ControlCenter Enterprise

Newspaper Prepress Flow Control

User Manual

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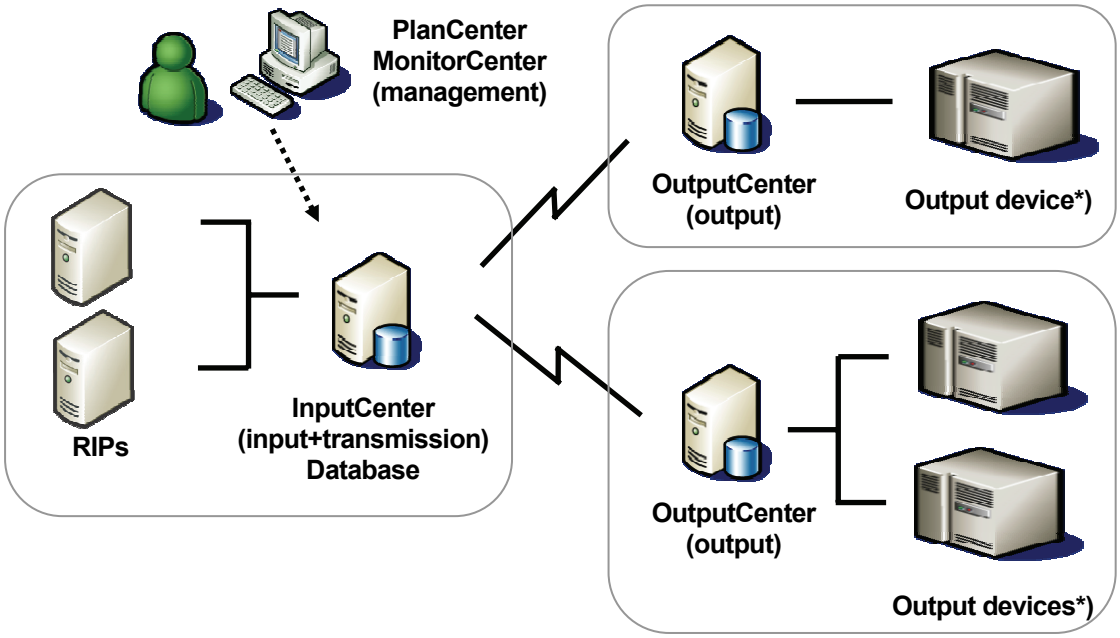
1 Introduction

1.1 Overview

ControlCenter Enterprise is a full fletched prepress edition management and output controlling workflow system for PDF files and ripped files. The basic functions of ControlCenter Enterprise are to act as a buffer and imposition engine for PDF/ripped files between the raster generating RIP(s) and the imaging output device(s). ControlCenter Enterprise offers a controlled page flow by providing a page approval stage at which the result of the ripping stage can be inspected visually and approved. Approved pages are optionally transmitted to a remote site for final imposition and imaging when released for production. ControlCenter is highly configurable is terms of how products are organized and how production must be controlled.

1.2 System components

At least three applications make up the workflow system. At the page emitting end (editorial), the automated *InputCenter* application monitors network folders for PDF



Typical system diagram showing ControlCenter Enterprise in between RIPs and output devices. The link between the InputCenter Station and OutputCenter is typically a LAN or WAN direct line. PlanCenter/PageCenter is a LAN client used for planning, visual page approval and flow control. MonitorCenter graphically shows status of all available processes and devices.
Note that for certain output devices each device must be connected to a separate OutputCenter PC.

or ripped material and transfers the files to the remote sites. A copy of the file is stored on the ControlCenter file system.
The *PlanCenter* application acts as the user front end to the system with planning and page flow controlling options. *OutputCenter* is the physical impose and imaging controlling application. OutputCenter receives files and imposes and exposes these in pre-defined ways depending on products (using press and layout templates).

Status for input, approval, transmission and imaging are reported to the PlanCenter front end for production control and reporting.

MonitorCenter is a graphical representation of all available devices and processes in the system, shown on one screen. From MonitorCenter, processes and output devices can be enabled/disabled remotely. Physically the devices are not changed but enabling and disabling will add or remove the devices as potential output devices (part of load balancing). MonitorCenter also shows all event logs and allows re-input, re-transmission and re-exposure requests.

ControlCenter includes a backup scheme allowing a second database and file server to be a 'hot' or 'cold' backup for the main machine(s). The BackupCenter application periodically synchronizes the backup machine with the main so it is up to date with configuration data and on-going productions (hot backup).

It case of main server failure BackupCenter will inform clients (InputCenter, OutputCenter, PlanCenter etc.) to re-connect to the backup database.


InputCenter


PlanCenter


OutputCenter


MonitorCenter


BackupCenter

ImportCenter (optional)


InkCenter (optional)


ProofCenter (optional)


PlateViewer (optional)

Apart from the core modules there are several optional modules. *InkCenter* generates ink preset data to press control systems. InkCenter Enterprise version

furthermore allows viewing of color plate images in the press room using the *PlateViewer* application. (see InkCenter user manual).

ProofCenter is required for high resolution bitmap proof to printers and plotters. ProofCenter generates ICC-profiled imposition proofs.

ImportCenter is the tool used for automated import of plans from external sources, e.g. from editorial planning systems.

1.3 Basic assumptions

1.3.1 Database

The ControlCenter installation CD includes the Microsoft MSDE SQL software. This package can be used for system with less than 6 clients attached (InputCenter, OutputCenter, PlanCenter and MonitorCenter).

For larger systems the full Microsoft SQL Server 2000/2005 must be purchased and installed prior to installation.

If a backup license is purchased, also install the MSDE or SQL Server on the backup machine.

1.3.2 PDF input

ControlCenter can be used for planning, imposition and output of PDF or PDF/X files. The internal preview generator makes use or Adobe Acrobat for PDF-to-JPEG conversion. Acrobat must be purchased separately and must be installed on the InputCenter PC prior to input of PDF documents.

Note that it is not enough to install the Acrobat Reader – it must be the full package version 4 or later.

1.3.3 TIFF input - Ripping

In case of Post-RIP setups, this document assumes the presents of one or more RIP with 1-bit TIFF output option (standard in e.g. Harlequin RIPs). The page setups on the RIPs must be configured to produce the required page/flat output. The incoming TIFF files may be compressed (typically G4).
The RIP must supply the separation color name in the file name. InputCenter will be able to decode this color name and will use it for proof/preview generation.

1.3.4 Network

The network between input and output site may be a LAN or a routed WAN. If firewalls are present between sites, ControlCenter requires one port open for FTP transfer (typically 21) and one port for database reporting (default is 1433). For automated backup notification to remote clients additional port are required. Ports for this is configurable (default port range for backup notification is 6000-6020).

1.3.5 Remote RIPs

For PDF workflows a RIP must be present at the remote site with pre-defined hot-folders for imposed PDF files. OutputCenter will generate and transfer final PDF files into folders depending on the production setup. This allows different RIP methods to be applied for different presses (e.g. for different dot-gain compensation).

1.3.6 Output devices

At the output site the presents of one or more imaging devices are assumed. The interface between the imaging controlling PC running OutputCenter and the device depends on the type of device. For Post-RIP setups ControlCenter supports direct interfaces to a range of device (see *ControlCenter Imager Compatibility List* sheet). Some devices are requiring fully made up TIFF files provided thought a network connection. Finally OutputCenter can deliver the final bitmap wrapped in EPS or PDF.

The system is to be installed in Windows PCs. As a minimum the InputCenter PC must be Windows 2000 Server or Windows 2003 Server with the latest service packs and updates applied. A server style PC with hardware RAID is also recommended as the station acts as system file server. Other PCs may run non-server OS.
Detailed minimum requirements are described in chapter 2 – Installation.

1.4 Terminology

There are a number of important concepts one must understand before configuring and using the ControlCenter. The terms relates to organization of products.

ControlCenter can run in two modes: *planned* and *unplanned* mode. The two modes can run simultaneously but not on the same product.

1.4.1 Planned mode

Planned productions are activated with the application *PlanCenter*. Plans hold information about expected pages for a given product and the subdivision of the product in editions (zones) and sections. Moreover the plan dictates target press(es), priority, deadline, page pairing and press specific layout options for the product. Plans also make page tracking more informational because the system will report what is left to do at any time.

Planned products can be changed during production – e.g. in case of changed page counts, regional plan changes, color changes or changed target output device(s) or press. Even for changed impositions the pages already received and approved will stay in the system – they will just be organized differently at output time.

1.4.2 Unplanned mode

For certain simple products a plan may not be required because the target press is predetermined and because no page pairing is required. Unplanned pages are simply entered into the system as they arrive. Preview files are generated and pages are transmitted and output when released for production. The parameters related to destination press, preview profile and layout template are linked to the hot-folder setup used for the product. Defaults for priority, hold/release settings and plate layout are decided at configuration time, not production time.

Note that page tracking only can show progress of already received pages – not pages to come. This is the main argument for using planned productions, even for products not requiring imposition.

1.4.3 Product organization

ControlCenter are able to cope with subdivisions of productions into physical and logical subsets. Many different definitions exist so definitions are required:

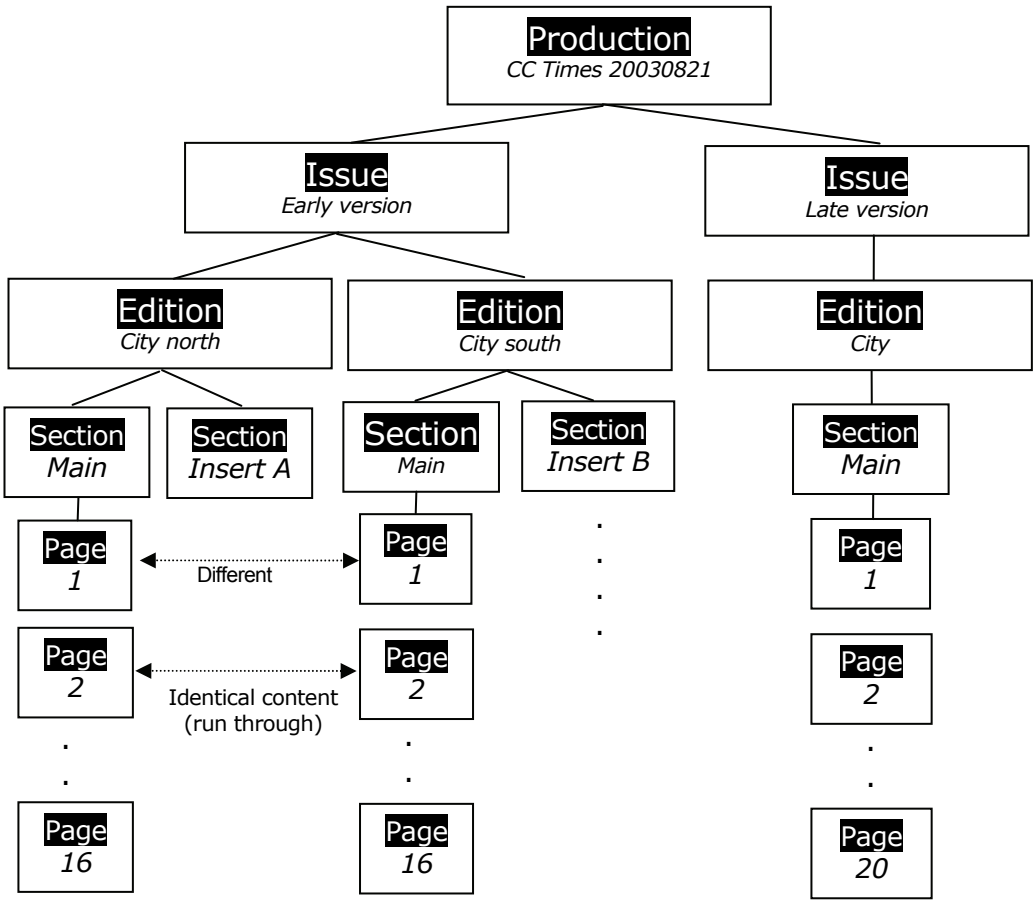
The production is the top level object in the hierarchy with a given publication name and a publication date. During planning one or more productions are launched by the operators.

A production consists of one or more issues– typically early and late issues of the same publication on the same publication date. Certain pages may be changed between issues (typically updated in contents) while other pages may be identical between issues.

Zoning is implemented using (regional) editions. One edition is typically denoted the main edition. In a specific regional edition, typically only some of the pages are specific for the region – the rest may be identical to the main edition pages (called run-through pages – they are not changed between press runs)
Complex zoning may require that there are sub-editions of regional editions. This calls for an 'edition-tree' in which the regions are arranged in layers. Knowing the edition-hierarchy is important when running the planning in order to calculate plate counts and form page pairs.

The lowest aggregation level is the section level. Multiple sections may be printed in the same run but may also be split in different runs (e.g. inserts produced days in advance for later collation). The section level is often the lowest subset level for which pages will be held and released.

Note that sections may not be physical sections, which divides the printed copy in e.g. main, sport, life etc. For larger commercial style products the section division is done simply due to press limitations. The sections (or rather the press sections) are simply press runs which are later collated into a finished product by insertion.

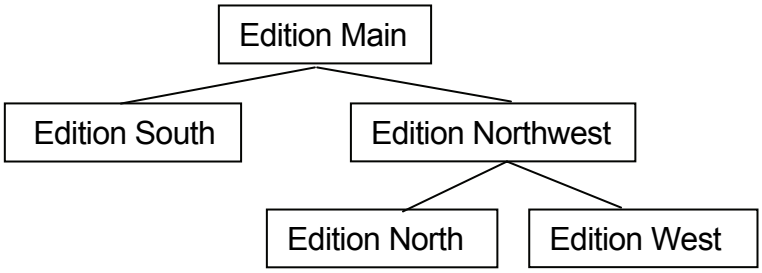


Product hierarchy handled by ControlCenter. Note that often the Issue layer is not used.

1.4.4 Edition hierarchy

Because zoning can be very complex for highly regionalized products the main/region division is sometimes not enough. A multilevel sub-edition hierarchy may be required.

In the example below a tree describes the edition hierarchy and a simple edition plan with a common edition and sub-editions. When planning such a plan the 'common' pages used for a given sub-edition is by default taken from the first parent edition holding a unique page. Below page 5 in the North edition is identical to page 5 Main, whereas page 2 North is identical to page 2 Northwest.
Note that the default 'edition-parent' page can be overruled. At planning time the page 2 North can be taken from the main edition.



Edition\Page	1	2	3	4	5	6	7	*8*
Main	X	X	X	X	X	X	X	*X*
- South	X			X	X			
- Northwest	X	X	X					
- - North	X		X	X				
- - West	*X*				*X*		*X*	

1.5 Production control

There are several concepts to understand when it comes to production control. When productions are planned there are options to control when plates are to be output. Basically control can be divided in two: page release control and plate/film release control.

1.5.1 Page release (approval)

For CTP it is highly recommended to soft-proof all pages prior to plate making. ControlCenter soft-proofing allows inspection of ripped pages prior to output. Initially all pages can be set on hold using the planning **Approval required** mode**.** Only after an operator has approved the page, the page will be ready for output (depending on production hold/release – see below).

Page approval is normally left to the editorial production department but can be distributed to different departments using the PlanCenter or WebCenter clients. For contract printers the page approval can be decided by the origin of the pages (customers).

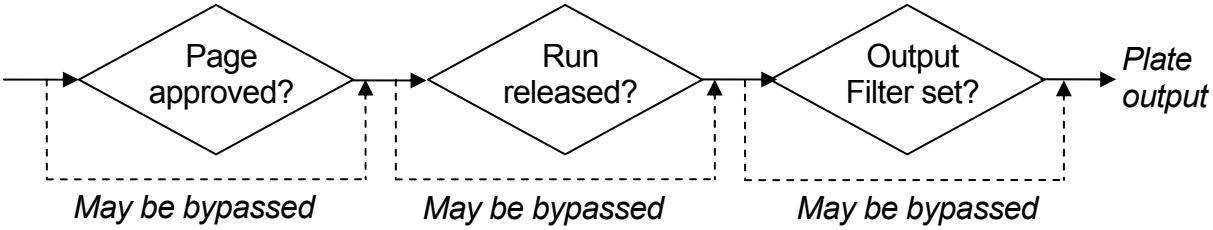
1.5.2 Plate release

Because page level inspection is often separated from actual plate production, another flag will hold the plate for final production. The **Hold** flag is usually set for all pages when plans are activated. When the plate room is ready to produce a given product, they release it. Any approved pages will automatically be paired and output.

Note that multiple productions can be released at any given time but it may now be convenient because it will cause plates for different press runs to be made.

If multiple products are released the output sequence will be dictated by the priority level of the plates. Combining the plate release with priority levels may be convenient at times when a few plates are missing for the upcoming press run, but the page closure waiting time may be utilized for producing plates for the next run again. When the last pages for the upcoming run has been closed and approved, they will 'jump the queue' and get out first because of the higher priority.

As an ultimate plate production control the OutputCenter applications also offers a *Press run filter* (see section 4.3.2) for select one or more specific press runs for output (and holding other runs back).



Plate/film production can be controlled with one or more checkpoints related to page approval, press run scheduling (release) and plate production filter in the plate room.

The production release mechanism will depend on the organization and responsibilities of the different departments. ControlCenter offers all the tools necessary but it is up to the organization to decide who does what.

1.6 About this manual

This user manual includes the required details for installing, configuring and operating the ControlCenter Enterprise system. The following chapter outlines the installation process. Make sure you have the installation CD and required dongles ready prior to installation.

The main chapters describe the individual applications – their basic usage and configuration.
The appendix includes detailed information about regular expressions and external script execution which are options used by InputCenter for customizing file name recognition.

2 Installation

2.1 First time installation

ControlCenter ships with an installation CD and a USB dongle. Insert the CD and wait until the main installation program pops up. If nothing happens it is because your PC is configured not to autorun CDs. In this case browse to the CD and

The CD autorun installation program giving the option to install the system module by module. Move the mouse over the buttons to see the help texts

double-click on the **Autorun.exe** file.

2.1.1 Installing the database

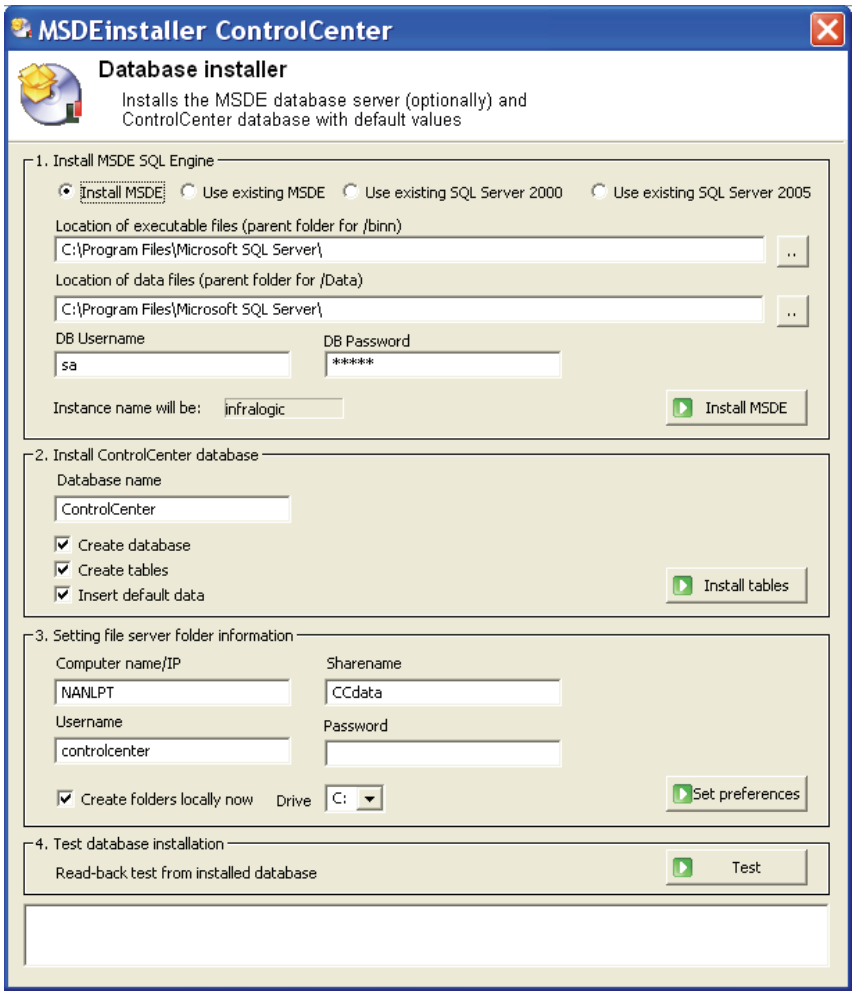
The database must be installed on a server in the network. Typically the database is installed on the machine running InputCenter (at the editorial).

The database installation program will copy in required files and show the database installation options.

The installation is divided in four parts: The core (optional) Microsoft SQL Desktop Engine (MSDE) engine installation (1), the scripting of the tables (2), the creation of system folders (3) and finally the installation test.

Database server options
The ControlCenter database may be installed on an existing SQL Server or MSDE engine. If SQL Server is chosen, this server must be installed separately using the SQL Server2000/2005 installation disk. When done resume the *MSDEinstaller* application to needed tables

MSDE SQL Engine
The installer will call the standard Microsoft setup program to install the MSDE. It is recommended to use the proposed paths for file locations.



Database installer

Press the *Install* button and wait until all opened windows are closed again.

ControlCenter database
For a new clean installation, make use both Create database, Create tables, Insert default data are checked (default).
Press *Install* to issue the SQL scripts required for database creation.

System folders
The system requires a central file repository known by all clients. The central file storage is organized as a root folder (default name *ccdata*) and several subfolders for high-res data, preview files etc.

The root folder must be shared and must be accessible from network clients. In most cases the root folder is located on the same server running the database. However, the file repository may be located on another machine in the network, e.g. an existing file server.
Enter the name of the file server and the root folder share name. Press *install* to store the folder location information in the database and to create the folder hierarchy.

Note that the configuration of *Remote location receive folders* may not be known at the time of installation. This can be set at a later stage during installation of OutputCenter.

After successful installation the following items are present:

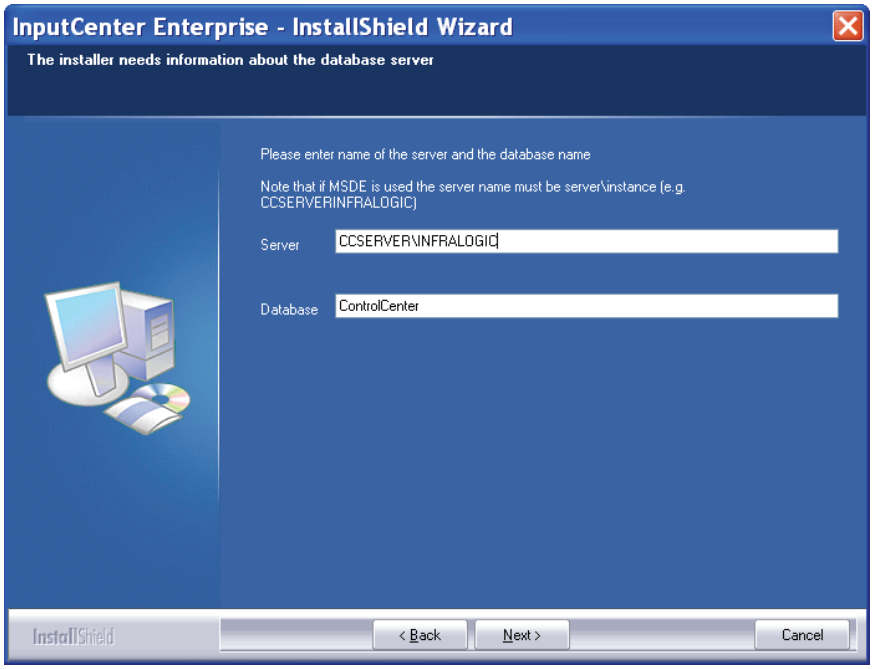
- The MSDE SQL Server service (running)
- The database and tables used by ControlCenter (default db name is ControlCenter)
- Default setup data in database, eg. Default input, proof and output configurations
- The ODBC Source named *cc* needed by clients
- The system folders where the top folder is shared as *CCdata* on the server (default share name)

2.1.2 Installing InputCenter

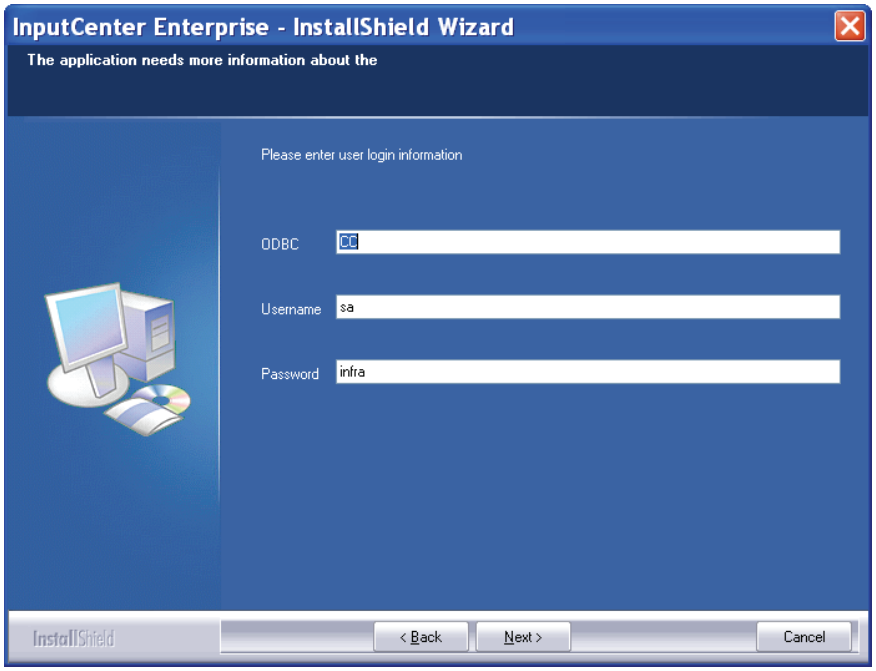
All of the remaining applications use standard installation programs which can be removed from the system using *the Add or Remove Programs* option in *Control Panel.*

The InputCenter application must be installed at the editorial site with network access to the RIP(s).

The installation program will present a set of default options which are recommended. The location of the executable files is in the folder <systemdrive>\Program Files\InfraLogic\InputCenterEnt.exe



The installation program prompts for the server name and data root folder share which was defined during the installation of the database.
IMPORTANT: The instance name is not used if SQL Server is used. Contact the system administrator if these settings are not known.



The InputCenter installation program prompts for the ODBC DSN name, username and password. Contact the system administrator if these settings are not known.

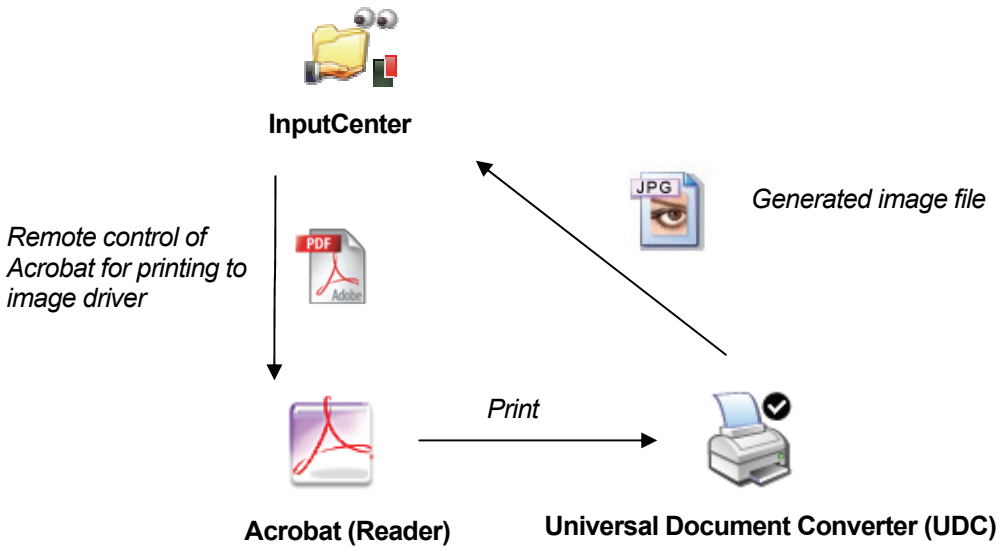
The only critical configuration is the location of the system server and data root

folder. You will be prompted for the server name (or IP address) and the share name of the data root folder on the server (*CCdata* is default). After successful installation an ODBC connection is created to the database and
a shortcut to InputCenter is placed on the desktop. By default the installation program creates an input folder (*c:\input*) and a proof configuration (called *Default*). The configuration of the input queues and proof method is handled within the InputCenter program (see section 3)

The last step in the installation will automatically install the HASP dongle driver (USB version)

2.1.3 Installing Acrobat Reader and UDC virtual printer (for PDF proofing)

Preview-generation of PDF files requires that Acrobat or Acrobat reader is installed on the InputCenter PC. Also the virtual printer driver Universal Document Converter (UNC) is required. This 'printer' generates the image file to InputCenter when a PDF file is printed via Acrobat



2.1.4 Installing PlanCenter

The PlanCenter application may be installed at the editorial site or at the remote site or at both sites. PlanCenter is the primary client for planning, controlling page approval and output control.

The installation program will present a set of default options which are recommended. The location of the executable files is in the folder <systemdrive>\Program Files\InfraLogic\PlanCenter.exe

Like InputCenter (and all other applications), the server name and data root share name must be entered at a stage in the installation. See section above for further details

2.1.5 Installing MonitorCenter

The MonitorCenter application may be installed at the editorial site or at the remote site or at both sites. MonitorCenter is a client for supervising all processes and devices in the system.

The installation program will present a set of default options which are recommended. The location of the executable files is in the folder .<systemdrive>Program Files\InfraLogic\MonitorCenterEnt.exe

Like InputCenter (and all other applications), the server name, data root share name and ODBC details must be entered at a stage in the installation. See section above for further details

2.1.6 Installing OutputCenter

The OutputCenter application must be installed at the remote site. OutputCenter is the unattended application performing device monitoring, imposition, load balancing and imaging.

The installation program will present a set of default options which are recommended. The location of the executable files is in the folder <systemdrive>\Program Files\InfraLogic\OutputCenter.exe

During installation the installer prompts for the database server name, file server name (usually the same), share name of the data root folder and ODBC details.

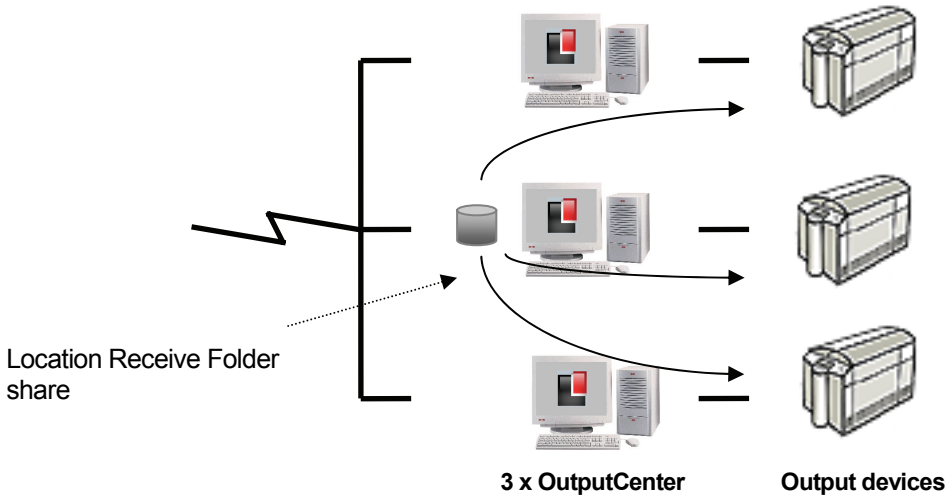
Location Receive Folder

The last step in the installation will ask for the location of the *Location Receive Folder* as servername/sharename . This folder will be the destination for the file transmission and the source file folder for all OutputCenter application on the specific location.

Note that if FTP transfer is used, an FTP service must be installed and configured on the remote site (e.g. Windows FTP Server, RhinoSoft ServU or similar). The Location Receive Folder must be reachable for the login user (configured in InputCenter). Remember to set read/write permission for the user.

Multiple OutputCenter applications

If multiple OutputCenter applications are running on the same location, they must all be installed to look into the same Location Receive Folder. There are no special settings necessary for parallel OutputCenter installations.



In case of multiple OutputCenter applications on the same site, one PC will hold the received files (Receive Folder). A backup share may also be configured.

2.2 Installation test

It is advisable to install and run the installation test program . First install the program from the auto-run installer (CCinstalltest on desktop). See Appendix C for detail about the installation test program.

3 InputCenter

3.1 Introduction

InputCenter is part of the InfraLogic *ControlCenter* suite of programs for publishing prepress output management. InputCenter takes in PDF files or high resolution ripped TIFF files from RIPs and generates composite page previews used in the approval production stage. In case of TIFF input the approval is based on ripped files and is thus the most secure checkpoint for ensuring reliable output.
For PDF input InputCenter uses Adobe Acrobat in the background to generate preview files. Acrobat must be installed prior to operation. Note that it is not enough to install the Acrobat Reader – it must be the full package version 4 or later

InputCenter absorbs the pages by monitoring one or more folders. For post-RIP flows each RIP output folder is a hot-folder for InputCenter with an associated configuration known as the *Input Queue Configuration*. For PDF input the source of files is usually an automatic pre-flight tool like Pitstop Server.

This input configuration dictates the input folder location, expected file naming convention, proof generation profile and rules linked to planned and unplanned product and preview.

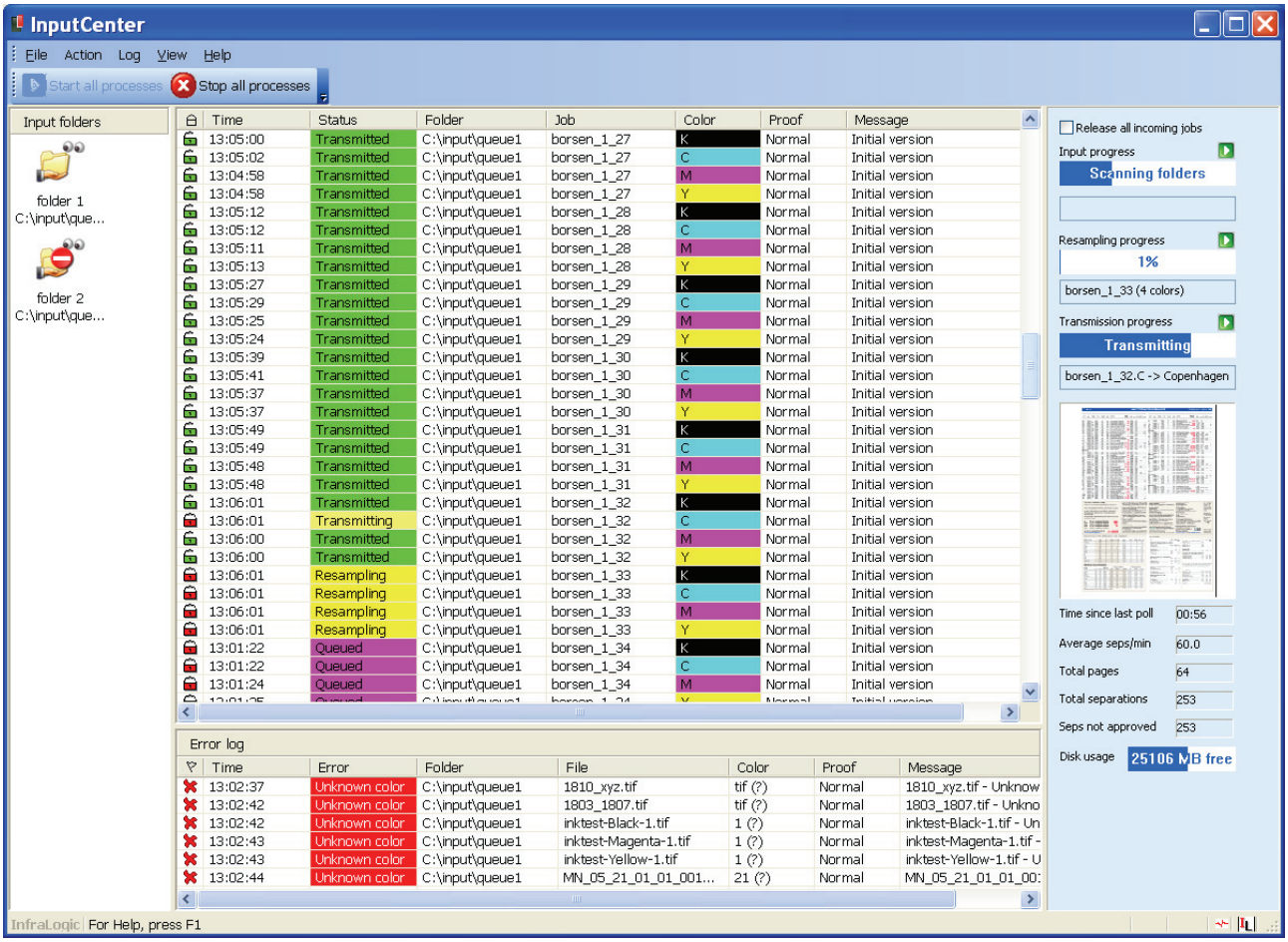
Planned products refer to product which has been prepared in the Plancenter application. Planning involved decision related to imposition, edition plan, distribution and priority of products. Running planned products ensures predictable and timely output and is required for imposed products.

Unplanned products are product without a pre-determined plan. Unplanned pages are simply entered into the system and transmission and output are performed according to setup data linked to the input folder. Unplanned pages cannot be automatically imposed – a plan is required for this. PlanCenter has a feature allowing a group of 'unplanned' pages to before planned in the system by applying a press plan 'onto' the unplanned pages. A number of rules will be applied when changing pages from unplanned to planned – e.g. purging of illegal colors, pages outside the page count range etc.

InputCenter stores all incoming TIFF/PDF files in a central file folder and stores preview files (jpegs) and thumbnail images in separate folders as well. Moreover InputCenter is responsible for transfer of incoming files to the remote locations (to

the *Remote Location Folder* on each location). The transmission is normal LAN file copy (NetBIOS) or FTP transfer.

It is up to the *PlanCenter* client program to view the previews and allow users to approve these. When a page is approved the associated PDF or high resolution separation files are copied to the *OutputCenter* – the ControlCenter imaging program (residing on the printing site).



InputCenter main user interface with the folder panel (left), the separation log (middle) and the progress panel (right).

3.2 Arranging the window

When ControlCenter runs on a single PC (local system), InputCenter and OutputCenter (section 4) can be arrange in a split screen fashion. Select **View->Half screen view** in both applications. This will arrange InputCenter in the upper half and OutputCenter in the lower half of the screen.

> Note: For automatic half-screen views at startup, set StartMaximized=2 in InputCenter.ini and OutputCenter.ini – see section 3.13 and 4.14

3.3 Basic usage

InputCenter is meant to run unattended on a PC with network access to the RIP(s). The program is capable of auto-starting the folder scans when the application is launched. However, the scan can be manually started and stopped also. Each monitored folder can be enabled/disabled in order to allow input from certain sources to be held back if required.

Once started three processes goes on continuously – the input folder search, the preview generation and the file transfer to the remote print site (if required). The preview generator will extract previews from PDFs or resample incoming tiff files to lower resolution images (the original high resolution files are kept as well).

The main user interface is divided in three parts – the folder panel, the logs and the progress status panel.

3.3.1 Input folder panel

On the left hand side the hot-folders are shown. Clicking on a hot-folder icon will enable/disable folder from the scanning process. A red stop sign indicates that the folder is not used.

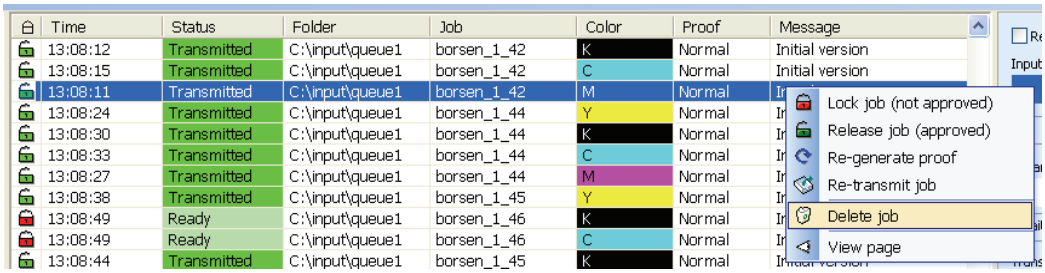
3.3.2 Log panel

The middle shows the list-based log of file separations being polled and re-sampled. Log lines can be selected using the mouse in order to purge files, approve/hold back files or re-generate proofs. This is done by right-clicking on the selected log lines.
The list shows the status of each separation (Queued, Re-sampling, Done or Error) along with the present lock/release state of the jobs, indicated with the lock/unlock icons.

3.3.3 Progress panel

The right hand side is informational only. It shows the current job in progress, the last preview made and some general statistics on files stored in the system.

By default all incoming pages are held back until a page approve action is issued. This can be overruled by checking the button *Release all incoming jobs*.



Select and right click in the log list to bring up the menu for manipulating jobs. Re-generate proofs may be used in case another proof profile must be applied to pages already re-sampled.

3.4 Error handling

Files are checked before they are moved into the system folders. Any file with errors are moved to the error folders and shown in the error log at the bottom of the main user interface. Errors related to files may be categorized as follows:

Naming error

File name does not correspond to the defined naming convention (see Input queue configuration section). The convention dictates division of file name in jobname and color. A typical naming error is missing separators.

Color error

Color name is unknown according to the color naming table (see configuration section)

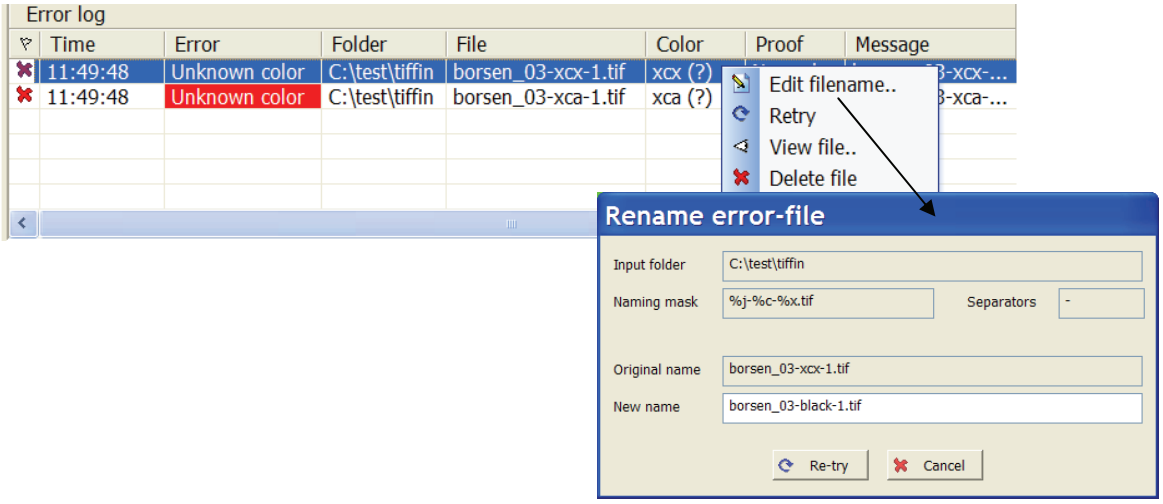
File corrupt

The TIFF-tag check or PDF-checker failed.

File error

File cannot be moved into storage directory. This is a severe error that may stem from bad configuration, network problems or disk problems.

Errors may be corrected manually by right-clicking in the error list. The pop-up menu gives the options to rename the file manually, re-try the polling, showing a preview of the file or deleting the file.

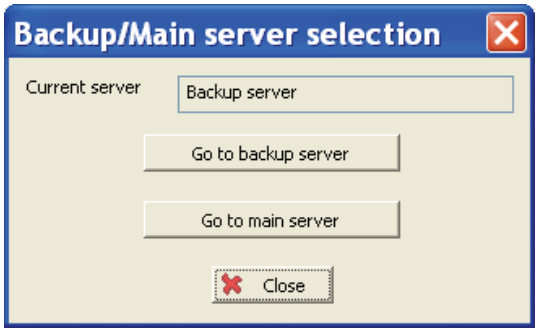


In the error log window, select and right-click on a job to show the error-handling menu. A given file name may be corrected and re-input manually using the popup Rename dialog.

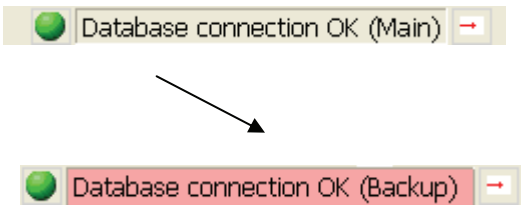
3.5 Change to backup

When fully installed with backup server, change to backup is centrally controlled via BackupCenter (see section 7). BackupCenter sends out a go-to-backup message to all connected clients (InputCenter, OutputCenter, PlanCenter etc.). InputCenter will re-connect to the backup server and resume operation.

If for some reason InputCenter must be connected to the backup server manually go to the menu **Action->Go to backup server**



InputCenter (like other clients) can manually be connected to the backup server (and changed back again)



The current server connection is shown at the bottom of the status bar

3.6 Configuration overview

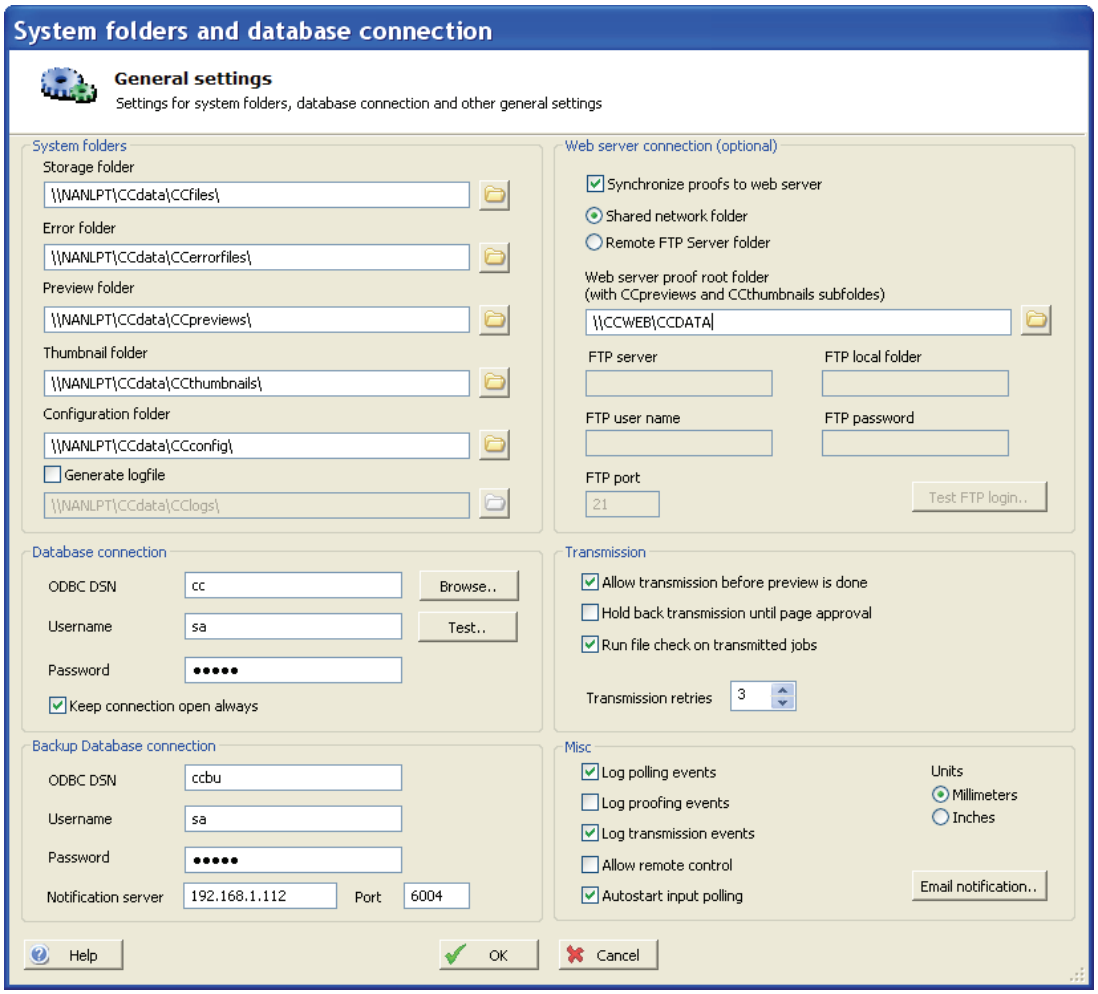
Note that changing configuration requires Administrative privileges. User will be prompted for username and password first time configuration menu is clicked. InputCenter will require login again to change configuration if no user action has occurred for one hour.

The system is configured using four different configuration dialogs: general settings, color name definition, location settings, input queue definition and proof generation definition. The first two holds system wide configuration and the latter two configurations related to InputCenter only.

3.7 General setting

System critical settings are accessed in the *File->General Settings..* menu. The configuration is stored and retrieved in the InputCenter.ini file and in the system database.

When InputCenter is installed using the Setup program, a set of default folder locations and a default ODBC data source are given and stored in the database. The folders and the data source can be changed in the configuration dialog.



Storage folder

Central file storage of all incoming tiff files. When InputCenter moves files into the storage folder they are renamed to <uniquenumber>.<color> for homogeneous access for the rest of the flow. The unique number relates to an entry in the ControlCenter database.

Error folder

Any files not matching the input naming convention are moved to this folder

Preview folder

Re-sampled composite (color) jpeg files are stored here. These files are typically 72 dpi files for page approval.

Thumbnail folder

Small preview files used for the page gallery in PlanCenter and WebCenter are stored here

Log folder

Folder used for log xml files

The database connection is required for ControlCenter installation. The configuration in InputCenter assumed the presents of an ODBC connection to the database (see section 2).

ODBC DSN

InputCenter uses an ODBC connection for status communication. Make sure the MSDE database[1] is installed and an ODBC source is created on the database.

Username

ODBC user name

Password

ODBC password

Keep conn. open

Recommended for installations where the database is located near the InputCenter application (same LAN).

[1] Described in section 2 Installation

In case a backup database is installed enter the ODBC DSN for the backup server. Note that the DSN for backup is not automatically created during installation – it must be added manually.

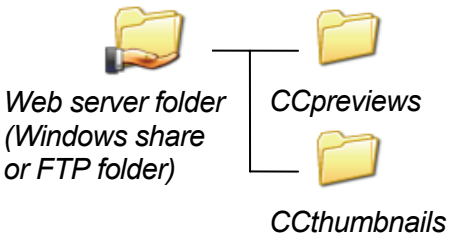
Notification Server

Name of server running BackupCenter. Usually the backup server name.

Notification Port

TCP port used internally for communication between BackupCenter and InputCenter. Default is 6001

In case preview and thumbnails are to be distributed to e.g. a web server, a copy of the preview file and the thumbnail can be made to a remote folder. The folder structure is assumed to be a root folder with subfolders named *CCpreviews* and *CCthumbnails*. The root folder may be a windows network share or an FTP folder. Contact the system administrator for configuration details.



Sync proofs to web server

Copies jpeg file to specified folder and maintains a cleanup schedule for old jpegs in the remote folder.

Web server root proof folder

Shared network folder (root of /CCpreviews and /CCthumbnails) on web server (if presents)

FTP server

Server name to use for FTP transfer to web server (usually the same name as the web server). Make sure the home folder for jpeg files are accessible for the web application showing the jpegs.

FTP local folder

Local subdirectory relative to login folder (home folder) with /CCpreviews and /CCthumbnails subfolders.

FTP username

Web server FTP login account name

FTP password

FTP login account password

FTP port

FTP port (default is 21)

Allow transmission before preview

If checked file transmission will start as soon as files are polled. However, if the checkbox below (Hold back until approval) is set transmission will not start until approval.

Hold back transmission until page approval

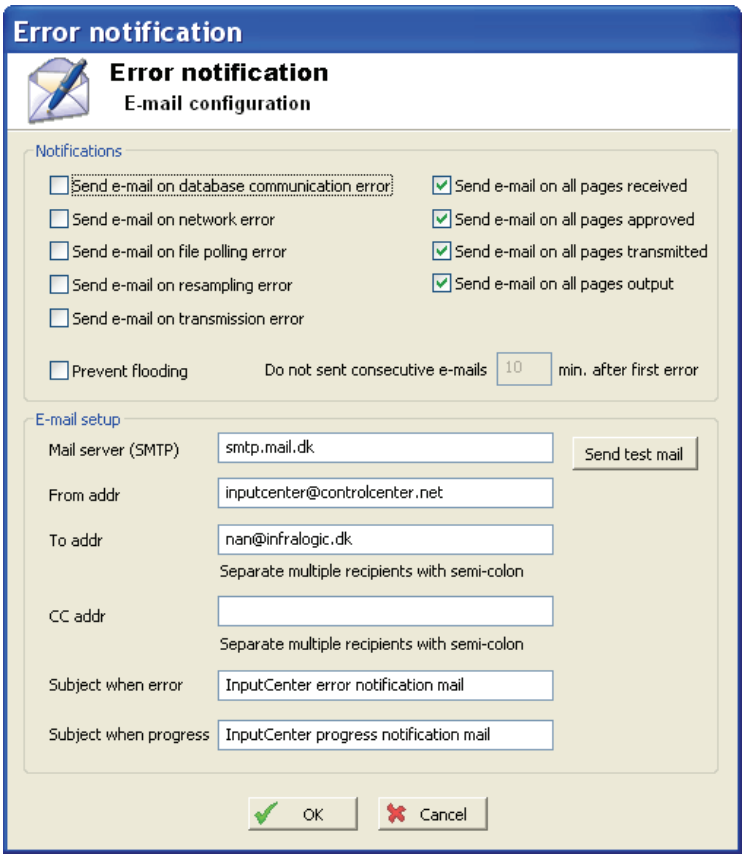
If set transmission will require page approval. This may be necessary in case of limited line bandwidth so that line resources are not used for noon-time-critical files.

E-mail notification

Click button to adjust the error notification e-mail system. See section

3.7.1 E-mail notification

InputCenter can notify operators via email about production progress and abnormal situations such as unknown incoming files, database connection errors or file



The error notification system allows e-mails to be automatically sent on different types of errors

transfer errors.

The system is able to send e-mails on the following events:

- All pages for a product has been polled (received)

- All pages for a product has been approved
- All pages for a product has been transmitted
- All pages for a product has been imaged
- Database connection error
- Network errors (hopefully not to the mail server)
- File polling errors (folder connection errors or illegal file names)
- Re-sampling errors (soft-proof generation)
- Transmission errors

Prevent flooding

Often a database error or network error may be sticky causing errors to persist. In order to prevent many e-mails being sent on sticky errors the **Prevent flooding** option will not repeat the error notification in a specified time frame.

Mail server

Enter outgoing SMTP mail server address (DNS name or IP-address)

From addr

Fills the FROM address field in the e-mail message. Note that some e-mail server will reject 'un-real' FROM email-addresses.

To addr

Fills the TO address field in the e-mail message. Multiple recipients can be added separated by semi-colons.

CC addr

Fills the optional CC address field in the e-mail message. Multiple recipients can be added separated by semi-colons.

Subject

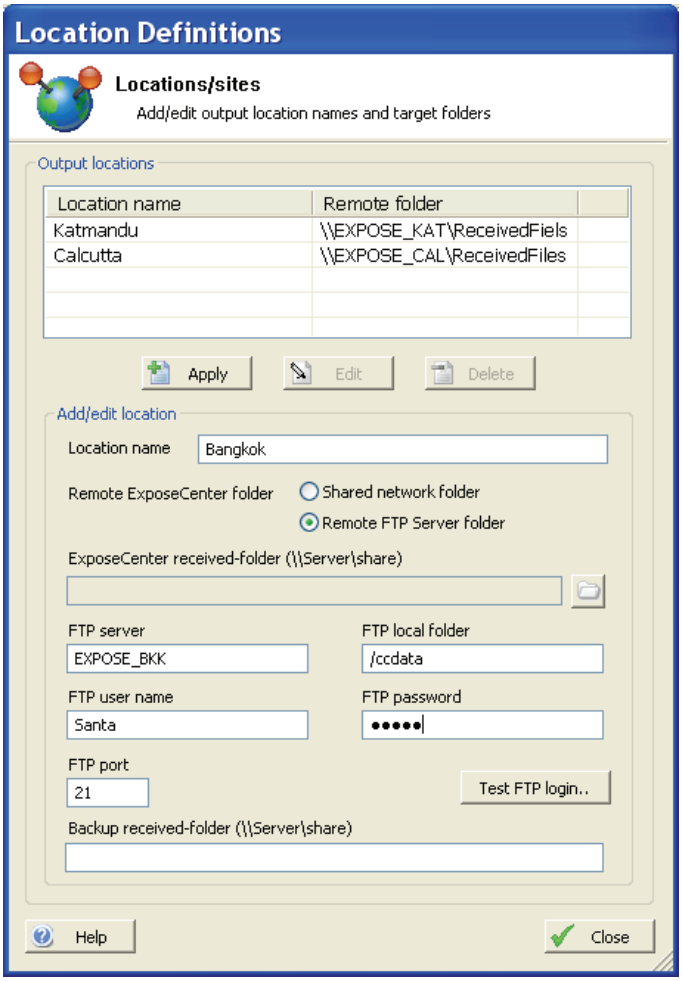
Fills the Subject field in the e-mail message.

Note: Most mobile telecoms have services allowing sms-messages to be sent via emails.

3.8 Location definitions

All remote locations must be defined in order to distribute the incoming files. A folder on each location must be shared to the network, either as a Windows share or as a FTP-server folder.

During installation of the OutputCenter application(s), the location name and network folder is configured and inserted into the common database. The locations already



Definition of names and remote target folders for output locations (sites).

defined during OutputCenter installations are listed in the Location Definition dialog. Under normal circumstances, no modifications are needed to the location list.

The Location definition dialog has three main buttons – **New**, **Edit** and **Delete**. Selecting New enables the input of location name and remote folder. Select folder type (Shared network folder or Remote FTP Server folder).

Press **Apply** to commit changes. Likewise, the Edit mode must be committed with the Apply button.

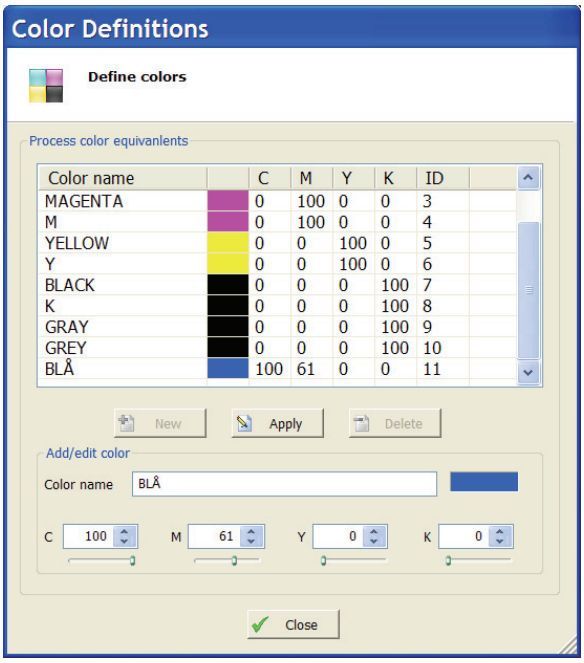
3.9 Color definitions

The incoming TIFF files are in principle all black but have files names given by the RIP that reflects the separation colors. The files has no other information about the

colors than the name, so in order to generate correct spot color previews, a color definition table is required.
All color names are looked up here (including process colors) in order to retrieve C,M,Y,K process color equivalences.

The Color definition dialog is accessed through the *File->Configure color names..* menu.

The color definition dialog has three main buttons – **New**, **Edit** and **Delete**. Selecting New enables the input of color name and color percentages. Press **Apply** to commit changes. Likewise, the Edit mode must be committed with the Apply button.



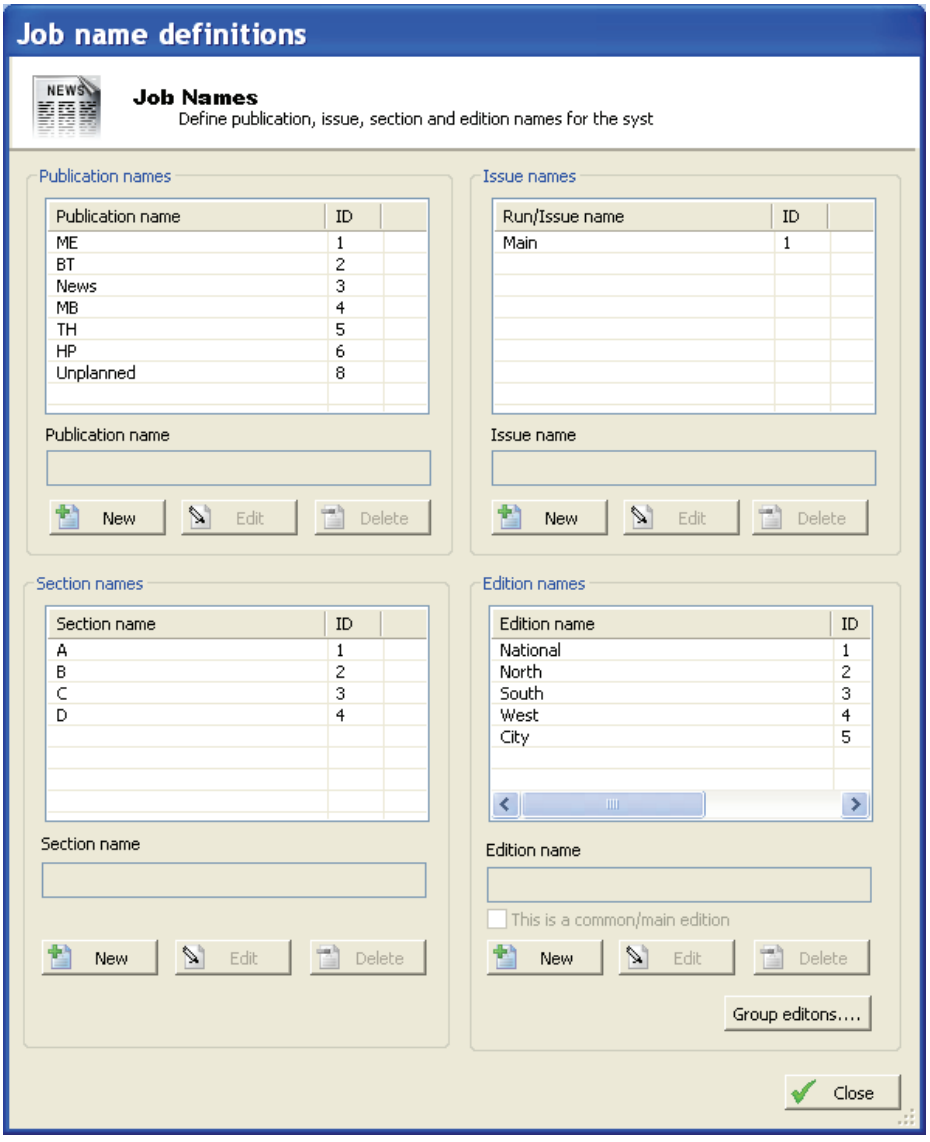
Definition of expected input color names and process color equivalents.

3.10 Job Name definitions

The system must know the names of publications, issues, edition and sections. These names can be defined in all ControlCenter applications using the *File->Configure Job Names* menu. The four name entry panels are similar except that further data may be added to the edition names.

Certain edition names are to be used as main editions in zoned production. Click the checkbox **This is a common/main edition** to define the edition as a main edition.

IMPORTANT NOTE: The system MUST have at least one entry in each of the name lists, even if production is not organized with the particular name category. For example if multiple issues are not used, one default entry must still exist. At installation time default names are defined to get started.



Job Name definitions. Add names used for publications, editions, sections and issues to the lists.

To further categorize editions click the **Group editions**.. button.

3.10.1 Edition tree

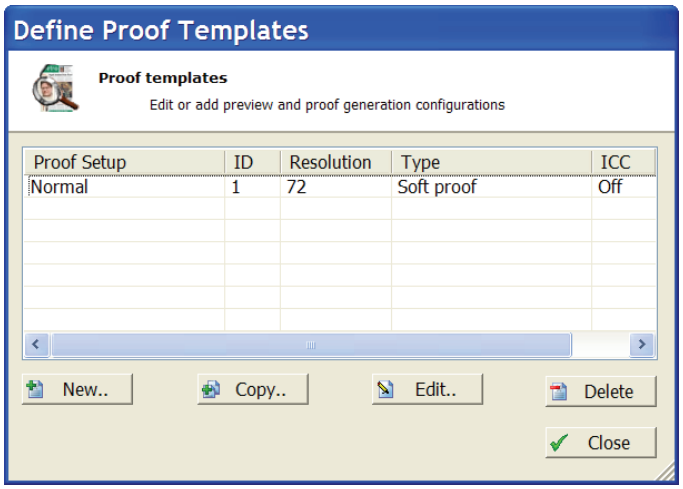
To define a so-called 'edition-tree' click the Group Edition and drag in editions into the tree on the right hand side under the parent edition. Drag the edition into the empty space below the tree to make an edition a main edition.

Edition hierarchy. Defined edition names are arranged in a tree structure reflecting main/sub-edition relationships

3.11 Proof Configurations

The proof configurations (templates) are managed through the *File->Configure proof generation* menu.

New proof templates can be defined here and existing proof templates are listed and can be copied, edited or deleted. To change an existing proof click on the setup in the list and press the **Edit** button



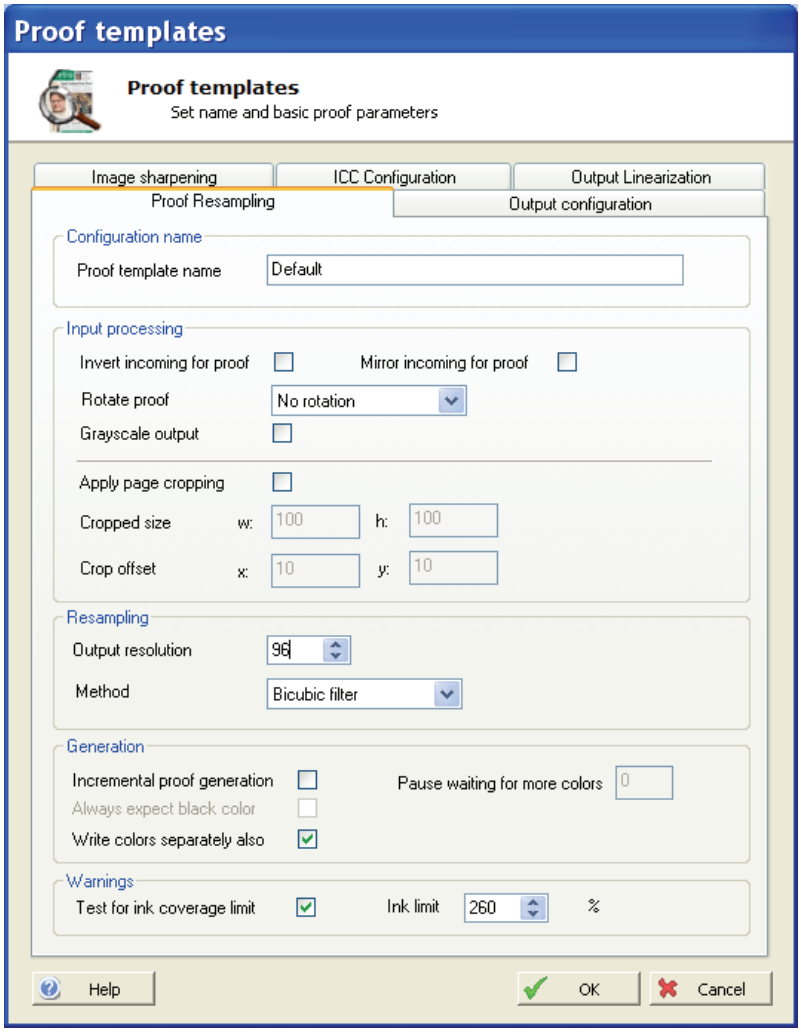
The proof template configuration consists of five dialog pages there the first two are important.

The mandatory parameters are *Proof template name*, *Output resolution* and *Output format definition* (must be set to SoftProof). All other parameters are optional and related to proof appearance.

3.11.1 Proof re-sampling

In case incoming files are rotated, inverted to mirrored, the proof re-sampler can revert this for the previews. Select the appropriate input processing parameters for correct right-reading previews.

Cropping of generated previews may be defined by checking the **Apply page cropping** checkbox. Enter size and upper left hand starting point for the crop box (bounding box).



Basic setting includes the name of the profile and the parameters for generation.

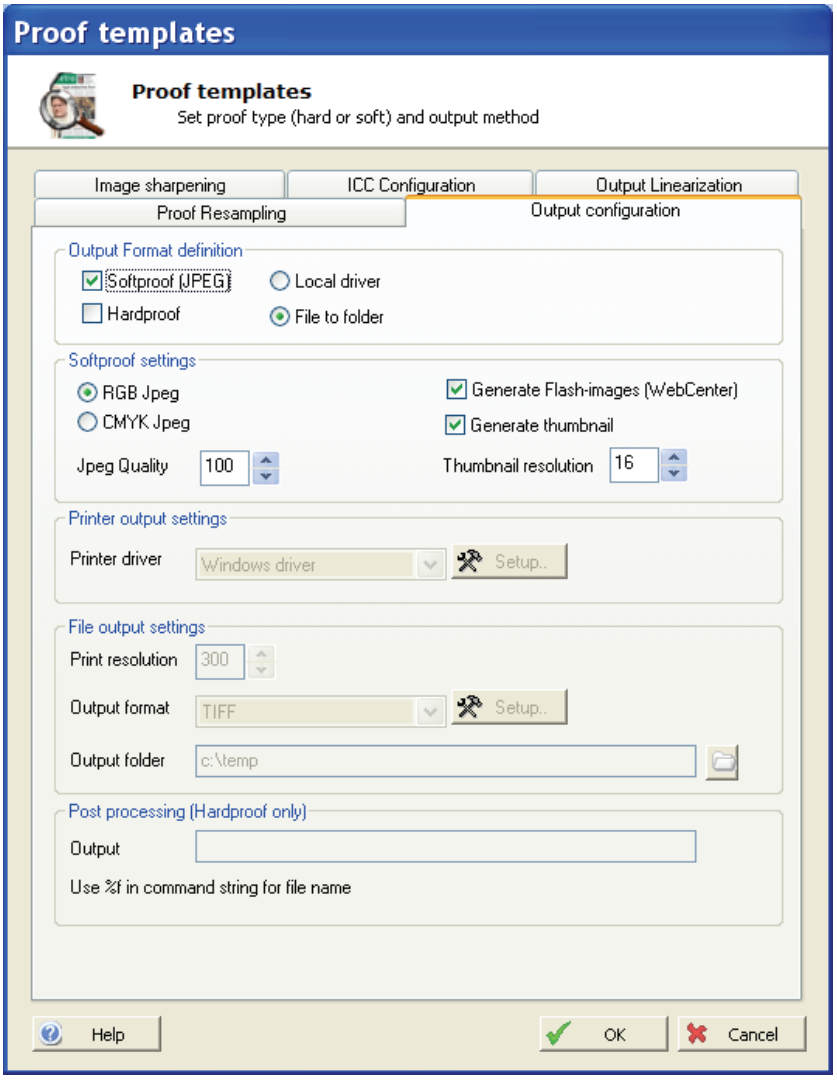
Various re-sampling methods (filters) exist. The fastest proofs are generated with the **Resampling method** set to *Averaging filter*. For optimal quality use *Bicubic filter.* This will provide the best quality in terms of moiré-free proofs. Combining Bi-cubic with the default sharpness filter (see below), results is smooth images and sharp text.

Normal vs. incremental proof generation

By default the proof generator will wait for all planned colors for a given page before re-sampling the page. At times the final colors are not known ahead of production so it makes sense to generate proofs based on arrived colors instead. Select **Incremental proof generation** to generate proofs 'on-the-fly'. To limit unnecessary generation, select **Always expect black color** and set **Pause waiting for more colors** to a few seconds. The latter will allow all ripped separations of a page to arrive fully before generating the proof.

3.11.2 Output configuration

Make sure *Generate thumbnail* is checked for applications using PlanCenter and/or WebCenter as page approval clients and set the resolution of the thumbnail.

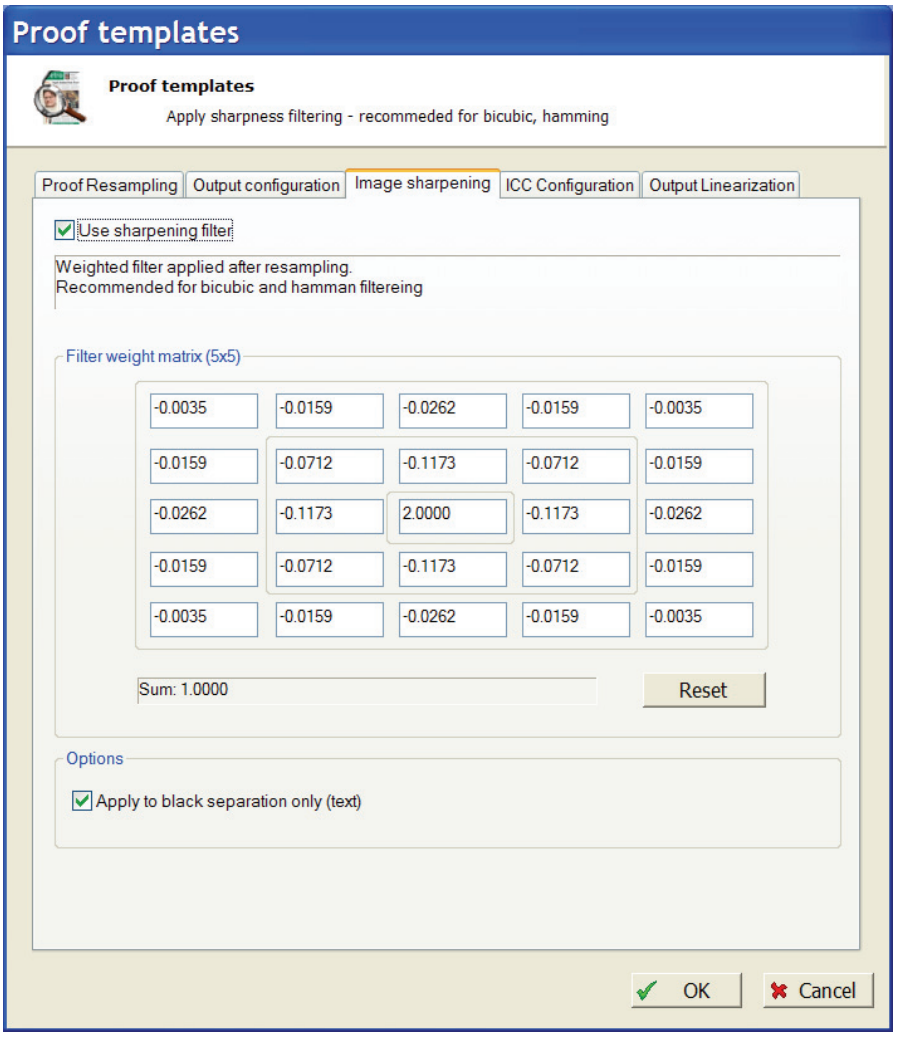


Proof format must be Soft-proof (jpeg) for applications using PlanCenter for page approval

IMPORTANT NOTE: A thumbnail resolution above 10 to 12dpi may decrease performance considerably for PlanCenter and the browser based WebCenter clients. Especially for remote browser clients, heavy thumbnail galleries take long to transmit.

3.11.3 Image sharpening

Bicubic, bilinear, Blackman and Hamming filters provides a smoothing effect on images in order to kill moiré. Potentially this will affect the text sharpness also. Applying a sharpness filter will compensate this. The filter is examining each pixel

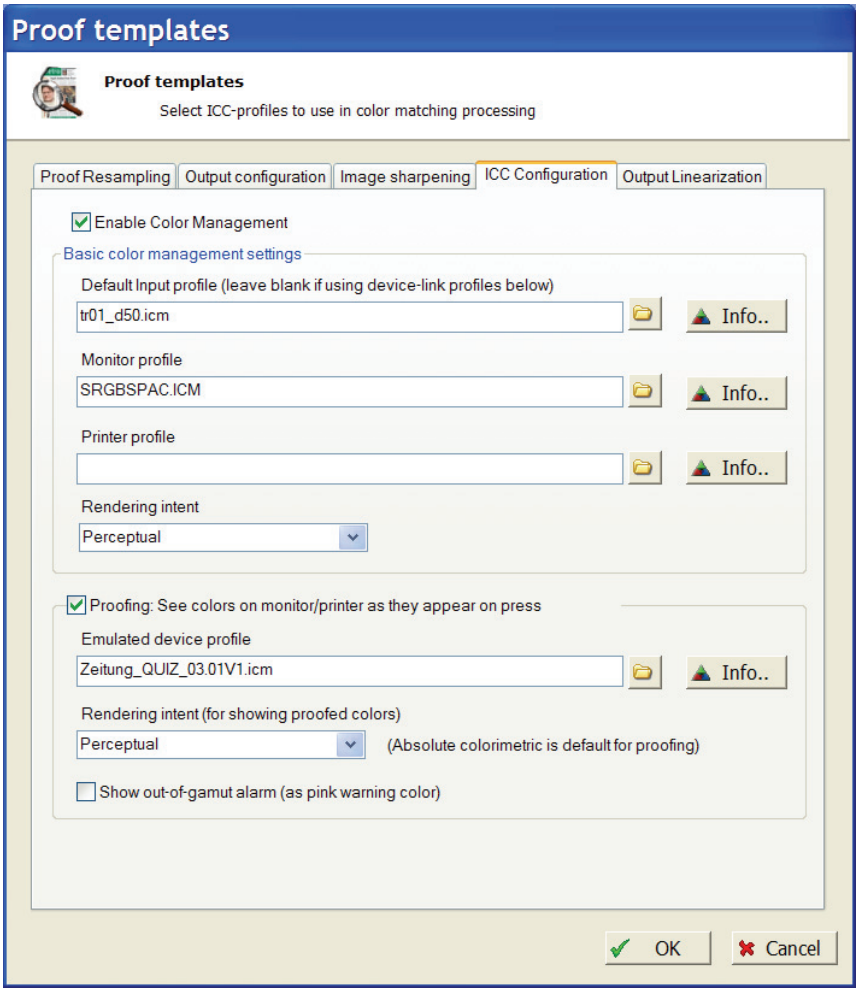


Sharpness-filter setup. The filter may be applied to the black separation only (text separation). Make sure all coefficients in the matrix adds up to 1.00 or else the color densities will change dramatically

and creating a new pixel based on the original value and weighted result of the 24 neighboring pixels. To keep the color densities, make sure the 5x5 coefficients adds up to 1.00.

3.11.4 ICC Configuration

InputCenter can apply profiles to the re-sampled image. There are several transformation methods between color spaces which can be applied. Transformation mode depends on which profiles are attached.



ICC profile setup. The input profile is usually a standard neutral filter because the input is pre-ripped CMYK separations. The printer profile is not used for soft-proofing.

For InputCenter soft-proofing, we want to recover the separated CMYK image to RGB (e.g. sRGB). For hard-proofing we want to re-map from already separated image to proofing device. For advanced press-emulated proofs we must set a third profile characterizing the press.

Input-output-transformation

Input and output device profiles will be used. For standard ControlCenter installations, where input comes from Rips, the input profile will be the one used by the RIP (plate/press profile). If only dot gain compensation is used in the RIP,

we must attach a linearization curve for each color (below) to 'reverse' this process and use Device-link transformation instead.

Device-link transformation

Rather than having two single device profiles, this mode assumes the presents of only one (output) profile, describing the whole transformation. Use this if no output profile is done in the Rip. Leave the input profile field blank to enable device-link profile processing

Input-output-proof transformation

Three profiles will be used - input, output and a profile emulation the color of another device (usually the press). This will only work if a proper gamut tag is present in proofing profile.

The standard *rendering intents* used by the transformation are handled by InputCenter:

Perceptual (Default)

Mainly intended for images only. Hue hopefully maintained (but not required), lightness and saturation sacrificed to maintain the perceived color. White point changes to result in neutral grays.

Relative colorimetric

Within and outside gamut; same as absolute colorimetric (see below). White point changed to result in neutral grays. If adequate table is present in profile, then it is used. Else reverts to perceptual intent.

Saturation

Mainly intended for graphics. Hue and saturation maintained with lightness sacrificed to maintain saturation. White point changed to result in neutral grays. If adequate table is present in profile, then it is used. Else reverts to perceptual intent.

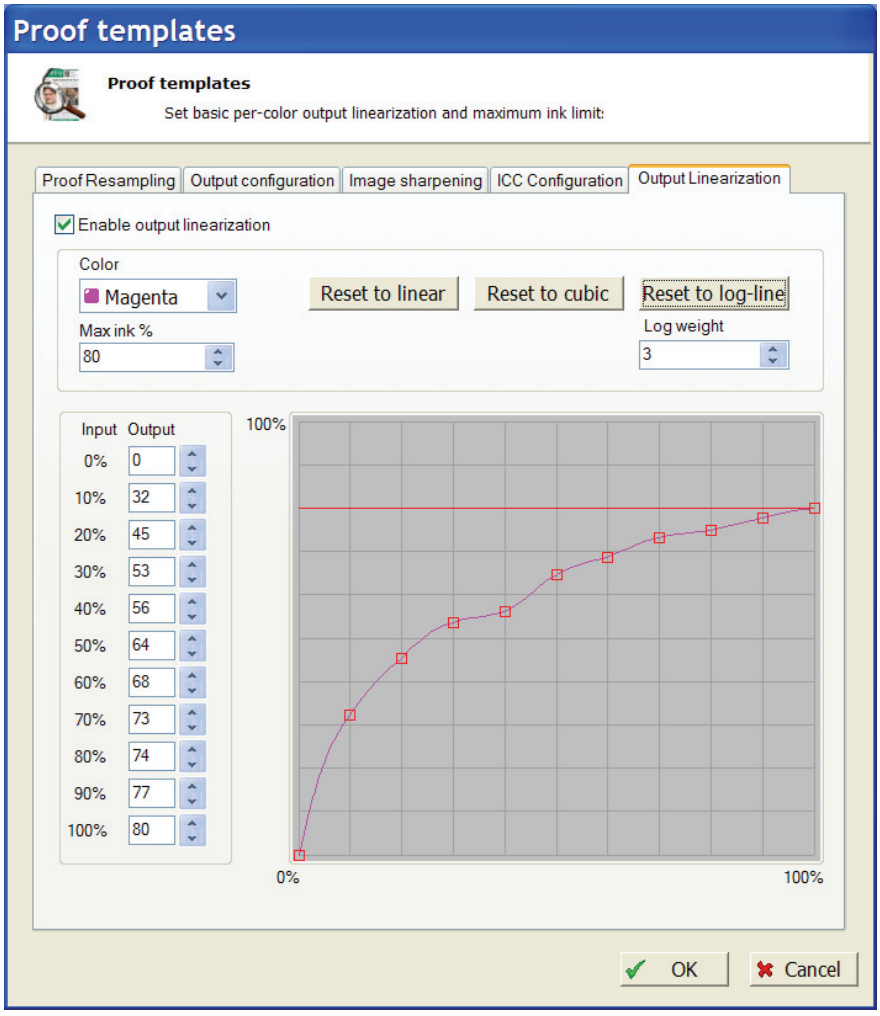
Absolute colorimetric

Within the destination device gamut; hue, lightness and saturation are maintained. Outside the gamut; hue and lightness are maintained, saturation is sacrificed. White point for source and destination; unchanged. Intended for spot colors (Pantone, TruMatch, logo colors, ...)

3.11.5 Output Linearization

The linearization filter is simple color-by-color lookup tables applied to pixels prior to color merging (and ICC processing). The filter consists to a curve per color which can be manipulated by dragging the anchor points with the mouse. Certain pre-defined curve shapes exist: Linear, cubic and logarithmic (press these buttons to reset to any of these curves.

The linearization can be used as a 'poor-mans' color processing tool where ICC profiles are not available.

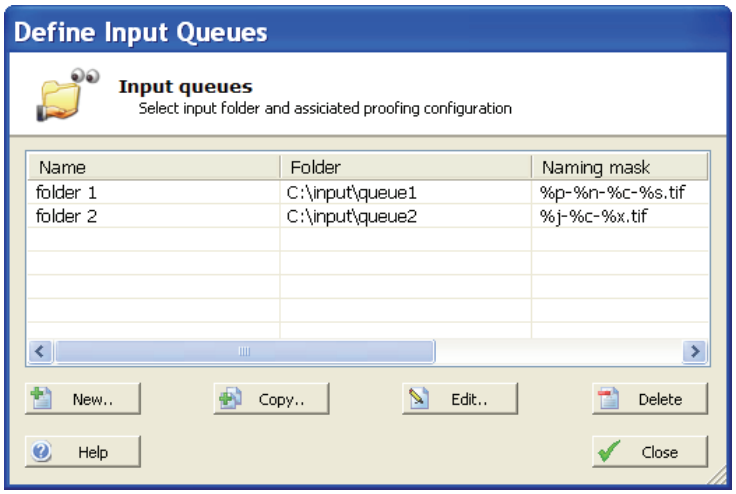


The linearization dialog allows simple mapping for each color. This can be used with or without ICC processing to correct the output on a per-color basis.

3.12 Input queue configuration

Input folders needs to be defined and the action required for each file must be determined.

Use the menu *File->Configure input queues* to get to the input queue manager. Here the list of already defined queues is maintained



The definition of input queues are divided in six steps (tab-bars) the most important being: **Input source**, **Input file naming** and **Filename pre-processing**.

3.12.1 Input source

The basic settings include the Queue name, Input Folder and other folder scan options.

Queue name

Enter a unique name for the queue (mandatory)

File source

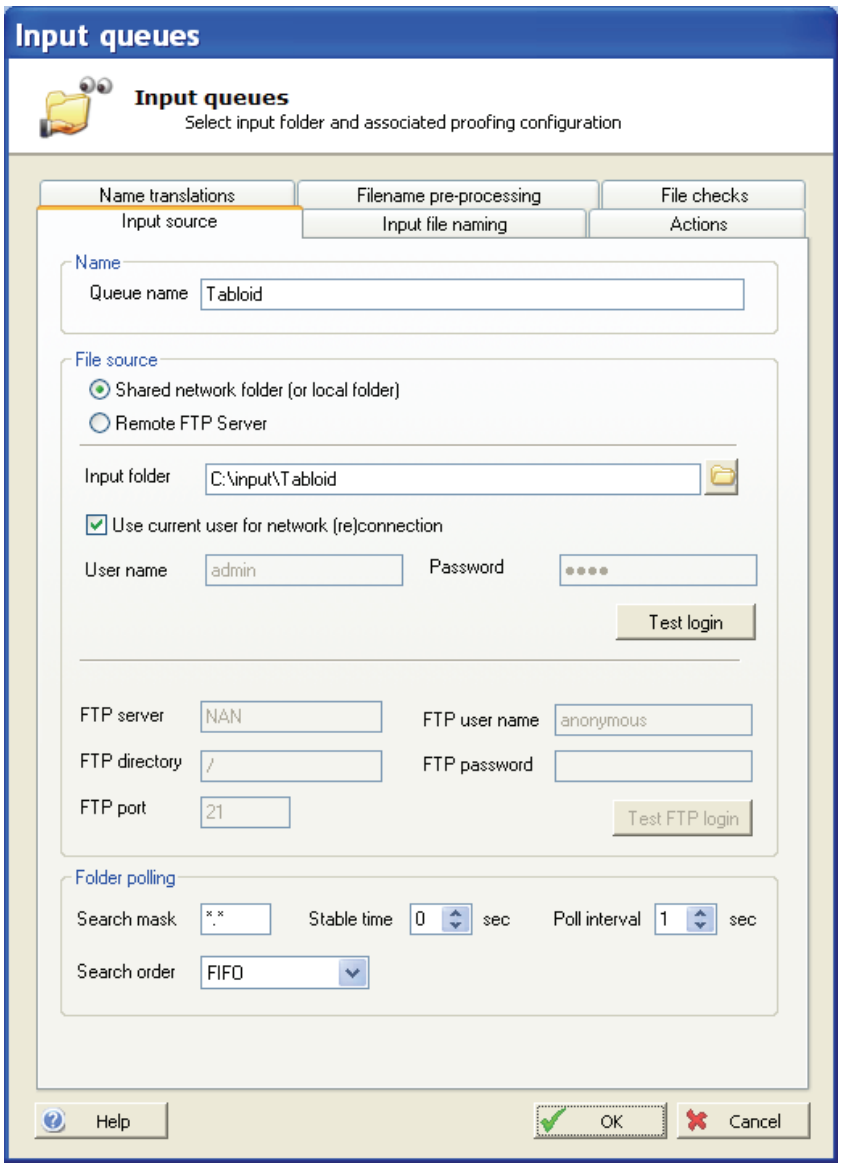
The file source may be a shared network folder on a RIP or an FTP server directory (e.g. for UNIX RIP access). Select *Shared network folder* or *Remote FTP Server* and enter folder name.

Input folder

Windows share to watch. Enter path as <mapped_drive>\subfolder or as unc \\<servername>\<share>\
subfolder.

Use current user

If checked InputCenter assumes that the folder is accessible using the current username used at login time.



User name

User name to use for login to input folder windows share in case current user name is not used.

FTP server

Server name (or IP) to search for files in case FTP file source is selected

FTP directory

Subfolder to login home folder

FTP user name

Web server FTP login account name

FTP password

FTP login account password

FTP port

FTP port (default is 21)

Search mask

An overall search mask can be defined as the first file sorting criteria. Specifying e.g. **.tif* will only analyze files with extension *.tif*. This may be required for certain RIPs which build up the ripped files with temporary extensions.

Stable time

Certain RIPs (e.g. polled via a FTP folders or UNIX Samba share) build up the ripped files by opening and closing the file many times. To ensure that a file is fully written, InputCenter may want to observe the file size and file modification time and only poll a given file if these attributes are stable for a period of time. The required stable time largely depend on the source system. Value between 1-10 seconds are usually recommended.

Poll interval

Wait time between scanning of folder

Search order

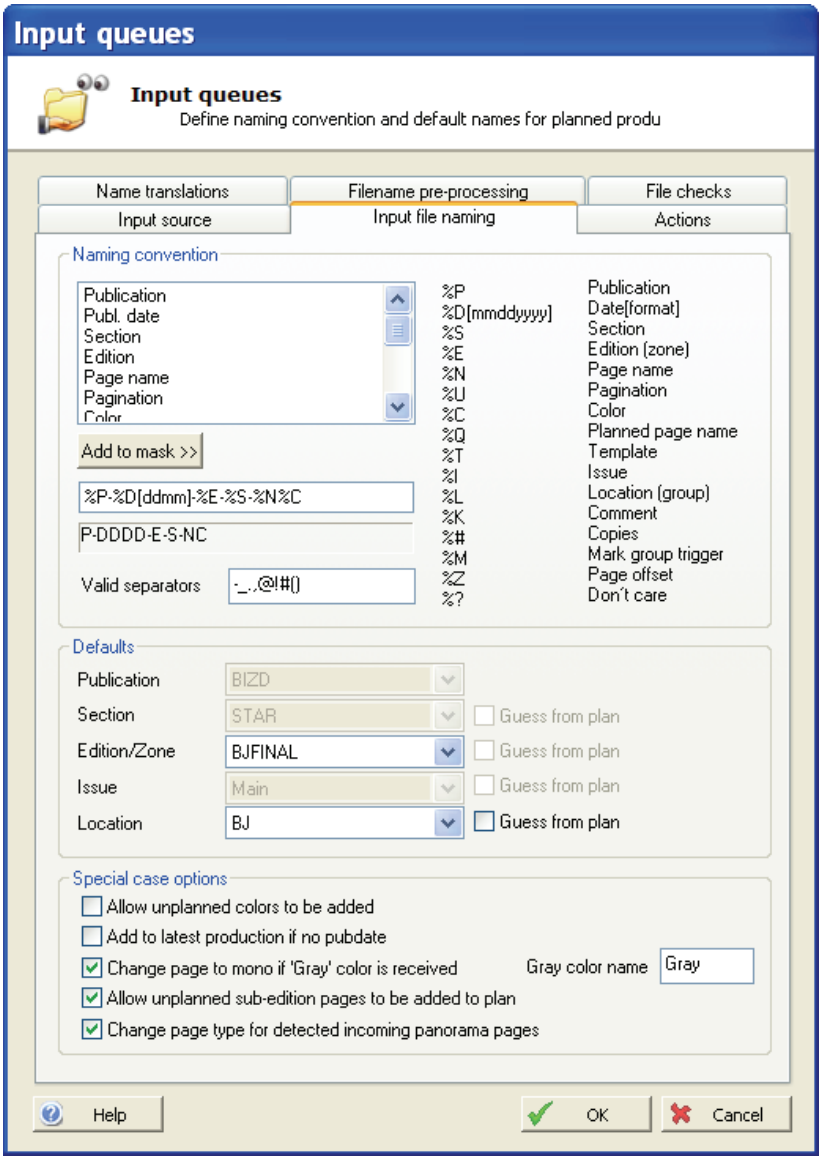
Set to FIFO (file create time) or alphabetic. Default is FIFO.

3.12.2 Input file name

The file name convention is entered using a number of *identifier-symbols*. The symbols are letters preceded by a %-sign denoting a particular production part id, eg. Publication name, section name, edition name etc.

The minimal filename must have a pagenumber/pagename and (for TIFF separations) a color name.
Normally a file name convention also dictates publication name, publication date and optionally section and edition names.

Because the system required all id's to be resolved when a file is registered, defaults names must be selected when not in the file name, e.g. a default edition name in case no edition name is present in the file name.



Example: Expected input name *News-01-Black-xyz.tif.* Setting the mask to *%P-%N-%C-%?.tif* will isolate the publication name to *News, page name to 1* and the color name to *Black.* The *xyz*-part will be ignored.

Important note: The file name convention is used for the resulting filename after Filename pre-processing (regular expression renaming). See description of pre-processing on page 49.

Name

Enter the expected file name mask using the %-symbols and separators. Alternatively select the identifier in the list and press **Add to Mask** button.

Valid separators

Separators are characters used for separating eg. Publication pagenumber color etc. Default includes characters

- (dash/minus), **_** (underscore), **!** (exclamation mark), **#** (hash sign), **(** (left bracket) and **)** (right bracket)

Default publication

Publication name to use if there is no publication name in the file name. All files dropped in the folder are assumed to be for this publication.

Default Section

Section name to use if there is no section name in the file name. All files dropped in the folder are assumed to be for this section. If ***Guess from Plan*** is checked the section name is determined from the plan (only applies to planned products).
If only one section name is defined in the system the default section input field is dimmed.

Default Edition

Edition (zone) name to use if there is no edition name in the file name. All files dropped in the folder are assumed to be for this edition. If ***Guess from Plan*** is checked InputCenter will try to determine the edition name from the planned data. Note that this may result in ambiguity in case the plan holds multiple editions (for this page number). In case of ambiguity the main edition is used. If only one edition name is defined in the system the default edition input field is dimmed.

Default Issue

Issue (press run) name to use if there is no issue name in the file name. All files dropped in the folder are assumed to be for this issue. If ***Guess from Plan*** is checked InputCenter will try to determine the issue name from the planned data. Note that this may result in ambiguity in case the plan holds multiple issues (for this page number). In case of ambiguity the current (non-printed) issue is used.
If only one issue name is defined in the system the default issue input field is dimmed.

Default Location

Location (press site) name to use if there is no location name in the file name. All files dropped in the folder are assumed to be for this location only. If ***Guess from Plan*** is checked InputCenter will poll in the file to all planned target locations for the page. If only one location name is defined in the system the default location input field is dimmed.

The additional options are special handling options:

Allow unplanned colors to be added

Even if the planned production dictates e.g. black only for a page this option will allow change to color. Use this option with caution – it will ignore potential errors related to unprintable colors.

Add to latest production if no pubdate

If publication date is not in the filename, this option will look up the latest production matching publication, edition and section names and use the publication date from here.
If this option is not selected the default date will be next day (with roll-over time option – see Action tab).

Change page to mono if 'Gray'

If checked a 'Gray' color name will signal that the page is to be printed in monochrome even if the page was planned for color.
Enter expected color name for mono pages in the input box **Gray color name**.

Change page type for detected incoming panorama page

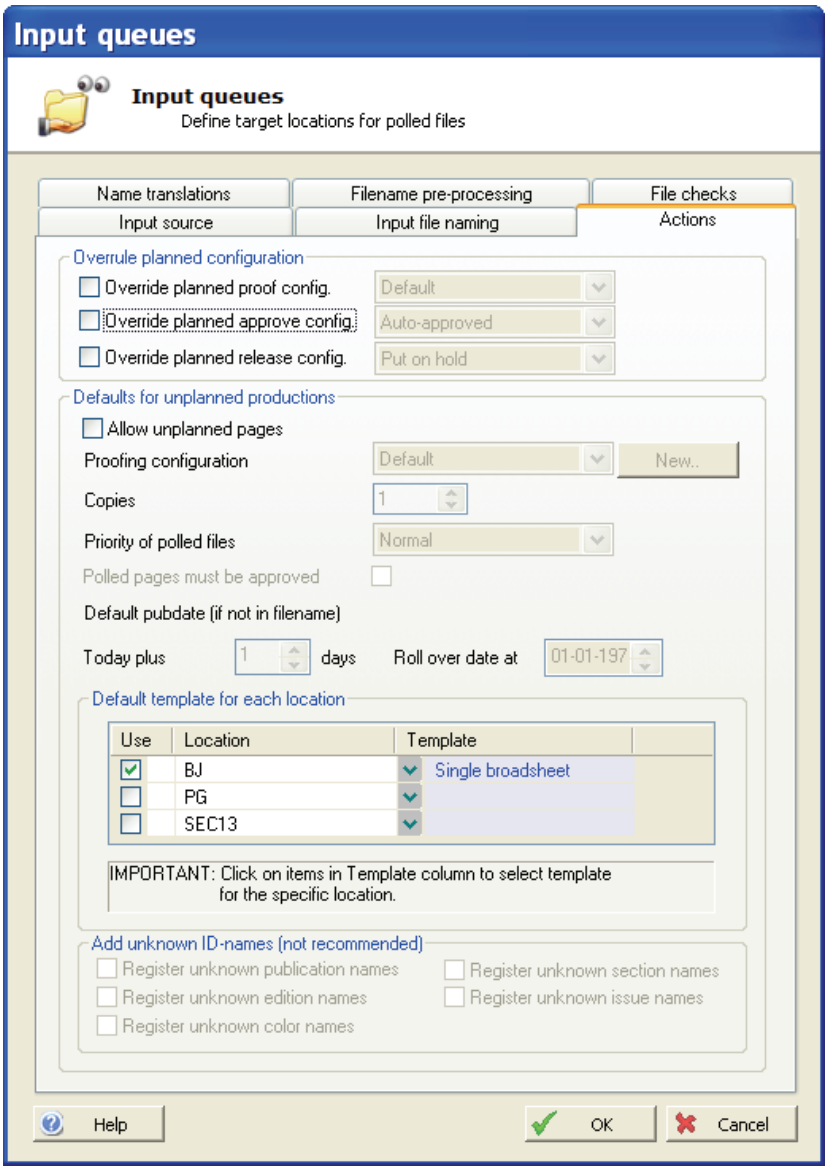
Some pre-press departments send centre-spreads as one file. ControlCenter is able to handle this when this is prepared for in PlanCenter (see section 5.4.7). InputCenter can be configured to automatically detect that the page is panorama so that the pages can be planned as singles and yet get out as panoramas. This feature requires the use of trim-boxes for output generation (see section 4.12.2).

3.12.3 Actions

The actions page is used to overrule planned data and to resolved defaults for unplanned data.
In planned mode the proof configuration, initial approval and release state are selected when starting the page plan. These settings can be overruled by the hot-folder configuration.

> NOTE: If the Allow unplanned pages checkbox is dimmed it is because the function has deliberately been disabled. To allow unplanned mode to be selected the setting *RestrictUnplannedMode* in the InputCenterEnt.ini file must to 0 (see section 3.13).

A typical scenario where approval, hold or proofer must be overruled is in cases where it is convenient to have a special variant of the main hot-folder with 'by-pass' settings for approval and release. The by-pass folder may be used in special cases where pages must be re-entered but not approved again.



Check the ***Override planned proof config*** option and select a proof configuration.

The rest of the **Actions** page is only used if unplanned files are permitted.
Actions define the proofing, distribution and output parameters for the polled files in case no plan is activated. The parameters are required to process the file correctly (proof, transmission and output).

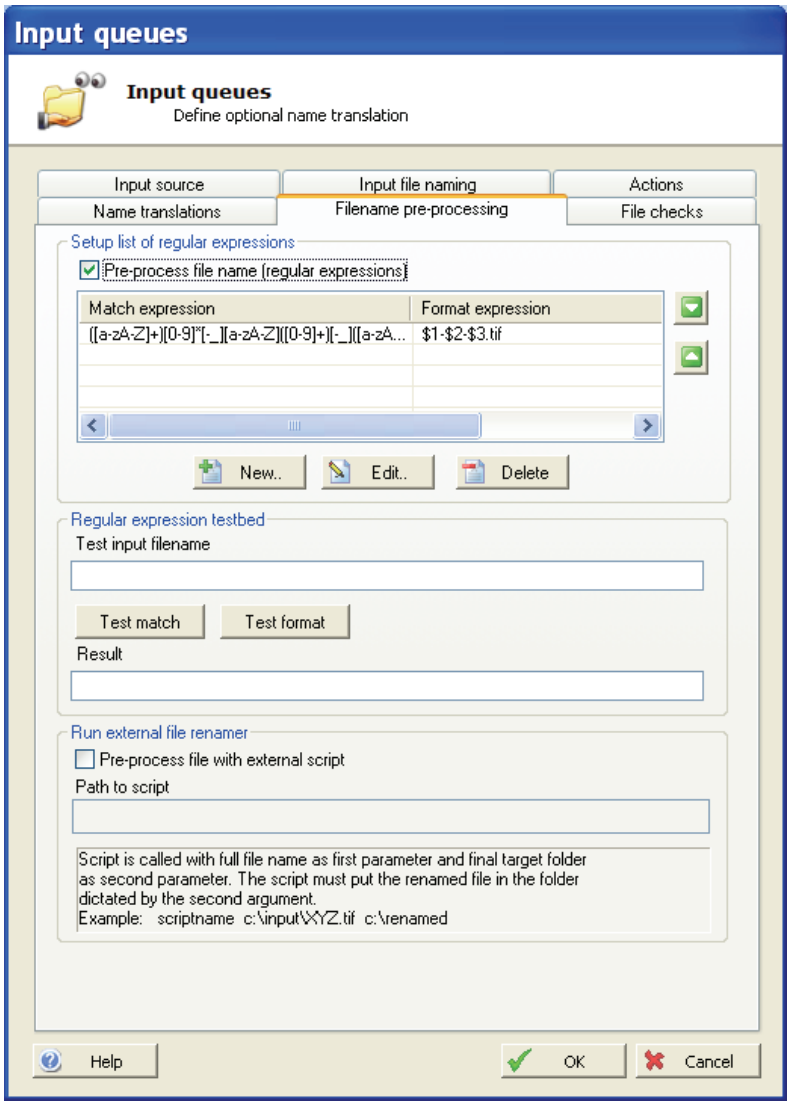
The files polled using the specific input queue will be re-sampled using the selected proof configuration. The files will be transmitted to the locations specified, and will be output using the remote template configurations selected (after approval).

By default all name identifiers (e.g. publication names) must be known to the system before production. However, for unplanned production InputCenter allows unknown names for publications, issues, editions, sections and colors. Check the boxes **Register unknown xxx names** to automatically let InputCenter register unknown

names in the system (can be edited in the Configure job names menu (see section 3.10)

3.12.4 Filename pre-processing

There are circumstances where the standard file name definitions (defining e.g. color location in filenames) are not adequate for file name recognition. Not all input file names are fitting the standard naming conventions InputCenter can tolerate directly. Regular expressions or an external script may be required to rename the incoming file to a form which fits the standard file mask definitions.



Pre-processing of file names using both regular expression and/or an external script. The script will rename the file and move it to a pick-up folder

Regular expressions

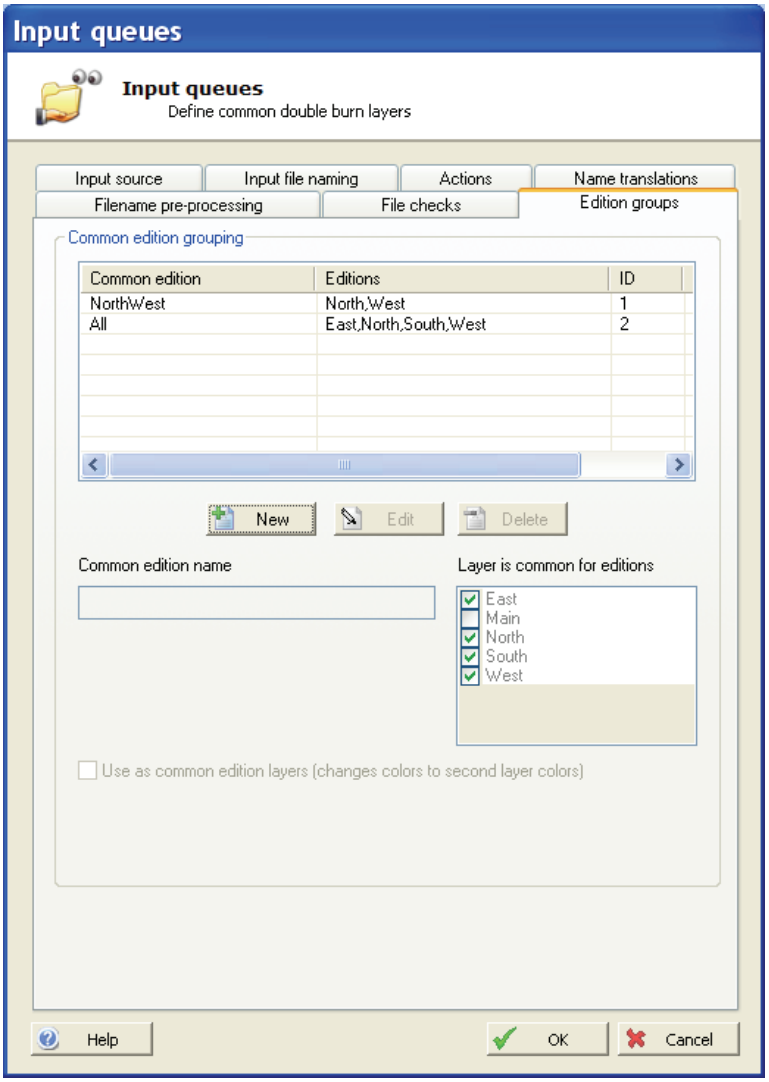
A number of *regular expressions and formats* can be applied on the incoming file names to rename these to fit the scheme. The regular expressions use a standard Perl syntax to define matching expressions and format expressions.

A number of expressions may be defined which will be evaluated in a ranked order until a match is defined. When a hit is found the associated format expression is applied to form the final file name (handed to the standard name parser defined in the **Input source** dialog)

See appendix A for an overview of regular expressions.

External script

For very irregular filenames with many special cases and defaults it may be needed to run an external renaming program (e.g. A Perl script, VB script or exe-file). If script-renaming is enabled, each file in the input folder is passed to the script together with a folder-name to be used for the renamed file. After the script has



Edition group definition (if enabled).

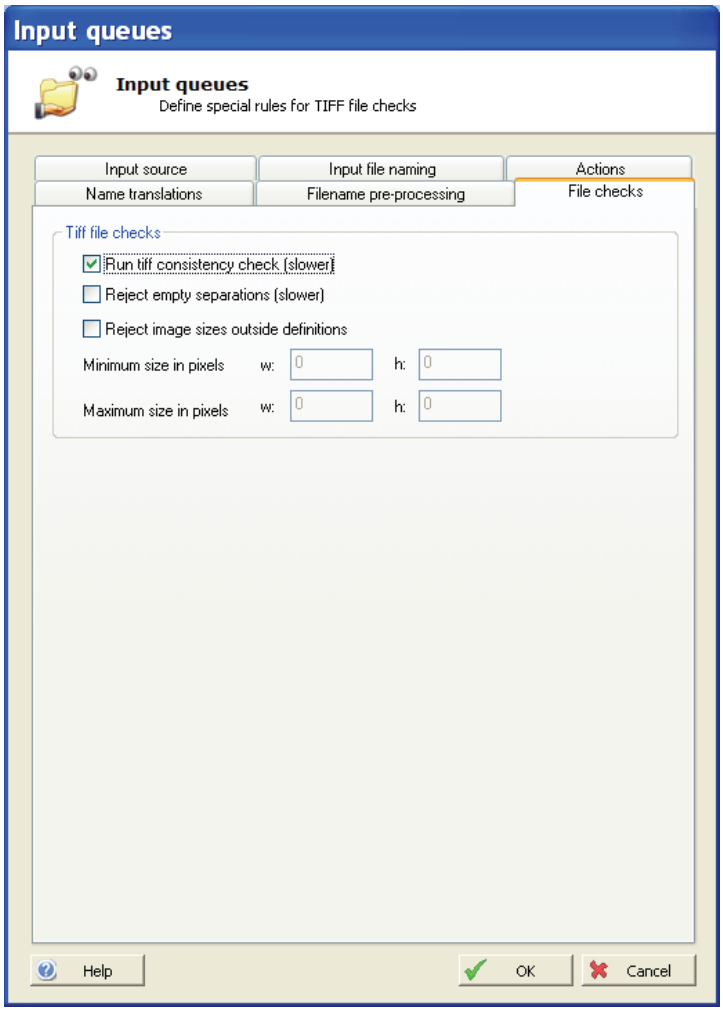
executed, InputCenter picks up the renamed file in the dedicated folder and parses the file according the defined naming convention. See appendix B for scripting examples.

3.12.5 Edition grouping (optional)

If enabled in InputCenterEnt.ini (see section 3.13) edition names can be grouped under common edition names so that an input file can be used in multiple editions even without having edition plans. A file with a detected edition group name will be "copied" to all editions in the group.

3.12.6 File checks

The last page tab relates to optional tiff file checking. The options allow rejection of files which are blank or file outside the defined pixel size limits.



File-checking may run pre-poll consistency and size checks.

3.13 Start-up defaults and advanced settings for InputCenter

Certain rarely changed parameters can be set in the program configuration file InputCenterEnt.ini. Changing ini-settings requires expert-knowledge of InputCenter behavior. The most important settings in InputCenterEnt.ini are shown below

Setting	Default	Description
StartMaximized	0	Set to 1 will default to full screen mode
AutoStart	0	Set to 1 to start all processes at application launch time
AllowRemoteControl	1	Set to 1 to allow MonitorCenter to control on/off states of polling, transmission and re-sampling.
NoLogin	0	Set to 1 to bypass admin-level login for changing configuration settings
Debug	0	Set to 1 to enable trace logging to log files written to CClogs folder
LogFolder	<inst>\logs	Path to log file folder. Default is subfolder \logs in the InputCenter installation folder
RescrictUnplannedMode	1	Set to 1 to disable the options for entering unplanned pages into the system. When 0 Unplanned mode must still be activated in input setup
SearchGutterZone	1	Set to 0 if gutter-mark removal is not used (saves time during processing)
CommonEditionSystem	0	Set to 1 to enable edition grouping names in input file name
DeleteFilesWithExtension	inf	Comma-separated list of file extensions for which the file must be deleted in the input folder (unwanted files). Leave blank to disable this feature.
CallCustomRenamerSP	0	Set to 1 to enable call to customizable stored procedure spInputCustomRenamer issued right after file is decoded. The stored procedure allows re-mapping of naming IDs based on planning data (expert mode!)
CallCustomSP	0	Set to 1 to enable call to customizable stored procedure spInputCustom (expert mode!) issued after file is registered
MultipleFileServerSystem	0	Set to 1 enables force to specific file server CCDATA share (not the default server share). Set servername and login parameters (see below). Notet that the share name must

		still be CCDATA.
FileServerToUse	*<blank>*	Name of alternative file server used when MultipleFileServerSystem=1
FileServerUseCurrentUser	1	Use current local username/password to access alternative file server when MultipleFileServerSystem=1
FileServerUserName	*<blank>*	User name for login to alternative file server when MultipleFileServerSystem=1
FileServerPassword	*<blank>*	Password for login to alternative file server when MultipleFileServerSystem=1
DatabaseLoginTimeout	5	Database timing parameter. Maximum time waiting for successful login to database. Exceeding this time will the system will report error.
DatabaseQueryTimeout	5	Database timing parameter. Maximum time waiting for successful query on database. Exceeding this time will the system will report error.
QueryBackoffTime	500	Database timing parameter. Time between retries on query timeouts (Time in millisec.)
QueryRetries	3	Database timing parameter. Number of retries on query timeouts before reporting error
ExtraPreviewCopy1	0	Set to 1 to make copy of generated preview files and thumbnails to other server. Set associated folders (see below)
ExtraPreviewFolder1	*<blank>*	Full UNC network path to folder receiving extra copies of preview files (jpg)
ExtraThumbnailFolder1	*<blank>*	Full UNC network path to folder receiving extra copies of thumbnail files (jpg)
ExtraPreviewCopy2	0	Set to 1 to make a second copy of generated preview files and thumbnails to other server. Set associated folders (see below)
ExtraPreviewFolder2	*<blank>*	Full UNC network path to folder receiving second extra copies of preview files (jpg)
ExtraThumbnailFolder2	*<blank>*	Full UNC network path to folder receiving second extra copies of thumbnail files (jpg)
TransmitTiffCheck	*1*	Run consistency check on transmitted tiff files.
TransmitRetries	*3*	Number of retries connecting and transferring files to remote folder
TransmitUseFileName	0	In case InputCenter is solely used together with WebCenter, the system can be set up to transmit every

		approved page (using Transmit after approval option in General Settings)
TransmitCreatePublicationFolders	0	If option TransmitUseFileName is used, this option creates a subfolder per product in the receive folder.
AllowPastPubDates	0	By default any partial date format assumes that the full date is the current day or in the future (say if only the day is given in the date InputCenter assumes any day below the current day will be for the next month). Set to 1 to allow dates back in time (used for demo only).
BackupNotificationMaxAgeMin	10	Maximum age of backup notification file for switching to backup (sent by BackupCenter)
LoginServerName# (#: 1-10)	<*blank*>	Used for automatic login to remote servers at startup time so the system does not rely on Windows already being logged on. Up to 10 network shares can be logged on to.
LoginServerShare# (#: 1-10)	<*blank*>	Share name used for automatic login (see above)
LoginServerUserName# (#: 1-10)	<*blank*>	Server login username used for automatic login (see above)
LoginServerPassword# (#: 1-10)	<*blank*>	Server login password used for automatic login (see above)
FlashTileSize	*256*	Dimension of image tiles for Flash image zoomer used in WebCenter. Beware that certain Mac-browsers cannot handle large tile sizes due to limited Flash memory
HotPrioritySystem	*0*	Controls the background process that dynamically sets priority according to planning options.

4 OutputCenter

4.1 Introduction

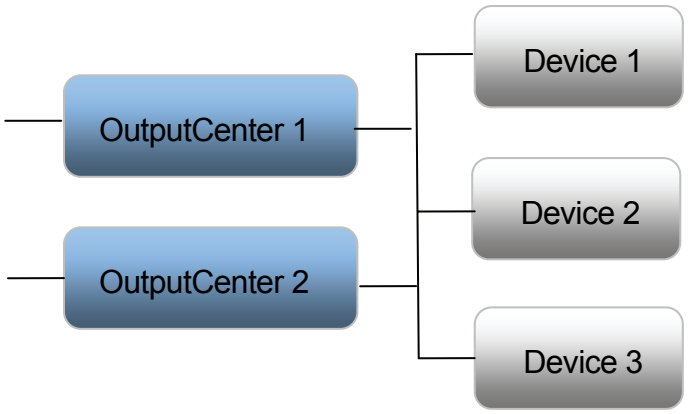
OutputCenter is part of the InfraLogic *ControlCenter* suite of programs for publishing prepress output management. It may run as an integrated part of ControlCenter or may be deployed as a stand-alone application.
The program takes in high resolution ripped TIFF files from hot-folders or as commands from the central ControlCenter Server. It will generate output to imagesetters, CtP devices or files.

OutputCenter has advanced template features for image positioning, rotation, cropping and plate mark inclusion.

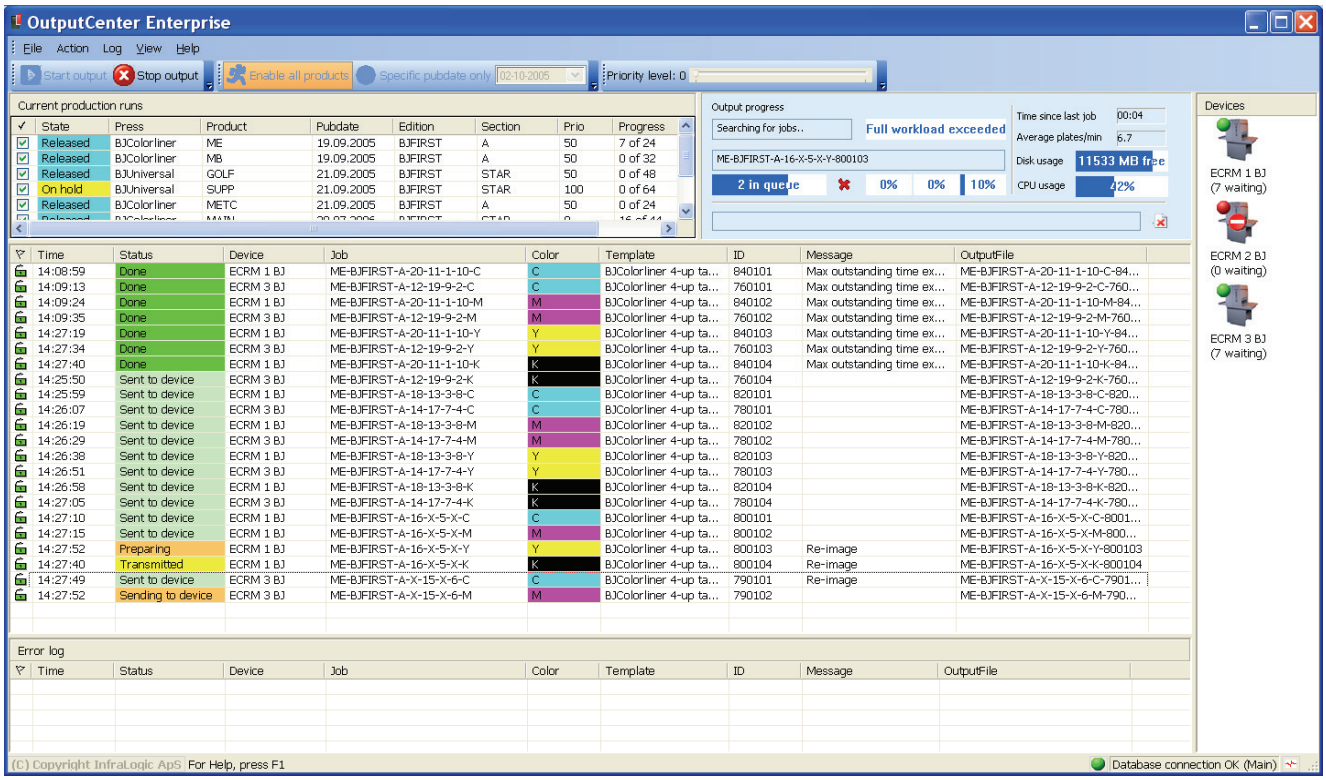
Main features also include the ability to load balance between multiple output devices, separation tracking (all colors for a flat to the same device), priority based output and hold/release functionality based on flat approval.

Multiple parallel OutputCenter applications can be connected to output devices for increased load. The load division between the OutputCenter applications is automatically handled by the system.

Also OutputCenter monitors output devices for device state reporting to ControlCenter clients.



Multiple OutputCenter applications can be connected to multiple devices. This may be required for very fast output devices.



The OutputCenter main screen GUI consists of production run filter (top left), status panel (top right), devices (right) and job log lists (middle and bottom).

4.2 Arranging the window

When ControlCenter runs on a single PC (local system), InputCenter and OutputCenter can be arrange in a split screen fashion. Select **View->Half screen view** in both applications. This will arrange InputCenter in the upper half and OutputCenter in the lower half of the screen.

> Note: For automatic half-screen views at startup, set StartMaximized=2 in InputCenter.ini and OutputCenter.ini – see section 3.13 and 4.14

4.3 Basic usage

OutputCenter is meant to run unattended on a PC with network access to the shared file repository of ripped files (transmission target folder). The program is capable of auto-starting the output when the application is launched.

The program main screen is divided in three panels – the device panel, the progress panel and the plate list panel.

4.3.1 Main toolbar buttons

The top-most panel includes the main on/off switch. Click the **Start output** and Stop output buttons to start/stop the plate generation.

Main command buttons in OutputCenter

Start output Starts the *imaging process* looking for jobs to process in the database. Only jobs approved, released and enabled for output (see below) will be output. Regardless of job states no output will be generated to offline devices.
Typically 2 to 3 available jobs will be processed at any given time.

Stop output Stops the imaging process but will finish off jobs already in queue (plate file being generated). Topping the imaging process will not stop the internal process tracking output standing job status and device states.

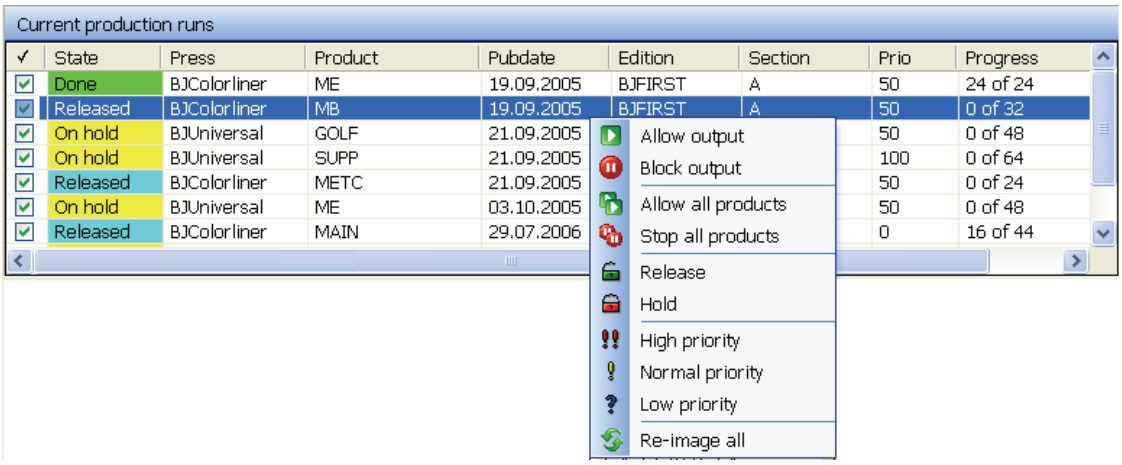
Enable all products
By default OutputCenter will look for any jobs to output. In case only a certain press run must be produced de-select this button and check/uncheck the products in the Production Run List below the toolbar.

Specific pub-date only
To quickly restrict the production run list to jobs for a given date, click this button and select the date in the date-chooser.

Priority level A given priority-level can be set allowing only jobs with greater priority to slip through to output. Set to 0 (lowest priority) to disable priority threshold.

4.3.2 Current production run panel (upper left hand side)

Available production runs (press runs) are listed in the panel allowing selection of specific runs for output. The checkmarks on the left hand side are used for output selection.



A popup-menu in the production run list can be used for selection of jobs for output and other actions performed on a per-run basis.

Allow output

Sets the checkmark for the selected run(s) enabling these for output (when released). This can also be done by clicking the check-marks.

Block output

Resets the checkmark for the selected run(s) disabling these for output (even if released). This can also be done by un-checking the check-marks.

Allow all products

Sets the checkmark all run(s) enabling these for output (when released). This can also be done by clicking the check-marks or selecting the toolbar button

Stop all products

Resets the checkmark for the selected run(s) disabling these for output (even if released). This can also be done by un-checking the check-marks.

Release

Sets the state to released on all jobs in the selected run(s).

Hold

Sets the state to hold on all jobs in the selected run(s).

High priority

Sets the priority to 100 on all jobs in the selected run(s).

Normal priority

Sets the priority to 50 on all jobs in the selected run(s).

Low priority

Sets the priority to 0 on all jobs in the selected run(s).

Re-image all

Re-outputs all plates in the run (including all copies) and resets the device locking so that load balancing can be restarted.

4.3.3 Device panel (right hand side)

Available devices are listed as icons with indicators for online state and enable/disable state. When output is stopped

Also, for each device an informational *workload* counter is shown. This reflects outstanding jobs on the device and is used internally for device load balancing.

Enable/disable

Each device can be enabled/disabled for output by double-clicking the checkmarks to the left of the device name. At time of output only enabled and online devices will be considered by the load balancing logic.

ECRM 1 BJ
(3 waiting)

Device is online (green light) and enabled for output. Note that three jobs are in queue on the device already

ECRM 2 BJ
(0 waiting)

Device is offline (red light) but enabled for output once it is online again

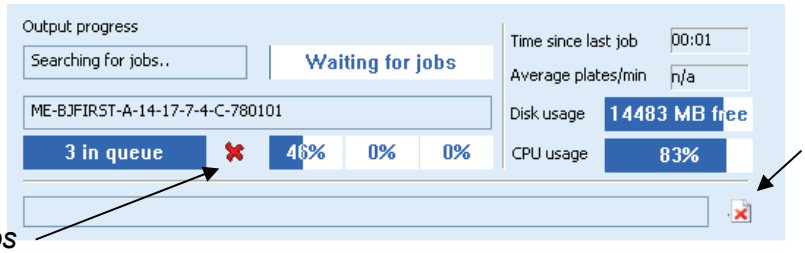
ECRM 3 BJ
(0 waiting)

Device is online but disabled manually for output by clicking the device icon (stop sign). Click the device again to enable the device.

4.3.4 Current output progress panel (top right)

The progress panel shows the activity progress bars and currently processed jobs. Typically 1 to 3 jobs are in progress of being output at any given time. When imaging is started a sweeping progress bar will indicate activity.

The button with the red cross is used for canceling ongoing jobs (jobs put in active queue).



Progress panel shows updated information about current jobs in progress, last error message and throughput statistics

4.3.5 Job log panel (middle)

The job list shows jobs (plates) and their related status. Jobs are listed starting from status 'Transmitted' (ready) to 'Imaged'.

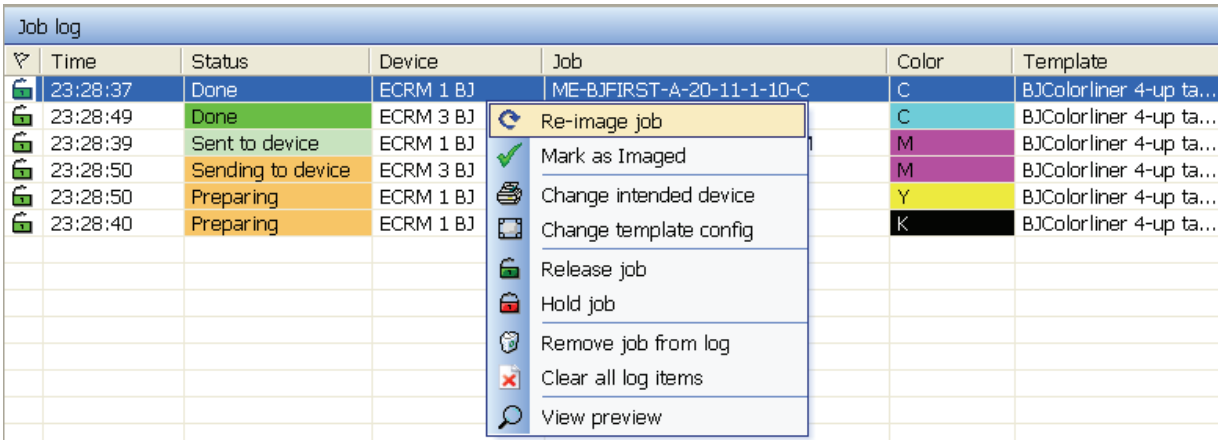
Important information columns are:

Status Status may be Transmitted, Imaging, Imaged or Imaging error.

Device The device name selected for the plate output

Job The name of the job

Template The layout template used for output generation



A popup-menu in the Job log list can be used for re-image and change output template/device

The following commands can be issued using the pop-up menu on selected jobs:

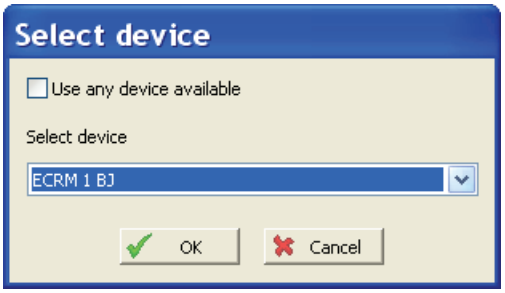
Re-image job

Resets status to 'Transmitted' causing re-output of the plate. Note that the selected device will be the same as the original device used for the previous output of the plate. To output to another device, use the **Change Intended Device** menu option (see below).

Mark as Imaged

Selected jobs will be registered as Imaged. Only jobs in status Imaging and Sent to device can be updated to Imaged status.
Forcing status to Imaged may be necessary in cases where the device does not report status back correctly.
Note that an 'auto-force Imaged' feature exists by setting the **Max time for outstanding jobs** option in general preferences (see section 4.6)

Change intended device



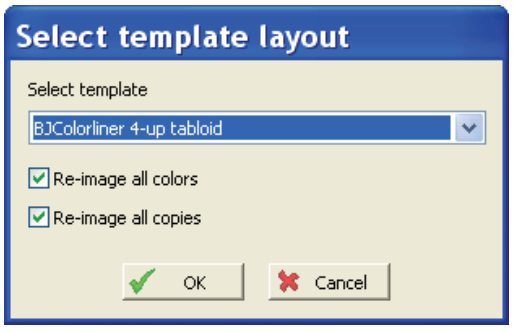
Select specific device or un-lock jobs for load balancing

In rare case it is convenient to lock certain jobs to a device other than he planned device. This may be due to specifically loaded plates in a device – e.g. panorama plates for spreads.

The menu item will bring up a selection box for device and an option to reset the job(s) to any available device.

Note: Changing device will reset status to 'Transmitted' on all colors in the color separation set.

Change template config



Select alternative layout template for selected plate files.

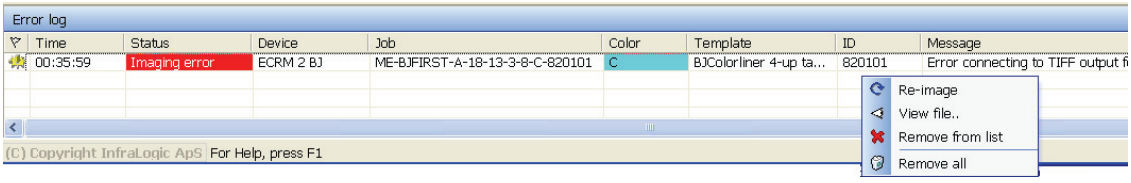
Change to the planned template is rarely used but may come handy in cases of emergency where plates must quickly be output e.g. to another press.

Select the new layout for the available templates. Note that only layout templates with the same number of pages on plate will be listed for selection.

The selected plate(s) will automatically be re-imaged by the operation. Select if all colors and/or all copies should be re-imaged.

4.3.6 Error Job log panel (bottom)

The jobs causing errors during image preparation or actual imaging will be listed in



A popup-menu in the Error log list can be used e.g. for re-imaging

the Error log list (moved from the job list to the error list). When an error is detected the internal database status is set to 'Imaging error'. To manually re-try failing jobs, right-click the jobs and select **Re-image**,

Note that the failing plate file is not stored separately in any internal error folder. Re-output using the re-image option will re-generate the plate image from start.

In case the job is still available as file on the output device folder, select **View file** to inspect the job in the internal 1-bit TIFF viewer.

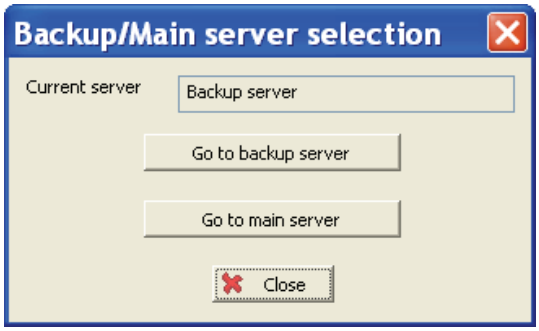
4.4 Advanced actions

The Action menu holds two separate functions for changing server and performing manual cleanup of old files.

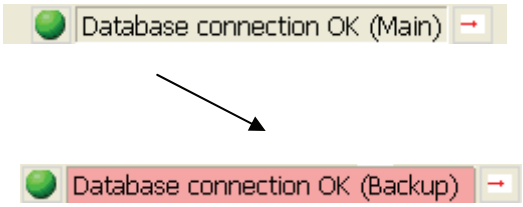
4.4.1 Change to backup

When fully installed with backup server, change to backup is centrally controlled via BackupCenter (see section 7). BackupCenter sends out a go-to-backup message to all connected clients (InputCenter, OutputCenter, PlanCenter etc.). OutInputCenter will re-connect to the backup server and resume operation.

If for some reason OutputCenter must be connected to the backup server manually go to the menu **Action->Go to backup server**



OutInputCenter (like other clients) can manually be connected to the backup server (and changed back again)



The current server connection is shown at the right hand side of the bottom status bar

4.4.2 Clean-up

It is highly recommended to set the cleaning interval in the General preferences (section 4.6). This performs unattended cleanup of used files. Should it be

necessary, the old files in the receive folder can be purged manually using the **Delete old receive files..** option in the **Action** menu.

Cleanout (automatic or manual) will examine all files in the receive folder and will delete files without database references. Files without database references are left-overs following a plan delete action in PlanCenter.

4.5 Configuration overview

Note that changing configuration requires Administrative privileges. User will be prompted for username and password first time configuration menu is clicked.

OutputCenter will require login again to change configuration if no user action has occurred for one hour.

The major challenge in the configuration of OutputCenter is to create correct output layout templates, that is, to define the placement and orientation of the image, marks and other elements on the final plate. Luckily OutputCenter's layout manager takes the guesswork out of this task, as plate layout is performed with an on-screen template designer. Creation of advanced templates are described in the application note *Advanced ControlCenter Output Templates*.

OutputCenter is configured using a number of different configuration dialogs accessed through the *Configuration* menu:

General settings
: The database connection setup to the central MSDE SQL database (if used*),* backup database, timing parameters etc.

Job Names
: Definition of publication, section, edition names (also accessible from PlanCenter, InputCenter and MonitorCenter).

Color names
: Process color mapping used for color preview generation

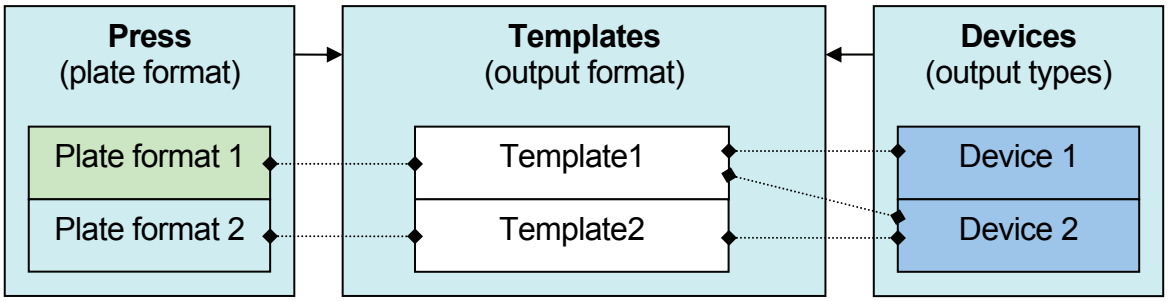
Press setup
: Definition of press plate formats

Device setup
: Output device definitions including device type

Template setup
: Output template definition including image placement and orientation on the output media. Device setup and Press setup must be defined prior to template definition

Bender setup
: Defines parameters related to punch/bend tracking

It is important to understand the relationship between device, press and template setup. See the figure below.



Example of device-press-template relation. Here Template 1 is using plate format 1 and outputs to device 1 or 2 (load balanced). Template 2 only outputs to Device 2.

4.6 General settings

Database connection, location of system data folders and names/colors for status texts etc. can be accessed via the **General Settings** item in the **Configuration** menu. Note that these setting are crucial for system operation and should only be changed in case of major system re-structure. Default values are set during installation of OutputCenter.

The database connection is required for ControlCenter installation. The configuration in OutputCenter assumed the presents of an ODBC connection to the database (see section 2).

ODBC DSN

OutputCenter uses an ODBC connection for status communication. Make sure the MSDE database[2] is installed and an ODBC source is created on the database.

Username

ODBC user name

Password

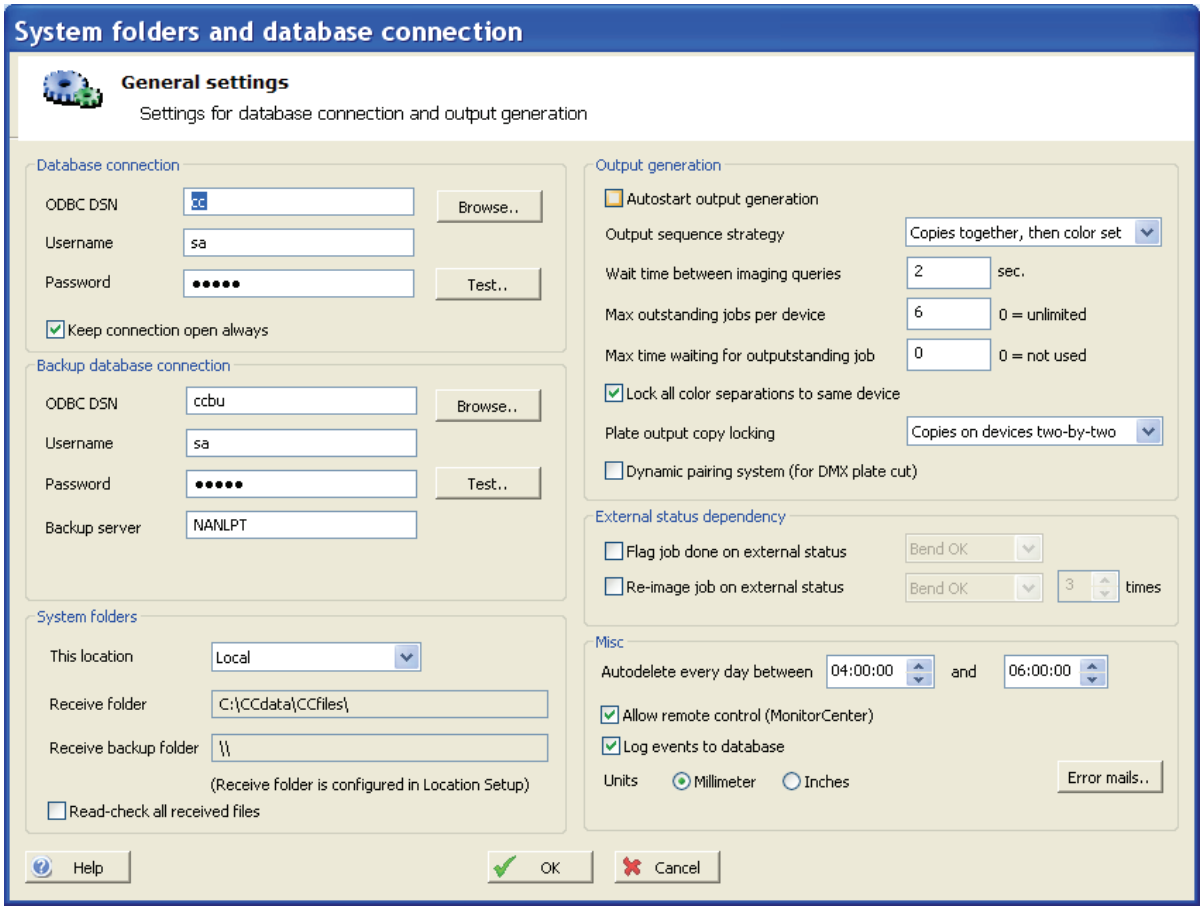
ODBC password

Keep conn. open

Recommended for installations where the database is located near the OutputCenter application (same LAN).

In case a backup database is installed enter the ODBC DSN for the backup server. Note that the DSN for backup is not automatically created during installation – it must be added manually.

[2] Described in section 2 Installation



Server connection properties. Settings should only be changed in case of major system changes

Backup Server

Name of server running BackupCenter. Usually the backup server name or IP-address.

This location

The receive folder is indirectly selected via the location selection. Note that changing the location of the receive folder on the location is done in the Location configuration (described in 3.8).

Read-check all received files

All files transmitted by InputCenter will be checked for consistency upon arrival and status will only then be set to 'Received'

Wait time between imaging queries

OutputCenter constantly scans the database for new jobs to process. In case no jobs are found a sleep time can be defined for OutputCenter. A sleep time of 1 to 3 seconds is recommended to allow other processes to run at full CPU speed.

Autostart output generation

If set OutputCenter will automatically start output generation after program launch. This may be used for unattended startup following a re-start of the PC (put OutputCenter shortcut in Startup folder. Auto-start can also be done setting the /s command switch.

Output sequence strategy

Determines the sequence of output plates for multiple copies: Setting *Copies together, then color sets* will output C-copy1, C-copy2..,M-copy1, M-copy2….etc. Setting Color sets together, then copies will output: C-copy1,M-copy1,Y-copy1,K-copy1,C-copy2…etc

Max outstanding jobs per device (max workload)

In case of multiple output devices, OutputCenter load balances between the available devices. For folder based output devices OutputCenter can hold back jobs if the current queue on a device exceeds a certain number. This number is referred to as the *max. workload.*
It is advisable to set the max workload as low as possible for optimal load balancing. Keep in mind that certain devices requires a number of jobs in queue for pipelining reasons. For example the DMX CTP should have max workload no less than 3.

Set max workload to 0 to allow an unlimited number of outstanding jobs on a device.

Max time waiting for outstanding job (seconds)

Certain devices are not able consistently to report final Done status on processed jobs. A maximum waiting time for an outstanding job can be set, assuming the job is successfully imaged after this period.
Be aware that using this option may not reflect the true status of the jobs – it should only be used in cases where feedback is not consistent.
On the other hand if this option is not used (set to 0 seconds) jobs with missing feedbacks will severely affect the efficiency of the load balancing logic (device will be assumed to have more in queue than is the true case).

Lock all color separations to same device

By default all color separations of a sheet side is locked to the same device once the first separation is starting to image on the device. This is highly recommended for registration purposes.
If for any reason color separations may be spread over multiple devices, uncheck this option.

Plate output copy locking

Even if plate copies have annotation text telling copy number, printers may prefer that all copies are imaged on the same device so that color set mix-up does not affect registration.

Perform autodelete between..

The receive folder must be maintained by OutputCenter. Any files without reference in the production database must be deleted. OutputCenter runs an automated cleaning process. The cleaning may be restricted time-wise to a time interval (24 hour format). Usually the time period is either before or after peak production hours.

***Allow remote* control**

Set this option if OutputCenter may be controlled from MonitorCenter. The output generation process as well as the device enable/disable mechanism may be remote controlled from MonitorCenter

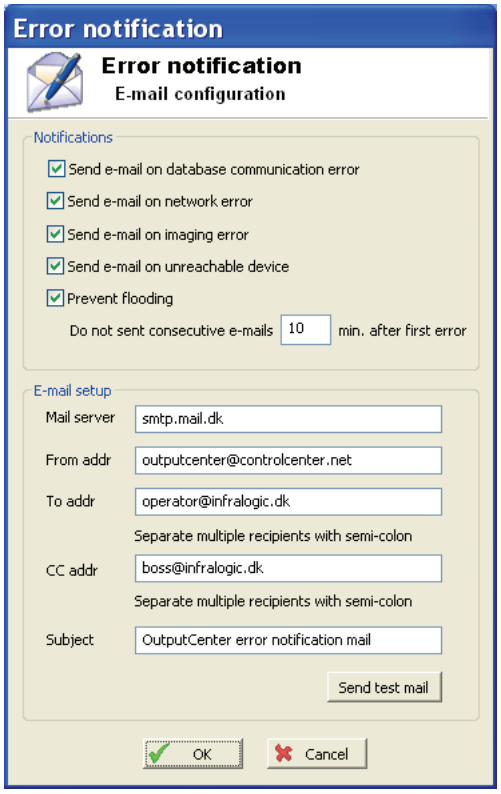
Log events to database

Set this option to log history progress to the database. The log can be inspected in real-time in MonitorCenter. Note that logging will put additional stress on the central database. In rare cases with weak network connections or highly loaded networks it is advisable to turn off the logging.

E-mail notification

Click button to adjust the error notification e-mail system. See section

4.6.1 E-mail notification



The error notification system allows e-mails to be automatically sent on different types of errors

OutputCenter can notify operators via email about abnormal situations such as imaging errors, network errors or database connection errors.
The system is able to send e-mails on the following events:

- Database connection errors
- Network errors (hopefully not to the mail server)
- Imaging errors (during image file generation or during exposure)
- Device connection errors

Prevent flooding

Often a database error or network error may be sticky causing errors to persist. In order to prevent many e-mails being sent on sticky errors the **Prevent flooding** option will not repeat the error notification in a specified time frame.

Mail server

Enter outgoing SMTP mail server address (DNS name or IP-address)

From addr

Fills the FROM address field in the e-mail message. Note that some e-mail server will reject 'un-real' FROM email-addresses.

To addr

Fills the TO address field in the e-mail message. Multiple recipients can be added separated by semi-colons.

CC addr

Fills the optional CC address field in the e-mail message. Multiple recipients can be added separated by semi-colons.

Subject

Fills the Subject field in the e-mail message.

Note: Most mobile telecoms have services allowing sms-messages to be sent via emails.

4.7 Configure job names

This is described in section 3.10 (InputCenter configuration)

4.8 Configure color names

This is described in section 3.9 (InputCenter configuration)

4.9 Configure location

This is described in section 3.9 3.8 (InputCenter configuration)

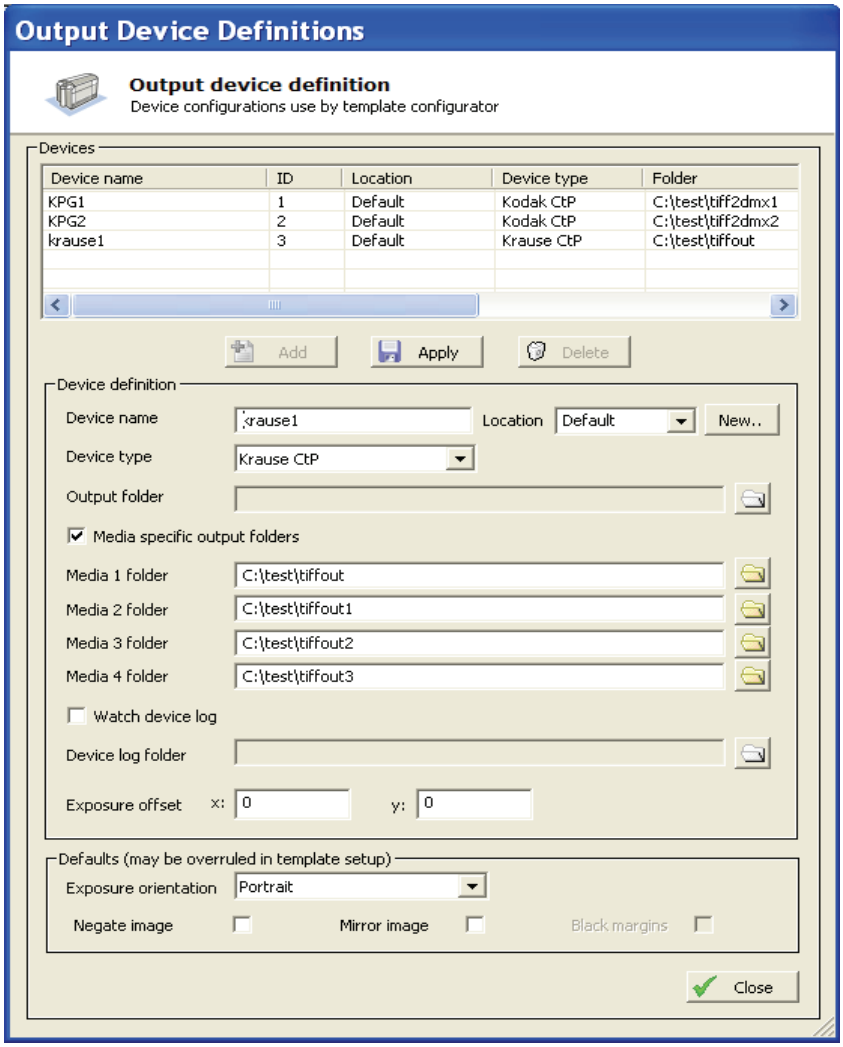
4.10 Device setup

Each device must be defined to determine imaging method. Supported devices are:

- DMX CtP (Esko-Graphics)
- PlateDriver CtP (Esko-Grpahics)
- Dotmate/DPX/DPX4 (Esko-Graphics)
- RasterBlaster (TIFF to Xitron application)
- Highwater device (PCI imager interface)
- TIFF (Generic TIFF e.g. EskoNet TiffPosition)
- Postscript (To RIPs driving output devices)
- Kodak/Creo Newsetter CtP connected via SCSI adapter
- Kodak/Creo Newssetter CtP connected via NewsConnect application
- AGFA devices connected via NewsDrive application
- Krause CtP (via NetLink)
- Fuji CtF/CtP (via GateWay)
- ECRM News CtP (via CTserver)

Certain devices require an *output folder* (input folder for the device) and a *device log folder* for imaging status feedback (e.g. DMX, Kodak and Krause). For devices requiring an output folder the generated tiff files can be sent to specific folders depending on media (e.g. used by Krause NetLink). Currently media-specific folders are limited to four different media types.

Use **Add**, **Edit** and **Delete** buttons to maintain the device list.



Output device configuration. Selecting of device type and optionally output file path(s)

Device name

Enter a unique name identifying the device

Device type

Select one of the supported device types from the drop down (see above)

Output folder

For file-driven devices, select a destination folder for final bitmap images. For media-specific output folder – see below.

Media specific output folder

Enables media 1-4 folder entering fields used for media specific output destination.

Watch device-log

Certain devices can report imaging progress in log-files located in a specified folder

Device log folder

Path to log file folder

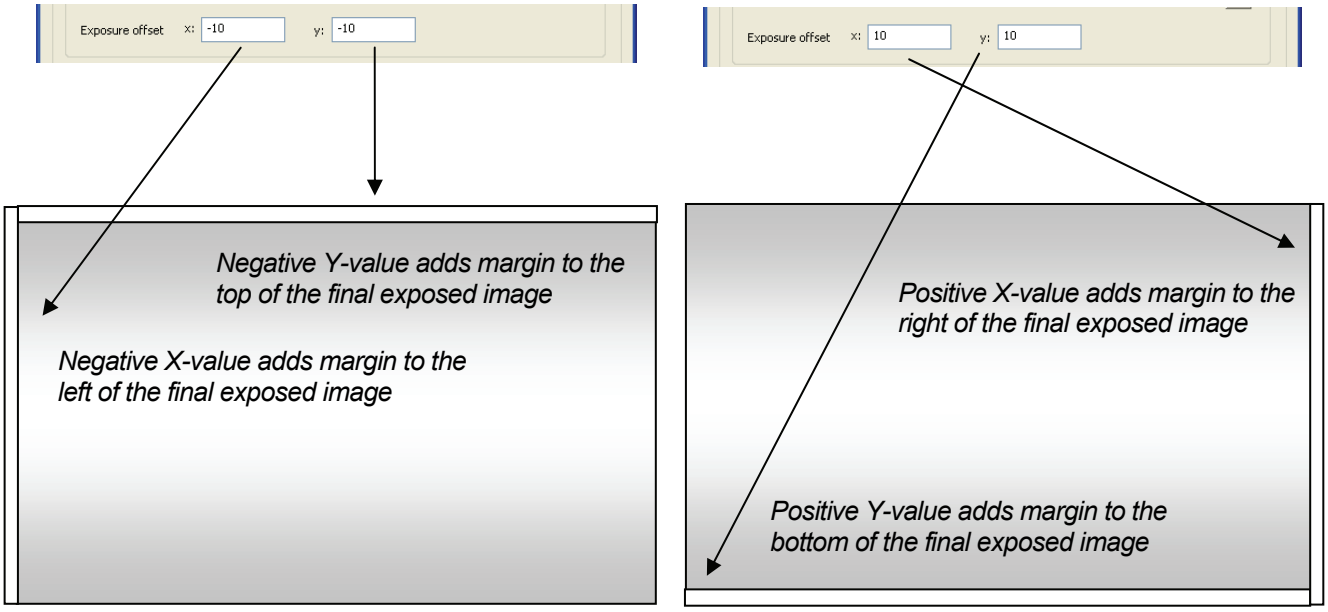
Exposure offset

A general exposure offset may be set per device to align multiple devices using the same template. See description below.

The imaging orientation, polarity and mirroring are defined in the template setup (below). The *default parameters* may be set in the device definition for convenience.

4.10.1 Device-specific image offsets using Exposure offset

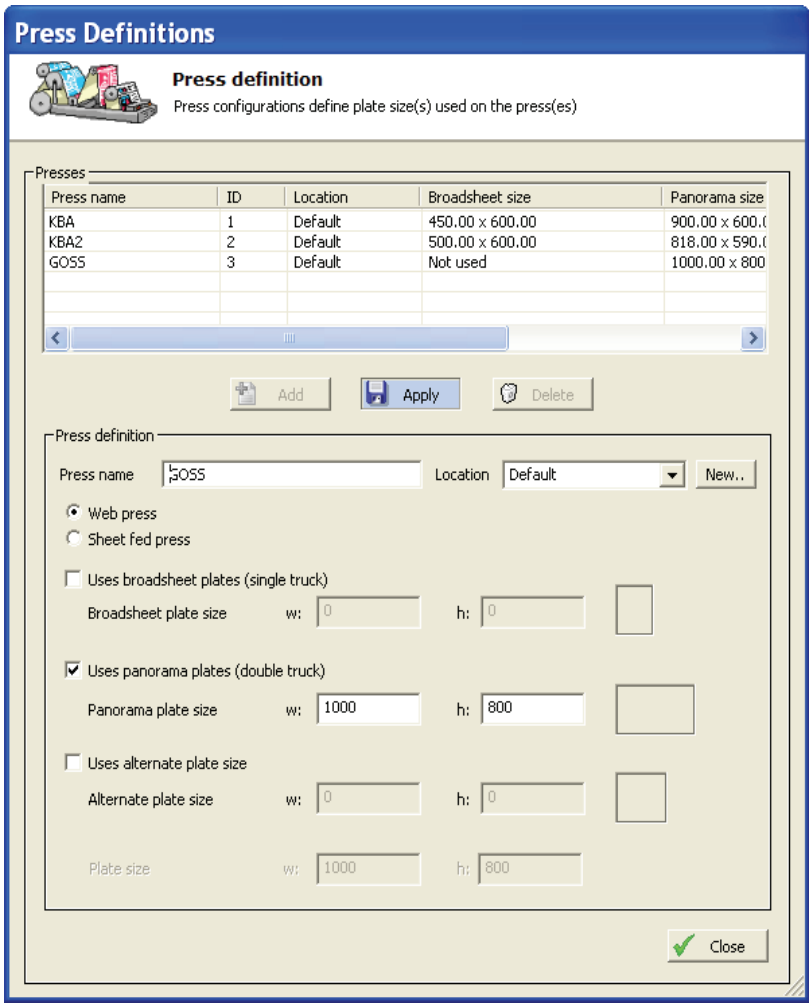
Device-dependent margins can be added to the final exposed image independent of press plate size and template configurations. This will be able to cater for differences in device-to-device offsets. Also the exposure margins can be used to ensure that the plate is exposed fully is cases where plate sizes vary slightly (e.g. due to badly cut plate stacks).



4.11 Press setup

Each template relates to a specific media size (plate size). Media sizes are defined in the Press configuration. The name of the press and the format must be defined – this information may be used for plate texts or output file naming.

Each press may have up to three different plate sizes defined: Broadsheet (single truck), Panorama (Double truck) and Alternative (Certain Asian presses handle a third format).



Press definition dialog. Enter a unique name and define plate dimensions

Use **Add**, **Edit** and **Delete** buttons to maintain the press list.

Web/sheet press

Select press type.

Press name

Enter a unique name for the press

Location

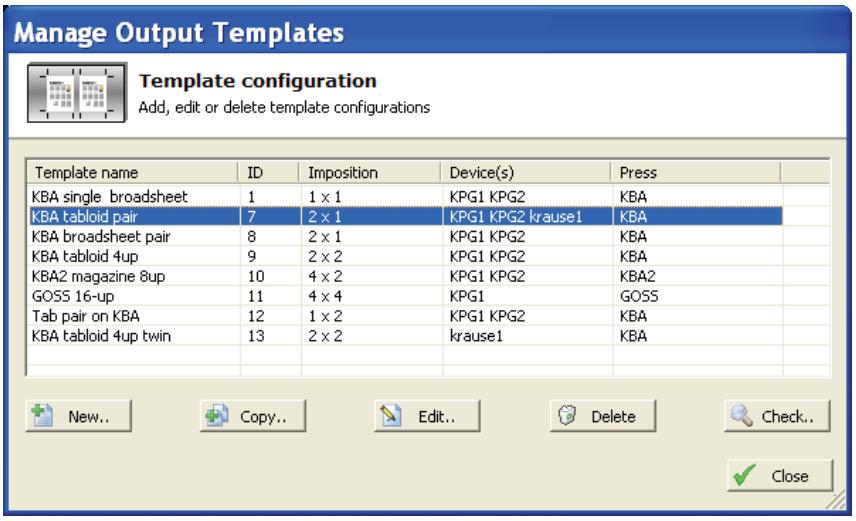
Select location (physical site) of this press

Use broadsheet plate size (or panorama or alternative plate size)

Enables the definition of a broadsheet type plate. It is recommended to enter the dimensions of the plate in the orientation it is mounted on the press

4.12 Template setup

Template definition starts at the template manager dialog where the defined templates are listed. Select **New**, **Copy**, **Edit** or **Delete** to maintain the template list. Also a template configuration **Check** can be selected.



The template definition is organized in five categories (tabs):

Device/media

The association between template devices and press plate size

Page definition

Defines optional cropping and 'snapping' (defined below) of incoming images

Plate layout front

The actual plate definition GUI for primary plate side

Plate layout back

The actual plate definition GUI for secondary plate side

Page numbering

Signature numbering skeleton for imposition calculation

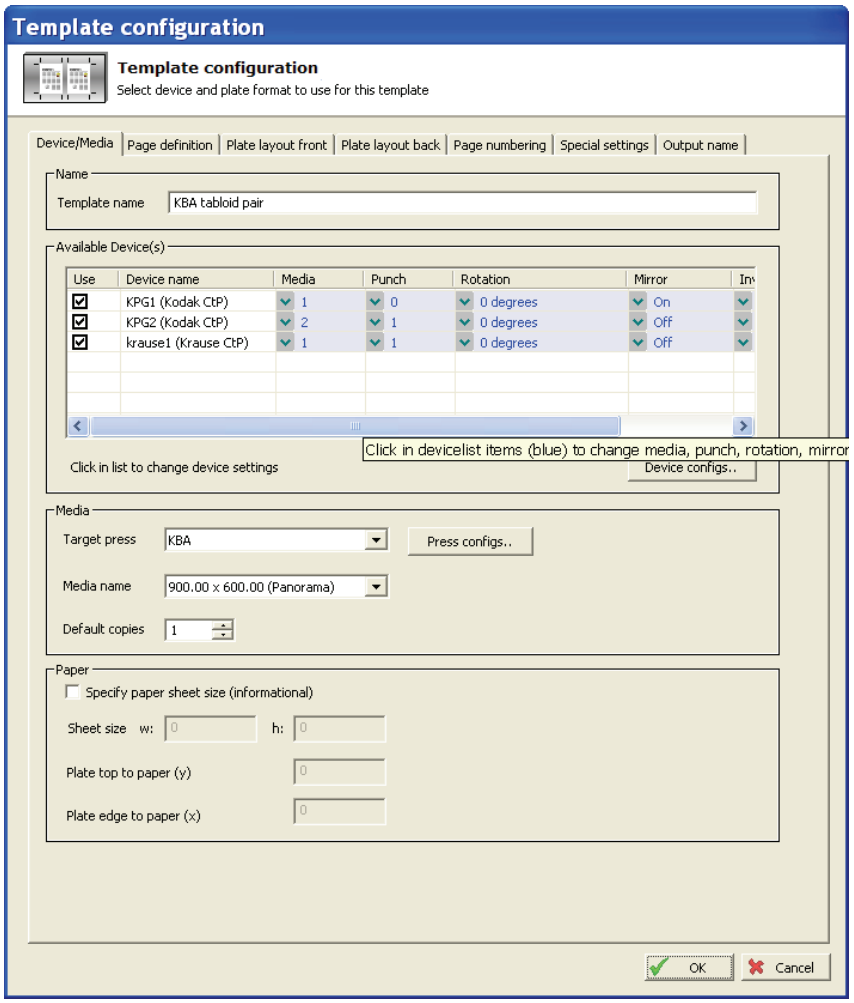
Special settings

Color specific settings (e.g. fan-out scaling)

Output naming Name of generated file

4.12.1 Template configuration - Device/Media

A template is linked to a plate format and one or more available output devices. Check the devices allowed to output plates formed with this layout. OutputCenter will load balance between these devices.
The plate size used is linked to the template.



Layout template device and media selection. Select one or more possible device to use with this layout.

Template name

You must type the unique template name here

Available devices

Select the devices to be used for this template by clicking the checkboxes. Note that for each device settings for media number, punch activation, rotation, mirroring and negation may be selected. Click on the list to activate to drop-down selection boxes.

Target press/media

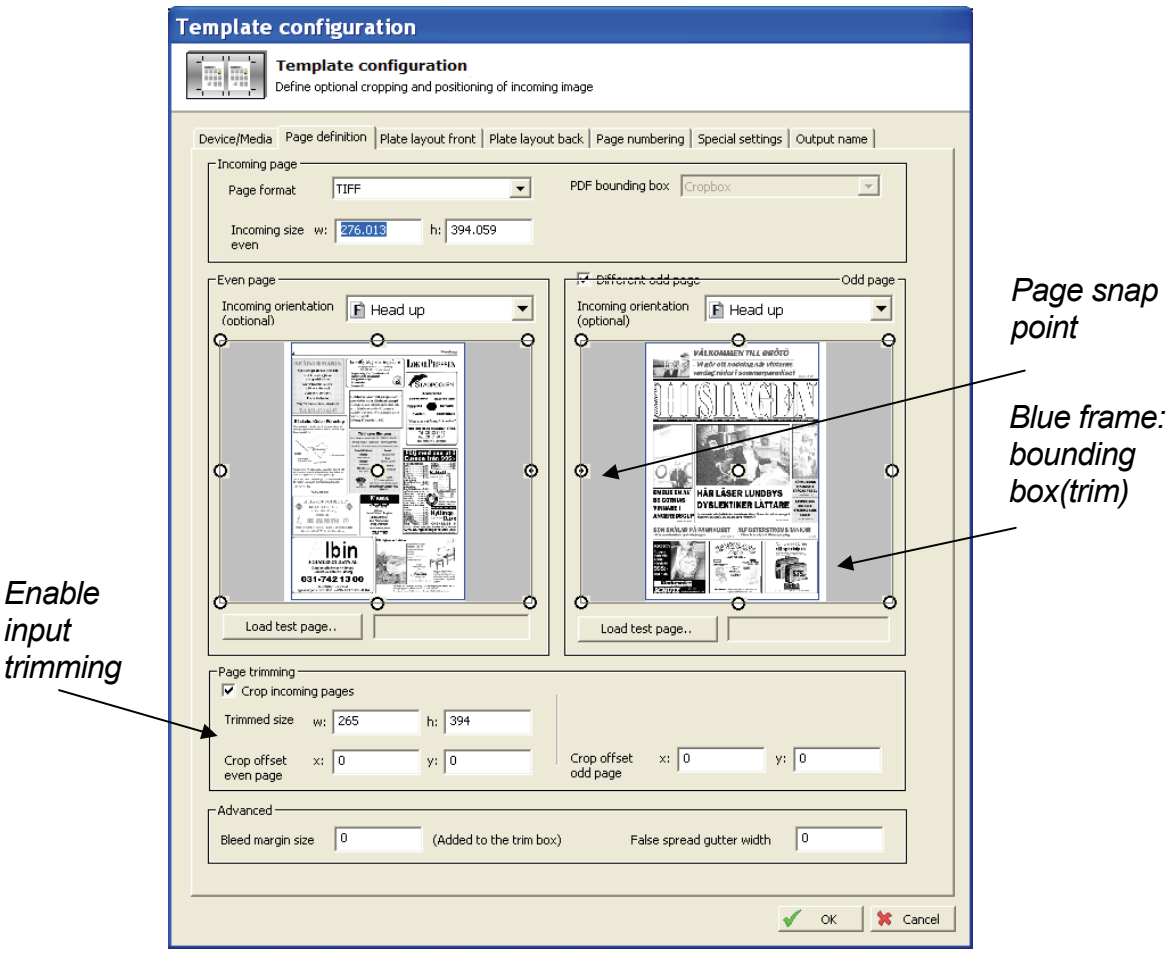
Select plate format for the intended press

Paper

Optionally the paper sheet size may be defined to visually see the plate-paper-image relationship in the Plate layout dialog.

4.12.2 Template configuration - Page definition

The page definition informs the system about the size and orientation of the expected incoming images. All parameters are related to the incoming page, not the



Page definition describes the input into the layout. Individual pages may be cropped to size

final output image (defined in Plate layout). Because the information is crucial for correct output, the template setup allows the use of real high-resolution pages for tests (Load test page button). Note that real pages are required for using the hi-res preview feature in the plate layout dialog

.

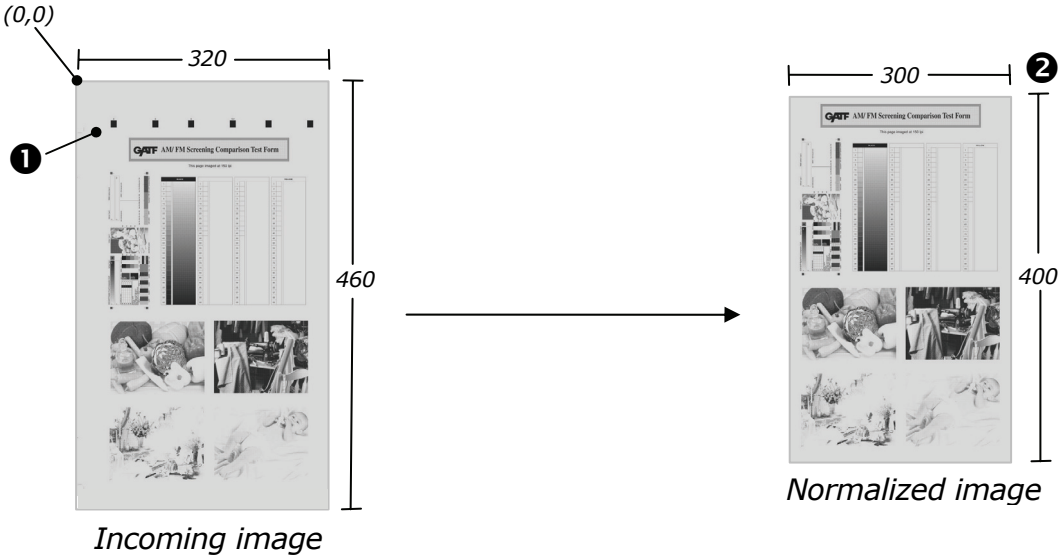
The configuration allows different odd and even page definitions. This may be

required I left and right pages from the layout program are not positioned the same (identical left/right/top/bottom margins).

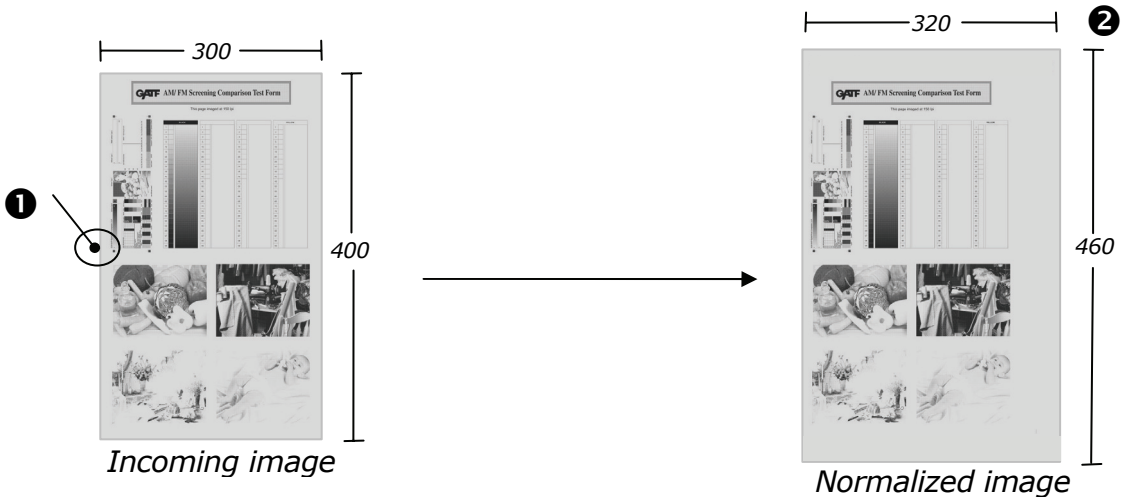
The page definition allows optional image trimming (cropping) or normalizing of incoming pages (check the *Trim incoming pages* option). The bitmap is physically cropped or enlarged to the size specified to ensure that the page is well-defined when positioned onto the final plate image. Therefore it is highly recommended always to use the page trimming feature. Now that the size is well defined the challenge is to define the starting point of the trimming. An absolute value can be entered (see example 1 below) or the convenient 'page snapping' feature can be used.
For example centred or left/right/ top/bottom adjusted cropping may be performed by selecting one of the snapping points in the image. This will align a potential smaller image to the box corner/edge selected (See example 2 below).

IMPORTANT NOTE:	The page definition only applies to the incoming page. The final placement of the page (margins etc.) on the plate is defined in the plate layout section.

Note that snapping and absolute trim offset can be combined. If for example a page must be cropped centred but also offset a small amount, the *Fixed trim offset* is 'added to' the centred page.



Trimming the incoming image with absolute parameters takes a fixed trim offset coordinate (❶) and a trim size (❷) as parameters. The trimming may be used to crop away unwanted marks from the incoming file.



Normalizing the incoming image (here to a bigger size) using one of the 'snap' points (❶) will center the image vertically, and align the left edge while ensuring a given size (❷). Using the center-snap will center the image vertically and horizontally.

Bleed margin

For trimmed products a *bleed margin* is included in the incoming page. The bleed is an extension of an image format going outside the trim-box to compensate for misaligned cutters. The bleed margin is usually 2-5 mm.

The bleed will expand the bounding box (blue frame) to cover the bleed. The actual trimmed page will be shown with a green frame in the page previews.

False spreads

False and true spreads requires special attention. In cases there marks are put in the gutter between pages (e.g. gray balance marks), the marks will be printed on all pages by default – also on spreads. To make sure marks are not put on spreads images, a zone can be defined in the gutter where marks are only allows if no image exists in the gutter. The zone will be shown in light-red in the previews.

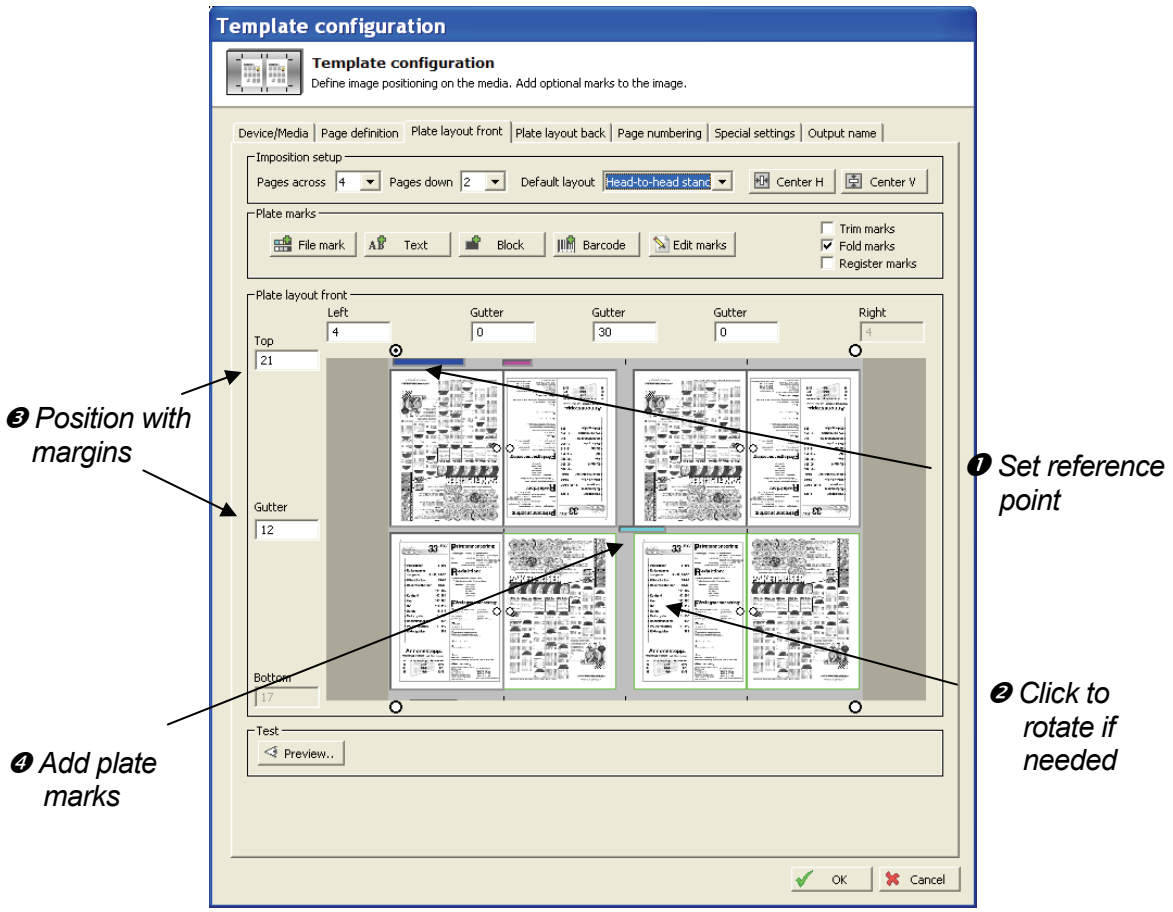
4.12.3 Template configuration - Plate layout front

The layout holds one or more page in each side of the paper. The natural starting point is to define the front first and when the back. An option exists on the back to simply copy the front layout.

The template layout allows up to 4 pages horizontally and 4 pages vertically (16 pages in total).
Select **Pages across** and **Pages down** and select one of the default layout method from the drop down box:

- Head-to-head standing (portrait orientated pages)
- Head-to-head lying (landscape orientated pages)
- Foot-to-foot standing
- Foot-to-foot laying
- Heads up
- Heads down
- Heads left
- Heads right

The placement of the (normalized) pages on the plate is done by applying gutters and margins to adjust image positions onto the final plate (selected in the Device/media dialog). Usually a corner or a center-edge point is the reference for the imaging. Select the reference point and use the Center H/V buttons to auto-centre the images on the plate. If the images are not to be centered on the plate, adjust the margins to 'push' the image in place. This is usually required if plate bends are different.



The recommended procedure in laying out a new plate is to set reference point (❶), optionally rotate the incoming pages (❷), position the images on plate with gutter/margin values (❸),and finally placing marks (❹) on the plate. The layout may be inspected in high-resolution (or as PDF) by pressing the Preview button.

A recommended strategy for getting started is as follows:

- Rotate the image by clicking on the page (in 90 degree steps).
- The recommended strategy for plate layout should follow these guidelines:
- Ensure the incoming page is trimmed (Page definition tab)
- Select imposition type (pages across and down) and default layout type (orientations)
- Select a reference point. The reference point depends on the device – generally the reference point should be where the imaging device places the first dot. For device with media auto-centering the reference point should be on one of the mid-edge points.

- Enter gutter values. Note that gutters are distance between trims in case bleed margins are used.

- Rotate the incoming pages if required (one click on a page will rotate if 90 degrees).

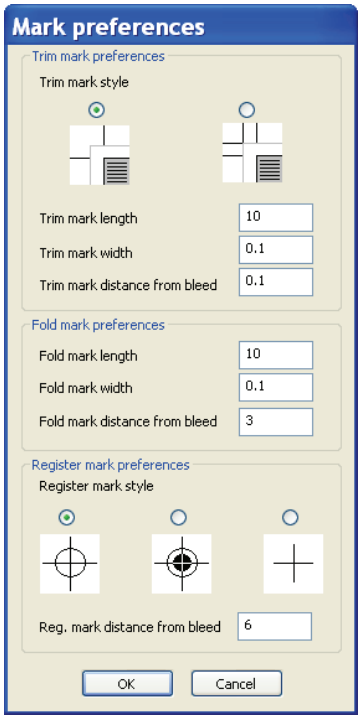
- Use the centre buttons and adjust margins if image is not to be centered on plate (e.g. due to different size plate bends top and bottom). The number of alignment buttons can be used for easy centering of 'swapping' of margin values.

- Place plate furniture (marks) onto the plate image using the buttons: **File mark**, **Text**, **Block** and **Barcode**. Plate mark definition is described below.

- Inspect the final image using the **Preview** button. This will run the image through the same engine used for final output but will route the image to the bitmap viewer.

Trim/fold/register marks

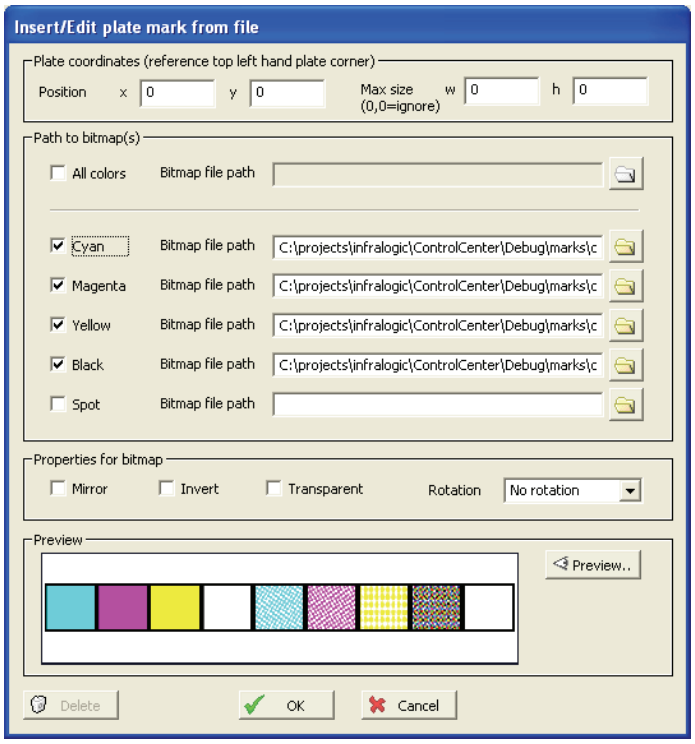
For trimmed products trim (crop) marks are required. Check the options **Trim marks**, **Fold marks** and/or **Register marks** to enable these. The appearance of these marks can be changed pressing the **Marks prefs** button.



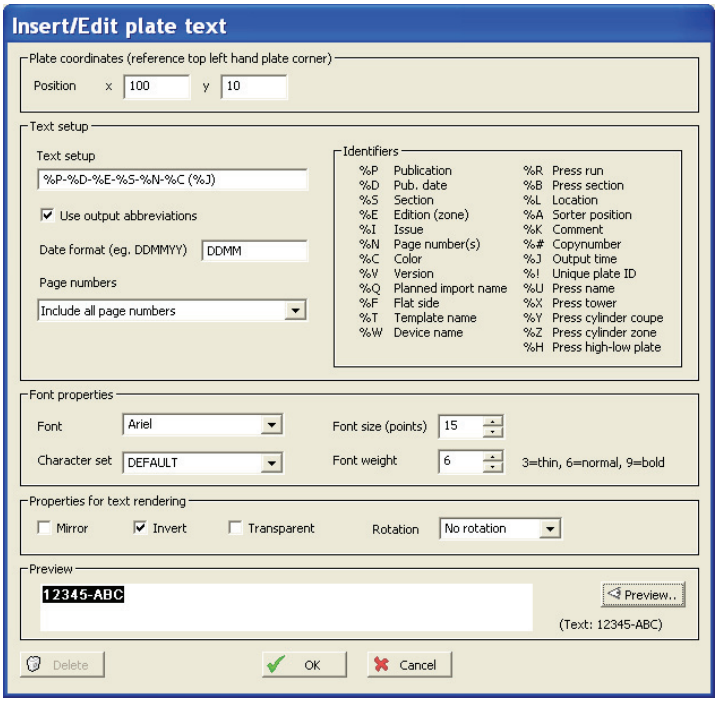
Trim/fold mark preference dialog. Select style and size properties for the trim and fold marks.

Plate marks

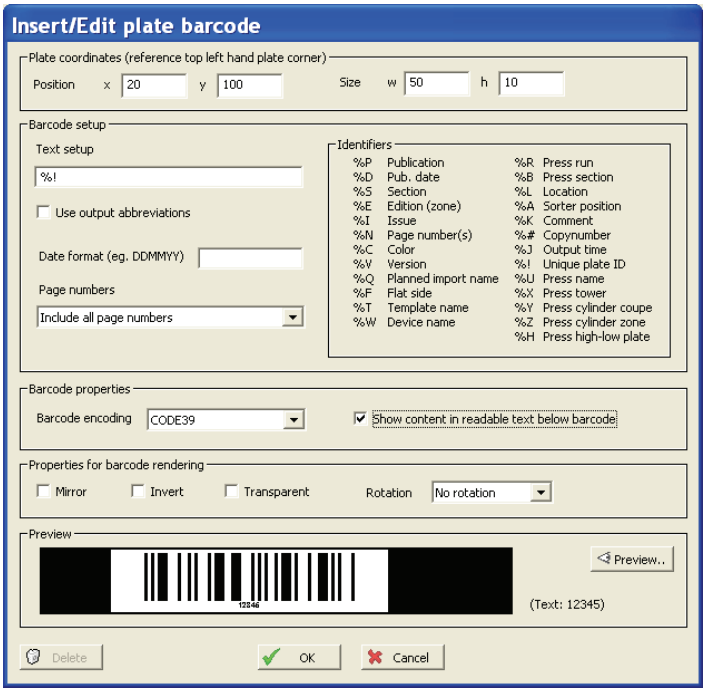
Plate marks covers both custom images embedded on the plate as well as texts and barcodes. Custom images (1-bit TIFF files or PDF files) are typically bender or press registration marks, side guides, cut-off guides or quality marks.
Texts and barcodes are generated dynamically at the time of imaging and well reflect a given number of combined information fields from the system, e.g. publication name, edition name, color, intended press, image time etc.



Custom file marks. In case of pre-ripped color marks enter path for each 1-bit tiff color separation



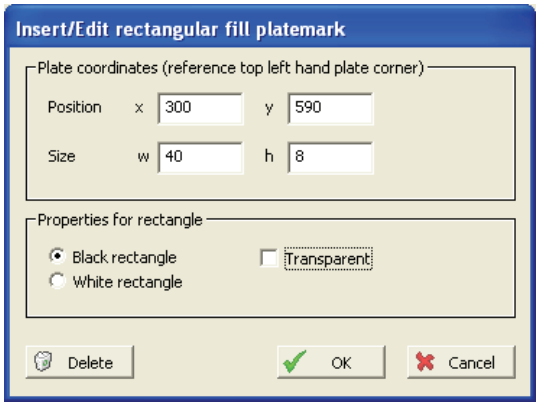
Text mark definition. Enter position, text definition string and font properties



Barcode definition. Enter position, maximum size, contents definition and barcode encoding.

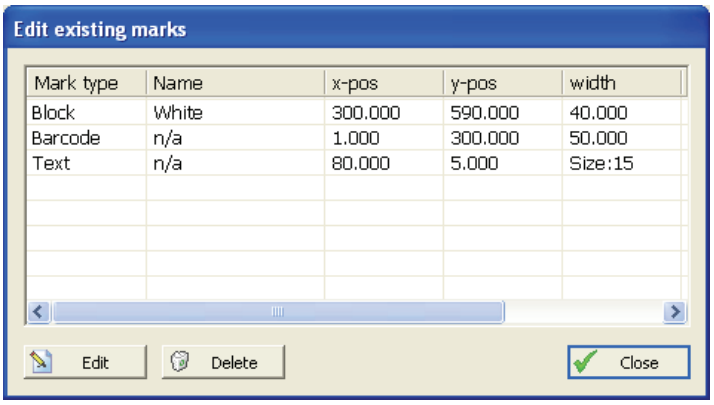
For all types of marks, enter the upper left hand corner coordinate of the mark. Note that the zero-point is in the upper left hand corner. For loaded image marks, barcodes and texts select polarity, mirroring and rotation for the mark.

The content of ID-texts and barcodes are user-defined. Form the text setup string defining the contents of the generated mark by entering one or more of the ID attributes with optional separator characters. Example *%P-%N-%C (%U)* may produce something like *CC-01-Black (GOSS1)*.



Rectangle (block) definition.
Enter position, size and black or white (mask-out) color

A mark can be edited or deleted by clicking on the mark in the plate layout. Alternatively, use the Edit marks button to manage existing marks:



In the mark edit dialog select a mark to edit it or delete it from the plate layout. Editing a mark will bring up the definition dialog(s) described above.

4.12.4 Template configuration – Plate layout back

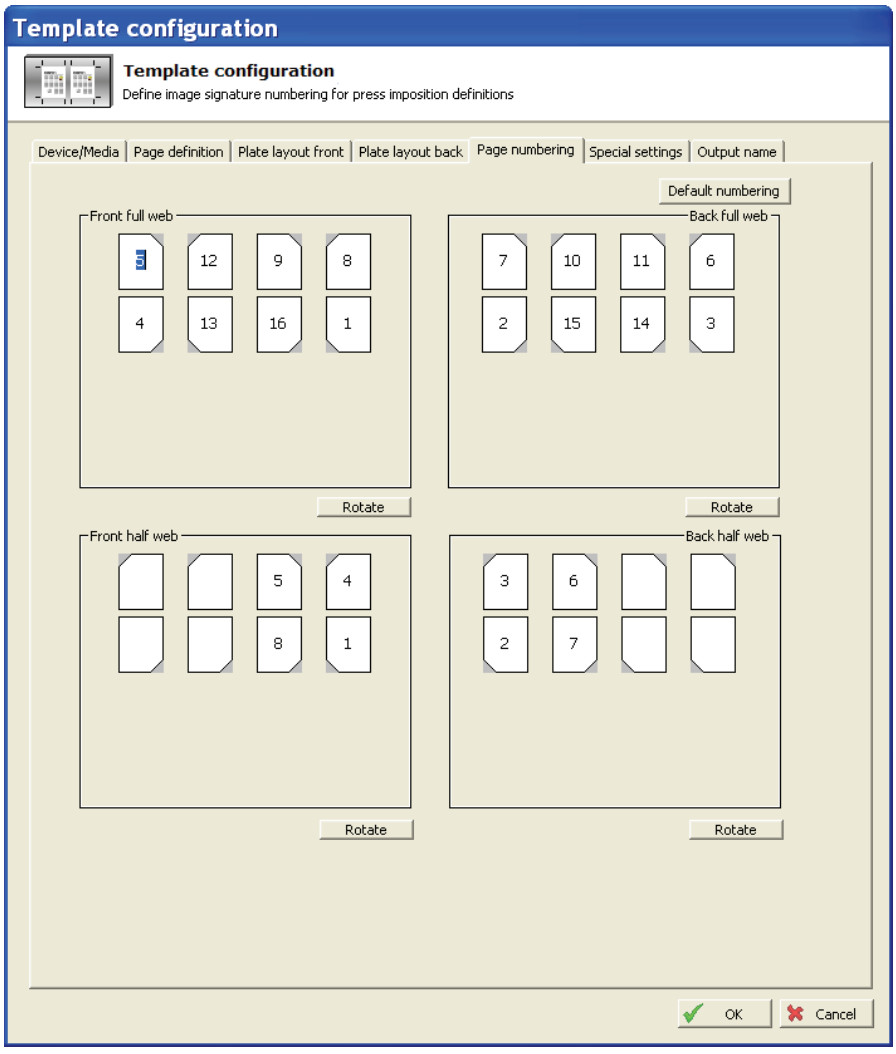
The definition of the back side is equivalent to the front except the option for copying the front layout. Uncheck the option to define specific page rotations, margins and plate marks for the back.

4.12.5 Template configuration – Numbering

The imposition calculator in PlanCenter requires knowledge about how sheets are folded. The fold will determine the placement of the individual page numbers. A *signature* is defined as a skeleton for numbering the page on front and back.

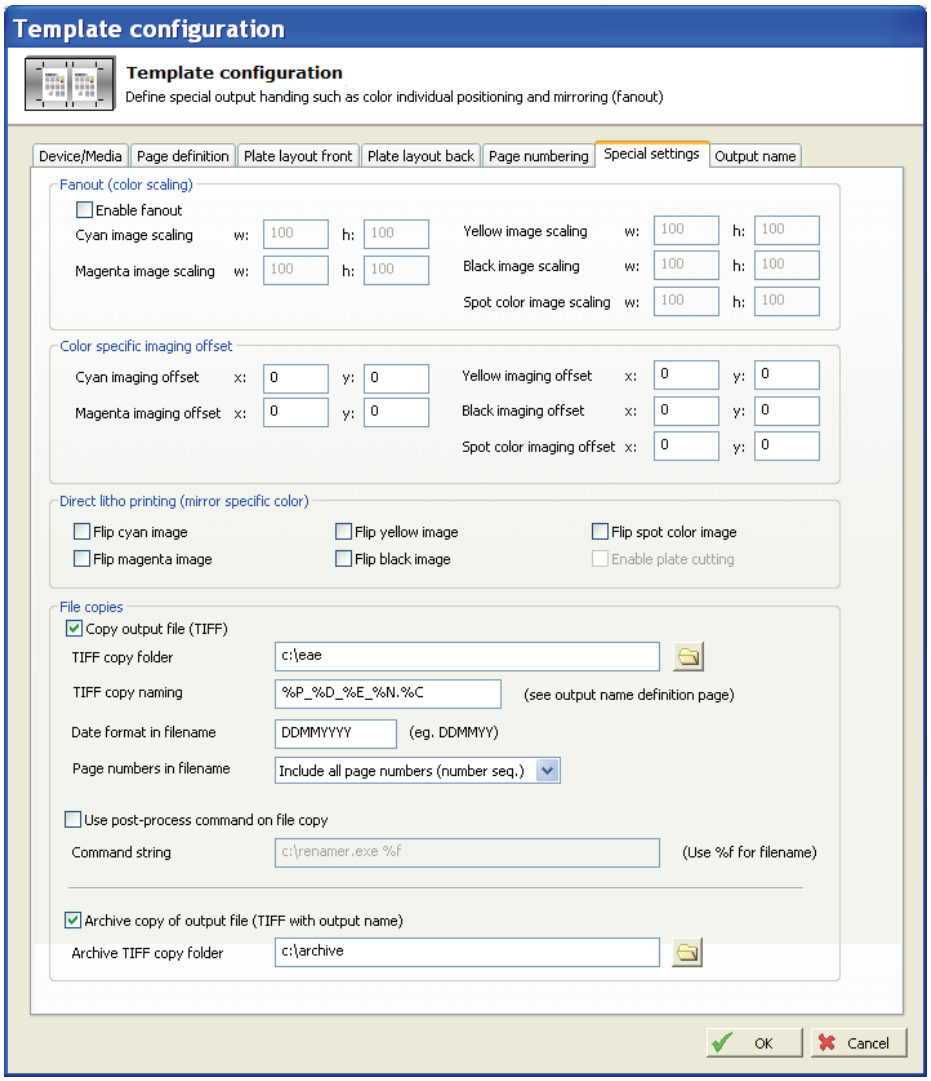
For web presses a potential half web signature must also be defined.

It is allowed to use duplicate page numbers, e.g. for double copy printing or step-and-repeat layouts.



Template signature numbering. The signature is used in planning (PlanCenter) to generate complete impositions. Note that the partial signature can be half-web (web presses) or work-and-turn (sheet-fed presses)

4.12.6 Template configuration - Special settings



Select color-specific scaling (if supported), offset and mirroring in the Special Settings dialog.

Certain press-specific special cases may need to be compensated for, e.g. for direct printing of one of the colors (direct litho) or color specific scaling for fan-out compensation.

Enable fan-out

Enable to allow color specific anamorphic scaling to be performed. Certain output devices are able to scale on the fly while imaging (e.g. DMX and DotMate). For non-scaling devices this feature requires the optional CCresampler module (sitting between OutputCenter and the output device

Color specific imaging offset

Offset adjustment of specific colors in mm/inches with respect to upper left hand corner. Color specific offset is sometimes required in combination with fanout scaling and direct litho printing.

Direct litho printing

Direct litho printing requires that one of the colors must be output mirrored compared to the other colors.

Copy output file (TIFF)

In cases where ink preset is required, enable this feature to generate an additional copy of the tiff file (does not apply to PDF output). Enter destination folder and naming convention for the file. For naming setup, see section 4.12.7

Archive copy of output file

Use this option to store a copy of all generated tiff flat files to an archive folder. This option should be used for sending files to InkCenter.

4.12.7 Template setup - Output naming

For file-delivered output (e.g. to Esko-Graphics DMX or Krause Laserstar) for final file name must usually be unique for tracking purposes. Define the output name using the available %-IDs (publication name, color etc.). Note that the naming convention may be dictated by the receiving device. Consult the documentation for the device for requirements for certain file name constructions.

Output name definition

The file name is constructed using the naming identifiers listed on the right hand side

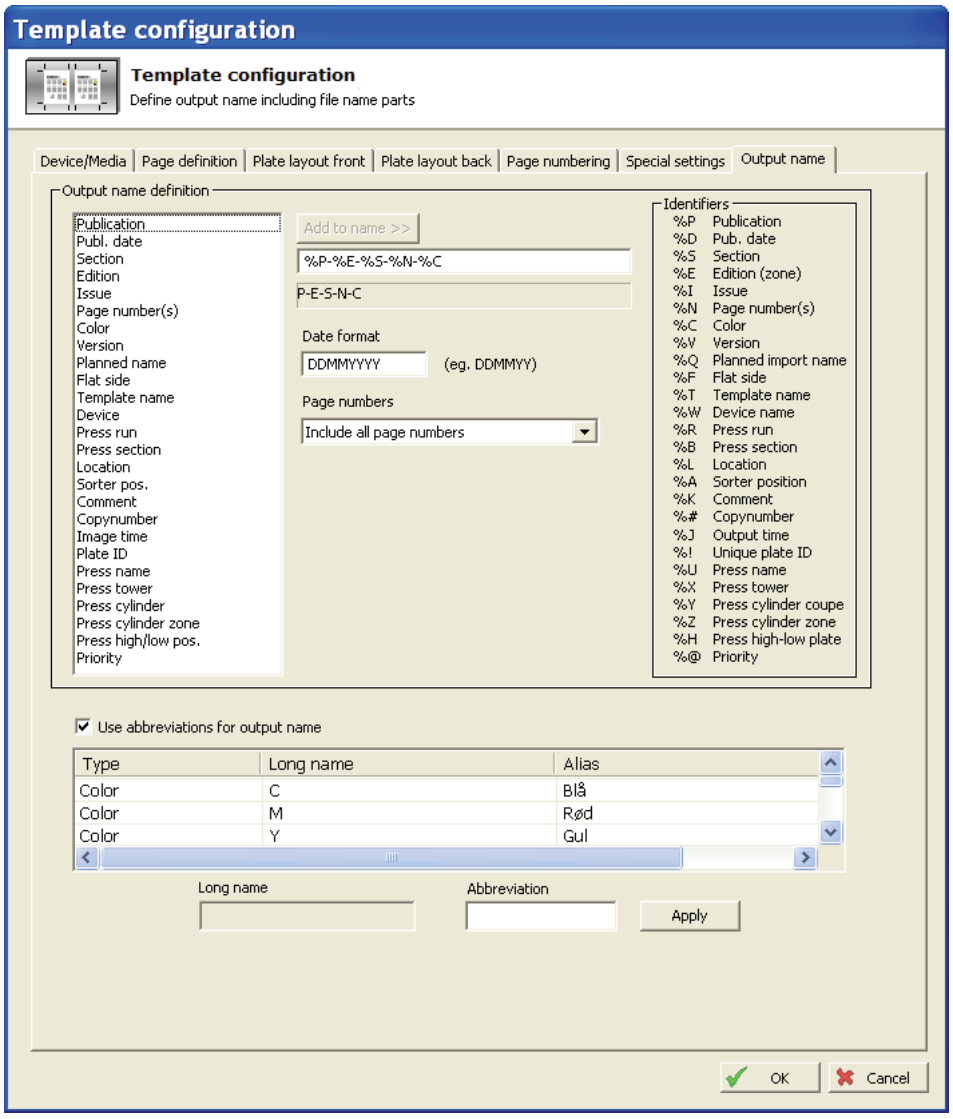
Example:

Name definition	%P-%D-%E-%N-%C.tif	
Date format	DDMM	
Page numbers		Include all page numbers (position seq)

Will generate filenames like: News-2412-Main-16-1-K.tif

Output abbreviations

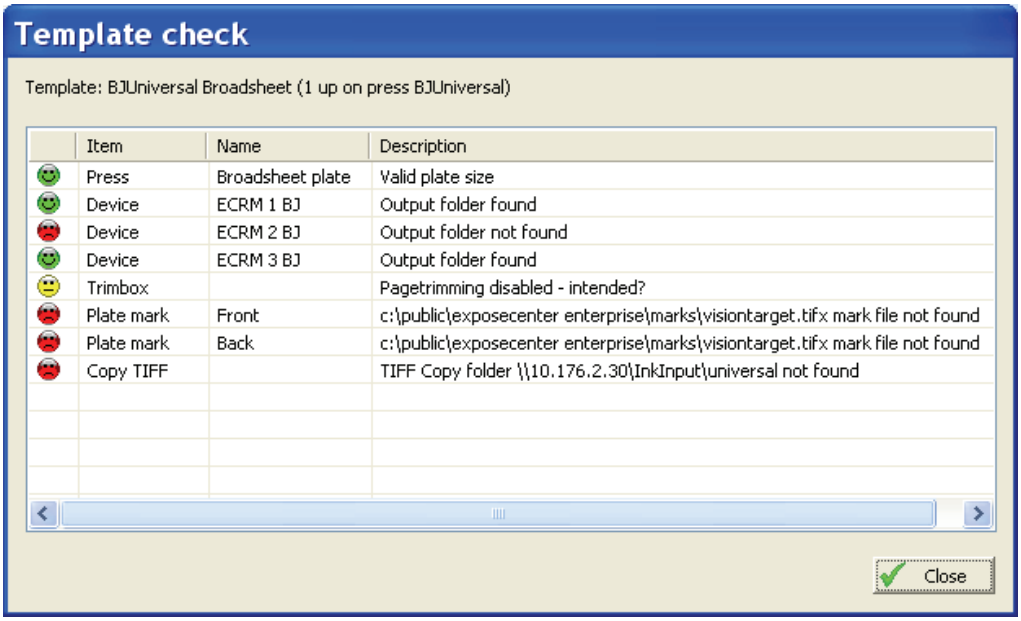
A one-to-one translation of certain identifiers can be defined – e.g. short names for publications, editions etc.



Output naming may be constructed using the information from the page plan e.g. publication name, section name page numbers, color, template name, press name etc.

4.12.8 Checking the template

From the Template Manager select **Check** to run a quick check of existing templates.

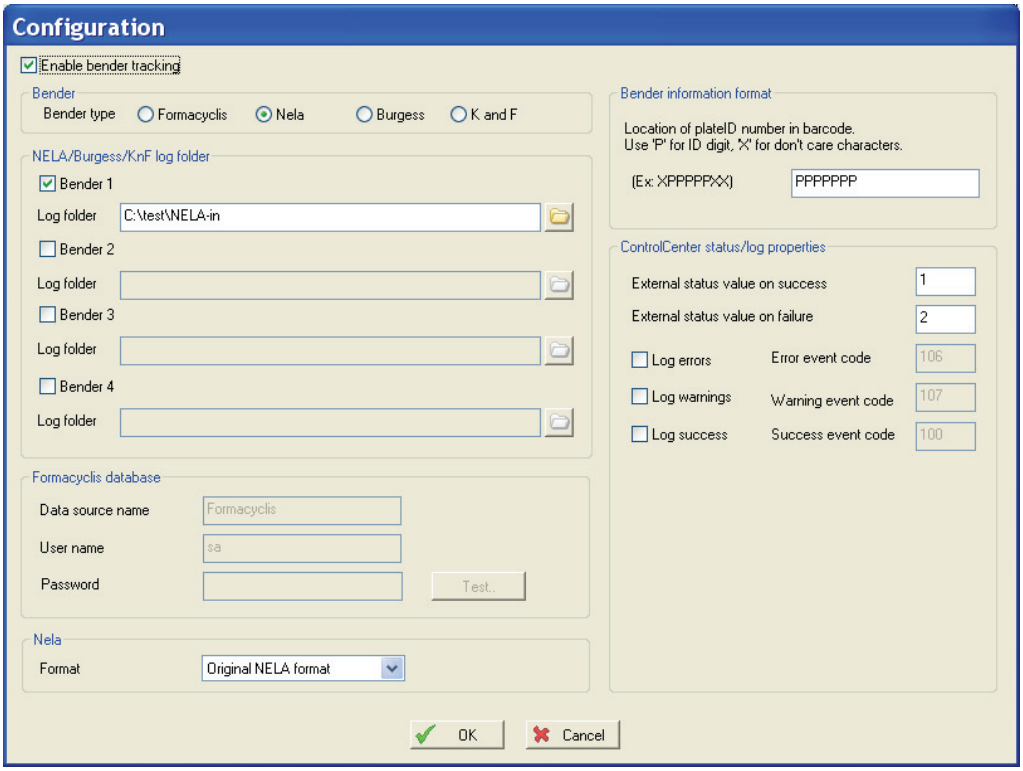


Template check will notify about problems with the template

Common problems such as unreachable folders, mark files and warnings about abnormal sizes of pages, margins etc. are reported.

4.13 Bender tracking configuration

A separate process exists in OutputCenter for tracking plate punch/bend stations. The bender feedback is established by including a barcode on the plate with the unique plate ID (%W). The number in the barcode will be read by the bender and OutputCenter can pick up the information. For most benders the barcode information is written to a log file or a job-specific event file by the bender control PC.



Punch/bend tracking configuration. Currently OutputCenter supports Formacyclis, Nela, Burgess and K&F.

The full barcode contents is usually reported by the bender. To isolate the plate-ID define the barcode mask using P-letters for relevant digits related to the plate-ID. Other digits/letters may be included for plate sorting but this to not relevant for plate tracking.

The status of each plate from the bender(s) is reported as 'External status' values in the ControlCenter database. The default status codes for bender-feedback are OK: 1, Error: 2

4.14 Start-up defaults and advanced settings OutputCenter

Certain rarely changed parameters can be set in the program configuration file OutputCenter.ini. Changing ini-settings requires expert-knowledge of OutputCenter behavior. The most important settings in OutputCenter.ini are shown below

Setting ([Setup] section)	**Default**	**Description**
StartMaximized	0	Set to 1 will default to full screen mode

AutoStart	0	Set to 1 to start imaging process at application launch time
AllowRemoteControl	1	Set to 1 to allow MonitorCenter to control on/off states of imaging.
NoLogin	0	Set to 1 to bypass admin-level login for changing configuration settings
Debug	0	Set to 1 to enable trace logging to log files written to CClogs folder
LogFolder	<inst>\logs	Path to log file folder. Default is subfolder \logs in the OutputCenter installation folder
DatabaseLoginTimeout	5	Database timing parameter. Maximum time waiting for successful login to database. Exceeding this time will the system will report error.
DatabaseQueryTimeout	5	Database timing parameter. Maximum time waiting for successful query on database. Exceeding this time will the system will report error.
QueryBackoffTime	500	Database timing parameter. Time between retries on query timeouts (Time in millisec.)
QueryRetries	3	Database timing parameter. Number of retries on query timeouts before reporting error
LoginServerName# (#: 1-10)	*<blank>*	Used for automatic login to remote servers at startup time so the system does not rely on Windows already being logged on. Up to 10 network shares can be logged on to.
LoginServerShare# (#: 1-10)	*<blank>*	Share name used for automatic login (see above)
LoginServerUserName# (#: 1-10)	*<blank>*	Server login username used for automatic login (see above)
LoginServerPassword# (#: 1-10)	*<blank>*	Server login password used for automatic login (see above)
SimpleWorkload	*0*	The workload decision logic counts job outstanding per device in the database having 'Sent to device' status. This is the correct way unless the devices are used by other output systems also. In these cases set SimpleWorkload=1 which will simple count un-exposed jobs in the output folder instead.

5 PlanCenter

5.1 Introduction

PlanCenter is the default client for planning and page management. Activation and changes to productions, page inspection, approval, priority changes and other production management tasks takes place in PlanCenter. PlanCenter can be installed on any of the sites with network access to the database and file server.

The different views in PlanCenter reflect the current state of pages/page separations polled into the system. Each page/separation is tracked for flow status, release/approve status and possible error messages. Note that pages are not entered into the system using PlanCenter – this is done by the automated InputCenter input folder scanner.

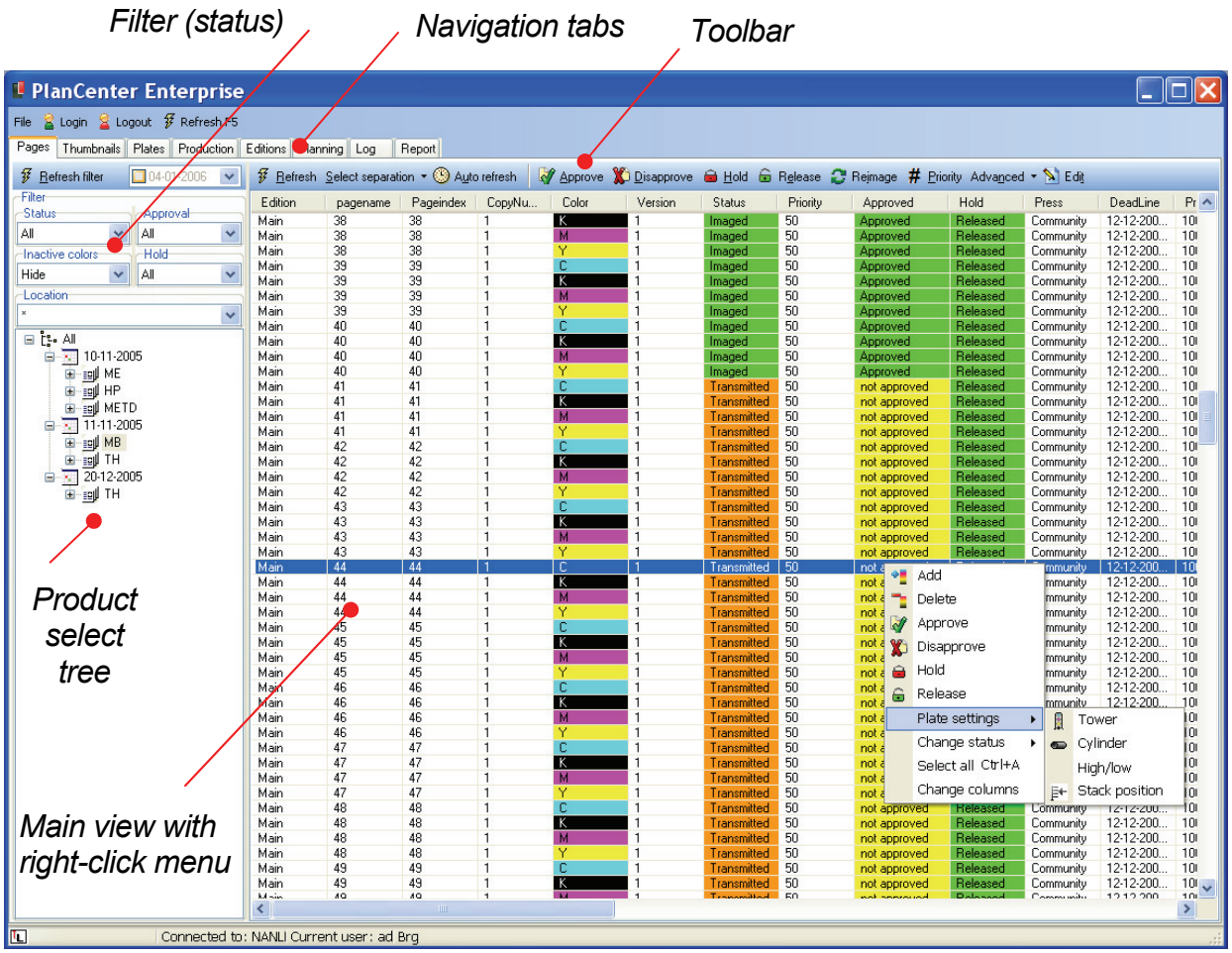
5.2 User Logon

When PlanCenter is started, you must log-on with your user name and password to perform any operations. Your user profile will determine the rights you have according to the table below ControlCenter features a user management system with user roles (see user setup later)

Note that changing configuration requires Administrative privileges. User will be prompted for username and password first time configuration menu is clicked. PlanCenter will require login again to change configuration if no user action has occurred for one hour.

5.3 Basic usage

PlanCenter consists of four *main navigation tabs* on the top left hand side divided in the view types *Pages*, *Plates*, *Planning*, *Progress* and *Error log*. Each view type exposes a tree view to the left and a view to the right.



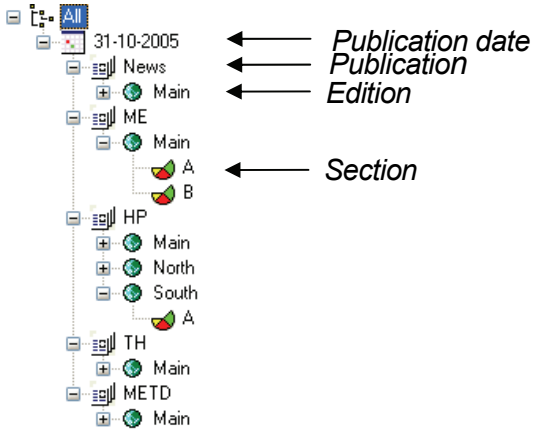
PlanCenter list view will show a filtered list of separations polled into the system. Each separation has a process status (polled, transmitted, imaging and done), an approval status and a priority.

5.3.1 Navigation - tree view

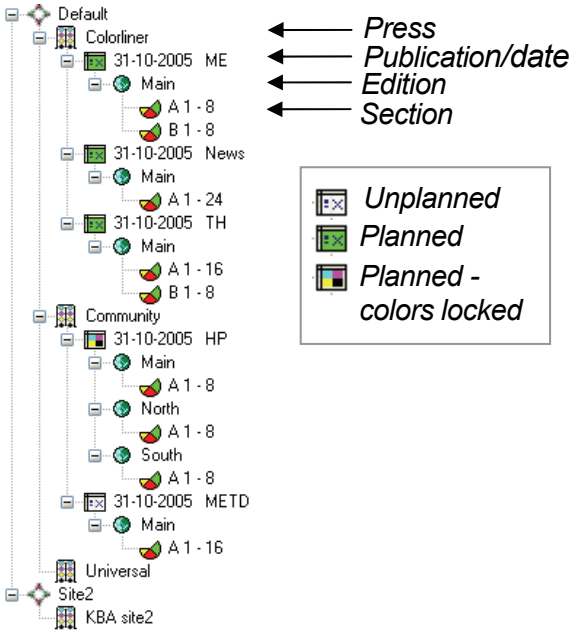
The tree on the left hand side is used to filter the list of pages in the main view. The filter is used to exclude pages from lists and thumbnail galleries. Typically the filter is used to quickly get an overview of pages not yet arrived, not yet approved or not yet output.

The tree view serves navigate between products in the system. Depending on the main view selected the tree is organized by press, print location, product, issue (if used), edition and section.
This list also dictates the hierarchy of product organization described in chapter 1.3.

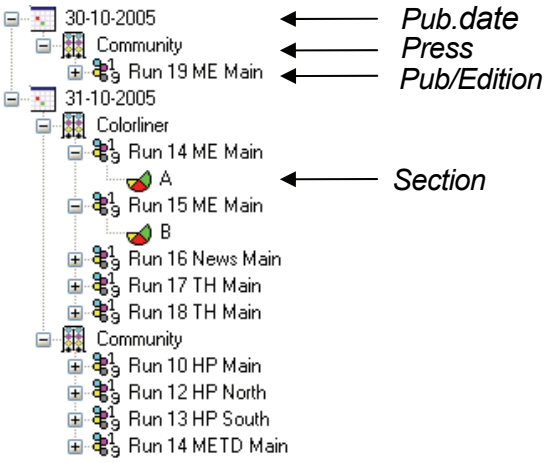
Click on a product, edition or section to filter the main view and only show pages related to the selection.



Tree i 'Pages' view mode



Tree in 'Planning' view mode



Tree i 'Plates' view mode

Date filter

A dropdown list of live publication dates. To filter by publication date, first enable the checkbox.

Status filter

A dropdown list of status levels used for filtering the list (e.g. restrict the view to page separations not yet transmitted). Note that also the approval filter is part of the filter result.

Approval filter

A dropdown list of approval states used for filtering the list (together with the status filter).

Inactive pages

Select *Hide* (default) to exclude non-active colors. Non-active colors are not expected to be output but may be activated during production in case of color changes.

Hold filter A dropdown list of hold/release states used for filtering the list (together with the status and approve filter).

Location filter

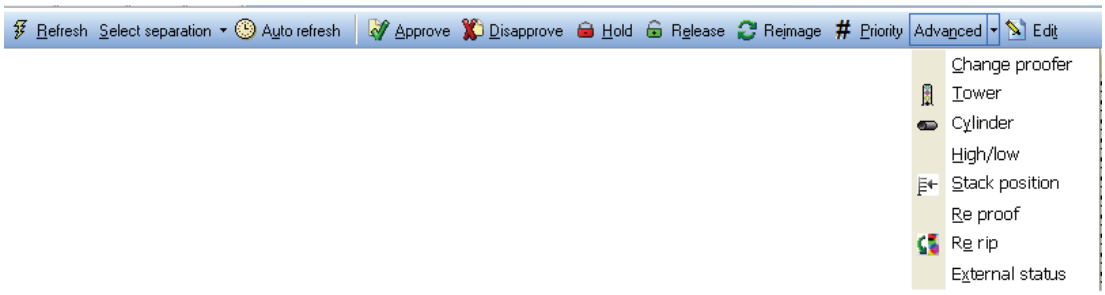
A dropdown list of registered locations (print sites). To view pages/plates for a particular print site, select the location and click the **Refresh** button.

5.3.2 Pages view

The Pages view consists of two different sub-views: *Datalist* and *Thumbnails*. Select the sub-view using the tabs on the right hand side view.

Action buttons (toolbar)

Actions on selected pages or page colors are performed using the toolbar buttons above the main view. Actions can be performed on select pages, e.g. for release, priority change or re-image of selected page. Note that most actions can also be performed using right-click menu on selected items.



Action buttons are located above main view. The lower panel is used to ease selection of pages/separations by auto-selecting e.g. all page colors, all pages on the flat etc.

Approve button

Approves the selected page separations. The approval action will trigger the transmission and output of the selected pages (together with 'hold' status).

Disapprove

Disapproves the selected page separations. The rejected pages will stay un-transmitted and signals a future page change.

Release

Releases the selected pages for final production. Typically a whole section or edition is released in one go.

Hold

Hold the selected pages for final production. Normally products are initially on hold.

Priority

A pop-up will allow priority changes on the selected page separations.

Add (color)

In case inactive pages are shown (selected in the filter above the tree), selected inactive colors can be activated.

Delete (color)

Selected colors will be made inactive and will not be expected for output. This feature may be used to change a page from color to mono.

Re-image

Resets status from *Imaged* or *Remote Imaging* to *Transmitted* to re-expose a particular plate.

Device

Page separations are locked to a device once the first color is imaged on the device. This device locking can be reset the device locking or force flats to a particular device.

Advanced - Re-transmit

Resets page status back to 'Ready' causing re-transmission.

Advanced - Re-RIP

Resets page status back to 'Missing'.

Advanced - Re-proof

Resets proof status causing a new preview/thumbnail to be generated. Note that the system automatically re-proofs in case an updated version of a page (or color) arrives.

Advanced – Imaged

Forces status on selected separations to Imaged. This may be required if output devices momentarily fails to feedback Done-status.

Forcing Imaged status only applies to jobs in *Imaging*, *Imaging error* or *Sent to device* states.

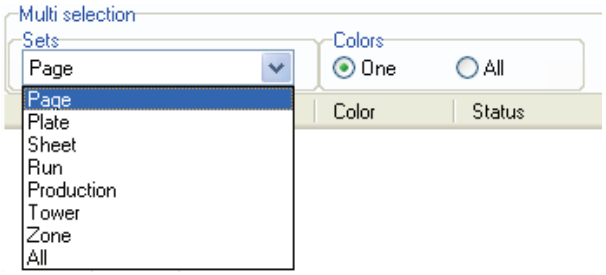
Advanced – Change proofer

Select alternative proof configuration. After selection proof status is reset causing re-generation of proofs.

Advanced- Export

Provided the workstation running PlanCenter has Microsoft Excel installed, the current page list can be exported directly into an excel sheet. All available event timestamps (input time, approval time, imaging time) are present for further statistical analysis.

Below the action buttons a selector can be set automatically select 'mating' page color or flat pages when selected in the main view. This is useful for selecting e.g. all pages on a flat for priority change or other actions. The selector is combined with the the **Color** selector (One or All) .



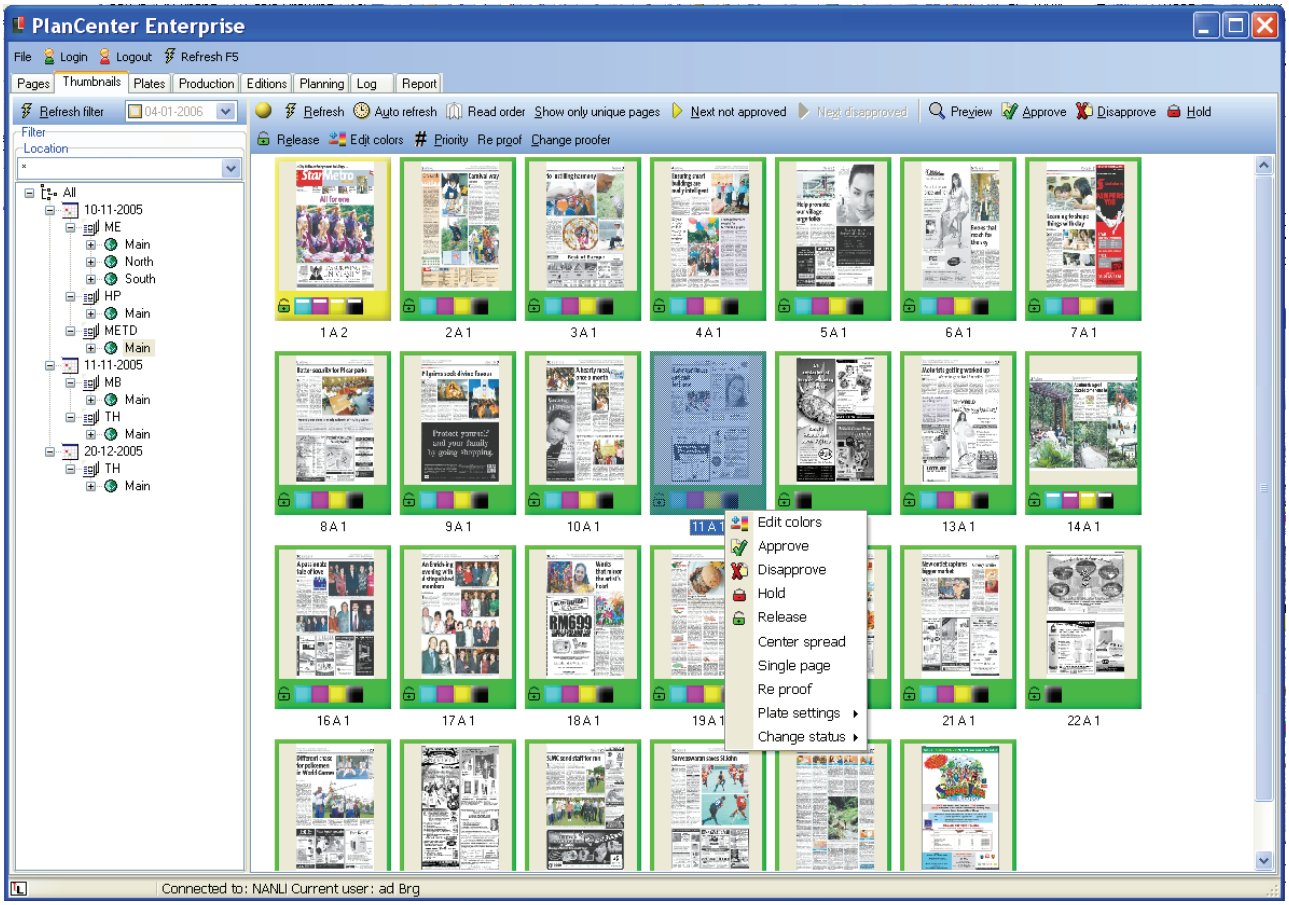
5.3.3 Page data list

The data list shows all details about each page or page separation in the system, including some internal references used for troubleshooting. The data list columns can be re-arranged be dragging the column headers sideways and sorted by clicking on the header (like Windows Explorer).

The datalist is refreshed manually using the **Refresh** button. Check the Auto-refresh checkbox for automatic refresh in intervals set in the Application Setting main menu (see chapter 4.8)

5.3.4 Page thumbnail view

In the *Thumbnail view* pages can be inspected visually. Click on a page thumbnail to display the zoom page viewer. Approval status is shown as a frame around the thumbnail. Gray awaits approval, green means approved and red means rejected.



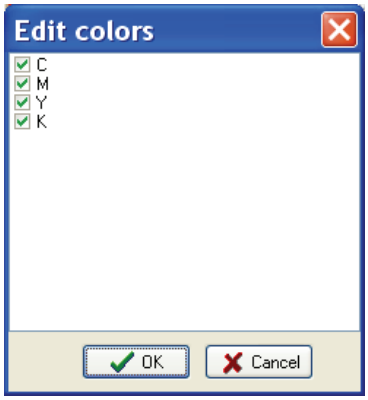
The thumbnail view shows the thumbnails of arrived pages. Click on a thumbnail to display the page (see below). The thumbnail frame indicated approval status and the blank page with stop sign signals that the page is still missing.

The toolbar in preview view allows page approval/rejection and color changes

The toolbar will perform actions on selected thumbnails such as page approval or color changes. Also a right-click popup menu allows similar actions as well as more advanced tasks (listed below)

Edit color

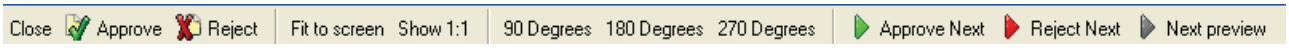
Select a page or a number of pages and click on the **Edit colors** button in the toolbar (or from the right-click menu). Select or de-select colors to use for the particular page(s). Deselected colors will appear with red crosses in the thumbnail view



Edit page color dialog

5.3.5 Page preview

The page preview can be shown as composite color preview or as separated colors. Select vie w-type on the tab bar above the main preview window. Approve or



*Toolbar in preview view. The **Approve Next** and **Reject Next** buttons performs the action and moves to the next preview requiring attention*

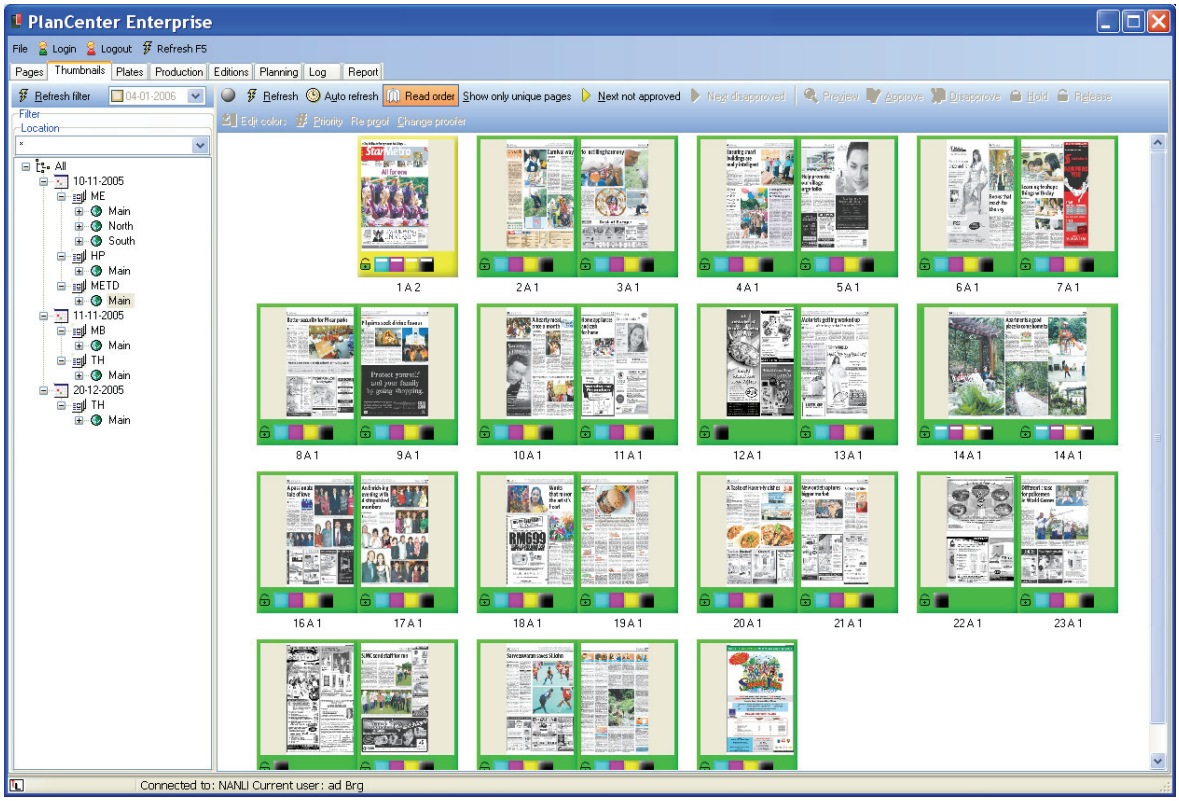
Composite view with previews of separations

disapprove (reject) the page using the toolbar symbols.

Single color separation view

5.3.6 Reader order view

Selecting **Reader order** view in the tool bar allows pages to be viewed side-by-side as read in the final product. False and true spreads can be checked in one view to verify alignments in the gutter.

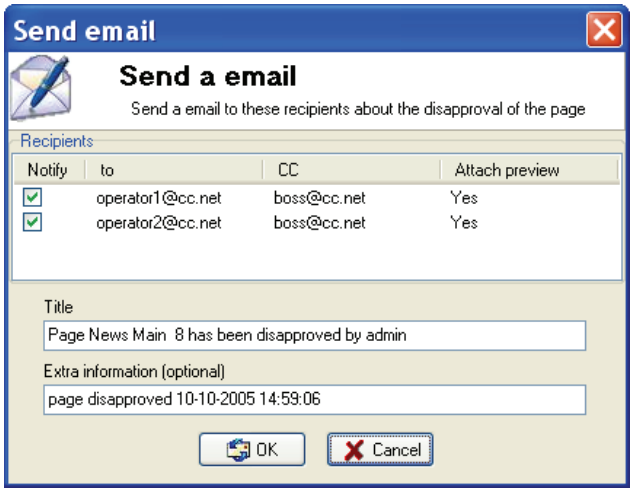


Read order view arranges pages in pairs as they appear in the final product (e.g. pages 2 and 3 together). Click the thumbnail pair to view the preview in the zoom window.

Read order preview shows the combined page spread (e.g. false spread). The pages are trimmed according to the layout template.
Buttons allow browsing forwards and backwards in the product like flipping pages in the final product

5.3.7 Email notification in rejected pages

If set in General settings, PlanCenter can fire an e-mail e.g. to editors or customers responsible for the page integrity. Page rejects can be communicated to a number of e-mail recipients linked to the publication name. The configuration allows multiple recipients to be prepared for the mail submissions. At page reject time the operator can select from the list or potential recipients and give a short description of the cause of rejection. Also the page preview can be attached to the e-mail. The e-mail notification system is configured in the Configure E-mail dialog (see section 5.9.14).



If enabled, page reject can be communicated to e-mail recipients. A pre-defined list of recipients are available for the specific publication. Enter information about the cause of the page disapproval.

5.3.8 Plates view

The plate view shows the graphical representation of the full flats (sheet sides). The view will fill in thumbnails to indicate arrived pages. A green plate background will indicate that all colors for the sheet have been image successfully. A red background signals that one or more of the colors are in error state. The detailed error message will be shown in the data list and in the Error Log (last main tab at the top of the screen).

*The toolbar in plate view allows hold/release, approve of all pages on plate, template change and device changes. The **Produce common plate** option is used to force common plate to output in subsequent editions*

Produce common-plate

This option applies to subsequent editions with common plates. Normally the plates are not output but this can be overruled if fresh plates are required.

Layout For changing layout templates for selected plate sets. Selection will affect all separations on front and back of the sheet. Note that the select list for alternative templates are restricted to layouts with the same number of pages per sheet (e.g. 4-up to 4-up alternative). Changing template will reset status on already imaged plate separations to *Transmitted* and will release device locking.

Marks For changing option plate marks for selected plate sets. Selection will affect all colors on the plate. The option marks are defined when building up the plate layouts and are used to conditionally turn on/off the marks. The primary use of optional marks is to enable quality marks (e.g. gray-balance marks) on certain plates only.

If re-image is selected a dialog will appear prompting for colors to re-image and an option to reset device selection. A reset will unlock the plate set from the device so that a full color set re-image may go to any idle device (as opposed to the original imaging device).

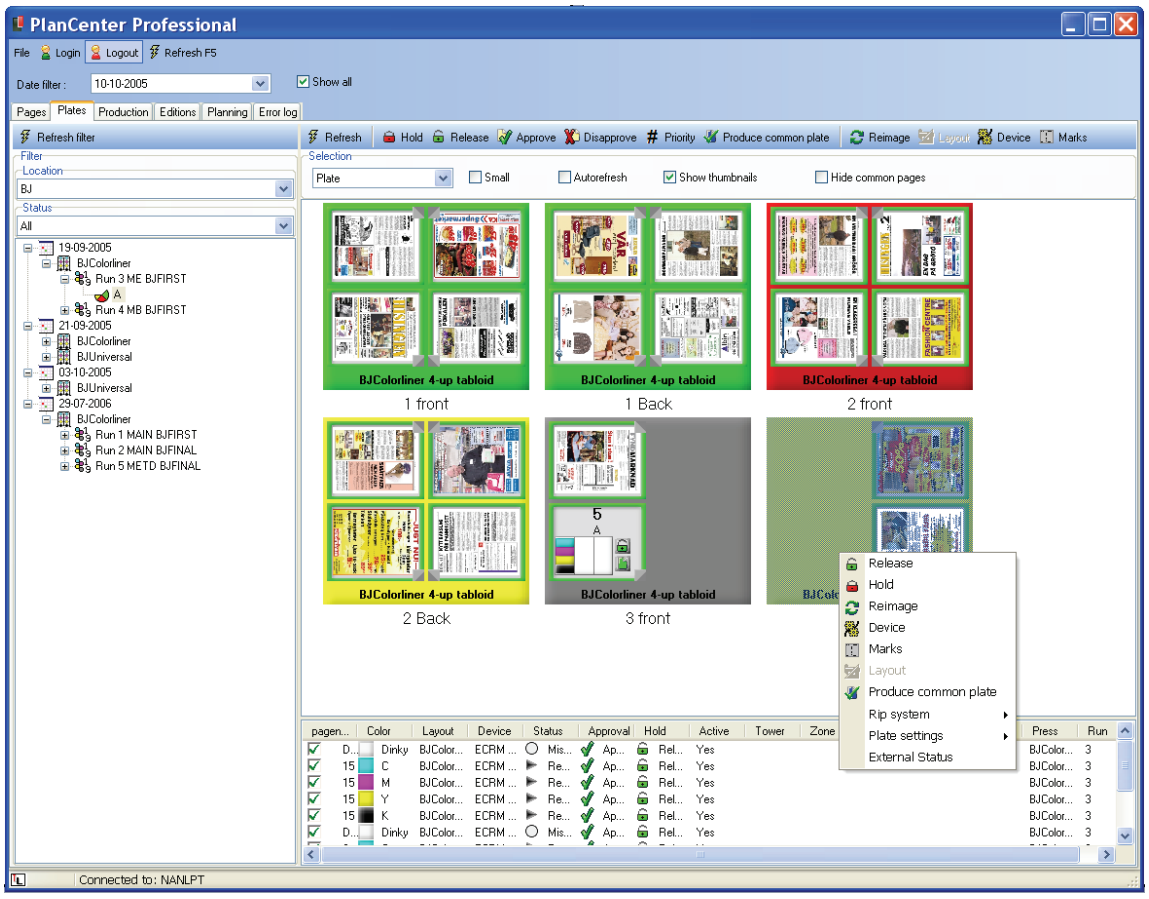


Plate view shows pages arranged on the plates. The lower list shows page separation details for a selected plate, allowing e.g. re-image of a single color only.
Note the right-click popup menu. Most actions found in the top toolbar can also be performed using the popup menu.

Plate view can be viewed as status progress bars (default) or with thumbnails (select the **Show Thumbnails** option)

Status progress is show per color in the plate icons. The background indicates the aggregated status of the plate separation set: gray means not ready (missing),

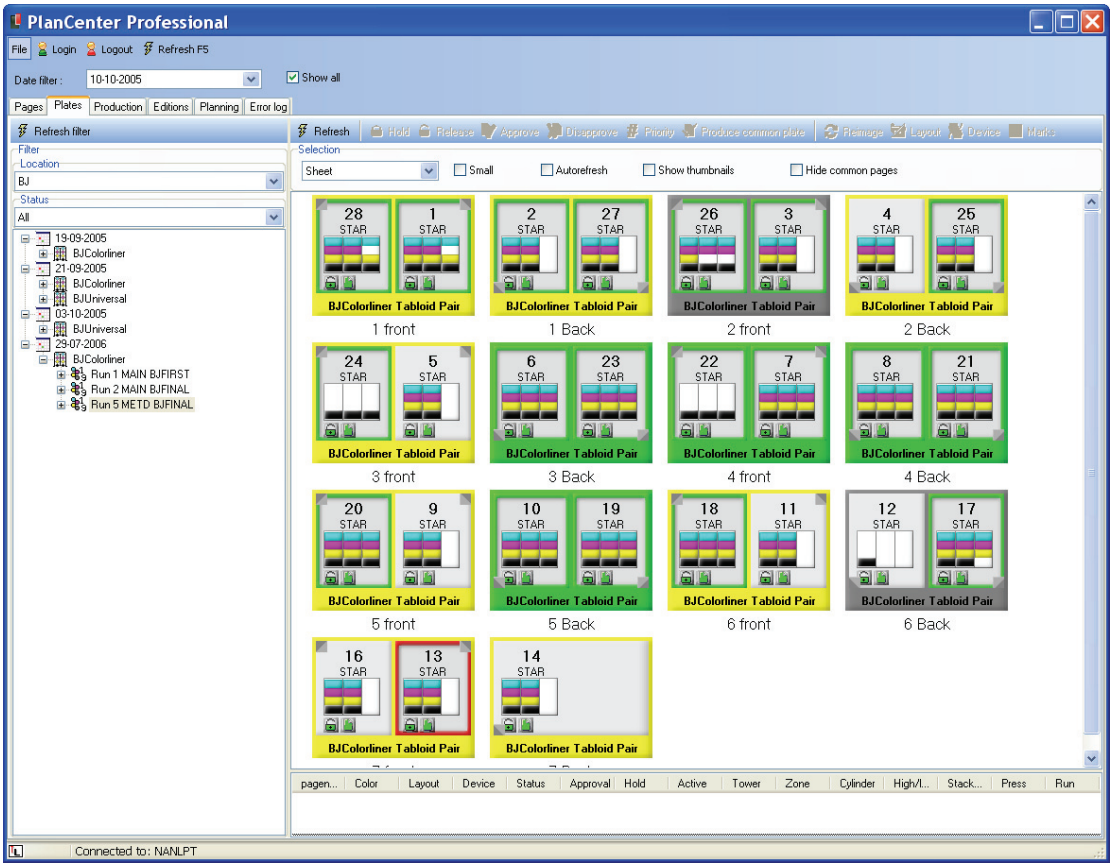


Plate view showing progress per separation.

Four color page – status missing

Four color page – ripped and transmitted

Mono page – Imaging or Sent to device status.

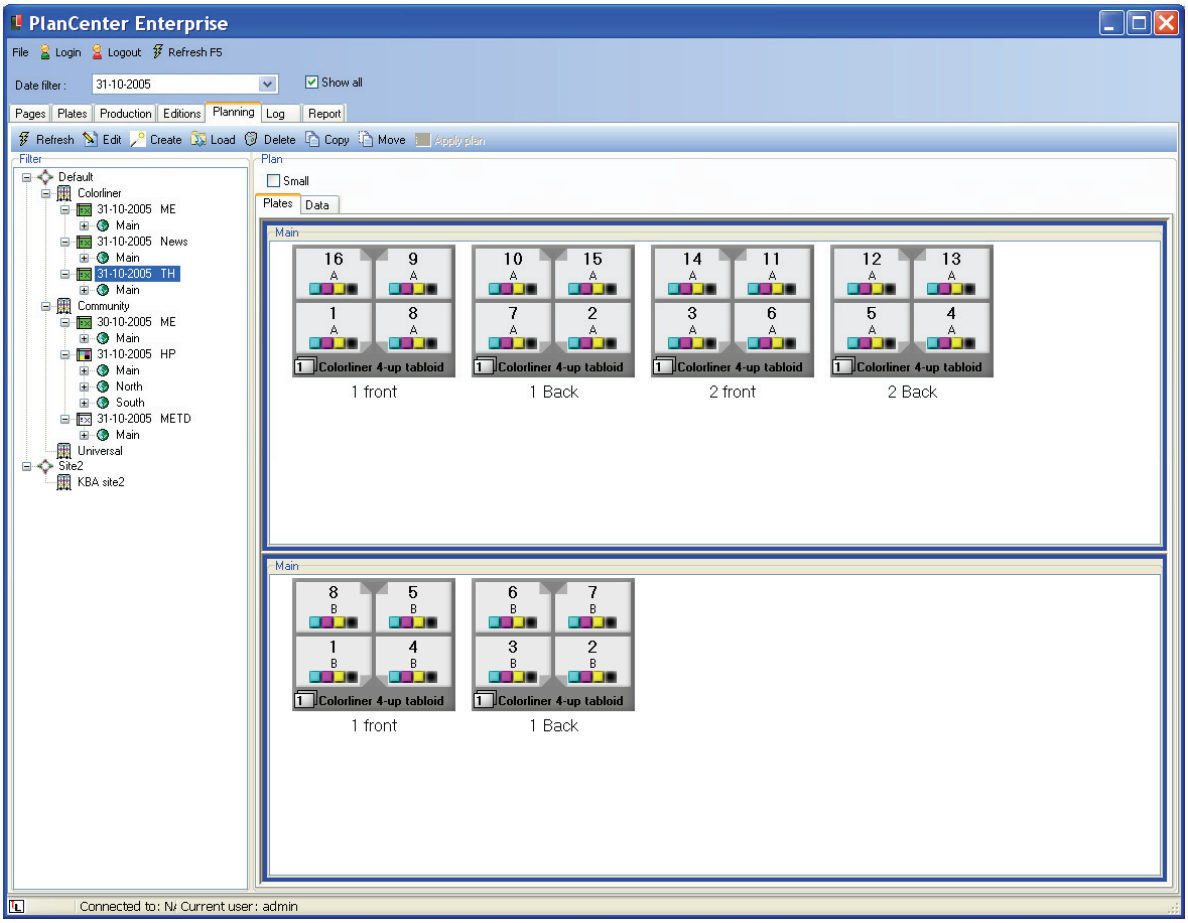
Mono page – Imaged.

yellow means ready for output and green means fully imaged.

A small frame around each page indicated the page approval status.

5.3.9 Planning view

The *Planning* view shows existing plans from a press perspective. The main use on the planning view is to start new products. Starting a new product is described in chapter 5.4.



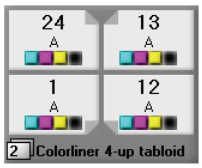
*Planning view showing press plan of selected production. Existing plans are shown in the tree view. Click on a plan (publication/edition) and click **Edit** button to change running plans*

The product navigation tree classifies plans in three groups, visualized by a plan icon:

Unplanned page lists entered via InputCenter Unplanned mode (see 1.4.2) or temporarily planned in WebCenter

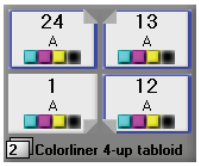
Planned products where page count is locked but where colors may change

Planned products where page count and colors are locked



1 front

Four color pages (4-up) – all unique pages
2 copies. Must be produced



1 front

Four color pages (4-up) – 3 common pages (blue frames)
2 copies. Must be produced

1 Back

Mono Four color pages (4-up) – all common pages (blue frames and background) 1 copy.
Will not be produced (unless requested)

5.4 Planning new products

This chapter is going to step through the creation of a new plan. There are many different ways to organize and impose products. PlanCenter handles the following planning issues:

- Impose from 2 to 16 pages per plate (32-up and 64-up for PDF also)
- Impose with sections – separate sections or sections imposed into on run
- Split large product over several press runs or presses.
- Plan multiple editions and calculate plate usage
- Trim/bleed margin and creep handling of commercial products
- Handling of half-web and single sided signatures (work-and-turn)
- Perfect bound and saddle stitched binding styles

For certain environments plans are entered into the system via the *ImportCenter* client instead of using PlanCenter for the initial planning. ImportCenter is a hot-folder based application accepting XML-documents describing the print plans. ImportCenter and the XML-format (schema) is described in the documents *"ImportCenter User Manual"* and *"ControlCenter Import Specification.pdf".*

Planning via ImportCenter is not described further in this manual.

5.4.1 Printing terms

Products can be printed in many different ways depending on product size, product organization and press capabilities. It is important to understand certain terms before planning in PlanCenter. The description is simplified and restricted to common usages.

The term *press run* indicates the press activities that occur while the same set of logical plates is mounted to produce a specific full or partial product. The concept of press run is needed for scheduling. A press run may contain one or more physical sections.

Our definition of a *physical section* is a folded part that is easily separated from the product. A physical section consists of one or more four-page sheets (two front, two back) which have a common spine fold. A broadsheet section can also contain a two-page sheet (half web or fly sheet). Often physical sections are called by letters A,B,C or other names. (Note however that sometimes a physical section may have multiple named sections inside).

Because the term *section* is often used describing different things we must dig down to define the term further.

Press terms

A finishing part of web printing press consists of one or more of the following processes:

Slitters for cleaving the paper in the direction of paper travel. Split paper strips are referred to as *ribbons*.

Formers for fold in the direction of the paper travel. Input to the folder is one or more ribbons.

Cross cutter for paper cut-off perpendicular to paper travel

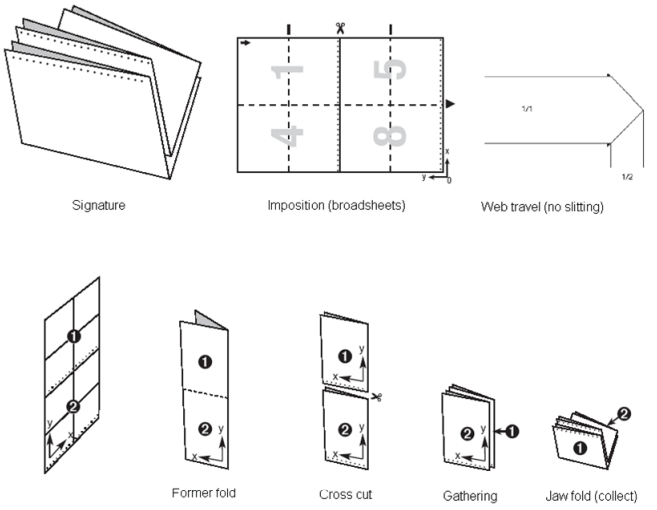
Gathering for combining collect mode high/low sheets

Jaw folder for final collection.

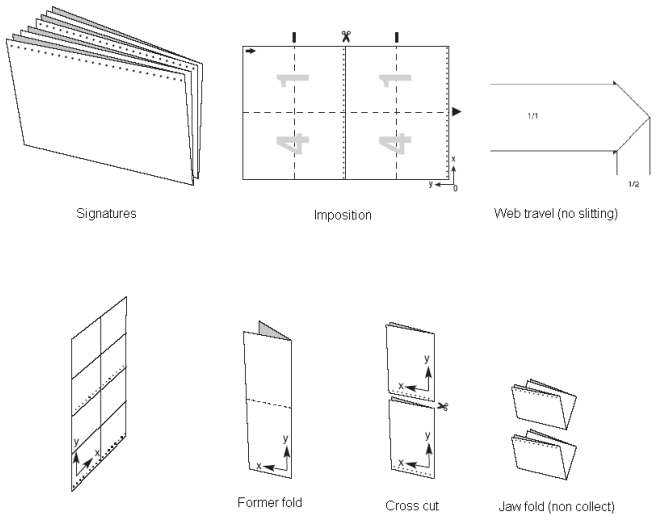
For magazine 8-up production on webs an additional *chopper folder* is used.

A two-around (two plates around the cylinder) press can run in *collect-mode* or *straight mode* (see diagram). In collect mode two different broadsheet sizes images are put on paper for each cylinder revolution. The two plates are often called high/low. For straight mode the same image is repeated (double production). The term *collect* refers to the last folding stage where the two cross-cut 'pairs' are folded together (collected).

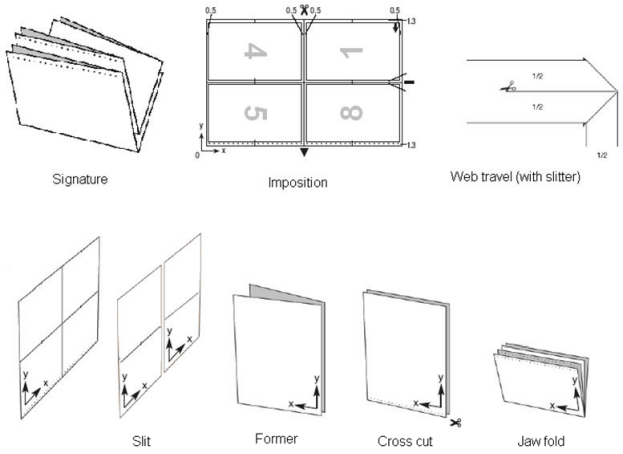
Tabloids and smaller product formats are printed using slit paper. Resulting 'ribbons' can then be combined in different ways depending on imposition needs. In case the paper strip (web) is not slit, the web and the ribbon term are identical.



Broadsheet collect

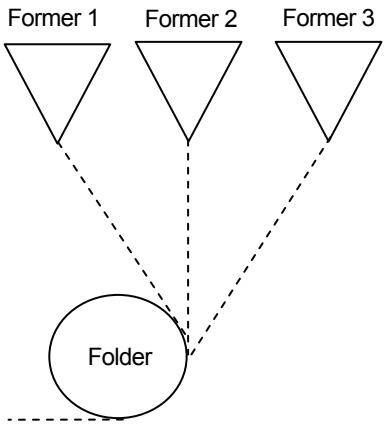


Broadsheet straight



Tabloid (two ribbons)

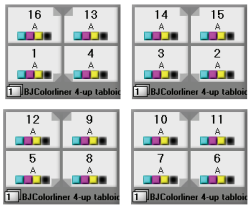
In the diagrams above only one web is used for illustration. In reality multiple webs/ribbons are combined in a former and there may typically also be multiple formers. The ribbons entering the same former are numbered from inside to outside where the inside ribbon is the one in direct contact with the former. A case of multiple formers each former typically fold one section but it may also be a part of a section. To overcome this ambiguity in terms, we will define the output of a former as a *press section* (as opposed to *physical section*).



Multiple formers feeding press sections to folder

Setting up imposition schemes must reflect the arrangement of the press sections. In the following two examples one physical section is made using one or two formers (press sections), resulting is very different impositions.

16 page section printed as one press section



16 page section printed as two combined press sections (8+8)

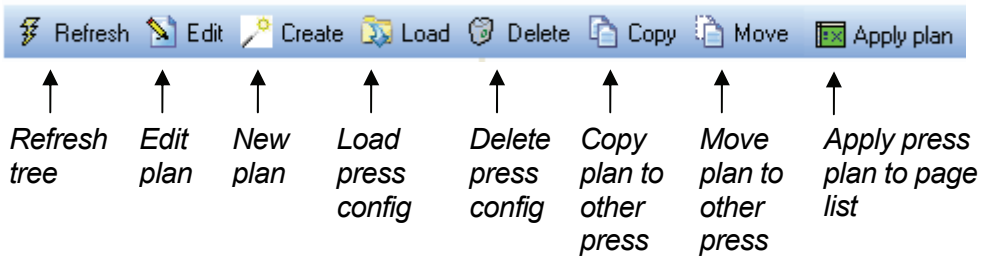
To complicate matters even more it may happen that large jobs (e.g. magazines) are printed in stages and collected after printing. Sheet-fed presses operate like this. In PlanCenter we refer to this as a *split run*. Note that split runs are merely press sections combined after printing instead of during printing in the folder due to size restrictions of the press.

5.4.2 The planning toolbar

The row of buttons available in the planning view includes actions to create, edit plans as well as load of pre-stored press plans.

Edit plan

The selected plan is loaded into the plan editor for modifications. Changes may be color changes, half web positioning, page name changes or page count changes



Toolbar in the Plan View. Press Create/edit to enter the plan editor

Create plan

A new plan is added to the selected press. The plan editor is started and a wizard pops up for setting template, page counts, section etc.

Load plan

Re-loads an existing press configuration/imposition for re-use another day and/or another product (see section 5.5)

Delete plan

Deletes active plans from the system

Copy plan

Copies the entire page information (number of pages, colors used, sections, editions) to a new press. The second press may have an entirely different imposition. Note that a copy will not have impact on input of pages. Polled pages are merely distributed to two presses instead of one.

Move plan

Moves the entire page information (number of pages, colors used, sections, editions) to a new press. The substitution press may have an entirely different imposition. Note that a move will not have impact on input of pages. Polled pages are merely distributed to the new presses instead of the original intended press.

Apply plan

Pages entered as so-called 'unplanned' pages (see InputCenter configuration 3.12) or pages related to a temporary plan (e.g. created from WebCenter by customers) may become a 'real' press plan by applying a press imposition to the pages. A number of rules are applied when changing unplanned pages to a planned product – see section 5.7.6.

5.4.3 Plan editor

The plan editor is the area where new plans are created and running plans are modified. Enter the Plan Editor using the buttons **Create** or **Edit**

Edit colors

Brings up the dialog allowing changes to expected colors for the selected sheet side – see section 5.4.7). Note that if only one of the pages on the plate is to be changed this must be done in the Pages view.

Change layout

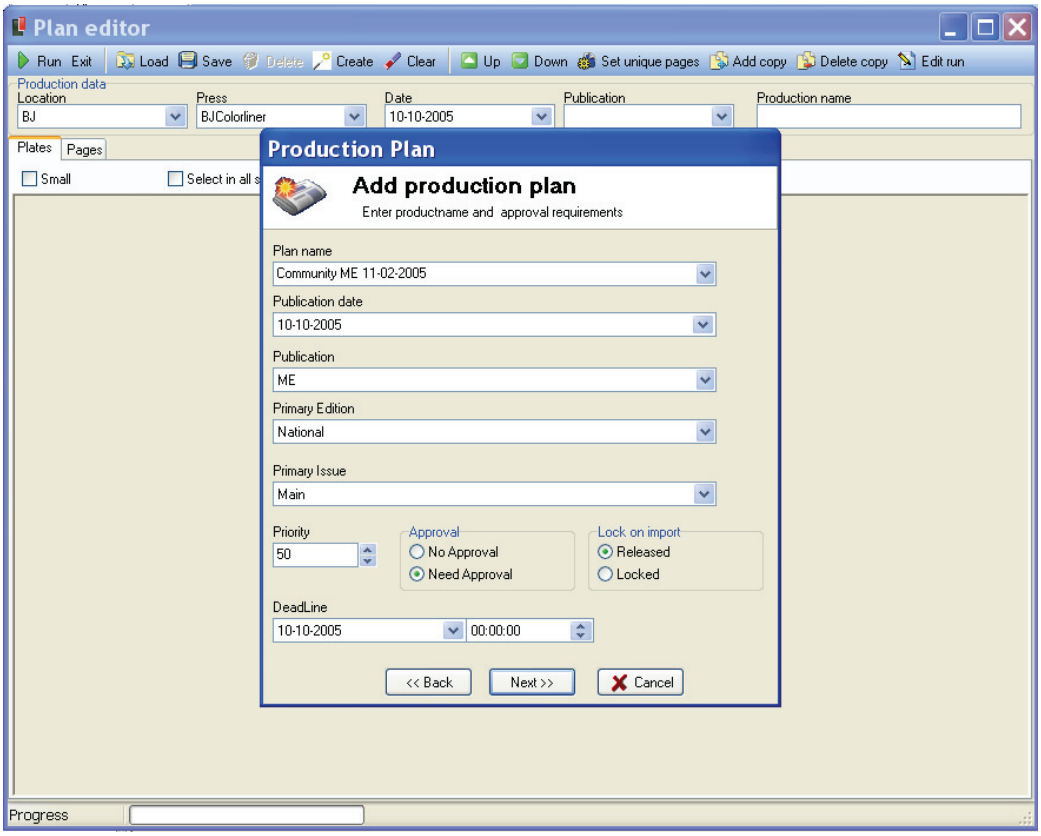
Change pre-defined plate layout template for selected plate(s). A dialog with alternative layouts for this press will be shown. Note that both front and back of the sheet will be changed to the new layout. Changing individual plates can only be performed if the new layout has the same number of pages per plate side.

5.4.4 Starting a new plan

The planning of new products is done using a so-called Wizard. Highlight a press symbol in the tree view and click the **Create production** button in the toolbar.

Dialog 1: Product name and mode

Select publication name, publication date and edit the default product name if required. By default production names are assigned the name *publication-publication date*



Plan wizard step 1 – Selection of product identifiers and production approval method

Select starting priority for the product (may be changed later)

Select Approve mode – No approval selected will not require operators to approve pages prior to output

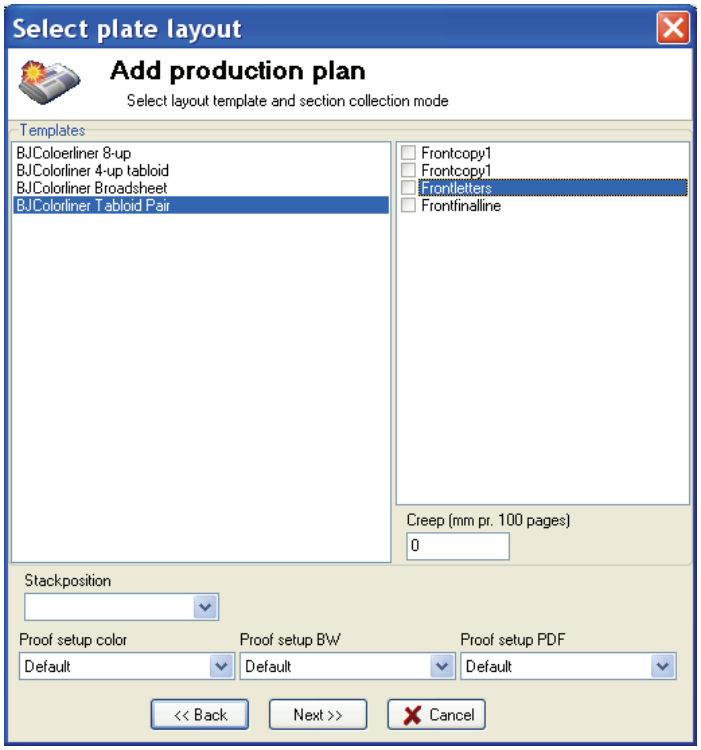
Select production lock mode: *Released* will not require operator to actively release the production. *Locked* will hold back pages until actively released for production.

Dialog 2: Layout template

Select a layout template for the product. The template list will show currently defined layouts for the particular press.

If no layouts exists in the list, quit the plan and create layout templates in OutputCenter first.

The column on the right hand side is only used in case optional marks are defined in the layout template.



Plan wizard step 2 – Selection of layout template on chosen press.

Dialog 3: Sections in product

Select default colors used per page. Default colors can be changed later.

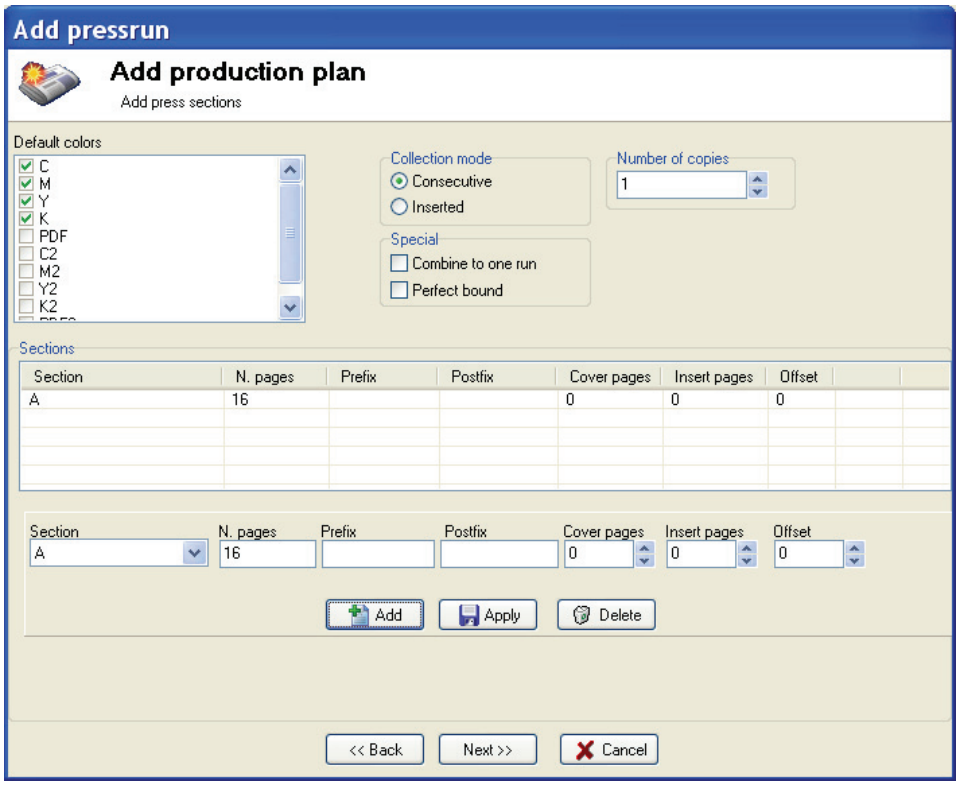
To arrange sections within the final product select one of the *collation modes* described below (section 0).

Select a physical section (eg. A) and enter number of pages in the section e.g. 16. Press **Add** to add the section to the plan. If a given physical section is made up by multiple press sections enter this as a comma-separated list e.g. 16,16,8 for a 40 page physical section divided in three press sections. The press section list will influence the final imposition page numbering.

Prefix and **Postfix** is used to form page numbers so they include section name, e.g. 1A or A1.

Often covers and inserts are printed separately from the main pages (e.g. due to differences in paper quality). To exclude covers and inserts from the present production, enter number of pages to exclude in the **Cover pages** and **Insert pages** column.

Example: Cover pages in a 68 page production take up 4. pages: 1, 68 (front/outside) and 2,67 (back/inside). Enter this as Start page: 1, End page: 68, Cover pages: 4 Insert pages:0



Plan wizard step 3 – Definition of pages per section in the current plan. Note that defined sections can be split over multiple press runs or combined to one run (see examples below)

Continue adding sections until done.

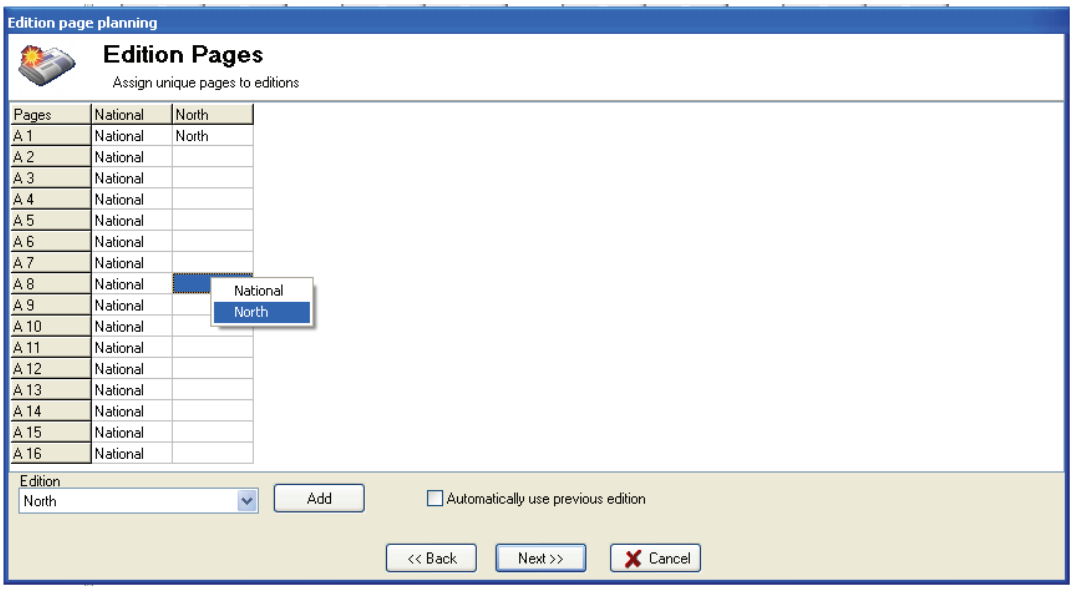
Dialog 4: Edition in product

If more than one edition exists select the regional edition from the list and press the **Add**-button.

Note that editions can also be added, changed and deleted in the Edition view in PlanCenter when they are created. See section 5.7.

Adding a new edition will add a new column to the list. By default all new regional pages are not unique - meaning they are identical to the main edition pages. Double-click a cell to make the page unique or select the cell and right click to choose from which edition the page is inherited.

Note that the right-click mode allows pages to be common between sub-editions – it is not required that common pages are taken from the main edition only. This will give full flexibility to construct complex edition – sub-edition relationships.



Plan wizard step 4 (last) – Multiple edition planning. Add regional editions ands select unique pages.

Press **Next** the view the new plan

The imposed plates will be shown with blue background indicating that these plates are not to be produced because no unique regional pages exists on these (edition) plates (see below). Building zoned products is described further in section 5.6.

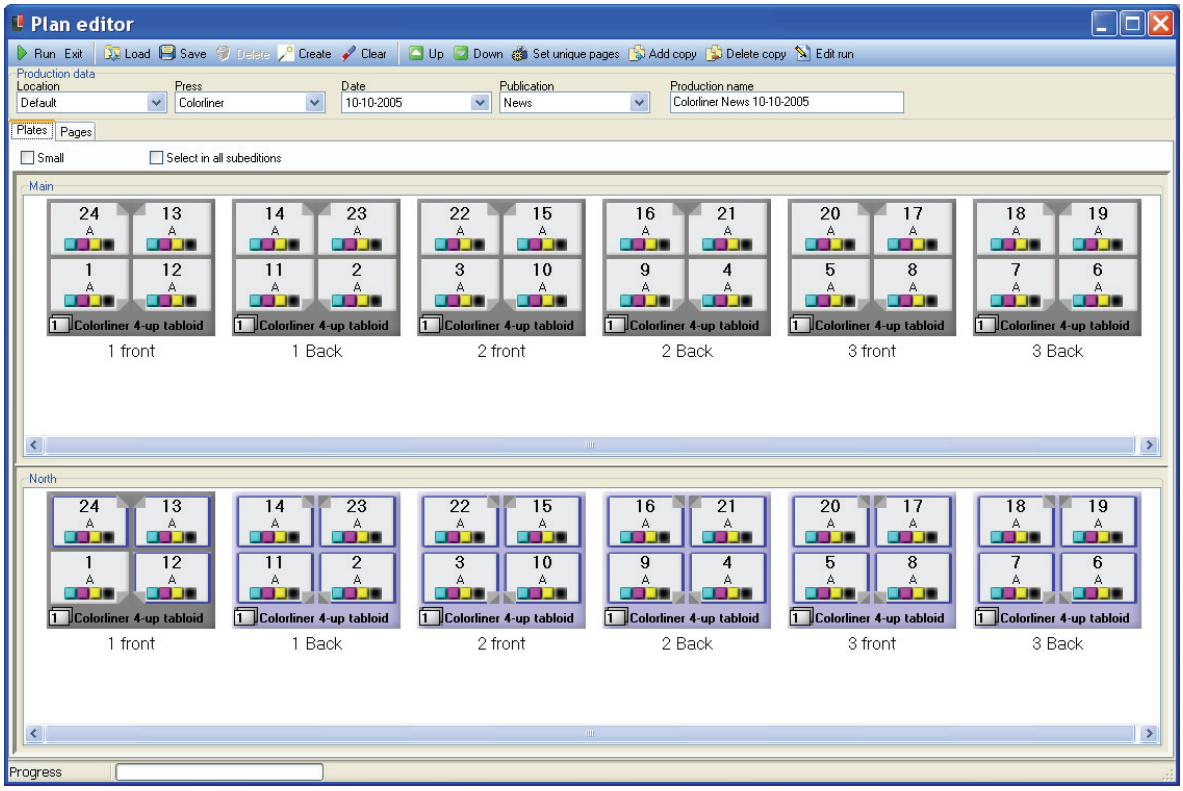
Modifying defaults

Right-click a plate icon to bring up the pop-up menu allowing changes to colors, template, half web position etc. Changes will be show in the Plan Editor. See description on how to modify a plan in section 5.4.7.

Applying the plan

When the plan is correct press the **Run** button to activate the plan (into a live run). Alternatively **Save** the plan for later activation.

5.4.5



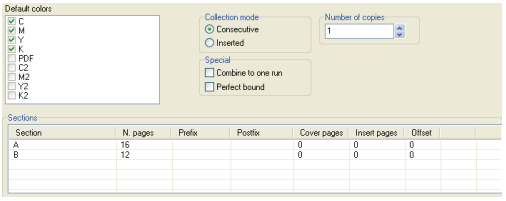
*Result of the **Create Production** wizard in the Plan Editor. Note that the second regional edition (North) only has one unique plate. The blue plates indicate that the plates are not to be produced because all pages are identical to the main edition pages. To force a duplicate plate - right-click and select Produce common plate from the pop-up menu.*

5.4.6 Collection modes

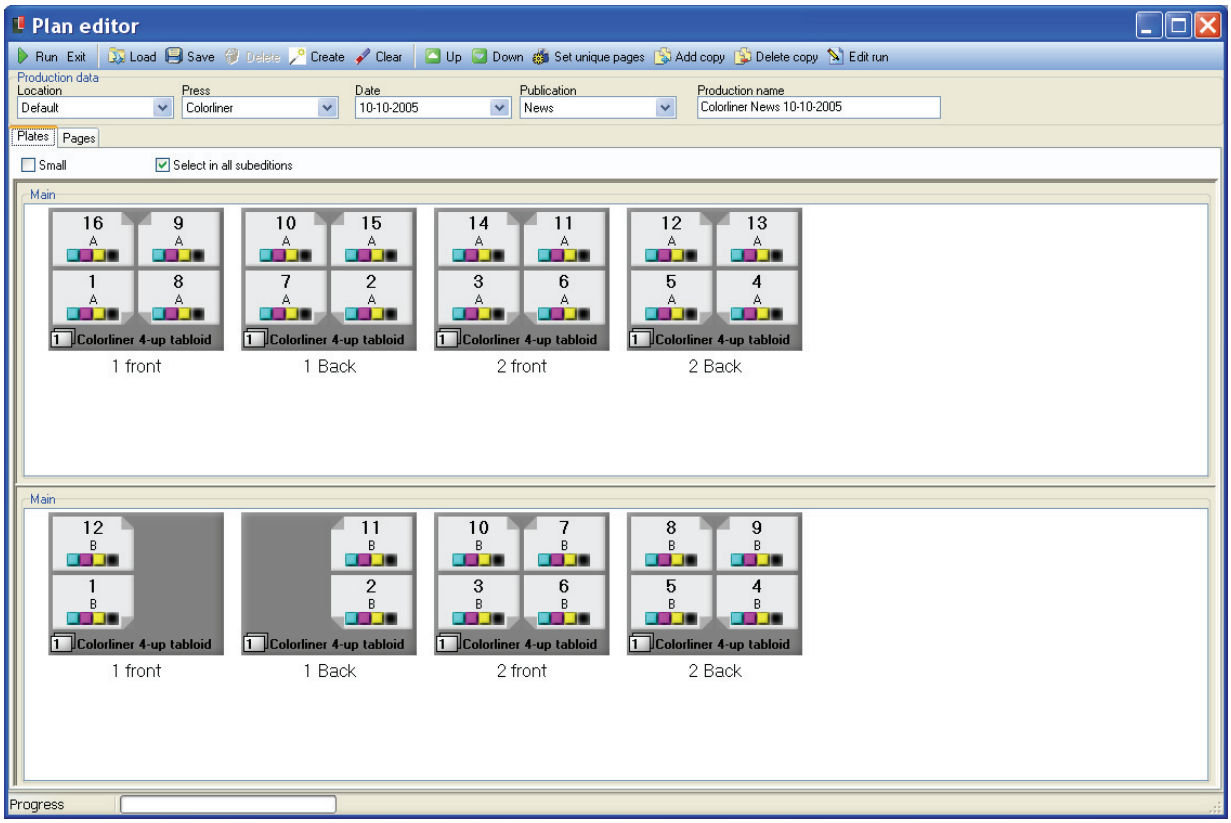
Collection mode will influence the way pages are numbered throughout the imposition.

Consecutive collation mode:

Physical sections are arranged in the imposition sequentially. No pages from different sections will end up on the same plate. The output will produce multiple press runs which can individually

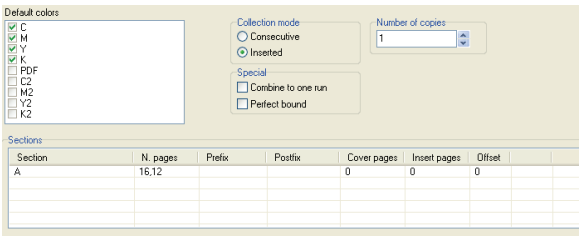


***Consecutive section imposition**. Each section is imposed individually and sections are collated in sequence. Note that the half-web can be moved using right click popup menu*

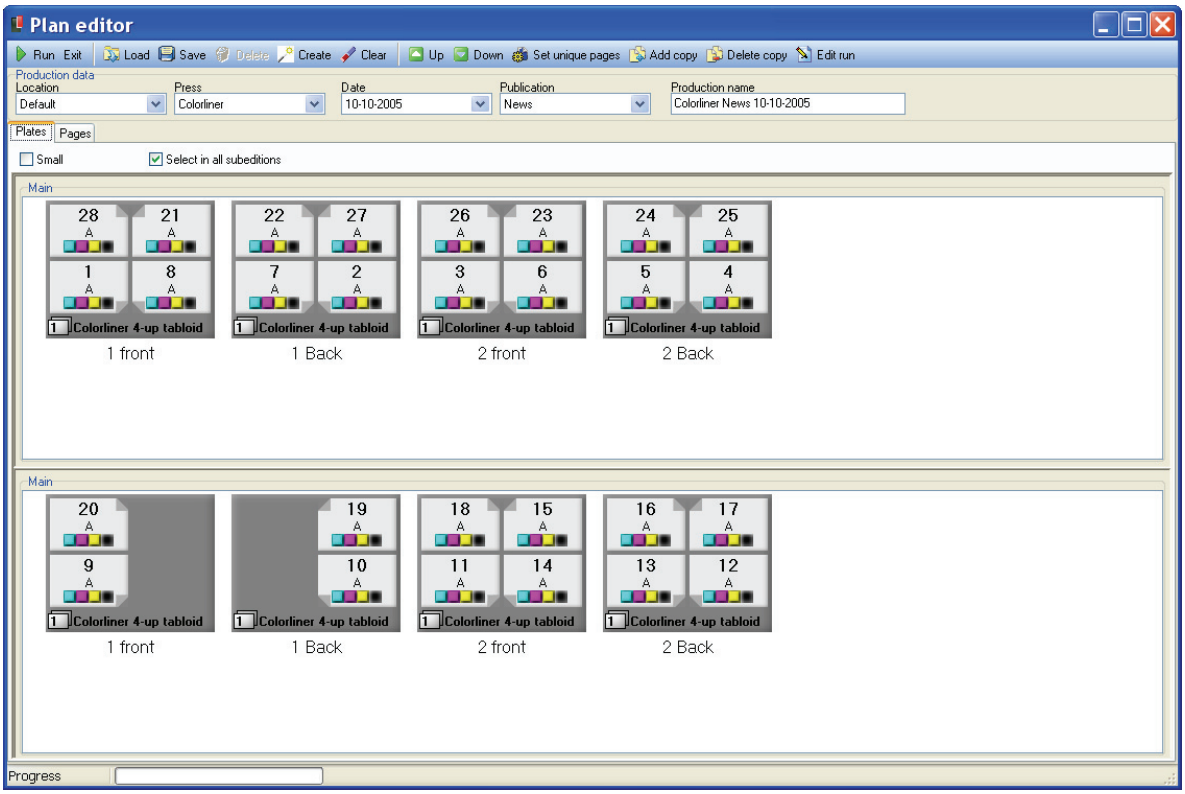


Inserted collation mode

A physical section (e.g. A) can be split in two or more press sections i.e. running through separate formers on the press and joined (inserted) after the folders on the press. The split physical section is said to be *inserted*. Note that the imposition for a split section (eg. 16,12 as shown above) is very different from the imposition of a non-split section

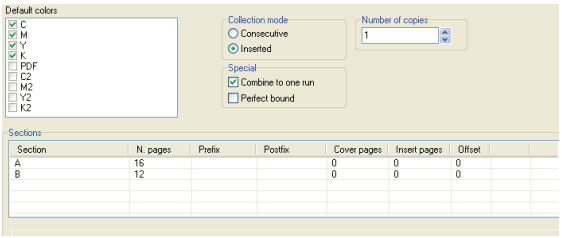


***Inserted collection imposition**: First and second press section (both section A) are inserted. This mode is usually due to multiple formers combining the full section.*

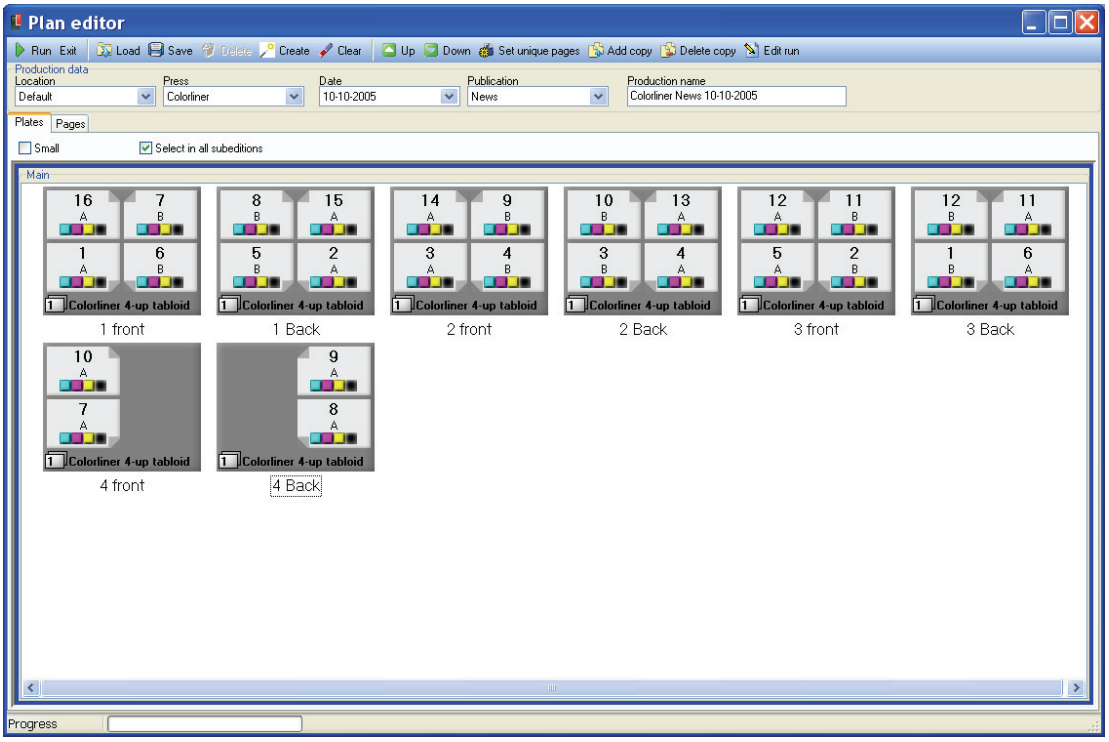


Combine to one run

Multiple ribbons (slit web) printing for 4up, 8up and 16up impositions allows combining physical section into one press section. All defined physical sections are imposed so that a section is always inserted in the middle of the preceding section.

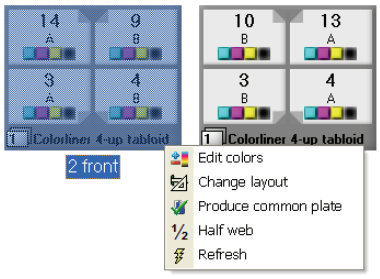


***Combined section imposition**.*
Section B is inserted into section A and



5.4.7 Modifying a plan

Once a plan is prepared the plate impositions will be shown (as in the screenshots above). At this stage the proposed plan can be edited. The common changes requiring changes are number of colors for each tower, half web position and potentially renaming or manual re-arrangement of pages.



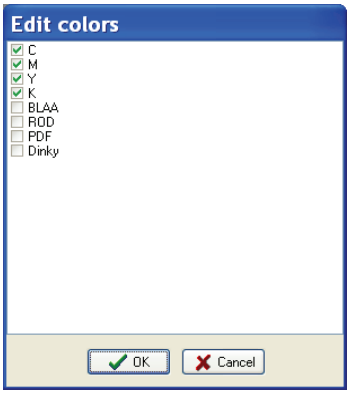
Right-click popup menu

Changes are made by selecting one or more

plate images and using the toolbar or right-clicking. The latter will bring up a menu.

Color changes

Select a plate or a number of plates and click on the **Edit colors** button in the toolbar. Select or de-select colors to use for the particular sheet sides. Deselected colors will appear with red crosses in the plate view.



Color change (e.g. from CMYK to K only)

Half web change

The default half web position may not be correct. Hold the mouse over the page in the plate view to be the lower page on the half-web tower and right click to reveal the *Half web* popup menu. The view is updated accordingly.

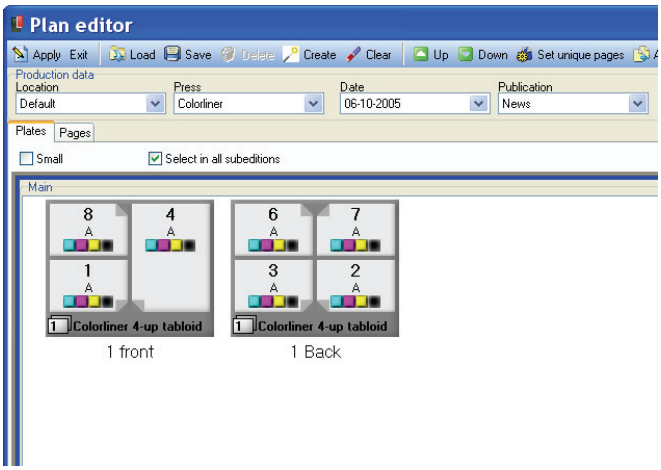
Change of layout template

Certain plates may have to be produced very specially using dedicated layout template. One example may be an older press where certain towers are radically different from the rest, e.g. different plate size or different fan-out. Selected plates in the plan may be forced to another layout using the *Change layout* option. PlanCenter will list the possible alternative layouts to use.

Change to panorama page

In case centre spreads (middle pages) arrives as one ‘page’ the system must be prepared for this. Example: In a 16 page paired production the centre spread (pages 8 and 9) comes as one file.

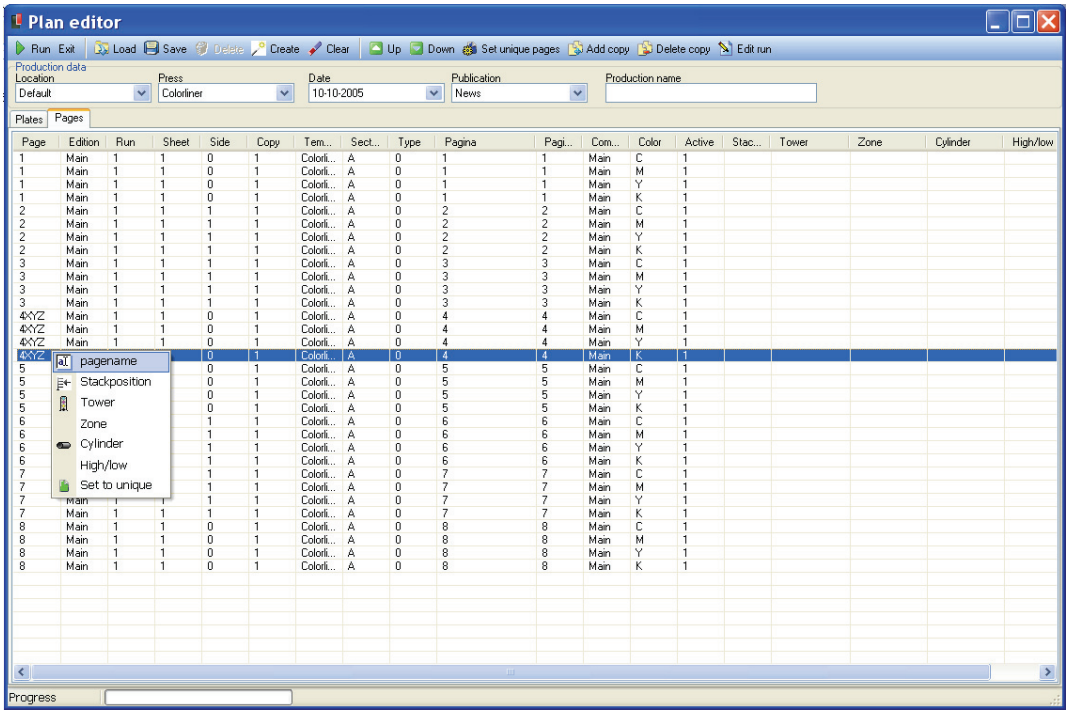
In the page list in the three select the left page (eg. 8) and right-click to bring up the menu. Select *Panorama* to change page 8+9 to 8 (being a panorama).



Changing to panorama using right-click menu. A dialog will prompt for the page(s) to change to panorama.

Plan Editor Page list

If for some reason the suggested imposition is not applicable, select the Pages tab (above the plates) to bring up the page separation list. Click a page name to edit it



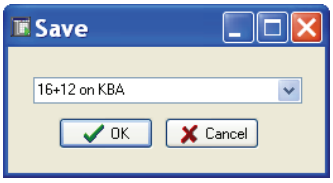
The Pages-tab in Plan Editor shows the details of each page separation in the imposition. Page names, press tower names and other press specific identifiers can be edited manually. Changing a page name on one color will change the page name on all colors of the page.

directly.

Changing page name prefix (e.g. A1,A2 etc.) or postfix (1A, A2 etc.) can be performed on all pages using the right click option

Applying prefix or postfix to page names

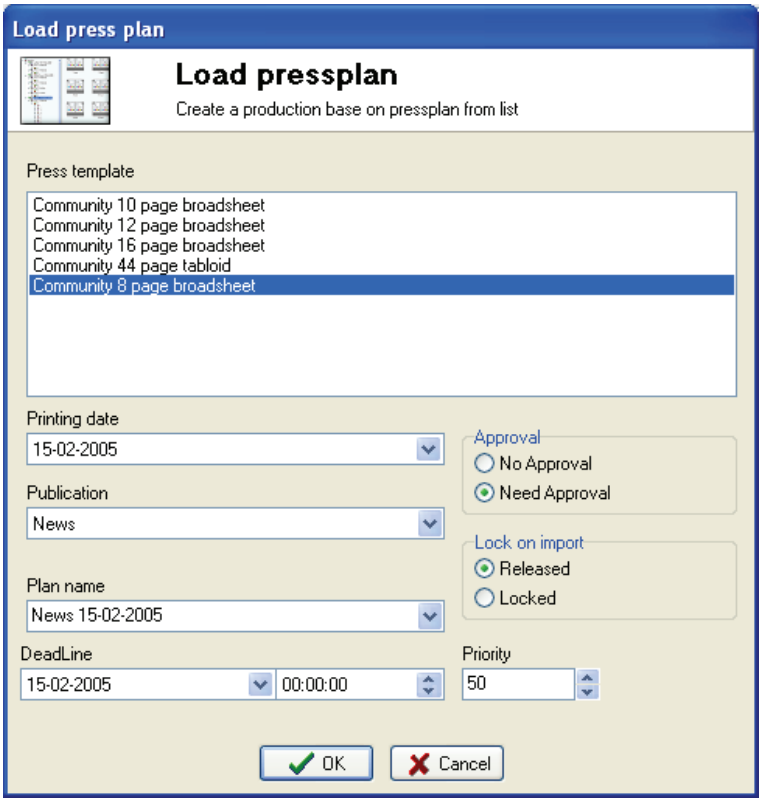
5.5 Re-using press plans



Saving plan as re-usable plan

Often press impositions are re-used for other publication dates or publication names. A press imposition can be saved clicking the **Save press plan** in the toolbar. Enter a name for the saved plan.

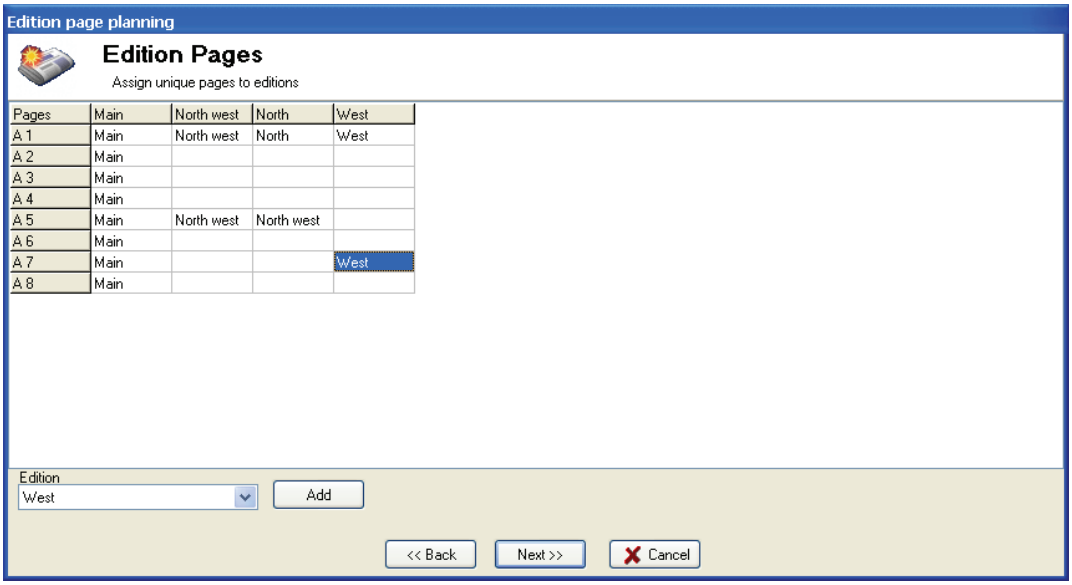
To re-use the plan click on the **Load press** plan button in the toolbar. A dialog will appear where a new publication date and publication name can be entered. Also, new production modes for page approval and initial hold/release state can be set.



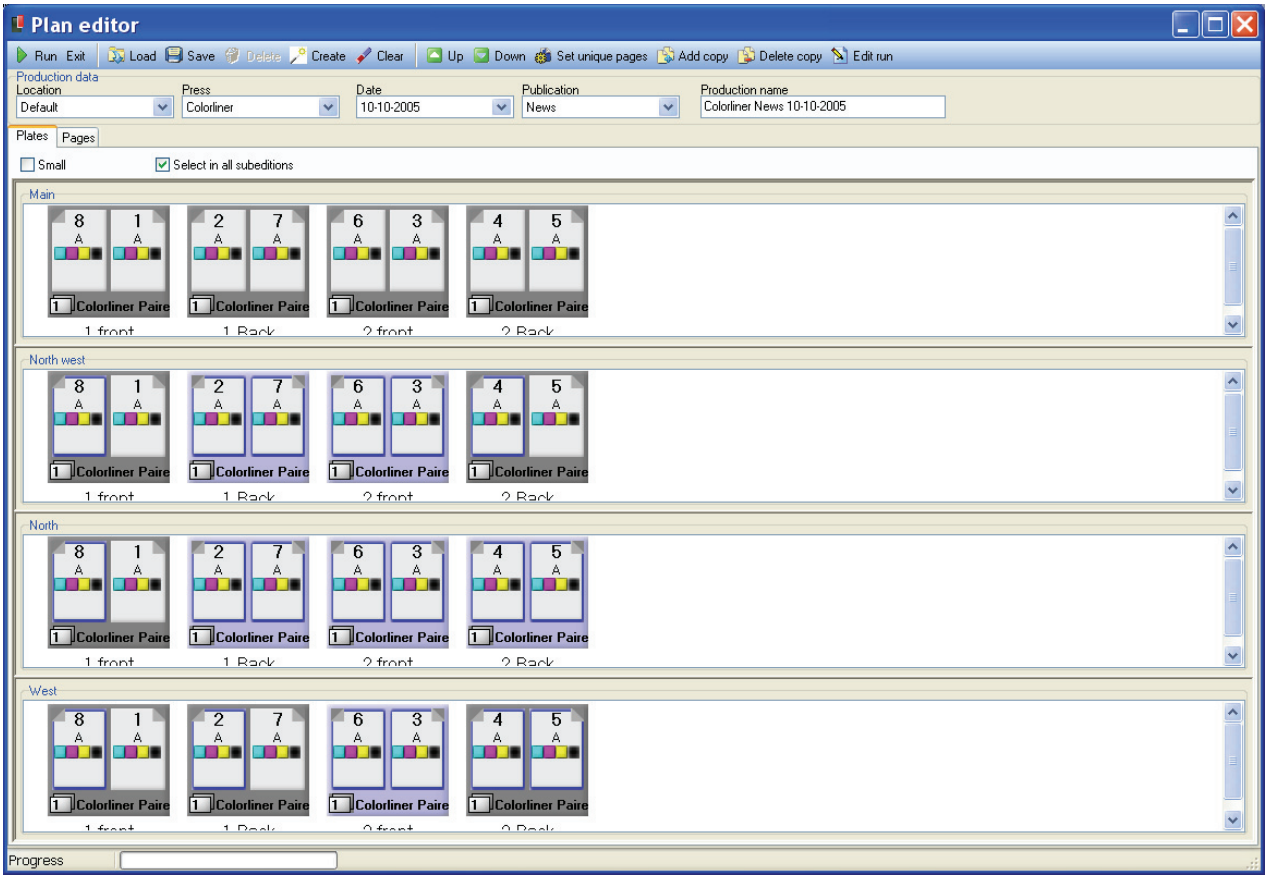
Load of stored plan template. The save/load plan feature enables build-up of a library of often used plans for easy re-use.

5.6 Planning multiple editions (zoning)

The last step in the plan wizard allows multiple editions to be produced. When planning for multiple editions all possible editions must be added to the plan. Even if the final product is not known at planning time, make sure to add all possible editions – unused editions will not be produced if no unique pages have arrived.



Zoned production using one main and three regional zones. Blank cells indicate pages identical to the main edition (common pages). Note that page 5 North is 'inherited' from Northwest page 5.



Resulting imposition using pairing. Blue background plates indicate common plate which are not to be produced for subsequent editions. In the tree blue pages also indicate common pages.

5.7 Changing edition plan

Changing the edition plan occurs frequently in real life productions. Changes ranges from simple color changes (use page list view for that), changes to the use of common pages between editions and complete new editions.

Changes to individual pages and addition or exclusion or editions can be done in the *Edition view*. Highlight a press name in a production for refresh to page-edition matrix for that production. This also enables the toolbar for adding/deleting sub-editions.

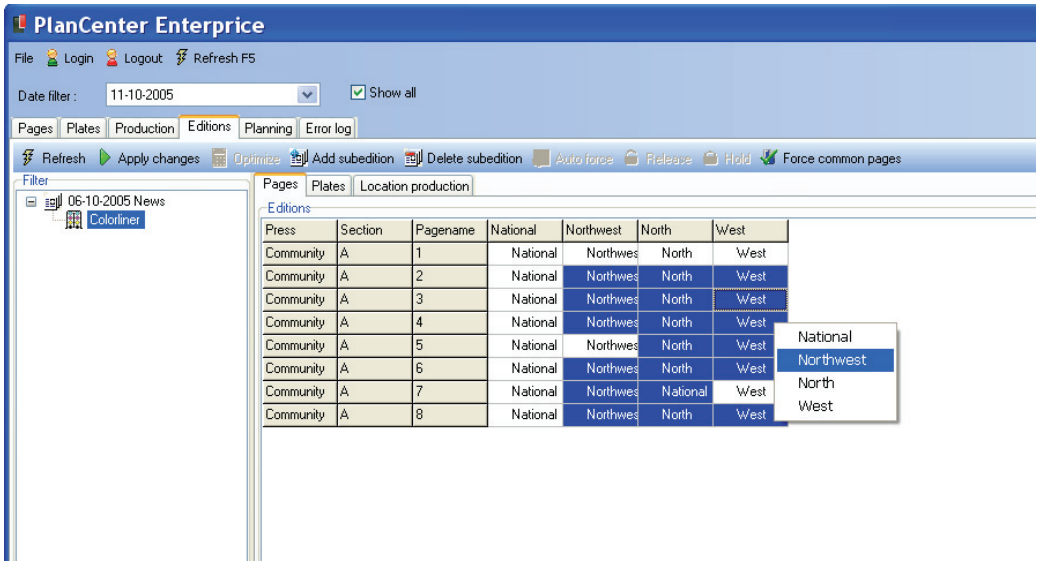
The term sub-edition simply implies that the edition is not the first/main edition. By definition the first edition to be produced (lowest run number) is the main edition.

5.7.1 Changing unique/common pages

A page is called a 'unique page when the page will not be a re-used page from a previous edition. A unique page must be input with the edition name in the filename. A non-unique page (or common page – always blue in PlanCenter) on the other hand will not be input because it is a re-use from a previous edition with a unique page.

Note that for page pairing a plate with all pages being non-unique will not be output (unless overruled by the user).

In the edition matrix edition names are listed as columns with blue cells indicating pages which are not unique. Select a cell and right-click to select another edition page. If the selected edition page name is the same as the edition itself the page will be unique. If the selected edition name is different fro the edition itself the page is a



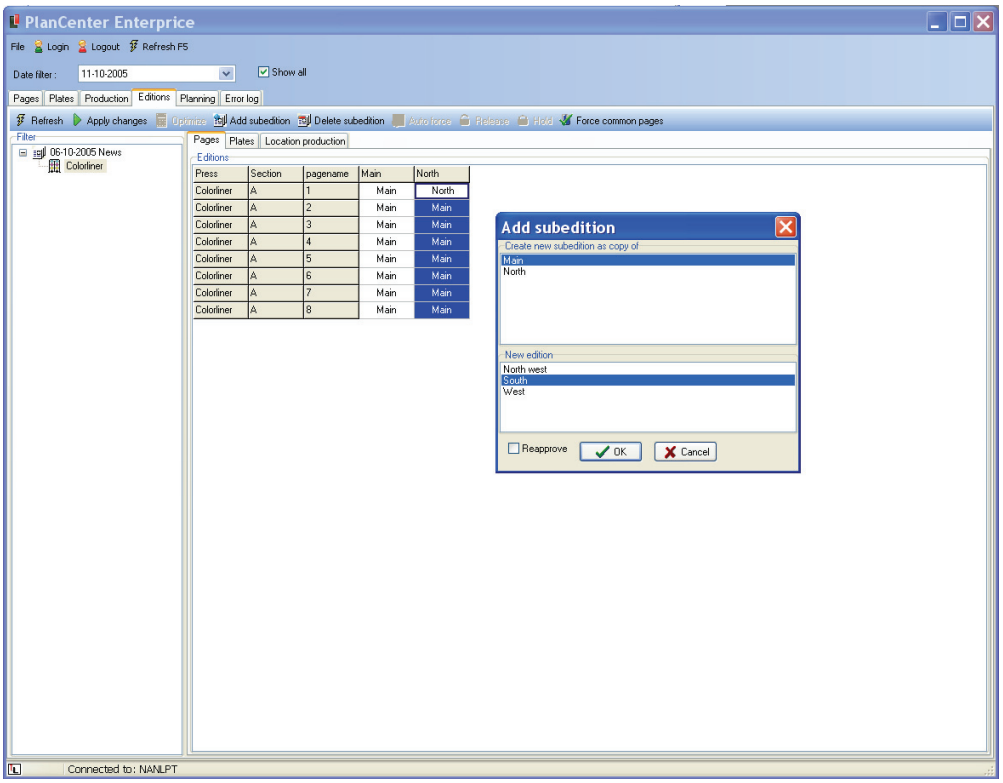
Use the Edition-tab in PlanCenter to change the edition plan. Blue cells indicate common pages. Right-click on a page cell and select which page is to be used. Example: Change a "blue" page to a regional version.

common page (blue).

5.7.2 Adding a new sub-edition

Highlight the press under the production to activate the toolbar in the edition view. Select Add sub-edition.

In the upper window of the **Add sub-edition** dialog select the existing edition from which common pages should be inherent from. Often this is the main edition.

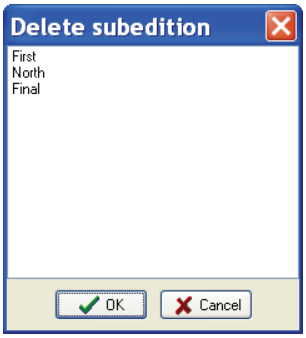


Adding editions to a production. Select a 'master' edition to copy edition pages from.

In the lower window select the name for the new sub-edition. Check the *Re-approve pages* option to set page approve state for new edition to 'Not-approved' regardless of approval state for the inherited common edition pages.

5.7.3 Deleting a sub-edition

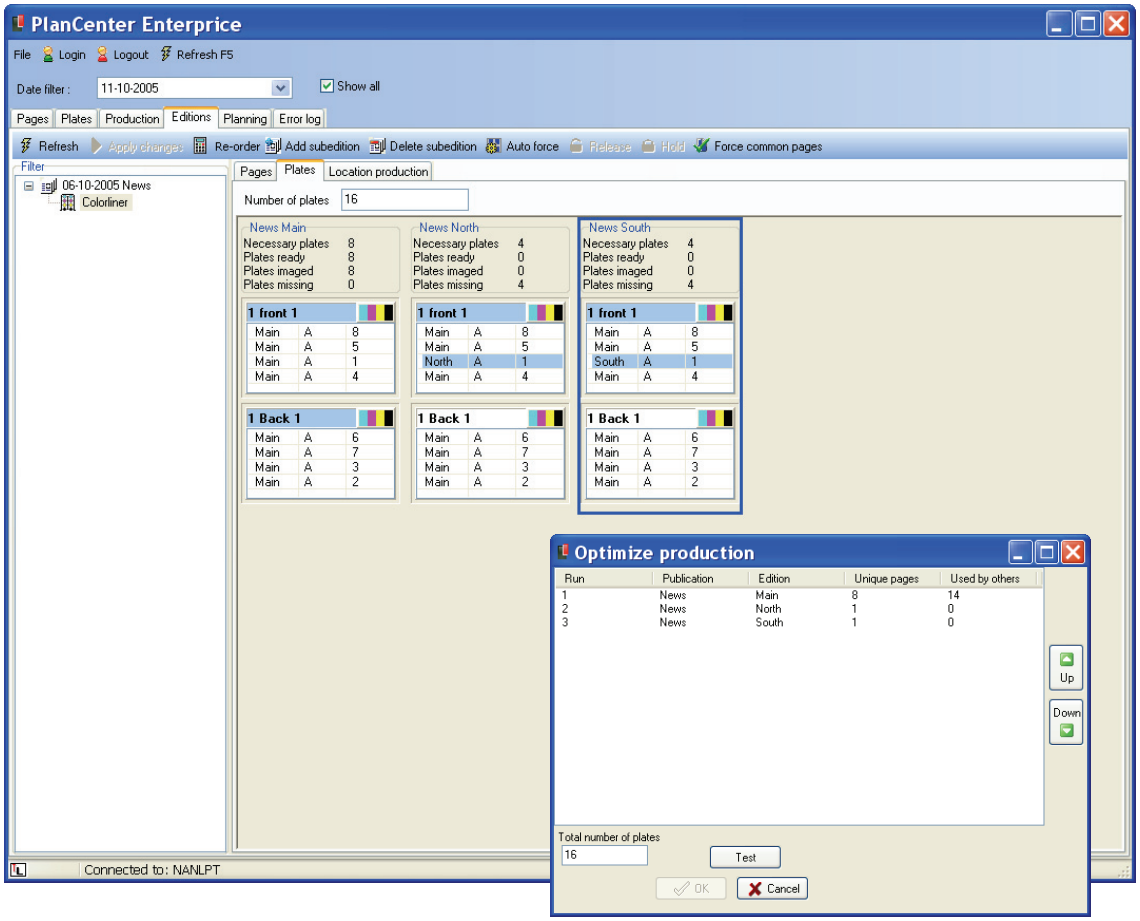
Click the **Delete sub-editions** button on the toolbar and select the edition to delete. Only edition where subsequence sub-editions are not using any of the pages can be deleted. Obviously the main edition cannot be deleted – Delete the full product instead (in Planning view)



5.7.4 Plate calculation

The actual number of plates in multiple edition runs with common pages depends on the printing sequence. Plates can only be re-used if they are common in consecutive runs. If a different (unrelated) run is inserted in between editions, fresh plates are (usually) required for the subsequent edition.

Select the **Plates** tab in Edition View to show the editions organized as columns of plates (plate color separation sets). Plates with a blue header are unique plates to be produced. White headers indicated that plates are common to the previews run so that no new plates are required (common plates).



*The resulting number of unique plates per run depends on the printing sequence. In the Plates view the sequence goes from left to right, each column being an edition run. The sequence can be changed using the **Re-order** option.*

5.7.5 Changing edition sequence

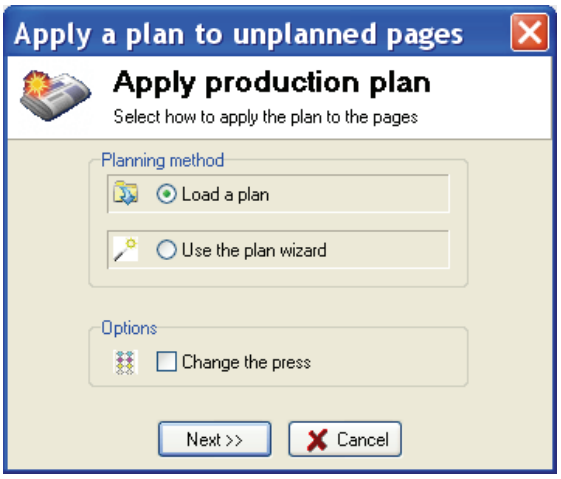
To observe changes to the plate requirements, click the **Re-order** button in the Plates view under Edition management. The sequence can be changed using the arrows on the right hand side of the run list. Press the **Test** button the re-calculate the plate count per edition.

Note that editions can be re-arrange in Edit-mode in **Planning** view also. In the Plan Editor, use the up/down arrows on selected run(s) to move runs forward/backward in the edition run sequence.

5.7.6 Applying a plan to unplanned pages

ControlCenter allows pages to be entered before an actual press plan is present. This allows early submission of pages from customers enabling early RIP'ing and page approval. When the full product is known the production department can 'Apply a plan' onto the incoming pages, e.g. a page pairing plan. The term 'unplanned pages' is used for pages entered ahead of planning.

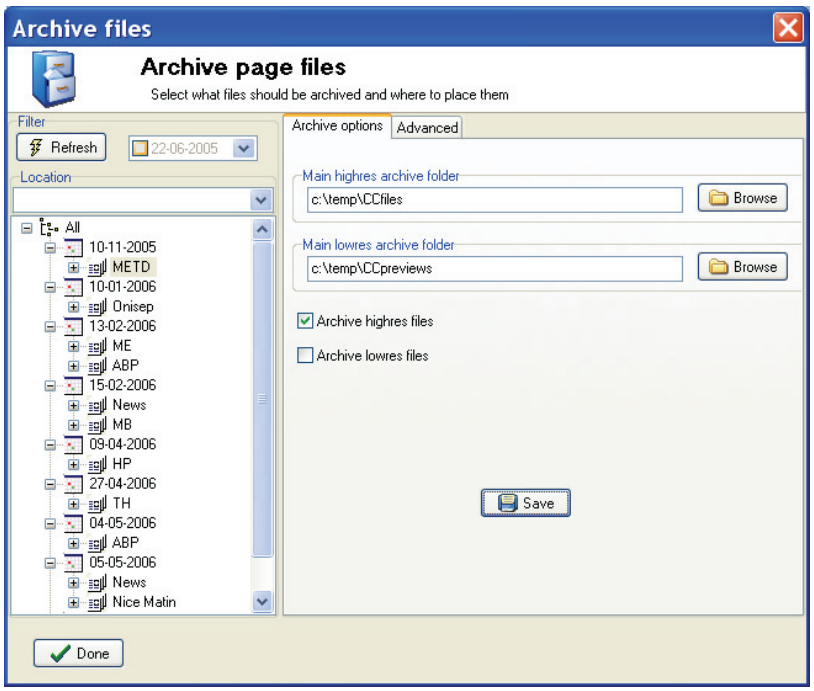
Unplanned pages are characterized by a white plan symbol in the Planning tree. After a plan has been applied to the pages the plan symbol goes green or CMYK-colored, allowing controlled output (when released).



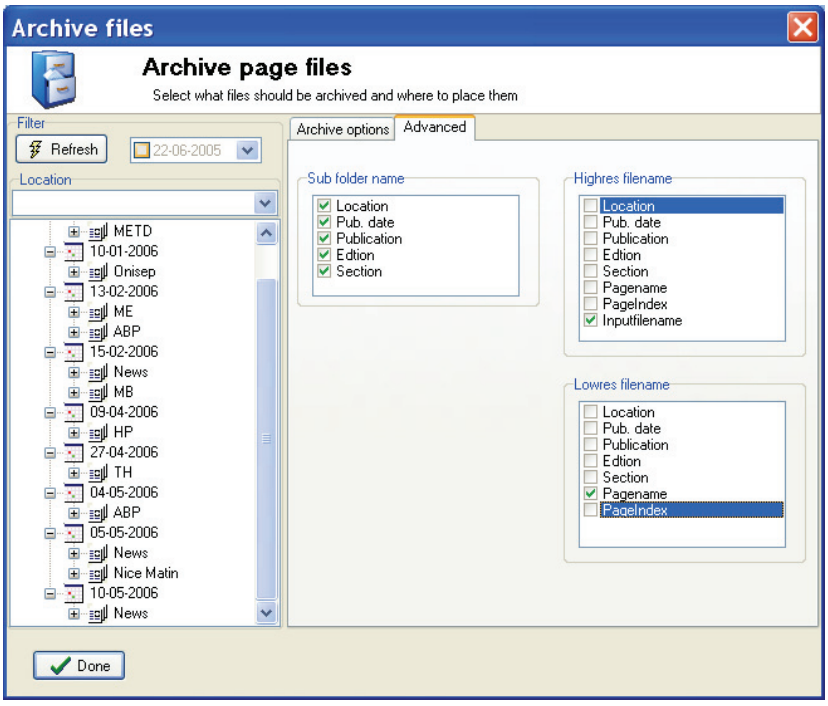
Applying a press plan to unplanned pages may used pre-stored press plans or may start the planning wizard

5.8 Archiving

PlanCenter can archive existing TIFF/PDF files in the system for later re-use. The archiving uses a defined file naming scheme and copies all existing files for a given product to another server folder.



Archiving is accessible from the right-click menu in the views or from the toolbar. Select the product (or partial product) to archive and select the naming convention in the **Advanced** dialog.



The files can be generated into a hierarchical folder structure with levels publication date, publication, edition and/or section.

5.9 General settings

The Program settings allow changes to basic configuration data for PlanCenter. The configuration is divided into a number of categories (tab bars).

5.9.1 General settings preferences

Language

The PlanCenter application can have GUI is several languages. Select one of the existing languages from the drop-down list. Note that localized names for status and event codes are set in MonitorCenter or InputCenter General Setting (section 3.7)

Auto login

If only one user is defined in the system (e.g. Admin), the *Auto login* option will bypass the user login prompt at start-up.

Auto-refresh time

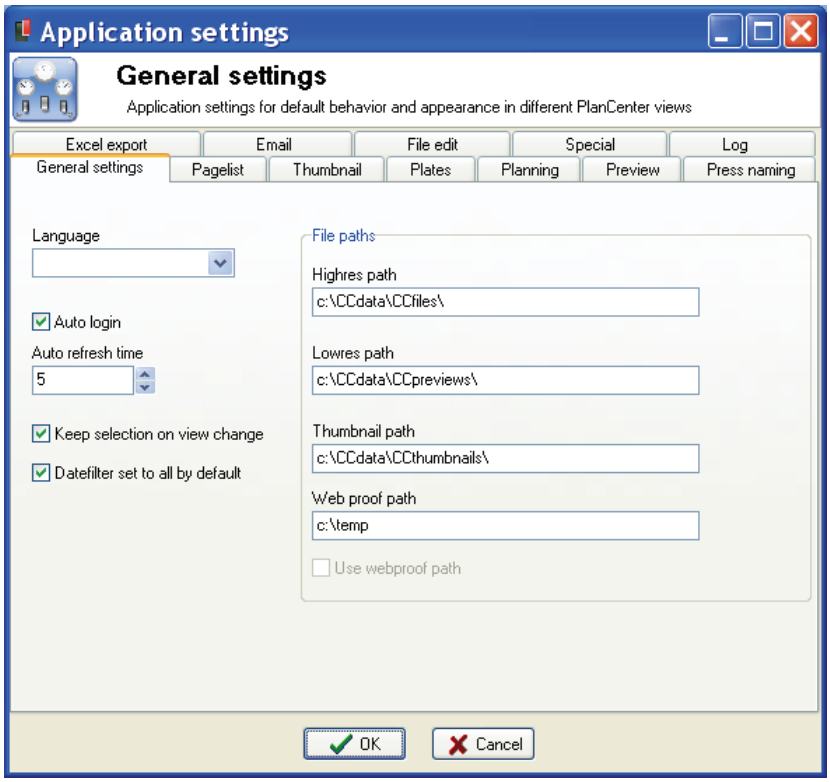
Time between screen refresh. Note that a low value is not recommended (below 5 sec) because it will cause heavy traffic on the server

Keep selections on view change

Keep focus on the same selected product when changing between

Date-filter all default

Set the top-most publication date filter to show all dates always



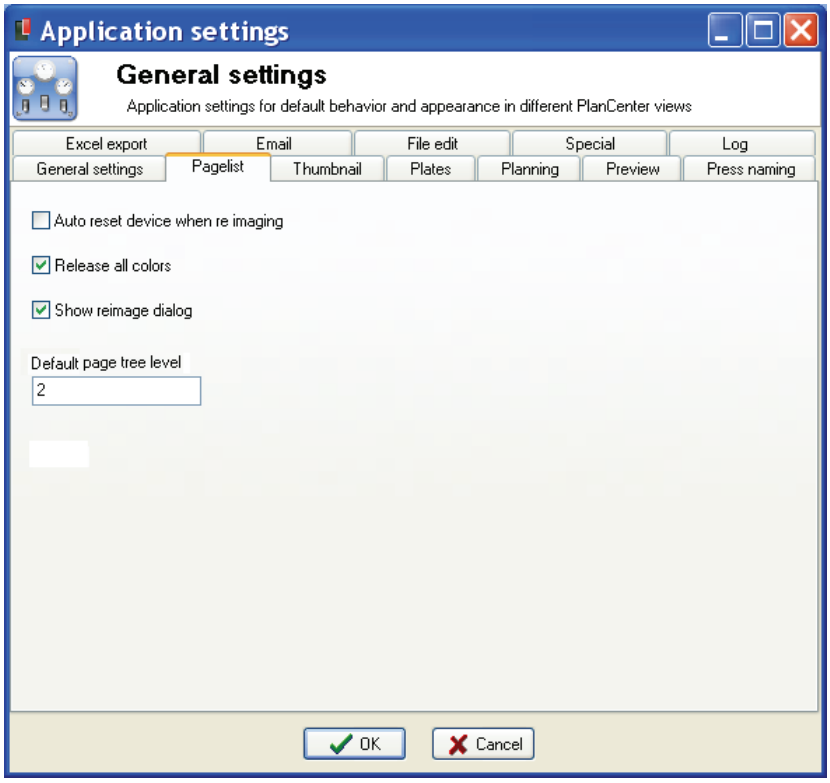
views (e.g. from thumbnail view to plate view)

File-paths

Paths to image files. By default images reside in subfolders to the main CCDATA share. However, special configurations may utilize local copies of the images.

5.9.2 Page-list preferences

Set the preferences for the datalist. Most settings are for internal management and



should not be changed for normal installations.

Auto-reset device when re-imaging

When re-imaging plates one can select if plates must go to the original output device or should be reset – meaning the plates may go the any device available (but still all colors to the same machine).

Release all colors

Even if one color separation is selected in the data list, this setting will release all colors for the page.

Show re-image dialogs

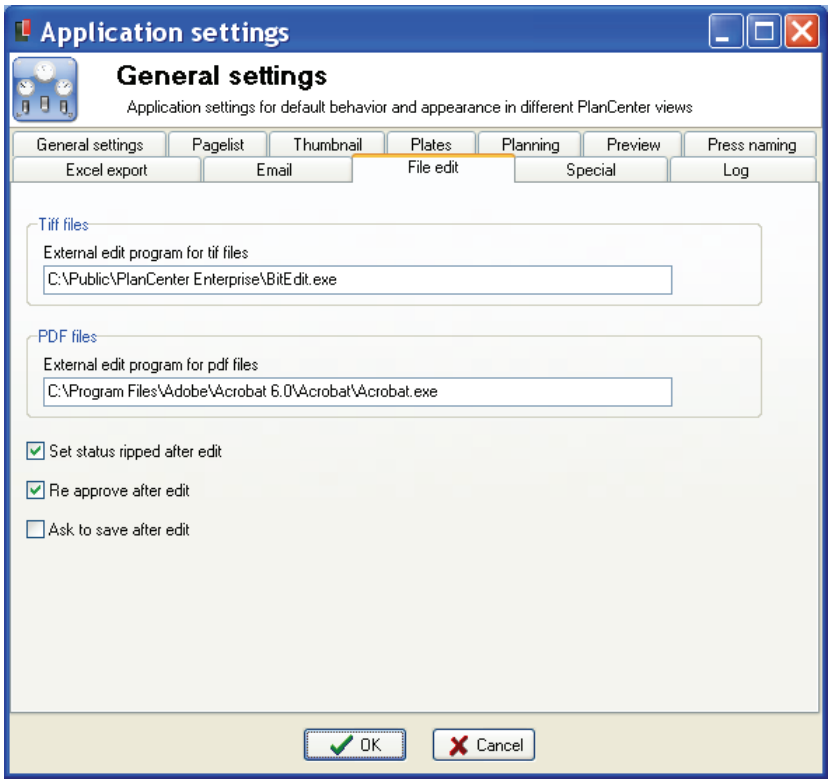
Controls if re-image commands should prompt the user for confirmation.

Default page tree level

Controls how deep the page navigation tree should expand on refresh.

5.9.3 File edit preferences

Application path settings for external bitmap editor and PDF editor called from the pop-up menu in the data list



Set status ripped (polled) after edit

Because PlanCenter may not be aware if the external editor has changes the page it is safe to assume the page must to re-transmission and re-imaged.

Re-approve page after edit

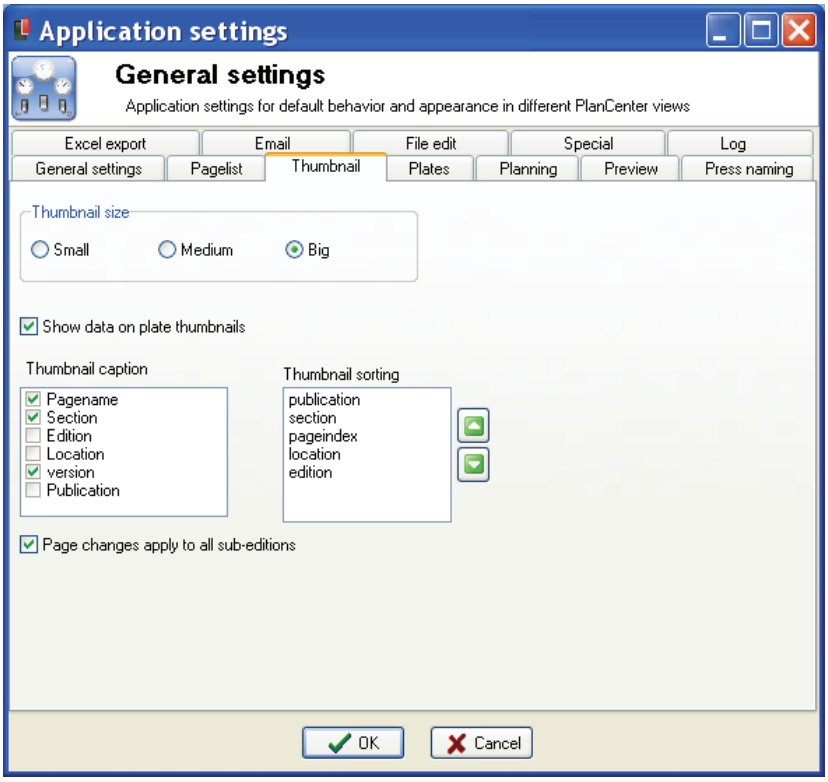
Assuming that the page has been altered by external editor, it may need to be re-approved.

Set status ripped (polled) after edit

Because PlanCenter may not be aware if the external editor has changes the page it is safe to assume the page must to re-transmission and re-imaged.

5.9.4 Thumbnail preferences

Settings for thumbnail view include thumbnail sizes, captions (texts under thumbnails) and sorting order.

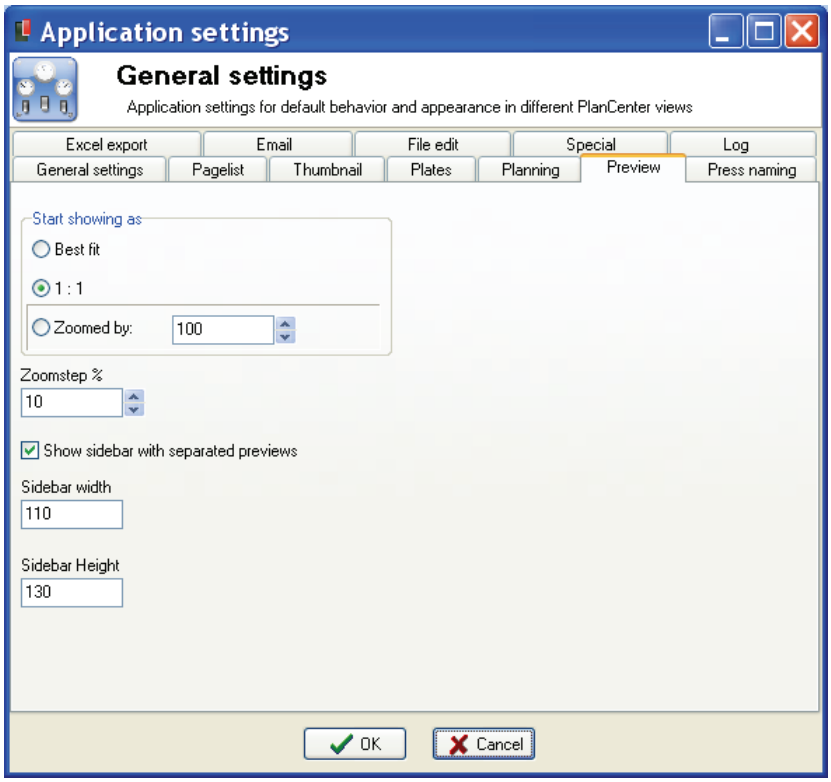


Page changes apply to all sub-editions

In case of approval, color changes and page type changes (e.g. to panorama) this option propagates the change to non-unique (common) sub-edition pages also.

5.9.5 Preview preferences

Settings for the preview view (clicking a thumbnail) set the default behavior of the zoom mechanism and the presents of the sidebar to the right of the preview showing



the individual separations.

5.9.6 Special preferences

Special settings relates to the actions taken when approving pages. Also this tab holds the configuration of the tree view for Production view.

Release on approval

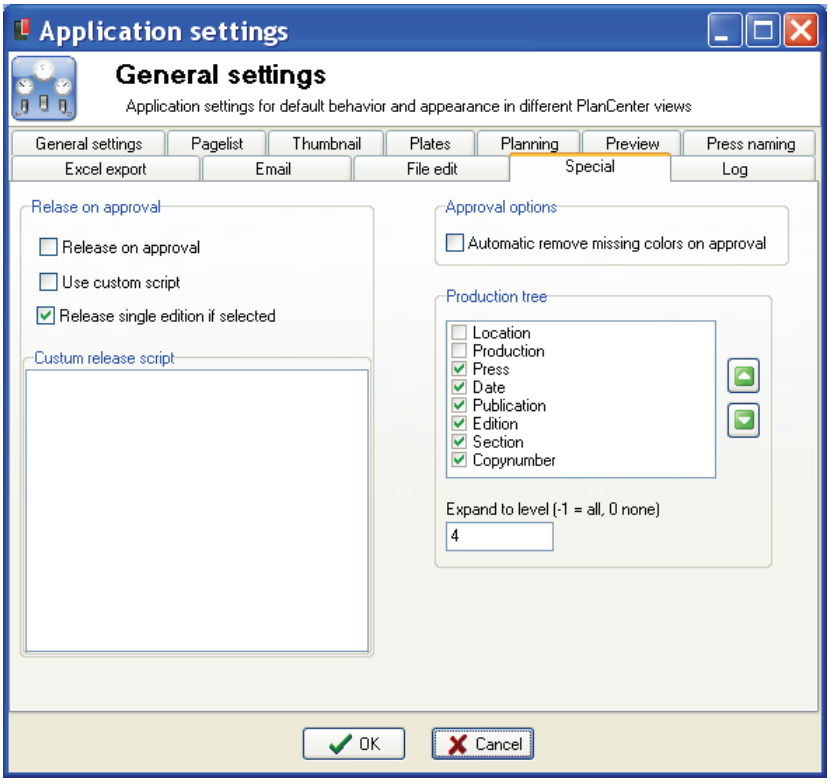
For certain departmental organizations the operator responsible for page approval may also be controlling production release. Setting *Release on approval* will release pages for imaging immediately following the approval.
Beware that this may cause a mix of plates for different runs if approval is on-going for multiple products at the time. For this scenario it is advisable to separate approval and release (set the option off)

Use custom script

A customized database script may be activated on approval. This may be to cover non-standard actions taken on page approval e.g. related to external event triggering.

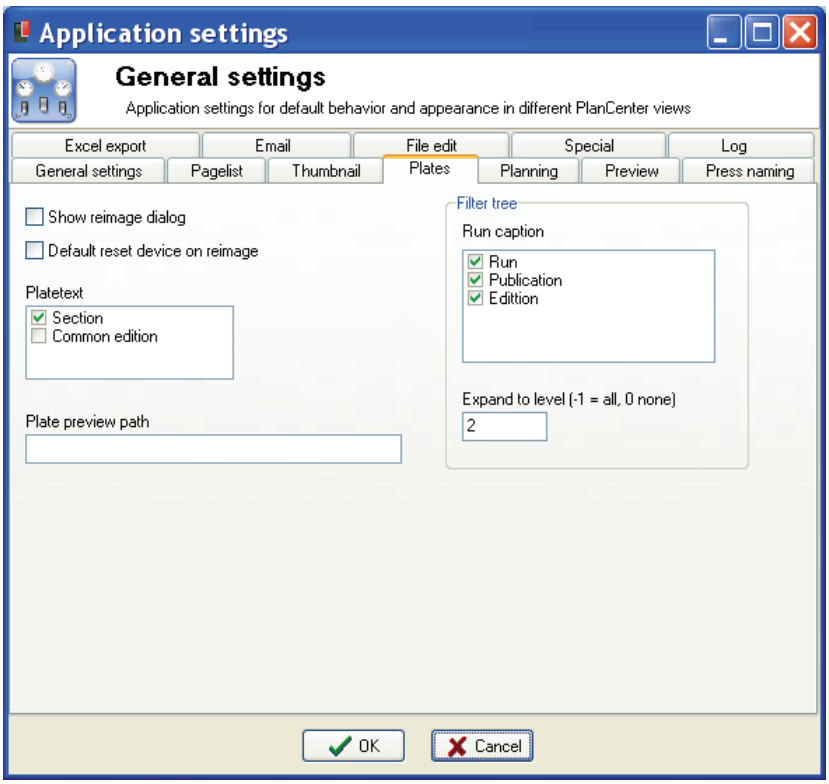
Remove missing colors

If this option is set and a page is approved, any colors not yet arrived will be disabled. This may be a convenient way be ignore certain separations which was planned for but never used.



5.9.7 Plates preferences

Set the preferences for plate-view sets parameters for default behavior when performing changes to the production in plate-view. Also the caption for the entries



in the tree view can be controlled.

Select all colors

Defaults to all colors selected when changing e.g. priority, hold/release etc.

Show re-image dialog

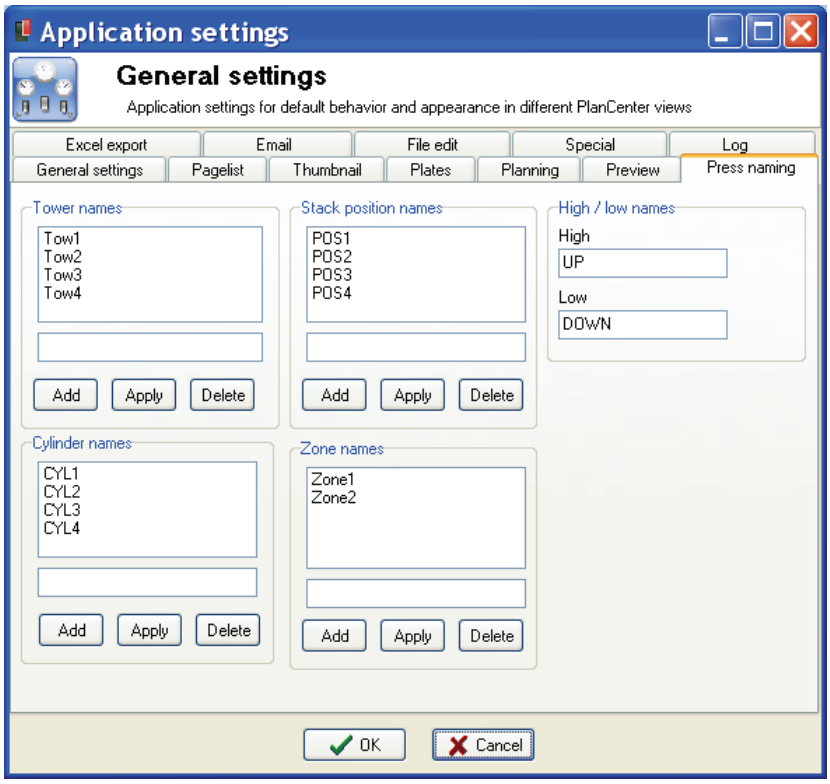
If selected the re-image color selection dialog will appear (see section 5.3.8)

Default reset device

When re-imaging this option 'releases' the full plate set (all colors) so it can be output to another device. The default behavior is to lock all colors to the same device – also when re-imaging.

5.9.8 Press naming preferences

Press related names can be defined here. Press tower, zone and cylinder names can be used in ID-texts and barcodes in the plate output.



5.9.9 Planning preferences

Planning preferences include defaults for the planning wizard and default behaviors for plan apply commands.

Select all markgroups by default

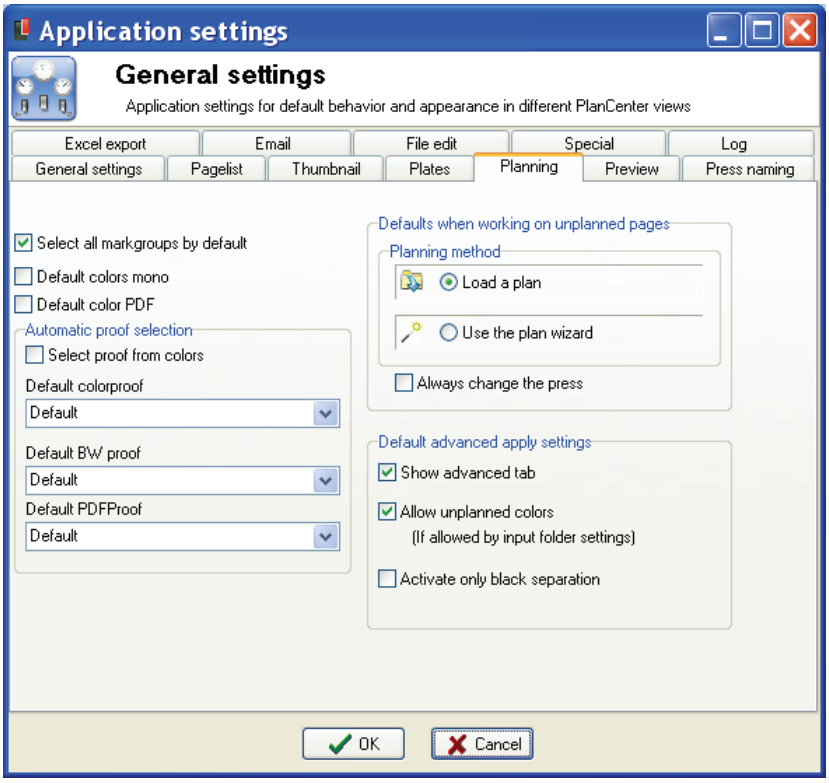
Enables all optional marks linked to the selected template in the planning wizard. The option marks are individually selectable in a check-box list.

Default color to mono

By default only the black color is selected in the planning wizard.

Default color to PDF

By default PDF is selected in the planning wizard.



Automatic proof selection

If *Select proof from colors* is selected the proof setup can be determined based on file type (TIFF/PDF) or color/BW.

Default flat-proof

Flat proofing (using ProofCenter) can be based on the production plan or overruled manually.

Planning method (Load or Wizard)

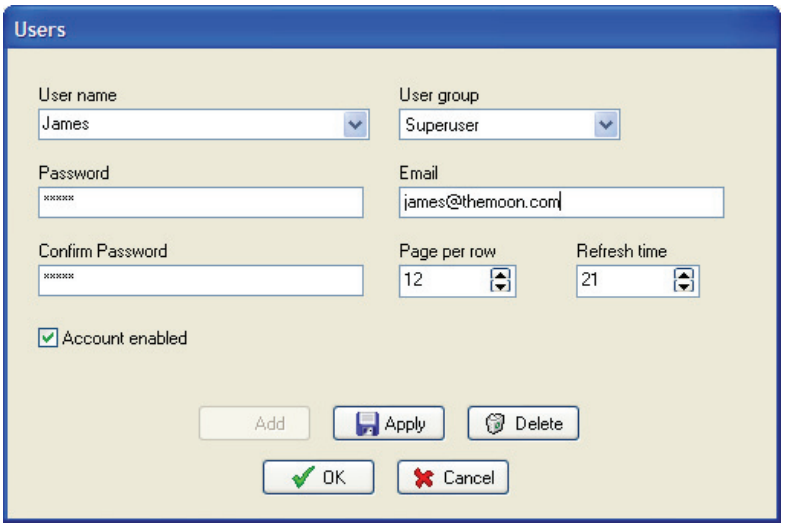
When applying a plan to an unplanned list of pages, PlanCenter can show the list of pre-defined plans or start the planning wizard.

5.9.10 User setup

The user management system allows different users to have different privileges. After a fresh installation, four user groups are available with the following rights:

User group	*Approve pages rights*	*Delete pages rights*	*Configuration rights*
Administrator	*YES*	*YES*	*YES*
PowerUser	*YES*	*YES*	*NO*
User	*YES*	*NO*	*NO*
Guest	*NO*	*NO*	*NO*

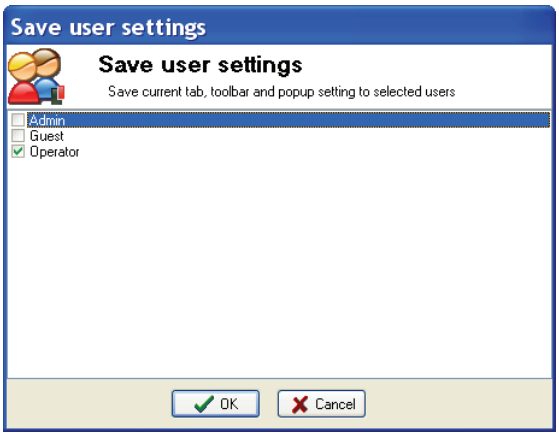
If you are administrator, you can manage users in PlanCenter using the **Config User** menu. Use Add, Edit or Delete buttons to manage new and existing users.



User management – available for Administrator users only

5.9.11 Customizing PlanCenter appearance

The appearance and available actions can be customized on a per-user basis. Certain users will have full access and others will only have limited access.



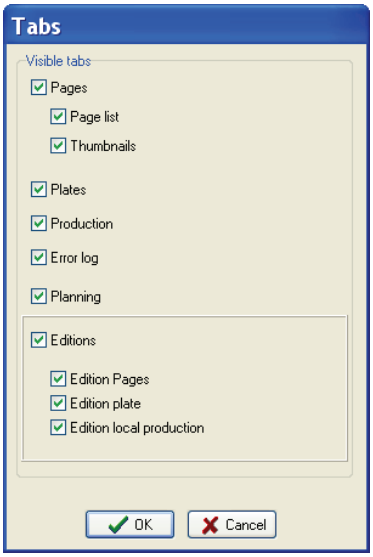
User setups are stored as **Desktop settings** (available under the **File** menu).

Only administrator level users can configure and save user desktop settings.

Note: On a freshly installed system start with the creation of users and user desktop settings. Log in as Administrator and save the settings to a specified number of registered users.

5.9.12 Configure tabs

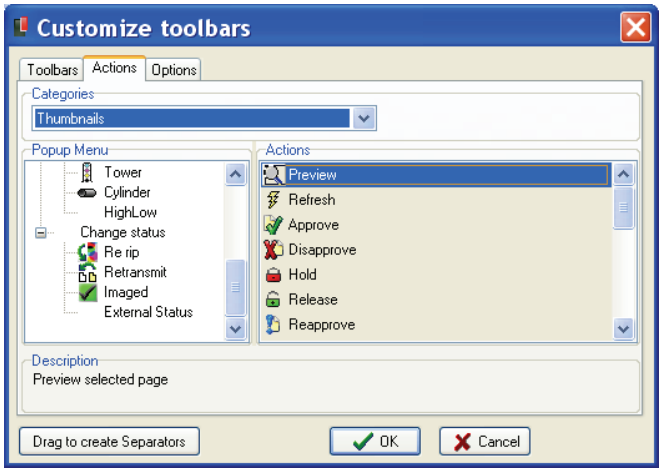
Available tabs can be adjusted in the **File->Configure tabs** menu. Check the tabs available for the user and save settings as default for the user using the **Save desktop settings** in the **File** menu.



5.9.13 Toolbar setup

The toolbars available for performing actions can be customized to fit personal preferences. The customization is equivalent to the method used in standard office applications.

The toolbar customize option is context sensitive so the default list of available toolbar buttons depends on the selected view.

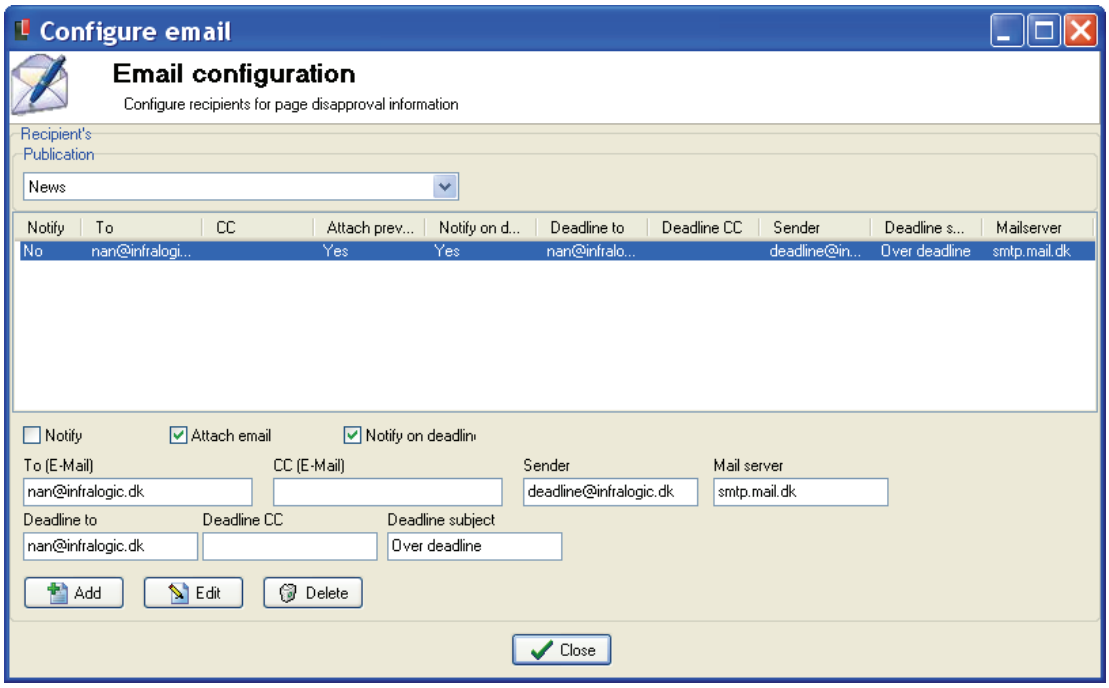


All toolbar settings are saved and linked to the user name. Each user name can have a unique combination of toolbar buttons available.

Save settings as default for the user using the **Save desktop settings** in the **File** menu

5.9.14 E-mail notification setup

Page rejects and late deadlines can be communicated to a number of e-mail recipients linked to the publication name. The configuration allows multiple recipients to be prepared for the mail submissions.
The list of recipients is associated to each publication so that different recipients can be pre-defined per publication (typical different customers or editors).



6 MonitorCenter

6.1 Introduction

MonitorCenter is the client used for supervising all system components. All processes, including polling, re-sampling, transmission and output each has an icon and associated status in MonitorCenter. Also, any traceable output device is shown with present status.

Apart from immediate status, progress logs are also presented.

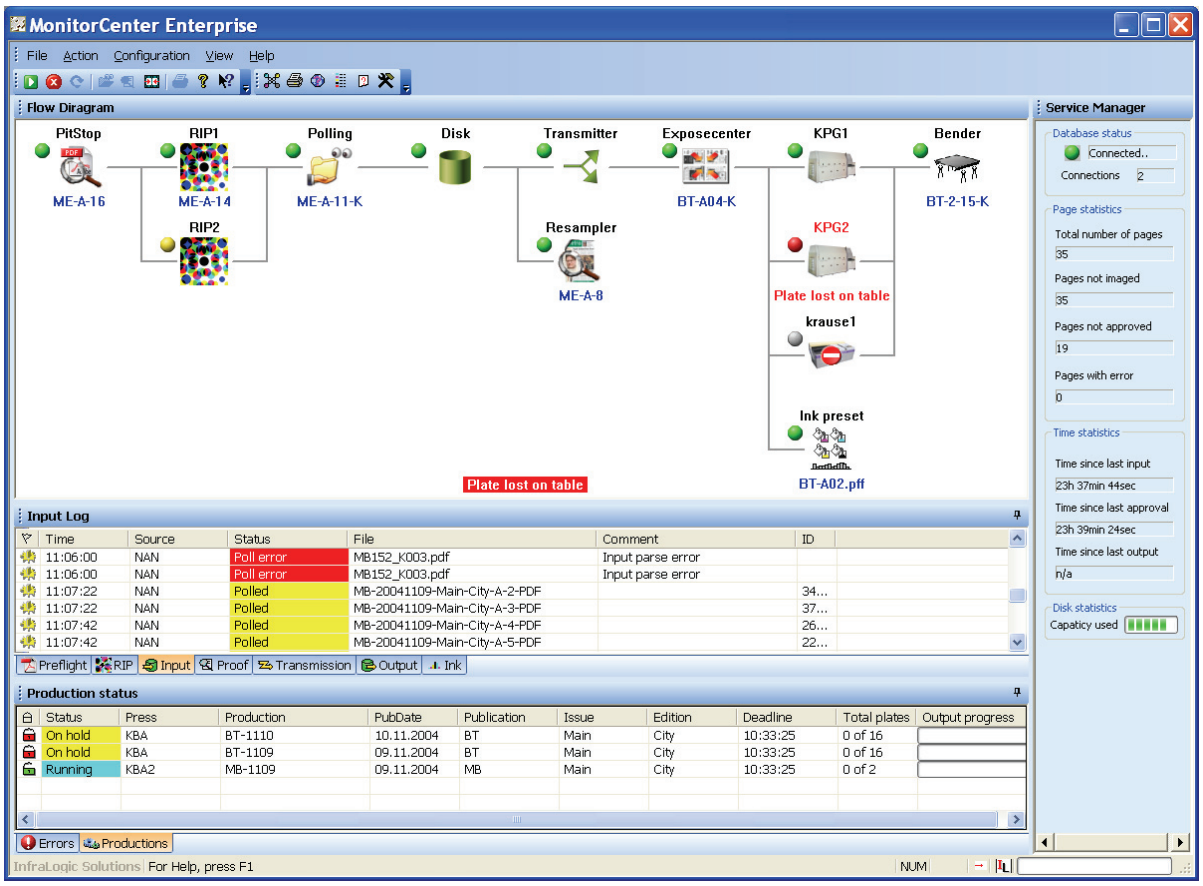
Optionally MonitorCenter also will track Preflight applications, RIPs, plate bunch/bend units and Ink preset applications (InkCenter)

Apart from showing the grand overview of system components, MonitorCenter also allows the operator to remote control enabling/disabling of processes and output to specific devices. This is similar to device enable/disable in the remote OutputCenter applications.

6.2 Basic usage

MonitorCenter consists of one main GUI and a configuration menu.
Apart from the processes and devices, a general *Error history* window and a view of files presently set aside by InputCenter can be viewed (Shows contents of error folders).

Also, current products and their progress can be observed in MonitorCenter.



MonitorCenter will show the present status and logs of all registered processes and devices. ControlCenter processes and output devices can be enabled or disabled (stop sign) with clicks on the icons. Errors will be shown in red.

6.2.1 Enabling/disabling processes and output devices

Click on an icon is the flow view to toggle between on and off for a process or device. Note that Preflight, RIPs and benders cannot be remotely controlled.

Note that enabling or disabling of an output device will not physically put the device in online/offline mode – it will merely block or allow output to be sent to the selected device. This can be used e.g. to disable a particular device from outputting so that the device is not part of the load balancing logic in OutputCenter.

6.2.2 Device and process errors

Reported errors will be shown in red in the flow diagram (see KPG2 device in the screenshot above).

If the error persists but the operator does not want to keep the error in the flow, click on the icon to clear the error message. Note that the error may still be present (e.g. device error)

Click on an icon is the flow view to toggle between on and off for a process or device. Note that Preflight, RIPs and benders cannot be remotely controlled.

Note that enabling or disabling of an output device will not physically put the device in online/offline mode – it will merely block or allow output to be sent to the selected device. This can be used e.g. to disable a particular device from outputting so that the device is not part of the load balancing logic in OutputCenter.

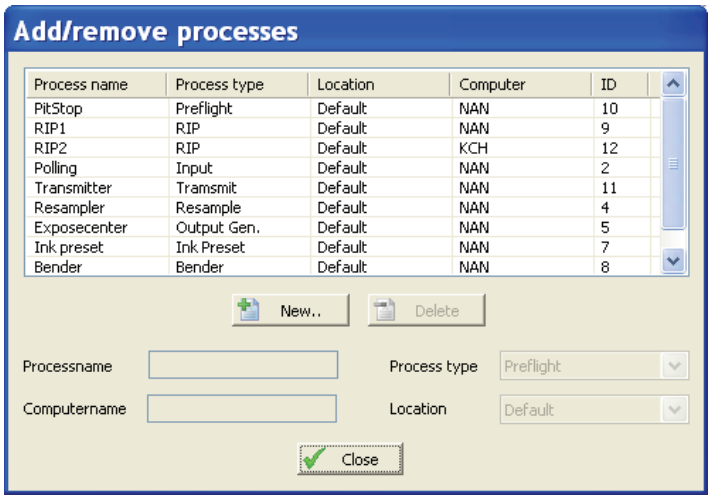
6.3 Configuration

Note that changing configuration requires Administrative privileges. User will be prompted for username and password first time configuration menu is clicked.

MonitorCenter will require login again to change configuration if no user action has occurred for one hour.

6.4 Process configuration

In main **Configuration->Process definitions..** menu the flow view can be customized to show only the devices and processes of interest. This may be a good idea in case one many locations where the main view may be too crowded with processes to give a good overview.



Configuration of MonitorCenter shows the list of available devices and processes. Check the boxes for the items to be included in the main GUI

6.5 Start-up defaults for MonitorCenter

Certain rarely changed parameters can be set in the program configuration file MonitorCenterEnt.ini.

The ini-file settings can control the default layout of the individual views in MonitorCenter. For big systems it may be required to hide one to both of the log views to have enough space for all processes (e.g. in case of multiple print sites).

The most important settings in MonitorCenterEnt.ini are shown below

Setting	Default	Description
SmallIcons	0	Show half-sized icons for processes for very crowded monitor
LogViews	2	2: logs divided in two windows at bottom of screen 1: all logs combined in one window at bottom of screen 0: log windows minimized to right hand side on main window
HideProductionView	2	Show/hide production statistics. Beware that showing production statistics puts more traffic on the database. 0: Production view and right hand side page statistics shown 1: Only page statistics shown 2: Production statistics hidden and page stat. not updated
RescrictHidingViews	0	Restrict hiding of log views (using X-button)
RescrictFloatingViews	1	Restrict floating (de-attached) of log views with double-click on caption bar
LocationFilter	empty	Enter a location name to show only that location in the monitor view
MayControlInput	1	Enable stop/start remote control of InputCenter processes
MayControlOutput	1	Enable stop/start remote control of OutputCenter processes
NoLogin	0	By default MonitorCenter requires login to alter configuration data. Set NoLogin=1 to bypass login prompt
AlarmFile	empty	Alarms Wave file to play when error (leave blank for no sound)
ShowProcessor	0	Show processor at each output device in monitor view
ProcessTimeOut	20	Timeout in seconds for processes. If timeout is reached status “Process dead” will be shown.
CheatMode	0	0: No cheat 1: Process timeout will never be shown 2: No process timeouts and all processes will appear online (green lamp)
KFbender	0	Show bender with K&F icon

SeparateBenderLines	0	0: Each output device is connected logically to all benders 1: Each device is connected to only one bender
DatabaseLoginTimeout	5	Database timing parameter. Maximum time waiting for successful login to database. Exceeding this time will the system will report error.
DatabaseQueryTimeout	5	Database timing parameter. Maximum time waiting for successful query on database. Exceeding this time will the system will report error.
QueryBackoffTime	500	Database timing parameter. Time between retries on query timeouts (Time in millisec.)
QueryRetries	3	Database timing parameter. Number of retries on query timeouts before reporting error

7 BackupCenter

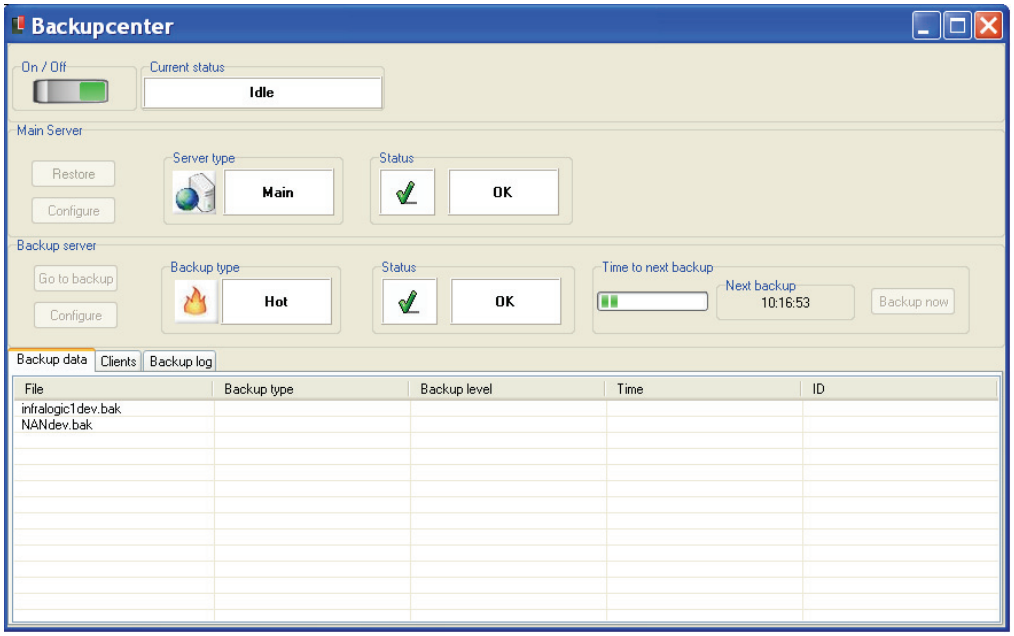
7.1 Introduction

BackupCenter is an application for automated server-to-server transfer of configuration and production data. Running on the backup server, BackupCenter continuously ensures that the backup database is updated with latest changes made to the main database.
BackupCenter offers three types of backup schemes:

Hot backup mode
Hot backup (default) runs unattended and makes automatic backup of main server and restore on backup server. This process ensures up-to-date synchronization of the servers.

Cold backup mode
Cold backup performs a server synchronization on request only (press of a button

Disaster backup mode
A disaster backup is a turned off server. The preparation of the server (system configuration details) are transferred using BackupCenter).



BackupCenter runs unattended on the backup server. At given interval a complete or partial backup is performed and transferred to the backup server.

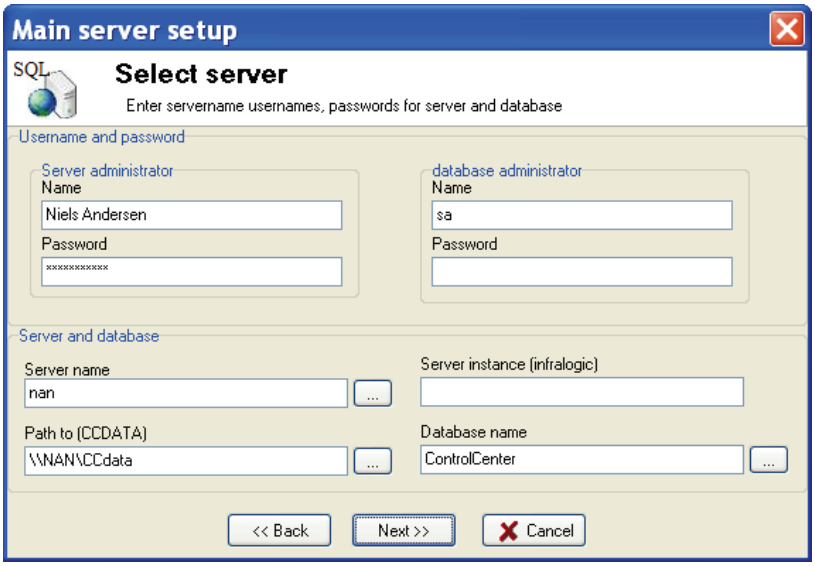
7.2 Configuration

Configuration requires two steps: Configuration of main server parameters and backup server parameters.

7.2.1 Main server configuration

The main server configuration is done pressing the **Config** button in the Main Server section of the user interface.

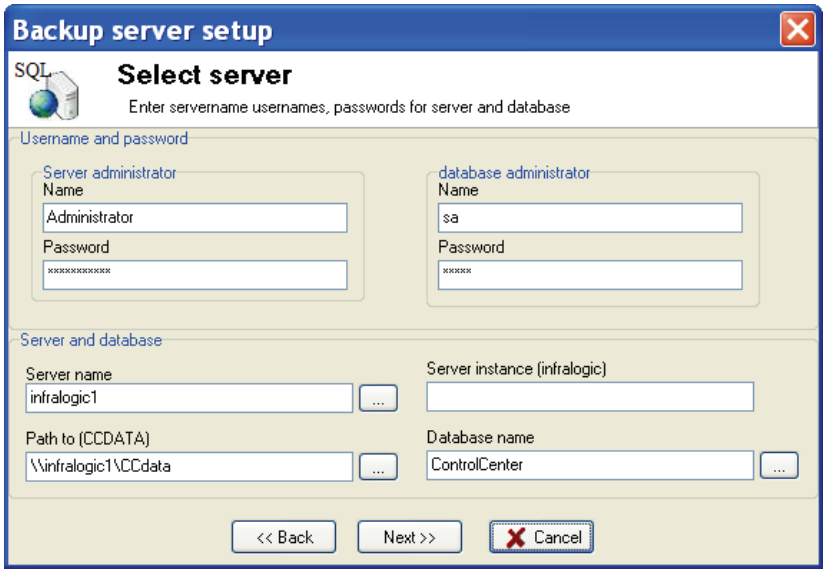
Set File server login name (Local Windows account or Domain controlled account) and password and fill in database login settings. Also enter path to main server file repository (default shared as CCDATA). Press next at test the connection.



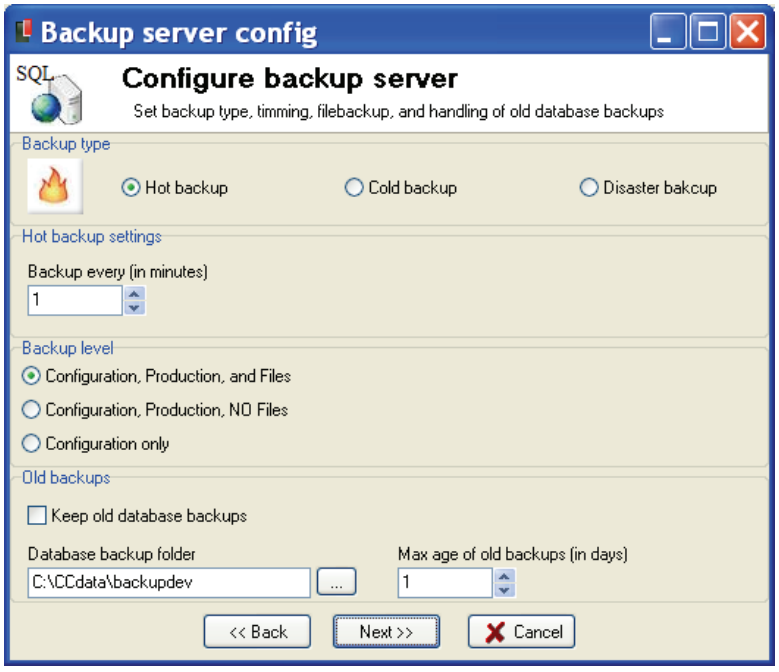
7.2.2 Backup server configuration

The back server configuration is done pressing the **Config** button in the Backup Server section of the user interface. This will start the config wizard.

Set File server login name (Local Windows account or Domain controlled account) and password and fill in database login settings. Also enter path to backup server



file repository (default shared as CCDATA). Press next.



.

Select mode of operation: Hot (repeated synchronization), Cold (on-demand synchronization) or Disaster backup (on-time snapshot of main server).

Select backup interval. A recommended value is between 5 and 15 minutes.

Backup level determines what data is synchronized to the backup server:

Configuration, Production and Files

The complete database is synchronized and production files (TIFF or PDF files), preview files etc. are replicated to the backup server. The mode ensures complete up-to-date backup of running productions. Note that this mode put pressure on the main server database, file system and network resources.

Configuration, Production and NO Files

The complete database is synchronized but production files (TIFF or PDF files) are NOT synchronized. The main reason for this mode is for setups where database server and file server are different platforms.

Configuration only

Only configuration data (templates, production names, press plans etc.) is synchronized to the backup machine. In case of backup the plans must be re-initiated and files must be input again.

Database backup files are created by SQL Server using an internal backup format where the complete database is stored as a separate file.

The backup files may be stored as revisions up to many days back. The reason for keeping 'old' backup files is that it offers the possibility to roll back to several restore points in time, e.g. to before a virus attack.

7.2.3 Backup event

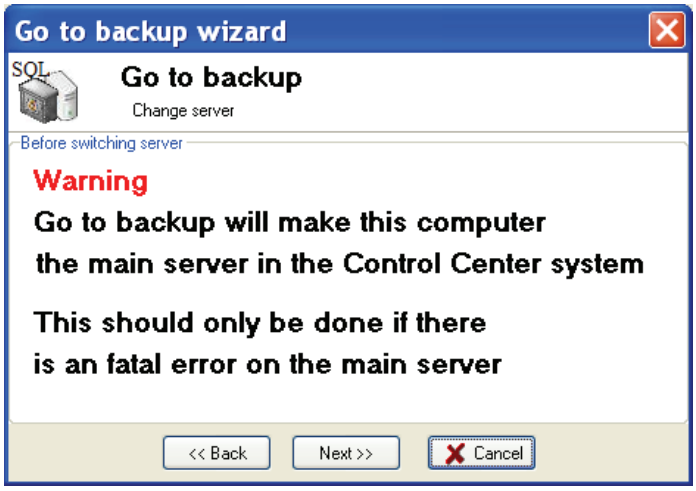
In the event of main server failure, BackupCenter offers several warnings:

- Notification to a number of administrators using e-mail alerts.
- Pop-up on BackupCenter

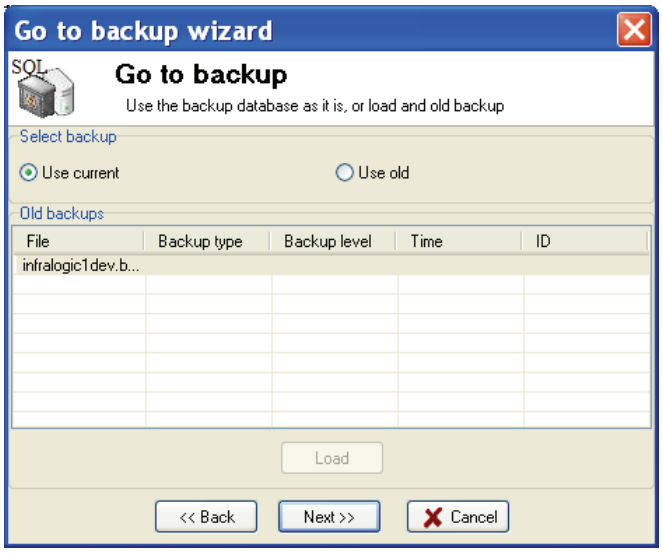
The decision about backup operation is left to the system administrator. BackuCenter will not make this decision, only warn about the failure on the main server.

Press the Go to Backup button to start the Backup wizard. The first screen is a warning only. Second screen allows selection between the current restored backup database (default for hot and cold backup mode) or if an old backup file should be restored (default for disaster backup).

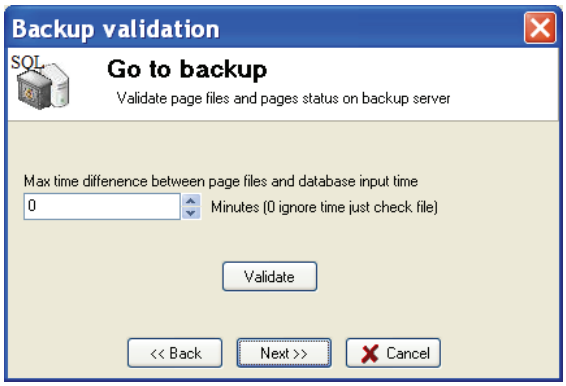
The last step before the actual backup allows verification of page files against database data.



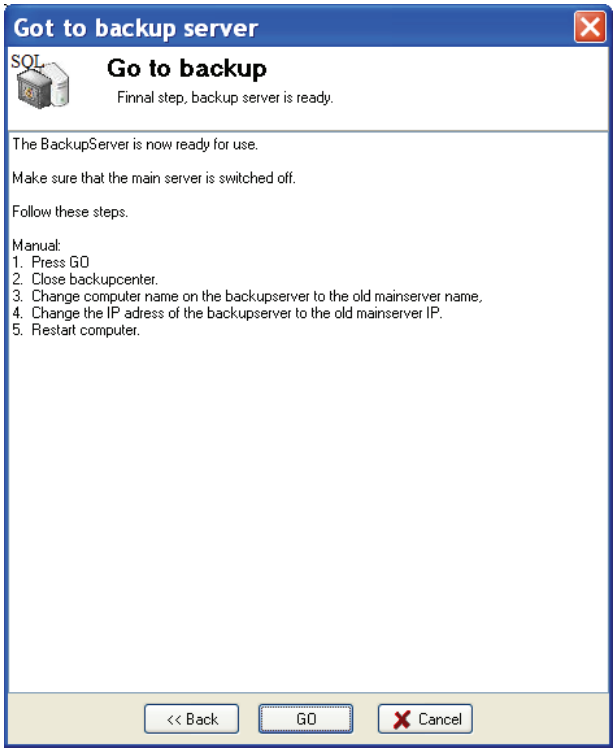
Step1: Go-to-backup wizard start page



Step2: Select if current backup server data should be used or if an older backup file should be restored.



Step3: Page files (TIFF/PDF) may be checked to make sure database content and files are in sync.



Step4 (final): Final confirmation of go-to-backup operation with instructions.

Appendix A – Regular expression

The InputCenter naming recognition may use regular expressions for pre-processing of the file names. To utilize the full potential of the very powerful regular expression methodology takes some practice. Recommended reading is *Mastering Regular Expressions by Jeffrey E.F. Friedl (O'Reilly)*.

Make sure to understand the meaning of the terms *match expression* and *format*

expression. Match expressions holds the actual pattern for name recognition. Format expressions are the definitions used for the generation of the renamed file names.

The first part of this appendix sums up the formal syntax of regular expressions. In the last part of the section a number of relevant examples are shown. These examples may serve as relevant starting points for building your own expressions.

A.1 Regular expression syntax

Literals

All characters are literals except*: ".", "|", "*", "?", "+", "(", ")", "{", "}", "[", "]", "^", "$" and "\".*

These characters are literals when preceded by a "\". A literal is a character that matches itself

Wildcard

The dot character "." matches any single character

Repeats
A repeat is an expression that is repeated an arbitrary number of times. An expression followed by "*" can be repeated any number of times including zero. An expression followed by "+" can be repeated any number of times, but at least once. An expression followed by "?" may be repeated zero or one times only. When it is necessary to specify the minimum and maximum number of repeats explicitly, the bounds operator "{}" may be used, thus "a{2}" is the letter "a" repeated exactly twice, "a{2,4}" represents the letter "a" repeated between 2 and 4 times, and "a{2,}" represents the letter "a" repeated at least twice with no upper limit. Note that there must be no white-space inside the {}, and there is no upper limit on the values of the lower and upper bounds.
All repeat expressions refer to the shortest possible previous subexpression: a single character; a character set, or a sub-expression grouped with "()" for example.

Examples:
"ba"* will match all of "b", "ba", "baaa" etc.

"ba+" will match "ba" or "baaaa" for example but not "b".
"ba?" will match "b" or "ba".
"ba{2,4}" will match "baa", "baaa" and "baaaa".

Non-greedy repeats
Whenever the "extended" regular expression syntax is in use (the default) then non-greedy repeats are possible by appending a '?' after the repeat; a non-greedy repeat is one which will match the shortest possible string. For example to match html tag pairs one could use something like:
"<\s*tagname[^>]*>(.*?)<\s*/tagname\s*>"
In this case $1 will contain the text between the tag pairs, and will be the shortest possible matching string.

Parenthesis

Parentheses serve two purposes, to group items together into a sub-expression, and to mark what generated the match. For example the expression "(ab)*" would match all of the string "abababab".. In the example the matching engine would contain a pair of iterators denoting the final "ab" of the matching string. It is permissible for sub-expressions to match null strings. If a sub-expression takes no part in a match - for example if it is part of an alternative that is not taken - then both of the iterators that are returned for that sub-expression point to the end of the input string, and the matched parameter for that sub-expression is false. Sub-expressions are indexed from left to right starting from 1, sub-expression 0 is the whole expression.

Non-Marking Parenthesis

Sometimes you need to group sub-expressions with parenthesis, but don't want the parenthesis to spit out another marked sub-expression, in this case a non-marking parenthesis (?:expression) can be used. For example the following expression creates no sub-expressions:
"(?:abc)"*

Forward Lookahead Asserts

There are two forms of these; one for positive forward lookahead asserts, and one for negative lookahead asserts:
"(?=abc)" matches zero characters only if they are followed by the expression "abc".
"(?!abc)" matches zero characters only if they are not followed by the expression "abc".

Alternatives

Alternatives occur when the expression can match either one sub-expression or another, each alternative is separated by a "|". Each alternative is the largest possible previous subexpression; this is the opposite behaviour from repetition operators.

Examples:
"a(b|c)" could match "ab" or "ac".
"abc|def" could match "abc" or "def".

Sets

A set is a set of characters that can match any single character that is a member of the set. Sets are delimited by "[" and "]" and can contain literals, character ranges, character classes, collating elements and equivalence classes. Set declarations that start with "^" contain the compliment of the elements that follow.

Examples:
Character literals:
"[abc]" will match either of "a", "b", or "c".
"[^abc] will match any character other than "a", "b", or "c".

Character ranges

"[a-z]" will match any character in the range "a" to "z".

"[^A-Z]" will match any character other than those in the range "A" to "Z".

Note that character ranges are highly locale dependent: they match any character that collates between the endpoints of the range, ranges will only behave according to ASCII rules when the default "C" locale is in effect. For the US localization model, then [a-z] will match the ASCII characters a-z, and also 'A', 'B' etc, but not 'Z' which collates just after 'z'.
"[[:space:]]" is the set of all whitespace characters.

The available character classes are:

\w in place of [:word:]
\s in place of [:space:]
\d in place of [:digit:]
\l in place of [:lower:]
\u in place of [:upper:]

alnum Any alpha numeric character.

alpha Any alphabetical character a-z and A-Z.

Other characters may also be included depending upon the locale.blank Any blank character, either a space or a tab.

cntrl Any control character.
digit Any digit 0-9.
graph Any graphical character.
lower Any lower case character a-z.

print	Any printable character.
punct	Any punctuation character.
space	Any whitespace character.
upper	Any upper case character A-Z.
xdigit	Any hexadecimal digit character, 0-9, a-f and A-F.
word	Any word character - all alphanumeric characters plus the underscore.
unicode	Any character whose code is greater than 255

Collating elements take the general form [.tagname.] inside a set declaration, where tagname is either a single character, or a name of a collating element, for example [[.a.]] is equivalent to [a], and [[.comma.]] is equivalent to [,]. Multi-character collating elements can result in the set matching more than one character, for example [[.ae.]] would match two characters, but note that [^[.ae.]] would only match one character.
Equivalence classes take the general form [=tagname=] inside a set declaration, where tagname is either a single character, or a name of a collating element, and matches any character that is a member of the same primary equivalence class as the collating element [.tagname.]. An equivalence class is a set of characters that collate the same, a primary equivalence class is a set of characters whose primary sort key are all the same (for example strings are typically collated by character, then by accent, and then by case; the primary sort key then relates to the character, the secondary to the accentation, and the tertiary to the case). If there is no equivalence class corresponding to tagname, then [=tagname=] is exactly the same as [.tagname.].
To include a literal "-" in a set declaration then: make it the first character after the opening "[" or "[^", the endpoint of a range, a collating element.

Line anchors
An anchor is something that matches the null string at the start or end of a line: "^" matches the null string at the start of a line, "$" matches the null string at the end of a line.

Back references
A back reference is a reference to a previous sub-expression that has already been matched, the reference is to what the sub-expression matched, not to the expression itself. A back reference consists of the escape character "\" followed by a digit "1" to "9", "\1" refers to the first subexpression, "\2" to the second etc. For example the expression "(.*)\1" matches any string that is repeated about its mid-point for example "abcabc" or "xyzxyz". A back reference to a sub-expression that did not participate in any match, matches the null string: NB this is different to some other regular expression matchers. Back references are only available if the expression is compiled with the flag regbase::bk_refs set.

Characters by code
This is an extension to the algorithm that is not available in other libraries, it consists of the escape character followed by the digit "0" followed by the octal character code.

For example "\023" represents the character whose octal code is 23. Where ambiguity could occur use parentheses to break the expression up: "\0103" represents the character whose code is 103, "(\010)3 represents the character 10 followed by "3". To match characters by their hexadecimal code, use \x followed by a string of hexadecimal digits, optionally enclosed inside {}, for example \xf0 or \x{aff}, notice the latter example is a Unicode character.

A.2 File name renaming examples using regular expressions

Typically the regular expressions are used to split up a filename into a well defined separated filename. In the following simple examples the match/format expression pair is used to streamline incoming file names. Note the brackets around partial match expressions. These are used to form the output name using the format expression. The first bracket set is mapped to format id $1 etc.

Match expression	*Format expression*	*Incoming filenames*	*Renamed filenames*
[a-zA-Z]([0-9]+).**	*myname-$1*	*AbC01xyz.tif*	*myname-01*
		Cdcdcdc02	*myname-02*
.([0-9]+)[.].**	*myothername-$1*	*abcXyZ123.ext*	*myothername-123*
		xxyy_zz124	*myothername-124*
*([0-9]+).**	*anothername-$1*	*56xYzsD.x.y.z*	*anothername-56*
		57edfr123	*anothername-57*
*([0-9]+)[-_]([0-9]+).**	*myname-$1-$2-1*	*12_98dsdf_a_b_c*	*myname-12-98-1*
		12-99xyz	*myname-12-99-1*
(.)[_]([a-zA-Z]+)[_](.*)*	*$1-$2-$3*	*x_y_z_01_black_1.tif*	*x_y_z_01-black-01.tif*

Appendix B - External scripts

Under special circumstances it is necessary to use an external application for file renaming so that the file can be parsed according to the options given by InputCenter (the file mask).

Even if the external program is referred to as a script it may also be a dedicated console program (exe-file) with argument inputs.

B.1 Script calling convention

The script is called using a blocking win32 CreateProcess() command. The command takes the following form:

Scriptfile PathToInputFile PathToTempFolder

where

ScriptFile is the full file name path to the script,

PathToInputFile is the full file name path to the input file to rename

PathToTempFolder is a path to a (temporary) destination folder for the renamed file

The script is expected to move the renamed file from the input folder to the temp folder (*PathToTempFolder)* where InputCenter will pick up the renamed file.

Important note: Because InputCenter blocks the polling when the scripts executes make sure to script is not blocking too long. As a safety valve InputCenter has a timeout counter which is defined in InputCenter.ini file in seconds.

```
[System]
ScriptTimeout=60
ShowScript=0
```

You may want to set the ShowScript=1 for diagnostics purposes. This will show the command prompt window while executing the script.

B.2 Script example

Input file: *c:\input\SomeNameThatStinks01-K.tof*

InputCenter configuration: File mask: %j-%c.tif
Script file: *c:\utils\renamer.bat*

Resulting command: *"c:\utils\renamer.bat" "c:\input\SomeNameThatStinks01.tof" "c:\temp"*

Batch file *echo Running external renamer batch using Perl script*
perl renamer.pl %1 %2

Batch file parameter transfer

If you are using batch files as scripts to parameters are passed as %1 and %2 as normal. Note that the parameters can be modified by the batch file processor, e.g. for extracting path from filename:

Modifier	Description
%~1	Expands %1 and removes any surrounding quotation marks ("").
%~f1	Expands %1 to a fully qualified path name.
%~d1	Expands %1 to a drive letter.
%~p1	Expands %1 to a path.
%~n1	Expands %1 to a file name.
%~x1	Expands %1 to a file extension.
%~s1	Expanded path contains short names only.
%~a1	Expands %1 to file attributes.
%~t1	Expands %1 to date and time of file.
%~z1	Expands %1 to size of file.
%~$PATH:1	Searches the directories listed in the PATH environment variable and expands %1 to the fully qualified name of the first one found. If the environment variable name is not defined or the file is not found, this modifier expands to the empty string.

The following table lists possible combinations of modifiers and qualifiers that you can use to get compound results.

Modifier	Description
%~dp1	Expands %1 to a drive letter and path.
%~nx1	Expands %1 to a file name and extension.
%~dp$PATH:1	Searches the directories listed in the PATH environment variable for %1 and expands to the drive letter and path of the first one found.
%~ftza1	Expands %1 to a **dir**-like output line.

B.3 Scripting languages

Using Perl

Perl is an excellent language the modifying filenames because of its regular expression capabilities. The description on how to use Perl for renaming files is beyond the scope of this manual. It is recommended to obtain the latest Perl distribution from www.ActivePerl.com.

Using Windows Scripting Host with VBScripts

Like Perl, Visual Basic Scripting has regular expression support using the RegExp object. Make sure the scripting engine is version 5.6 or later (download from www.microsoft.com).
You invoke scripts from batch files using the cscript //nologo <filename> command.

See msdn.microsoft.com/scripting for further details

Appendix C - Post-installation test

After installation of database and all ControlCenter clients a set of default configuration parameters are set. These defaults are required for getting a flow up and running quickly.

In order to test a fresh installation a test program *CCinstallTest* exists in the CD. The test program is used to feed real files through the system and observe that the files gets registered in the database and gets output.

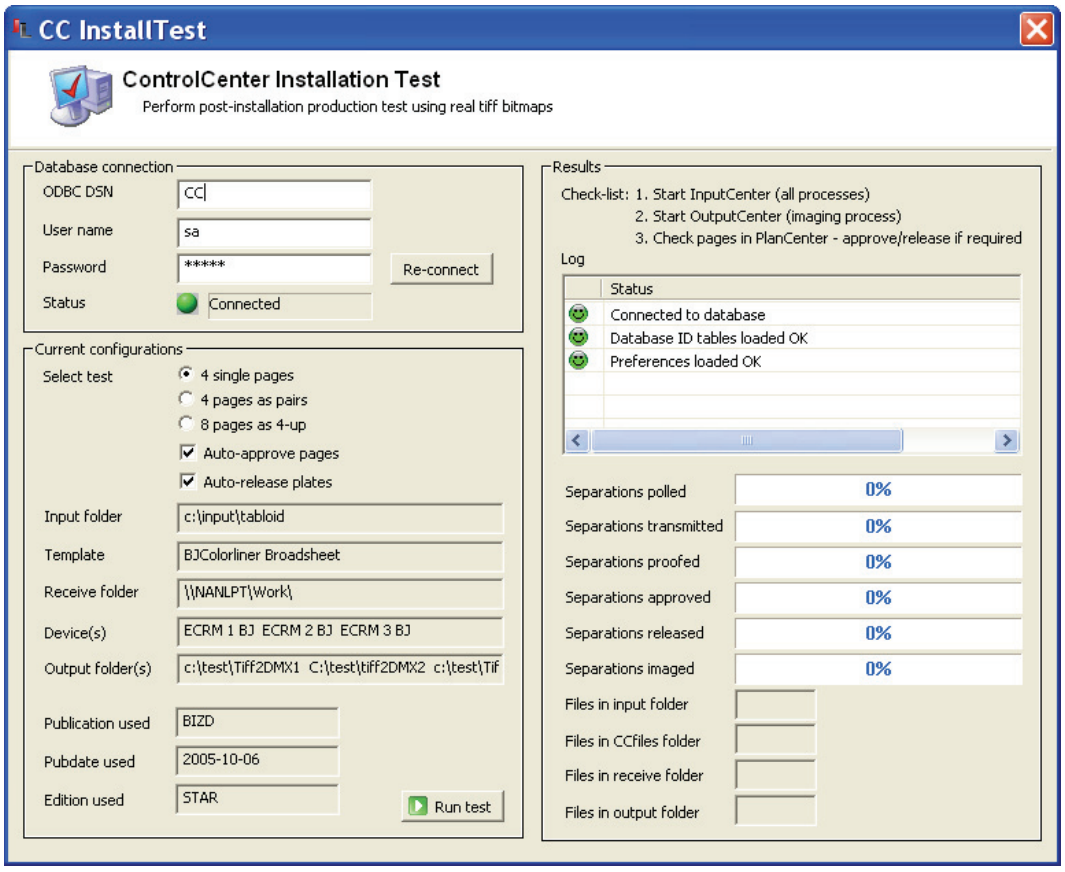
C.1 Fresh install defaults

The following defaults are set during installation:

Publication names:	News, Unplanned
Section names:	A, B, C, D, E, F
Edition name:	Main
Issue name:	Main
Color names:	C, M, Y, K, PDF, Dinky
Location name:	Default
Press name:	Press (plate formats 450x600 and 900x600)
Devices:	Device1 (TIFF to folder c:\output\tiff)
Templates:	Single broadsheet, Paired broadsheet, 4-up tabloid
Proof config:	Default (72dpi softproof – no ICC)
Input config:	Hotfolder c:\input\broadsheet with naming convention %P-%N-%C.tif
User groups:	Administrator, Superuser, User, Guest
Users:	Admin (password root)

C.12 CCinstallTest

Given the fresh install defaults listed above CCinstallTest runs a number of test productions through the system using InputCenter and one OutputCenter client.



The installation test program may be used to test a freshly installed system

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