

One Way Vision is an Agfa licensed application of the registered Contra Vision® functionality. (The Asanti license is called PREFLIGHT_ONE_WAY_VISION.) Additionally, you need the PREFLIGHT_EDIT_ACTION license to edit the One Way Vision action list.

This print method is used to print on transparent adhesive material which will be mounted on window panes in order to show an image on the outside of the window while from inside you can see through the printed material while a black pattern hides the image.

Typically, this is used to cover the windows of busses, trams and other vehicles with advertising images. But also shop and office building windows are covered with (large) images these days.

The current implementation only supports line perforations.

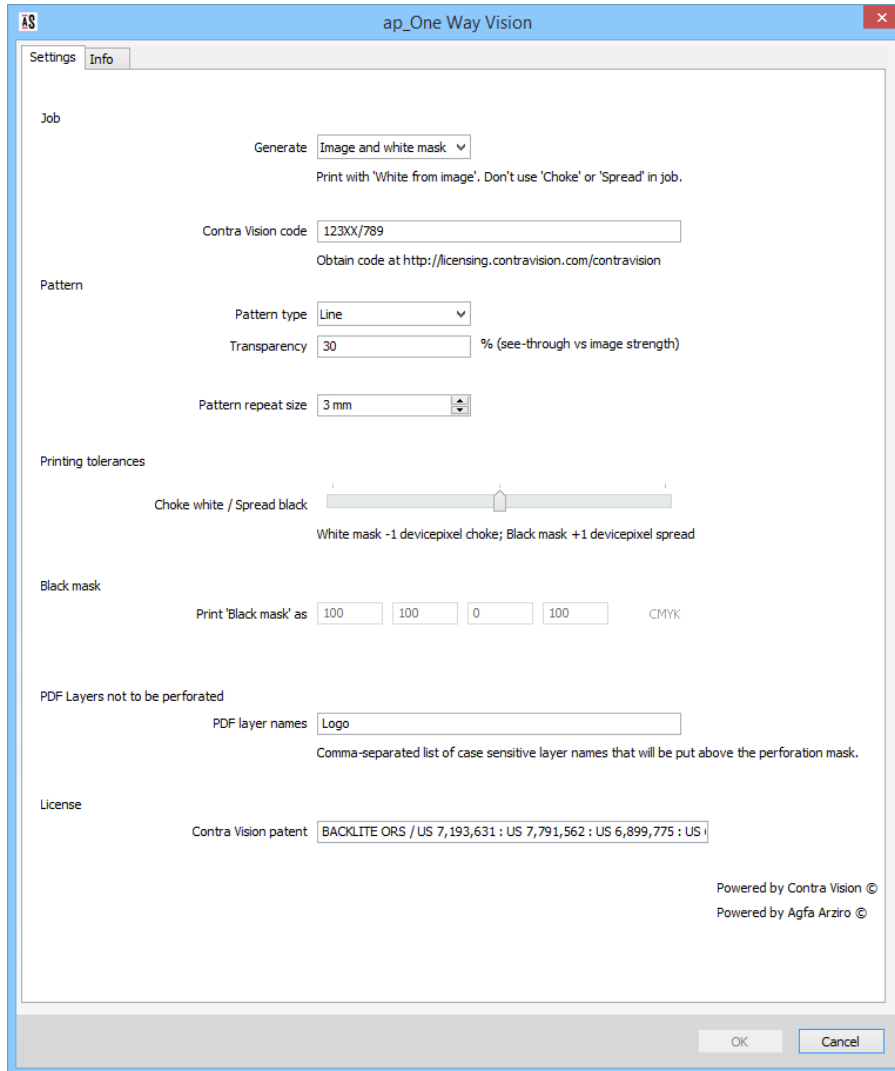
Download the Asanti Sample Files via the Asanti Client (Help > Asanti Online > Download Sample Files).



1. One Way Vision Preflight Action List

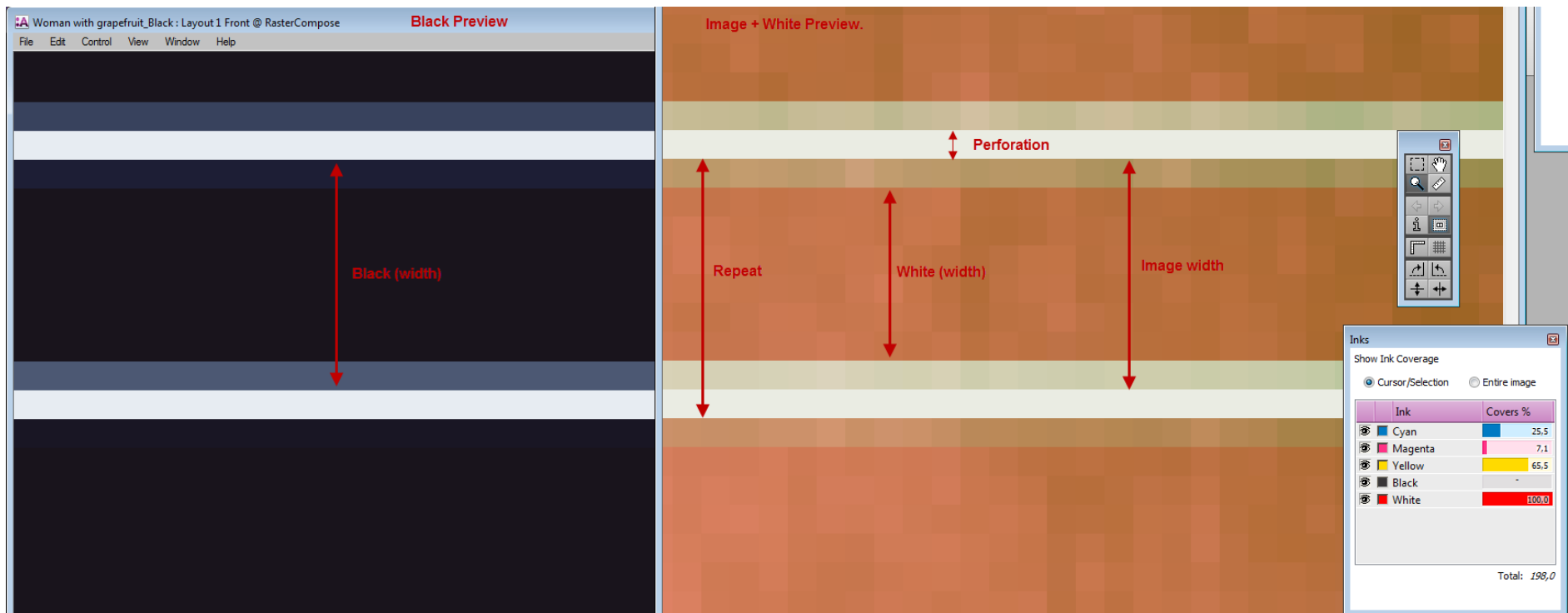
The One Way Vision workflow requires the One Way Vision Apogee Preflight Action list. This action list perforates the image on PDF level to become see-through and generates black and white masks to complete the print data to be printed on transparent media.

Two jobs need to be created to generate all necessary print data. Each job requires different action list settings.



Job	Select here which content to generate in the job: "Image and white mask" or "Black mask".
Contra Vision code	This should be updated for each job. This code is job dependant and should be obtained from ContraVision® for each job you print with the One Way Vision action list. Get it at http://licensing.contravision.com/contravision/ . This code will also be printed in the left bottom corner of the image.
Pattern: Pattern Type	The type of pattern of the perforations. Currently only a line pattern is supported.
Pattern: Transparency	The percentage see-through versus the image area. Recommended is 20 or 30%.
Pattern: Pattern repeat size	The size of the pattern (image area + perforation). Give in the wanted value, Asanti will adjust the numbers to the nearest dot size in slow-scan direction; to ensure that all distances are a multiple of the printer's dot size.
Printing Tolerances	Use the slider to set the amount of white choke and black spread by 1 or 2 pixels.
Black mask	Enter here the CMYK values for the black mask. These are the CMYK values before ink split.
PDF Layers not to be perforated	Type here the name(s) of the PDF layer(s) which should not be perforated, f.i. a layer containing a Logo which should be left untouched by the ap_One Way Vision action list. Leave blank if all the PDF layers in the file need to be perforated.
License Contra Vision Patent	This should never be changed. It is the patent number of the ContraVision® technology. It will also be printed on the image in combination with the Contravision Job code.

Previews of both jobs:

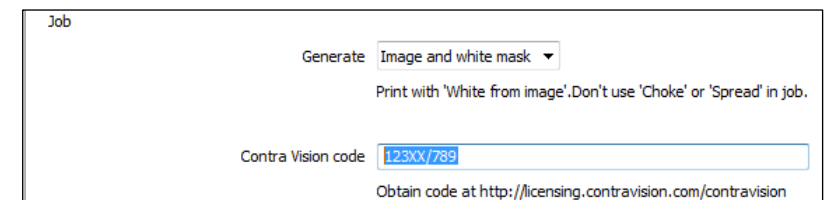
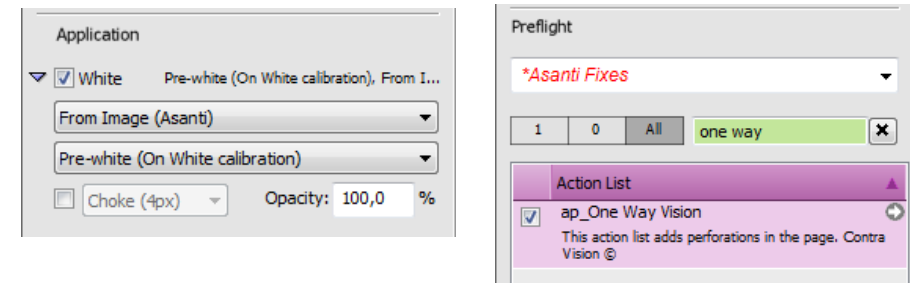


2. Creating the perforated image and the white print content

The current One Way Vision implementation needs 2 jobs to create all necessary print information. The image, white and black content will be combined later using the Print Engine imaging software to print concurrent.

The first job will create the image and the white (to print in between the image and the black content). All will be perforated by an Apogee Preflight action list so it becomes see-through from the inside.

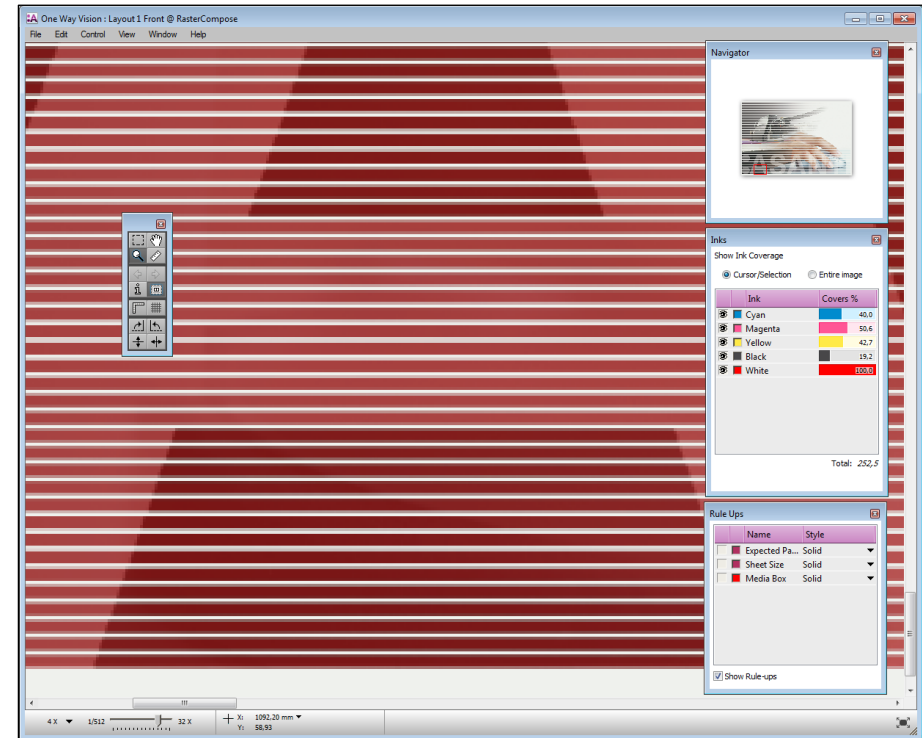
1. In Layout Editor: File > New Wide Format job.
2. Job name: One Way Vision.
3. Select your printer. The printer needs to be able to print white.
4. Add the "Asanti visual 1200x797.jpg" in the Images pane.
5. In Job Set-Up: Set the Sheet size to 1400 x 1000 mm.
6. Place the image on the sheet.
7. In Job Set-Up > Application Inspector: Select White generation: From Image. The Preflight will create it.
8. Decide here on pre-or post-white according to the mounting method of the end result. Select pre-white when mounting the film on the outside, select post-white when mounting the film on the inside of the window.
9. Deselect Choke.
10. Select a CPM that contains on white calibration.
11. In the Job Set-up Inspector > Preflight: type "One Way" in the filter field and select the ap_One Way Vision action list.
12. Click the arrow at the right to edit the action list to set the Contra Vision code for this job. You can get it at <http://licensing.contravision.com/contravision/>
13. Click OK.
14. Submit the job. Make and hold.



15. Open the Raster Preview to verify the result. The image is perforated with lines and white lines were added underneath the image parts. The Preview cannot be used to measure the widths. See the limitations at the end of this document.

Note: In the image in this lesson the white is represented in the Preview as red. This color can be changed by clicking on the colored square in the Inks Palette.

For each job a unique Contra Vision code needs to be obtained and paid for from the ContraVision website. The format should be at least 7 characters. The first characters define the customer's ID number, the last represent the unique job ID. A basic check is performed on the code.



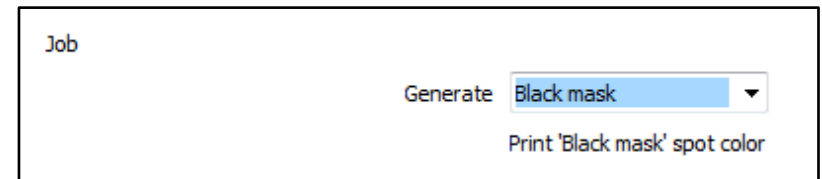
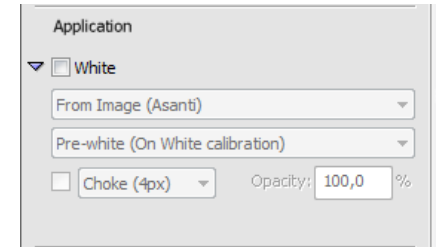
3. Creating the Black content

The Black content is printed on the white to block the image from view on the inside of the window.

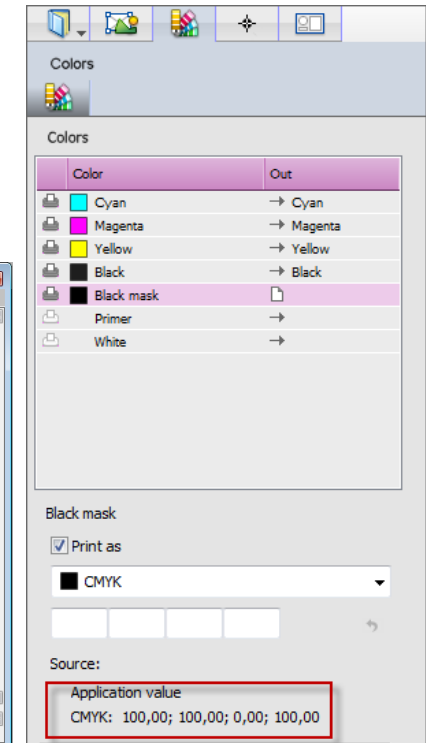
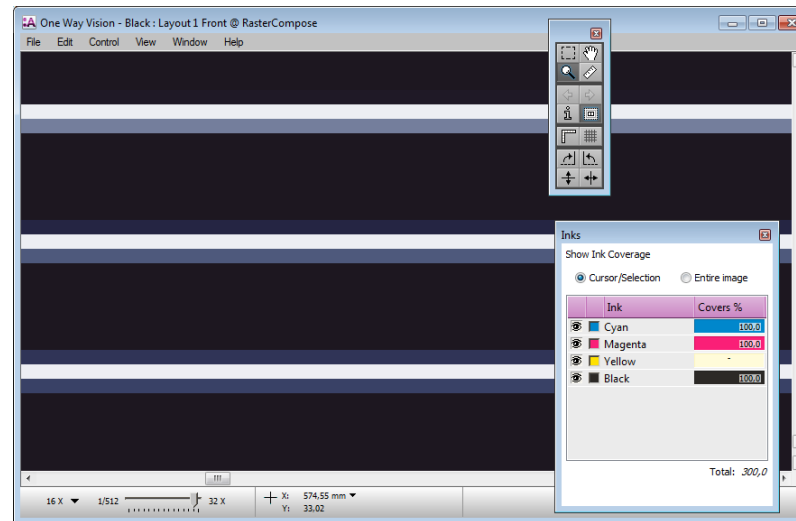
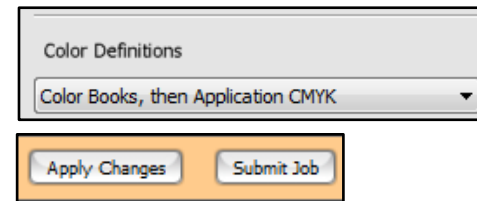
1. Duplicate the “One Way Vision” job.
2. Add “- Black” behind the name (JOBNAME - Black).

Tip: When using the Sheet mark “Job Info”; be sure to change only the last part of the job name. The 2 jobs will be superimposed later and thus so will the mark. By changing only the last part, the mark stays readable.

3. In Job Set-Up > Application Inspector: Deselect the white generation.
4. Go to the Job Set-up > Preflight Inspector. Type in One Way in the filter field to find the action list.



5. Click the arrow at the right to edit the ap_One Way Vision action list.
6. Change the Job option to generate “Black mask”. Click OK.
7. In the Colors Inspector: The Color look up needs to be set to “Color Books, then Application CMYK.”
8. Click the “Apply Changes” button to have the new settings take effect in the Layout job.
9. Submit the job. Make and Hold.
10. Open the Raster Preview to verify the black content. You can see the perforations, measuring them is difficult. See the limitations at the end of this Tutorial.



4. Combine both results on the Print engine software

Depending on whether the (transparent) print substrate is to be mounted on the inside or the outside of the window, the layers need to be mirrored and a certain print order will need to be set.

Send the rendered results to the print engine and consult the respective manuals on how to combine the image, white and black content in the desired order. Make sure they are printed precisely on top of each other.

The layers need to be printed concurrent as the smallest misregistration can lead to interference patterns.

5. Known limitations

1. Do not scale or rotate the image in Asanti

The One Way Vision perforation is done by Apogee Preflight before the imposition, scaling is done afterwards. Therefore, you cannot perforate and scale in the same job because the perforations will be scaled as well.

The perforation lines must be in the same direction as the fast scan direction of the printing head; therefore, you should not rotate the images within Asanti. The pattern is developed using the grid of the slow scan resolution.

2. Widths of white, black and image are hard to see in Preview

The previews in Asanti are rather low in resolution. The Pattern and transparency sizes are very small and therefore not optimally represented in the Preview.

3. Only a line pattern

Currently only a line pattern is supported. According to Contra Vision[®] the line pattern is the best method for quality see through image viewing. They recommend a repeat of 3 mm and 30% see-through. They tested up to 4mm and 20 to 30% see though.

4. The Generic SD engine is not supported

One Way Vision is not supported on the Generic SD.