

Attachment Converter Workshop, iPres 2023

Nishchay Karle, Obi Obetta, Matt Teichman*

September 1, 2023

Welcome to the Attachment Converter Workshop at iPres 2023! In this session, we'll walk you through our new open source application, Attachment Converter, which batch-converts all attachments in an email mailbox to preservation formats.

There are two ways to participate in this workshop. If you're feeling tech-savvy, we would encourage you to install the required software in advance of the workshop and type along with us as we walk through some illustrative examples of the email format. If you aren't feeling tech-savvy, you should be able to just watch and follow along. Either way, we are really looking forward to engaging with your questions and comments as we show you how to use our new tool. If you aren't sure how tech-savvy you're feeling, the question to ask is whether you're comfortable opening the Terminal application on your computer and working at the command prompt.

In the next section, we'll go through how to install the software you'll need if you want to participate in the workshop by typing along on your own machines. If you're planning to simply attend, watch, listen, and ask questions, please feel free to skip the Advance Preparation section—you won't need to set anything up on your computer in advance of the workshop.

Advance Preparation

If you're planning to type along with us on your computer during the workshop, then this is the section for you!

The software you'll need to install for the workshop is slightly different, depending on whether you're working in Windows or macOS. Either way, you will need to have privileges on your machine that allow you to install software, so if you're attending this conference from a work machine, that might be something worth looking into with your system administrator.

*teichman@uchicago.edu

macOS

If you're on a Mac, you'll need to open a Terminal, then install an open-source package manager, the `git` version control system, the GNU Make build tool, and the `libpst` package. We'll go through those steps next, but if you're on Windows, please skip to the section entitled Windows (Debian WSL).

Remember: to follow these instructions, you'll need to have the ability to install software on your machine, so if you don't, you may want to reach out to your system administrator to see whether they can grant you the right privileges.

Install Homebrew

There are various options for open source package managers on macOS, but we recommend using Homebrew. If you've never used it before, you'll first need to install XCode Command Line Tools, which you can do by running this command in your Terminal:

```
$ xcode-select --install
```

Then you can install Homebrew by following the instructions here:

```
https://brew.sh/
```

Or, equivalently, by typing this command:

```
$ /bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
```

Install Version Control Software

Now that you've installed Homebrew, the next step is to install Git, which is what we will use to download the source code for the project and compile it into an executable that you can run. To do so, run this command:

```
$ brew install git
```

Install Libpst

The last thing we'll ask you to install is Libpst, the software we will use to convert from Outlook `.pst` to MBOX format during the workshop. To install that, run:

```
$ brew install libpst
```

Once you’ve reached this point on your Mac, you can skip the next section—which is our Windows-specific setup instructions—and proceed straight to the section called Compile Attachment Converter.

Windows (Debian WSL)

Attachment Converter is a UNIX application, which means that in order to run it on Windows, you’ll need to install the Windows Subsystem for Linux. We chose Debian as a Linux distribution for this purpose, because Debian has full out-of-the-box support for OCaml, the programming language that Attachment Converter was written in.

So first, you’ll install the Debian WSL. Once that’s set up, you’ll open up a Debian WSL Terminal and do everything else from inside that Terminal, including installing a few more utilities, as well as running Attachment Converter itself.

Note that you need to have privileges to install software on your machine to follow these instructions. If you don’t, check with your system administrator about how to get them.

Set up the Debian WSL

First, open up the Microsoft Store application using your Start Menu. When it opens, there should be a search box at the top of the window that says something like: “Search apps, games, movies and more”. Type “Debian” in the search box and hit Enter. A list of search results will then come up, and the one you want is called Debian. Double-click on that, and click through the installation buttons, prompts, etc. that come up. During the installation process, you will be asked to choose a username and password for your Linux subsystem. Make sure to write those credentials down and keep them available for reference! You may need to reboot your Windows machine after you finish.

Once you’ve rebooted and logged back in, you should be able to open a Debian WSL Terminal by running an application called “Debian” from your Start Menu. It will ask you to log in using the username and password you chose during the installation process.

Install Version Control Software

Now that your UNIX environment is set up, the next step is to install version control software, which in this case is Git. To do that, run this command:

```
$ sudo apt install git
```

This is the utility we will use to get the latest version of the source code for Attachment Converter, later in these setup instructions.

Install GNU Make

The software we're going to use to compile Attachment Converter is called Make. To install it, run this command:

```
$ sudo apt install make
```

Install Libpst

Finally, we're going to ask you to install Libpst, which is a freely available utility for converting Outlook `.pst` files to MBOX format—the email mailbox format that Attachment Converter uses.

Once you've reached this point on your Windows machine, you're ready to go to the next section, in which we show you how to compile Attachment Converter into an executable that you can run.

Compile Attachment Converter

Now that you're set up with the basic software you need, whether you're on Windows or a Mac, the next step is to download the source code for Attachment Converter, compile it into an executable you can run, and put the executable in a location where your Terminal can see it.

Compiling

The utility we're going to use to compile Attachment Converter is called Make. If you're on Windows, we told you to install that in the previous section. If you're on a Mac, then you already have Make installed on your computer.

Attachment Converter has a lot of moving parts, which means that installing it involves installing some more standard utilities and copying a bunch of different files to a bunch of different places in your home directory. What Make will do is