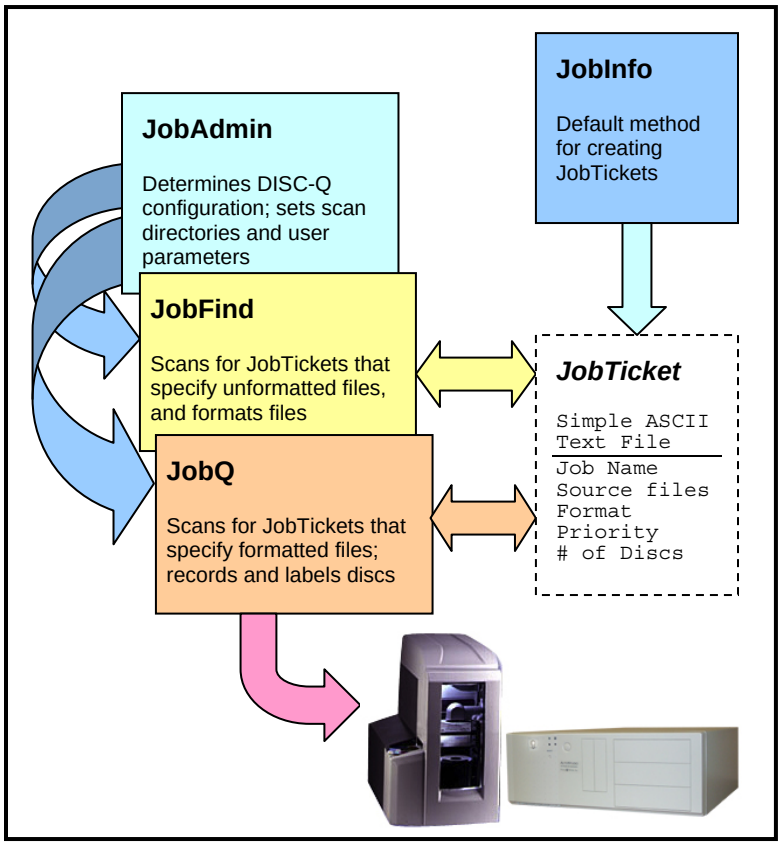
DISC-Q Description

DISC-Q is a set of interrelated Java software packages that work together to automatically manage the process of issuing, formatting, recording and labeling CD-R/DVD-R/Blu-Ray-R discs.

Four main components comprise DISC-Q:

- JobFind
- JobQ
- JobAdmin
- JobInfo

Three of these packages (JobFind, JobQ, and JobAdmin) are core programs that reside on the host computer that controls system hardware resources. The fourth package, JobInfo, is a client Java application that can be freely distributed to DISC-Q network users. It is the default method used to create *JobTickets* for DISC-Q (see sidebar).



JobTickets

JobTickets are simple text files that describe the tasks to be performed by JobFind and JobQ.

Many methods can be used to generate JobTickets. Young Minds supplies JobInfo, a simple and graphical Java-based application as the standard JobTicket creation tool.

- MakeDisc+ (with Java 2 GUI) also allows users to create JobTickets.
- Any software application, batch file, or shell script that can generate a simple ASCII text file can build a JobTicket.

JobTicket Parameters

A JobTicket contains keywords and parameters that tell DISC-Q how to process a particular recording task. Required parameters include:

- Name of the recording job
- Location of files to be recorded
- Filesystem format

Optional parameters include:

- Job priority
- Label information
- Email notification address
- Number of discs to be recorded

JobTickets

Every disc production job submitted to DISC-Q is defined by a *JobTicket*. A JobTicket is a simple ASCII text file that describes the parameters for disc production to the DISC-Q server software. JobTickets can be created by JobInfo, or by batch files, shell scripts, or third-party applications. DISC-Q's power and flexibility derives from the simplicity of the JobTicket and the ease with which JobTickets can be created.

Some of the information in a JobTicket is automatically generated by information contained in DISC-Q configuration files. If an empty JobTicket is submitted, the default values from the configuration files fills in the missing parameters to form a complete JobTicket.

JobFind and JobQ search for JobTickets in designated search directories. JobFind and JobQ distinguish between JobTickets by their filename extensions (see sidebar, below for more information on filename extensions).

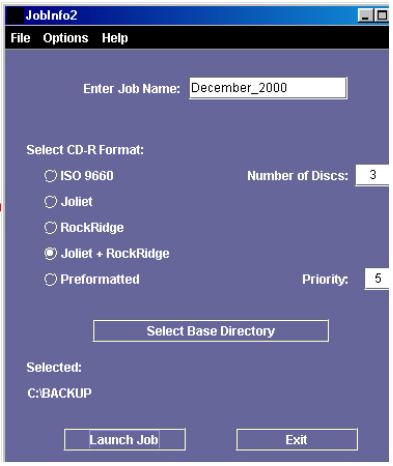
JobFind looks for JobTickets associated with files that require "premastering" (disc image formatting). JobTickets that require premastering are identified by a *.FRD extension.

JobQ looks for JobTickets associated with image files (a set of files that have already been premastered). JobTickets that are ready for recording are identified by a *.PRD extension.

- JobFind premasters the source data set into a preformatted image and stages it for JobQ.
- JobQ performs the actual disc recording tasks. It searches the directories for formatted disc images (*.PRD files) and prioritizes them relative to the information contained in the JobTickets.

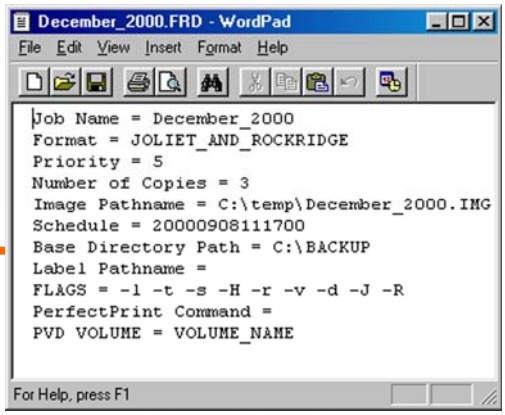
Searches by JobFind and/or JobQ can traverse multiple directories, allowing a great deal of flexibility when assigning search directories to users. Search directories can be allocated to projects, groups, departments, etc.

Creating a JobTicket



JobInfo – *Default application to create JobTickets*

Shell Script/Batch File
Easy way to automate JobTicket creation

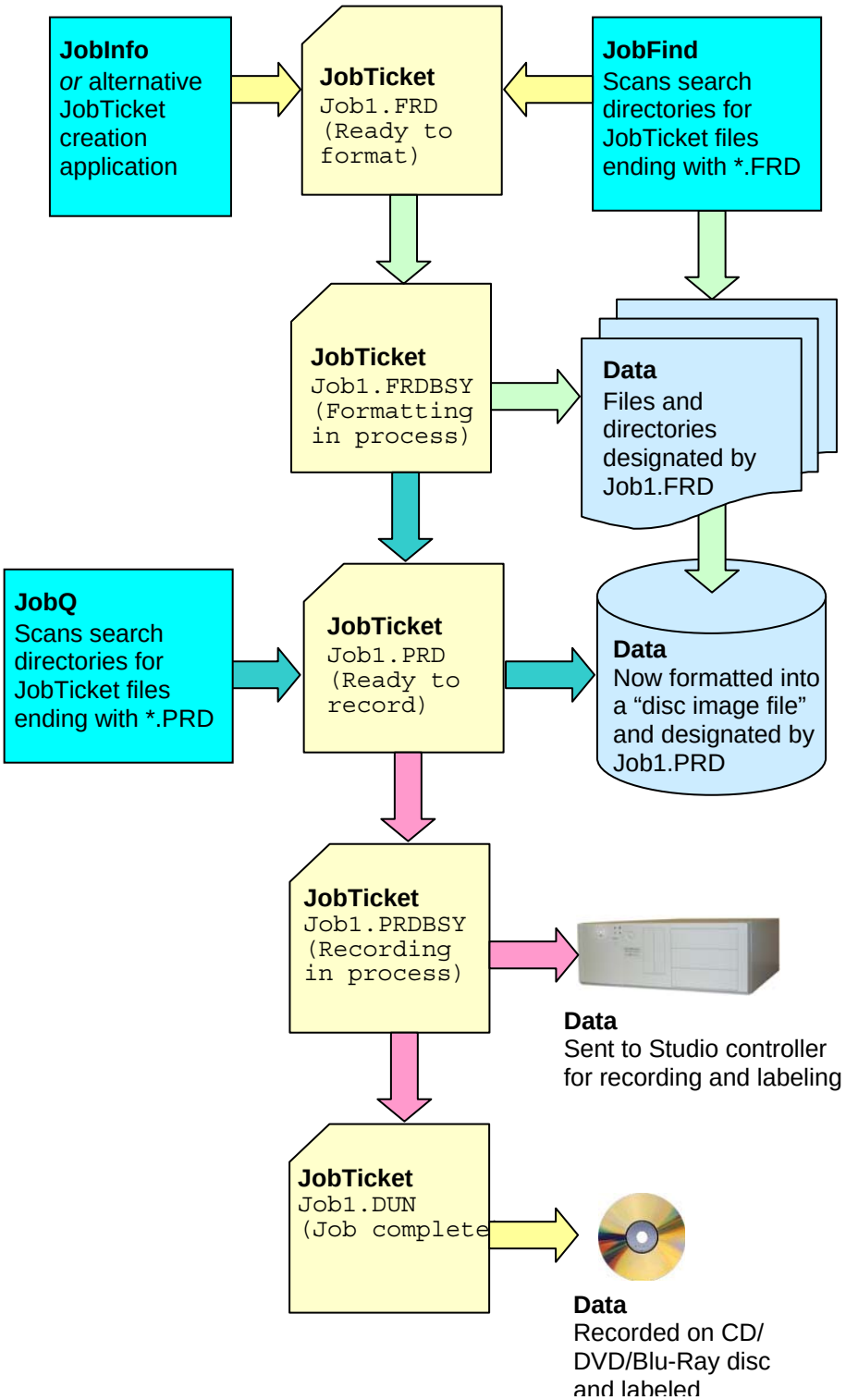


Text Editor – *Edit existing JobTicket files or manually create new JobTickets*

Customized Application
Modified to output JobTickets

```
Job Name = December_2000
Format = JOLIET_AND_ROCKRIDGE
Priority = 5
Number of Copies = 3
Image Pathname = C:\temp\December_2000.IMG
Schedule = 20000908111700
Base Directory Path = C:\BACKUP
Label Pathname =
FLAGS = -l -t -s -H -r -v -d -J -R
PerfectPrint Command =
PVD VOLUME = VOLUME_NAME
```

JobTicket
A simple text file that provides the information DISC-Q needs to process disc requests



The Life of a JobTicket

A JobTicket progresses through a number of stages, as diagrammed here.

These stages include:

Ready to format:
A set of data files is designated within the JobTicket as ready for formatting. The JobTicket informs DISC-Q how the set of files should be formatted.

Formatting in process:
DISC-Q is now premastering the set of files.

Ready to record:
Premastering is now complete; the files have been converted to a disc image.

Recording in process:
The disc image is in production. The production process includes disc loading / unloading, recording, and printing.

Job complete:
The job designated by the JobTicket has been completed. Email notification is now sent out, and information about the job is entered into the database.

DISC-Q Workflow

DISC-Q is designed to increase productivity by minimizing the amount of time that users must spend creating discs. It is the mass storage version of "fire and forget," a term usually used to describe smart weapons that guide themselves to the target once they have been released. In DISC-Q's case, the user clicks a mouse button and the software does the rest.

Creating a JobTicket with JobInfo takes only a few seconds, and users can learn how to use the application within a few minutes.

In most cases, creating a JobTicket through the DISC-Q JobInfo application requires the following steps:

1. Type a descriptive Job Name (up to 20 characters)
2. Select a filesystem format (ISO 9660, Rock Ridge, Joliet, Rock Ridge with Joliet, Bridge UDF, or preformatted image)
3. Enter number of discs (if different than default value)
4. Enter priority for job (if different than default value)
5. Select the dataset to be premastered (or the dataset image file, if previously premastered). Selection can be done graphically, by clicking on the directory that contains the dataset.
6. Click the "Launch Job" button.

Once the JobTicket has been created, it is placed into one of DISC-Q's scan directories. Then, at the next designated search interval, DISC-Q finds the JobTicket and processes the dataset associated with it. The JobTicket itself is also processed as the dataset is processed, and its name (filename extension) is changed to reflect the current status of the job.

For seamless disc creation, DISC-Q can be easily integrated into custom applications, without the need for extensive recoding or using complex APIs. This owes to the simplicity of the text-based JobTicket. Wrapping simple scripts around an application lets the application automatically generate JobTickets upon an event occurrence or other trigger. There are virtually an infinite number of potential applications for DISC-Q, with limitless implementations and variations possible.

JobTicket File Extensions

JobTickets use specific file name extensions that DISC-Q uses to interpret how the JobTicket should be processed. DISC-Q changes the JobTicket file name extension as it moves the JobTicket from the start, when DISC-Q first finds the job, to the end, when the job is complete.

FRD	Ready to format
FRDBSY	Formatting in process
PRD	Ready to record
PRDBSY	Recording in process
DUN	Job is complete
BAD	Unable to process job