

EQUIOS

Workflow Solution

Workflow innovation enables smart print manufacturing



EQUIOS: an advanced solution platform

EQUIOS functions as an overall solution platform for SCREEN products, enabling the control of a wide range of devices. EQUIOS ART is a suite of technologies that helps to ensure optimal quality standards across different SCREEN graphic arts products. These technologies include SCREEN's proprietary RIP, image processing and color management systems, which combine to produce images of consistently high quality on diverse printed materials. EQUIOS UX likewise provides a broad range of functionality across the entire production process from Web2Print input to printing and finally postpress. This includes support for user-friendly operations tailored to individual applications, automation of various repeated tasks and maintenance of links with a wider production system based on rapidly emerging IoT (Internet of Things) technology. Working synergistically, these technologies help to create a highly stable printing environment that delivers outstanding quality and productivity, with minimal operator skill requirements.



Support Solutions

A highly dependable solution for extending the performance and reliability of EQUIOS in time-sensitive production lines

TRUST Network Service

If EQUIOS is vulnerable to sudden problems, deadlines become difficult to meet and, more importantly, a company's reputation can be badly damaged, causing both sales and client confidence to suffer.

TRUST Network Service helps to optimize EQUIOS operations and workflows, ensuring a consistently reliable production environment. In essence, it is designed to maximize uptime and create a stable base for effective production.

Predictive diagnosis based on monitoring of normal EQUIOS status

Provision of regular analytical reports and technical information

Precise identification of malfunctions plus operational support and guidance

Protection of clients' EQUIOS system

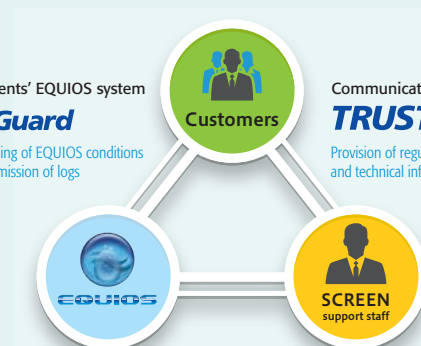
TRUST Guard

Accurate understanding of EQUIOS conditions and automatic transmission of logs

Communication with clients

TRUST Dialog

Provision of regular analytical reports and technical information



Remote assistance of clients

TRUST Assist

Precise identification of malfunctions plus operational support and guidance

TRUST Network Service is provided as part of the EQUIOS maintenance contract. Please contact your nearest sales representative for further details.

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We reserve the right to alter product design and specifications without prior notice.

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EQUIOS Version 8 Topics

Full automation and enhanced POD linkages



NEW

Improved links with toner-based POD and output with a wider color gamut

Processing of RGB to CMYK conversion is performed in the press (toner-based POD) instead of EQUIOS. This enables output with a wider color range using the POD gamut.



Improved EQUIOS open interface enables smarter operation

Advanced imposition settings (creep settings for the flatplan, etc.) can be made when creating the job in Smart JOB Creator. These settings significantly increase process automation.

Improved external text linking enables the creation of instructions for layered output, while reset instructions for the press can be issued from an external system. Both abilities further enhance automation.

Connection with imposition and planning solution "tilia Phoenix"

tilia Phoenix, by Tilia Labs, is an imposition and planning solution designed for a range of work including carton packaging and labels. SCREEN's EQUIOS connects with tilia Phoenix to enable JDF integration including imposition data, die cutting data and other job information. This integration reduces prepress time and errors for carton and package printing.



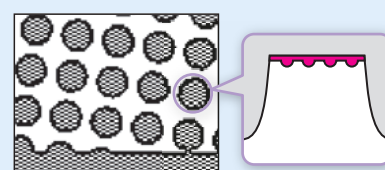
Enhanced workflow for flexo printing

Easier dot gain adjustment for flexo printing

The dot gain curves can be clearly seen when bumping up the settings, allowing more precise adjustment.

Super Fine Cell patterns for flexo printing (option)

Computations performed by EQUIOS allow the formation of minute holes in the plate surface, helping to improve ink transfer issues that can occur in flexo printing. The holes retain ink and enable a higher volume to be transferred. This function is particularly effective for increasing ink density in solid areas.



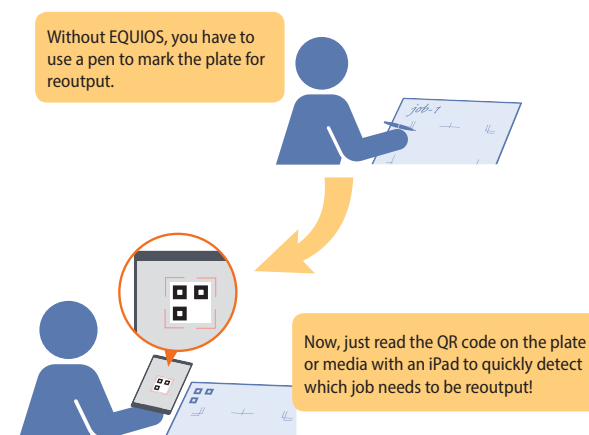
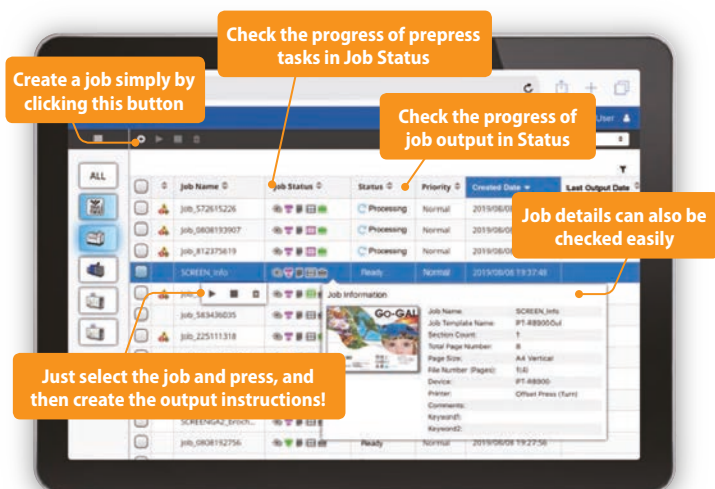
Simple Job Controller streamlines processing

An iPad can be used to register and output printing instructions for jobs. These jobs can be registered as soon as their orders are received, which significantly improves efficiency. Anyone can create output instructions by designing templates for imposition and output in advance.

QR codes allow checking of jobs requiring reprinting

When a plate is damaged and needs to be output again, you can detect which plate it is by reading the QR code on the plate with an iPad. This reduces the time and effort required to find the job data and also eliminates mistakes.

A barcode option for books is necessary to create QR codes.



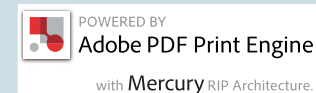
Latest RIP core improves stability of output results

EQUIOS Version 8 incorporates Adobe's latest RIP core, Adobe® PDF Print Engine, and latest Adobe® PDF Library. It also includes the latest version of PitStop for enhanced preflight functionality. In addition to ensuring compatibility with Adobe's latest products, EQUIOS provides more stable output quality at even faster speeds.

PDFs with transparency effects are now processed directly and the reproduction of line widths and colors composed of overprints both show major improvements. EQUIOS Version 8 significantly improves the productivity of the latest PDF-centered workflows, ensuring materials are output at high speed looking exactly as expected.

Certified "Adobe Mercury RIP Architecture"

The Mercury RIP Architecture is a scalability framework and distributed multi-tier cache technology developed



by Adobe for its PDF Print Engine. It enables enhanced, high-performance rendering and is essential for digital presses as well as variable printing. SCREEN has adopted Mercury for use with EQUIOS on the Truepress Jet520HD variable printing system.

Improved data processing boosts overall performance

High-speed processing

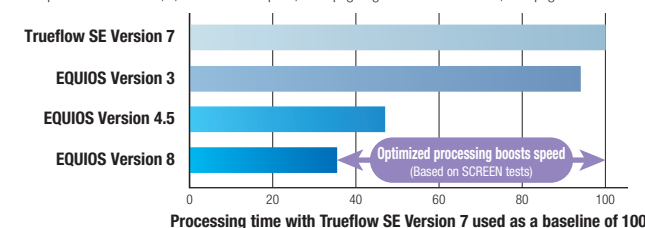
Following the adoption of Adobe PDF Print Engine, SCREEN has fine-tuned the processing of accessories, spot colors and multiple pages, producing significant gains in performance. With Version 8 offering enhanced support for parallel processing, SCREEN has also improved the processing speed to achieve further increases in productivity.

Efficient parallel processing

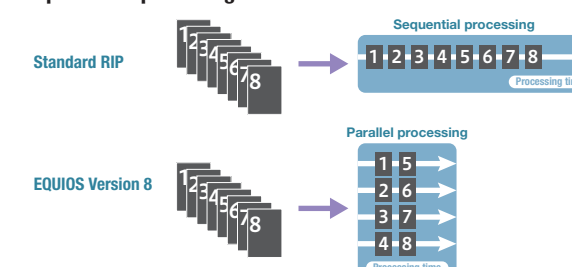
To ensure continuing high productivity, EQUIOS has supported parallel processing functionality since it was first launched. Execution of parallel processing operations can be adjusted as the number of CPU cores and installations of EQUIOS PT-R Drive increase, helping to maximize the performance of the EQUIOS platform.

Comparison of processing times

Tickets: Input processing • Imposition scheme • DotTiff (2400 dpi)
Imposition scheme: A4, 1,030 x 800 mm plate, 40 4-page signatures for both sides, 320 pages



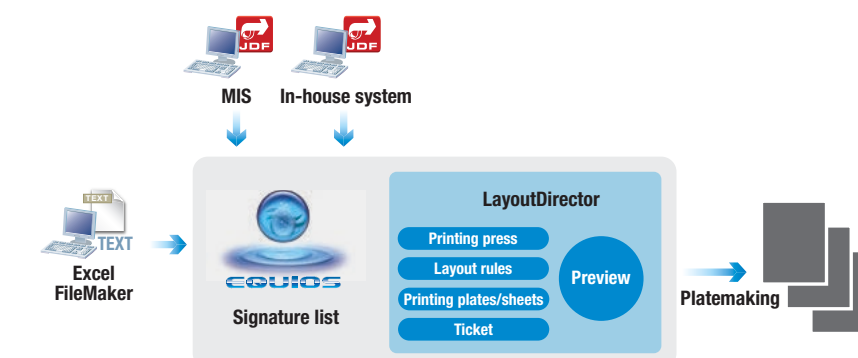
Comparison of processing times



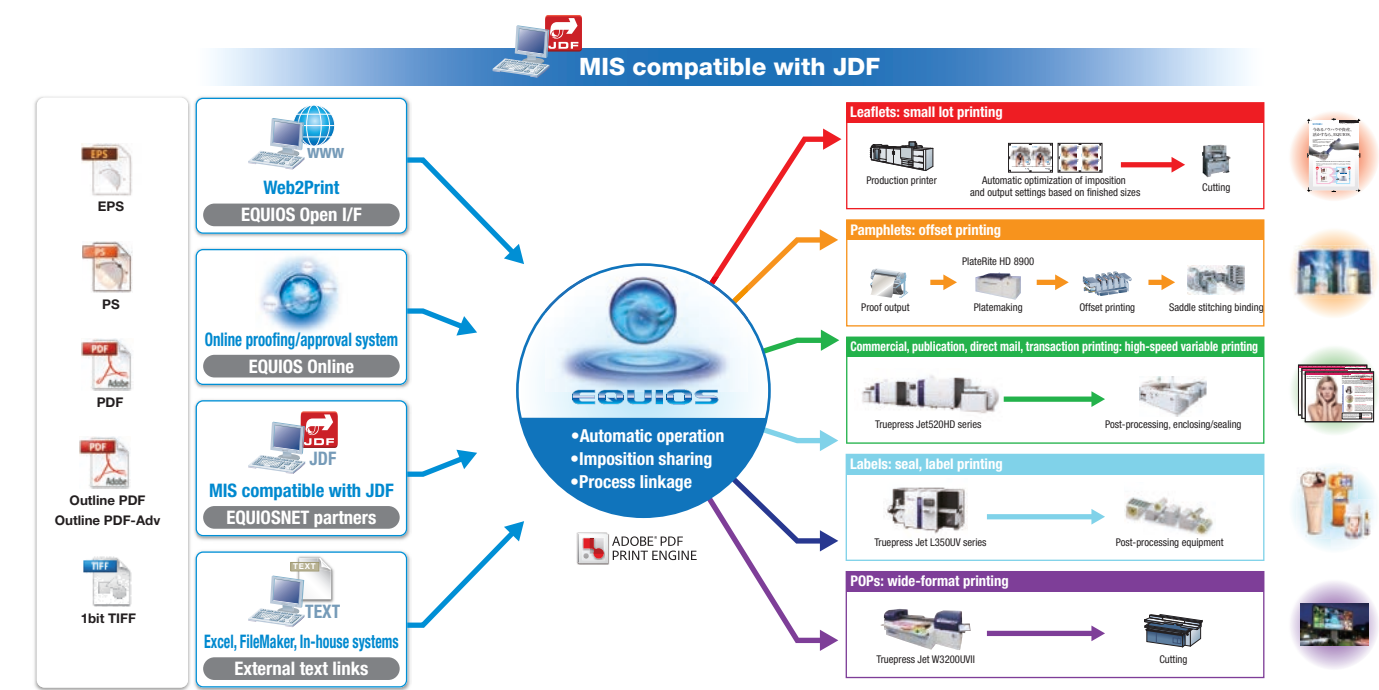
Optimized linking to external text enables full automation of ganging operations

Enhanced linking to external text creates a seamless workflow from upstream systems right through to LayoutDirector. Ganging settings can be assigned simply by linking plate, paper and accessory settings to a press, greatly improving work efficiency.

Even after ganging, setting changes, fine adjustments and other customizations can be performed quickly and easily. The entire sequence from data input to platemaking can now be completed without using specialized ganging software.



Autoflow concept enables continuous, fully automated processing



Fully automated prepress processing

RIP workflow development has focused on creating new ways to streamline and accelerate processing. However, with the printing industry requiring ever wider options for differentiation and value creation, EQUIOS simply eliminates unnecessary operations. This approach improves overall workflow efficiency and establishes the shift to value creation as a new goal for the industry.

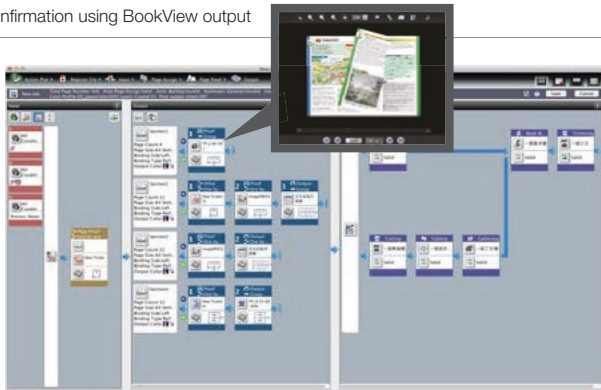
Nonstop processing from order receipt to final submission is now a reality with SCREEN's Web to Delivery Automation concept. The most important factors in this approach are the conversion of the process plans for individual jobs to templates (action plans) and ability to automatically select appropriate templates based on the data input (linkage with upstream devices).

Individualized job workflows

EQUIOS includes Action Plan, a navigation system developed by SCREEN to enable simple yet reliable planning of complete workflows from initial order receipt through to final submission. Action Plan allows advance setting of all operations leading up to submission, including input, preflight, imposition, output, cutting and folding details. This permits fully automatic, nonstop processing with no lost time between steps.

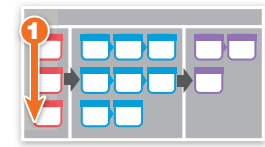
The ability to create an action plan for individual orders naturally improves the processing efficiency of regular jobs. These workflows can also easily be changed or expanded as required, boosting productivity for any type of processing.

Easier confirmation using BookView output



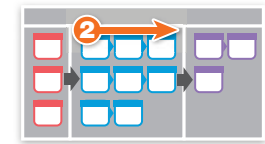
1 Input workflow settings

PitStop's new engine automates various processes based on the characteristics of the input data. This includes the output of error and warning notifications, execution of preset processing and other operations linked to the job conditions



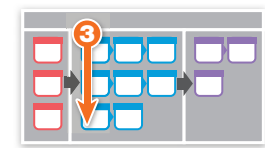
2 Output workflow settings

With EQUIOS, it is possible to assign multiple output tickets for a single section. This eliminates the need to individually configure complex imposition or ticket settings for each output process and produces significant labor savings and improvements in automation.



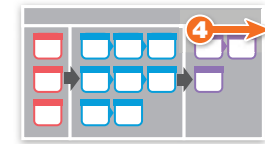
3 Section functions

EQUIOS handles the different parts of jobs containing mixed specifications as sections, enabling uniform management of an entire job. This simplifies the complicated process control and file management usually required for each order, effectively reducing the overall workload.



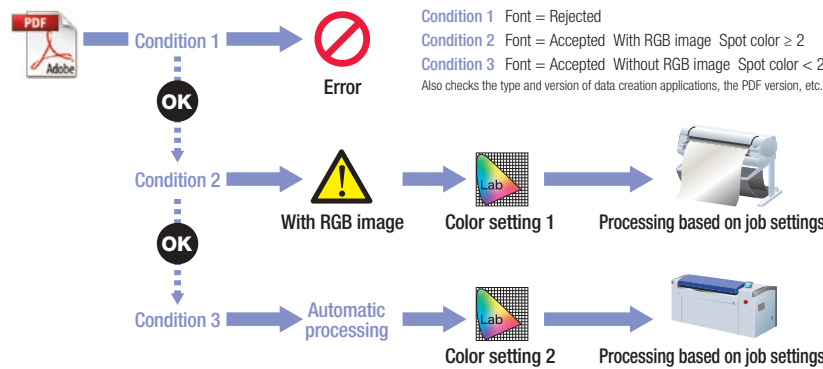
4 Post-processing settings

EQUIOS automatically handles the setup of the entire post-processing system by creating JDF data for a wide range of operations such as cutting and folding as well as collating and binding. Individual processes can also be configured as a single workflow containing any desired operations, dramatically reducing the waiting time between steps.

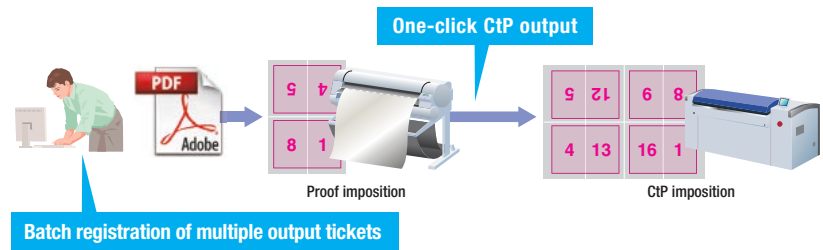


JDF data is automatically output to the post-processing equipment as soon as output of all signatures in a job finishes.

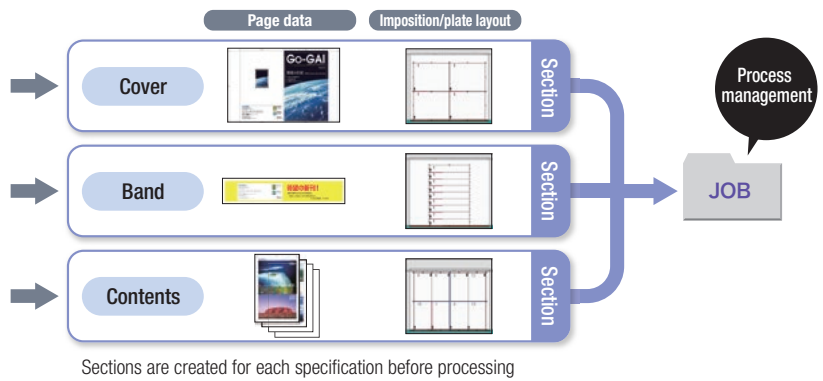
Automatic optimization of settings based on the input data and job conditions



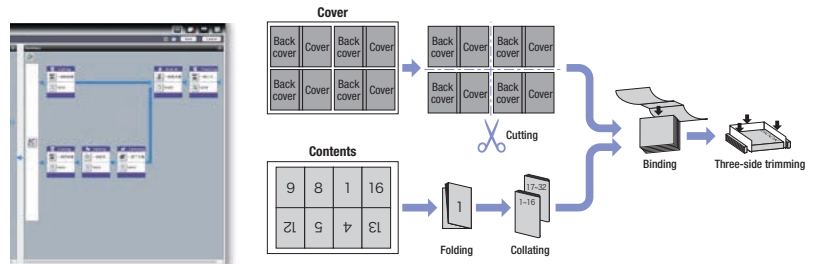
Integrated setting of all output processing during data input for total automation



Effective uniform management of jobs containing different specifications



Total control of all post-processing including cutting, folding, collating and trimming



Highly efficient automatic imposition boosts throughput and reduces errors

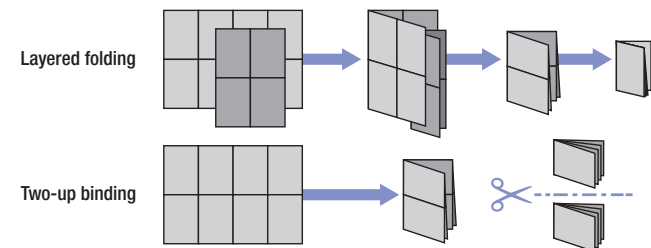
Streamlined automatic handling of standard formats

Imposition templates

Easier imposition design using CIP4 compatible fold catalogs

Fold catalogs are used to specify execution patterns for folding machines. In its normal configuration, EQUIOS is preloaded with around 90 types of CIP4 compatible fold catalogs as well as its own standard fold catalogs. It is also possible to create additional user defined specifications. With EQUIOS's selection of fold catalogs, even operators with limited knowledge or experience of imposition patterns are able to easily design imposition schemes.

Extensive range of standard fold catalogs



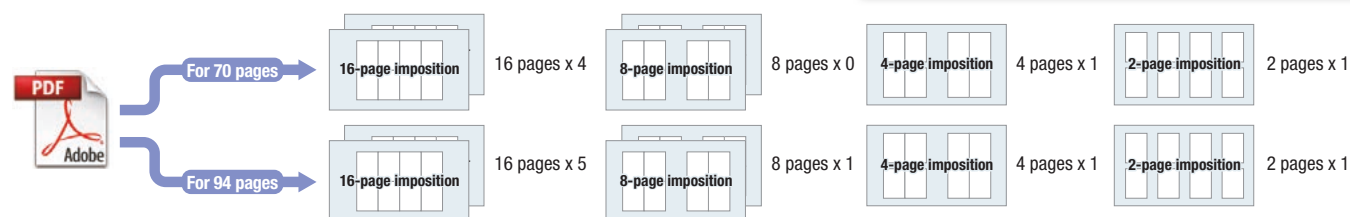
Simplified management with fewer templates

Imposition scheme templates are independently linked to the information for the basic settings, print settings and accessories via the fold catalogs (fold patterns). This means it is extremely simple to make changes after the templates are created. Even details such as the finished size and output destination can be reset with ease, eliminating the need to manage large numbers of similar imposition scheme templates.

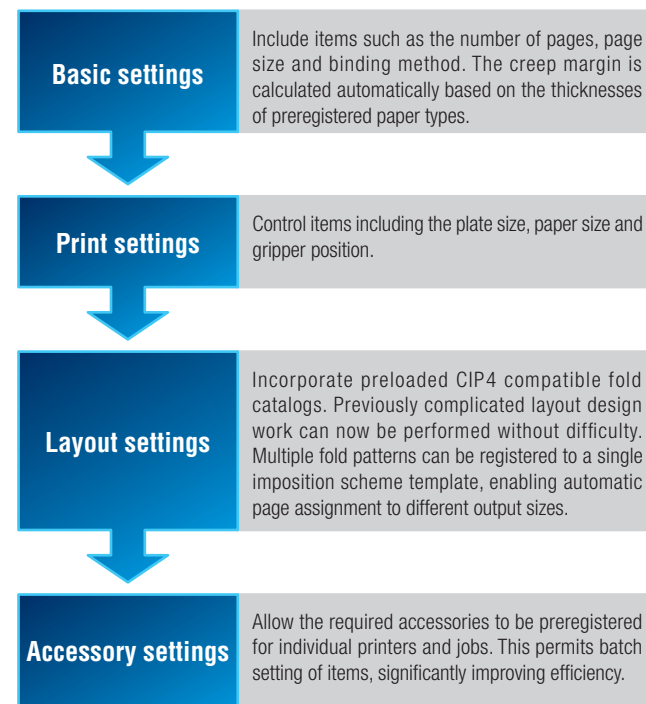
Auto-fit imposition scheme

EQUIOS supports the setting of multiple fold catalogs with four, eight or any other differing number of pages in an imposition scheme template. This flexibility eliminates the need to create templates for each size. Based on the number of pages for the input job, imposition and page assignment are executed automatically by increasing or decreasing the preset signatures as required.

For example, with a B1 printer (A4 x 8 pages, total of 16 pages for the front and back), if four types of fold catalog (16 pages x 1, 8 pages x 2, 4 pages x 4, 2 pages x 8) are preset, imposition schemes can be automatically created according to the total number of pages for a job, as shown below.



Simpler creation of templates using wizards

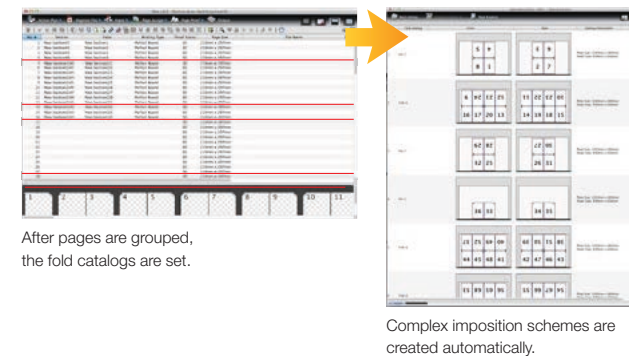


Extremely flexible processing of irregular imposition

Irregular layout support

Optimized combination of different signatures

With EQUIOS, even irregular jobs including 4-page, 8-page or any other type of signature can be processed with complete reliability. The whole job is first separated into groups using Activity Board and then appropriate fold catalogs are assigned for each group. After this, the complex imposition scheme is created automatically. Any changes to the pagination can be handled just as easily. (Please see the following page regarding Activity Board.)



Automatic double-page spread processing

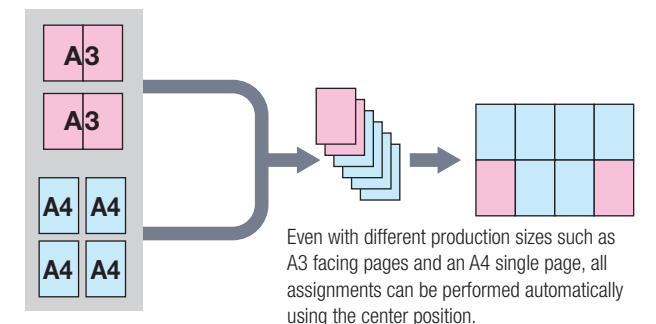
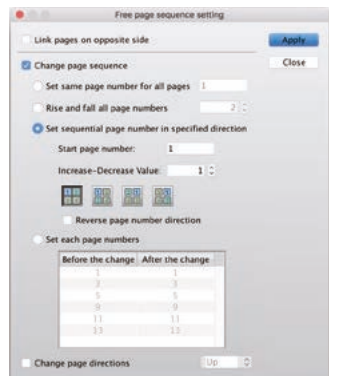
Automatic assignment of different production sizes

EQUIOS automatically performs the time-intensive spread processing required for the data of facing pages. Layout is possible using either the four corners or center as references. This extremely convenient feature means that if the margin is uniform, all assignments can be performed automatically using the center position, even when the finished and spread sizes are mixed.

Free progress imposition

More reliable step and repeat setting

Free progress imposition schemes enable items such as playing and trading cards to be imposed with greater efficiency. Various operations can be performed from the imposition progress screen, including changing all of the different page numbers to the same number and setting the direction in which the serial numbers are assigned. This greatly simplifies the previously time-consuming step and repeat processing.



Auto Ganging (option)

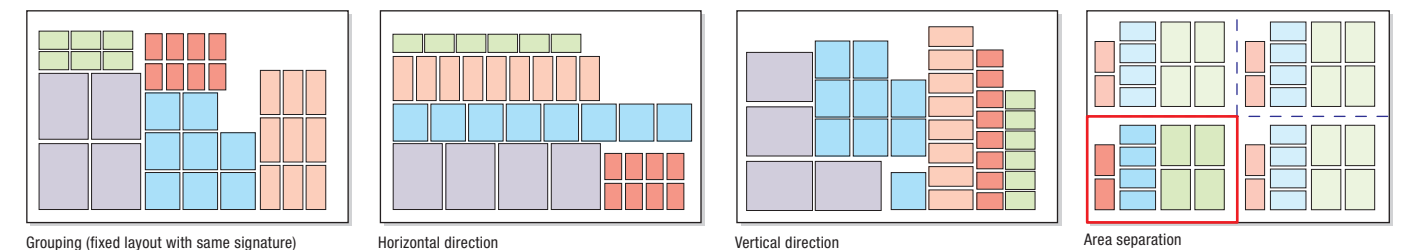
Optimized imposition of jobs with different specifications

Auto Ganging performs automatic and highly efficient imposition of different single-page jobs. Automated intelligent plate design that even calculates factors such as ease of cutting further improves throughput for this type of printing work.



More flexible layout style for imposition

The layout style can be set freely based on points such as the imposition rules and whether ganging is used. This provides increased flexibility in any production environment.



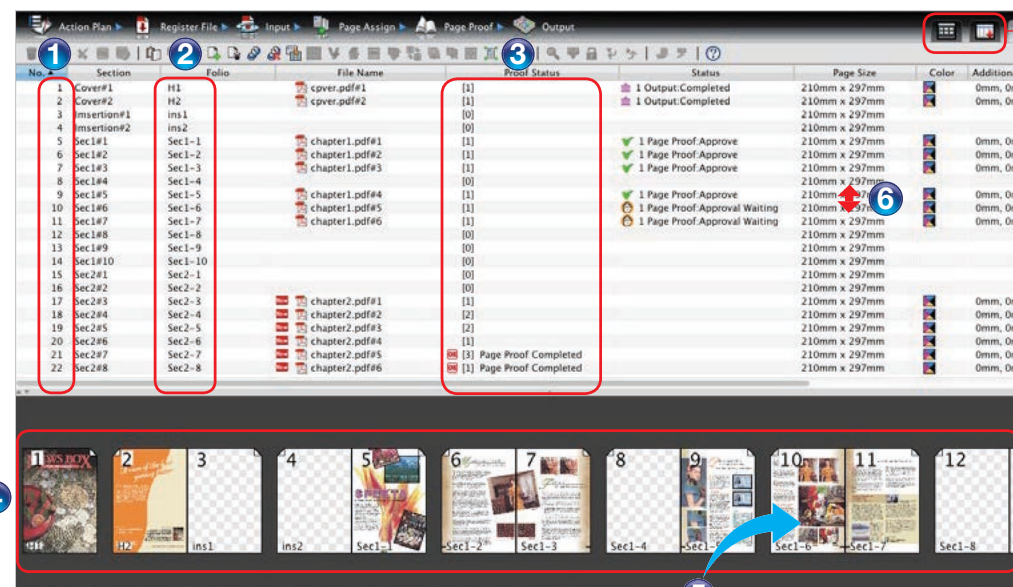
Instant status checks of individual pages and smart information sharing enhance progress management

Control of progress conditions, file registration and output for individual pages

Activity Board

EQUIOS Activity Board is an integrated compass for confirming at a glance job progress from data submission to output by page sequence. Job management from data submission to final proofing can be performed using temporary pagination even if the imposition scheme is not finalized, allowing page assignment and other tasks to be performed in advance. Activity Board also offers numerous other convenient functions, including a preview feature for spread confirmation, indication of the number of proofing rounds, and drag and drop file registration.

These capabilities support efficient operation and are advantageous for the management of small jobs and jobs for which pages arrive late. EQUIOS Activity Board enables integrated management of progress in production steps such as data submission, replacement and final proofing, as well as management of reprinting, proofing and digital submissions. It serves as a valuable management center, not only in the prepress process but also in sales, process management and platemaking.



Activity Board (page view)



Page assignment screen

Main functions

- Activity Board enables confirmation of job progress at a glance by page sequence and contributes to information sharing with sales, production and other departments.
- Operation using temporary pagination is possible. EQUIOS can be used as a progress management tool beginning with processes before pagination has been finalized.
- Data submissions, proofing counts, final proofing and imposition conditions can each be checked.
- Input data content can be confirmed using a viewer. Spreads and page offsets can be checked.
- Files can be input using a simple drag and drop operation, with the management screen and viewer updated in real time. Minus bleed and multi-dot gain settings can also be checked.
- Page transfer and replacement are both possible using the management screen.
- Individual pages can be selected for assignment from different uploaded PDFs.
- Layout (signature) view and file view are available in addition to page view.

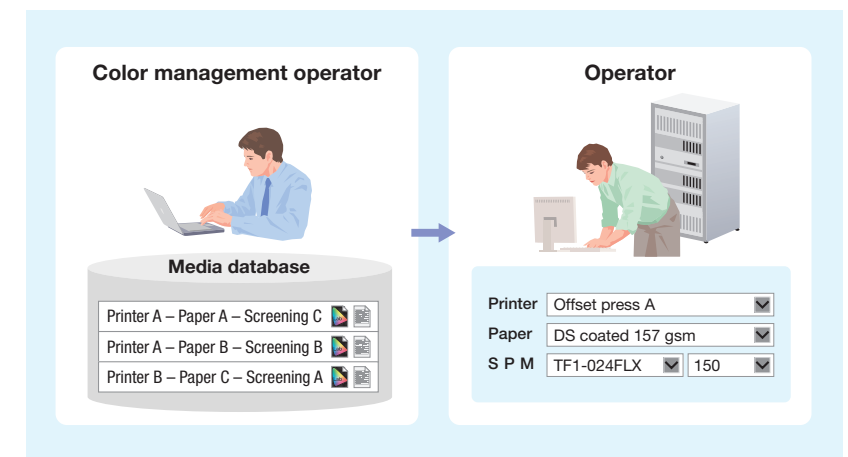
A wealth of color management expertise ensures optimal reproduction and error-free processing

Intuitive color management with outstanding quality

Media database

Using the expertise of a color manager to configure the Media database and separating color management setting from the printing operation are key to realizing error-free color management and efficient personnel utilization.

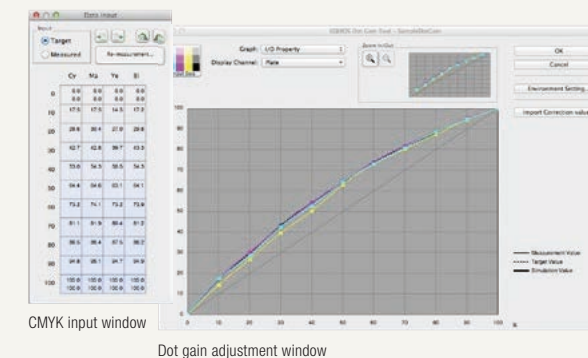
The Media database centrally manages output systems (printer and CtP), printing conditions (paper, screening, screen ruling and gripper width) and color management information (dot gain and ICC profile). When the operator who issues printing instructions selects a printer and printing conditions (paper and screening), the latest, most optimal color conversion settings are automatically selected from a database. The simplified, accurate operation eliminates the need for the operator to be conscious of color management requirements each time printing instructions are prepared.



Cutting-edge color management environment

Optimized dot gain setting

With EQUIOS, a dot gain optimization function comes as a standard feature. It works with an X-Rite densitometer to automatically calculate dot gain correction values using measured values from actual printed matter. EQUIOS streamlines operation by integrating into the Media database a series of processes, from the creation and manual fine-tuning of dot gain curves to the display of simulated application results and association with printer and paper.



Linkage with ink-saving tools

Ink-saving tools that reduce the amount of ink used and contribute to cost-cutting are attracting a great deal of attention as a solution to increasingly fierce price competition. EQUIOS supports DeviceLink profiles, enabling linkage with ink-saving tools.

Enhanced color correction functions

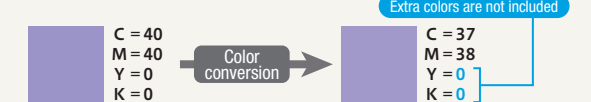
Maintenance of secondary colors

This new function prevents the inclusion of unneeded colors when converting secondary colors during ICC profile conversion. The ability to preserve colors consisting of two components stops the loss of color saturation.

Maintenance function off



Maintenance function on



Black spot correction

This function prevents shadows being lost as black areas when correcting black spot settings in the profile and converting from a wide to narrow color gamut.



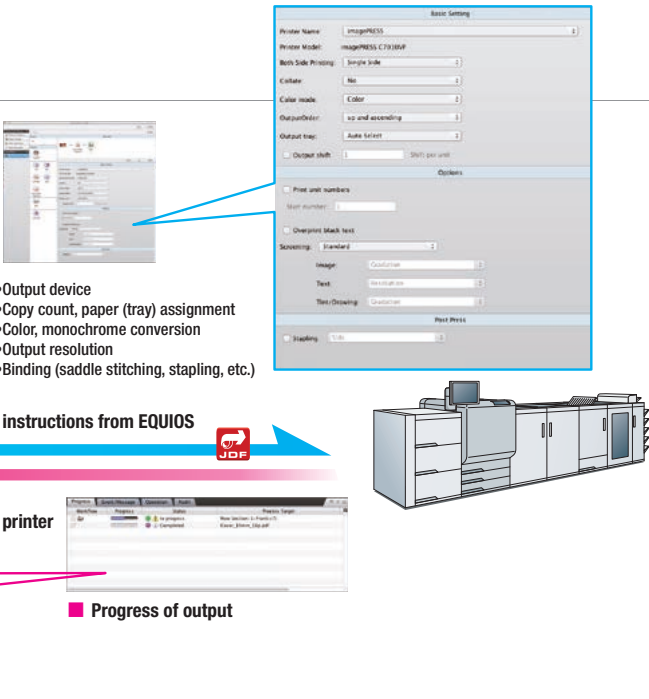
External
Integration

Connection with external peripherals creates faster, more efficient workflows

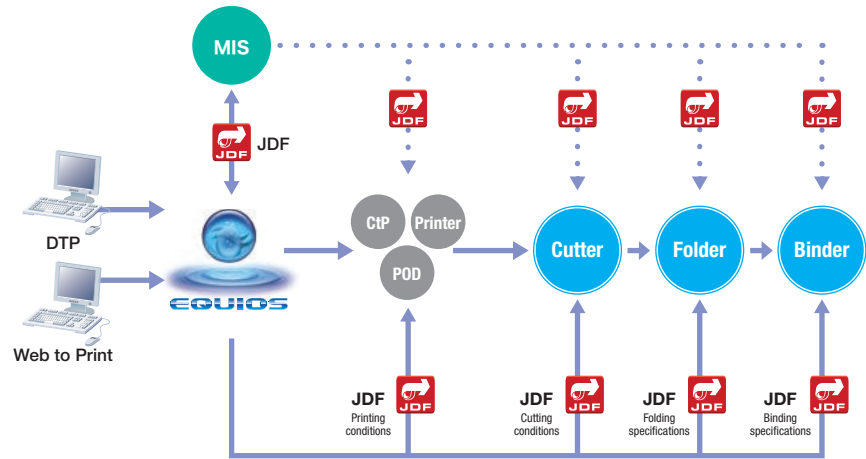
Improved links with toner-based POD

EQUIOS offers enhanced capabilities as an output center for CtP and virtually any other type of printing. It is now possible to output basic instructions to the production printers (toner-based POD) available from most companies.

Along with the acquisition of paper information, transfer of instructions and process management, EQUIOS provides improved interactive linkages that enable comprehensive monitoring of printing progress and results. Handling of small lot jobs is also easier than ever before.



Full automation from data input to final processing



Improved upstream (MIS) automation

Template selection and job creation are both executed automatically using printing specifications set and are managed by the MIS. This capability fully automates platemaking. EQUIOS is able to link with the MIS and utilize it as a comprehensive production tool. This helps to reduce information transfer errors as well as operator workload and also supports integrated process management. Linkages with Web2Print and EQUIOS Online also provide a direct connection between the client and production and make EQUIOS an extremely efficient automation solution.

Enhanced post-processing linkages

EQUIOS enables direct transfer of cutting and folding information (JDF) as well as the setting information for the equipment itself. Following downstream transfer, setup takes place automatically. These settings can of course be sent via the MIS. EQUIOS also handles the barcodes for most binding equipment via accessories. This prevents any lost or non-sequential signatures and further enhances automation.

Online input, proofing and approval system connecting clients with DTP and prepress

EQUIOS Online

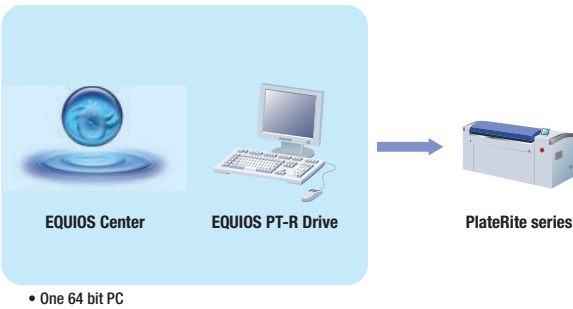
EQUIOS Online is an Internet-based communication tool that seamlessly connects clients with the DTP and prepress processes. Proofing histories and progress details can be shared online by all parties, helping to create a highly efficient, error-free and continuous operational workflow. As EQUIOS' front end software, EQUIOS Online creates tight linkages that help to optimize the entire production process. Its many advantages provide an ideal opportunity for approaching clients with new value added proposals.

Configuration
Examples

EQUIOS

Powerful yet flexible workflow solution immediately boosts any production environment

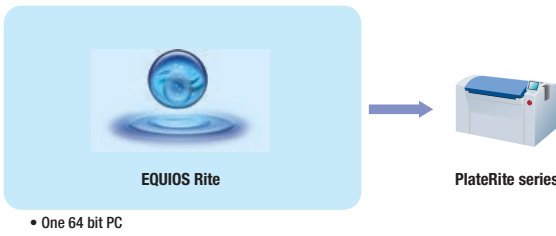
A configuration with many key features as standard for CtP operation. Recommended workflow when first introducing EQUIOS



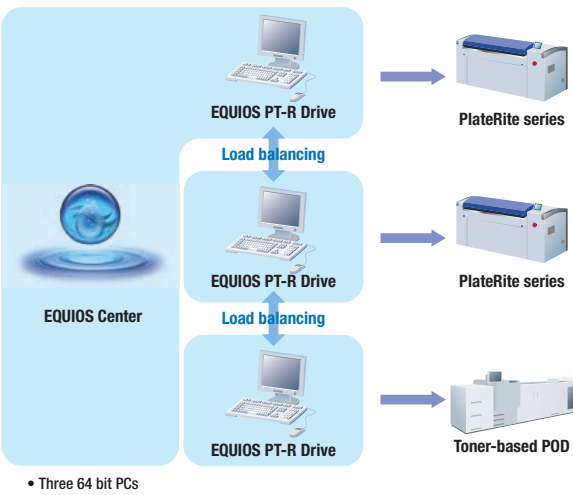
A workflow that links with a Web portal system, providing flexible support even in an environment where process management and platemaking operations are separated



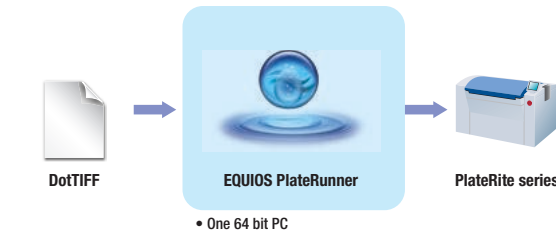
Basic configuration with core functions for CtP output



Recommended workflow when using multiple CtP recorders



Recommended workflow when using DotTIFF applications



EQUIOS for CtP Product Lineup

EQUIOS PT-R

EQUIOS PT-R includes EQUIOS Center, enabling integrated management of all EQUIOS workflows, and Adobe® PDF Print Engine. EQUIOS PT-R Drive can also be incorporated to provide advanced computation processing and maximize the power of the EQUIOS system. EQUIOS Center supports effective management of the content input process, jobs, imposition, CMS and output device conditions. It also provides control of multiple installations of EQUIOS PT-R Drive. This comprehensive package enables flexible operation of all CtP processing.

EQUIOS Rite

EQUIOS Rite is a limited feature version with the core functionality required for CtP output from EQUIOS PT-R. It allows the creation of workflows including operations such as auto-trap, imposition, TIFF output and recorder output. A system can easily be upgraded after installation with the purchase of additional features as the production environment expands.

EQUIOS PPP

EQUIOS PPP is a limited feature version with functionality specialized for file output operations from EQUIOS PT-R. A combination of EQUIOS Center and Polished Drive will handle Postscript-to-PDF or PDF-to-PDF conversion combining SCREEN color expertise, Adobe and Entofocus Preflight technology for file output operation. (Connection to CtP devices is not possible)

EQUIOS PlateRunner

EQUIOS PlateRunner is a limited feature version with the specialized functionality required for DotTIFF output from EQUIOS PT-R. EQUIOS PlateRunner provides easy access to view display, file search, rotation and other functions that are useful for DotTIFF applications.

Please contact your SCREEN representative for a list of the functions and options available for each configuration.