



DpuScan

Janich & Klass
Computertechnik GmbH



DpuScan 6.x

Referenzhandbuch

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<http://www.jkimaging.com/pdf/DpuScan-Referenzhandbuch.pdf>

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1 Overview

Empty Page Detection

A empty page detection can be done in different ways. It has been customary in DpuScan, evaluate the empty pages with the memory size of each image as a black/white image. There is a variable in DpuScan that allows this evaluation for color images too. Event rules have then made a rule that such images are deleted.

With this PlugIn is a more accurate tool ready to examine pages.

- The PlugIn evaluates pixel groups on the image to determine which images are empty.
- Reviewed only the inner area of an image, edges with holes and dirt are not analyzed. The size of the margins can be set.
- The analysis of the information on the sheet is independent of the resolution of the image.
- There may be a threshold to be specified so that small groups of pixels, such as slight noise, are excluded.
- Lines produced by folding the paper, can also be excluded from the evaluation.
- In addition, information on the number of the elements which are greater than the threshold, can be returned.
- The variable set by PlugIn can be evaluated and overwritten in the event rules. The number and complexity of the event rules becomes smaller, especially if event rules to be processed several times.

To use the Empty Page Detection, it has to be loaded in the base profile and used in the system as a step on the task

Task Profile Configuration

Base Profile Configuration

Configuration of the Empty Page Detection

Return Values

1.1 Task Profile Configuration

The Empty Page Detection is a PlugIn which can only be used in the process mode.

Please open the **Task Profile Configuration** insert the call of the PlugIn "Call PlugIn for every image" in the task list after loading the images, i.e. after "Load from directory" or "Load from scanner"

In the task list the Empty Page Detection is available only if it was loaded in the base profile before.

To configure the Empty Page Detection in the task list, insert the call and determine the color type and, if there are more images of the same type, the position of the images to be processed. If you work with a double side scanner select "Both sides" **always**; the processing of the front side can be suppressed in the PlugIn configuration.

The PlugIn can be applied to any images of an image group, but it's wise to call it for one image only, because the result `%(I.PlgDectEP.Empty)` (= empty or not) is store for all images of the group at once.

More information can be found in the overview of this PlugIn.

1.2 Base Profile Configuration

The PlugIn must be loaded and configured in the Base Profile.

Open the **Base Profile Configuration**, select the tab **Process** and click the button **PlugIns**. The Add button will take you to the choice of available PlugIns.

Select the PlugIn JKDectEP. The PlugIn is now loaded for usage within the Base Profile.

Please make sure that the checkbox "PlugIns activated" is marked with a check, otherwise the PlugIns will not be used. The check box can be activated only when at least one PlugIn is loaded.

In this list is a column "Mode" which controls, when a PlugIn can be called. Please ensure the **Process Mode** is selected there. Process Mode means, it's available for images when scanning but not as an interaction in the pause.

More information can be found in the overview of this PlugIn.

1.3 Configuration of the Empty Page Detection

The Empty Page Detection works with configurable parameters. They can be set in the Base Profile.

The Setup Dialog

This sizable dialog is divided into two parts. On the left side there is a preview, on the right are several control elements.

File open



Opens a file open dialog to load an image as preview.

Preview with blue frame

The preview shows the previously loaded image.

The blue frame indicates in which area the image is evaluated.

An evaluation is carried out only within the blue frame so that punching, stapling marks and damaged edges will not affect the analysis of the empty page.

Position and size of the frame can be adjusted with the mouse or entries in the appropriate fields.

Frame

Left

The definition of the position of the left edge. The value can be input via keyboard. If the frame is changed with the mouse, the values fit into the input fields here.

Top

The definition of the position of the upper edge. The value can be input via keyboard. If the frame is changed with the mouse, the values fit into the input fields here.

Right

The definition of the position of the right edge. The value can be input via keyboard. If the frame is changed with the mouse, the values fit into the input fields here.

Bottom

The definition of the position of the lower edge. The value can be input via keyboard. If the frame is changed with the mouse, the values fit into the input fields here.

Remaining Structures

Indicates the number of the remaining structures within the frame. If the number is greater than 0, the page is not empty.

Sensitivity

The sensitivity determines, from which size on existing pixel groups are relevant. The indication is unitless. The default value corresponds to about a character in a font size of 9 points.

Tolerance

Here you can specify how to deal with "outliers". Usually the existence of ONE large structure is enough to identify a page as a non-empty.

With the tolerance value, this can be somewhat relaxed: A higher value detects single clearly larger structures or multiple slightly larger structures. These are ignored and the page will be blank.

Ignore lines

If this option is enabled, are long, thin lines, as may be caused by fold seems, exempt from the review of the blank page analysis.

Ignore holes

Ignores up to 7 mm wide, nearly circular structures.

Ignore front side

The search occurs in an approximately 2 cm wide strip on all four edges of the image (but not the frame). The number of found holes is irrelevant.

Flip rear side

Doesn't process front side images. Instead a "non-empty" will be returned.

Are entered different values for right and left edges of the frame, this option allows that these values are exchanged for rear sides.

More information can be found in the overview of this PlugIn.

1.4 Return Values

The Result of the Empty Page Detection

The result can be seen in the variable **% (I . Pl gDect EP. Empty)**. A value of **1** indicates an empty page, otherwise it is **0**.

Also the the number of the remaining structures will be returned as **% (I . Pl gDect EP. Remai ni ngSt r uct s)** . This allows a raw classification of the non-empty pages.

More information can be found in the overview of this PlugIn.

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