PoINT Publisher NG

Overview

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About This Manual

Preface

The manual provides an overview of PoINT Publisher NG, including system requirements, installation, and functions of the system. It is the objective of the manual both to explain and facilitate the processes involved.

Audience

This document addresses administrators, systems integrators, and users working with or installing PoINT Publisher NG.

Reference

For further reference material, please refer to the following additional documentation:

- PoINT Publisher NG – Server,

- PoINT Publisher NG – ECR,

- PoINT Publisher NG – SDK,

- README files.

1 Introduction

This chapter is an introduction to PoINT Publisher NG.

1.1 What is PoINT Publisher NG

The product PoINT Publisher NG enables you to automatically produce CD/DVD/BDs in combination with an autoloader system on PCs running Microsoft Windows 2000, 2003, XP or Vista.

1.2 About Producing CD/DVD/BDs

CD/DVD/BD has been adopted world-wide as a universal storage medium for digital data and audio. The modest dimension, high capacity and total reliability combined with low cost make CD/DVD/BD the ideal medium for both storage and distribution of digital information. Established standards ensure that discs created with PoINT Publisher NG can be read or played in all drives, regardless of vendor.

With PoINT Publisher NG you can produce and duplicate CD/DVD/BDs comfortably at your desktop.

1.3 General Functionality

PoINT Publisher NG consists of the several components which work together. The PoINT Publisher NG – Client or PoINT Publisher NG – Web Client provides the interface for the user and is used to prepare and to create Disc Images which are sent to PoINT Publisher NG – Server as jobs. A Disc Image is a file containing all information (layout and data) that define the content of a disc as well as specifications like the number of copies that shall be made and the label that

shall be printed to the disc. The PoINT Publisher NG – Client also includes an integrated Label Editor for defining print labels.

PoINT Publisher NG - Server maintains a list of jobs. PoINT Publisher NG - Server takes these jobs as input and writes CD/DVD/BDs according to the specifications. To achieve highest productivity, PoINT Publisher NG - Server processes multiple Disc Images and writes to multiple recorders at a time if possible, and it supports autoloaders with integrated label printing.

You can operate more than one autoloader at a computer. Each autoloader is assigned to a single instance of PoINT Publisher NG – Server; multiple instances can run simultaneously.

1.4 Event Controlled Recording (ECR)

ECR is intended as a tool for simplifying and automating the production of CD/DVD/BDs in a network environment without the need of builder applications. ECR offers network shares to which data can be copied. According to certain configurable conditions ECR will instruct " PoINT Publisher NG – Server" to produce the discs.

For more information about ECR please refer to the document "PoINT Publisher NG – ECR".

1.5 Software Development Kit

The Software Development Kit (SDK) is an optional extension to the interactive versions of "PoINT Publisher NG".

The SDK adds batch processing functionality to "PoINT Publisher NG", so that definitions including imprint file, number of copies and order of jobs for "PoINT Publisher NG" can be controlled by external programs.

Batch processing is controlled by **job-lists**. A **job-list** consists of a number of statements which are stored in an ASCII text

file. " PoINT Publisher NG" takes **job-lists** as command line argument and automatically starts to execute the described jobs. An arbitrary number of **job-lists** can be active at a time and in parallel.

For more information about the SDK please refer to the document "PoINT Publisher NG – SDK".

2 Concept & Architecture

This chapter describes the concept and architecture of PoINT Publisher NG and provides an overview of the design and internal processing. It introduces the terms which are used in this manual and in the program. Users and system administrators will get an understanding of the functional modules of the product and how they work together.

2.1 PoINT Publisher NG Modules

PoINT Publisher NG consists of several modules. The following figure shows these different modules and their relationship:
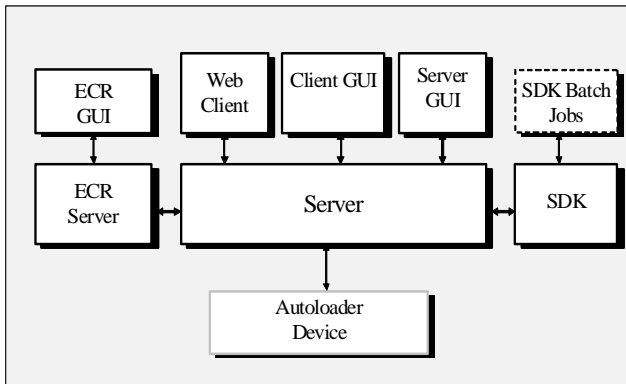
The function of the different modules is:

– Client GUI ("PoINT Publisher NG – Client")
This is the main module of PoINT Publisher NG and provides the client user interface. It is used to prepare and to create Disc Images which are sent to the Server as jobs.

- Web Client ("PoINT Publisher NG – Web Client")
  This is the browser based GUI of PoINT Publisher NG.
  The Web Client runs in a web browser and does not
  require a program installation.
- Server GUI
  The Server GUI is only used for administrative purposes
  to configure and administer server function, like e.g.
  License Key setting, device configuration, user
  management.
- Server
  The Server takes jobs from the GUI or from the ECR or
  SDK module as input and performs the production
  process including the label printing.
- SDK
  The SDK module takes user defined batch jobs as input
  and interprets the batch commands. It creates a
  corresponding SDK job which is sent to the Server. The
  processing of Job Lists can be initiated at the server or at
  the clients
- SDK Batch Jobs
  SDK Batch Jobs are user defined ASCII text files
  containing of a number of statements. These files are
  processed by the SDK module.
- ECR Server
  The ECR Server monitors configured ECR folders and
  creates ECR jobs which are sent to the Server.
- ECR GUI
  The ECR user interface is used to configure the ECR
  server and to setup ECR folders.

The PoINT Publisher NG – Client can be installed on the
server PC and also on a remote client PC in the LAN.

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2.2 General Functionality

2.2.1 Client

The main window of PoINT Publisher NG – Client provides the following "Tasks" which are used to define jobs for the production process:

– Create Data Disc Job
Creates a data disc production job from objects in the file system.

– Create Audio Disc Job
Creates an audio disc production job from audio files.

– Create Video Disc Job
Creates a video disc production job from a video disc directory structure.

– Create Copy Disc Job
Creates a disc production job from a source disc.

– Create Image Job
Creates a disc production job from an image file.

– Create Label Print Job
Creates a label print job without recording.

For a description of the different Tasks please refer to chapter 7.
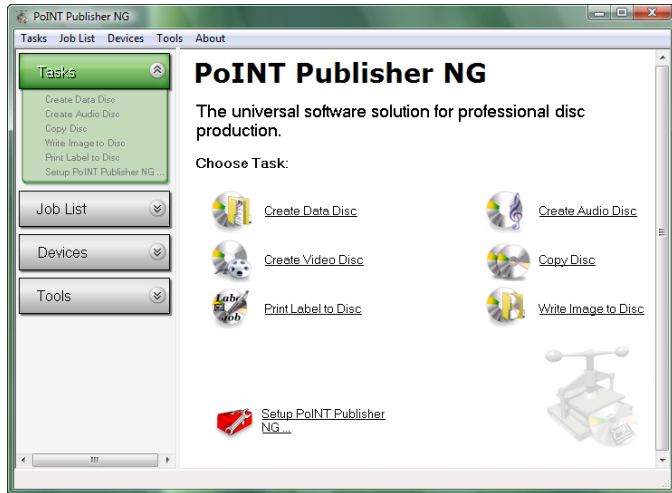
The user selects the appropriate Task and after specifying the required input data and setting of the recording options, especially the number of copies to be produced, a production job will be sent to the PoINT Publisher NG – Server and the production process will be started.

In case of using ECR or the SDK, the jobs will be created by the corresponding modules and sent to the PoINT Publisher NG – Server for disc production. For detailed information about ECR and SDK please refer to the corresponding documentation.

The production process can be controlled in the Job List view which shows a list of all active jobs queued to the server including the status information.
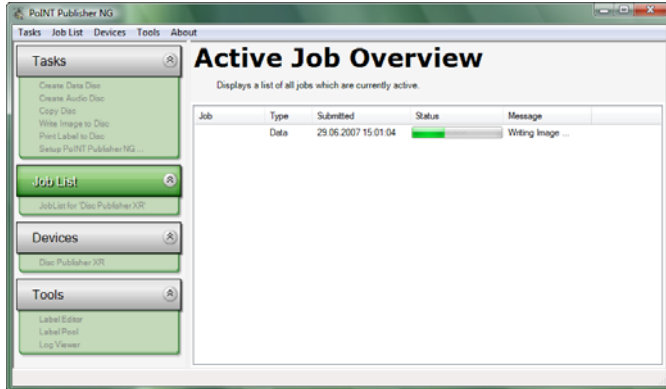
Under the menu bar **Devices** or under the **Side Bar** menu under **Devices** an overview of the configured devices is displayed. The device configuration can be specified in the GUI of PoINT Publisher NG – Server. Please refer to the corresponding document.

The **Tools** menu contains the following entries

– Label Editor
  The Label Editor allows to create and edit label files for discs which can be used with jobs to automate label

printing during the disc production. For a description of usage of the Label Editor please refer to chapter 8.

– Label Pool
The Label Pool is a file browser which has been optimized for finding and selecting label files which have been created by the PoINT Label Editor.

– Log Viewer
The Log Viewer is a separate application which shows a production log file of the current PoINT Publisher NG session.
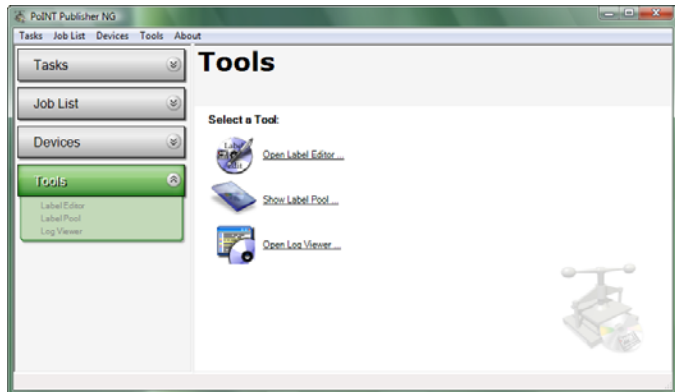
2.2.2 Web Client

The Web Client supports creation of Image Jobs and Label Print Jobs. In addition the Web Client allows to view the Job List.
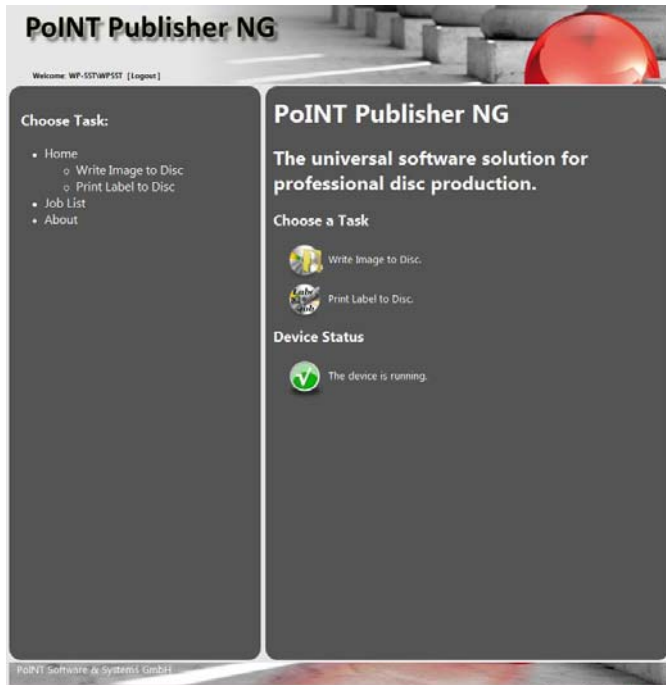
3 System Requirements and Supported Devices

3.1 PoINT Publisher NG System Requirements

The following hardware and software is basically required:

- PC with Intel Pentium processor or any compatible processor

- Microsoft Windows (supported versions see README file)

- A supported autoloader, with or without a disc printer or a number of supported single CD/DVD/BD recorders (tower), preferably of the same type and with the same firmware revision. For a list of supported device please refer to the README file.

- For detailed requirements concerning CPU, RAM, and hard disks, please refer to the actual values listed in the README file on your installation medium.

Note:
Running other CD/DVD/BD recording software in parallel to PoINT Publisher NG may cause initialisation and recording errors. In some cases, other recording software replace standard system components by incompatible versions at installation time. This may cause permanent failures of PoINT Publisher NG.

3.2   Web Client

Server Requirements

The following is required on the server for support of the PoINT Publisher NG – Web Client:

- Microsoft Information Server (IIS)

- .NET Framework (will be automatically installed with PoINT Publisher NG)

Please refer to the REAMDE file for detailed information on supported versions of the required components.

Client Requirements

PoINT Publisher NG – Web Client requires a supported web browser and an installed Java Runtime Environment.

Please refer to the README file for detailed information on supported web browsers and required Java Runtime Environment versions.

3.3   Supported Devices

For a list of devices which have successfully been tested with your software version, refer to the README file of PoINT Publisher NG.

The range of supported devices is continuously expanded. Please contact PoINT Software & Systems to obtain the up-to-date list.

4 Installation

4.1 **Product Packaging**

PoINT Publisher NG is shipped on a CD-ROM in the ISO 9660 / Joliet format or provided by internet download as an installable package.

The PoINT Publisher NG installation package includes an interactive installation program that installs all components of PoINT Publisher NG.

PoINT Publisher NG can be installed on a Windows operation system. Please refer to the README file for the supported Windows versions.

Your login must have Administrator rights to run the setup program.

The installation process offers three options:

- Server Components
- Client Components
- Web Client Components

The Server Components install the components which are required to control the connected autoloaders, manage jobs and which provide access from a remote computer

The Client Components install a standalone application which provides access to the server. These components can be installed on any other computer in the network. However, the number of clients that can be used together with a PoINT Publisher NG is restricted by the purchased license. For more information about licensing please refer to chapter 5.1.

The Web Client Components install a component on the server which provides access to the PoINT Publisher NG – Server by the browser based Web Client. This functionality requires the Microsoft Internet Information Server (IIS) to be installed on the server system.

To start the installation process, execute 'setup.exe'. The welcome screen of the installation program appears. Click 'Install' and follow the screen prompts to continue the installation.

If you need to know the requirements for a system running PoINT Publisher NG, please refer to chapter 3.

Most recent information about requirements, supported hardware, and installation can be found in the README file.

4.2 De-installing PoINT Publisher NG

To remove PoINT Publisher NG from your PC, use the function 'Add and Remove Software' from the 'Control Center'.

5 Licensing and Configuration

5.1 Licensing

PoINT Publisher NG requires a License Key for operation. It is based on the PoINT Publisher NG Serial Number and the machine-dependent Product Key.

Without a License Key the software runs in a restricted demonstration mode (see README file). To obtain the License Key, contact your dealer and refer to the Serial Number, Product Key, and the connecting Target Device.

Note: The PoINT Publisher NG Product Key is machine-dependent and may change whenever the (hardware) configuration is modified.

The License Key enables and disables optional features of PoINT Publisher NG. In case that a License Key is not part of the delivery of " PoINT Publisher NG ", you may find information on how to obtain the license key in the separate 'Licensing Instructions'.

Client/Server configuration

In a client/server configuration, you need one additional license for each client. In this context, a client is identified by the user's login name and the corresponding computer name.

A client can be the application based client ("PoINT Publisher NG – Client") which needs to be installed or the browser based client ("PoINT Publisher NG - Web Client").

A license is not bound to a specific client, user, nor computer (floating license).

If a client wants to establish a connection to a PoINT Publisher NG - Server, an unused client license is needed. A list of all PoINT Publisher NG users is displayed, if all licenses are in use. The client license is marked as used as long as the client is connected to the server or one of the user's jobs in the job list is not finished.

Set and View the License Key

The License Key can be set in the **License Key** dialogue box after selecting **Configuration** → **License Settings** of PoINT Publisher NG – Server.

When you start PoINT Publisher NG - Server the first time, the dialogue is displayed automatically. This dialogue may also be used to find out which options and extensions are enabled by your current license key.

5.2   Server Configuration

Please refer to the document PoINT Publisher NG – Server for a description on how to configure the server.

6 Getting Started

As the first step it is necessary to start PoINT Publisher NG – Server to configure the hardware and to enter the License Key. Please refer to the document "PoINT Publisher NG – Server" for a detailed description of the necessary configuration.

Note: **PoINT Publisher NG – Client or PoINT Publisher NG – Web Client can only submit jobs to a PoINT Publisher NG – Server if the server is running and a server is selected in the client. PoINT Publisher NG – Server can be installed on the same computer as also on a remote system.**

As the next step start PoINT Publisher NG – Client. Prerequisite to using PoINT Publisher NG - Client is that you are logged in with a user name and password that is also known to the computer where PoINT Publisher NG - Server is running. So, the computers must be members of either the same network domain or the same workgroup. In a domain, there is a unique user name/password combination for every Domain User, which is managed by the domain controller. In case of a workgroup, you must guarantee that the user name/password combination is identical on the client and the server computer. Therefore, create a user account with membership in the Administrators Group on a client and create the same user account on the computer running PoINT Publisher NG - Server.

To start PoINT Publisher NG - Client:

1. Click on the 'Start' button to open the start menu

2. Click on 'Programs' and then on PoINT Publisher NG. This opens the program group of PoINT Publisher NG and shows the installed components.

3. In the PoINT Publisher NG program group, click on PoINT Publisher NG - Client to start the program.

If the client is started for the first time, the **Startup Wizard** appears which helps you configure PoINT Publisher NG. You will be guided through the following steps:

- Server Selection

- Recording Options

- Printing Options

- Recording Speed

- Directory Settings

After the Startup Wizard is completed the PoINT Publisher NG – Client appears. All settings which have been performed in the Startup Wizard can be changed or viewed under the task "Setup PoINT Publisher NG …".

After the configuration steps have been performed everything is prepared to create and execute disc production jobs.

6.1 PoINT Publisher NG – Web Client

The PoINT Publisher NG – Web Client is a browser based GUI for PoINT Publisher NG. The Web Client runs in a browser and does not require a program installation.

Before starting the Web Client it is necessary that PoINT Publisher NG – Server is installed and configured as described in the sections before.

To start the Web Client in a web browser connect to the PoINT Publisher NG – Server by using he following URL:

```
http://<server name>/PublisherNG
```

"<server name>" represents the computer name of the system with installed PoINT Publisher NG – Server.

Please note that it is required that PoINT Publisher NG – Server is running to establish a connection.

Then the following login screen will appear:

Login of a user is based on the Windows authentication mechanism. This means the User Name and Password must be known on the server or in the domain and a user can use this account information to login and connect to the PoINT Publisher NG – Server.

Logout

Please note that it is necessary to logout at end of a session to immediately terminate the connection to the PoINT Publisher NG – Server. Termination of the connection without logging out will keep the login active for further 5 minutes.

7 Creating Jobs

This section refers to the PoINT Publisher NG – Client. The description can mainly also be applied to the browser based Web Client if the corresponding job type and functionality is supported by the Web Client.

PoINT Publisher NG – Client allows creating different types of jobs:

– Data Disc Job
– Audio Disc Job
– Video Disc Job
– Copy Disc Job
– Image Job
– Label Print Job

7.1 Data Disc Job

The main objective of this job type is to publish your own data by building a job according to the content of a selected source directory.
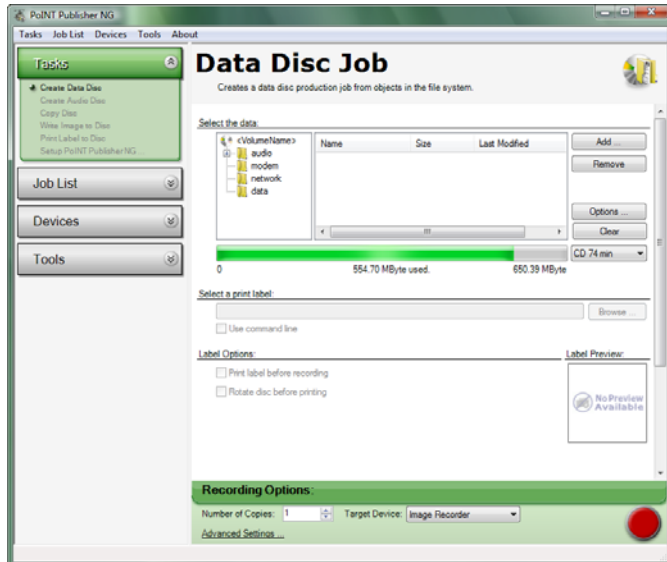
For creating a Data Disc Job the following steps have to be performed:

1. Select the data

2. Determine the Volume Name

3. Specify the Image Option

4. Select a Print File and specify the Label Options

5. Specify the Recording Options and submit the Job

Select the Data

The contents of the directory tree which will be recorded can be individually specified. You can use the 'Add/Remove' commands or the context menu commands. Please note that the context menu commands depend on the cursor location. In **directory tree** (**left part**) you will get commands which are related to directory operations. In the **right part** of the window the commands are related to file operations.

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Determine the Volume Label

In the directory tree select the entry "<VolumeName>" and execute the 'Rename' command from the context menu. Please note that depending on the selected file system not all characters are allowed. E.g. for pure ISO9660 only capital letters 'A-Z', digits '0-9' and the underscore '_' are allowed.

Specify the Image Options

Execute the command 'Options" and specify Image Options.

This dialog allows to specify the file system for the disc. At least one file system has to be selected but you can also select more than one file system.
For ISO 9660 you can also specify additional Options.

Warning: If you select any options other than 'Max. 11 characters', 'ISO 9660' character set, of options that 'cancel ISO restrictions', the resulting media may not be readable on all platforms. Furthermore, not all platforms support the Joliet or the UDF file system.

Any combinations of the file systems ISO 9660, Joliet, and UDF (Universal Disc Format) are supported:

-   ISO 9660:
    This file system is supported on all operating system platforms if recorded using interchange level 1.
    However, it is the most restrictive one:
    - At interchange level 1, the maximum length of file names is 11 characters (8.3 file names); at interchange level 2, the maximum length is 31 characters. Directory names must not have an extension.
    - Only the characters '0-9', 'A-Z' and '_' are allowed.
    - The number of directory levels is restricted to 8, including the root directory.
    - The maximum path length is limited to 255 characters, including directory separators (i.e. '\').
    - Furthermore, the maximum number of directories is limited to 65536.
    Because of these restrictive characteristics, CD/DVD Image Builder offers several options to relax them.

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However, you should note that relaxation of the rules of the ISO 9660 standard may result in discs which are not readable on some platforms.

- Joliet:
   This option extends the number of allowed characters and additionally supports long file and directory names of up to 64 characters per name. The number of directory levels is not limited, but the maximum path length is limited to 240 characters. Please note that the created discs can only be read on target systems supporting the Joliet extension of ISO 9660.

- UDF:
   This file system allows any characters and additionally supports long file and directory names of up to 254 characters per name. The number of directory levels is not limited, but the maximum path length is limited to 1023 characters. Please note that the created discs can only be read on target systems supporting the UDF file system.

Furthermore and for special applications, you may define Publisher and Application Identifier.

Select a Print File and specify the Label Option

For a description of Print File Selection and Label Options refer to section 7.7

Specify the Recording Options and submit the Job

For a description of the recording options please refer to section 7.8.

After the number of copies and the recoding options have been specified the productions process can be started by pressing recording button.

7.2   Create Audio Disc Job

This job type allows to master digital audio CDs. Input for the mastering process are existing digital audio files in

WAVE, AIFF or raw format (see also section 7.2.1 for a description of digital audio files).

Assembly of the digital audio data and placement of tracks can comfortably be performed by means of 'drag-and-drop' and 'cut-and-paste' features.

At the end of the mastering process, this task creates a CD Image which is used as input for the recording process to make an arbitrary number of copies.

For a description of Print File Selection and Label Options refer to section 7.7.

For a description of the recording options please refer to section 7.8.

7.2.1 Digital Audio Files

A digital audio file (also called audio image file) is a file containing sampled sound[1]. PoINT Publisher NG supports digital audio files containing 44.1 kHz 16 bit stereo PCM samples. The audio samples shall be linear encoded in a 16 bit 2's complement format, the sampling frequency shall be 44.1 kHz. The encoding may have been carried out either without pre-emphasis or with first order pre-emphasis.

Each sample may be seen as being sub-divided into two 8-bit items, the low-order or least significant byte (bits 0-7), and the high-order or most significant byte (bits 8-15). Because different processors store data in different orders (least significant byte first - LSB or most significant byte first - MSB), PoINT Publisher NG supports both orderings and, if necessary, swaps bytes when transferring the file contents to CD-R.

A group of two samples, one of each channel (stereo), is called a Sample Frame. 588 Sample Frames[2] fit into one

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[1] Generation of a sample sequence from an analogue audio signal is called Pulse-Code-Modulation (PCM) or analogue-digital (A/D) conversion or, simply, sampling.

[2] Not to be confused with the terms Audio Frame and Frame.

digital audio sector. For stereo sound files, channel 0 represents the left channel, and channel 1 represents the right channel. The first sample of a Sample Frame belongs to channel 0, the second one to channel 1.

Sample Frame 1				Sample Frame 2			
Channel 0 (left) LSB	Channel 0 (left) MSB	Channel 1 (right) LSB	Channel 1 (right) MSB	Channel 0 (left) LSB	Channel 0 (left) MSB	Channel 1 (right) LSB	Channel 1 (right) MSB
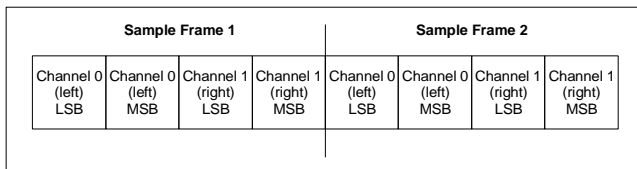
Fig. 7-2: First two Sample Frames of a digital audio track

PoINT Publisher NG recognises digital audio files of two standard interchange formats, the Wave Interface File Format (RIFF/WAVE) used in the Microsoft Windows environment, and the Audio Interchange File Format (AIFF) used in Apple Macintosh environments. If the sampled sound files are recorded according to RIFF/WAVE or AIFF, file/sample format specific parameters are determined automatically.

7.3 Create Video Disc Job

This job type allows to create Video CDs (VCD), Super Video CDs (SVCD) and DVD Videos. Input for the mastering process are existing directory structures which have to conform to the corresponding VCD, SVCD and DVD Video format specifications. These structures are typically created by authoring applications. See also section 7.3.1 for a description of the directory structures for the different formats.

The specification for VCD and SVCD is described in the "White Book" standard which is published by Sony, Philips, Matsushita and JVC. The DVD Video specification is published by the DVD Forum.

The video disc job creates a disc image which is used as input for the recording process to make an arbitrary number of copies. For a description of Print File Selection and Label Options refer to section 7.7.

For a description of the recording options please refer to section 7.8.

Adding Data File to a DVD Video Structure

For DVD Video, the job dialog allows to add additional data files to the disc structure by using the 'Add Files …' command.

Note: Do not delete the "VIDEO_TS" directory. This would change the disc type to a standard data disc. Re-creation of the "VIDEO_TS" directory will not retract this.

7.3.1 Video Disc Directory Structure

The following tables describe the directory and file structure for Video CD, Super Video CD and DVD Video according to the corresponding specifications:

Video CD

Directory/Files	Comment
VCD	
INFO.VCD	Album and disc identification
ENTRIES.VCD	Entry point list for up to 500 entries
PSD.VCD	Optional Play Sequence Descriptor
LOT.VCD	Optional List ID Offset file
MPEGAV	
AVSEQnn.DAT	MPEG files for up to 99 tracks containing the main movie, trailers, extras, menus, etc.
CDDA	
AUDIOnn.DAT	Optional CD Audio files
SEGMENT	
ITEMnnn.DAT	Segment play items, max 999 segments, still pictures or still menus
KARAOKE	
KARINFO.xxx	Optional Karaoke information files

Directory/Files	Comment
EXT	
PSD_X.VCD	Optional extended version of PSD,VCD
LOT_X.VCD	Optional extended version of LOT.VCD
SCANDATA.DAT	Optional list of I-frame addresses
CAPTnn.DAT	Optional Closed Caption data
CDI	
(undefined)	CD-I program and data file

Super Video CD

Directory/Files	Comment
SVCD	
INFO.VCD	Album and disc identification
ENTRIES.VCD	Entry point list for up to 500 entries
SEARCH.DAT	List of I-frame addresses
TRACKS.SVD	
PSD.VCD	Optional Play Sequence Descriptor
LOT.VCD	Optional List ID Offset file
MPEG2	
AVSEQnn.MPG	MPEG2 files for up to 99 tracks containing the main movie, trailers, extras, menus
CDDA	
AUDIOnn.DAT	Optional CD Audio files
SEGMENT	
ITEMnnn.MPG	Segment play items, max 999 segments, still pictures or still menus
KARAOKE	
KARINFO.xxx	Optional Karaoke information files
EXT	
PSD_X.VCD	Optional extended version of PSD,VCD

LOT_X.VCD	Optional extended version of LOT.VCD
SCANDATA.DAT	Optional list of I-frame addresses
CAPTnn.DAT	Optional Closed Caption data
CDI	
(undefined)	CD-I program and data file

DVD Video

Directory/Files	Comment
VIDEO_TS	
VIDEO_TS.BUP	
VIDEO_TS.IFO	The first video play item, IFO, usually a copyright notice or a menu
VIDEO_TS.VOB	The first video play item, VOB
VTS_xx_0.BUP	
VTS_xx_0.IFO	Title xx (starting with 01), IFO, usually the main movie
VTS_xx_0.VOB	Title xx, VOB 0, the menu for this title
VTS_xx_y.VOB	Title xx, VOB y, the video for this title up to 99 (01-99) titles with max 10 (0-9) VOB files if necessary

File Extensions:

.BUP = backup copies of the IFO files

.IFO = IFO files includes information such as chapters, subtitle tracks and audio tracks

.VOB = VOB files contains the actual video, audio, subtitles and menus

7.4   Copy Disc Job

This job type creates Disc Images of existing CDs, DVDs or BDs. These Disc Images can then be used as input for the recording process to make an arbitrary number of copies.

The list box under 'Select a source device' displays all supported drives which have been found in your configuration. All listed drives can be used for reading.

Insert a disc in a drive of your choice and select the drive by clicking on the corresponding entry in the list. The 'Info' command displays disc information of the inserted disc.

Stop on Read Errors

By default, PoINT Publisher NG breaks the process if unrecoverable read errors occur in significant data areas of the disc. Especially in case of data discs, this option should always be enabled to ensure that correct copies can be created. If you decide to ignore errors on data discs, defective sectors will be filled with binary 0'es. Since it is not possible to mark these blocks on the copies, it will be possible to read the copies without any indication of the error. This may lead to critical malfunctions of applications which use the erroneous information.

Select Reading Speed

These options allow to select the reading speed for data and audio tracks separately. Especially in case that you copy bad audio CDs (scratches), the number of corrected read errors and, thus, the quality of the copy may be improved by reducing the speed. In case of data CDs, modern drives automatically reduce the speed if they encounter problems.

7.4.1 Supported Disc Standards

PoINT Publisher NG supports the following disc formats:

–   Single-session CDs. This includes Digital Audio CDs as well as CD-ROM, CD-I, CD-ROM/XA, Hybrid and (Super) Video CDs.

–   Multi-session CDs. This includes known formats like CD-BRIDGE, Photo CD, CD-EXTRA (Enhanced Music CD), and Joliet.

- Incrementally recorded single- and multi-session CDs. This includes CDs formatted in UDF format.
- Single- and multi-border data DVD-ROM and DVD-R or DVD-RW, recorded in disc-at-once or incremental modes, and DVD+R or DVD+RW, according to the standards, with sizes up to 4.7 GB. PoINT Publisher NG copies user data areas of all recording zones in all borders.

PoINT Publisher NG copies binary and audio data areas as well as sub-channel information of P-and Q-channels. This includes copy protection and pre-emphasis information, ISRC, catalogue numbers (UPC/EAN codes), sub-indices, pauses and post-gaps.

7.5 Image Job

An Image Job allows a disc production with an existing Image File as input. Supported image file formats are PoINT Disc Images and Raw/ISO Images.

For a description of Print File Selection and Label Options refer to section 7.7.

For a description of the recording options please refer to section 7.8.

7.6 Label Print Job

A print only job (Label Print Job) performs only the printing process and omits the data recording.

For a description of Print File Selection and Label Options refer to section 7.7.

For a description of the recording options please refer to section 7.8.

7.7   Print File Selection and Label Options

Select a Print File

In this section you can specify a file which will be printed on the disc. By clicking the "Browse" button you can choose a label from the Label Pool. For a description of the Label Pool refer to 9.

When you select a label from the Label Pool or when you enter a label manually a preview image of the selected label will be displayed. Double-clicking on the preview will open a larger preview window.

Usually only the file name of the label will be displayed in the text box. However, when you click on the text box to select a different label, the short name will be substituted by the full qualified path of the label.

Use command line

Using the command line option you can customize the printing behaviour. Instead of using the default printing application you can specify a command line which determines which application shall be used to

Print before recording

If you want that printing to the disc is done before recording, check the appropriate control.

Rotate Disc before printing

When your autoloader is able to rotate discs to a marker to adjust pre-labelled discs before printing, you may switch rotation on or off for each individual job. The corresponding attribute in the job properties is set or unset at job creation time according to the setting selected here. You may change the attribute individually for each job in the job's properties dialogue.

7.8 Recording Options

The Recording Options dialogue box allows to select the recording speed and to enable the 'BURN"-proof and simulation mode.
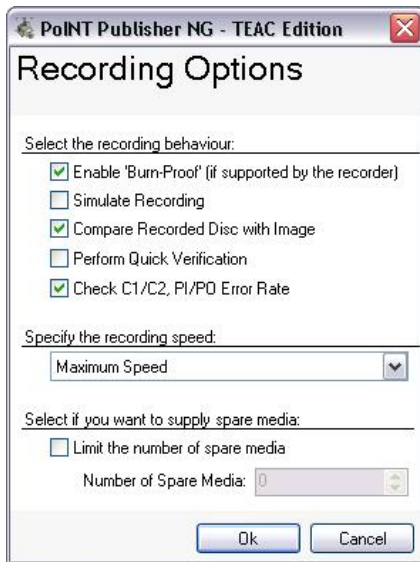
The 'BURN'-proof mode has an effect only if the recorders support 'BURN'-proof technology. So, this option may always be enabled.

The simulation of the writing process is performed by the recorder itself. The simulation mode helps to make sure that your SCSI sub-system is well configured and operable before you start the actual recording process. You should perform a simulated recording of several discs when you have installed "PoINT Publisher NG - Server" and before you start using the system.

Note: **Simulated recording for DVD+R and BD media is not supported by these media types.**

Check 'Compare Recorded Discs with Image', if you want to compare each recorded disc with its Disc Image.

Check 'Perform Quick Verification' if you want to perform a quick verification of recorded data after recording of a session.

Select the option 'Check' C1/C2, PI/PO Error Rate' if you want to check the C1/C2-or PI/PO error rate of a recorded CD or DVD.

For a description of the functions 'Perform Quick Verification' and 'Check C1/C2, PI/PO Error Rate' refer to the PoINT Publisher NG – Server documentation. Please note that these settings are only enabled if these functions are supported by the corresponding autoloader.

When 'Maximum Speed' is chosen, the individually highest speed for each recorder is used.

It is possible to limit the number of spare discs used for a job by selecting the 'Limited number of spare discs' control and by specifying the maximum number of spare discs.

Under the menu 'Job List' the status and progress of a submitted job can be controlled.

8 Label Editor

To start the integrated Label Editor select from the menu bar **Tools→Label Editor** or select **Label Editor** from the **Side Bar** menu under **Tools**. The Label Editor offers an easy way to edit printable labels for discs. Label size and content can freely be adapted to your needs.

The content of a label is defined by placing an arbitrary number of Text Objects and Graphic Objects in the label area, over a Label Background. Special kinds of text objects dynamically derive their text at the time of printing from external sources like clock, command line and data file.
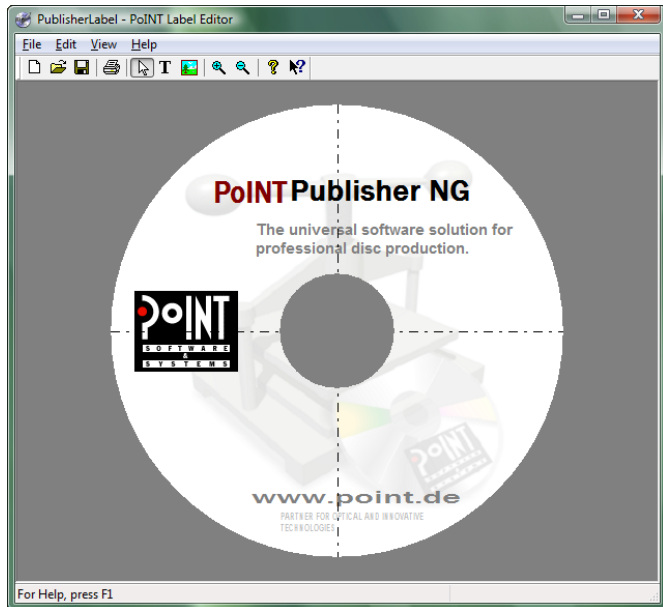
8.1 Working With PoINT Label Editor

The Label Editor offers the following elements for designing a label:

- Text objects
- Graphic objects
- Label background

The 'Edit' menu has commands for inserting label objects and for setting the properties of the label background.

When you insert a text or graphic object on the label, the object's properties dialog is opened which permits you to control all properties of the object like type, size, position, etc.

8.1.1 Text Objects

The controls for the properties of Text Objects are distributed on three tabs, titled Text, Format, and Position.

The Text Tab

The object text determines the text that will be shown on the screen. It depends on the selected type:

- Static text
  Static text objects will be printed as they appear on the screen. One or more lines of text can be entered. Empty lines at the beginning or the end of the text are automatically removed when the properties dialog is closed.

- Variable text
  Variable text objects receive their actual text from a data file. This should be a pure ASCII text file and contain one or more lines, each consisting of one or more text fields. The fields in a line of the file are numbered from left to right starting at 1.
  See section 8.1.6 for more information about data files for variable text objects.

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The key attribute of a variable text object is the field number from which the text is taken. The field number is displayed as text of the object on the screen. However, before printing it will be replaced by the corresponding field value from the data file that PoINT Publisher NG will send to PoINT Label Editor on actual printing. The maximum field number supported is 99.

PoINT Label Editor itself always takes the fields from the first line of the data file, the other lines are ignored. However, if you create - in a job that writes and prints e.g. 10 discs, the data file for the label may contain 10 or more lines. PoINT Publisher NG extracts the first line for the first disc and submits it to PoINT Label Editor, then it extract the second line for the second disc, and so on. Please refer to the "PoINT Publisher – Server" manual for more information.

To obtain a more precise impression of what will be printed, you may assign a data file to the label by selecting a Sample Data file.

If the data file does not contain a field corresponding to the field number, the string <empty> it displayed, and the printed field will remain empty. Also, if no data file is specified, variable text objects remain empty when printed.

For testing purposes, you may decide to directly print by the 'Print' menu command without using PoINT Publisher NG. You may select any printer and, e.g., to print to paper. In this case, variable text objects are printed as they are presented on the screen: either the field number or the text from the sample data file is printed.

- Serial Number
  Serial number objects define a placeholder for a number that PoINT Publisher NG can send to PoINT Label

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Editor.

The minimum and maximum number of digits can be specified. If the number of digits of the submitted serial number is less than the chosen minimum, the serial number will be left-extended with leading zeros. If the number of digits is greater than the chosen maximum, leading digits will be cut. The object remains empty when no serial number is given.

The minimum number of digits is adjustable from 0 to maximum. If the minimum number of digits is equal zero, the maximum number of digits is adjustable from 1 to 12, otherwise from minimum to 12.

The text shown on the screen is a placeholder for the chosen format. You can change it, according to your wishes, but it does not affect the number printed. If you print by the Print menu command, not by PoINT Publisher NG, serial number objects are printed as they are presented on the screen.

- Date

  Date objects define the format of the date. The current date, in the chosen format, will be printed on the label. The displayed text is a placeholder for the chosen format.

- Time

  Time objects define the format of the time. The current time, in the chosen format, will be printed on the label. The displayed text is a placeholder for the chosen format.

The font, its style and size, as well as other font settings can be selected in a standard font dialog that is displayed when you click the 'Choose...' button.

The text background can be transparent or can have a basic or custom color.

When a text object consists of more than one text line, the Paragraph Formatting option permits to adjust the lines relative to each other in horizontal direction.

The Format Tab

The Rectangle Size determines the region, in which the object text will be presented. Its width and height is adjustable from a value, which depends on the smallest font height and width of the chosen font, up to 100 cm. Invalid values are automatically corrected to meet these limits. All parts of the text object that are out of the label are clipped.

The Horizontal Alignment determines the text block alignment within the rectangle in horizontal direction.

You can control how the text will be adapted to the given rectangle size by the options 'Automatic' and 'Manual' 'Text Adaptation to Rectangle'.
If 'Automatic' is chosen, the font height and with will be automatically changed to adapt the text to the rectangle.
In case of 'Manual' adaptation the font height will be automatically changed to adapt the text to the rectangle, but only within the limits given by the minimum and maximum values for the font size.

The minimum font size determines the smallest font height allowed. If, for a chosen font size, the text extends beyond the rectangle size, all parts of the text that are out of the rectangle, will be clipped. The maximum font size determines the largest font height used for text adaptation.

The Position Tab

The object position determines the horizontal and vertical position of the object.

Instead of dragging the object in the label area, the horizontal and vertical position of the label object can also be determined by entering values for its coordinates. If the entered values put the object completely beyond the label boundaries, perhaps to an invisible area, they will be automatically corrected, so that the object touches the label and, thus is at the visible area of the label editor's window.

The object alignment with respect to its position can be chosen for the horizontal and vertical direction.

8.1.2 **Graphic Objects**

The controls for the properties of Graphic Objects are distributed on two tabs, titled Graphic and Position.

The Graphic Tab

The object graphic determines the graphic that will be shown on the screen. It depends on the selected type:

- Embedded graphic

  Click the 'Browse…' button to select a *.bmp, *.jpg, *.gif, *.png or *.tif file for a graphic object with an embedded image.

- Variable graphic

  Variable graphic objects receive their actual image from a file of which the path name is specified in a data file. The following image types for graphic objects are supported: *.bmp, *.jpg, *.gif, *.png, *.tif. The size and position of the graphic can be adapted.

  The data file should be a pure ASCII text file and contain one or more lines, each consisting of one or more text fields as shown in the example below. The fields in a line of the file are numbered from left to right starting at 1. The maximum field number supported is 99.

  See section 8.1.6 for more information about data files for variable text and variable graphic objects.

  The key attribute of a variable graphic object is the field number from which the path to an image file is taken. If the image file is located on a client computer, the path to the image file has to be an UNC path that PoINT Publisher NG has access to.

  The field number is displayed in a default graphic object on the screen. However, before printing, the graphic will be replaced by the contents of the image file that

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PoINT Publisher NG will send to PoINT Label Editor on actual printing.

PoINT Label Editor itself always takes the fields from the first line of the data file, the other lines are ignored. However, if you create a job that writes and prints e.g. 10 discs, the data file for the label may contain 10 or more lines. PoINT Publisher NG extracts the first line for the first disc and submits it to PoINT Label Editor, then it extract the second line for the second disc, and so on. Please refer to the "PoINT Publisher NG – Server" manual for more information.

To obtain a more precise impression of what will be printed, you may assign a data file to the label by selecting a Sample Data file.

If the data file does not contain a field corresponding to the field number, a default picture with a corresponding field term is displayed, and the printed field will remain empty. Also, if no data file is specified, variable graphic objects remain empty when printed.

For testing purposes, you may decide to directly print by the 'Print' menu command without using "PoINT Publisher". You may select any printer and, e.g., to print to paper. In this case, variable graphic objects are printed as they are presented on the screen: either the default graphic with the field number term or the graphic from the sample data file is printed.

You can choose between several presentation forms:

- Original size
  The graphic will be shown with its original dimensions. The width or height of the graphic cannot be changed.

- Percentage of original size
  The graphic width and height can be changed. You specify the size as percentage of the original size. If 'Maintain ratio of sides' is activated, the changing of one

value will automatically modify the other one accordingly.

- Adaptation to rectangle
The graphic width and height can be changed by entering values. The width and height is adjustable from 0.10 cm to 100 cm. If 'Maintain ratio of sides' is activated, changing one value will automatically change the other one accordingly, but so that no value exceeds the value range allowed.

- Maintain ration of sides
The ratio of the sides is constant. If you change one dimension, the other one will change accordingly. The height of the graphic cannot be changed, if a graphic object is variable.

If the entered values are outside of the range between 0.10 cm and 100 cm, they are automatically set to the respective limits. All parts of the graphic object, which are out of the label, will be clipped.

The Position Tab

The object position determines the horizontal and vertical position of the object.

Instead of dragging the object in the label area, the horizontal and vertical position of the label object can also be determined by entering values for its coordinates. If the entered values put the object completely beyond the label boundaries, perhaps to an invisible area, they will be automatically corrected, so that the object touches the label and, thus is at the visible area of the label editor's window.

The object alignment with respect to its position can be chosen for the horizontal and vertical direction.

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8.1.3 **Label background**

The background of the label can adapted to your requirements. Click the 'Select Label Background' command from the 'Edit' menu to open the 'Label Background' dialog.

The background can be either transparent or it can have a color, or you can choose a graphic for the background. In the latter case, the with and height of the image are scalable.

A graphic as background can either be an embedded image or an image derived from a field in a data file. The field entry has to consist the path to an image file. You can choose a *.bmp, *.jpg, *.gif, *.png or *.tif image file for the background.

8.1.4 **Label Properties**

The outside diameter of the printable area of the label is adjustable in the range from 1.70 cm to 12 cm. The diameter of the inner unprintable area of the disc is adjustable in the range from 1.50 cm to (label diameter – 0.2 cm).

Those parts of the objects on the label including a background graphic that are outside of the outside diameter or inside of the diameter of the hole are not printed. The label dimensions can be saved as default values that will be used to create new label.

The length of a comment to describe the label is limited to 256 characters.

8.1.5 **Drawing Aids**

While you are placing text or graphic objects on the label, a previously chosen background color or background graphic may be inconvenient. So, you may like to switch the background presentation off by the 'Label Background' command of the 'View' menu.

In the same menu there are the commands 'Label Axes' and 'Label Bounds'. The label axes divide the label in four

quadrants. The position of a selected object is shown on the status bar of the Label Editor's main window. These coordinates are relative to the origin of the coordinate axes. The label bounds limit the view of label objects to the label area. All parts of label objects which are beyond the limits are clipped.

8.1.6 Sample Data File

To obtain a more precise impression of what will be printed when you are using Variable Text and Variable Graphic Objects, you may assign a data file to the label by selecting a Sample Data file.

The syntax of a data file must meet the following rules:

- ASCII text file consisting of one or more lines.

- Each line consists of one or more text fields.

- Text fields are enclosed in double quotation marks (") and separated by commas.

Example file containing two lines with three fields, each:

"My Product","My Company","Release 2.4","C:\My Images\Logo1.jpg"

"New Product","My Company","Release 1.0","\\MyComputer\My Images\Logo2.tif"

Please refer to section 8.1.1 and 8.1.2 for more information about Variable Text and Variable Graphic Objects.

8.1.7 Zoom Label

The view of the label can be zoomed in and out in steps of 10%. The smallest zoom factor is 10%, the greatest factor depends on the window size.

To zoom the label, use the "Zoom In" and "Zoom out" buttons on the toolbar, or in the 'View' menu.

Select in the 'View' menu 'Original Size' to set the view back to 100%.

8.1.8 Set Unit of Measure

"PoINT Publisher NG" supports "Centimeter" or "Inch" as unit of measure for the label.

To change the unit of measure choose 'Unit' in the 'View' menu.

8.1.9 Convert Label

A label can be converted into different image formats and resolutions. The following formats are supported:

- *.bmp

- *.jpg

- *.gif

- *.png

- *.tif

Click the 'Convert Label' command from the 'File' menu to open the 'Convert Label' dialog. Select an image file and enter the resolution.

9 Label Pool

Selecting **Tools→Label Pool** or **Label Pool** from the **Side Bar** menu opens the Label Pool view.
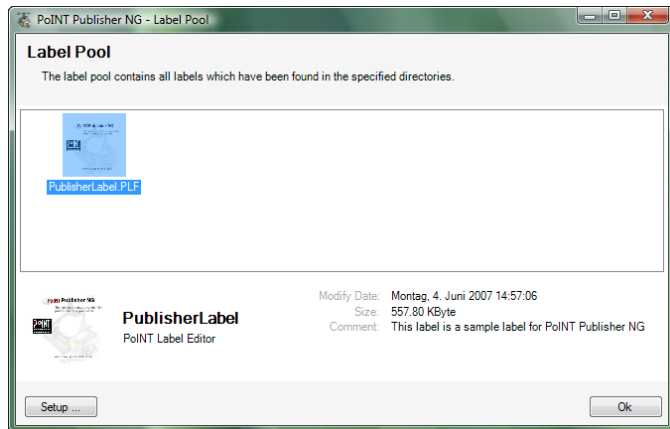
The Label Pool is a file browser view which has been optimized for searching and displaying PoINT Label Editor files. It consists of a list of labels which are displayed with a small preview thumbnail of the actual label.

When one label of the list is selected, context information of the label is displayed in the information area below the list. In detail you may find an identifying thumbnail, the label name, the file type, the modification time, the file size and a comment which can be set in the PoINT Label Editor. Double-clicking on the thumbnail in the information bar will open a larger preview window of the label.

Unlike classical file browsers the Label Pool automatically searches automatically for specific label files. Clicking on the

"Setup" button in the lower left-hand corner of the Label Pool will open a dialogue which lets you adapt the parameters which are used for the search. You can adapt the following parameters:

- Search Path

  Here you can specify one or more directories which will be included in the search. Note, that all subdirectories for a specified directory are included in the search.

- File Extensions

  In the file extension box you can enter one or more file extensions which will be included in the search. By default PoINT Label Editor labels are included. If you want to search for further labels you can append the extensions separated by a semicolon, e.g. ".plf; .raw"

- Update Interval

  The update interval determines when a new search shall be performed. Initially the search is performed every 30 minutes.

Note:

When a new label is created with the PoINT Label Editor or any other supported label editor application it is not automatically included in the search index. Only when the next scheduled search run is performed the label will be indexed.

10 Log Viewer

From the menu bar select **Tools→Log Viewer** or select **Log Viewer** from the **Side Bar** menu to view the log file.
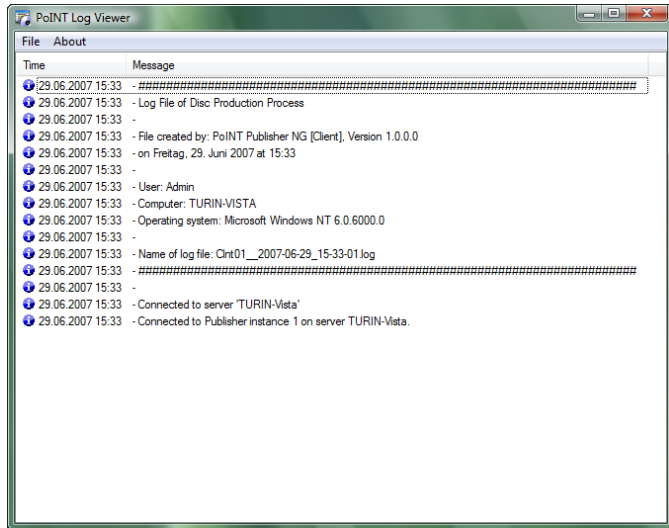
The Log Viewer displays a production log file of the current PoINT Publisher NG session. Each time the PoINT Publisher NG – Client is started a new log file is created in the directory specified in the Setup dialog.

The log file contains information which results from operations on the Client. For example, when a Data Job formats a new Disc Image, the formatting process is written to the log file. Furthermore, the log file contains information about server-sided events, like the recording process.

There three kinds of log entries:

- Informational log entries are indicated by a blue symbol and are used to monitor normal behaviour.

- Warning log entries are indicated by a yellow warning symbol and state that an abnormality has occurred which did not interrupt the operation progress.

- Error log entries are indicated by a red error symbol and show that an error has occurred which lead to the abortion of an operation.

PoINT Publisher NG

Server

PoINT Software & Systems GmbH

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Contents

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About This Manual

Audience

This manual is intended for users working with or installing PoINT Publisher NG. It also discusses the minimum system requirements for a computer running PoINT Publisher NG.

Organisation

The Server is organised as follows:

Chapter 1	Introduction Presents an overview of PoINT Publisher NG and of client/server operation.
Chapter 2	Installation Specifies the minimal system requirements and describes the installation procedure of PoINT Publisher NG.
Chapter 3	Using PoINT Publisher NG Discusses the functionality of PoINT Publisher NG.

Reference

For further reference material, please refer to the following additional documentation:

- PoINT Publisher NG – Client,
- PoINT Publisher NG – ECR,
- PoINT Publisher NG – SDK,
- README files.

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1 Introduction

This section is an introduction to PoINT Publisher NG - Server and the client/server operation in a network.

1.1 General Functionality

PoINT Publisher NG - Server performs and controls the recording and label printing process of discs in an autoloader device.

Input for PoINT Publisher NG -Server are jobs which are normally created by PoINT Publisher NG –Client or by PoINT Publisher NG – Web Client and sent to the server. Additionally PoINT Publisher NG –Server can directly process third party image files, including DDP files, as well as jobs issued by ECR and the SDK.

PoINT Publisher NG - Server will produce discs according to the specifications made in the job and it can handle any number of jobs at a time. The current list of jobs can be rearranged if necessary.

If an autoloader is used, and provided that a sufficient number of blank discs are placed in the input bin of the loader, the discs are produced according to the given jobs until all jobs have been done or the user stops the process. A job is done when all discs have been produced.

If a drive tower is used instead, PoINT Publisher NG - Server opens the trays of the recorders whenever empty discs have to be inserted or recorded discs have to be removed. In all cases, an appropriate instruction is displayed on the user interface.

You can operate more than one autoloader at a computer. Each autoloader is assigned to a single instance of PoINT

Publisher NG – Server; multiple instances can run simultaneously.

1.2 Client/Server Operation

Typically PoINT Publisher NG – Client or PoINT Publisher NG – Web Client is used to connect to PoINT Publisher NG – Server. This connection may be established when client and server are running on the same computer as well as if client and server are running on different computers in the network.

You may have multiple PoINT Publisher NG - Server instances running on one server. In this case PoINT Publisher NG – Client can be connected to all instances.

You also may have multiple PoINT Publisher NG – Server installations in your network. In this case PoINT Publisher NG – Client can be connected to one server at a time.

1.3 Installation and Licensing

Regarding installation, system requirements and licensing information please refer to the PoINT Publisher NG – Client manual.

2 Starting PoINT Publisher NG - Server

PoINT Publisher NG – Server will be automatically started when PoINT Publisher NG – Client is started, if both components are installed on the same computer.

In case of a network configuration and in case of multiple server instances (see 1.2) the server must be started manually.

To start PoINT Publisher NG – Server manually perform the following steps:

1. Click on the 'Start' button to open the start menu
2. Click on 'Programs' and then on PoINT Publisher NG. This opens the program group of PoINT Publisher NG and shows the installed components.
3. In the PoINT Publisher NG program group, click on PoINT Publisher NG - Server.

2.1 Starting Multiple Server Instances

If you want to start more than one instance of PoINT Publisher NG - Server, you have to specify the instance number on the command line. The syntax is
<path name>\Cdserver.exe /inst <number>

E.g. C:\PoINT\PoINT Publisher\Cdserver\Cdserver.exe /inst 3 starts server instance 3. If /inst 0, or /inst 1 is specified or if this parameter is omitted, server instance 1 is started.

3 Configuring PoINT Publisher NG - Server

When you run PoINT Publisher NG - Server the first time after installation you have to configure the software for use in your specific operating environment. Later on you may alter the configuration whenever this is necessary. PoINT Publisher NG - Server stores and uses the current configuration until you change it or until you de-install the software. You may open the 'Device Configuration' dialogue by command 'Settings' of the 'Configuration' menu. When you start PoINT Publisher NG - Server for the first time, the dialogues are displayed automatically.

Additional settings can be done in the 'General', 'Defaults' and 'Autoloader' dialogues.

3.1 Setting up the Connected Hardware

To open the setup dialogues, click on the 'Setup' button in the 'Device Configuration' dialogue. First select the autoloader to be configured and then assign the corresponding drives.
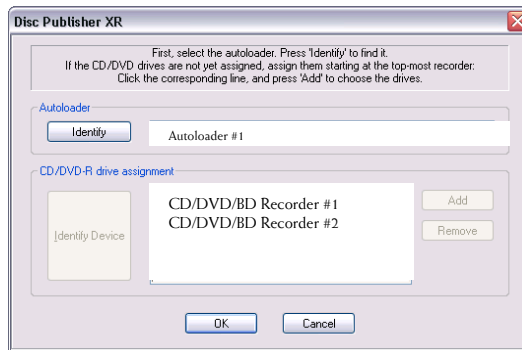
Use the 'Identify' commands to identify the correct autoloader and drives if multiple autoloaders are connected and if an autoloader is configured with multiple drives. Please note that in this case the physical position of a drive must correspond to the position in the list of the setup dialog.

If more than one autoloader shall be operated with one computer, each autoloader must be configured using a different server instance (see 2.1). So, an autoloader is persistently attached to a specific server instance.

After device setup the 'Device Configuration' dialog displays the configured autoloader.
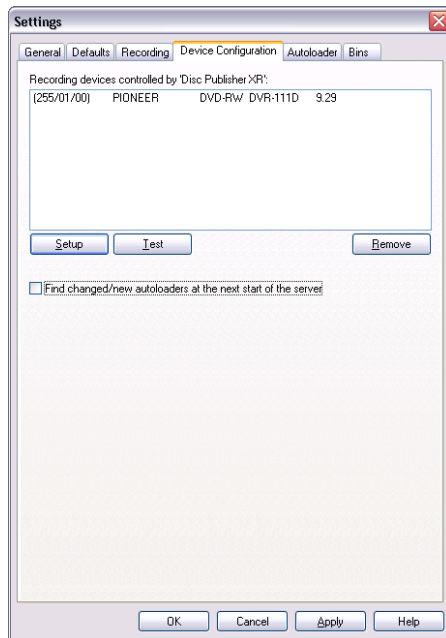
Use the '**Test**' command to finally check the configuration.

After successful configuration the check box '**Find changed/new autoloaders at the next start of the server**' will be automatically disabled. This means that at next start PoINT Publisher NG - Server will only check for the configured device. In case the device has changed or additional de-

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vices have been connected this check box must be enabled that the changed configuration will be detected.

If you have setup an autoloader (not a drive tower) you will find this page in the 'Settings' dialogue.
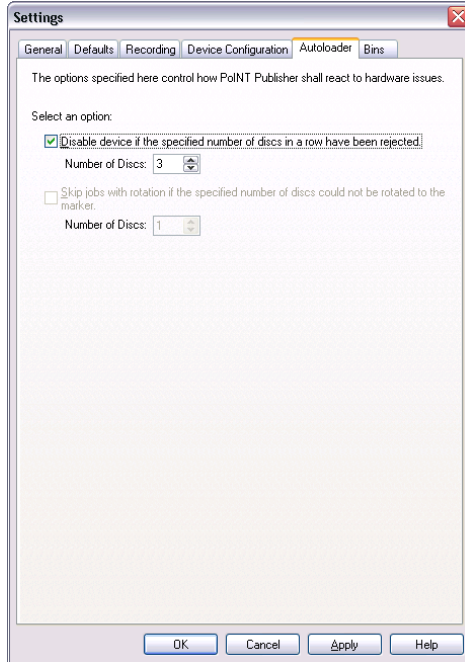
In order to avoid wasting discs by a malfunctioning recorder, you can instruct PoINT Publisher NG - Server to disable it after a certain number of failures that occurred in a row with this device. In case that a recorder is disabled, processing continues with the remaining recorders. Disabled recorders are automatically re-enabled when you start the next production cycle. If you want to permanently disable a malfunctioning recorder, remove it from the configuration in the hardware Setup dialogue (3.1).

For autoloaders with a disc printer and a rotation function the next option is available. Jobs that require disc rotation to a marker before printing will be excluded from further process-

ing when a certain limit of rotator errors occurred. Usually rotator errors are caused by discs that have no marker.

3.2 Recording Options

The settings in the 'Recoding' tab determine the default values used at the creation of jobs. Please note that these settings may be overwritten by job individual settings, specified for a specific job.
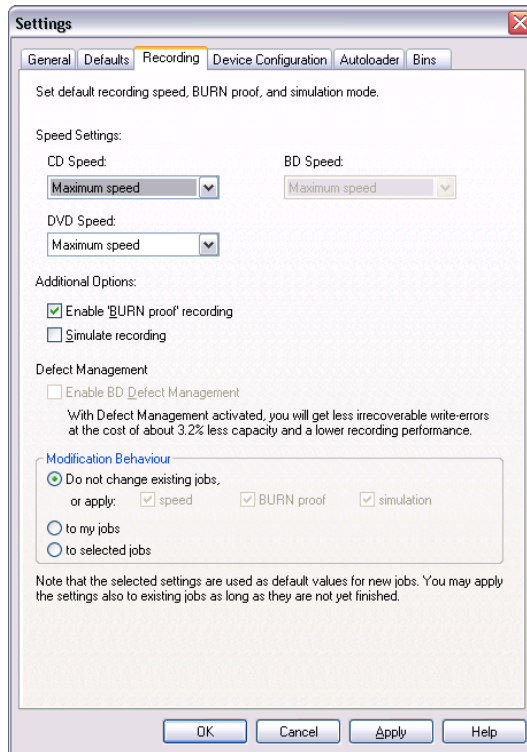
The Recording Options dialogue box allows to select the recording speed and to enable the BURN-Proof and simulation mode. When 'Maximum Speed' is selected, the individually highest speed for each recorder is selected.

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Some recorders support the so-called 'BURN-Proof' technology, i.e. they are able to write accurate discs even if the system is not able to send the data fast enough.

These recorders then stop recording and restart again when new data arrive. When the BURN-Proof feature is enabled, it can have an effect only, if the recorders support it. Also, all jobs that are processed at the same time need the BURN-Proof feature enabled. Otherwise, the jobs are automatically recorded in normal mode.

The simulation of the writing process is performed by the recorder itself. The simulation mode helps to make sure that your hardware configuration is well configured and operable before you start the actual recording process. You should perform a simulated recording of several discs when you have installed PoINT Publisher NG – Server and before you start using the system.

The option 'Enable BD Defect Management' can automatically correct write errors during the recording process at the cost of less capacity and lower recording speed. By default this option is disabled. Possible write errors will be detected by PoINT Publisher NG – Server by the comparison process, which is performed by default (see 3.4) after the recording process.

The settings here primarily affect the attributes of jobs that will be created after this dialogue is terminated. The attributes in the job properties are set or cleared at job creation time according to these settings. However, you may also change the attributes of existing jobs. You may change the attributes individually for each job in the job's properties dialogue.

3.3 General Settings

When executing the command 'Settings ...' from the menu 'Configuration' the following dialog is shown:
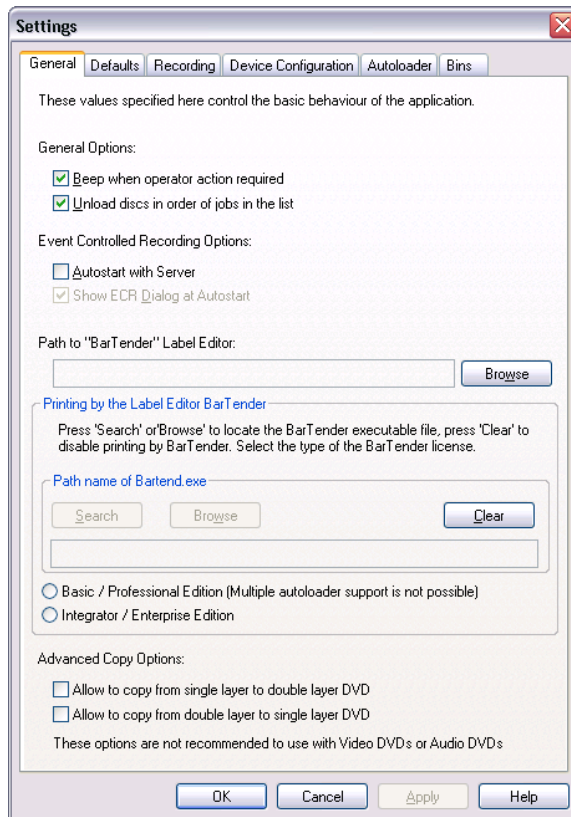
Check '**Beep on operator requests**' if you want an acoustic signal when PoINT Publisher NG -Server requires operator intervention or when processing terminates.

In autoloader configurations, it may be important that the discs are put into the output bin in the order of the job list, e.g. to ease the identification of the discs. On the other hand, when the discs can be unloaded in any order, large recording jobs do not stop short jobs.

The option '**Unload discs in order of jobs in the list**' lets you configure PoINT Publisher NG - Server convenient to your needs.

Event Controlled Recording (ECR) offers additional features and is provided by a separate component. For detailed information about ECR, please refer to the manual PoINT Publisher NG -ECR.

If you want to create print files for disc labels by using a label editor, you can use 'PoINT Label Editor' which is an integral component of PoINT Publisher NG – Client or a third party label editor.

If you want to use the product 'Bar Tender' from Seagull, this software must be installed on your computer. When PoINT Publisher NG - Server is started, it looks up the path to Bar Tender in the registry and displays it in the dialog above. Some releases of Bar Tender omit the registry entry so that PoINT Publisher NG - Server cannot find the path. In this case you can set it manually: Press the 'Browse' button and find the file "BARTEND.EXE" on your computer; press 'OK' to select it. This will add the path to the registry.

The '**Advanced Copy Options**' are available if recorders capable of writing to DVD+R double layer media are configured and licensed.

These options are not recommended to use with Audio or Video DVDs, since the relative position of the sectors will differ on the different media. This may influence the timing during the playing of the media.

Note: On double layer media, the first layer is always recorded from the inner part to the outer part of the disc. The second layer may be recorded in the same direction or in reverse direction.

The second layer of double layer DVDs created by the PoINT Publisher NG - Client are recorded in reverse direction.

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3.4   Verification

PoINT Publisher NG is able to verify and check recorded data by specific functions. The defaults for all job types are specified in the 'Defaults' dialog:
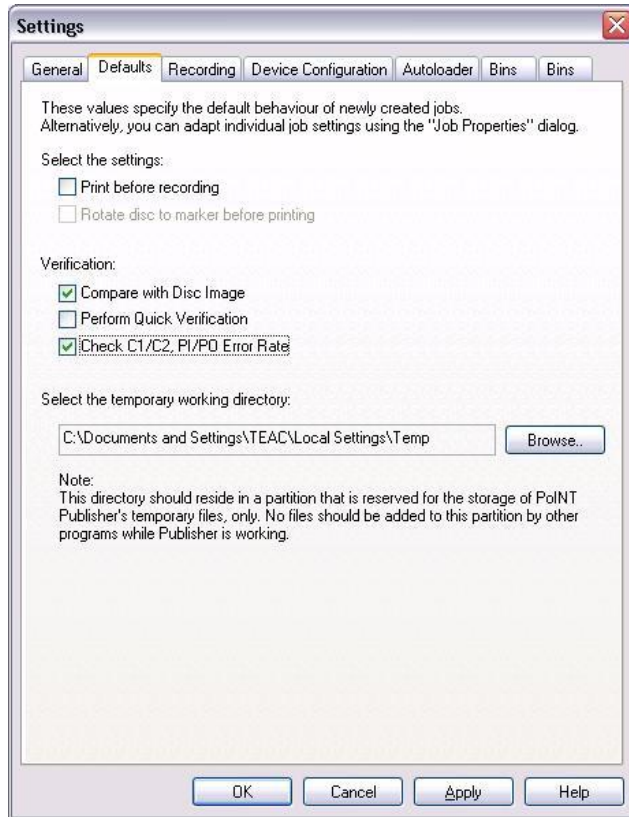
The following three functions are available:

Compare with Disc Image

Check '**Compare with Disc Image**' if you want PoINT Publisher NG - Server to compare the data tracks of each recorded disc of a job with its source data. The corresponding

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attribute in the job properties is set or cleared at job creation time according to the setting selected here.

Please note that audio tracks cannot be checked by this function.

It is recommend to enable this function which is also the default setting. You may change the attribute individually for each job in the job's properties dialogue.

Perform Quick Verification

This function performs a quick verification of a recorded disc immediately after recording of a session. It is a hardware specific function and therefore only enabled if the configured drive supports this function. Quick Verification checks four areas of a recorded disc consisting of Lead-In area and beginning, mid and end of the data area. PoINT Publisher NG has no influence on position and size of the checked areas because this function is completely handled by the drive. The check does only take a few seconds. If the check fails the disc will be rejected. The result of this check will also be logged in the log file.

Please note that this check does not perform a comparison with the source data and it does only check parts of the recorded areas of a disc.

The check functions can be used in addition or - under acceptance of the consequences - as an alternative to the function 'Compare with Disc Image'. But please note that only readability of parts of a recorded disc is checked.

By default this function is not enabled. You may change the attribute individually for each job in the job's properties dialogue.

Check C1/C2, PI/PO Error Rate

This function checks the C1/C2 error rates per second of CD media or the sum of PI/PO errors in eight consecutive ECC blocks of the complete recorded data area of DVD media. The check is performed immediately after recording of the disc.

This function is a hardware specific function and therefore only enabled if the configured drive supports this function.

The check does not verify if errors can be corrected. As result of this check the measured average and maximum error rates are logged in the log file. Please note that PoINT Publisher NG does not evaluate the results.

According to the CD standards the sum of all C1 errors per second is called BLER (Block Error Rate) and must be below a value of 220. The value of C2 errors should be zero.

According to the DVD standards the PI errors (Parity Inner Errors) should be below a value of 280. The logged PO error rate should be below 32. PoINT Publisher NG uses the standardized "SUM8" as measurement procedure.

For more details information about C1/C2 or PI/PO error rates and measurement procedures please refer to the corresponding CD or DVD standards.

Please note that checking C1/C2 or PI/PO error rates takes normally longer than the recording process of the disc because the checks are performed with 4x CD or 4x DVD speed.

It is recommended to enable this setting in addition to the setting 'Compare with Disc Image', which is also the default.

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3.5 Default Settings

If you want that printing to the disc is done before recording, check the appropriate control.

When your autoloader is able to rotate discs to a marker to adjust pre-labelled discs before printing, the corresponding attribute in the job properties is set or cleared at job creation time according to the setting selected here. You may change the attribute individually for each job in the job's properties dialogue.

The verification settings are described in section '3.4 Verification'.

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As temporary working directory, select a directory on a hard disk which satisfies the minimum system requirements. There should be space for one disc image or more for temporary working files of PoINT Publisher NG - Server. Consult the Performance Profile to find out the fastest disk: The higher the hard disk throughput, the faster is the drive. If possible, avoid to select the drive on which the operating system resides.

3.6 Bin Settings

This dialogue page is not available for drive tower configurations.

Here, you can specify the type of the media that you have put into the input bin(s). The selections made will restrict the possible choices of media types during the creation of jobs.

You can choose between CD-R, DVD-R, DVD+R, DVD-R DL (dual layer), DVD+R DL (double layer), BD-R, and BD-RE type media with different capacities. If there are recorders in your configuration supporting both, DVD-R and DVD+R, you can also select "DVD-R or DVD+R". This means that you can put (mix) both types into the bin.

If you use pre-labelled media, you can select a label type out of a list of five types ("label 1" through "label 5"), or "unlabelled".
For example, you have CD-R media of a capacity of 74 minutes which are pre-labelled with your company name and the name of your product. You decide to call this label type "Label 1". An addition, another pile of CD-R media with the same capacity is labelled with a different product name. You call this "Label 2". Depending on the media you put into the bins, you select the appropriate media type, capacity, and label type for them. Later, when you will create jobs, you will select the bin with the media required for the job in the job's properties dialog.

In case of a drive tower configuration, there are no bins; so you directly select the media type, capacity and label type in

the job properties. PoINT Publisher – Server will request to insert the specified media when the job is processed.

Depending on the capabilities of the hardware, you may also configure the purpose of the bins. There are three autoloader operation modes:

- Sequence of 'Input/Output Bins' with a separate 'Reject Bin'

- Sequence of 'Input/Output Bins' without a separate 'Reject Bin'

- Individual Configuration
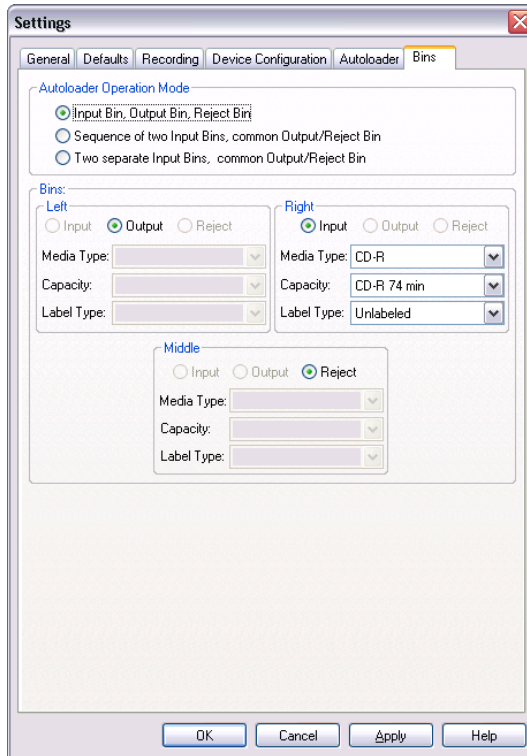
In "'**Sequence of 'Input/Output Bins' with a separate 'Reject Bin'**'" mode there are one output bin, one reject bin, and a sequence of input bins. Discs are taken from the first input bin and unloaded to the output bin. As soon as the first input bin

becomes empty, the media are taken from the next input bin. When the output bin becomes full and an input bin is already empty, this empty bin is made the current output bin and unloading is done to this bin.
This procedure continues until the last input bin is empty. The user is then requested to remove all media from the bins and to insert new media into the input bins. After the user has acknowledged the media change, the production continues again with one output bin, one reject bin and a sequence of input bins.

"**Sequence of 'Input/Output Bins' without a separate 'Reject Bin'**" is similar to the mode above, except that the reject bin is used as an additional input bin. Bad discs are marked with a special label (black stripes) if a printer is configured and are then rejected to the current output bin.

The special label is stored in a print file named 'BadDiscLabel.prn' which is located in the installation directory of the server (usually C:\PoINT\PoINT Publisher\CDserver). It is made for the Primera Signature III printer. You may replace the file by a print file for your printer type and with your own layout.

In the third mode you can configure the purpose of each single bin according to the following rules:

There must be one input bin and one output bin at least. You can have one reject bin at most.

Note that changes to the bin configuration are possible only if the job list is empty.

3.7 Performance Profile

The Performance Profile is a set of data about the throughput capability and access times of the system's hard disks as well as the performance of the processor and main memory.

Use this command '**Performance Profile…**' from the menu '**Control**' to generate the Performance Profile.

PoINT Publisher NG - Server controls the recording process on base of these data to avoid hard disk overloads which may lead to buffer underrun conditions. When the system detects a possible overload, it delays the recording process for the corresponding recorder until enough hard disk throughput capacity becomes available.

Note: You should generate the Performance Profile when you have modified the configuration of your PC.

3.8 Firewall Settings for Client/Server Communication

For the client/server communication PoINT Publisher NG requires two network ports. By default the ports 8089 (TCP) and 8090 (TCP) are used. These ports have to be enabled in case of an active firewall on the PoINT Publisher – Server and on the PoINT Publisher – Clients. On the server these ports have to be activated manually in the firewall administration. On the client system the firewall usually prompts the user automatically to allow communication for PoINT Publisher NG if the client tries to establish the communication to the server.

In case that it is necessary to change the default port numbers the following steps have to be performed. It is required that the new port numbers are two different numbers.

Configuration File "RegistrationServer.exe.config" on PoINT Publisher NG – Server

This file is stored in the installation directory of PoINT Publisher NG – Server in the subdirectory "RegSvr". In the section as described below the port number 8090 can be changed.

```
<application>
        ….
    <channels>
        <channel ref="tcp" port="8090" secure="true">
        ….
        </channel>
```

```
    </channels>
</application>
```

Configuration File "CommunicationServer.exe.config" on PoINT Publisher NG – Server

This file is stored in the installation directory of PoINT Publisher NG – Server in the subdirectory "CommSvr". In the section as described below the port number 8090 can be changed.

```
<application>
        ….
        <client>
              <wellknown type=
          "PoINT.Registration.IRegistration, RegistrationInterface".
          url="tcp://127.0.0.1:8090/RegistrationInterface.rem" />
        </client>
</application>
```

Configuration File "PublisherClient.exe.config" on PoINT Publisher NG – Client

This file is stored in the user's application data directory. E.g. "\documents and setting\ <user>\application data\ PoINT\PoINT Publisher". In the section as described below the port number 8090 can be changed.

```
<application>
        ….
        <client>
              <wellknown type=
          "PoINT.Registration.IRegistration, RegistrationInterface".
          url="tcp://127.0.0.1:8090/RegistrationInterface.rem" />
        </client>
</application>
```

Registry Key on PoINT Publisher NG – Server

The following registry key has to be created (does not exist for the default port number) to change the default port number 8089:

HKEY_LOCAL_MACHINE\SOFTWARE\PoINT\PoINT Publiser\CommSvr

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For this key a DWORD value with the new port number has to be specified with name "Port"

After changing the port numbers as described above PoINT Publisher NG – Server and PoINT Publisher NG – Client have to be restarted.

4 Working with PoINT Publisher NG - Server

The main window of PoINT Publisher NG - Server consists of three areas. The top-most area contains title, menu bar and toolbar. Underneath this area on the left side the job list follows, and on the right side the program status and control area.
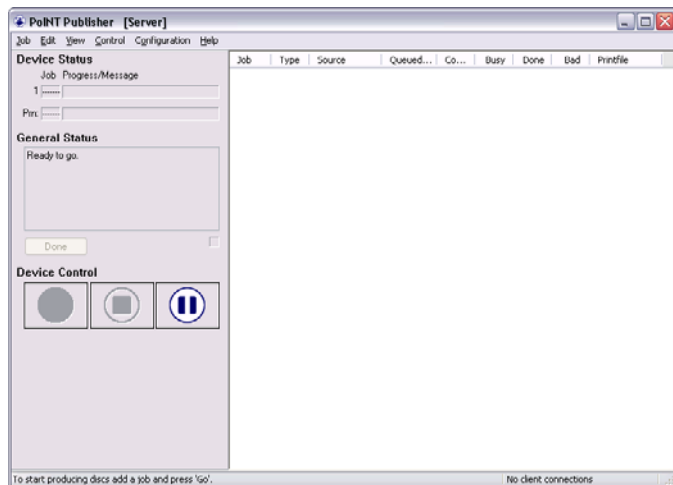
All commands of the program can be found in the menu. In addition the Device Control commands 'Go', 'Stop', 'Pause' and 'Done' are also available via the corresponding buttons.

Job	Type	Source	Queued by	Copies	Busy	Done	Printfile
✓ 1	CDcopy	Summertime.cd	Susan at PC_1	160	0	160	Privat.prn
⇨ 2	CDcopy	Documentation.cd	Scott at SATURN	45	4	35	Doc.prn
⇨ 3	CDcopy	Number One.cd	Dave at OMEGA	20	4	0	No_One.prn
✓ 4	CDcopy	Charts.cd	Simon at PC_2	100	0	100	Charts.prn
⛔ 5	CDcopy	Products.cd	Scott at SATURN	15	0	0	Products.btw
✓ 6	CDcopy	Company.cd	Dave at OMEGA	80	0	80	Comp.btw

The 'Job List Window' contains the list of jobs.

In the first column, the job's current state together with the job number is shown. Jobs are numbered in the order in which they are added to the list. Job numbers are maintained even if the list is re-arranged.

The job type is displayed in the second column.

Next, the name of the source data file for the job is displayed. The owner, i.e. the user who created the Disc Image and the computer where it was created, is contained in the fourth column.

The fifth column indicates the user who added the job to the list and the computer from which the job was queued.

The next three columns show the number of copies to do, the number of discs being under preparation, and the number of discs done.

The last column shows the name of the print file.

The general program status is displayed in the lower part. When PoINT Publisher NG – Server requires operator intervention, the corresponding message is displayed here. Also, a coloured indicator flashes near the status line of the device affected. The operator has the choice to do the action requested and to press the 'Done' button, or to press the 'Stop' button.

For example, the operator may be requested to put empty discs into the input bin, or to remove complete discs from the recorders when using a drive tower. In the first case he may decide to stop the production, because all discs are used up.

Clicking the 'Go' button starts the production of discs. Clicking the 'Stop' button stops the process. You will be asked

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whether the server shall finish the current recording/printing and then stop, or whether you want to abort further processing immediately. In the latter case, the media in the recorders will get corrupted and will be put into the 'reject' bin, if any.

The 'Pause' button inhibits the automatic loading and unloading of media, so that the operator can safely manipulate the bins and devices. More detailed information about the use of the 'Go', 'Stop' and 'Pause' commands (buttons) can be found in section 4.8, Controlling the Production Process.

The status bar is displayed at the bottom of the "PoINT Publisher NG - Server" window. To display or hide the status bar, use the 'Status Bar' command in the 'View' menu.

The status bar describes actions of menu items as you use the arrow keys to navigate through menus. This area similarly shows messages that describe the actions of toolbar buttons as you depress them, before releasing them. If after viewing the description of the toolbar button command you wish not to execute the command, then release the mouse button while the pointer is off the toolbar button.

In addition, the number of connected clients is indicated in the right part of the status bar.

4.1   What is a Job

An order for PoINT Publisher NG – Server to create a number of identical discs is called a job. The specification of the job comprises the source data file, the print file for the imprint on the disc, and the number of discs which shall be produced using the source data and print information. When the job specification contains a source data file but no print file, only the data are written onto the discs. Likewise, jobs can be created with a print file only, so-called Print-Only jobs. Then the recording step is left out. Jobs can be submitted to the server by the PoINT Publisher NG – Client or whenever you add a source data file or print file to the server's job list.

The following file types may be used as source data file: A Disc Image file, a (raw) third party image file, or a DDP file.

The picture below shows how a job may be displayed in the job status window.

Job	Type	Source	Queued by	Copies	Busy	Done	Printfile
✓ 1	CDcopy	Summertime.cd	Susan at PC_1	160	0	160	Privat.prn

How to Create Disc Images

Disc Images are created by PoINT Publisher NG – Client. Besides the proper data, Disc Images may contain print information including the print file and also the number of discs to produce. So a Disc Image can contain all information to do a job. Please refer also to the documentation of the PoINT Publisher NG – Client for information on how to create Disc Images.

DDP File as Source Data File

PoINT Publisher NG - Server supports DDP files conforming to DDP levels 1.00, 1.01 or 2.00. Please note that this is an optional feature which is controlled by license key.

In order to add a new job based on DDP files, simply add the file containing the DDP identification record (e.g. DDPID).

DDP files and the corresponding data images have to be pre-processed and converted to Disc Images by PoINT Publisher NG - Server first before the actual recording process can be started. Therefore PoINT Publisher NG – Server always and automatically copies DDP data images to temporary Disc Images in the temporary working directory. The copy process is performed automatically and in parallel to recording processes, temporary Disc Images are automatically deleted and the occupied space is released when the corresponding recording process ends. This especially allows adding DDP files directly from remote computers regardless of the network performance.

Since usually identical names are given to DDP files for different discs (i.e. DDPID, DDPMS, PQ_DESCR, ..), these discs are identified by means of the parent directory names. Therefore PoINT Publisher NG adopts this directory name as job name in case that the DDP identification file is named DDPID.

For a Double Layer DVD, two DDPID files are needed. To create a job, specify the DDPID file of the first layer. You will be prompted for the DDPID file of the second layer.

What Is a Print File

A print file holds the information about the label which shall be printed to a disc. A print file is either a 'raw print file' or a 'format file' of the label editor used with or without an 'input data file'.

Raw print files

Raw print files are created by first designing a label in an arbitrary application (Corel Draw, Microsoft Paint, or any suitable program). This label is then printed to a file using a printer driver that is compatible to the disc printer. The resulting file (*.PRN) can be used by "PoINT Publisher NG". It is copied to the printer as is, no changes are applied by "PoINT Publisher NG".

Label editor format files

Label editor format files are created by the label editor installed and made available by the advanced print option of PoINT Publisher NG. Format files of PoINT Label Editor usually end in *.PLF, those of BarTender end in *.BTW.

The label editors support, besides comfortable editing and placement functions for the elements of a label, printing of variable texts, and pictures. Variable fields are automatically filled during printing, either according to the serialisation rules or according to the corresponding fields in an additional input data file (*.DAT).

The advanced print option thus allows to produce series of discs with identical data contents and with identical or varying labels.

Please refer to the properties of text and picture elements and to the documentation of the label editor used for more information about the supported features. Sample format files with and without variable fields may be found in directory 'LE-SMPLS' on the installation disk of PoINT Publisher NG.

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Input data files of the label editor

Variable text fields are filled during printing from an input data file (*.DAT) which is used in combination with the format file.

An input data file contains an arbitrary number of text lines, called records. Each record contains one or more fields which may be enclosed in quotation marks and must be separated by commas. For PoINT Label Editor it is required to use both, quotation marks and commas.

The required number and the meaning of fields in the input data file depends on the type of the related field on the label and on the features supported by the label editor used. In case of text and bar code, the fields will generally contain text. In case of pictures, the field will contain the full pathname of the file containing the actual picture. Picture replacement and the use of barcodes are supported by BarTender.

Usually the first record (record number 0) of the input data file is applied to printing the label of the first disc of a job. With version 5.0 of "PoINT Publisher NG" or higher you can determine any record in the file as the starting record.

Serial Number

When using a PoINT Label Editor format file (*.PLF) you can specify a start value for a serial number. This value replaces the serial number text object of the label for the job's first disc produced. The number is incremented by one for each subsequent disc of the job.

Note: You should not enable options like 'view on print time' or 'prompt on print time' in the label editor. These options would cause the label editor and, thus, the entire production process to stop execution at print time and to wait for user input.

Job Status

The states are symbolised by the following icons:

→ Job is pending.

✓ Job has been finished without error.

! Job has been finished with error(s).

⇒ Job is in progress.

🛑 Job has not been started yet or has been stopped.

▽ Job is being stopped. Processing of the job will be stopped as soon as recording/printing of currently loaded discs will have been completed.

If you are working with PoINT Publisher NG - SDK, if you selected DDP files for input, or if jobs have been added by PoINT Publisher NG - Client, the icons below are used additionally:

▦ Creation of Disc Image on a local hard disk of PoINT Publisher NG - Server is in progress.

▥ Creation of Disc Image is completed. Job is ready for recording.

▨ Job is being stopped. Processing of the job will be stopped as soon as the creation of the Disc Image will have been completed.

4.2 Adding new Jobs

Jobs are automatically added to the job list when working with PoINT Publisher NG – Client.

In addition it is possible to add new jobs by using the 'drag and drop' feature of Microsoft Windows and to drop source data files (Disc Images, third party image files, and DDP files) or print files on the job list. Use the Windows Explorer to select the files, and drag and drop them on the job list of PoINT Publisher NG - Server. Jobs are inserted in alphabetic order of the file names involved.

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Besides this, it is also possible to insert source data files or print files (for Print-Only jobs) by the command 'Add Job' or 'Add Print-Only Job', respectively. Select these commands either from the 'Job' menu or by clicking the following buttons:

 Add a job

 Add a Print-Only job

Additionally you can take influence on the position in the list when new jobs will be added:

– If no job is selected, the new job(s) will be added at the end of the job list.

– If a job is selected, the new job(s) will be inserted above the selected job.

The priority of the jobs is determined by their position in the job list, not by the job number.

Note that it is possible to add new jobs above jobs which are currently in progress. In this case PoINT Publisher NG - Server interrupts the current jobs as soon as possible, processes the new job, and then continues the current jobs.

4.3 Removing a Job

To remove jobs simply select the jobs and choose 'Remove Job' from the 'Job' menu or press the right mouse button to show the context menu and press 'Remove job'. Busy jobs cannot be removed nor cut.

4.4 Properties of a Job

Select a job, press the right mouse button and choose 'Properties' in the context menu or click the following button

The 'Properties' dialogue box appears on the screen.

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Data
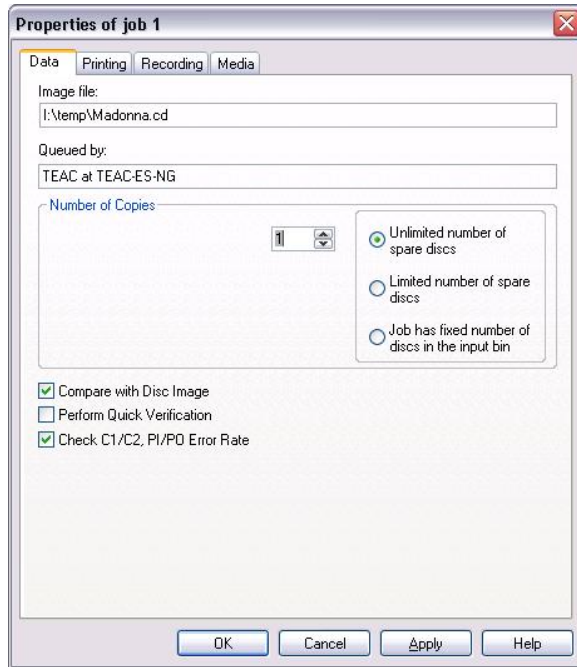
The top-most area of this dialogue page shows the path name of the Disc Image, third party image file, or DDP file used for the job as well as the user and computer that have queued the job.

Next, there is a field where you can adjust the number of discs to create from the selected data file.

Usually PoINT Publisher NG –Server recovers from certain errors by retrying the recording / printing process as long as discs are available. It is possible to limit the number of spare discs used for a job by selecting the 'Limited number of spare discs' control and by specifying the maximum number of spare discs.

Select the control 'Job has fixed number of discs in the input bin' if you want to use different pre-labelled discs for different

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jobs. The respective number of discs in the input bin of several "fixed jobs" must match the specified number in the corresponding jobs. Jobs with a fixed number of discs cannot follow jobs with a variable number of discs.

The verification functions and the default settings are described in detail in section '3.4 Verification'.

Printing

Printing is activated and the type of print information is selected by the controls at the top-most area of this property tab. When the Disc Image of the job includes print information, it is displayed on this tab. You may change these settings, or, if the Disc Image does not contain print information, you may add it here. Changes to the settings only affect the actual job but do not modify the Disc Image.

If you want that printing to the disc is done before recording, check the appropriate control.

If the autoloader is able to rotate discs to a marker on the disc before printing, you may switch on/off this function here for the selected job. By default, this control is set according to the setting in the Defaults dialogue.
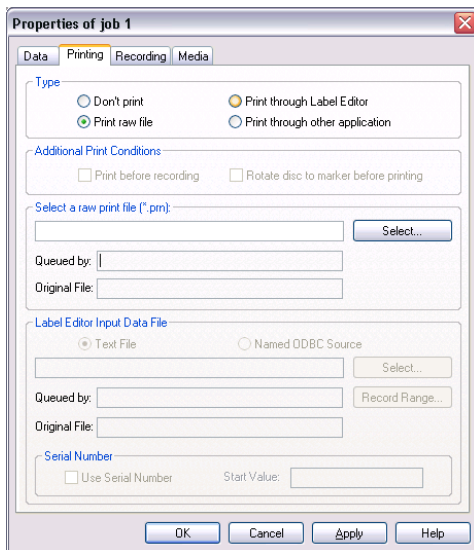
To select a file, click on the respective 'Select' button. A file selection dialogue will be opened and allows you to specify the target directory and the name of the imprint file, label editor format file, input data file, or command file. When you have completed the specification, click on 'Open' to return.

Print raw file

Here you may select and assign a raw print file (*.PRN).

Print through label editor

Here you may select and assign label editor format files (*.PLF or *.BTW) and, optionally, an input data file (*.DAT) or – when using BarTender - the description of a named ODBC source. Refer to the documentation of Bar-Tender for more information about ODBC.

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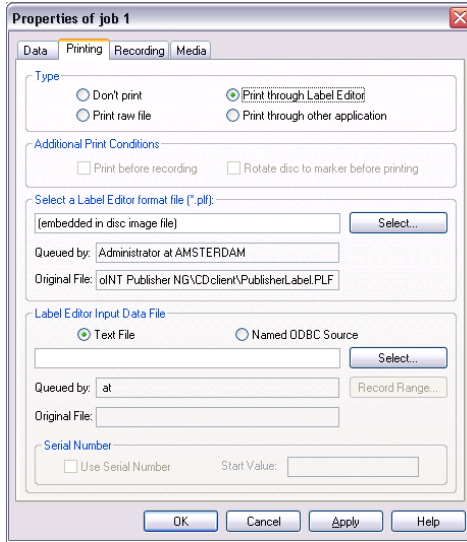
Please note that the "number of copies" should not be greater than the number of records in the optional input data file. Otherwise the last record will repeatedly be used for all copies beyond that limit.

As mentioned above you can determine the starting record of the input data file. Click on 'Record Range…' to display the 'Input Data Records' dialogue.

Records are numbered beginning at 0. You can suppress the automatic incrementing of the record numbers for each new disc (copy) of the job.

Usually, the field values that are inserted at the corresponding locations of the print file come from the input data file.

You can select a field that shall be supplied with a value specified in this dialogue instead of the input data. Then, this value is taken for all records (discs) of the job.

Fields are numbered starting at 1. Field number 0 disables the replacement. Select the 'delimitation' appropriate to the input data file.

Print through other application
> If you wish to use your own print program, you may specify a command which is executed as soon as the disc is loaded in the printer. This may either be another console or Windows program or a batch file. This function is part of the advanced print option.

The given command line is executed as is. Therefore the first argument must be a valid program name. Program and files names which contain blanks must be enclosed in quotation marks. Batch files shall be executed by a separate instance of CMD.EXE. The given command must not terminate before all data has been transferred to the printer (e.g. do not use the 'START' command in a batch file or on the command line, use 'CALL' instead).

PoINT Publisher NG - Server supports three special arguments which may be used on the command line. "%SN%" will be replaced by the serial number of the current disc. PoINT Publisher NG - Server starts counting at 0 for the first disc of each job, the number is increased by 1 for each successfully completed disc. "%PD%" will be replaced by the name of the configured printer. "%PP%" will be replaced by the port name of configured the printer.

Examples:

CMD /C C:\TEST.BAT %SN% executes batch file TEST.BAT with the serial numbers (0, 1, 2, 3, ...) as first argument.

CMD /C COPY C:\TEST.PRN %PP% copies TEST.PRN to the printer port (e.g. LPT1).

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C:\TEST.EXE "**%PD%**" executes TEST.EXE with the name of the printer as first argument. The name is enclosed by quotation marks because it often contains blanks.

Recording
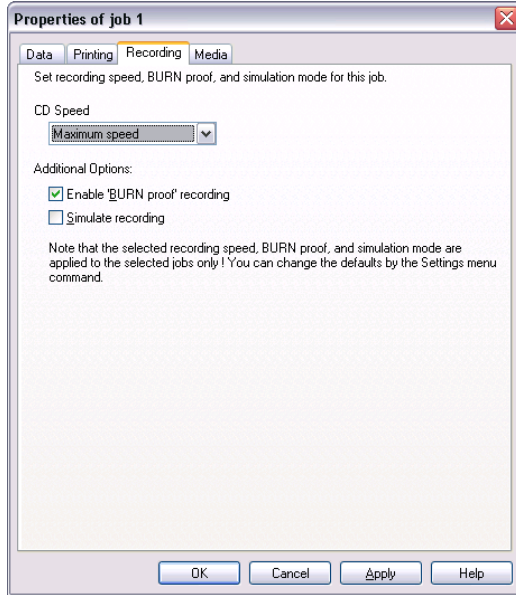
The Recording Options dialogue box allows to select the recording speed and to enable the BURN-Proof and simulation mode for the selected job. When 'Maximum Speed' is chosen, the individually highest speed for each recorder is used.

Usually the 'BURN-Proof' mode can always remain selected, since it does not effect recorders that do not support this function.

For a detailed discussion of the 'BURN-Proof' mode please refer to section 3.2, Recording Options.

The simulation of the writing process is performed by the recorder itself. The simulation mode helps to make sure that your hardware is well configured and operable before you start the actual recording process. You should perform a simulated recording of several discs when you have installed

PoINT Publisher NG - Server and before you start using the system.

The settings here affect the attributes of the selected job only.

Media
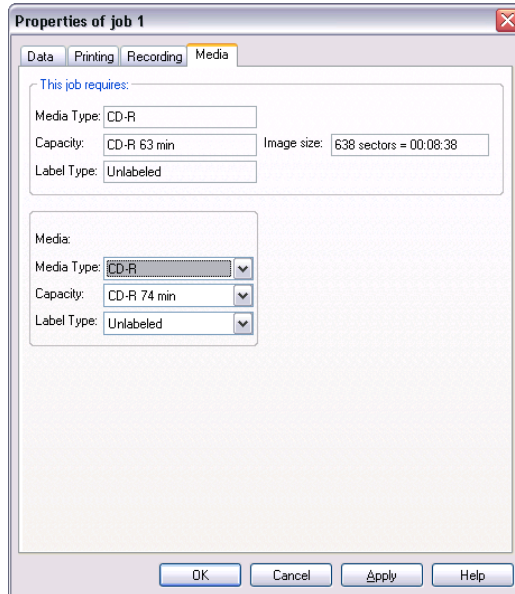
This dialog page presents the properties of the media the job requires. It also shows the media properties that are currently selected for the job and it permits to change them.

The required capacity is presented in three different ways:

- The standard media size that can be selected in the bin settings (e.g. CD-R 74 min) and that is large enough for the disc image.

- The length of the disc image specified as number of disc sectors.

- In case of CD-R media, the disc image size is also displayed in minutes/seconds/frames presentation.

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Since the label type is no requirement caused by the format or size of the data, the last selected label type is shown.

When a job is created, PoINT Publisher NG - Server searches the settings of the autoloader's bins for media that fulfil the job's requirements. If a matching bin is found, the actual media properties as set for the bin are selected in the controls.

The media type can be changed if the image file is a third-party image, i.e. if the media type is not given by the image file. Different capacities can be selected as far as these are larger than the job's image size. The label type can also be changed.

When a job is started for execution, PoINT Publisher NG - Server checks the selected media properties against the media in the autoloader's bins (the settings made in the 'Bins' dialog page of the 'Settings' command of the 'Configuration' menu). If no matching media are available, the job is immediately stopped. In the log file you will find what type of media is required for the job.

4.5 Loading Jobs from and Storing Jobs to a File

Jobs can be stored in a file. This means that all settings you have made in the job's properties dialog are written to the file. This does not include the contents of image or print files.

At a later time, you can load the file to create a job without having to select the various options again.

Job files have the file name extension 'JB' per default.

Note: You can load only those job files that have been created on the same computer. So, job files cannot be exchanged between server and clients.

4.6 Saving the Job Settings to a Disc Image File

Job settings can be saved to the job's image file. If a job was created from a Disc Image, all settings of a job, except those on the Recording Options dialogue page, can be saved back

to the Disc Image file. When the image is loaded later, the job will get these settings again from the Disc Image.

This function is especially useful if you want to change print files that are embedded in the Disc Image file. To do so, add a job with the image file to modify. In the print settings of the Job Properties dialogue, select the new print file(s). Then, select the job and use the menu function 'Save Job to Image File' from the Job menu to write the settings and the new print files back to the Disc Image file.

4.7 Editing the List of Jobs

Jobs can be removed by selecting the jobs, clicking the right mouse button and selecting 'Remove' from the context menu, or by the command 'Remove job' from the 'Edit' menu.

Another way to edit the job list is to use the 'Cut', 'Copy' and 'Paste' functions. Select one or more jobs and click the right mouse button to show the context menu and select the corresponding function from it. Select the job in front of which you want to insert the jobs and press the Paste command, or de-select all jobs to paste the jobs at the end of the job list.

Note that it is not possible to use a job for 'Cut' operations that is currently in progress.

Information about completed jobs may be deleted from the 'Job Status Window' by clicking on the 'Clear Display' command in the 'Edit' menu.

4.8 Controlling the Production Process

The production process is controlled by the 'Go', 'Go All' , 'Stop', and 'Stop All' commands of the 'Control' menu. The 'Go' and 'Stop' commands are also available via the 'Go' and 'Stop' buttons of the program status and control area.

The actual effect of 'Go' and 'Stop' depend on the selected jobs:

When none are selected, the commands start or stop only "own" jobs, i.e. jobs that the actual user created at the actual computer. When there are jobs selected, the commands affect the selected jobs.

Note that the 'Go' and/or 'Stop' commands may be inhibited dependent on the selection and the permissions for the user.

The 'Go All' and 'Stop All' commands operate on all jobs regardless of the currently selected jobs. These functions may also be disabled for certain users.

4.9 The Pause Button

When operator intervention at the autoloader is required, it may be necessary to inhibit further processing for a while and to make certain parts of the autoloader like input or output bins accessible to the user.

When the 'Pause' button is pressed "PoINT Publisher NG" tries to claim the autoloader for manual access. Depending on the actual situation you may need to try it several times. The 'Pause' button will be disabled and the 'Go' button will change to a yellow arrow. Then "PoINT Publisher NG - Server" hands over control to the operator who can use the 'Next Bin' / 'Recorders' / 'Printers' menu commands to turn the carousel or move the gripper to the required positions.

If your autoloader has several input bins that can serve as one sequence of bins, you may use the 'Reset Bins' menu command to re-start loading of media at the first bin. So, you can remove the media from the output bins, add new media to the input bins and let the production continue before the last bin is exhausted.

The availability of these functions depends on the type of autoloader. To release the autoloader for normal processing click on the 'Go' button.

4.10   List of Connected Clients

Select the command 'Connected Clients …' from the 'View' menu to view the list of connected clients to PoINT Publisher NG - Server.

If you cannot logon, because the licenses are exhausted, you may want to know the clients that are using them.

The list contains an entry for every client connected. The clients that are no more connected, but which have still jobs in the queue, are listed, too. In both cases, they occupy a client license

4.11   Behaviour in Case of Errors

"PoINT Publisher NG" continues the production of discs as far as possible. Only in case of serious errors (i.e. hardware errors) it stops and waits for the operator to solve the problem.

The behaviour in case of errors is described in the following.

Error during recording

If errors occur during recording or printing, the defective CD/DVD/BD is always rejected.

Malfunction of a single recorder

Recorders that do not function correctly are excluded at the time the malfunction is recognised.

Malfunction of the loader

PoINT Publisher NG - Server tries to keep the production process running as far as possible. In case of an unrecoverable malfunction, the production process is stopped at the time of the occurrence.

Disc loaded at starting time

Discs that were left in recorders are automatically unloaded and rejected at starting time.

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4.12   **Error Logging**

At every start of PoINT Publisher NG - Server it begins writing a new log to the log window and to a log file. The latter is created in the LOGFILES subdirectory of the installation directory of PoINT Publisher NG - Server. Its file name reflects the date and time of the start. From time to time you should remove old log files in order to free disk space.

In addition, a detailed log is written to LOGFILE.OUT residing in the installation directory of PoINT Publisher NG - Server. It is automatically created, if it does not yet exist. Information is always appended to the file. So it increases over time. You will get a warning at program start, when its size is greater than about 1 MB.

The log files both are pure text files.

In LOGFILE.OUT, information is recorded in chronological order. In the session specific log files and in the Log window, messages belonging to the processing of a single disc are put together.

The log files can be viewed by opening it with a text editor of your choice.

5 User Management

It may be desirable to restrict the functions that users of PoINT Publisher NG - Client can do or even to exclude users from using PoINT Publisher NG - Client at all. For this purpose PoINT Publisher NG - Server manages a list of users and their permissions.

The permission settings do not affect a user when using PoINT Publisher NG - Server. Everybody who can log on at a server and start PoINT Publisher NG - Server has all permissions.

Changes to the user list can only by done in PoINT Publisher NG - Server. To work with the user management, select the 'User Management' command from the 'Configuration' menu.
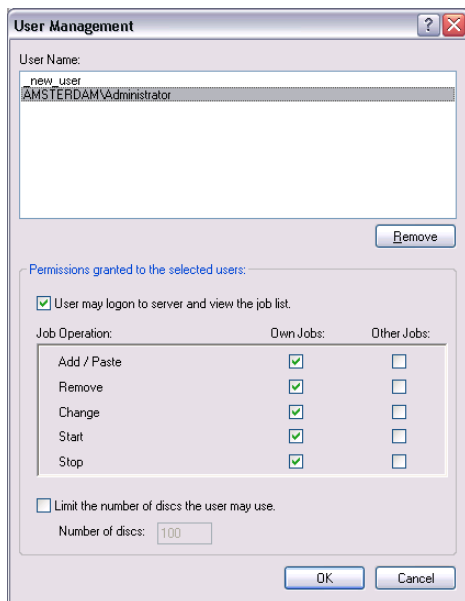
As soon as a user starts PoINT Publisher NG - Server or connects to it by PoINT Publisher NG - Client, the user is looked up in the user list. If he is not found, a new entry is made and the permissions are copied from a default. This is represented by the entry "_new_user" in the user list. It cannot be removed.

By un-checking the permission "Logon to server, view job list" of "_new_user" you can exclude new users from working with this software. "Own jobs" are jobs that were queued by the selected user.

When the "paste" option is not checked, the user can add jobs to the end of the job list, only. So, the jobs must be deselected to enable the "add job" command. When the "paste" option is checked, the user may add his own jobs at any place in the list and he may also copy/paste jobs of other users.

You can limit the maximum number of discs users may have queued in the job list: Check the "Limit to" option and enter the maximum number required for the user(s) selected.

6 User Notifications

You can specify users, computers or e-mail addresses which will be notified if one or more of the following happens:

- all jobs in the list have been completed without an error

- all jobs in the list have been completed, but an error occurred

- every job which has been completed without an error

- every job which has been completed with an error

- the system requires an operator action

- a device has been disabled because of a hardware problem.

Two different message types are supported:

NetSend
This function utilizes the Windows "net send" command which allows to send messages to computers or users in the LAN. To use this function, the Messenger Service must be running on both the local and the remote computer.

SMTP
This protocol allows to send messages to internet e-mail addresses. To use SMTP, a SMTP host and a sender address must be specified. The SMTP host should be configured to accept SMTP connections from the computer running PoINT Publisher NG - Server. Also, it must not require a SMTP-after-POP authentication. The sender address will be added to the generated e-mail, so that the recipient knows where the e-mail originates. It is not necessary to create a special e-mail account for PoINT Publisher NG - Server; you may also use your own.

Use the Add, Edit, or Remove buttons to modify the list of users. If the list is empty, no notifications will be sent.

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PoINT Publisher NG

Event Controlled Recording

Contents

About This Manual

Audience

This manual it intended for users working with "PoINT Publisher NG – Event Controlled Recording".

Organisation

The manual is organised as follows:

Chapter 1   Introduction
                   Presents an overview of PoINT Publisher NG - ECR.

Chapter 2   Setup and Using PoINT Publisher NG - ECR
                   Discusses the functionality of PoINT Publisher NG - ECR.

Chapter 3   PoINT Publisher NG - ECR Term
                   Explains unfamiliar terms.

Terms

While reading this manual you may come across terminology that has not been thoroughly explained. In such instances please refer to chapter 3 for ECR specific terms for clarification of unfamiliar terms.

Throughout this document "PoINT Publisher NG – Event Controlled Recording" will be called PoINT ECR.

Reference

For further reference material, please refer to the following additional documentation:

-   PoINT Publisher NG – Server,

-   PoINT Publisher NG – Client,

-   PoINT Publisher NG – SDK,

- README file.

1 Introduction

This section is an introduction to PoINT ECR. While reading the manual you may come across terminology that has not been thoroughly explained. In such instances please refer to the Appendixes in the back of the documentation for clarification of unfamiliar terms.

1.1 What is PoINT Publisher NG - ECR and what does it offer

PoINT ECR is intended as a tool for simplification and automation of the recording process in network environments. Therefore PoINT ECR makes it possible to record CD/DVD/BDs from any client in the local network without installing a builder application.

PoINT ECR supports different recording modes to produce discs. These modes depend on the needs of the user. It is possible to record the contents of a directory to discs every day at a specific time or when the directory contents reaches a specific amount of data (also known as watermark) or users may put together their discs independently and record at their own needs. PoINT ECR provides an easy way to configure the different conditions that may lead to the recording of a disc.

PoINT ECR allows to configure so called ECR Folders on an ECR Server. These folders will be shared over the local network and users may copy their files and directories directly to an ECR Folder over the network share. The ECR Folder will be observed by PoINT ECR for the fulfilment of the specified conditions and if the conditions come true a disc will be automatically created.

PoINT ECR provides a user interface for the configuration process. If all the different ECR Folders have been configured the application may run in the background without any user feedback. To get information about the recording process it is possible to inspect special log files that will be generated for every ECR Folder.

PoINT ECR provides a Wizard to create new ECR Folders. This makes it easy for new users to become familiar with PoINT ECR.

PoINT ECR does not write directly to a recording device. The production process will be performed in conjunction with the PoINT Publisher NG - Server as production server.

2 Setup and Using PoINT ECR

This section describes the how to setup and how to use PoINT ECR.

2.1 Running PoINT ECR for the first time

After you have installed the software, please start PoINT ECR from the **Job** menu of PoINT Publisher NG - Server.

The configuration dialog of PoINT ECR will be started.
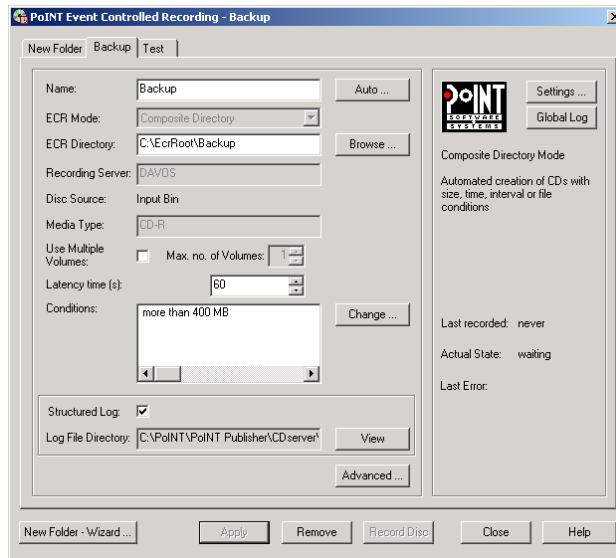
Fig. 2-1: Main Window of PoINT Publisher NG - ECR

The basic organisational unit used in Event Controlled Recording is the ECR Folder. It represents a directory on the ECR Server (the computer PoINT ECR is running on) and the network share that may be used to copy data to the server. All parameters and conditions may be set for the ECR Folder.

The configuration tool for PoINT ECR is organised as a tab control where each tab represents one of the ECR Folders. The first tab in the control may be used to create a new folder. If all settings have been made pressing the **Apply** button creates the new ECR Folder.

A much more convenient way to make the settings for a new folder is to use the New Folder Wizard that will be started by pressing the **New Folder** - **Wizard ...** button in the dialog.
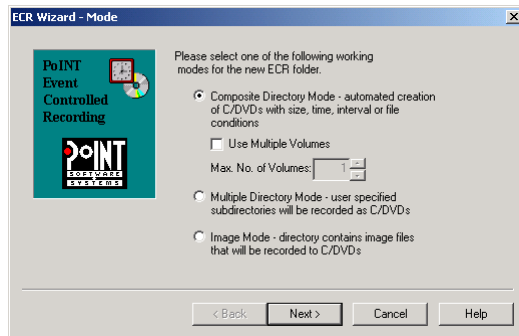
Fig. 2-2: New ECR Folder Wizard

The wizard guides the administrator through all the necessary steps to easily create an ECR Folder. Although, to get all the possible settings for the folder it is necessary to use the main dialog of the configuration tool.

After the new ECR Folder appears as an additional tab in the tab control, ECR is ready for recording and observes the directory in the background for the fulfilment of the specified conditions.

2.2   Configure an ECR Folder

The ECR configuration tool enables the administrator to change all the settings for an ECR Folder. To make any changes to an ECR Folder effective it is necessary to press the Apply button. The following short description explains all possible settings for an ECR Folder:

ECR Folder Name

The name for an ECR Folder may consist of up to 32 characters. Only the following characters are allowed for this: 'A'-'Z', 'a'-'z', '0'-'9', '_'.

The ECR Folder name acts as the share name in the local network. If the actual folder runs in Composite Directory the name is also used as title for the new disc. Therefore it is possible to specify additional place-holders in the folder name (date, time or sequential numbers). The replacement of these place-holders is called Automated Naming. "PoINT ECR" substitutes the actual settings for the place-holders and records the disc with this new title. For an additional explanation on this refer to section 2.7.

ECR Mode

The mode in which a special ECR Folder actually runs may be specified only at creation time and is valid through the whole lifetime of the folder. The administrator may choose between three modes:

- **Composite Directory Mode**: Repeated recording of one folder to disc (every day,...).

- **Multiple Directory Mode**: Creation of single discs.

- **Image Mode**: Recording of CD Image files or third party image files.

A more detailed description on the different modes will be given in section 2.4.

ECR Directory

The directory that will be shared over the local network. All virtual CDs or image files for this ECR Folder are put in this directory. If the name of the directory is unknown it is possible to browse for it (**Browse** button).

Recording Server

From the list select the server instance that shall process the jobs of the ECR Folder.

Media Type

ECR provides the possibility to specify which type of discs should be used for recording, CD-R, DVD-R, DVD+R, DVD-R DL (double layer), DVD+R DL (double layer), BD-R, or BD-RE. To select the media type, press the 'Advanced' button and choose the 'Media' tab in the 'Advanced Options' dialog.

Use Multiple Volumes

This feature is available in Composite Directory Mode only. When checked, the contents of the folder may contain more data than fit on a single medium. Therefore, the data is recorded on as many volumes (discs) as are needed. The maximum number of volumes can limited. Please refer also to 2.4.4.

Latency time

The latency time specifies the time in seconds (>10) that has to be elapsed between the last change in the directory and the recording of the disc. This parameter is very important to prevent the creation of discs that have not been fully copied to the ECR Directory.

Conditions

This box contains all the conditions that apply to the actual ECR Folder. To add/remove/change conditions it is necessary to use the condition dialog described in section 2.6.

The condition dialog may be accessed by pressing the **Change** button.

Log-File

Information about errors and other events are stored in log

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files.

Earlier versions of "PoINT ECR" had a single log file per ECR Folder. Now, every time an ECR condition comes true, a new log file is created where the messages go to that occur during the creation and execution of the recording job. Every event gets a unique ID and a time stamp by which the log file can be identified

When you press the View button of an ECR Folder you will get a sorted list of events representing the log files of the folder. The icon indicates whether the job

→ is not yet completed

ⓘ was successfully completed

⚠ caused warning messages

🛑 ended with errors.

You can select a file to view its contents or to remove it. The naming and the location of the log files is maintained by PoINT ECR.

This is the recommended use of log files.

However, if you prefer to use the old method, you may clear the 'Structured Log' check box. Then it is possible to enter the name for the new log file or to browse for it (**Browse** button). If no directory is specified the actual working directory of PoINT ECR will be used.

If the ECR Folder has been created the **Browse** button changes to a **View** button. Pressing this button starts a special viewer application or the Windows notepad.

To view the state of the different ECR Folders the administrator may use the global log-file. Whenever an error occurs a message is written to this file indicating in which folder the error occurred. Also, errors that are not specific to a folder are logged here. To view this file simply press the **Global Log** button in the main dialog.

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An Options Dialog is available that contains different additional options. Please refer to section 2.2.1 for a description.

If an ECR Folder is no longer used it is possible to remove it by pressing the **Remove** button.

2.2.1   Sample ECR Folder

Imagine the employees of the sales department of your company want to daily store bills on CD. To do so it would be possible to collect all documents, format and write a CD every day. Instead you could use 'PoINT ECR' in ' Composite Directory Mode' to do this automated.

The only thing to do is to enter the following settings under the 'New Folder' - Tab of the Main Configuration Dialog of ''PoINT ECR':

Name: Bills_%D (%D is used to add the date to the name of the CD)
ECR Mode: Composite Directory
ECR Directory: "C:\EcrBase\Bills"
Latency Time: 300   (5 min)
Simulate Recording: Off
Create Joliet CD: On
Remove Data after Rec.:   On

Now press the "Change" button for the condition dialog and enter the following condition:

"more than 600 MB"

Now close the condition dialog and press the "APPLY" button in the Main Configuration Dialog.
The ECR Folder is ready and users may copy their data over the network. CDs will be created if the directory contains more than 600 MB. Depending on the actual date the different CDs will get the names: 'Bills_19980808', ''Bills_19980809', ...

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2.3   ECR Folder - Advanced Options Dialog

Different options for an ECR Folder can be specified by this dialog. To enter the dialog simply press the Advanced ... button in the main dialog. There three dialog pages with options for data, printing, and recording.

Data
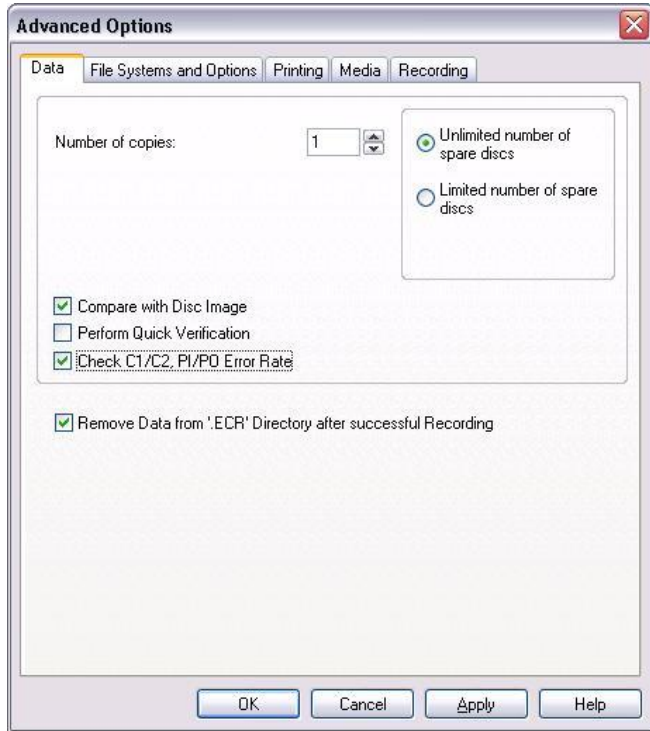
Fig. 2-3: Advanced Options 'Data' Dialog

Number of copies:

Normally PoINT ECR only creates one copy of the original data. To make more than one copy it is possible to enter the number in the Edit Field.

You may want to define how many spare discs PoINT Publisher NG – Server" shall use in the case that recording errors occurs (e.g. caused by bad media).

Unlimited number of spare discs:
You may want to define how many spare discs PoINT Publisher NG – Server shall use in the case that recording errors occurs (e.g. caused by bad media).
PoINT Publisher NG – Server will do any number of retries until the requested number of media is produced. Nevertheless, the number of retries may be limited by settings in the 'Autoloader' dialog PoINT Publisher NG – Server.

Limited number of spare discs:
When the specified number of discs is exhausted and the requested discs are not yet done, the job will terminate with an error.

Compare recorded discs of job with Disc Image:
If this option is enabled the complete disc will be compared against the source data to verify that the recording was correct.

Perform Quick Verification:
If this option is enabled PoINT Publisher NG will perform a quick verification of recorded data after writing of a session.
Refer to the PoINT Publisher NG – Server documentation for more detailed information about this function.

Check C1/C2, PI/PO Error Rates:
If this option is enabled PoINT Publisher NG will check the C1/C2 or PI/PO error rates of a recorded CD or DVD. Refer to the PoINT Publisher NG – Server documentation for more detailed information about this function.

Remove Data from '.ECR' Directory after successful Recording:
Specifies if recorded files and directories should be removed after successful recording. Initially this option is turned on.
If the 'ECR Folder' runs in 'Image Mode' this option is not accessible. In this case the image files are always removed.

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File Systems and Options
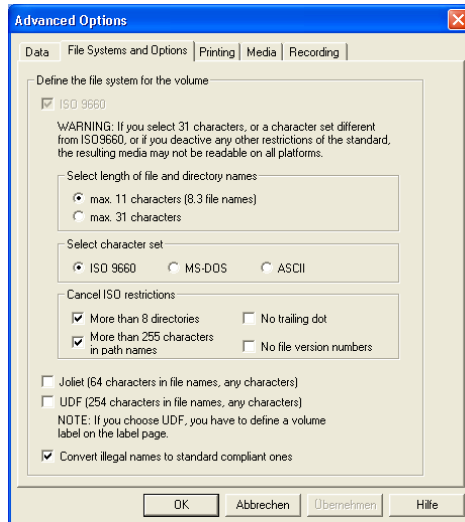
Fig. 2-4: Advanced Options 'File Systems and Options' Dialog

This page allows to specify the file system for the disc. You can select more than one file system. At least one file system has to be selected.
For ISO 9660 you can also specify additional Options.

ISO File System

> This file system is supported on all operating system platforms if recorded using interchange level 1.
> However, it is the most restrictive one:
> - Max. 11 characters for file names (8.3 file names), directory names must not have an extension.
> - Only the characters '0-9', 'A-Z' and '_' are allowed.
> - The number of directory levels is restricted to 8, including the root directory.
> - The maximum path length is limited to 255 characters, including directory separators (i.e. '\').
> - Furthermore, the maximum number of directories is limited to 65536.
> These restrictions can be relaxed by the options below, but the resulting discs may not be readable on all platforms.

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The maximum length of file and directory identifiers depends on the selected Interchange Level of the ISO 9660 standard:

Max. 11 characters (Interchange Level 1):

The maximum length of file and directory names is 8 characters. The maximum length of the file name extension is 3 characters. Directory identifiers cannot have an extension.

Max. 31 characters (Interchange Level 2):

The maximum length of file and directory identifiers is 31 characters. In case of file identifiers, it includes name, dot (.) and extension. Directory identifiers cannot have an extension. The length of the file name or else of the extension may be zero.

This option – though compliant with the ISO 9660 standard – may result in discs not being readable on all platforms.

Character sets:

ISO 9660:

Only the characters '0-9', 'A-Z' and '_' are allowed for file and directory identifiers. In addition a dot (.) separates the extension from the name of file identifiers.

MS-DOS:

This option extends the number of allowed characters to those permitted for file and directory identifiers in Microsoft MS-DOS. Directory identifiers may have an extension. Small letters are converted to capital letters. Especially the language specific characters of many European languages are part of the extension. Please note that language specific extensions highly depend on the selected code page(s) of the target system. Wrong characters may be displayed in case that the code pages do not match.

The following characters are not allowed: The control characters (codes 0 through 31), and the characters '*', '/', ':', ';', '?', '\' '<', '>', '|', '+', '=', '@', '[', ']', '^', '{', '}', '~', and rubout (code 127).

This option may result in discs not being readable on all platforms.

ASCII:

> The differences to the option above (MS-DOS) are:
> Small letters are not converted to capital letters and the characters '+', '=', '@', '[', ']', '^', '{', '}', '~', and rubout (code 127) are allowed.
> This option may result in discs not being readable on all platforms.

Further restrictions can be cancelled by the options below. Note that these may result in discs not being readable on all platforms

More than 8 directories:

> When activated, the number of directory levels is not restricted to eight. It is limited by the maximum path name length, only.

More than 255 characters in path names:

> When activated, the maximum path length is 1023 instead of 255 characters.

No trailing dot:

> File identifiers that have no extension shall be recorded with a dot (.) at the end according to ISO 9660. On platforms that allow names with and without a trailing dot this may cause problems.
> When activated, the trailing dot is omitted.

No file version number:

> The file version number which follows the file identifier of an ISO 9660 file system is omitted when this option is selected.

Joliet File System

> This file system extends the number of allowed characters and additionally supports long file and directory names of up to 64 characters per name. The control characters (codes 0 through 31), and the characters '*', '/', ':', ';', '?', '\' are not allowed.
> The number of directory levels is not limited, but the maximum path length is 240 characters.
> Please note that the created discs can only be read on

target systems supporting the Joliet extension of ISO 9660.

UDF File System

This file system allows any characters and additionally supports long file and directory names of up to 254 characters per name. The number of directory levels is not limited, but the maximum path length is limited to 1023 characters.

Please note that the created discs can only be read on target systems supporting the UDF file system.

Convert illegal names to standard compliant ones:

When activated, illegal file names are automatically converted to legal names instead of rejecting them with an error message.

Note: If you choose UDF, you have to define a volume label on the label page.

Warning: If you select any options other than 'Max. 11 characters', 'ISO 9660' character set, of options that 'cancel ISO restrictions', the resulting media may not be readable on all platforms. Also, not all platforms support the Joliet or the UDF file system.

Printing
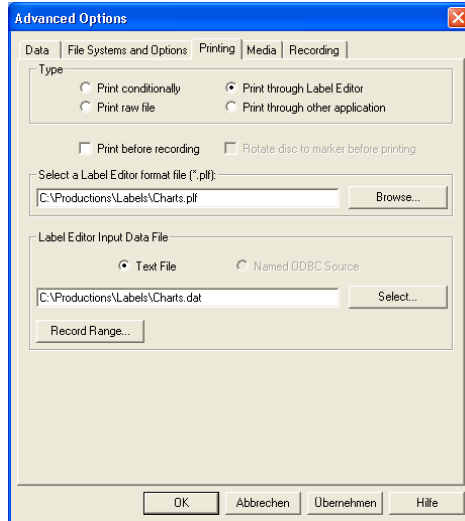
Fig. 2-5: Advanced Options 'Printing' Dialog

Printing is activated and the type of print information is selected by the controls at the top-most area of this dialog page. When the Disc Image of the job includes print information, it is displayed in this dialog. You may change these settings, or, if the Disc Image does not contain print information, you may add it here. Changes to the settings only affect the actual job but do not modify the Disc Image.

Prerequisite for the use of print functions an existing connection to a recording server that supports printing. In particular, the availability of the appropriate license and of a label editor control which settings are possible.

Printing is activated and the type of print information is selected by the controls at the top-most area of this dialog page. When the Disc Image of the job includes print information, it is displayed in this dialog. You may change these settings, or, if the Disc Image does not contain print information, you may add it here. Changes to the settings only affect the actual job but do not modify the Disc Image.

Print conditionally:

When this option is selected, printing is done depending on the following conditions:

- The file name, without a file name extension, is specified in this dialog. If no file name is given, printing is switched off.
  The file name may contain wildcard characters (* and ?).

- A print file with the specified name and the extension '.PRN', '.PLF', or '.BTW' is found, when the ECR condition comes true.
  In Composite Mode, 'PoINT ECR' looks for print files in the ECR directory; in Multiple Directory Mode, it looks in the subdirectory of the ECR directory.
  E.g.:
  Composite Mode:
  If the ECR directory is 'C:\EcrRoot\MyComposite' and the name of the print file is 'MyLabel', 'PoINT ECR' searches C:\EcrRoot\MyComposite for files called 'MyLabel.PRN' or 'MyLabel.PLF' or 'MyLabel.BTW'.
  Multiple Directory Mode:
  If the ECR directory is C:\EcrRoot\MyMultiple and you put a directory called 'MyDisc' into C:\EcrRoot\MyMultiple, 'PoINT ECR' searches C:\EcrRoot\MyMultiple\MyDisc for the print file.

Depending on the file name extension ('.PRN', '.PLF', '.BTW') of the file found, raw printing or printing by the appropriate Label Editor is done. In case of a '.PLF' or '.BTW' file, 'PoINT ECR' also uses a '.DAT' file as input data file, if there is any. For more information about input data file, please refer to the documentation of the Label Editor.
In Multiple Volume Mode the volume number can be printed by special items in the input data file as

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described below (Print through Label Editor).
If no print file is found, the disc will be produced without printing a label. Print files found in the ECR Directory will be removed after successful completion of the job.

Files with the extension '.PLF' or '.BTW' are ignored if the server does not support the appropriate label editor, whether it is not installed or it is not configured or it is not licensed at the server.

In Image Mode, printing is either switched off, or, when on, 'PoINT ECR' looks in the ECR directory for a print file with the same file name and extension '.PRN' or '.BTW'.
E.g.: When the image file 'MyImage.CD' is put in the ECR directory C:\EcrRoot\Img, 'PoINT ECR' searches C:\EcrRoot\Img for the files 'MyImage.PRN', 'MyImage.PLF', and 'MyImage.BTW'. If a '.PLF' or '.BTW' file is found, it also uses 'MyImage.DAT', if present.

Note: In Multiple Directory Mode, the print file is placed in the directory that represents the root directory of the disc. If a file is taken as print file, it is not included in the data that is recorded.

Raw print file:
By selecting this option, you can specify an absolute location of a raw print file. This file will not be removed by PoINT ECR.
Appropriate raw files are created by first designing an imprint in an arbitrary application (Microsoft Paint or WordPad or any suitable program). This imprint is then printed to a file through a printer driver which is compatible to the printer of your production environment. The resulting file (*.PRN) can then be selected here.

Print through Label Editor:
By selecting this option, you can specify an absolute location of a Label Editor format file. This file will not be removed by PoINT ECR.
Appropriate Label Editor format files are created by the Label Editor. These files usually end in *PLF or *.BTW.

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Optionally, an input data file (*.DAT) or a named ODBC source may be used in combination with the format file. ODBC is not supported with '.PLF' files (PoINT Label Editor files).

The input data file is a text file organized in a number of lines. Each line contains items for placeholders in the format file. Before a disc is printed, the format file is updated with items from one line. The first line is used for the first disc of the job, the second one for the second disc and so on.
Please refer to the Label Editor documentation for more information about ODBC.

Files with the extension '.PLF' or '.BTW' are ignored if the server does not support the appropriate label editor, whether it is not installed or it is not configured or it is not licensed at the server.

The 'number of copies' specified on the Data page of the Properties dialogue must not be greater than the number of lines in the input data file.

If Multiple Volume Mode is activated, you can print the volume number onto the discs. The character strings ### and $$$ are reserved for this purpose. Each occurrence of ### in the input data file is replaced by the volume number and each occurrence of $$$ is replaced by the total number of volumes.
Example:

"Disc ### of $$$"

For the fourth disc of a set of 10 discs the resulting item will be:

"Disc 4 of 10".

Print through other application:
If you wish to use your own print program, you may specify a command which is executed as soon as the disc is loaded in the printer.

To select a file click on the respective 'Select' button. A file selection dialogue will be opened and allows you to specify the target directory and the name of the imprint file, Label Editor format file, Input Data file, or command file. When you have completed the specification, click on 'Open' to return.

Print before recording:

Check this control if label printing shall be done before recording. When unchecked, recording is done first.

Rotate disc to marker before printing:

If the autoloader is able to rotate discs to a marker on the disc before printing, you may switch on/off this function here for the selected job.

Record Range:

Press this button when you want to select the starting record or provide field data when using an input data file. The Input Data Records dialog is then displayed.
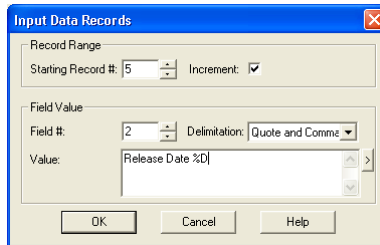
Fig. 2-6: Input Data Records Dialog

Starting Record #:

When supplying the Label Editor with records from an Input Data File "PoINT Publisher - Server" starts at record number 0 by default. You may specify any other starting number within the range of records in the file. Records are numbered beginning with 0.

Increment:

Disable this option if you want to use the same record for all discs of the job.

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You may want to replace a field in the input data by another value than in the file. You can specify no more than one field.

Field #:

Field number 1 is the left most position in a record. The value 0 means that the replacement is switched off.

Delimitation:

Select the method of field delimitation appropriate to the one used in the Input Data file.
Note: PoINT Label Editor supports "Quote and Comma" delimitation, only.

Value:

Enter the text that shall replace the field.
To simplify the insertion of place-holders (see Automated Naming), you may press the button at the right of the Edit Field to select a place-holder from a menu.

Recording
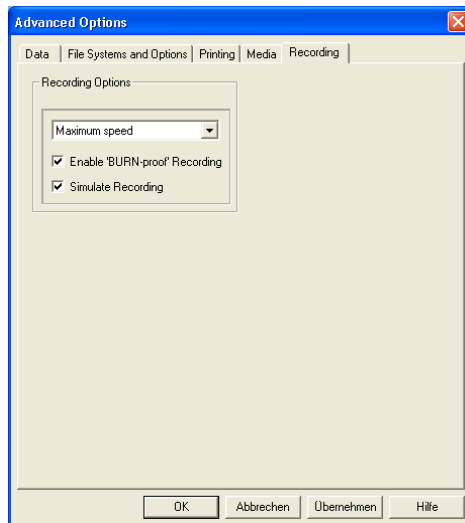
Fig. 2-7: Advanced Options 'Recording' Dialog

Recording Speed:

You can select the desired recording speed here. If

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'Maximum Speed' is chosen, the recording is done with the highest speed the recorder is capable of.

Enable 'BURN'-proof Recording:

'BURN'-proof mode is usually enabled, since it affects only those recorders that support this mode. Please refer to the PoINT Publisher NG – Server documentation for details about the 'BURN'-proof technology.

Simulate Recording:

To test the different settings and conditions the folder may run in simulation mode where all recording will be done only simulated.

Media
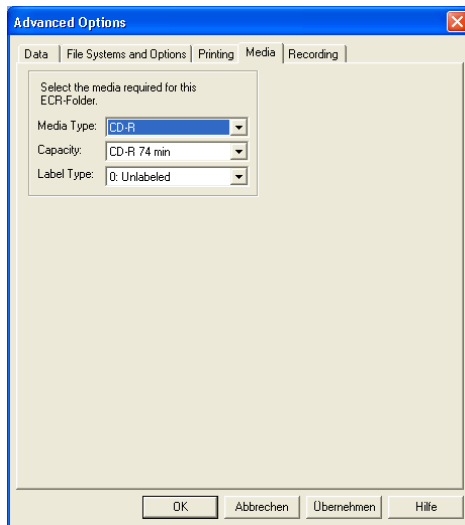
Fig. 2-5: Advanced Options 'Media' Dialog

In this dialogue you can choose the type of media, its capacity as well as the label type. If the required media is not available when the ECR condition comes true, the job is aborted with an error.

2.4   Recording Modes

PoINT ECR supports three different modes for recording. These modes differ in the way discs are produced from the files and directories in the ECR Folder. It depends on the needs of the user which mode is most convenient.

2.4.1   Composite Directory Mode

This mode is very useful for people who want to produce discs together in intervals of time or for automated systems that automatically store data files and want to record these files at a specific point of time.

Imagine the employees of the sales department of your company want to store bills on disc daily. To do so it would be possible to collect all documents, format and write a disc every day. Instead you could use PoINT ECR in Composite Directory Mode to do this automated.

The only thing to do is to create a new ECR Folder in Composite Directory Mode, specify a size and a time condition (see also 2.6) and tell the people in the sales department to copy the bills to the network share on the ECR Server.

If you enable Multiple Volume Mode the amount of data put in the folder's directory (network share) may be larger than the capacity of a single medium. The data is recorded onto as many volumes (discs) as are needed. Please refer also to 2.4.4.

2.4.2   Multiple Directory Mode

To give the users in your company the possibility to produce discs at their own it is possible to use PoINT ECR in Multiple Directory Mode.

In this mode every user may produce its own disc by performing the following three steps:

1. Create a subdirectory in the ECR Folder (seen over the network share), the new Disc Directory.

2. Copy all files and directories to the directory (the name of the Disc Directory will be the title for the new disc).

3. Wait until PoINT ECR records the disc.

PoINT ECR doesn't start immediately to record the disc, instead it waits a specific amount of time to ensure that all the files have been fully copied to the disc directory (see Latency Time in 2.2).

2.4.3 Image Mode

This mode is most convenient for people who want to use their own formatting tools or work on other platforms than Windows, e.g. Apple or UNIX, to produce discs with PoINT ECR.

In this mode it is only necessary to copy the prepared disc images to the ECR Folder. PoINT ECR ensures that the images have been fully copied and starts to record discs.

2.4.4 Multiple Volume Mode

This is a special operating mode in Composite Directory Mode. If activated, the amount of data put in the folder's directory (network share) may be larger than the capacity of a single medium. The data is recorded onto a set of as many volumes (discs) as are needed for the data.

The discs of such a set get different volume names. The volume name is composed of the regular name as described in sections 2.2 and 2.7 to which an underscore character ("_") and the volume number are appended.

The maximum number of volumes can be limited. When the specified condition comes true, the contents of the folder's directory are split up according to the capacity of the media used with the folder. If the number of volumes required exceeds the selected maximum, further processing of the

folder is halted and a message box is displayed. You can now decide whether the total job shall be cancelled or whether the maximum shall be ignored. In the latter case processing continues and all data are recorded.

Note: The message box is displayed on the server computer where "PoINT ECR" is running, but not at the clients which use the network shares.

Restriction: There is an upper limit of 99 volumes.

2.5 Media Type

You can chose between CD-R, DVD-R, DVD+R, DVD-R DL (dual layer), DVD+R DL (double layer), BD-R, or BD-RE media, several capacities and label types in the 'Advanced Options' dialog. Note that the required media must be available in one of the autoloader's bins when the ECR condition comes true and the job is created. If not, the job will be deferred until the media are available.

2.6 Conditions for ECR Folders

PoINT ECR supports different kinds of conditions to configure the events that lead to the production of a disc. The following table (Tab. 2-1) compares the different modes with the conditions that may be specified.

	Mode		
	Composite Directory	Multiple Directory	Image
Time Condition	x	-	-
Interval Condition	x	x	x
Size Condition	x	x	-
File Condition	x	-	-

Tab. 2-1: ECR-Conditions

The different conditions may be configured for an ECR Folder. To use more than one condition it is possible to combine the different conditions by logical operators (AND/OR).

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To enter conditions for an ECR Folder a configuration dialog (Fig. 2-6) is supported that enables the administrator to combine different conditions.
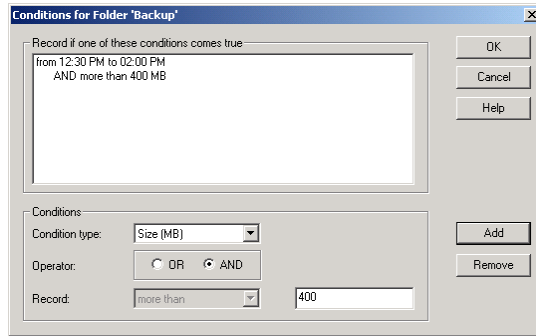
Fig. 2-6. Condition Configuration Dialog

To enter a new condition simply select the new settings and press the **Add** button and to remove a condition select the condition in the list box and press the **Remove** button.

The following conditions may be used for ECR Folders:

Time Condition
– **Once a Hour:**   A disc will be recorded once every hour.
– **Once a Day:**   A disc will be recorded once every day.
– **Once a Week:**   A disc will be recorded once every week at the specified weekday.
– **Once a Month:**   A disc will be recorded once every month.

Interval Condition
A disc will be recorded only between the start and end time of the interval.

Size Condition
– **more than:**   the disc will be recorded if the directory contents reaches the specified amount of data in MB.

File Condition

- **file must exist:** the disc will be recorded if the given file exists (file name has to be an absolute path).

Note: "PoINT ECR" always uses an implicit Size Condition (more than 0 MB) to prevent the recording of empty discs.

2.6.1 Sample Conditions

The following sample conditions may be used to configure 'PoINT ECR' for the first time or to learn more about the basic conditions.

Situation	Conditions
Record CD at a specified size	"more than XX MB"
Record CD at a specified size but only once a day	"more than XX MB" AND "once a day"
Record CD at a specified size but only between 8:00 PM and 11:00 PM	"more than XX MB" AND "from 8:00 PM to 11:00 PM"
Record a CD if no files have been added for 10 minutes	set Latency Time to 600 s "more than 0 MB"

2.7 Automated Naming

In Composite Directory it is possible to specify additional place-holders for the ECR Folder name. This could be necessary if the ECR Folder is used to produce more than one disc because the title for the new disc is always the ECR Folder name.
If no Automated Naming is used every disc created by the same ECR Folder will get an equal name.

The following table (Tab. 2-2) shows the different place-holders that may be used for Automated Naming. The sample

in the right column shows the original name of an ECR Folder combined with a place-holder and the resulting name.

Place-holder	Description	Sample
%D	the actual date 'YYYYMMDD'	TestECR%D TestECR19980901
%T0	short time 'HHMM'	TestECR%T0 TestECR0912
%T1	long time 'HHMMSS'	TestECR%T1 TestECR091231
%S	sequential number 'xxxx'	Test_%S_ECR Test_0005_ECR

Tab. 2-2: Place-holders for Automated Naming

To simplify the process of defining new place-holders a configuration dialog for this is supported. This dialog simply adds/removes the place-holder to/from the ECR Folder name.
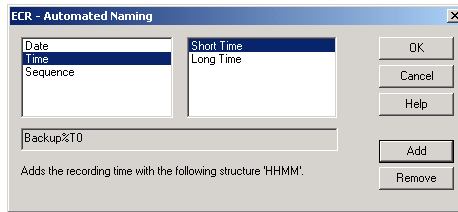
Fig. 2-7: Configuration for Automated Naming

To add a place-holder to the ECR Folder name simply select the matching one in the list boxes and press the **Add** button. To remove the last place-holder in the name simply press the **Remove** button.

Of course it is possible to enter a new name for the ECR Folder with the suitable place-holders direct to the edit field in the ECR configuration dialog.

Note: ECR only accepts names that follow the correct syntax for Automated Naming.

2.8   **Recording of an ECR Folder**

When the conditions for an ECR Folder become true the recording process for this folder starts. Depending on the type of ECR Folder different actions take place.

Composite Directory Mode

The share for the ECR Directory is removed and the directory is moved to the 'EcrDirectoryName.ECR' directory. The original directory is created again and shared over the network by its original share name. A user in the network only recognises that the directory is suddenly empty.
"PoINT ECR" now creates a job and instructs "PoINT Publisher – Server" to produce the media. If the recording has been successful and the **Remove Data from '.ECR' ...** option has been enabled the original data will be removed. Otherwise the data for this folder remains in the '.ECR' directory and may be accessed over the network.

Multiple Directory Mode

If the conditions for one of the virtual discs are fulfilled the subdirectory is moved to the 'EcrDirectoryName.ECR' directory. PoINT ECR creates a job and instructs PoINT Publisher NG – Server" to produce the media. If the recording completed successful and the **Remove Data from '.ECR' ...** option has been enabled the original data is removed otherwise it remain in the '.ECR' directory.

Image Mode

PoINT ECR moves the image files to the temporary recording directory ('EcrDirectoryName.ECR') and creates a job and instructs "PoINT Publisher – Server" to produce the media.
Depending on the **Remove Data from '.ECR' ...** option the original images will be removed from the '.ECR' directory after successful recording.

2.9 Global Settings

To specify different global settings PoINT ECR has a **Global Settings** dialog box. To access this dialog please use the **Settings ...** button in the main dialog of PoINT ECR.
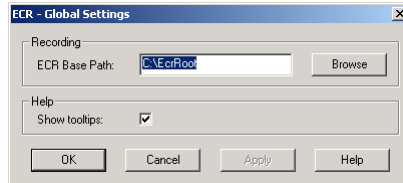
Fig. 2-8: Global Settings dialog box

ECR Base Path

Specifies the base path for all ECR folders. The default setting for the disc directory of a new ECR Folder is always a subordinate directory of this base path.

Show Tooltips

If this option is enabled tool tips will be displayed for most of the dialog elements.

2.10 Errors

Whenever an error occurs a message is written to the global log file indicating in which folder the error occurred. Also, errors that are not specific to a folder are logged here. The global log file can be accessed by pressing the **Global Log** button in the main dialog. See also section 2.2.

2.11 Macintosh Network Shares

PoINT ECR can be applied to network environments with Apple Macintosh clients and a Windows system running PoINT Publisher and PoINT ECR.

However, please observe the following restrictions:

– PoINT ECR does not automatically create and remove shares for Macintosh clients. Therefore, you have to add

the Macintosh share manually after the creation of the ECR folder.

– Composite Directory Mode is not supported for Macintosh shares. You should not create a Macintosh share for a Composite Directory Mode folder since recording cannot start before the Macintosh share is removed.

– Files or directories with the attribute 'hidden' that are put in an ECR folder are ignored. Hidden files or directories in subdirectories of an ECR folder are handled as normal files or directories.

2.12 Restrictions

PoINT Publisher - Server must be installed on a computer running Windows, if you want to use Event Controlled Recording (ECR). Also, a network protocol must be installed on the computer.

Files or directories with the attribute 'hidden' that are put in an ECR folder are ignored. Hidden files or directories in subdirectories of an ECR folder are handled as normal files or directories.

3 ECR Terms

Automated Naming
> Process of specifying additional place-holders for the ECR Folder name that will be substituted if a new disc is created (only accessible in Composite Directory Mode).

Disc Directory
> Contains an individual disc. All files and directories located in a Disc Directory will be recorded to one destination disc. Depending on the actual mode of the ECR Folder the Disc Directories may be subordered directories or the ECR Folder itself.

ECR Condition
> May be time, size or file conditions. ECR Conditions are used as an indicator for the recording of a disc. Multiple ECR Conditions may be combined by AND or OR operators to a more complex conditional expression.

ECR Folder
> Shared directory in the local network which contains the Disc Directories that represent individual discs (disc). There exist three different modes in which an ECR Folder may work which differ in the number of contained discs and the way discs will be recorded.

> **Composite Directory Mode**
>> The ECR Folder contains the directory structure for the whole destination disc. In this mode the ECR Folder is equal to an Disc Directory. Different ECR Conditions may be specified including time, interval, size or file conditions.

> **Multiple Directory Mode**
>> The ECR Folder may contain more than one disc. Each individual disc is represented by its own Disc

Directory (subdirectories located in the ECR Folder).
The name of the subdirectory will be the label for the
disc. Size and interval conditions may be specified for
this type of ECR Folder.

Image Mode

In this mode the ECR Folder acts as a container for
Image files or third party image files. The image files
will be recorded by "PoINT Publisher Server" when
they have been copied to the ECR Folder. In addition
interval conditions may be specified for this type of
folder.

Multiple Volume Mode

This is a special operating mode available in
Composite Directory Mode, only. It permits the
amount of data to record to be larger than the media
capacity. So, it distributes the data onto as many
volumes (discs) as are needed.

ECR Server

The computer in the local network on which PoINT ECR
is running.

Event Controlled Recording

The process of defining ECR Folders, Disc Directories and
ECR Conditions to record discs.

Image File

PoINT ECR allows to use all image files that are supported
by PoINT Publisher NG - Server.

PoINT Publisher NG

Software Development Kit

PoINT Software & Systems GmbH

Contents

4

1 Abstract

The Software Development Kit for PoINT Publisher NG, called "PoINT Publisher NG - SDK" is an extension to the interactive versions of PoINT Publisher NG.

"PoINT Publisher NG - SDK" adds batch processing functionality to PoINT Publisher NG, so that definitions including printing and number of copies as well as sources (directory tree, Disc Image) and order of jobs for PoINT Publisher NG can be controlled by external programs. The creation of Disc Images from the source files is performed when needed, and the Disc Images may automatically be removed from temporary drives when the corresponding job is finished. This significantly reduces the required free space on local hard disks.

Batch processing is controlled by Job Lists. A Job List consists of a number of statements which are stored in an ASCII text file. The processing of Job Lists can be initiated at the server or at the clients.

By "PoINT Publisher NG - SDK" you can create bootable CDs. There is a tool to simplify the creation of boot images.

2 Program Start

To submit a Job List, start the program CDsdk with the command line argument **/List** (or /L) followed by the name of the Job List file. You may either append a fixed command line argument to the command line in the Properties dialog of the program icon of CDsdk, or you may start CDsdk with argument from another program (including Basic programs) or Windows batch file.

CDsdk can also be started on the server and on a client computer. In both cases start CDsdk with the name of the Job List file and the computer name of "PoINT Publisher NG – Server" as command line arguments:

Example:

CDsdk /List C:\MyJobs\JOBS.PJL /Computer SERVER_PC

Processing of a particular Job List is completed when the started CDsdk terminates.

If multiple "PoINT Publisher NG – Server" instances are running on a computer, you can specify the server instance that shall process the Job List.

Example:

CDsdk /Inst 2 /List C:\MyJobs\JOBS.PJL /Computer SERVER_PC

Please note that it is possible for you and the initiating program to read a Job List file and contained status information while the file is being processed, but it is not possible to write to and change the Job List file at this time. It is also not possible to start one Job List file more than once at a time.

Any number of different Job List files can be active at a time and in parallel, and, thus, any number of CDsdk instances can be started. Job List files are processed according to the starting order of "PoINT Publisher NG – Server" instances.

These instances are not visible to users. They automatically launch one central instance of "PoINT Publisher NG – Server" which is visible on the desk top and is responsible for the actual processing of all Job Lists.

If exceptional states occur in "PoINT Publisher NG – Server" during processing of a particular job (e.g. no more empty CDs available, autoloader failure) which require operator intervention, these states are displayed to the user by the central instance of "PoINT Publisher NG – Server" and, in addition, are reported to the initiator by an optional state field (OIRequest) in the Job List file. In such cases, you may intervene by means of the user interface of "PoINT Publisher NG – Server" or by starting an instance of CDsdk with an appropriate intervention code (see section 3.1.3).

Note: For compatibility reasons summiting Job List files by the executable program "CDserver" is still supported. But the "Load Balancing" functionality will not be applied when submitting Job Lists by CDserver.

3 Job List Details

The Job List consists of a header, a job-command-list and, optionally, a project-definitions-list.

The header contains general status information and global settings for all jobs. This includes e.g. specification of a temporary directory for project files and maximum recording speed.

In the job-command-list you specify order and sources for the separate jobs as well as the respective number of CD/DVD/BDs and imprint files.

As source for a job, you may either specify Disc Images which may have been created by any of the builders, or you may define and create new project files by statements (project-definitions-list). The latter case allows to define the entire layout of a disc by simple instructions for adding files and directories or pre-formatted image files.

3.1 Job List Syntax

3.1.1 Syntax Notation

The following notation is used for the syntax definition of the Job List:

Terminal symbols are written **bold-face**. Non-terminal symbols are written with *italic* letters.

The following special characters are used:

– | exclusive or operator (e.g. sym1 | sym2 means either sym1 or else sym2)

– {} zero or more occurrences of the symbol(s) between the braces (e.g. { *sym3* } means empty or *sym3* or *sym3 sym3* or ...)

3.1.2 General

Each statement begins on a new line. White space (spaces or tabs) is used to separate the tokens. Except where indicated white space may be added to make the text more readable. Terminal symbols are not case sensitive.

File name or other character strings that contain blanks must be enclosed in double quotation marks. Double quotes within a string being enclosed in double quotation marks must be preceded by a backslash (\).

Lines beginning with a semicolon (;) at the first column are considered comment lines and are completely ignored. They may be placed anywhere in the Job List.

job-list:
    header project-definitions-list job-command-list

3.1.3 Header Syntax

Global settings for the total batch job are specified in the *header*. Settings in *project-definitions* or in *job-blocks* of the *job-command-list* may override the global settings for the individual project or job.

header:
    Header *header-status-stmt header-stmt-list* **EndHeader**

header-status-stmt:

Status *joblist-progress,joblist-error*

Note: No spaces are allowed before and after the   comma (,)
This statement reports the progess of the batch   job
and what kind of error occured, if any.

header-stmt-list:

{ *imgdir-stmt | projdir-stmt* } { *burnproof-stmt | cdcapacity-stmt | labeltype-stmt | maxspeed-stmt | mediatype-stmt | simul-stmt | printbefore-stmt | rotate-stmt | termination-stmt | oprequest-stmt | custom-ok-stmt | custom-err-stmt | verification-stmt | quick-verification-stmt | error-rate-check-stmt* }

imgdir-stmt:

ImgDir *dir-path-name*

A directory for the storage of Disc Image files can be specified by *dir-path-name*. This statement overrides the default setting.

burnproof-stmt:

BurnProof   On | Off

If not specified, the 'BURN'-proof feature is on, per default. For more information about 'BURN'-proof technology, please refer to the "PoINT Publisher NG - Server" documentation.

cdcapacity- stmt:

CdCapacity *value*

Value specifies the capacity of the CD/DVD/BDs used. Enter the number of sectors of the medium. E.g. a 74 minutes CD- has $74*60*75$ sectors. Jobs that require more capacity than specified will be aborted. This statement overrides the default setting of 333000 (74 minutes).

Usual values for CDs are:
283500 (63 minutes), 333000 (74 minutes), 359998 (80 minutes), 359999 or more (greater than 80 minutes, overburn CD).

Usual values for DVDs are:
DVD-R: 2297000 (4.7GB), DVD+R: 2295000 (4.7GB), DVD-/+R double layer: 4173824 (8.5GB).

For BDs the capacities depend on whether the discs shall be written with or without defect management. The respective lower

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value is valid for activated defect management:
BD-R/BD-RE 25GB: 11826176 or 12219392,
BD-R/BD-RE 50GB:.23652352 or 24438784
If you specify 11826176 or 2365352, the discs will be written
with defect management; if you specify one of the other values,
the discs will be written without defect management. This
overrules the defect management setting in the 'Recording
Options' dialog of the PoINT Publisher – Server.
If you do not specify a capacity, the default capacity is 25GB and
the defect management setting of "PoINT Publisher NG – Server"
is applied. Therefore the default capacity is either 11826176 or
12219392.

labeltype- stmt:

LabelType   0 | 1 | 2 | 3 | 4 | 5

Label type 0 means unlabeled and is the default. If the required
label type is not available in one of the bins of the autoloader, the
job will stop. It can be restarted when the required media are
made available in one of the bins.

custom-ok-stmt:

CustomOkMessage   *text*

When the processesing ends successful and a message box is
displayed (Termination MsgBox), the specified *text* is appended to
the end of the standard message. When *text* contains spaces or
tabs, it must be enclosed in double-quotes.

custom-err-stmt:

CustomErrMessage   *text*

When the processesing ends unsuccessful and a message box is
displayed (Termination MsgBox or ErrorBox), the specified *text* is
appended to the end of the standard message. When *text* contains
spaces or tabs, it must be enclosed in double-quotes.

maxspeed-stmt:

**MaxSpeed   1 | 2 | 4 | 6 | 8 | 12 | 16 | 20 | 24 | 32 | 40 | 48 | 52
| 60 | 80 | 120 | 160 | Maximum**

Selects the recording speed. When you choose **Maximum**, the
individually highest speed for each recorder is selected. To select
the speed for DVDs use **10** for 1X, **20** for 2X, **24** for 2.4X, **40** for

4X, **60** for 6X, **80** for 8X, **120** for 12X, , and **160** for 16X DVD speed. The values **60** through **160** are not valid for CDs. The default is 4.

mediatype-stmt:

MediaType   1 | 2 | 4 | 8 | 16 | 32 | 64

Value **1** means CD-R, value **2** means DVD-R, value **4** means DVD+R, value **8** means DVD-R Double Layer, value **16** means DVD+R Double Layer, value **32** means BD-R, value **64** means BD-RE. Note that images of non-incremental DVDs may be written to DVD-R or DVD+R media. The server automatically detects the properties of the image and selects one of the media types available in the bins. The images created by TTree projects are always non-incremental.

Oprequest-stmt:

OIRequest   *oivalue*

This statement reports whether the server is waiting for operator intervention. *oivalue* should initially be set 0000. (See *oivalue* below.)

When "PoINT Publisher NG – Server" sets *oivalue* to non-zero, it is waiting for operator intervention e.g. because of missings CDs in the input bin of the autoloader.

The cause is specified by *oivalue* as stated below.

You may send an automatic reply by starting "PoINT Publisher NG – Server"again (second instance) with a command line argument that specifies the reply. The replies have the same effect as pressing the corresponding button at the user interface. "PoINT Publisher NG – Server" will thereafter reset *oivalue* to 0000.

The following command line arguments are possible:
/OPREPLY OR_OK
/OPREPLY OR_RETRY
/OPREPLY OR_ABORT
/OPREPLY OR_PRETRY
/OPREPLY OR_PABORT
/OPREPLY OR_DONE

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/OPREPLY OR_GO
/OPREPLY OR_STOP

The command line arguments are not case sensitive.

The same statement can be used in the *job-command-block*s, too.
The affected job's *oivalue* is set to the same value as in the header.

oivalue:
0000 | 0001 | 0002 | 0003 | 0004 | 0005

0000:   no operator intervention required
0001:   loading/unloading CD from/to recorder or   printer.
Possible replies are OR_DONE,   OR_STOP.
0002:   autoloader error occurred. The only reply is
         OR_OK.
0003:   autoloader error occurred. Possible replies are
         OR_RETRY, OR_ABORT
0004:   printer error occurred. Possible replies are
         OR_PRETRY to try again with a new CD, or
         OR_PABORT to stop further processing
0005:   "PoINT Publisher NG – Server" stopped processing
though not all jobs are done. Possible reply OR_GO to restart.
All other values are reserved.

printbefore-stmt:
PrintBefore   On | Off

This statement controls whether printing is done before or after
recording. The default is **Off**.

projdir-stmt:
ProjDir   *dir-path-name*

Project files specified by a relative path name (e.g. the file name
only) are stored and found in the directory specified by *dir-path-name*. This statement overrides the default setting.

Rotate-stmt:
Rotate   On | Off

There are autoloaders that are able to rotate the CD to a marker
on the CD label before loading it into the CD printer. So you
can add further information to pre-labeled CDs.
On/Off: Rotation is switched on/off for all jobs. This

setting can be overridden by a *Rotate-stmt* in the *job-command-block*. The default is Off.

simul-stmt:

Simulation   On | Off

On: All data are sent to the recorders but they are not really written. You may select this option for testing purposes.

Off: Normal recording. This is the default.

termination-stmt:

Termination   MsgBox | ErrorBox | Silent

MsgBox: PoINT Publisher NG - SDK displays a summery message in a message box at the end of processing. The user must acknowledge the message box before PoINT Publisher NG - SDK terminates.

ErrorBox: Similar to MsgBox, but the message box appears only in case of an error.

Silent: PoINT Publisher NG - SDK terminates silently. Default: MsgBox.

verification-stmt

Verification   On | Off

On: The recorded discs are compared with the source (Disc Image etc.). If any difference is detected, the disc is rejected and a new one is produced.

Off: No comparison is done. This is the default.

Verification statements in the *job-cmd-list* (see below) override the setting in the header.

quick-verification-stmt

QuickVerification   On | Off

On: A quick verification of the recorded discs is performed. If any of the checked areas of a disc is considered bad, the disc is rejected and a new one is produced.

Off: No quick verification is done. This is the default.

QuickVerification statements in the *job-cmd-list* (see below) override the setting in the header.

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error-rate-check-stmt

ErrorRateCheck   On | Off

On: The minimum, average, and maximum error rate of the
          recorded discs is determined and is witten to the log file.
Off: No comparison is done. This is the default.
ErrorRateCheck statements in the *job-cmd-list* (see below) override
the setting in the header.

For more information about verification and error rate checking,
please refer to the PoINT Publisher NG – Server documentation.

joblist-progress:

0 | 1 | 2

0:        new, not yet processed
1:        in progress, processing has begun but is not yet
          completed.
2:        done, processing completed either without errors   or
with unrecoverable errors

Note: job-progress should be initially set to 0.

joblist-error:

00 | 10 | 11 | 12 | 13 | 16 | 17 | 20 | 21 | 30 | 31 | 40 | 50

00:       no error
10:       PJL error, syntax errors in PJL file detected.
11:       invalid input data specified (invalid names, etc)
12:       medium is not compatible with the project
13:       no medium present
16:       amount of data exceeds the capacity of a medium
17:       file open error
20:       no space on hard disk
21:       internal i/o error
30:       autoloader error, operator intervention required
31:       irrecoverable write error
40:       internal (software) error
50:       aborted by user (cancel button pressed)

Note: *joblist-error* should be initially set to 00.

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3.1.4 **Project Definition Syntax**

project-definitions-list:
    { *project-definition* }

project-definition:
    project-start-stmt project-status-stmt { *project-stmt-list* } **EndProject**

project-start-stmt:
    Project   *proj-file*

    Proj-file specifies the path name of the project file that will be created by the *project-definition*. If *proj-file* is a relative path, the file is stored in the directory defined by the ProjDir statement. If the ProjDir statement is missing the default setting of the project directory is taken.

    Proj-file identifies the project being created and is used as a reference to the project in the job statements (see CreateCd).

project-status-stmt:
    Status *proj-progress,proj-error*

    Note: No spaces are allowed before and after the comma (,). This statement reports the progess of the project definition processing and what kind of error occured, if any.

project-stmt-list:
    target-tree-session | *data-img-session* | *audio-session* | *dont-del-stmt* | *finalization-stmt* | *cdtext-disc-stmts*

dont-del-stmt
    DontDelete

    Usually, project files that are created during processing of a job list are deleted when the program terminates. This statement prevents PoINT Publisher NG - SDK from deleting the project file.

finalization-stmt
    Finalization **None | Open | Close**

    None: session is not finalized. Note that the disc will be readable only in recorders but not in CD/DVD-ROM drives

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while not being finalized.

Close: CD/DVD is closed so that it gets read-only.

Open: (Mode 2 only) Session is closed and next session   is opened.

Defaults: When finalization is not explicitly specified, Target Tree - mode 1 projects close the disc, Target Tree - mode 2 projects close the session and open the next session. Data Image or Audio Image projects are not finalized by default.

Note: If you have specified any statements that add CD Text to the disc, the finalization must be "Open" or "Close".

cdtext-disc-stmts:
    disc-title-stmt | disc-performer-stmt | disc-langcode-stmt | disc-genrecode-stmt

These statements define CD Text for the disc. In addition, you can supply further CD Text information for each audio track separately (see **AudioImage**).
Note that the finalization must be "Open" or "Close", since CD Text is written to the lead-in area of the disc.

disc-title-stmt:

DiscTitle   *string*

String specifies the title of the disc; it may be up to 255 character long.

disc-performer-stmt:

DiscPerformer   *string*

String specifies the performer of the disc; it may be up to 255 character long.

disc-langcode-stmt:

DiscLanguageCode   *number*

Number may adopt the values according to the following table:

0	Unknown	12	Estonian	24	Latvian	36	Serbian
1	Albanian	13	Basque	25	Luxembourgian	37	Slovak
2	Breton	14	Faroese	26	Lithuanian	38	Slovene
3	Catalan	15	French	27	Hungarian	39	Finnish
4	Croatian	16	Frisian	28	Maltese	40	Swedish
5	Welsh	17	Irish	29	Dutch	41	Turkish
6	Czech	18	Gaelic	30	Norwegian	42	Flemish
7	Danish	19	Galician	31	Occitan	43	Walloon
8	German	20	Icelandic	32	Polish		
9	English	21	Italian	33	Portugese		
10	Spanish	22	Lappish	34	Romanian		
11	Esperanto	23	Latin	35	Romansh	64	Background sound/clean feed

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disc-genrecode-stmt:
DiscGenreCode   *number*

Number may adopt the values according to the following table:

0	Not used	10	Erotic	20	Pop Music
1	Not defined	11	Folk	21	RAP
2	Adult Contemporary	12	Gospel	22	Reggae
3	Alternative Rock	13	Hip Hop	23	Rock Music
4	Childrens Music	14	Jazz	24	Rhythm & Blues
5	Classical	15	Latin	25	Sound Effects
6	Contemporary Christian	16	Musical	26	Sound Track
7	Country	17	New Age	27	Spoken Word
8	Dance	18	Opera	28	World Music
9	Easy Listening	19	Operetta		

target-tree-session:
    target-tree-track-def { *audio-track-def* }

data-img-session:
    data-img-track-def { *audio-track-def* }

audio-session:
    { *audio-track-def* }

target-tree-track-def:
    TTree   *ttree-oper-list* **EndTTree**

ttree-oper-list:
    { *add-dir-stmt* | *add-dirc-stmt* | *add-file-stmt* | *boot-def* | *file-systems-stmt* | *mode-stmt* | *naming-stmt* | *new-dir-stmt* | *volid-stmt* }

add-dir-stmt:
    AddDir   *source-path-name target-dir*

The directory specified by *source-path-name* and all the files and directories contained therein will be copied to the directory *target-dir* on the medium.

Note: If *target-dir* is not the root (\) itself, it must have been created already either explicitly by a *new-dir-stmt*, or implicitly by a *add-dir-stmt* or a *add-dirc-stmt*.

add-dirc-stmt:
    AddDirC   *source-path-name target-dir*

The contents of the directory specified by *source-path-name* (not the directory itself) will be copied to the directory *target-dir* on the CD/DVD .

Note: If *target-dir* is not the root (\) itself, it must have been created already either explicitly by a *new-dir-stmt*, or implicitly by a *add-dir-stmt* or a *add-dirc-stmt*.

add-file-stmt:
    AddFile   *source-path-name target-dir*

The file specified by *source-path-name* is copied to the directory *target-dir* on the medium.

Note: If *target-dir* is not the root (\) itself, it must have been created already either explicitly by a *new-dir-stmt*, or implicitly by a *add-dir-stmt* or a *add-dirc-stmt*.

boot-def:

BootInfo *boot-spec* **EndBootInfo**

By adding boot information to the job list, you can create bootable CDs. The layout is made according to '"El Torito", Bootable CD-ROM Format Specification, Version 1.0'. Only "Single Boot-Image Configuration" is supported.

boot-spec:

{ *platform-id-stmt* | *platform-id-string-stmt* | *boot-media-type-stmt* | *system-type-stmt* | *load-segment-stmt* | *sector-count-stmt* | *boot-image-file-stmt* }

platform-id-stmt:

PlatformId **0 | 1 | 2**

Specifies the computer platform on which the CD is bootable.
0   - 80x86
1   - PowerPC
2   - Mac
If not specified, the default 0 (80x86) is taken.

platform-id- string-stmt:

PlatformIdString *string*

string is a character string of up to 24 characters and is intended to identify the manufacturer/developer of the CD.

boot-media-type-stmt:

BootMediaType **0 | 1 | 2 | 3 | 4**

This specifies what media the boot image is intended to emulate.
0   - No emulation
1   - 1.2 MB diskette
2   - 1.44 MB diskette
3   - 2.88 MB diskette
4   - Hard disk
If not specified, the default 0 is taken.

system-type-stmt:

SystemType   **0 | 1 | 4 | 6 | 7**

This is the "system type" as specified at byte 5 of the partition table. If this value is 0 (default) and "boot media type" is 4 (hard disk emulation) the system type is taken from the partition table found in the file specified by the *boot-image-file-stmt.* If "boot media type" is 0, "system type" may also be set to 0. If not specified, the default value is 0.

0	- .Invalid; used as described above.
1	- 12-bit FAT partition or drive
4	- 16-bit FAT partition or drive
6	- BIGDOS FAT partition or drive
7	- NTFS partition or drive

load-segment-stmt:

LoadSegment   *decimal number*

decimal number is the load segment for the initial boot image. If this value is 0 the system will use segment 1984 (hexadecimal 7C0), if non-zero, the system will use the specified segment.
The value cannot be greater then 65535. If not specified, the default value is 0.

sector-count-stmt:

SectorCount   *decimal number*

decimal number is the number of "virtual/emulated" 512 byte sectors (not CD sectors) the system will store at Load Segment during the initial boot procedure..
The value cannot be greater then 65535. If not specified, the default value is 1.

boot-image-file-stmt:

BootImageFile   *path-name*

path-name specifies the boot image file that will be copied onto the CD. It must be an absolute path name.
This is the only statement of *boot-spec* that is required. All other statements are optional.
Please refer to section 7 about how to make boot image files.

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file-systems-stmt:
FileSystems *file-systems-spec* **EndFileSystems**

file-systems-spec:
{ *iso-spec* | **Joliet** | *udf-spec* | *autoconv-spec* }

The source data can be recorded as ISO 9660, Joliet, or UDF file system, or any combination of the three file systems.
Note that not all platforms support Joliet or UDF file systems.

Joliet: A Joliet file system is written to the disc.
The maximum length of file and directory identifiers is 64. The following characters are not allowed:
The control characters (codes 0 through 31), '*', '/', ':', ';', '?', and '\'.

iso-spec:
Iso { **IsoRules** *isorules-spec* **EndIsoRules** }

An ISO 9660 file system is written to the disc. If you do not specify special checking rules by **IsoRules**…, the file system is written according to the ISO 9660 standard, Interchange Level 1.

isorules-spec:
{ *iclevel-spec charset-spec maxdir-spec maxpath-spec nodot-spec nofileversion-spec* }

Warning: By selecting any options that relax the checking rules of ISO 9660, you will get discs that may not be readable on all platforms.

iclevel-spec:
InterchangeLevel **L1** | **L2**

L1: The maximum length of file identifiers is 11 characters, max. 8 characters for the file name, a dot (.), and optionally max. 3 characters for the extension (8.3), directory identifiers cannot have an extension.
L2: The maximum length of file and directory identifiers is 31 characters. In case of file identifiers, it includes name, dot (.) and extension. Directory identifiers cannot have an extension. The length of the file name or else of the extension may be zero.

charset-spec:
CharSet **ISO** | **MSDOS** | **ASCII**

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This option controls which character set is considered valid for names of files and directories.
Note that both, 'MSDOS' and 'ASCII', may result in discs not being readable on all platforms.

ISO: This corresponds to the ISO 9660 standard. Valid characters are '0' through '9', 'A' through 'Z', and '_' (underscore). PoINT Publisher NG - SDK automatically converts small letters to capital letters.

MSDOS: This option extends the number of allowed characters to those permitted for file and directory identifiers in Microsoft MS-DOS. Directory identifiers may have an extension. Small letters are converted to capital letters. Especially the language specific characters of many European languages are part of the extension. Please note that language specific extensions highly depend on the selected code page(s) of the target system. Wrong characters may be displayed in case that the code pages do not match.
The following characters are not allowed:
The control characters (code 0 through 31), '*', '/', ':', ';', '?', '\', '<', '>', '|', '+', '=', '@', '[', ']', '^', '{', '}', '~', and rubout (code 127).

ASCII: The differences to the option above (MS-DOS) are: Small letters are not converted to capital letters and the characters '+', '=', '@', '[', ']', '^', '{', '}', '~', and rubout (code 127) are allowed.

maxdir-spec:

MaxDirLevel   Standard | Maximum

Standard: Nesting of directories is restricted to eight levels according to ISO 9660.
Maximum: The number of directory levels is limited by the maximum path name length, only.

maxpath-spec:

MaxPathLength   Standard | Maximum

Standard: The maximum length is 255 characters including directory separators (\).
Maximum: The maximum length is 1023 characters including directory separators (\).

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nodot-spec:

NoDot   Off | On

File identifiers that have no extension shall be recorded with a
dot (.) at the end according to ISO 9660. On platforms that allow
names with and without a trailing dot this may cause problems.

Off: According to the standard.
On: The trailing dot is omitted.

nofileversion-spec:

NoFileVersion   Off | On

Off: According to the standard.
On: The file version number which follows the file identifier of
an ISO 9660 file system is omitted

udf-spec:

Udf { **UdfRules** *udf-rules-spec* **EndUdfRules** }

Udf: A UDF file system is written to the disc.
This file system allows any characters and additionally supports
long file and directory names of up to 254 characters per name.
The number of directory levels is not limited, but the maximum
path length is limited to 1023 characters.

udf-rules-spec:

UdfRevision   UDF1.02 | UDF1.50 | UDF2.01 | UDF2.50

If UdfRules is not specified, the default is UDF1.02.
Note: Windows Vista or higher is required for reading discs with
UDF revision 2.50 format.

autoconv-spec:

AutoConvert   Off | On

Each file system has its specific rules for file and directory names,
especially for the set of valid characters.

Off: If the identifiers of files or directories are not conformant
with the rules, they are rejected with an error message.
On: If the identifiers of files or directories are not conformant
with the rules, they are automatically converted to compliant
ones.

Note that this option applies to the less restrictive file system, if more than one file system is selected. So, if Iso, Joliet, and UDF are chosen, it applies to UDF. If Iso and Joliet are selected, it applies to Joliet. Non-compliant names of more restrictive file systems are always auto-converted to compliant ones.

mode-stmt:

Mode   1 | 2

1: Single session mode
2: Multi session Bridge Disc mode

naming-stmt:

Naming   Iso | Msdos | Joliet

This statement is obsolete and supported for backward compatibility reasons.

Iso: PoINT Publisher NG - SDK checks file and directory names on conformance with the ISO 9660 standard.
Msdos: MS-DOS file and directory names are allowed.
Joliet: CD/DVD is written in Joliet format (support of long file names).

new-dir-stmt:

NewDir   *dir-name target-dir*

A new directory with name *dir-name* is created in the directory *target-dir* on the CD/DVD .

Note: If *target-dir* is not the root (\) itself, it must have been created already either explicitly by a *new-dir-stmt*, or implicitly by a *add-dir-stmt* or a *add-dirc-stmt*.

volid-stmt:

VolId   *volume-identifier*

The volume-identifier may have up to 32 upper case letters (A through Z) or digits (0 through 9) or underscore ('_'). It is written to the Primary Volume Descriptor of the CD/DVD .
If Joliet format is used, the volume identifier may not be longer than 16 characters.

data-img-track-def:
   DataImage   { *di-oper-list* }   **EndDataImage**

di-oper-list:
   File   *file-name*

File-name specifies the file containing the binary image of a data
track that is to be written to the disc.

audio-track-def:

    AudioImage { *ai-oper-list* } **EndAudioImage**

ai-oper-list:

    file-stmt | isrc-stmt | copyprot-stmt| 2ndgen-stmt | pause-stmt | *performer-stmt* | preemph-stmt | *title-stmt*

file-stmt:

    File *file-name*

    File-name specifies the file containing the binary image (.WAV file or .MP3) of a audio track that is to be written to the CD-R. Besides files in RIFF/WAV format, files in MP3 format can be used as input files for audio tracks. The SDK automatically recognises the format.
    Note: Audio track cannot be written to DVD/BD discs.

    Additional P/Q editing is possible by an extension to this Software Development Kit. Please contact your dealer to get information about this extension.

isrc-stmt:

    ISRC *string*

    String must consist of 12 characters according the scheme below.

    The international standard recording code (ISRC) serves to identify audio and video recordings. It consists of four components, the country code, the owner key, the year number and the recording key.

Country code:	2 capital letters 'A' - 'Z'.
Owner key:	3 capital letters 'A' - 'Z' or numbers '0' - '-9'.
Year number:	2 numbers '0' - '9'.
Recording key:	5 numbers '0' - '9'.

copyprot-stmt:

    CopyProtection   **On** | **Off**

    A track can be marked "copy protected" if it contains audio material which is protected by copyright laws.
    Default is "Off".

2ndgen-stmt:

    SecondGeneration   **On** | **Off**

If the track contains a second or higher generation copy of copyright protected material, set the "second generation" bit by this statement.
Default is "Off".

pause-stmt:

Pause *length*

This statement defines the pause before the start of the audio track. Length can be specified as a number of frames (75 frames per second) or in minutes-seconds-frames format (MM:SS:FF). The default is 2 seconds (150 or 00:02:00).

Note that the pause before the first audio track must be 2 seconds at least and it must not be greater than 3 seconds, according to the standards. Also, when the preemphasis changes, the pause must be 2 seconds at least.

Examples:
Pause   320
Pause   00:04:20

performer-stmt:

Performer *string*

String specifies the performer of the audio track; it may be up to 255 character long.

preemph-stmt:

Preemphasis On | Off

The encoding or sampling of the source audio signal may have been carried out either without pre-emphasis or with first order pre-emphasis.
Default is "Off".

title-stmt:

Title *string*

String specifies the title of the audio track; it may be up to 255 character long.

proj-progress:

0 | 1

0:       new, not yet processed
1:       processed

Note: proj-progress should be initially set to 0.

proj-error:
00 | 10 | 11 | 14 | 15 | 16 | 30 | 32 | 80 | 90

00:       no error
10:       Job List error, syntax errors in Job List file   detected.
11:       could not create project file
14:       input error, error while reading source data (file not
found)
15:       invalid, invalid file/directory names or invalid
          directory level
16:       size error, the amount of data specified exceeds the
capacity of the medium. This project cannot be done
30:       Job List-corrupt, severe syntax error in Job List,
          processing of this Job List file is not possible
32:       HD full, the local hard disk(s) is (are) full
80:       internal (software) error
90:       aborted by user (cancel button pressed)

Note: *proj-error* should be initially set to 00.

3.1.5   Job Command Syntax

The *job-command list* comprises the following statements:

job-command-list:
    { *job-command-block* }

job-command-block:
    job-start-stmt job-status-stmt { *job-cmd-list* } *job-end-stmt*

Job
    Introduces a sequence of statements that specify the job.

job-status-stmt:
    Status *job-progress,job-error,cds-done*

    Note: No spaces are allowed before and after the commas (,).
           This statement reports the progess of the job command

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processing, what kind of error occured, if any, and the number of CD/DVD s successfully produced.

job-cmd-list:

> *createcd-stmt | createimg-stmt | imprint-stmt | numCDs-stmt | printbefore-stmt | rotate-stmt | oprequest-stmt | spareCDs-stmt | fixedSpareCDs-stmt | maxspeed-stmt | burnproof-stmt | cdcapacity-stmt | labeltype-stmt | mediatype-stmt | terminated-stmt | verification-stmt | quick-verification-stmt | error-rate-check-stmt*

createcd-stmt:

> **CreateCd**   *project-spec | image-spec*

Writes the data/audio tracks defined by *project-spec* to the media. Note: Audio tracks can be written to CD-Rs, only.

project-spec:

> **ProjectPath**   *project- name*

Identifies the project to use for creating the disc.

Image-spec:

> **ImagePath**   *image-file-name*

Image-file-name specifies the path name of the source data file to use. It can be a Disc Image file (*.CD), a third party image file (*.IMG).

> **Note**: Also in case of Disc Images, additional settings like the number of CDs to produce and the imprint information must be specified in the job command block, since they are not taken from the Disc Image.

createimg-stmt:

> **CreateImageFile**   *project-spec imagefile-spec*

Writes the data defined by *project-spec* to the image file specified by *imagefile-spec*. It does not produce any discs.

> **Note**: This statement can be combined with the statements CdCapacity, LabelType, MediaType, OiRequest, only. Also, the project defined by *project-spec* must be a pure data project using the TTree section.
> The image file that will be created by this statement, cannot be used by other jobs in the same Job List file.

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Imagefile-spec:

ImagePath   *image-file-name*

Specifies the path name of the output file where the image file is written to.

Note: The path name must be accessible by the server. So, it can either be a server-local path name like C:\data\myimagefile.cd, or a UNC path like \\anycomputer\anyshare\dir\myimagefile.cd.

imprint-stmt:

Imprint   *print-file-name | imprint-block*

Print-file-name is the absolute path name of the print file. It should have been created by printing the desired CD-label to a file.

imprint-block:

labeleditor-block | cmdline-stmt | raw-stmt

labeleditor-block:

LabelEditor   *format-spec* [*inputdatasection-spec | inputdata-spec | odbc-spec*] [*serial-number-spec*] **EndLabelEditor**

When input data shall be specified, only one of the directives *inputdatasection-spec*, *inputdata-spec*, or *odbc-spec* may follow the *format-spec*. The new directive *inputdatasection-spec* should be used now instead the simple *inputdata-spec* which is still supported for backward compatibility reasons. The *inputdatasection-spec* itself contains an *inputdata-spec* statement.

Note: The **ODBC** directive is not supported for PoINT Label Editor files (*.plf).

format-spec:

FormatFile   *filename*

The Label Editor format file (usually *.plf or *.btw) is specified as *filename* here.

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inputdatasection-spec:
> **InputDataSection** *inputdata-spec* { *startrec-spec* | *increment-spec* | *fieldnumber-spec* | *delim-spec* | *fieldname-spec* } **EndInputDataSection**

inputdata-spec:
> **InputData** *filename*

> The Label Editor input data file (usually *.dat) is specified as *filename* here.

startrec-spec:
> **StartRN** *number*

> *Number* specifies the record of the input data file to begin with. Records are numbered starting at 0 which is the default value.

increment-spec:
> **IncrementRN** **On** | **Off**

> The record defined by **StartRN** is taken for the first disc of the job and for each of the following discs the record number is incremented by 1, by default. You can suppress the automatic incrementing of the record numbers by specifying **IncrementRN Off** so that the same record is used for all discs of the job.

fieldnumber-spec:
> **FieldNumber** *number*

> Usually, the field values that are inserted at the corresponding locations of the print file come from the input data file. You can select a field that shall be supplied with a value specified in the *inputdatasection-spec* instead of the input data. Then, this value is taken for all records (discs) of the job.
> Fields are numbered starting at 1. Field number 0 disables the replacement.

delim-spec:
> **Delimitation** **QuoteAndComma** | **Comma** | **Tab**

> Select the 'delimitation' of the fields appropriate to the input data file. **QuoteAndComma** is the default value.

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fieldvalue-spec:
> **FieldValue**   *string*

> String is the text for the specified field. It should be enclosed in double quotation marks.

odbc-spec:
> **ODBC**   { *where-clause-spec* | *userid-spec* | *password-spec* } **ENDODBC**

where-clause-spec:
> **Where**   *where-clause*

userid-spec:
> **UserID**   *userid*

password-spec:
> **Password**   *password*

> For information about ODBC, please refer to the documentation of the Label Editor.
> **Note:** This directive is not supported for PoINT Label Editor files (*.plf).

Serial-number-spec:
> **SerialNumber**   *sernum*

> *Sernum* specifies the start value for serial numbers that substitute serial number text objects of label files. The value range of serial numbers is 0 up to $2^{64} - 2$ (=18446744073709551614)

> This statement must be the last statement in the LabelEditor … EndLabelEditor block and requires that a format file be specified.

> **Note:** This directive is supported for PoINT Label Editor files (*.plf), only. For more information about serial number text objects, please refer to the documentation of PoINT Label Editor.

cmdline-stmt:
> **CmdLine**   *commandline*

> The command line must be enclosed in double quotation marks. Double quotation marks within the command line must follow a preceding backslash (\) as escape character.
> E.g.: "CMD.EXE /C \"A long quoted file name\""

raw-stmt:

Raw *print-file-name*

Print-file-name is the absolute path name of the print file. It should have been created by printing the desired CD-label to a file. Imprint Raw *print-file-name* is equivalent to Imprint *print-file-name*.

numCDs-stmt:

NumberOfCDs *number*

Specifies the number of CD/DVD s to produce with this job.

oprequest-stmt:

OIRequest *oivalue*

See the description of the header syntax.

printbefore-stmt:

PrintBefore   On | Off

This statement controls whether printing is done before or after recording. The default is given by the *printbefore-stmt* in the *header-stmt-list*.

rotate-stmt:

Rotate   On /Off

There are autoloaders that are able to rotate the CD to a marker on the CD label before loading it into the CD printer. So you can add further information to pre-labeled CDs.
On/Off: Rotation is switched on/off for this job.
The default is given be the *rotate-stmt* in the *header-stmt-list*.

spareCDs-stmt:

SpareCDs *number*

number defines the maximum number of spare CDs to use for this job in case of e.g. write errors.

fixedSpareCDs-stmt:

FixedSpareCDs *number*

number defines the number of spare CDs for the job. "PoINT Publisher NG – Server" expects that the number as stated in the *numCDs-stmt* plus the number of spare CDs will be in the input bin. The next CD is considered to belong to the next job. As a

consequence, jobs with a fixed number of CDs cannot follow jobs with a variable number.

maxspeed-stmt:

MaxSpeed   1 | 2 | 4 | 6 | 8 | 12 | 16 | 20 | 24 | 32 | 40 | 48 | 52 | 60 | 80 | 120 | 160 | Maximum

Selects the recording speed for the job. When you choose **Maximum**, the highest speed is selected that the recorder does support.
This statement overrides the setting of the job header for the individual job.

burnproof-stmt:

BurnProof   On | Off

If not specified, the 'BURN'-proof feature is given by the Header directive or its default. For more information about 'BURN'-proof technology, please refer to the "PoINT Publisher NG - Server" documentation.

cdcapacity- stmt:

CdCapacity   *value*

Value specifies the capacity of the CD/DVD/BDs used. Enter the number of sectors of the medium. E.g. a 74 minutes CD- has 74*60*75 sectors. Jobs that require more capacity than specified will be aborted. This statement overrides the default setting of 333000 (74 minutes).

Usual values for CDs are:
283500 (63 minutes), 333000 (74 minutes), 359998 (80 minutes), 359999 or more (greater than 80 minutes, overburn CD).

Usual values for DVDs are:
DVD-R: 2297000 (4.7GB), DVD+R: 2295000 (4.7GB), DVD-/+R double layer: 4173824 (8.5GB).

For BDs the capacities depend on whether the discs shall be written with or without defect management. The respective lower value is valid for activated defect management:
BD-R/BD-RE 25GB: 11826176 or 12219392,
BD-R/BD-RE 50GB:.23652352 or 24438784
If you specify 11826176 or 2365352, the discs will be written

with defect management; if you specify one of the other values, the discs will be written without defect management. This overrules the defect management setting in the 'Recording Options' dialog of the PoINT Publisher – Server.
If you do not specify a capacity, the default capacity is 25GB and the defect management setting of "PoINT Publisher NG – Server" is applied. Therefore the default capacity is either 11826176 or 12219392.

labeltype- stmt:

LabelType   0 | 1 | 2 | 3 | 4 | 5

Label type 0 means unlabeled and is the default. If the required label type is not available in one of the bins of the autoloader, the job will stop. It can be restarted when the required media are made available in one of the bins.
This statement overrides the setting of the job header for the individual job.

mediatype-stmt:

MediaType   1 | 2 | 4 | 8 | 16 | 32 | 64

Value **1** means CD-R, value **2** means DVD-R, value **4** means DVD+R, value **8** means DVD-R Double Layer, value **16** means DVD+R Double Layer, value **32** means BD-R, value **64** means BD-RE. If the required media type is not available in one of the bins of the autoloader, the job will stop. It can be restarted when the required media are made available in one of the bins.
This statement overrides the setting of the job header for the individual job.
Note that images of non-incremental DVDs may be written to DVD-R or DVD+R media. The server automatically detects the properties of the image and selects one of the media types available in the bins. The images created by TTree projects are always non-incremental.

terminated-stmt:

Terminated   *time-stamp-token* **Server** *server-name-token*

When this statement is present and the job terminates, *time-stamp-token* will be replaced by the local time at which the job terminated, and *server-name-token* is replaced by the computer name of the server where the job was executed. A job is terminated

when all media of the job are done or when it cannot be continued because of an error.
The format of the time stamp is:
YYYY-MM-DD,HH:MM:SS

Initially, the tokens may consist of arbitrary character strings, optionally enclosed in double quotation marks. They must be long enough to receive the requested information. If they are shorter, the time stamp or server name are shortened to fit into the token. If they are longer, the rest of the token is replaced by space characters.

Examples:
Initial:
Terminated 19charactersAreEnuf Server placeholderforname
After job terminated:
Terminated 2001-08-31,18:50:16 Server PC001

Initial:
Terminated "   " Server "   "
After job terminated:
Terminated "2001-08-31,18:50:16" Server "PC001   "

Initial:
Terminated "too short" Server "very long placeholder"
After job terminated:
Terminated "2001-08-3" Server "PC001   "

verification-stmt

Verification   On | Off

On: The recorded discs of this job are compared with the source (Disc Image etc.). If any difference is detected, the disc is rejected and a new one is produced.
Off: No comparison is done.
By default, the setting is taken from the header.

quick-verification-stmt
QuickVerification   On | Off

On: A quick verification of the recorded discs is performed. If any of the checked areas of a disc is considered bad, the disc is rejected and a new one is produced.

Off: No quick verification is done. This is the default.

By default, the setting is taken from the header.

error-rate-check-stmt
ErrorRateCheck   On | Off

On: The minimum, average, and maximum error rate of the recorded discs is determined and is witten to the log file.

Off: No comparison is done. This is the default.

By default, the setting is taken from the header.

For more information about verification and error rate checking, please refer to the PoINT Publisher NG – Server documentation.

job-end-stmt:
EndJob

job-progress:
00 | 10 | 20 | 30 | 90

00:    new, not yet processed

10:    job created

20:    Disc Image created

30:    job in progress

90:    done

The value of job-progress indicates that PoINT Publisher NG - SDK completed all steps including the action denoted by the actual value. E.g. if job-progress equals 20, the job and the Disc Image were created.

Note: job-progress should be initially set to 00.

job-error:
00 | 10 | 12 | 13 | 14 | 15 | 16 | 17 | 19 | 20 | 30 | 31 | 32 | 34 | 35 | 80 | 90

00:    no error

10:    Job List-error, syntax error in project list

12:	PRJ not found, error while opening or reading project file
13:	incompatible, project cannot be applied to CD/DVD (wrong CD/DVD imported)
14:	input error, error while reading source data (file not found)
15:	invalid, invalid file/directory names or invalid directory level
16:	size error, the amount of data specified exceeds the capacity of the CD/DVD. This project cannot be done
17:	file open/create error, access denied
19:	file open error, file not found
20:	recording error, write error occured during recording. This error may be have been recovered by a further retries with other CD/DVD s.
30:	Job List-corrupt, severe syntax error in Job List, processing of this Job List file is not possible
31:	autoloader failure, further processing aborted, operator intervention required.
32:	HD full, the local hard disk(s) is (are) full, further processing aborted.
34:	irrecoverable write error, spare CDs are exhausted.
35:	file I/O error
80:	internal (software) error
90:	aborted, user cancelled operation during the processing of this CD/DVD .

Note: job-error should be initially set to 00.

cds-done:

A four digits number including leading zeroes. It indicates the number of successfully produced CD/DVD s that belong to the job.

Note: cds-done should be initially set to 0000.

3.2   Job List Example

By setting "QuickVerification On" in the header, all Jobs specified in this job list inherit this setting.

```
Header
    Status 0,00
    Simulation Off
    QuickVerification On
EndHeader

; Project files "P1.PRJ", "P2.PRJ", "P3.PRJ", and
; "P4.PRJ" are created during the execution of this
; project list.
; At the end they are all deleted, except file
; "P2.PRJ" (DontDelete statement).
; The names of project files have to be different
; in order not to be overwritten.


; Project file "P1.PRJ" will be created with the
; following settings:
; The Volume Identifier of the PVD will be
; "ORDERS_ARCH_96", the recording mode will be
; Mode 1 (single-session), file and directory names
; validation will be done according to the ISO9660
; rules, and directory ARCHIVE will be created in
; the root of the CD/DVD . The directories
; "C:\DOCU\ORDERS" and "C:\DOCU\INVOICE" including
; their subtrees will be copied to \ARCHIVE. The
; directories "C:\ADMIN", and "C:\TEXT" including
; their subtrees will be copied to the root.
; So, the resulting CD/DVD  will contain the
; directories "ARCHIVE","ADMIN", and "TEXT" in its
; root; directory "ARCHIVE" will contain
; directories "ORDERS" and "INVOICE".
;
Project P1.PRJ
    Status 0,00
    TTree
        VolId   ORDERS_ARCH_96
        Mode    1
        Naming   Iso
```

```
        NewDir   ARCHIVE    \
        AddDir   C:\DOCU\ORDERS    \ARCHIVE
        AddDir   C:\DOCU\INVOICE    \ARCHIVE
        AddDir   C:\ADMIN    \
        AddDir   C:\TEXT    \
     EndTTree
EndProject


; Project file "P2.PRJ" will be created with the
; following settings:
; The Volume Identifier of the PVD will be
; "BUGS_AND_FIXES", the recording mode will be
; Mode 2 (multi-session), MS-DOS file and directory
; names are allowed, and directory "C:\BUGFIXES"
; including its subtree will be copied to the root
; of the CD/DVD s. Then, the directory "TEST" will be
; created in "\BUGFIXES" on the CD/DVD . Three files
; "T1.EXE", "PATTERN1", and "PATTERN2" will be
; copied from "C:\TESTFIX" to the newly created
; directory "\BUGFIXES\TEST".
; The resulting CD/DVD  will contain the directory
; "BUGFIXES" in its root. Besides the files and
; directories that are contained in "C:\BUGFIXES",
; directory "\BUGFIXES" on the CD/DVD  will contain
; directory "TEST" which will contain the three
; files mentioned above.
;
Project P2.PRJ
   Status 0,00
   TTree
      VolId   BUGS_AND_FIXES
      Mode    2
      Naming  Msdos
      AddDir   C:\BUGFIXES    \
      NewDir   TEST    \BUGFIXES
      AddFile  C:\TESTFIX\T1.EXE  \BUGFIXES\TEST
      AddFile  C:\TESTFIX\PATTERN1  \BUGFIXES\TEST
      AddFile  C:\TESTFIX\PATTERN2  \BUGFIXES\TEST
   EndTTree
   DontDelete
```

```
        EndProject

        ; Project file "P3.PRJ" will be created with the
        ; following settings:
        ; A mixed mode CD will be created consisting of a
        ; data track and four digital audio tracks.
        ; The Volume Identifier of the PVD will be
        ; "TOP_GAMES97", the recording mode will be Mode 1
        ; (single-session), file and directory names
        ; validation will be done according to the ISO9660
        ; rules, and directory GAMES will be created in the
        ; root of the CD/DVD . The files and subdirectories
        ; found in directory "D:\MYGAMES\PROGRAMS" will be
        ; copied to "\GAMES" on the CD/DVD . The files and
        ; subdirectories found in directory
        ; "D:\MYGAMES\SETUP" will be copied to the root
        ; directory of the CD/DVD . Four digital audio tracks
        ; will be written after the data track.
```

```
Project P3.PRJ
   Status 0,00
   TTree
      VolId   TOP_GAMES97
      Mode   1
      Naming  Iso
      NewDir  GAMES    \
      AddDirC   D:\MYGAMES\PROGAMS   \GAMES
      AddDirC   D:\MYGAMES\SETUP   \
   EndTTree
   AudioImage
      File   D:\MYGAMES\MUSIC\SONG4.WAV
   EndAudioImage
   AudioImage
      File   D:\MYGAMES\MUSIC\SONG5.WAV
   EndAudioImage
   AudioImage
      File   D:\MYGAMES\MUSIC\SONG1.WAV
   EndAudioImage
   AudioImage
      File   D:\MYGAMES\MUSIC\SONG8.WAV
   EndAudioImage
   Finalization   Close
EndProject

; Project P4.PRJ is similar to P1.PRJ, except that
; it contains statements for creating a bootable
; CD: 80x86 platform, 1.44MB diskette emulation,
; system type FAT12 (1)
Project P4.PRJ
   Status 0,00
   TTree
      BootInfo
         PlatformId   0
         PlatFormIdString   "My Company"
         BootMediaType   2
         SystemType   1
         SectorCount   1
         BootImageFile   D:\BOOT\FLOPPY
```

```
        EndBootInfo
        VolId   ORDERS_ARCH_96
        Mode    1
        Naming  Iso
        NewDir  ARCHIVE   \
        AddDir  C:\DOCU\ORDERS   \ARCHIVE
        AddDir  C:\DOCU\INVOICE   \ARCHIVE
        AddDir  C:\ADMIN   \
        AddDir  C:\TEXT   \
    EndTTree
EndProject


; Project file "P5.PRJ" will be created with the
; following settings:
; A digital audio CD will be created consisting of
; four digital audio tracks.
; CD Text information is added for the disc, as well
; as for track 1, 3 and 4.
; Note that finalization must be "close" or "open".
```

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```
Project P5.PRJ
   Status 0,00
   DiscTitle        "This is the title of my disc"
   DiscPerformer    "Performer of my disc"
   DiscLanguageCode  9
   DiscGenreCode     7
   AudioImage
      File           D:\ MUSIC\SONG4.WAV
      Title          "Title 1"
      Performer      "Performer of title 1"
   EndAudioImage
   AudioImage
      File   D:\ MUSIC\SONG5.WAV
   EndAudioImage
   AudioImage
      File   D:\ MUSIC\SONG1.WAV
      Title          "Title 3"
      Performer      Performer3
   EndAudioImage
   AudioImage
      File   D:\ MUSIC\SONG8.WAV
      Title          "Title 4"
   EndAudioImage
   Finalization   Close
EndProject


; The following four jobs will be executed:
; Two CD will be produced using the project P1.PRJ
; and the print file C:\IMPRINTS\LABARC4.PRN.
; In addition to the activated QuickVerification
; inherited from the header, verification by comparison
; is enabled, too.
;
Job
   Status   00,00,0000
   CreateCd   ProjectPath   P1.PRJ
   Imprint   C:\IMPRINTS\LABARC4.PRN
   NumberOfCDs   2
```

```
      Verification    On
EndJob


; One CD will be produced using the project P3.PRJ
; The QuickVerification setting inherited from the header
; is overridden by the setting in this job.
;
Job
   Status    00,00,0000
   CreateCd    ProjectPath    P3.PRJ
   QuickVerification    Off
EndJob


; 40 CD will be produced using the project P2.PRJ
; and the print file C:\IMPRINTS\FIXES.PRN. The job
; shall use no more than 3 spare CDs.
;
Job
   Status    00,00,0000
   CreateCd    ProjectPath    P2.PRJ
   Imprint   C:\IMPRINTS\FIXES.PRN
   NumberOfCDs    40
   SpareCDs    3
EndJob


; 18 CD will be produced using the project
; C:\PROJECTS\XY.PRJ and the print file
; C:\IMPRINTS\XY.PRN.
; Here, the new syntax for raw print files is used.
;
Job
   Status    00,00,0000
   CreateCd    ProjectPath    C:\PROJECTS\XY.PRJ
   Imprint    Raw    C:\IMPRINTS\XY.PRN
   NumberOfCDs    18
EndJob


; 10 CD will be produced using the Disc Image
; C:\IMAGES\TEST.CD. For the imprint a PoINT Label Editor
; format file and a data input are specified.
```

```
;
Job
   Status   00,00,0000
   CreateCd   ImagePath   C:\IMAGES\TEST.CD
   Imprint   LabelEditor
          FormatFile   C:\IMPRINT\ABC.PLF
          InputDataSection
                  InputData   C:\IMPRINT\ABC.DAT
                  StartRN   5
                  FieldNumer   3
                  FieldValue   "My company name"
          EndInputDataSection
   EndLabelEditor
   NumberOfCDs   10
EndJob

; 10 CD will be produced using the project
; C:\PROJECTS\XY.PRJ. For the imprint a Label
; Editor format file is specified.
;
Job
   Status   00,00,0000
   CreateCd   ProjectPath   C:\PROJECTS\XY.PRJ
   Imprint   LabelEditor
   FormatFile   C:\IMPRINT\GEF.PLF
   EndLabelEditor
   NumberOfCDs   10
EndJob

; 10 CD will be produced using the project
; C:\PROJECTS\XY.PRJ. For the imprint a command
; line is specified.
;
Job
   Status   00,00,0000
   CreateCd   ProjectPath   C:\PROJECTS\XY.PRJ
   Imprint   CmdLine   "CMD.EXE /C MYPRINT.EXE"
   NumberOfCDs   10

EndJob
```

```
; 10 CD will be produced using the Disc Image
; C:\IMAGES\TEST.CD. For the imprint a Bar Tender Label
; Editor format file and a data input are specified.
;
Job
   Status    00,00,0000
   CreateCd    ImagePath    C:\IMAGES\TEST.CD
   Imprint    LabelEditor
           FormatFile    C:\IMPRINT\ABC.BTW
           InputDataSection
                   InputData    C:\IMPRINT\ABC.DAT
                   StartRN    5
                   FieldNumer    3
                   Delimitation    Comma
                   FieldValue    "My company name"
           EndInputDataSection
   EndLabelEditor
   NumberOfCDs    10
EndJob
```

4 Order of Execution

The jobs in one job list file are executed top down. Different job list files are processed in the order of appearance. Jobs are processed in parallel as far as possible, independent of the source job list file.

5 Status and Error Handling

"PoINT Publisher – Server" constantly updates the status information fields of the *job-list* file. This especially ensures that "PoINT Publisher – Server" can be re-started with the same *job-list* file after critical failures because "PoINT Publisher – Server" can evaluate the status information and continue with the first incomplete job.

6 Program Termination

When started with a PJL file as command line argument, PoINT Publisher NG - SDK terminates with a summary message in a message box by default. See also the Termination directive in the Header of the project list.

7 Making Boot Image Files

PoINT Publisher NG - SDK includes a tool for creating boot image files.

According to the "El Torito" specification, the boot image may contain an image of a diskette or of a hard disk to be emulated by the BIOS. In order to simplify creating a boot image file, PoINT Publisher NG - SDK contains the program **mkbootimg.exe**. It is a command line program by which you can copy a diskette or a hard disk partition to a file that can be directly used with the **BootImageFile** directive of the project definition in the Job List file.

To use MkBootImg start a "Command Prompt" and enter:

> **cd** <installation directory of "PoINT Publisher NG – Server">
> **mkbootimg** <source drive> <output file name>

It copies all blocks of the disk or partition at <source drive> to <output file name>. E.g. to copy partition C: to file C_PART enter:

> cd C:\PoINT\Publisher\CDserver
> mkbootimg C: C_PART

Supported disks are 1.2MB, 1.44MB, and 2.88MB floppy disks. Partitions are supported without restrictions. The contents of a hard disk partition is automatically extended by a Master Boot Record (MBR) including a partition table, as required by "El Torito".

The sector size of the media (source drive) must be 512 bytes.

MkBootImg displays "Media Type" code and "System Type" code. These values have to be used with the corresponding directives of the project definition as described above.