Get serious. Dive for data the right way.

DEEPSPAR
Data Recovery Systems

DeepSpar Disk Imager 4

The lifeline of the PDR Toolset™

Disk imaging is the critical second step of the 3D Data Recovery Phases & Issues, after drive restoration, but before final data retrieval.

Most disk imagers are designed to copy data from one good drive to another. If you have a stable drive, just plug it in and create a new image without hiccups. No need to see what's happening behind the scenes.

But damaged drives, the kind that show up for data recovery? They're another story altogether.

Imaging faulty drives can give you the bends!

Drives repeatedly stop responding. Most software-only disk imaging products are not equipped to reset or repower the drive when it clicks or stops responding.

You lose drives to degradation and failure. If you're not using the proper tools, your drive is working too hard.

You leave data behind in bad sectors. Most tools skip bad sectors because they systematically execute the same read command against all sectors, good and bad.

You waste time with fruitless processing. If a tool can't reset or abort processing when a sector takes too long to read, the drive can spend days grinding down sectors with multiple read attempts that don't retrieve any data.

You wonder about the quality of your data while imaging is underway. With traditional methods, you don't know whether you've recovered any good data until the imaging process is complete.

The result: wasted effort, lost time, and worse, lost data and lost revenue.

Why can't most disk imagers do professional data recovery?

Because they use the same hard-coded imaging algorithms for everything:

- *They treat every read-write **head** the same, no matter what the level of degradation.* Typical disk imagers don't even know what head each sector belongs to.
- *They treat every **problem area** the same, no matter what the media issue.* You get no information on the types of media issues or what's happening under the hood, and you can't change the imaging algorithm for different types of media issues.
- *They treat every **type of user data** the same, no matter what its importance.* You can't target crucial files or skip the unnecessary stuff. Disk imagers with some data recovery functionality may image files by browsing, but this technique is much slower and has a very high risk of drive failure.

The Wrong Way:

One button. No control.

How does DeepSpar Disk Imager do professional data recovery?

The Right Way:

Visual, interactve, configurable.
More data.

DeepSpar Disk Imager™ TOP PRIORITY

Problem: Reading media problems

38% of respondents reported this.

DeepSpar Disk Imager™ TOP PRIORITY

Problem: Drive read instability problems

30% of respondents reported this.

DeepSpar Disk Imager™ TOP PRIORITY

Problem: Need deepest diagnostic tools

30% of respondents reported this.

DeepSpar Disk Imager™ TOP PRIORITY

Problem: Better handling of media and disk instability

13% of respondents reported this.

* Research data from an independent survey conducted by DeepSpar Data Recovery Systems with fifty Professional Data Recovery companies in 15 different countries.

DeepSpar Disk Imager is the first disk imaging system specifically built to handle damaged drives.

*It treats every **head** differently.*

Each head is diagnosed and different algorithms are configured for heads with different levels of degradation. Sectors on good heads are imaged first, because in some cases critical user files may be retrieved after imaging data on good heads only. The drive may be imaged head by head to avoid the extra load of continuous switching between heads while imaging.

*It treats every **problem area** differently.*

DeepSpar Disk Imager uses a lighter touch by disabling background firmware processes and turning off bad sector auto-relocation. Different imaging algorithms are configured for each pass. For example:

- If the drive stays busy more than a certain period of time, the tool resets and repowers it. If a sector has media corruption, the tool processes it by different read commands.
- If a certain number of consecutive sectors have a specific type of error, the tool jumps over those sectors to return to that area on later passes.

*It treats every **type of user data** differently.*

File system elements, such as boot sectors, file allocation tables, and file attributes such as file names, are processed with the highest priority. Sectors that belong to files the client is looking for are imaged at this time.

No matter what type of user data each sector contains, the tool uses a *drive linear imaging sequence,* taking into account all other factors, such as head-by-head imaging or sequence defined by the specific media issue.

*It is the **perfect buddy** to the PDR Workflow™.*

Together, DeepSpar Disk Imager, your PDR technician and the PDR Workflow methodology ***evaluate*** the drive at all levels, ***image*** the drive in multiple passes, ***monitor*** the imaging process and ***validate*** data after imaging in a systematic, scientific way that can be repeated across technicians, cases, locations and that is proven to get more data.

DeepSpar Disk Imager 4 Benefits

- ***Don't babysit unresponsive drives.*** DeepSpar Disk Imager eliminates the need to manually note the sector, repower, and reboot before continuing, because the hardware module can perform those functions itself if errors occur. You can comfortably leave the process unattended.
- ***Save more drives.*** DeepSpar Disk Imager allows you to change algorithms so that it uses significantly lighter operations, and the drive remains alive and well until all data is imaged.
- ***Get more data from bad sectors.*** DeepSpar Disk Imager can process each byte in a sector, ignoring error correction codes (ECC). Our imaging software responds appropriately to sector errors and uses probability to determine correct data values.
- ***Save more time.*** DeepSpar Disk Imager uses read timeout control to identify and skip problematic sectors for recovery on later passes.
- ***Check the quality of your data while imaging is underway.*** A hex representation of each sector's data appears onscreen as DeepSpar Disk Imager reads it, with a count of the most common file types that have been imaged so far. And unlike with other imagers, if all else fails, you can pause the entire process and restart where you left off.

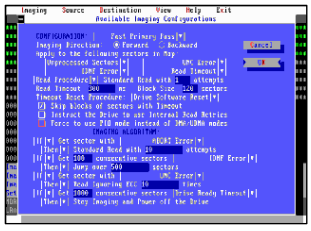
More speed; more control; more data.

DeepSpar Disk Imager Features

- All-in-one PCI-E device for data recovery imaging
- Support of native SATA functions for drive diagnostics and imaging such as PHY and COMRESET
- Configurable, visual, interactive data recovery imaging environment
- Extensive drive diagnostics: individual heads, media, PCB, mechanical issues
- A hardware solution bypassing the computer's BIOS
- Full sector map and metadata stored on destination (or separate configuration) drive
- Stop/resume imaging at any time
- Fully configurable multi-pass imaging
- Drive ready timeout processing
- Read sector timeout controlled by Software/Hardware reset and power cycle
- Backwards imaging
- Validation of data on-the-fly: Hex view, File counters, File System elements
- Support of drives over 2TB
- Imaging by selective head
- Disable SMART subsystem
- Disable Read Look-Ahead option
- Multiple methods of bad sector recovery
- Bit level analysis of corrupted data to filter out the read-write channel noise
- Imaging only the needed partitions/directories/files
- Set/Clear HPA
- Power protection for the source drive
- Adjustable read block size

DeepSpar Disk Imager kit includes:

- DeepSpar Disk Imager hardware
- ZIF and CF adapters
- 1.8" and 2.5" IDE laptop adapters
- Instruction manual
- One-year full warranty



Configuration and Status screens: DeepSpar Disk Imager allows you to fine tune the imaging process for greater speed and accuracy, and also gives you live feedback as imaging progresses.

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