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OVERVIEW

The LONI de-identification Debablet is an user friendly and convenient application for removing patient-identifying information (e.g., patient name and id) from medical image files. Removing patient-identifying information is useful for sharing image files with collaborators in a HIPAA compliant manner. The name “Denablet” is derived from the underlying execution engine (the Debabler), which is used to create and modify the de-identifications. The LONI De-identification Debablet can be run as a stand-alone application or from the command line.

Although we attempt to remove all patient-identifying information, we cannot guarantee that the resultant files are completely void of all such information. Always inspect file metadata after de-identification to confirm that no patient-identifying information remains.

- Supported platforms: Windows, Linux, Unix (reportedly does not work on some Mac OS X platforms)
- Requires Java 1.4.2 or higher
- De-identifies DICOM, ANALYZE, GE, MINC, ECAT, and HRRT Interfile file formats that contain MR or PET image data.

STARTING THE LONI DE-IDENTIFICATION DEBABLET

0. On Windows systems, start the Debablet by double-clicking the `loniDeidentifyDenablet.jar` file.
 - . On all systems, the Debablet can be started by typing the command line: `java -jar loniDeidentifyDenablet.jar`
 - . Command line options for running the de-identifications without the GUI can be found by typing: `java -jar loniDeidentifyDenablet.jar -help`

SELECTING THE FILES TO DE-IDENTIFY

0. Click the “Select” button in the upper-right hand corner of the Debablet. A file system dialog will appear.
0. Choose the files to de-identify by navigating the file system dialog:
 - . Highlighting a file with the mouse and clicking the “Add Files” button will select the file. Multiple files can be highlighted by holding down the Ctrl-key.
 - . Double-clicking a file will also select the file.
 - . Dragging a file (holding the left mouse button down on a file and moving the mouse) into the “Selected Input Files:” box (at the top of the dialog) will also select the file.
 - . Selecting a directory will select all files in the directory. If the option “Include subdirectories” is checked, all files in all the subdirectories of the directory will be selected.
 - . Highlighting a file with the mouse in the “Selected Input Files:” box (at the top of the dialog) and clicking the “Remove Files” button will de-select the file. Multiple files can be highlighted by holding down the Ctrl-key.

- . Clicking the “Remove All Files” button will de-select all files in the “Selected Input Files:” box.
3. Accept or cancel the selected files
 - . Clicking the “OK” button will select all the files in the “Selected Input Files:” box. This will replace any previously selected files (if any).
 - . Clicking the “Cancel” button will cancel the selection; any previously selected files will still be selected.

SCANNING THE INPUT FILES

1. The “Input Files” box of the Debablet will begin to report results as the Debablet scans the selected input files.
 - . The scan can be canceled at any time by clicking the “Stop” button in the upper-right hand corner.
 - . When the scan is complete, the “Stop” button will reset itself back to “Select” (at which time the selected input files can be changed).
2. The total number of input files is displayed in the upper-left corner of the Input Files” box. Underneath is a list that divides the input files into different types.
3. Clicking a “+” button (to the left of each file type in the list) will launch a dialog containing all the files that belong to that type.
4. A file type (e.g., “DICOM”) displayed in green indicates that the files of this type can be de-identified by the Debablet.
5. A file type displayed in red indicates that the files of this type cannot be de-identified by the Debablet.
 - . An “unreadable” file cannot be read by the Debablet. For example, the permissions on the file may be set so that the user running the Debablet does not have access to the file.
 - . A “zero-size” file is a file that has zero size. The file contains nothing.
 - . An “unrecognizable input” is a file type that the Debablet does not recognize. For example, the Debablet cannot de-identify HTML files.
 - . An “undecodable input” refers to a file whose contents cannot be understood by the Debablet. The file may be corrupt or in an unsupported format.
 - . An “unidentified input” refers to a file that can be read and decoded by the Debablet, but does not conform to its de-identification rules. For example, a DICOM file with modality CT does not conform to the de-identification rules (only the MR and PET modalities are supported).
6. Only file types listed in green will be de-identified by the Debablet (file types in red are ignored).

CHOOSING DE-IDENTIFICATION OPTIONS

1. Choose the output directory (directory in which the de-identified files will be written).
 - . The directory can be typed into the text box immediately to the right of “Output Directory:” in the “Options” box in the center of the Debablet.
 - . Click the “Browse” button in the “Options” box of the Debablet to launch a file system dialog. Navigate the directories and choose the output directory. Click the “Select” button to accept the output directory choice or click the “Cancel” button to dismiss the dialog.
2. Type the new subject ID. This ID will be inserted into each de-identified file (replacing the ID of each input file being de-identified).
 - . The new subject ID text box is located under the “Output Directory” text box.
 - . The new subject ID must be 10 characters or less.
 - . If a new subject ID is not typed, a blank ID will be used during de-identification.

DE-IDENTIFYING THE INPUT FILES

1. Only file types listed in green in the “Input Files” box will be de-identified by the Debablet (file types in red are ignored).
2. Click the blue arrow button (to the right of “Run”) in the “De-identified Files” box at the bottom of the

Debabled.

- a. The blue arrow button will change to an animation while the de-identification process is occurring, and the "Run" label will change to "Stop -->".
 - b. Click the animation (to the right of "Stop -->") to stop the de-identification at any time.
 - c. When the de-identification is complete, the animation will be replaced with the blue arrow, and the text will read "Done!". Clicking the blue arrow button again will repeat the de-identification.
2. After running the Debabled, the de-identified file types will be listed inside the "De-identified Files" box (on the left).
 - a. A de-identified file type label in green indicates that the de-identification performed successfully.
 - b. A de-identified file type label in red indicates that the de-identification failed.
 - c. Clicking the "+" button (to the left of each de-identified file type label) will launch a dialog containing all the de-identified files that belong to that type.
 3. De-identified files written by the Debabled are never deleted. Running the Debabled twice on the same set of input files will create two copies of each de-identified file.
 4. More files can be de-identified by selecting new input files and repeating the above steps.