

# EMET Help Documentation

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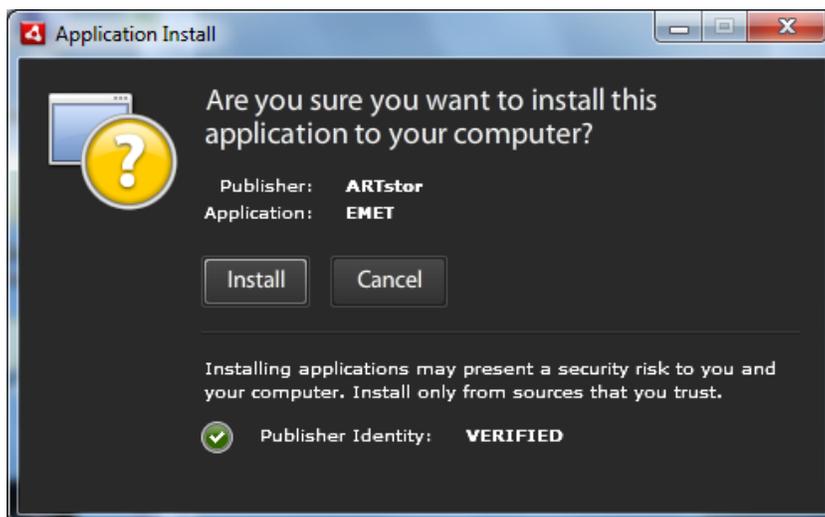
## Description and System Requirements

EMET is a tool designed to extract metadata embedded in JPEG and TIFF files. EMET is compatible with Mac OS 10.4+, as well as Windows XP, Windows Vista, and Windows 7. EMET also requires Adobe Air 2.0, which can be downloaded free of charge at the following url: <http://get.adobe.com/air/>. For optimal performance the following are recommended:

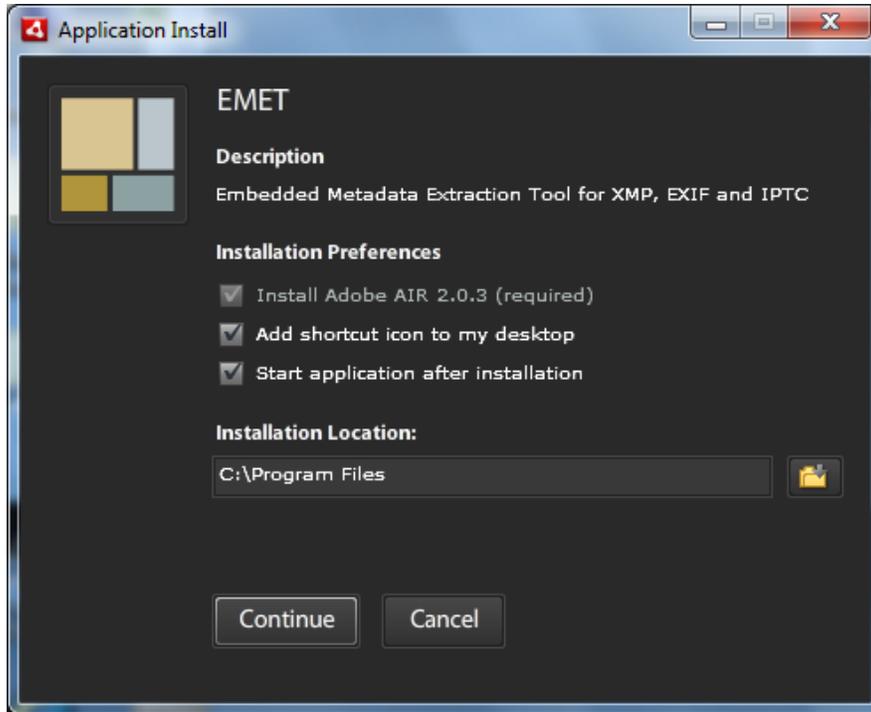
- Mac OS - Multicore Intel processor and 1GB of RAM
- Windows - Intel® Pentium® 4 or AMD Athlon® 64 processor and 1 GB of RAM

## Installing EMET

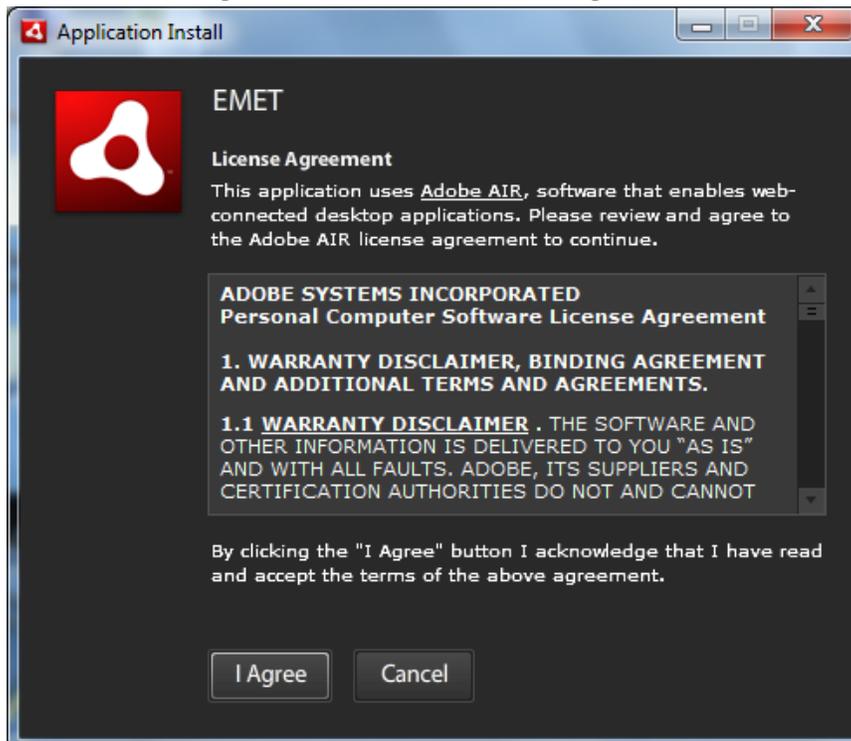
1. Before you install EMET, first install Adobe Air 2.0. This is a free software download available at: <http://get.adobe.com/air/>.
2. Download the EMET installation file from the following link: <http://www.artstor.org/global/g-html/download-emet-public.html>.
3. Before completing the download, you will be required to fill out a short webform questionnaire.
4. Once the installation files have been downloaded, open the file package and proceed through the installation steps.
5. Click “Install” in the window which opens



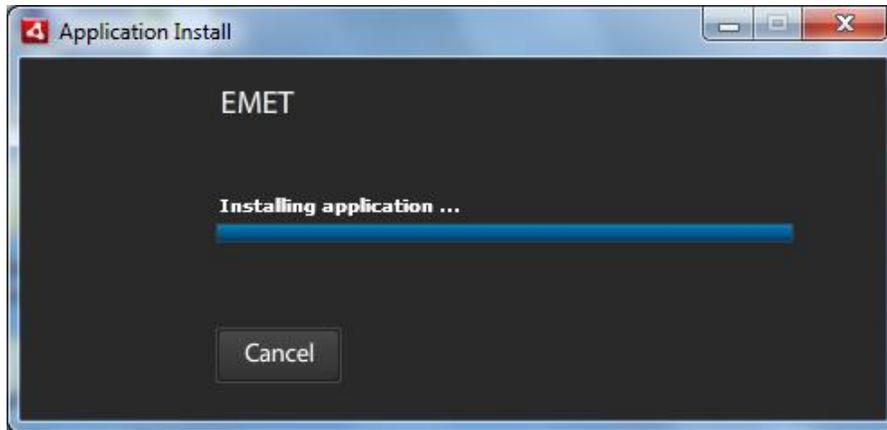
- Next, click “Continue”



- In the License Agreement window, click “I Agree”

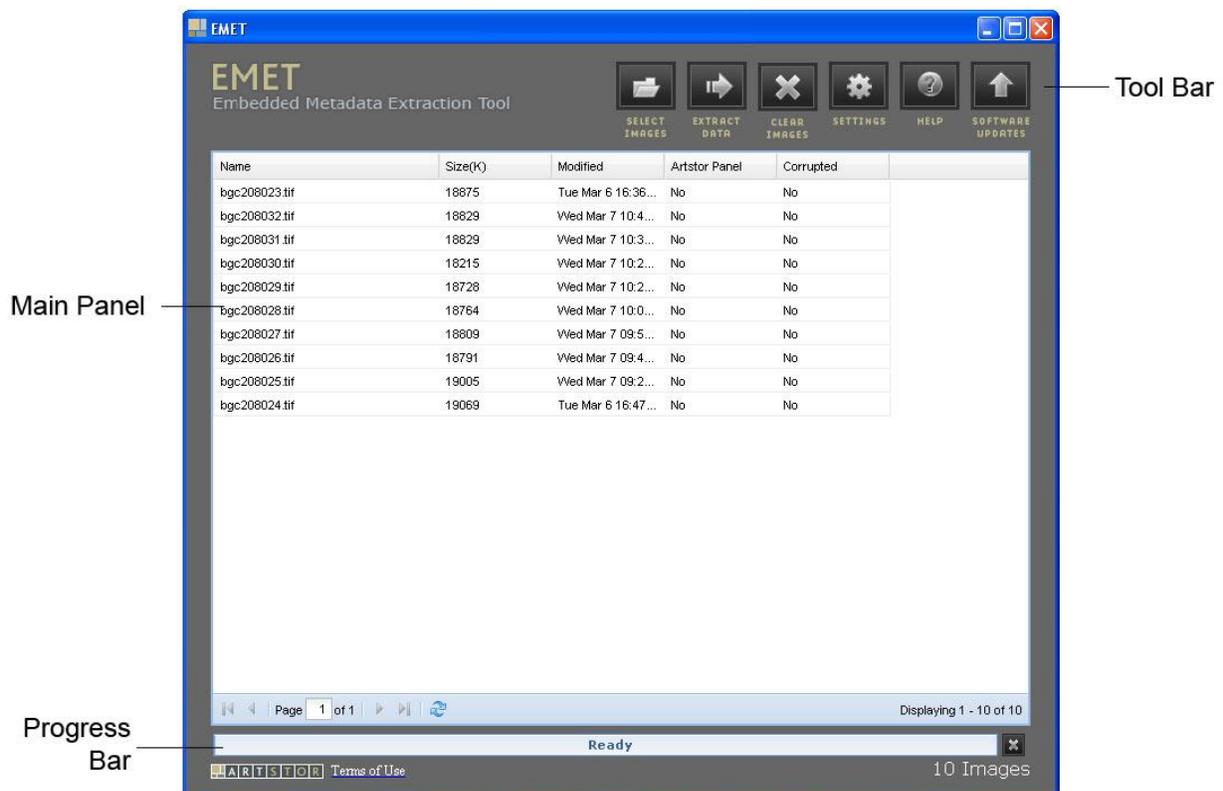


8. Finally, wait for the installation to completely install.



9. Once EMET is fully installed, the program will be available in your computer's Programs or Applications directory as well as through a shortcut icon on your desktop.

## Screenshot of EMET Window



## Checking for Corruption and Extracting Data

1. Launch EMET.
2. Loading Images
  - a. There are two ways to load images into EMET to prepare for data extraction.
    - i. The first method is to drag and drop files directly from your desktop or file directory window into the Main Panel.
    - ii. You may also go to the Tool Bar icons at the upper-right corner of the EMET window and click the “Select Images” icon. Your computer’s directory will open. Use it to browse to the location of your image files. EMET can import JPEG and TIFF file formats. Select individual files to upload or hold the CTRL (or ⌘) key to select multiple files. Click **Open** to upload the selected files. The original file(s) will remain on your computer and EMET will extract the data.
  - b. While performing the metadata import, EMET will check for corruption and the presence of the ARTstor Panel as it loads the files. *(NB: Because of issues with Windows, users will not be able to use the “Select Images” icon for more than 5,000 images. When selecting more than 5,000 images, users can select to drag and drop the files, or return to the same directly and select the images in batches.)*
3. Managing Main Panel Display
  - a. EMET displays twenty-five images per page on a list of images. To browse from one page to the next, click the arrow buttons at the lower-left corner of the Main Panel.
  - b. To sort the list of files, click the header of the data column you wish to sort at the top of the Main Panel.
4. Extracting Data
  - a. To extract the data click on the “Extract Data” icon. EMET will extract all data from all images that have been loaded into the Main Panel.
  - b. A dialog box will appear noting that the ARTstor Panel is not present for some or all of the images, to proceed with the extraction, press the “Continue All button”, or cancel the extraction by pressing the “No” button. *(For more information on the ARTstor Panel, see “Installing and Using the ARTstor Panel below.)*
  - c. EMET will automatically launch Microsoft Excel (or another spreadsheet or text software designated to open .csv files) and open the error report and the extracted data. By default, these files are saved to the My Documents directory on a PC and in the Documents directory on a Mac.
5. EMET Data Files

- a. EMET creates two spreadsheets of data when performing the data extraction. One is an error report, the other is the extracted data.
  - i. **Error Report:** By default, this file is named EMET\_Error\_Report\_[date and time stamp]. It lists any corrupt files and provides information regarding the absence or presence of the ARTstor Panel (*For more information see “Installing and Using the ARTstor Panel” below.*)
  - ii. **Extracted Data:** By default, this file is named EMET\_Extraction[date and time stamp]. It contains the extracted data. The first four columns of the extracted data are Name, Size(k), Path, and Corrupted. Any remaining data fields are extracted in alphabetical order (lower case first and then upper case) and are grouped by the first letter of the xmp namespace. (*For more information about the data that is extracted, see the FAQ under “What data does EMET extract?”*)

## Customizing EMET

1. Changing the prefix of the filename of the error report or extraction file
  - a. By default EMET saves names the two data files:
    - i. EMET\_Error\_Report\_[date and time stamp]
    - ii. EMET\_Extraction\_[date and time stamp]
  - b. Click on the Settings icon in the Tool bar and enter the desired prefix in the Extract Prefix and Error Report text boxes. (*NB: The prefixes for the extraction and the error report cannot be identical. If they are they will overwrite one another.*)
  - c. EMET will remember these settings the next time you launch the application.
2. Disabling the Error Report
  - a. If you are not using the ARTstor Panel and would like to disable the error report, you may do so by clicking on the Settings icon in the Tool bar and turning off the Generate Error Report check box.
  - b. EMET will not remember these settings the next time you launch the application, so if you would like to disable error reporting, you will have to change this setting every time you start the application. (See Release Notes below.)
3. Saving extracted data to a custom location
  - a. By default, EMET saves the two Excel files to My Documents on a PC and Documents on a Mac).
  - b. Change the default location by clicking on the Settings icon in the Tool Bar and choosing the Change Location button at the bottom of the dialog box. Then press Save.
  - c. EMET will remember this location the next time you launch the application.

## Installing and Using the ARTstor XMP Panel

1. A link to the installers for the ARTstor XMP Panel for use with Adobe CS3 and CS4 and above will be available after downloading the EMET application.
2. Clicking on the link ([http://www.artstor.org/pubsiteforms/artstor\\_xmp\\_panel\\_install.zip](http://www.artstor.org/pubsiteforms/artstor_xmp_panel_install.zip)) will download a compressed file containing the ARTstor XMP Panel installers in directories labeled by operating system.
3. Select the appropriate directory for your operating system and launch the installer for the version of Photoshop you are running. (*NB: For CS3 there is one installer that will work for both Photoshop and Bridge. For CS4 and above, the installations must be run separately.*)
4. After installation, the panel may be used to enter data in Adobe Photoshop CS3, CS4, and CS5 and Bridge. To locate the panel in Adobe Photoshop, open an image and go to File>FileInfo. The panel will be labeled ARTstor and will appear as one of the tabs in the pop up window. (*For more information about how to use the panel in Photoshop, please see the Photoshop support pages: <http://www.adobe.com/support/photoshop/>.*)
5. In Bridge, you can access the panel in the Metadata window. (*For more information about how to enter metadata in Bridge, please see the Adobe Bridge support pages: <http://www.adobe.com/support/bridge/?promoid=GWEL0>.*)
6. If data has been entered in any field in the ARTstor Panel, EMET will display “Yes” in the Main Panel when the image is loaded into EMET. This will allow a user to see whether or not the ARTstor panel has been used for a given image. Further verification occurs upon export. If no value appears in either the Title or Photographer fields, or the ARTstor panel is not present, the image will appear in the Error Report, noting the missing panel and the missing fields.

## Frequently Asked Questions

### What is EMET?

EMET is a stand-alone, cross-platform tool for use with TIFF and JPEG files. It checks for corrupt files, extracts custom XMP data, and extracts fields associated with EXIF, IPTC, Photoshop, TIFF, and Dublin Core, among others. Used in conjunction with ARTstor’s custom Photoshop panel, the tool may also be used for very simple metadata verification. (See “What is the ARTstor custom Photoshop panel?”) EMET runs on the Adobe Air platform. It was created by ARTstor with funding from the Federal Government’s National Digital Information Infrastructure Preservation Program (NDIIPP).

### **How does EMET check file corruption?**

EMET checks to see if the filetype in the header matches the extension and looks for any inconsistencies in the bit stream.

### **What data does EMET extract?**

The first four columns of the extracted data are Name, Size(k), Path, and Corrupted. Any remaining data fields are extracted in alphabetical order (lower case first and then upper case) and are grouped by the first letter of the xmp namespace. Header values are constructed by combining the namespace and the tag for each discrete data field. In instances where a complex bag array is extracted, the hierarchy is replicated in the header of the extracted data.

With the exception of a few technical fields, EMET extracts data in its raw format and will automatically open two spreadsheets in MS Excel in .csv format (or whatever application has been designated to open .csv files). This means that the values for some technical fields, such as exif:ColorSpace will show up as alphanumeric characters rather than displaying the translated form of the value. For the exif:ColorSpace field, for example, the value extracted is 1 and it stands for “RGB.” The only other value available for this field is 2, which stands for “Unidentified.”

There are some instances where EMET works not only as an extractor of raw data but as a translator for data that has been determined to be useful for the purpose of managing image files. Translation has been enabled for the following fields:

- Exif:ColorSpace
- Photoshop:ColorMode
- ICC Profile

### **Is there a limit to the number of images that can be loaded in to EMET for extraction?**

There is no limit to the number of files and file size of the images you load into EMET, however the more files you select, the longer the loading and extraction process will take. Furthermore, if your computer does not have the recommended RAM and processor speed (Mac OS - Multicore Intel processor and 1GB of RAM; and Windows - Intel® Pentium® 4 or AMD Athlon® 64 processor and 1 GB of RAM), you may have trouble running EMET with large files.

### **Where does EMET save the extracted data?**

Upon extraction, EMET will automatically launch MS Excel (or whatever spreadsheet or text software has been designated to open .csv files) and open the error report and the extracted data. By default, these files are saved to the MyDocuments directory on a PC and in the Documents directory on a Mac.

### **Why are some of the technical data showing up as date fields in the extracted data?**

Some fields, such as exif:DigitalZoomRatio and exif:ExposureTime will be rendered as 10-Jun, for example, rather than the original ratio 6/10. This is a function of MS Excel, which renders certain data as dates automatically. This feature cannot be turned off in Excel, but if the data is viewed in another application such as FileMaker or MS Access the data can be viewed in its original format. Please note that if the .csv file is saved as an Excel file, it will retain the rendered date values.

### **Why isn't some data that I know is embedded in my file being extracted by EMET?**

EMET works best with flat xmp data and should extract any xmp namespace. There are, however, known issues when data has been embedded using complex bag arrays. (See Release Notes below.) If EMET does not extract all data, you may want to try EXIF Tool to see if the data will appear there: <http://www.sno.phy.queensu.ca/~phil/exiftool/>.

### **Can EMET extract data that has been embedded using the PLUS panel?**

The PLUS panel uses many complex bag arrays to structure its data, so there are quite a few fields that may not export as expected. For users seeking to extract PLUS data from their images according to PLUS standards, ARTstor recommends using the PLUS panel for Adobe Bridge. This tool may be downloaded here: <http://www.iptc.org/cms/site/single.html?channel=CH0099&document=CMS1279131209658>.

### **How can the data extracted from EMET be used?**

The data can be used in a variety of ways. Descriptive data can be isolated and ingested into an external database for further cataloging and clean up. Technical metadata may be also be ingested into external systems that do not have the capacity to interpret embedded data. Please note, however, that EMET does not translate the data, but merely extracts it. This means that some of the technical data will come up as alphanumeric codes that require translation to be interpreted. (See the FAQ "What data do EMET extract?") For more information about embedded metadata and how it can be used, see the wiki of the Visual Resource Associations' Embedded Metadata Working Group: <http://metadatadeluxe.pbworks.com/>, as well as Adobe's XMP site: <http://www.adobe.com/products/xmp/>.

### **What happens if I don't have Excel installed on my computer and I use EMET?**

If you do not have MS Excel installed on your computer, then the files will be opened in whatever spreadsheet or text software has been designated to open .csv files and will be saved into the My Documents (for a PC) or Documents (Mac) folder, or in the directory specified in the Settings.

### **What is the ARTstor custom Photoshop panel?**

The ARTstor Custom Panel includes the following bare minimum set of fields for describing cultural heritage works.

- Work Creator
- Work Title
- Work View Description
- Work Description
- Work Date
- Work Repository
- Work Repository Accession Number
- Work City
- Work Country
- Photographer
- PLUS Creator Number
- PLUS License Number

The panel can be used to embed data in files with either with CS3, CS4 and CS5. This panel is not intended to represent a standard for ARTstor submissions, and while it maps very loosely to such standards as VRA Core it was created primarily to demonstrate the metadata validation capabilities of EMET. (For more information, see “Installing and Using the ARTstor Panel”.)

### **How do I install the ARTstor Photoshop XMP Panel?**

A link to the installers for the ARTstor XMP Panel for use with Adobe CS3 and CS4 and above will be available for download after downloading the EMET application at the following url ([http://www.artstor.org/pubsiteforms/artstor\\_xmp\\_panel\\_install.zip](http://www.artstor.org/pubsiteforms/artstor_xmp_panel_install.zip)) This panel can be used with Adobe Bridge and Photoshop CS3, 4, and 5 on a PC or a Mac and was developed primarily to test data verification with EMET. (For more information, see “Installing and Using the ARTstor XMP Panel”.)

## **Release Notes**

### **Version 2.31.0 – September 2010**

#### **New Features / Changes:**

- Personal setting customization
- Image selection
- Data extract and report

### Known issues

1. EMET-81 PC (Vista 32 bit, 64 bit, and Windows 7) cannot load the image files more than 5k; but it works fine in Mac

NOTE: The issue is based on a windows system call limitation. The function `GetOpenFileName` [<http://msdn.microsoft.com/en-us/library/ms646927%28VS.85%29.aspx>] can only support 32K of data. The error being thrown: "Sorry. Select fewer files" is a windows error.

This error only comes up when the user selects "Select Images" > Go to folder and make a selection with more than 32K of filenames (including spaces & quotes). There exist the following workarounds:

1. Use Drag & Drop for selections of that size
  2. Use browse & select multiple times ensuring that each selection is under 32K of file names. (Directory only counts as one name).
2. EMET extracts the root value of data in a bag array and concatenates values and separates them with a comma. [e.g. Creator 1 (artwork),Creator 2 (artwork),Creator 3 (artwork),Creator 4 (artwork)] Users may choose to separate the concatenated fields after the data has been extracted using Excel or some other spreadsheet program.
3. EMET does not retain the setting to disable reporting when the application is shut down and relaunched.