

BIT-THROUGH Series

It does not matter if the workflow is digitalized, printing itself is still phigically


It does not matter how perfect the digital workflow is, printing itself is still physically.

The printing process is significantly influenced by humidity, change in temperature, changes according to the weather, the sickness and the grain of the paper, pH of the dampening water and so on. These factors will throw you in many different situations that might be disastrous if the situations are not handled quickly and correctly. For example, unexpected color changes, misregistration, ghosting and etc.

In those situations, if the person in charge is capable of adjusting the printer, controlling the ink, and etc, the printing process might not be affected. However, if an adjustment requires re-generate the plate, that is a whole different story. Procedures such as "cross-department explanations and amendment instruction for the plate making upper process" and "proof re-output at workflow RIP, verification of contents and CTP output" significantly impact the delivery time and production plan of the plant.


We would like to show you how to resolve problems in these situations without reverting to the upper process with 1BitTiff CTP Workflow **BIT-THROUGH** series.


Misregister! How shall I fix it?!

 Go to page 3


Different printer, different colour!

Moire!


 Go to page 5

 Go to page 9


A request for partial replacement at this stage?!

 Go to page 6


Wants to adjust the tone!

 Go to page 7

Wants to predict ghosting!

 Go to page 7

Printer failure!! Have to output on another printer!

 Go to page 3



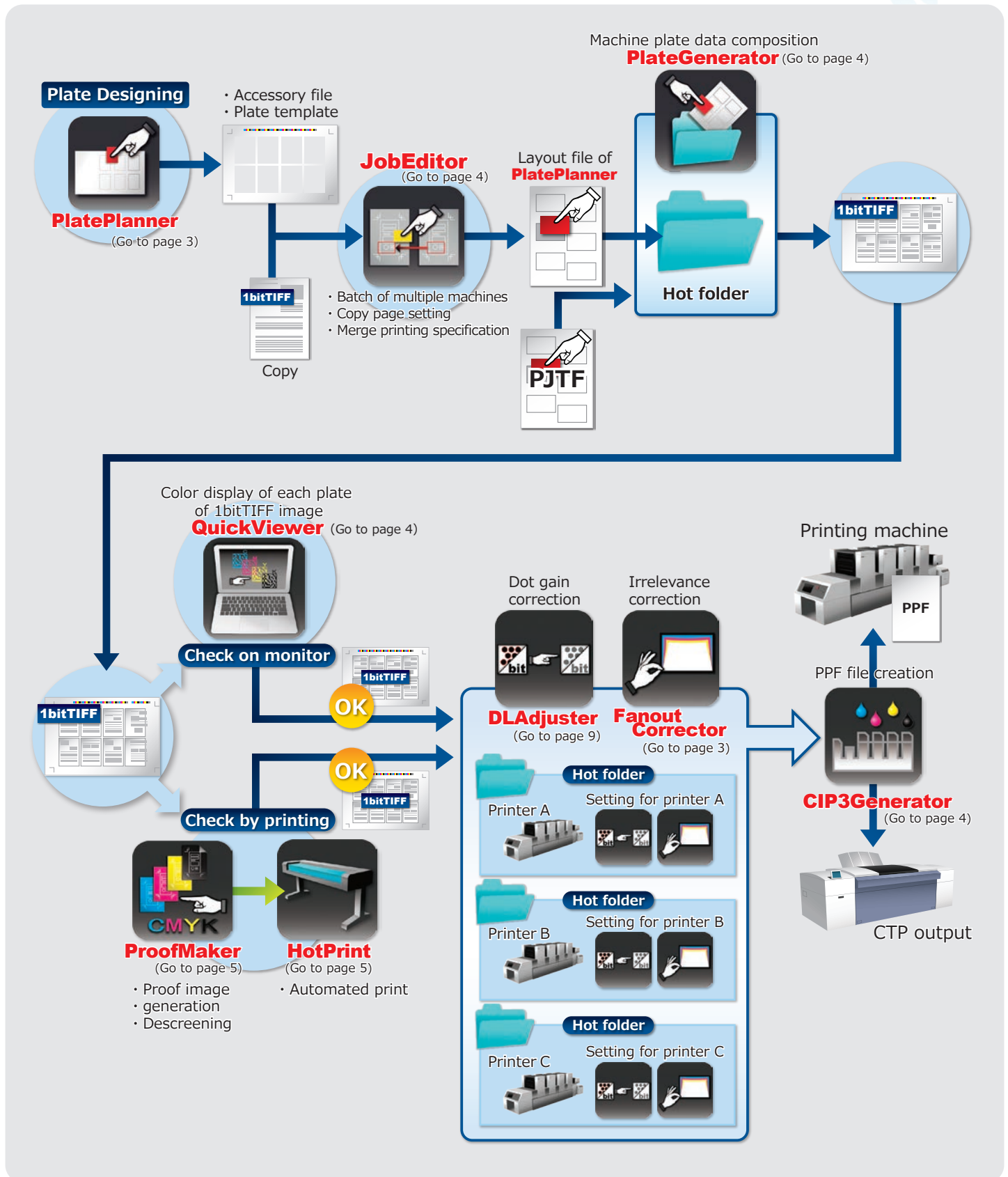
Time consuming...
Labor-intensive...
Costly...

So what if there is a workflow that does not require you to start over every time?



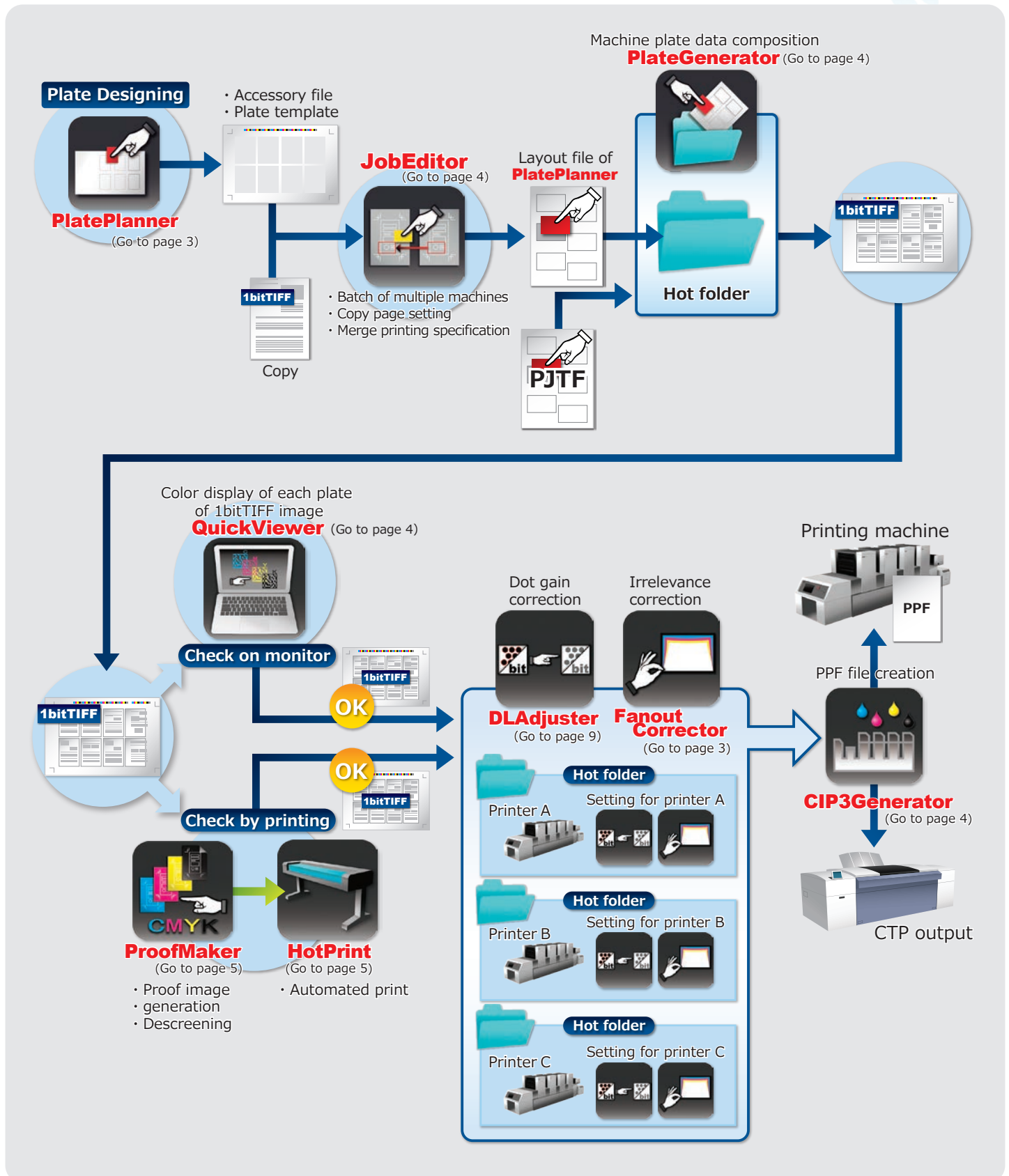
BIT-THROUGH Series

Introduction of the 1BitTIFF CTP workflow and software



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Introduction of the 1BitTIFF CTP workflow and software

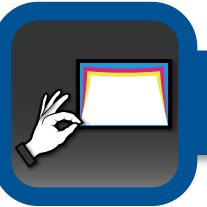


Misregister ! How do you fix ?

In such cases

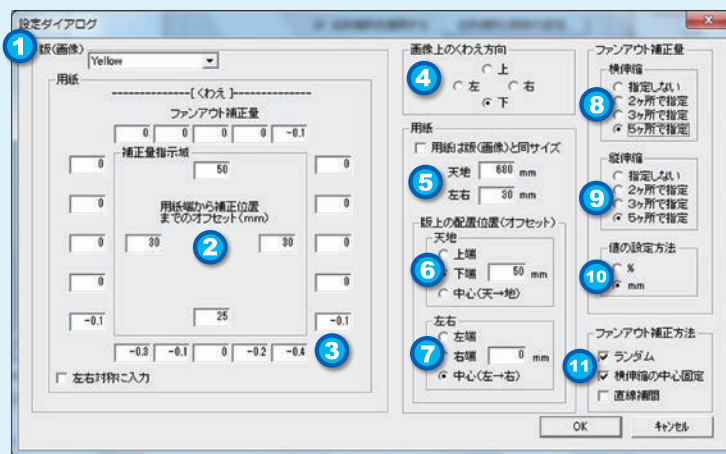


FanoutCorrector ファンアウトコレクター



Recently the demand for lower cost, (eg. lower quality and thinner paper) high quality printing is increasing. If the thickness of the paper is reduced, the ink is more prone to (expand and contract, reduce and tight register). In this situation, reverting back to DTP and correcting plate imposition is a very time-consuming and costly option.

So, why not arrange the layout using **FanoutCorrector** at the plate field? In the event of any misregister, each register mark at the outer side of the printed material is checked through a loop on the plate field, and its width is noted down at each position for each cases. For example, when the width of a register mark is 0.1mm and the misregister is 3 register marks wide (which is equivalent to 0.3mm wide) and the printing color spreads to the base plate, negative figure are inputted to the same.



- ① Specify the plate to correct. The offset from the edge of the paper to the correction point, namely, the distance to a register mark measured from the edge of the paper.
- ② Enter the figures to specify correction values faithful to the actual measurement.
- ③ Enter the correction values for the correction points specified in ⑧ and ⑨. Although you can enter any number of decimal places, the value actually corrected is limited to the 1 dot unit of 1BitTiff. Set negative values for spread against the standard plate, and positive values in the reverse situation
- ④ Size of data = Size of plate * (specify the position of the gripper margin of data)
- ⑤ Size of paper
- ⑥ } Enter an offset value from the plate edge to the paper
- ⑦ }
- ⑧ You can increase transverse expansion to the print direction by up to 5 correction points.
- ⑨ You can increase the print direction by up to 5 correction points of expansion.
- ⑩ Specify the correction value in millimetres or the ratio for the entire plate size.
- ⑪ Specify the computing method at correction.

Have to print with a different printer urgently!

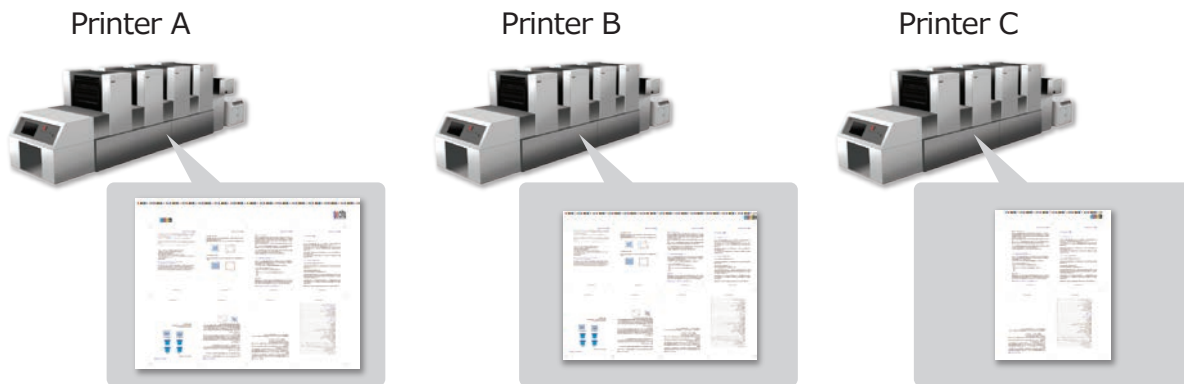
If so,



PlatePlanner プレートプランナー



Sometimes with an urgent job you inevitably have to rush the printing with multiple printers and process changes due to errors. For easy CTP output with the 1BitTiff workflow, you only need to paste the plate data to the template of each printers that are setup with **PlatePlanner**. Moreover, the formation of halftone dots will remain unchanged; and you will only need to confirm the distance of the gripper position before you start the printing.



JobEditor ジョブエディター

JobEditor associates the 1bitTIFF file with the plate template generated with **PlatePlanner** and gives the layout information to **PlateGenerator** through a hot folder. You can process operations involving formulaic formats such as periodicals, replacement shop names in flyers, page imposition and so on; rapidly and efficiently.



PlateGenerator プレートジェネレーター

PlateGenerator is the server application to distribute the process of **PlatePlanner** CTP plate generation. It receives layout files (that are several kilobytes in size) from the **PlatePlanner** through hot folder and generate plate automatically. An operator can start to design the next plate while the current generation is going on.

Better still, **PlateGenerator** can receive the layout information and the information of the PJTF (Portable Job Ticket Format) from **JobEditor**.



QuickViewer クイックビューワー

QuickViewer is a viewer that displays the separation of 1BitTiff in color. It is a great way to reduce costs because the operators no longer have to print out physical copies for proofing, they can do the proofing digitally on a monitor. **QuickViewer** can also handle overprint confirmations effortlessly, which used to be difficult.



CIP3 Genetator CIP3 ジェネレーター

The **CIP3 Generator** generates an ink fountain control information (PPF) file from separation 1bitTIFF file for CTP. By setting the plate output folder of **PlatePlanner** and **PlateGenerator**, you can create a PPF file at the same time by generating the plate data for CTP.

Want to predict moiré before printing ?!



ProofMaker プルーフメーカー



ProofMaker is a software that is used for generating 8 bit color images according to the size and the area of the halftone dots and by calculating the tone level of the halftone dot image of the separated 1BitTiff. Since moiré patterns will be generated in halftone dot images, by exploiting this phenomenon, it is possible to discover the generation of moiré patterns on a monitor or print out.

The latest version of **ProofMaker** has included some new features and enhancements such as, refining a descreening algorithm, removing more screening patterns, enhancing image quality, offering color proofing, reusing photos of images, checking for moiré patterns and etc.



HotPrint ホットプリント

Hotprint is a software that automatically outputs TIFF files in the hot folder generated by **ProofMaker** and then to a printer that is connected to a Windows PC. Normally, a printer without the hot folder function requires manual output, but with **Hotprint**, all those hassles are eliminated.

In addition, it is possible to output large files by decreasing the resolution, which is difficult under normal operation. Operators can assign output functions such as: title, center alignment, automatic rotation, automatic scaling, title output to multiple hot folders.

Moiré ! How do you fix it ?!



StripEditor ストリップエディター



After predicting the moiré patterns with **ProofMaker**, moiré patterns can be easily removed with **StripEditor**. The angle of the halftone dot, pattern are all factors that contribute to the appearance of moiré patterns. It is difficult to predict where moiré patterns will appear, and it is even more difficult to remove it after it appears. The current solution is to revert back to DTP and tweak the color and angle of the photo, however, the StripEditor offers options that does not require the operators to revert to the upper process.

Pattern elimination (option)

StripEditor has a command called "pattern elimination". Select the area with moiré patterns using the selection tool and delete it by gradually changing only the form of the halftone dot and not the tone level of the halftone dots. With this method of deletion, it eliminates the need to return to DTP for image correction or detailing, and it also cuts out the RIP step entirely.

① Halftone dots with moiré



② Remove pattern with level 1



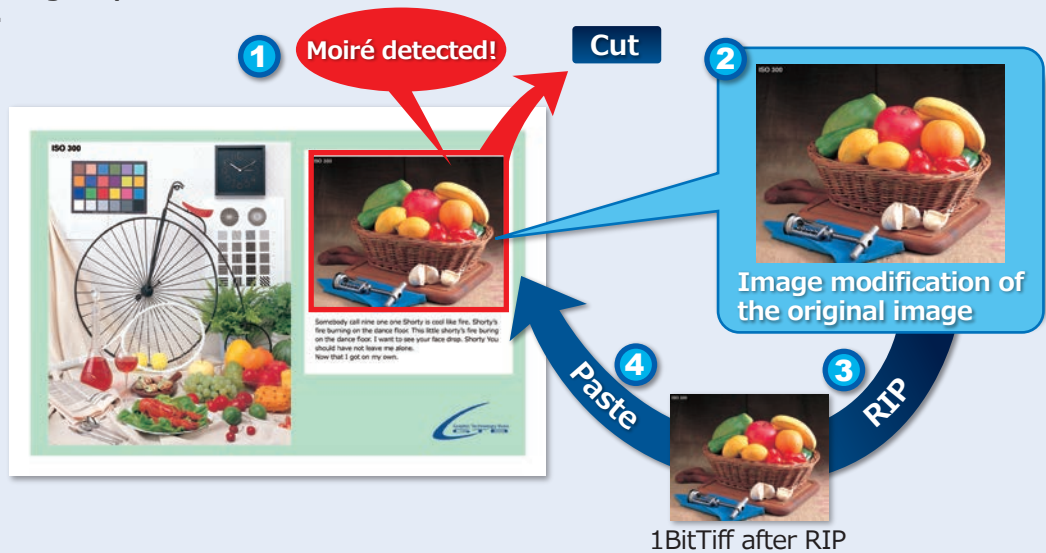
③ Remove pattern with level 1



Furthermore, it is possible to use **StripEditor**

and its "pattern elimination" option for films as well.

- Step 1 : The image with moire pattern is cutted
- Step 2 : Removal of moire pattern
- Step 3 : Re-performed the RIP
- Step 4 : The corrected image is pasted onto the original image.



Furthermore, this functionality is not only for the resolution of moiré.



A request for partial replacement at this late stage!

With **StripEditor**, it supports cut and paste on site by converting the image into 1BitTiff. You can cope with sudden requests for image replacement and etc.

I want to adjust the tone!



StripEditor

ストリップエディター

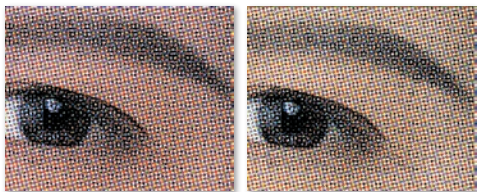


In situations like press proof, printer change and etc, you can perform task like tincture part of a picture with red easily with one of the **StripEditor**' s command, "tone adjustment" .

Tone adjustment (option)

Imagine if you want to increase the neutral color of magenta plate.
 Modify 30% → 34%, 40% → 47%, 50% → 55%, then set, execute the tone curve without changing the settings of highlight and shadow, and you can create a converted 1BitTiff instantly.

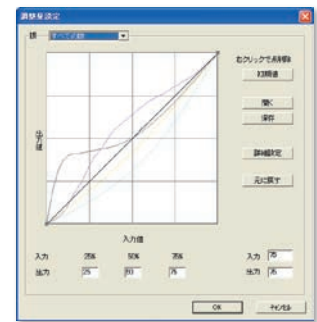
- Tone curve adjustment and detailed tone adjustment settings



Original After tone adjustment

With **StripEditor**, you can adjust the red level of the image or change the tone of flat color part by specifying the tone curve without having to back to RIP.

Also, in creation of the tone curve, you can specify the input values and output values at 1% intervals and that enables fine adjustment.



More doors will open with **StripEditor**!

Want to predict ghosting?!



StripEditor

ストリップエディター



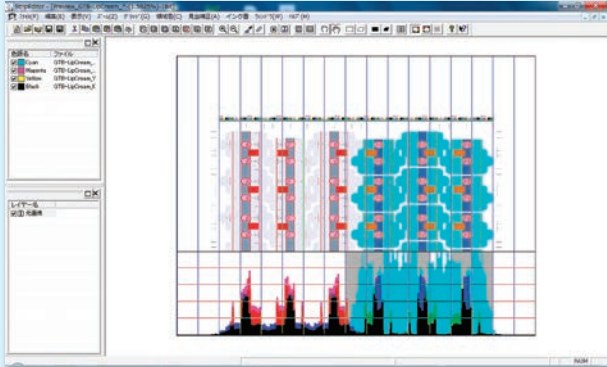
Do you recall the problem like that ghosting appeared in the advertisement on the page of gripper end side by an influence from the advertisement on the page of gripper byte side ?

With **StripEditor**, you can predict if ghosting is going to appear or not. Open the image before plating, then click on the "graph display" icon. The picture area ratio will be displayed in a graph with the gripper as the X axis and you can set the number of ink fountains of the printer or the boundaries between them as the Y axis. This way, you can view the areas where the rapid fluctuation of the amount of ink used occurs at one glance.

It is also possible to paste sutebeta directly when you are predicting ghosting with **StripEditor**.

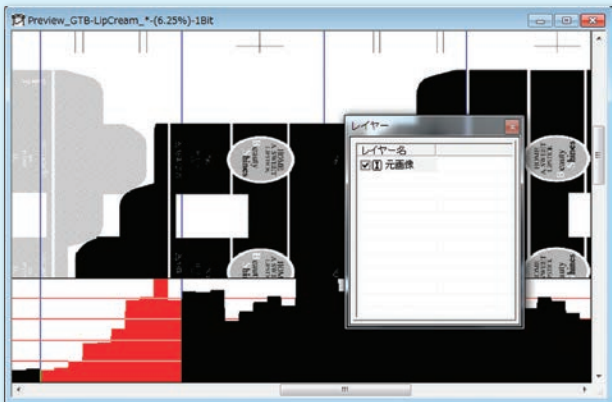
Ghost buster (option)

Graph display of the area ratio of each plate of the color draft

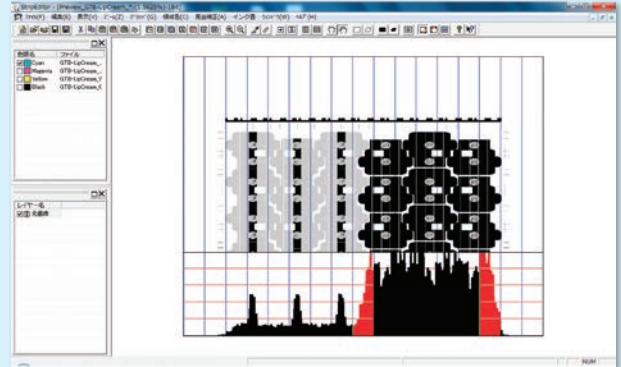


Display the area ratio of the picture in a graph. The vertical line is the boundary of the ink fountains set in advance.

You can check the potential for ghost to emerge around the alert displayed in red

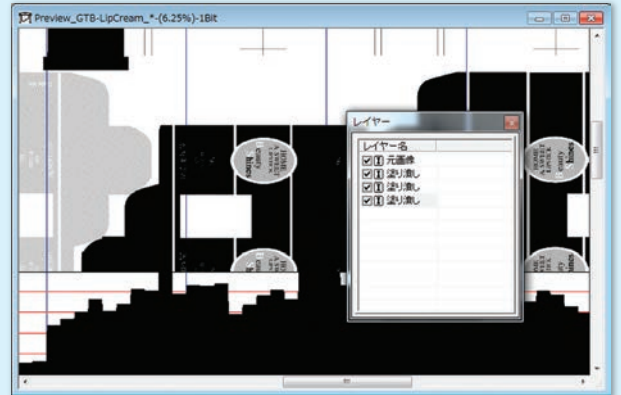


Display only the cyan plate of the color draft and display the plate area ratio in graph form



If there is a rapid change in the level of ink in the same ink fountain, a red alert is triggered.

Equalize the ink quantity by pasting solid area patches directly onto the outer side of the picture



Different printer, different color ! What's the answer ?



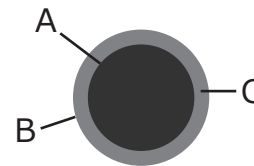
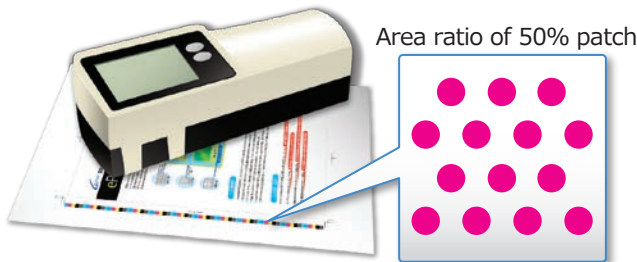
DLAdjuster ディーエルアジャスター



Color adjustment for printers is an eternal problem. Retouching professionals used to visually guess the halftone dot concentration of film, and then adjust the printing condition on the target printer to make the halftone dots thicker or thinner to absorb variation in dot gain. Today, we no longer use film, we output directly with CTP. We have to adjust the tone curve at RIP to adjust the size of the halftone dots; however, we wonder how many companies actually adjust the dot gain curve by printer.

Although you can measure the printed materials, evaluate the lab value and calculate the degree of color reproduction, it is still very difficult to adjust color for printers. Therefore, to make it easier to return to the old way and correct the dot gain, we bring you **DLAdjuster**.

Measures the area ratio of halftone dots of a concentration patch by a single plate



A : Area ratio of halftone dots on 1BitTiff
 B : Halftone dot area ratio on paper
 C = (B - A) = Physical dot gain amount

IF the concentration of area ratio on digital data in DTP is 50% and output it with RIP with setting that adjust tone curve straight line, the halftone dots in BitTiff are also output as 50% concentration. So print it our and compare it to the area ratio of the target.

Measure the halftone dot area ratio of the color patch of the printed materials, and then identify the difference with the area ratio of the target chart (Japan color and so on). Input the value to fill the difference and create the table for the digital data.

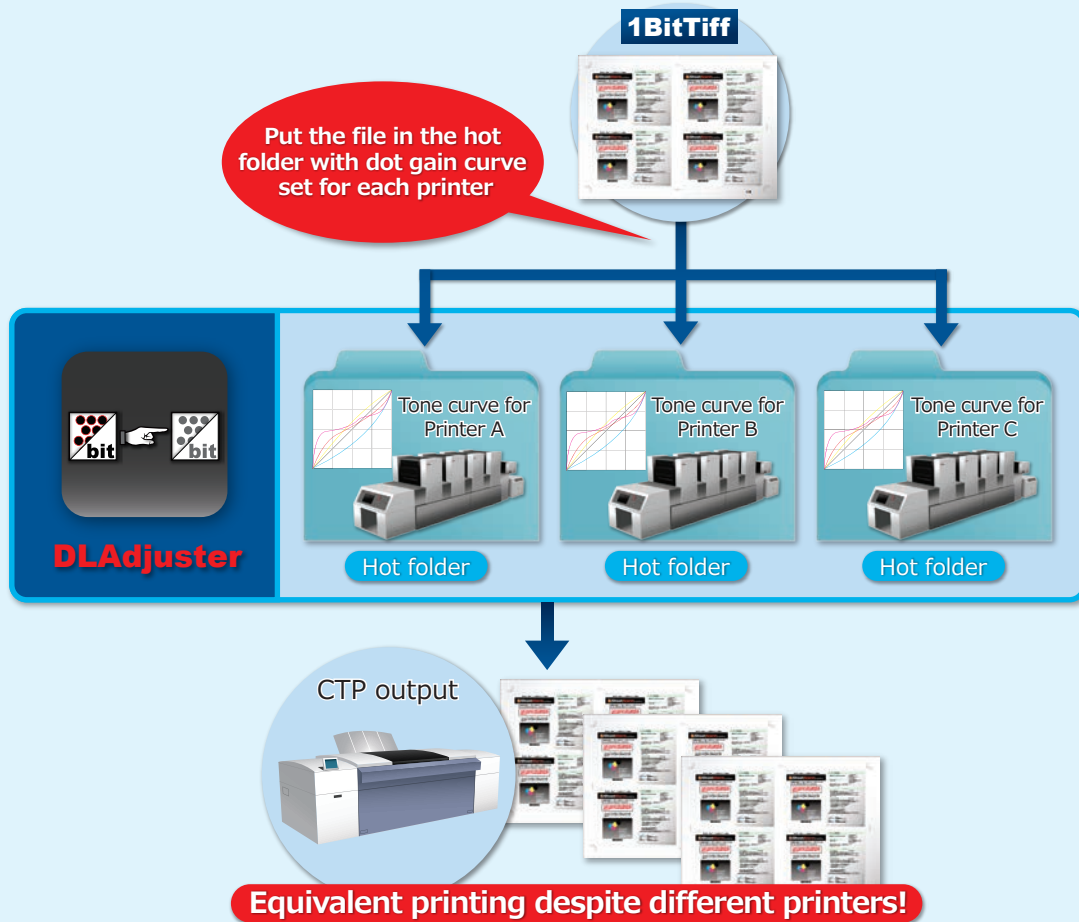
For example, As in the below table, take a look at concentration of digital data. When the digital data is 50%, target is 55% and Actual printed material is 62%. In the actual printed material, the dots expand to 62%, so the difference from the target is 7% and now you can use this number for correcting the digital data.

	Concentration/area ratio of color patch (%)									
Digital data	10	20	30	40	50	60	70	80	90	100
Target chart	8	18	32	44	55	64	76	84	93	100
Actual printed material	12	24	37	48	62	73	80	92	97	100
Difference from target	4	6	5	4	7	9	4	8	4	0

In other words, It's adjusting a dot gain curve setting about 43% when concentration of color patch of the digital data is 50%. and measure the concentration of color patch of multiple printers and create the dot gain curve for each printer.

	Concentration of color patch
Digital data	50%
Target chart	55%
Actual printed material	62%

Set these tone curves to each hot folder of **DLAdjuster** for multiple printer. then, you only need to drag and drop 1BitTiff data to the hot folders. Printers output plates that the dot gain is adjusted. Moreover it is easy to adjust the tone curve at printing filed. Of course, it is difficult to measure and reflect the optical dot gain due to the characteristics of ink or paper quality and it is also impossible to adjust the trapping concentration though, It still can adjust the color concentration of the each plate similar and reduce difference of color reproduction for multiple printer.



ReDimension

リディメンション

ReDimension is the software with an advanced function of resolution and size conversion. Previously, when convert resolution or size, you had to choose only one way and apply it to the entire image either the conversion algorithm to prevent emerging moiré in the halftone dot or the conversion algorithm to prevent emerging noise in the line art.

That's why sometimes moiré is emerged in the halftone dot because of the conversion algorithm for the line art. and noise is emerged in the line art because of the conversion algorithm for the halftone dots.

ReDimension is an advanced tool with an auto detect engine of halftone dots and line art. So **ReDimension** can apply two different optimal conversion algorithms for each the halftone dot and the line art.



Rotator

ローテーター

To rotate by 90 degrees 1bitTIFF which is almost 1GB per plate without compression in the direction of the CTP output, require CPU power. **Rotator** rotates 1bitTIFF data by 90 degrees easy. Moreover, automatically invert negative and positive. Also, in combination with **PlatePlanner**, the rotation process is dispersed and operational efficiency can be improved.