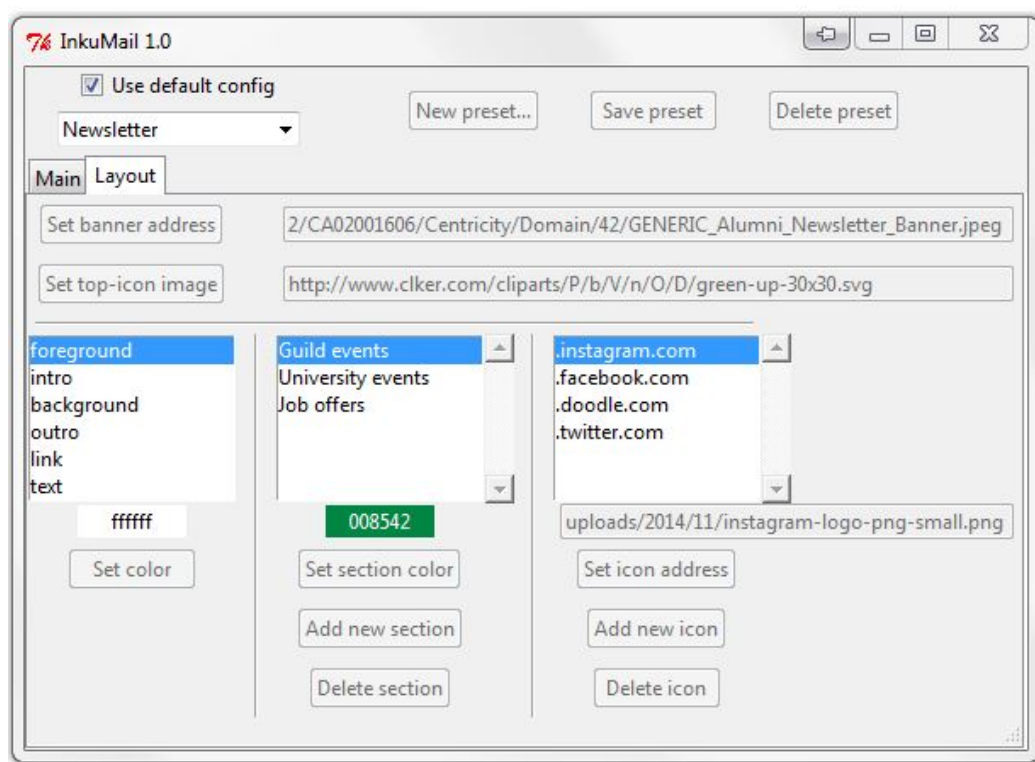
Figure 4: A sample view of the *Layout* -node.

3.6.1   Banner image

Here you can insert a URL to an image, which will then be displayed at the very top of the letter. Regardless of the dimensions of the original image, it will be scaled such that the width is 526 pixels. After entering the URL for the image, press the "Set banner address" -button to register the change. If no banner image is wanted, this field is to be left empty.

3.6.2   Top-icon

At the end of each article, there exists an achor link in the template that leads back to the table of contents. This link may be given an icon by entering the URL for the icon image in this field. After entering the URL, press the "Set top-icon" button to register the change. If no image address is provided, the link will simply read "Top".

3.6.3   HTML colors

The colors of various elements of the HTML-letter may be fully customized. These elements include:

- Background – the color outside the column of text

- Foreground – the color inside the template column, behind the text

- Text – the color of the text in the letter

- Link – the color of the links. This applies to both anchor and URL-links

- Intro – the color of the title of the intro text

- Outro – the color of the divider line separating the last article and the outro text

While InkuMail does offer the option of fully customizing these colors, discretion is advised for any individuals planning on aesthetical crimes against humanity. Please keep your newsletters easy on the eyes!

3.6.4   Sections

Each preset may have any number of sections (although 0 sections will result in there being no articles apart from a possible intro and outro). The names of the sections will be case-insensitively matched with the section names in

the article .txt-files, but will appear in the table of contents of the letter in the exact form that they are written on the *Layout* -panel.

Sections may be added, deleted, reordered and their color may be changed. Reordering the sections may be done by dragging them up and down with the left mouse-button held down, or with hotkeys Shift+Up and Shift+Down.

The color of each section will appear both in the table of contents, and above each article contained in that section. The color the text which spells out the section name in the table of contents will be either black or white, depending on if the color behind the text is lighter or darker than 50% gray. Darker colors will have white text on top of them, and vice versa.

3.6.5 Link icons

InkuMail includes a feature for replacing all URL-addresses with certain identifiers to be replaced with a hyperlinked custom image icon. The purpose of these is to allow for a more streamlined look for text with a lot of hyperlinks, and also enables making the links easier to click on touchscreens.

The user is able to have an arbitrary amount of link patterns, each of which must be associated with a URL to a corresponding image icon.

For example, let's presume ".aalto.fi" has been set as a string pattern to be matched. This means that after InkuMail has changed all the URL-addresses in the text body into hyperlinks, it will go through them again, searching for the string pattern ".aalto.fi". If it finds a link with that pattern in it, it will replace the text link with the corresponding icon image.

When using link icons for detecting certain domains in URLs such as Facebook, Instagram, AYY or Aalto, it is recommended to use a leading "." in the string patterns, like in the previous example. Otherwise email addresses (such as example@aalto.fi) might also accidentally get replaced with icons.

It is also worthy of note that if the recipient has images disabled in their email service (as they often are by default), then the link won't show at all. So some discretion is in order when using link icons.

3.6.6 Sender and Recipient addresses

Unlike all the previous customization options, the place for altering the sender and recipient addresses of the letter are located on the *Main* -panel.

At the moment, the sender address needs to be a valid @aalto.fi -address. Multiple recipient addresses may be used, separated by ',' or ';' .

3.7 Sending with InkuMail

Once the customizations have been set and articles have been placed in their .txt -files, the final letter may be generated using the "Compile" -button on the *Main* -panel. This will cause InkuMail to fetch the articles and insert them into the HTML-template with the selected customization options. The length of this process depends on the length of the letter, and it may be monitored from the progressbar at the bottom of the panel.

The compilation process produces four files, which are then saved in the "active"-subfolder. These files are:

- `email-html-version.html` – This file represents the HTML version of the email, and is the one that is presented when previewing the mail.

- `plain_text_version.txt` – This file represents the plain-text version of the mail.

- `MIME_version.eml` – This MIME-file (Multi-purpose Internet Mail Extension) is the file that is actually sent. It contains both the HTML and plain-text versions, encoded to an eml-file which most email services can recognize and read.

- `web_version.html` – This is a slightly altered version of the email HTML version, where the title and intro text have been removed and the width isn't restricted. It may be used, for example, for posting the letter online on a website.

After the letter has been has been compiled, it may be previewed with the "Preview" -button, which will open a view of the letter to a web browser. The letter customizations and articles may then be tweaked it necessary, after which the letter needs to be compiled again, until the compilation looks ready. The plain-text version of the letter may be previewed by going into the "active" -subfolder and opening it in a text viewer/editor.

Sending the letter happens through the "Login" -button. A dialog will appear (see Figure 5) requesting the Aalto Web Login username and password, both of which need to match the account with the email address configured as the sender. Neither of these will be saved anywhere in the system. If the username and password are correct, the letter will be sent by pressing "Send". Once the mail has been sent successfully, all the contents in the active folder will be copied to a new folder that is created in the archive-subfolder.
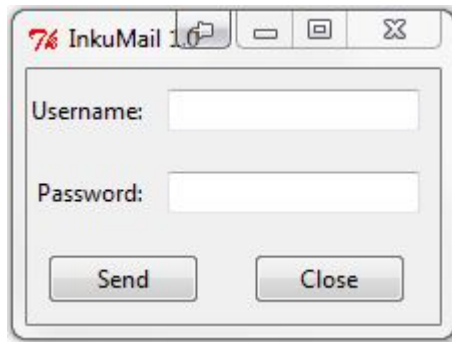
Figure 5: This is the screen that pops up when "Login" is pressed.

4 Possible future improvements

InkuMail follows an open-source principle, and was created with the intention that knowledgable users may research the Python code available to implement their own improvements. There are still many areas where InkuMail has room to grow, some of which are covered below and may be addressed in future installations offered by the original creators:

- Currently in InkuMail 1.0, the only server available for use is the "mail.aalto.fi" server with port 587. More options may come available in future versions.

- Also it is worthy of note that the mailing lists at list.ayy.fi for some reason fail to add the corresponding list tags to the beginning of the letter subject when using InkuMail. In future versions of InkuMail, there will probably be an option for adding these tags to the subject line before sending. But currently this is only implemented for a few Inkubio mailing lists which are hardcoded into the .py files.

- It might be more user-friendly, if the articles were handled via a user-interface inside InkuMail, instead of being external .txt-files. Future options for this may be looked into.