User's Manual

R-UNDELETE

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I Start

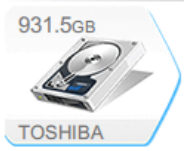
II Quick Start Guide in 3 Steps

2.1 Step 1. Disk Selection

• Locate the physical storage device where lost files resided.

Disks panel

Storage Device Icons

	Computer's internal hard drives 42. Disks with files reside on them.

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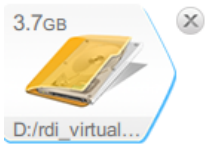
	USB storage devices like external hard drives or memory sticks
	SSD storage devices. File recovery from such devices has some peculiarities described in the SSD and NVME storage devices 42 section.
	NVME storage devices. SSD storage devices connected to the computer through a special interface. They have the same file recovery peculiarities of SSD devices described in the SSD and NVME storage devices 42 section.
	Disk image 50. A file that contains exact, byte by byte, copies of storage devices or disks. Files from such images can be recovered as if those images were real disks.
	CD/DVD discs or virtual disks.

• Check if the hardware of the storage device with lost files is in a good condition. If the storage device has hardware problems, R-Undelete marks such a device with an exclamation mark and gives a S.M.A.R.T. Monitoring 30 warning. Disk imaging 29 is the best solution in this situation.

• Select the disk on the device where the lost files might reside.

Recovery of deleted files or lost files from a formatted disk with the same file system

These files most likely reside on an existing disk.

To see the files resided on the disk, right-click and select Show Files (Quick Scan operation 43). Depending on the disk size, the number of files, and your computer hardware, it may take a few seconds or more. When files are found, R-Undelete switches to the Files panel where found files are selected for recovery 4.

Recovery of lost files from a formatted disk with a different file system

These files most likely reside on an existing disk.

To see the files resided on the formatted disk, right-click and select Show Files (Quick Scan operation 43). Depending on the disk size, the number of files, and your computer hardware,

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it may take a few seconds or more. When R-Undelete switches to the Files panel, click the Deep scan button, wait for Deep Scan 26 to finish, and select the previous partition 42 where lost files resided. Then select files for recovery 4.

Recovery of lost files from a deleted disk

Deleted disks are usually found on the unallocated space.

Right-click the unallocated space on the storage device of the disk, select Scan for partitions, and wait for R-Undelete to finish scanning the device. Note that it may take a long time if the device is large. When the disk is found, right-click Show Files then select files for recovery 4 .

Recovery of lost files from a damaged disk or a partition with an unsupported file system

Damaged disks or partitions with unsupported file system are usually found on the unrecognized space.

This recovery is very similar to the case of lost files from a deleted disk.

Right-click the unrecognized space on the storage device of the disk, select Scan, and wait for R-Undelete to finish scanning the device. Note that it may take a long time if the device is large. When the disk or a partition is found, right-click Show Files then select files for recovery 4.

If the files are to be recovered from a partition with an unsupported files system, R-Undelete will use only raw file search, and, therefore, will not recover file names and the original folder structure. See the Definitions 44 help page for more details.

Disks,Unrecognized Space, and Unallocated Space Icons

	A logical disk with letter (E:). Deleted files or files from formatted disks might reside on such disks.
	Unallocated space on a storage devices. A storage space that does not belong to any disk. A deleted disk (partition) might be found here.
	Unrecognized space on a storage devices. A storage space that is supposed to belong to a disk or partition, but R-Undelete cannot detect any because of its damaged or unsupported file system. A damaged disk or a partition with an unsupported file system might be found here.

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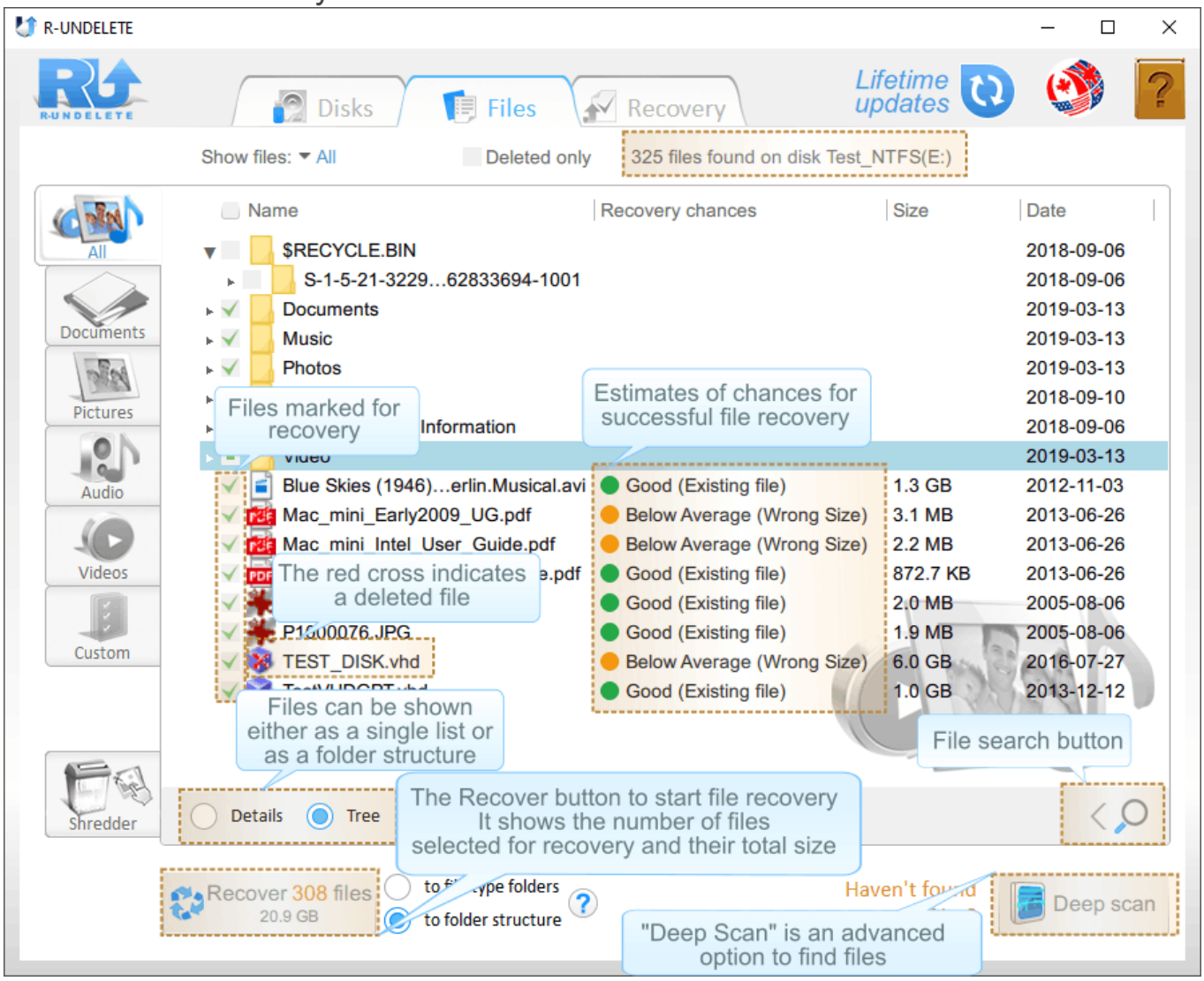
2.2 Step 2. File Marking

Mark files for recovery.



Files panel.

The Recovery chances column shows the estimates of chances for successful file recovery 43.

Files are shown in a single file list with details or as a folder tree structure, or tiles on the Pictures tab.

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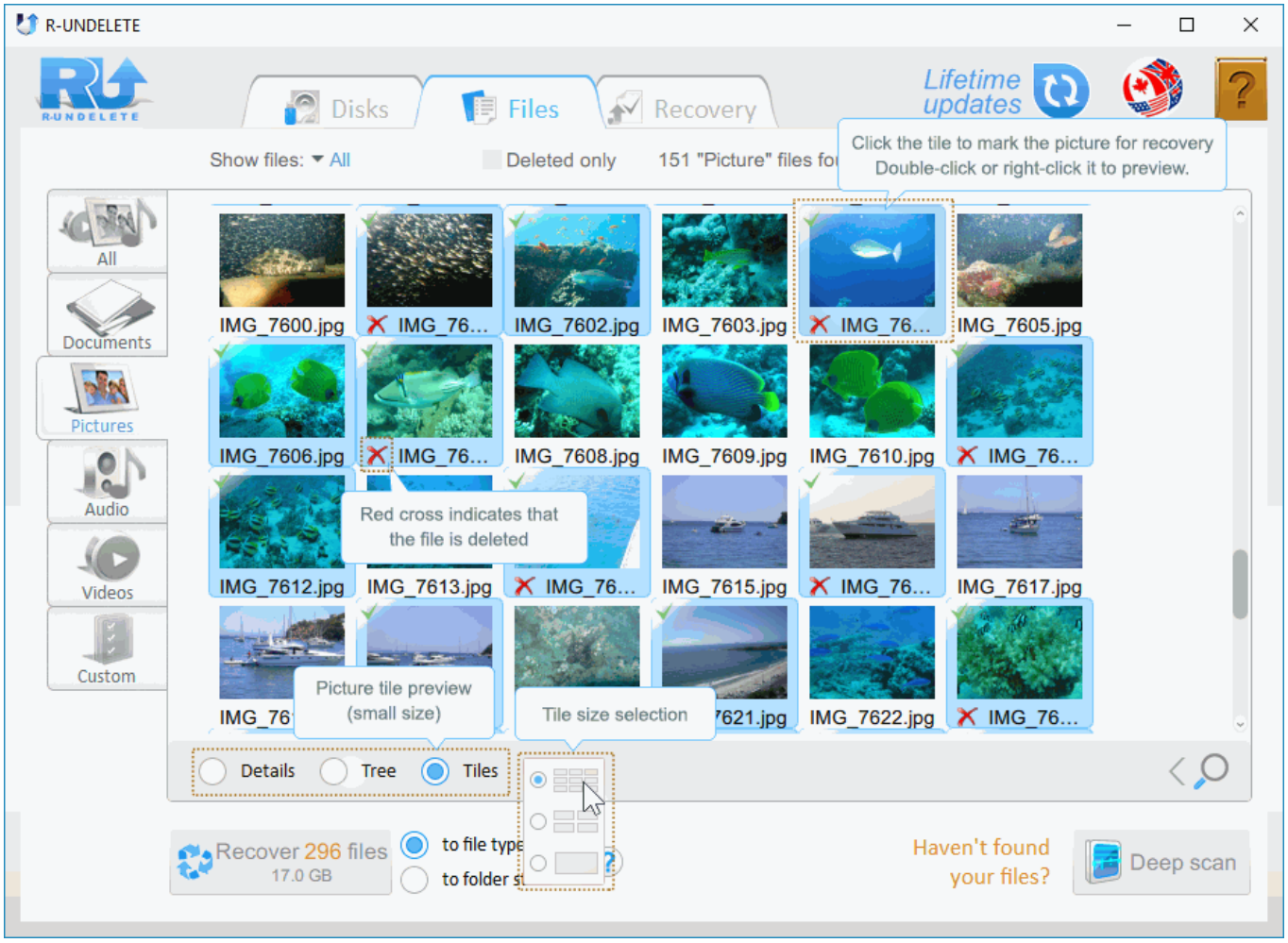

Files panel - Pictures tab.

There are advanced sorting and searching options in R-Undelete. See the File Sorting 9 and File Search 14 help pages for more details.

If a file is marked/cleared for recovery, it is applied to all tabs where it appears.

The build-in file viewer 15 allows you to estimate chances for successful file recovery or to find a necessary file to recover.

If the required files are not found, or you are recovering files from the reformatted disk with a different file system, use the advanced Deep scan option.

You may shred deleted files to render their content completely unrecoverable. Go to the Shredder 33 help page for more details.

When files are marked, click the Recover button to start the recovery 5.

2.3 Step 3. Recovery

When the required files are found and marked for recovery, a sufficient storage space on another disk should be available to save them.

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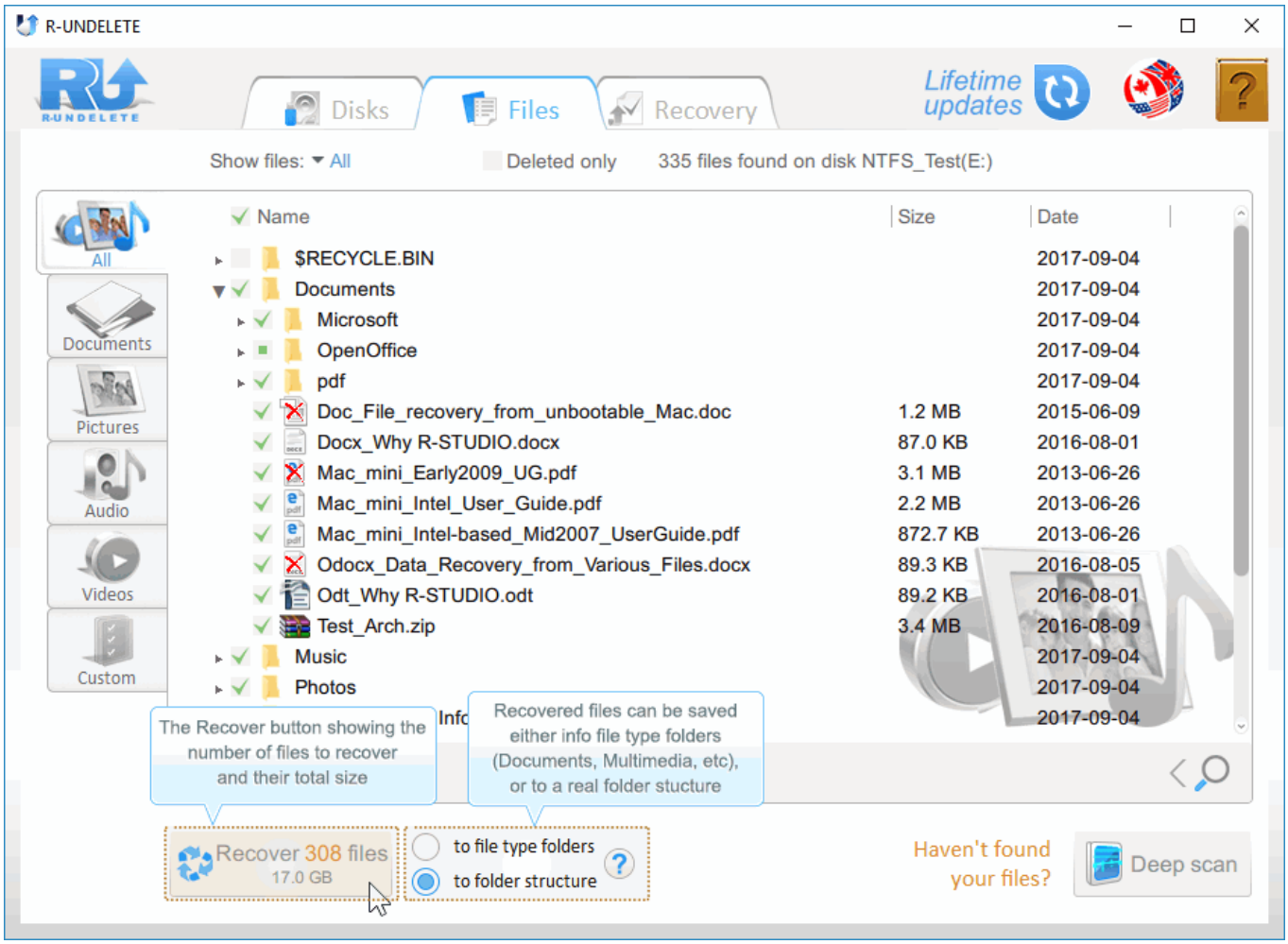
Never save the recovered files on the place where they resided, or you may completely loose them!



File recovery options

Select the way R-Undelete saves the files: either into the file type folders or to the real folder structure.

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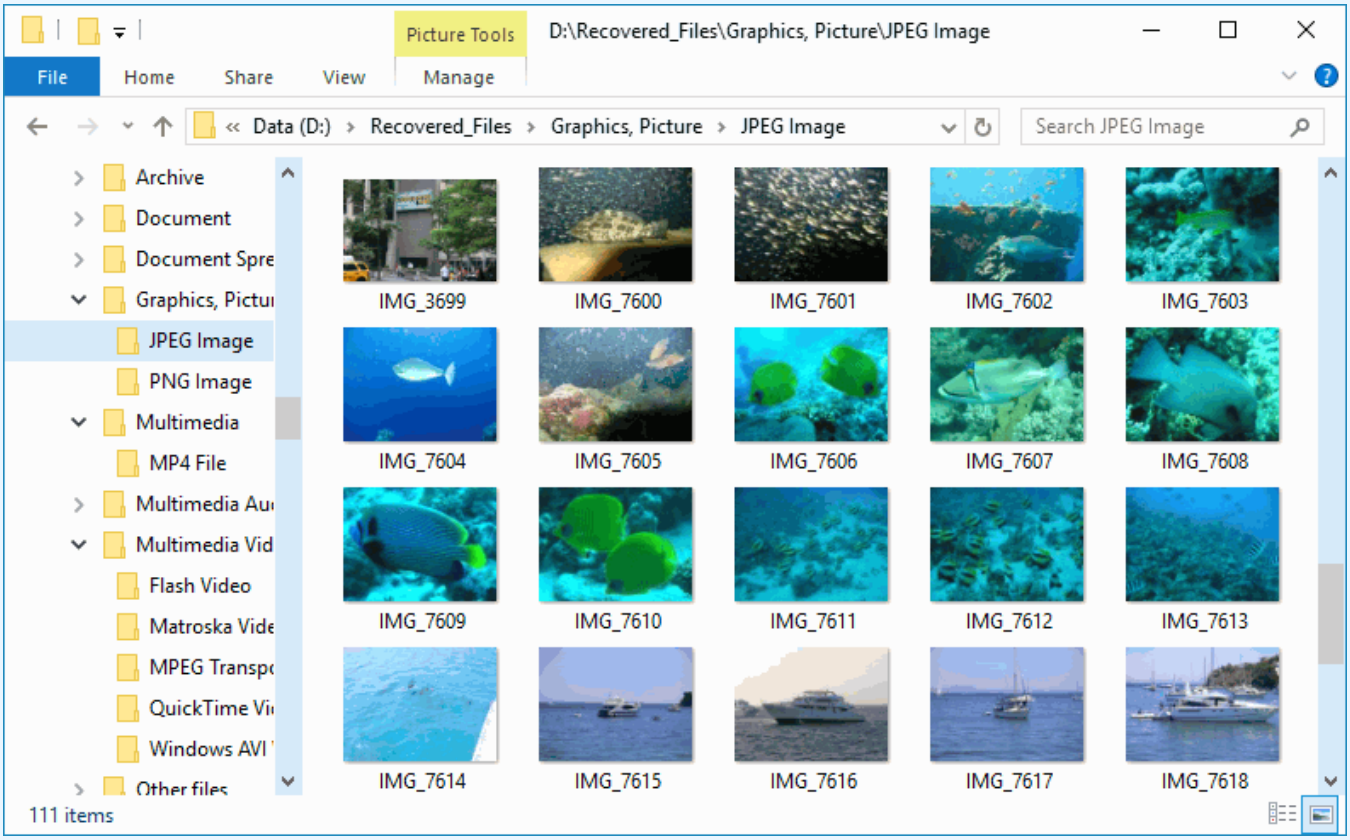

Recovery to the file type folders

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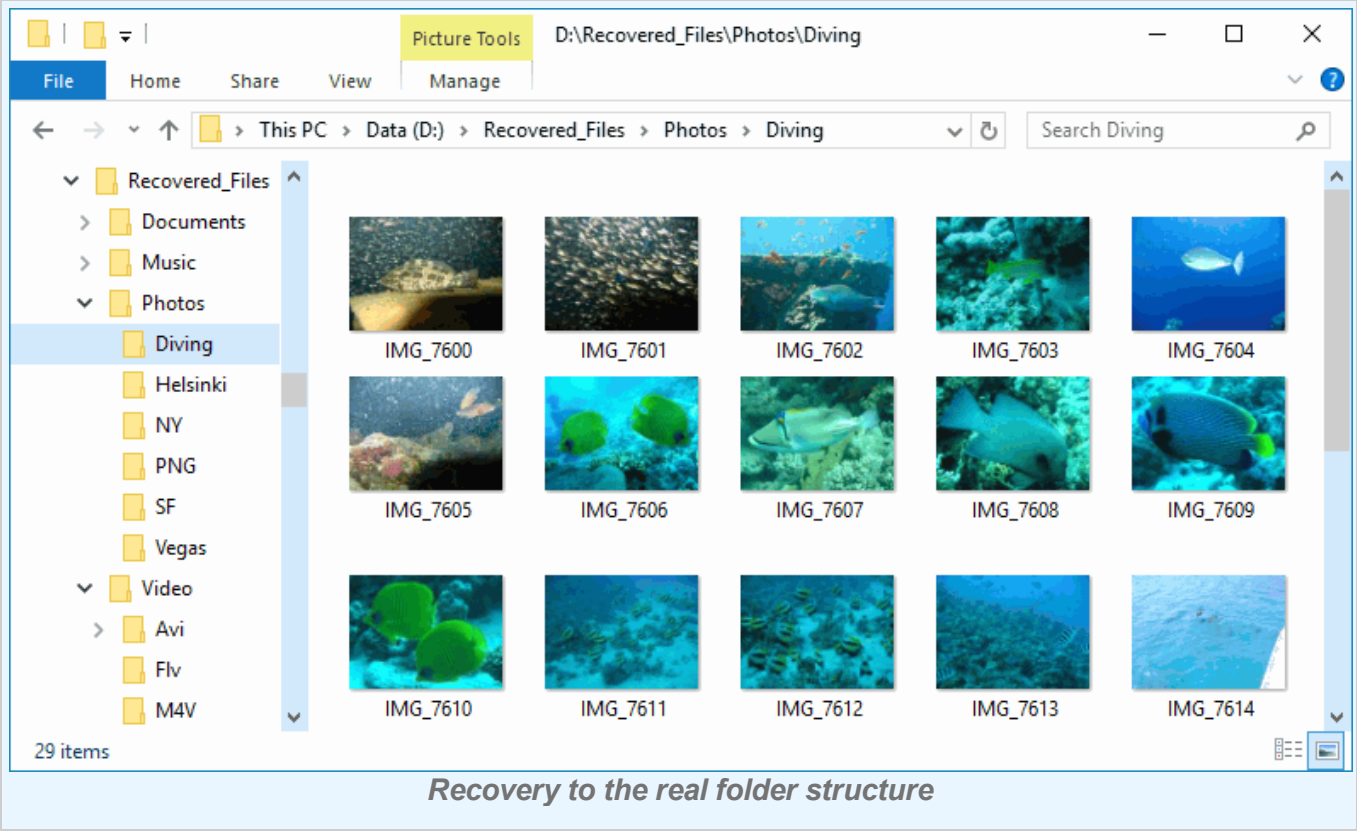

Recovery to the real folder structure

When all the necessary preparations are made, click the Recover button to start file recovery.
Wait for R-Undelete to recover the files and see the results.

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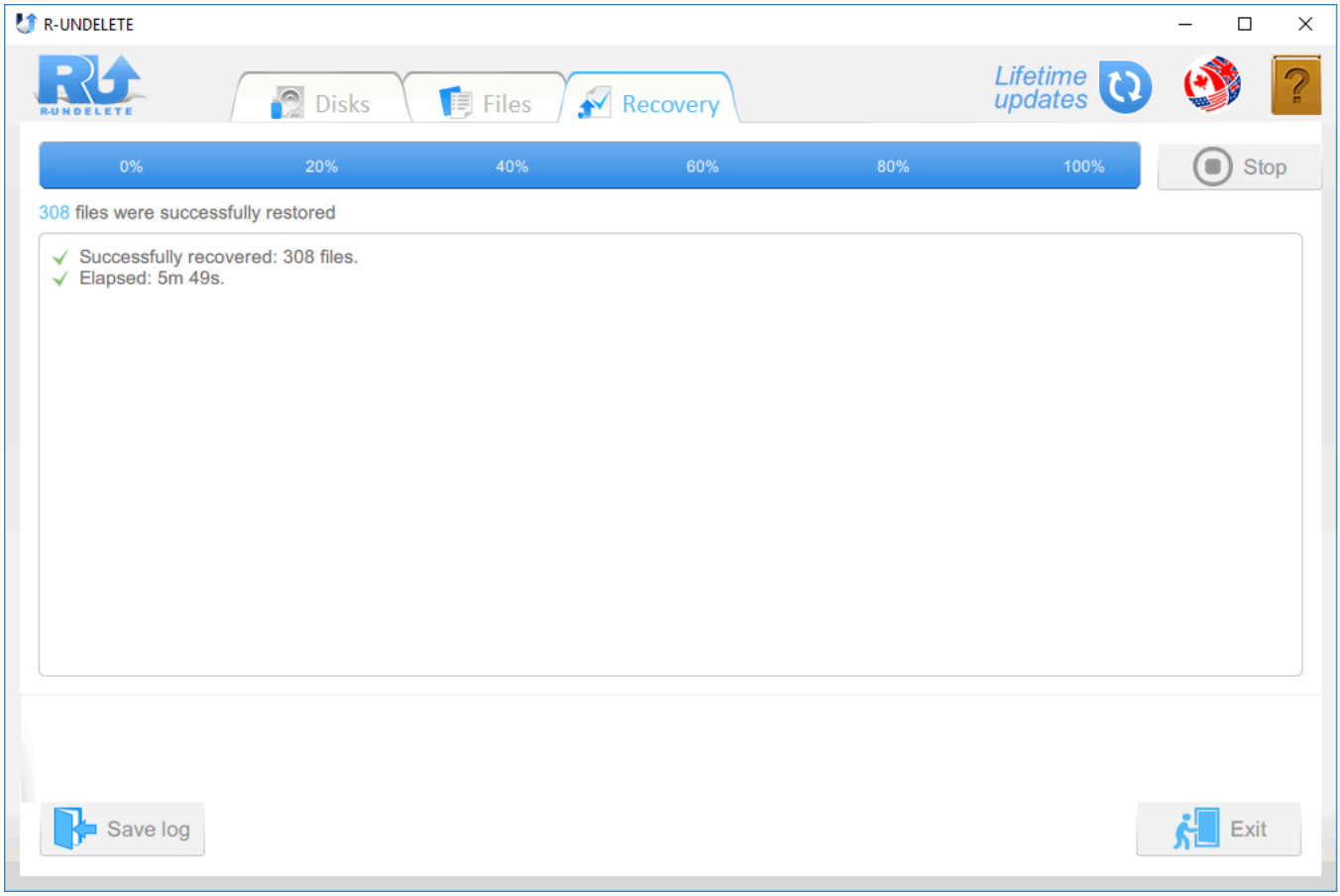

File recovery results

A file recovery log can be saved by clicking the Save log button.

When the recovery is over, the folder with recovered files will be automatically opened.

Now the recovery session is over. Go to the Disks panel to start another session or click the Exit button to close the program.

III Features

3.1 File Sorting

Within the tabs files can be sorted by their names, paths, sizes, or dates, and shown in a single file list with details or as a folder tree structure, or tiles.

R-Undelete gives its users various means to find files for recovery. These means can be combined to make file search in R-Undelete versatile.

Global file sorting:

These settings are applied to all found files on the disk regardless of which tab is selected.

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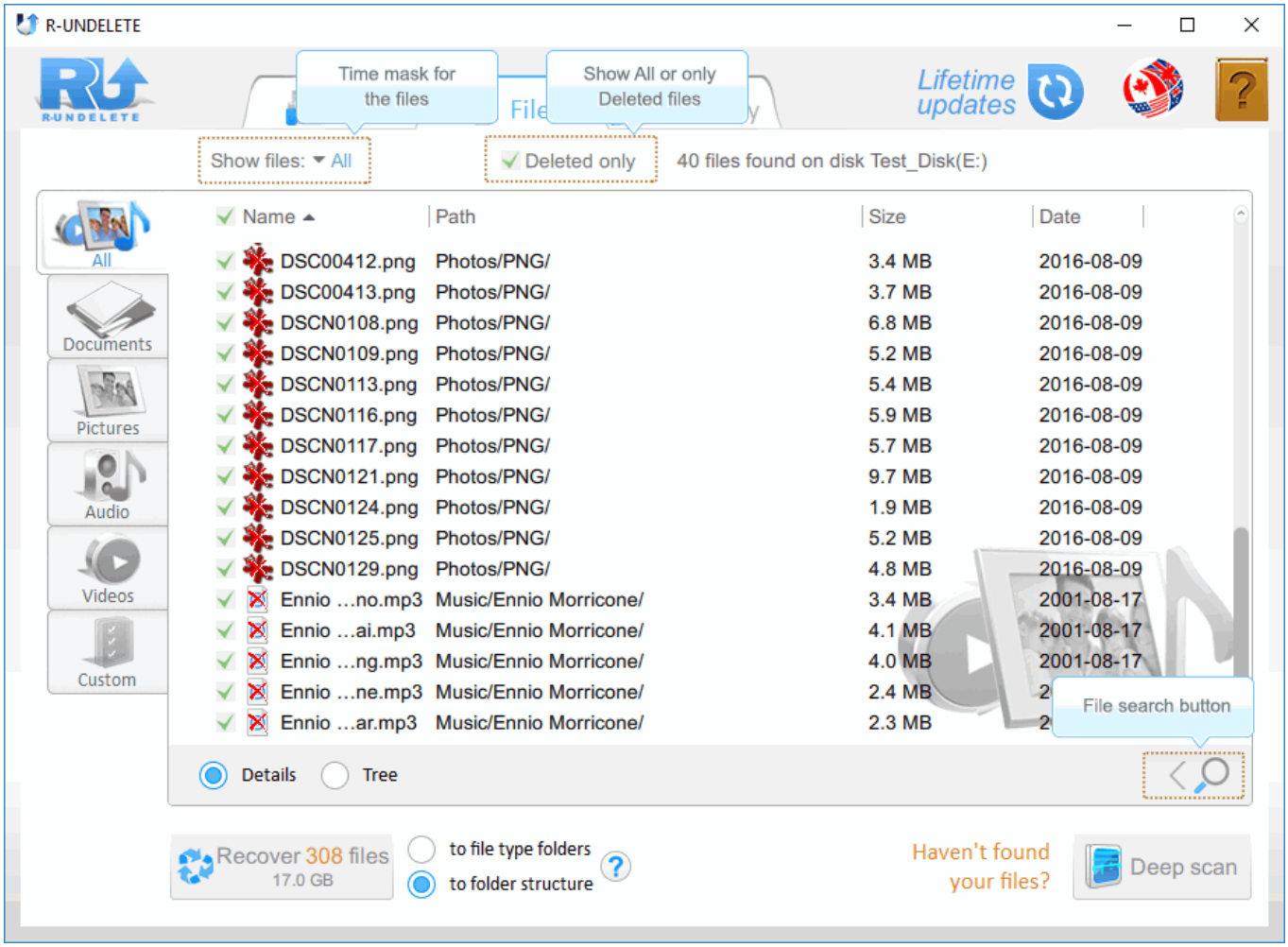
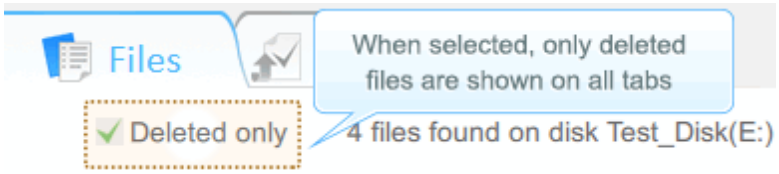


Global filtering tools

- Only deleted files are shown by default. Click this button to see all files.



- Files can be also rearranged to see files within a specified time period.

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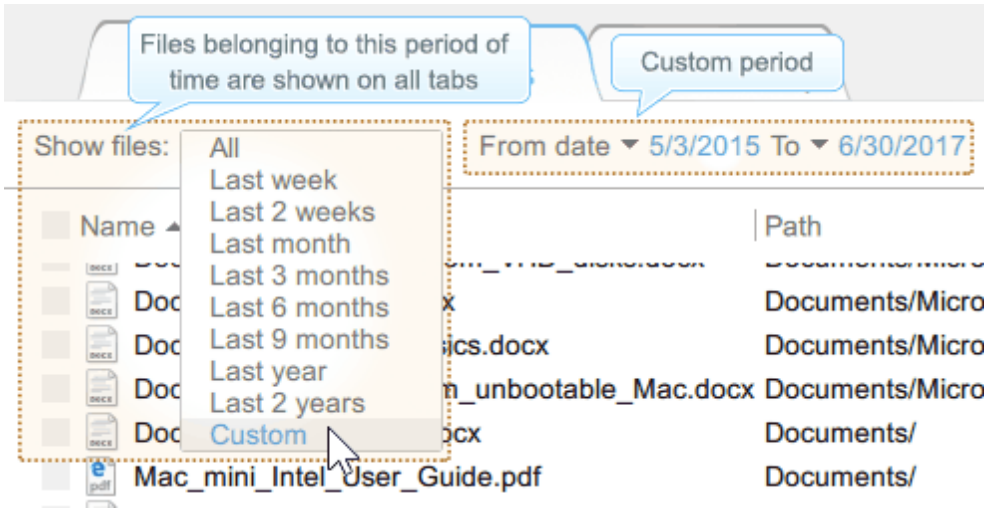
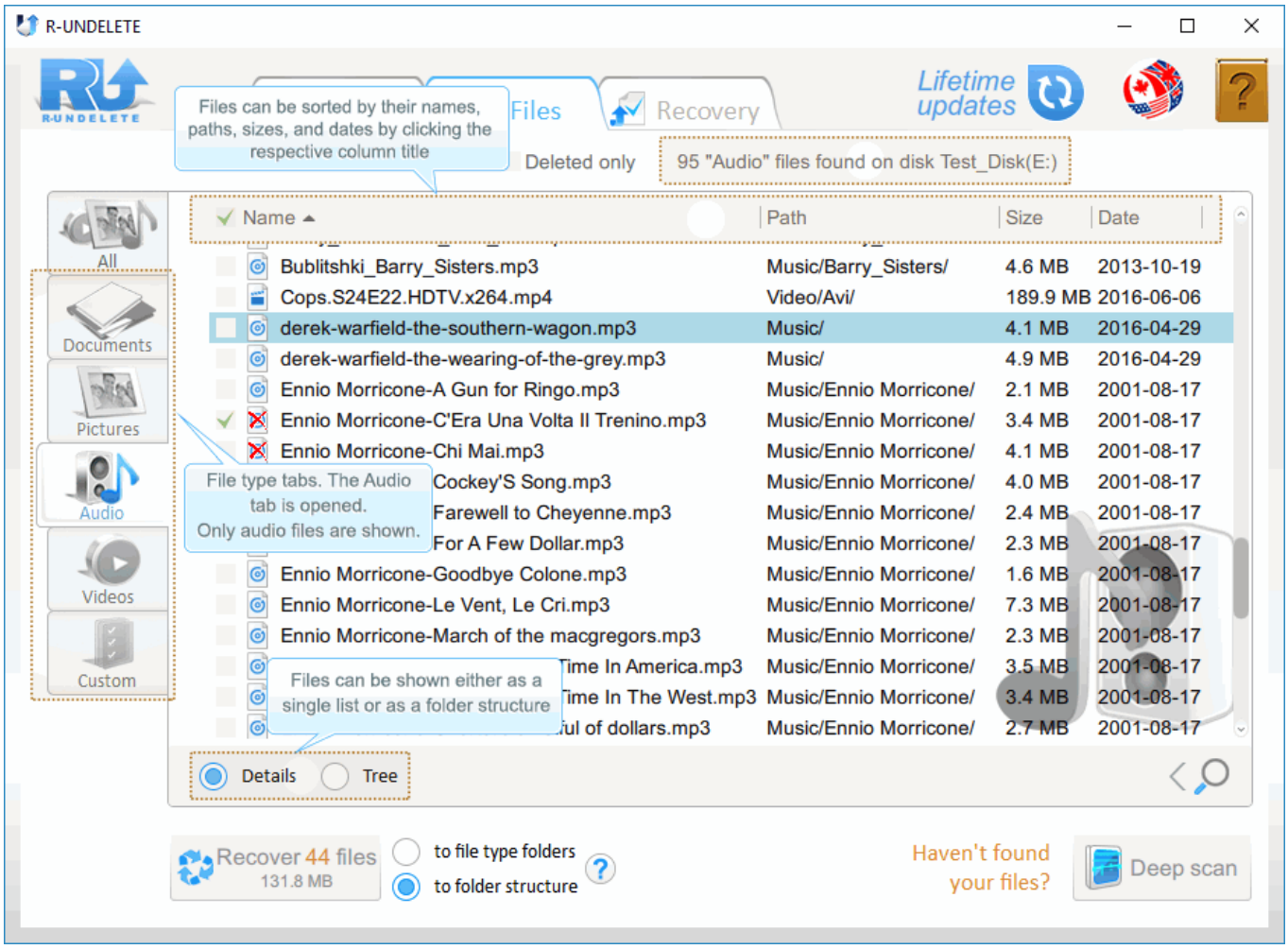


Files sorting by specific file types

For users convenience, files are already presorted by most common file types and placed to the corresponding tabs.



Audio tab

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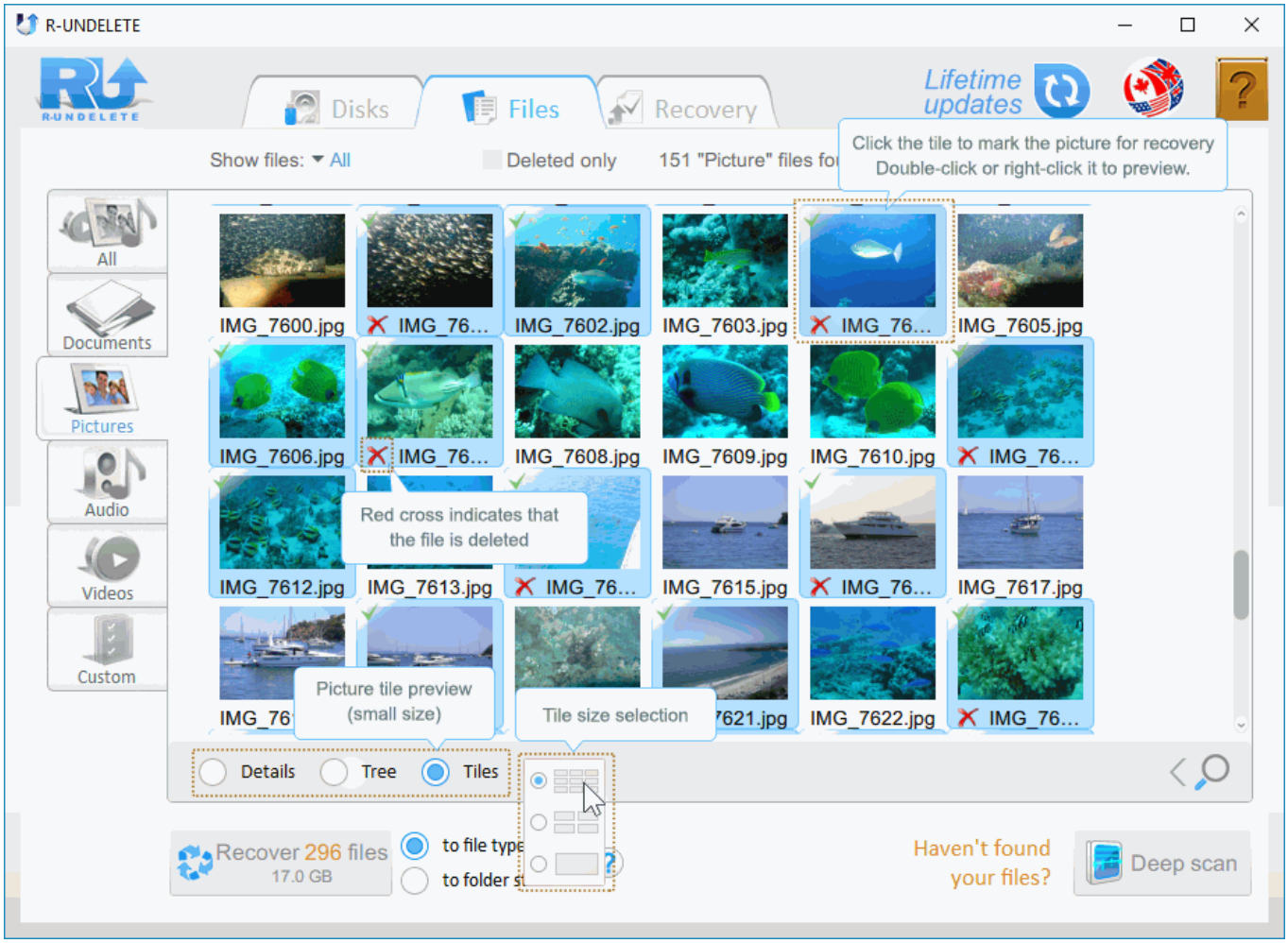
Within the tabs files can be shown in a single file list with details or as a folder tree structure, and as tiles (for the Pictures tab only). Then files can be rearranged by their names, paths, sizes, and dates.

When the Pictures tab is selected, R-Undelete can show picture files as tiles.



Pictures tab - Tiles view

The extra tab “Custom” allows the user to setup this tab to show specified file types only.

Custom tab setup

1. Click the Custom file type tab and then click the Setting buttons.

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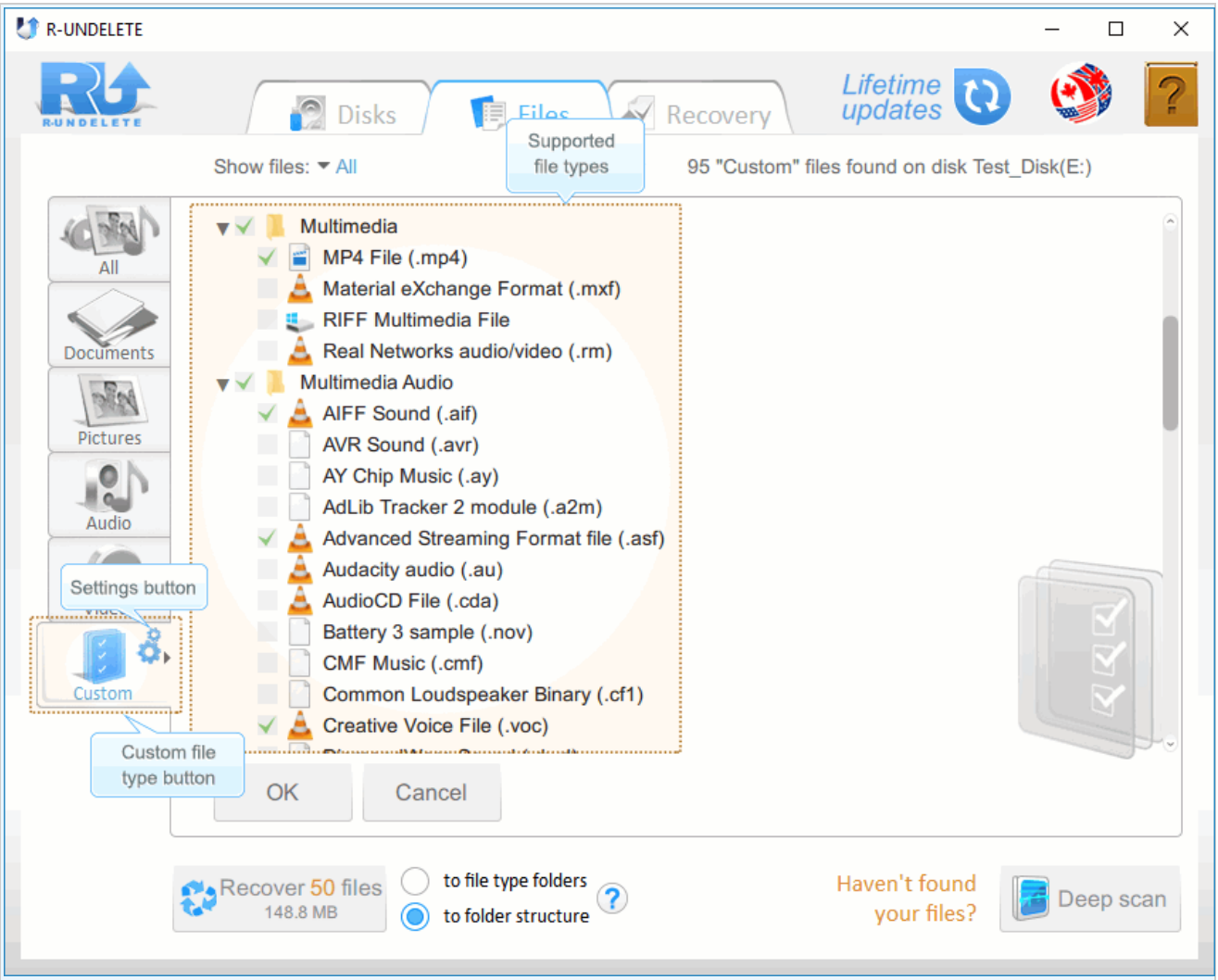

2. Select the required file types and click the OK button.

Only the selected file types will be shown.

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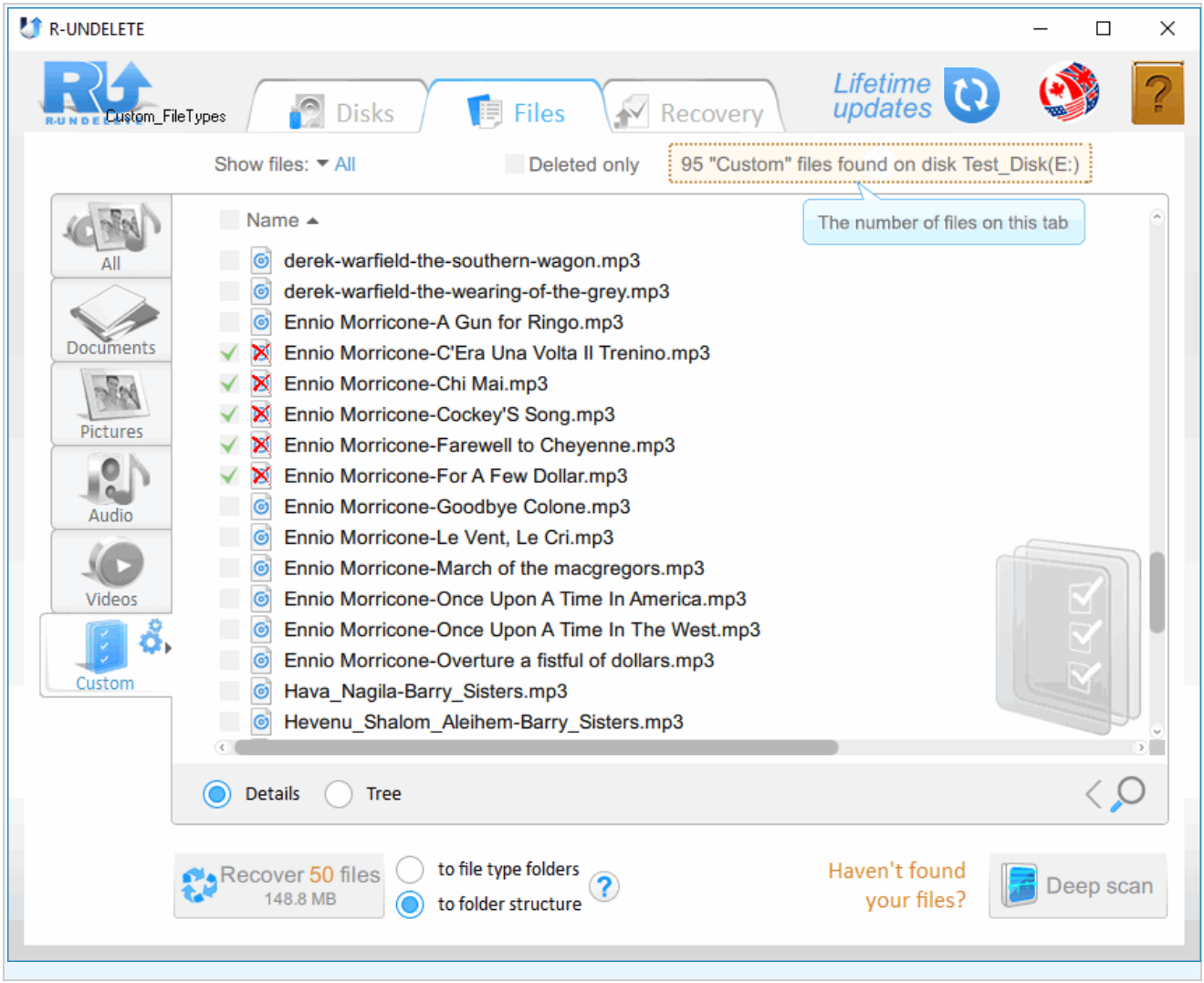

Individual files can be searched for [14] by clicking the Search button.

3.2 File Search

To search for individual file(s) use the Search button, specify the file name or file mask, [44] and click the Start button.

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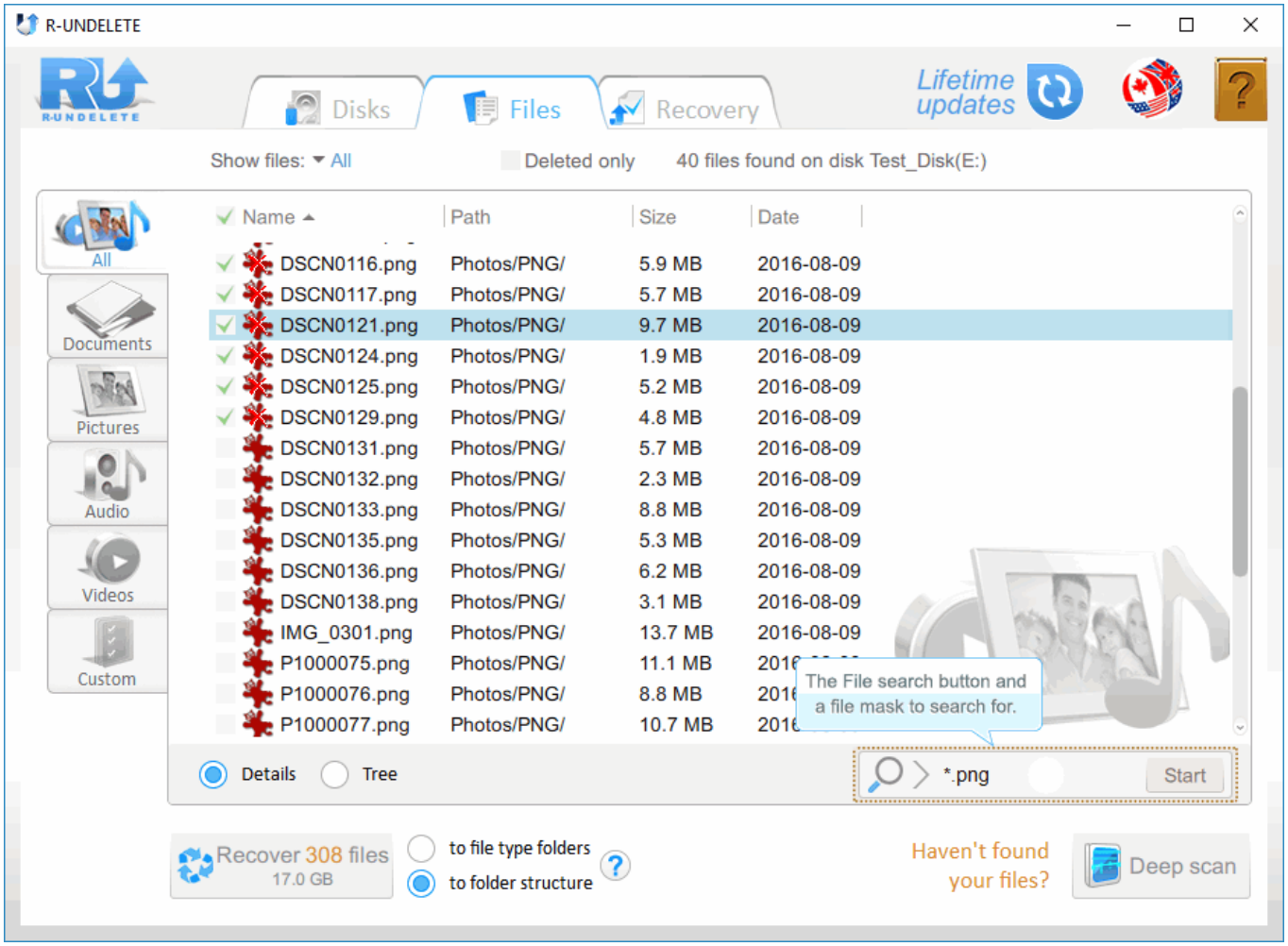

Search for files

Only the matched files will be shown.

File search is done on the files on the current tab. Select the All tab to search among all files.

File mask wildcards:
* : matches all characters,
? : matches one character.

File mask examples:
*.png matches all files with the png extension.
myfile??.doc matches files with any two last characters, like myfile01.doc or myfilena.doc.

3.3 File Viewer

The built-in file viewer allows the user to view both existing and deleted files to estimate chances for successful file recovery or to find a necessary file to recover. All common file types are supported: documents, pictures, audio and video files.

To view a file, double-click or right-click the file.

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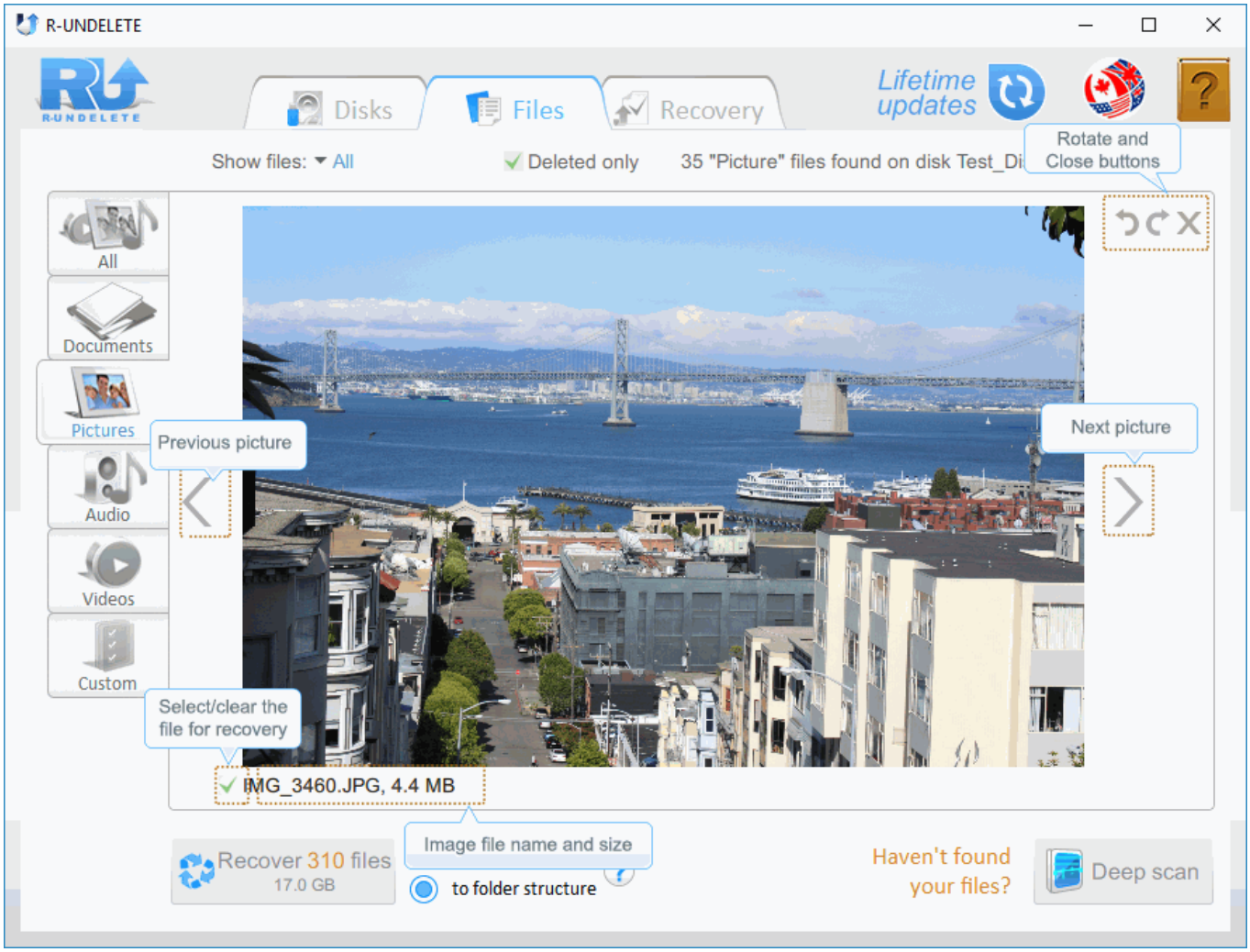
Depending on its type, R-Undelete will show or play file's content differently.

File viewer for pictures

Pictures are shown within the main program's window.



File view - Pictures

The picture can be rotated, if necessary. Use the arrows on the upper right corner. The picture can also be zoomed in/out by resizing the program's window.

Right-click the file to return to the previous view on the tab.

R-Undelete can also show picture files as tiles.

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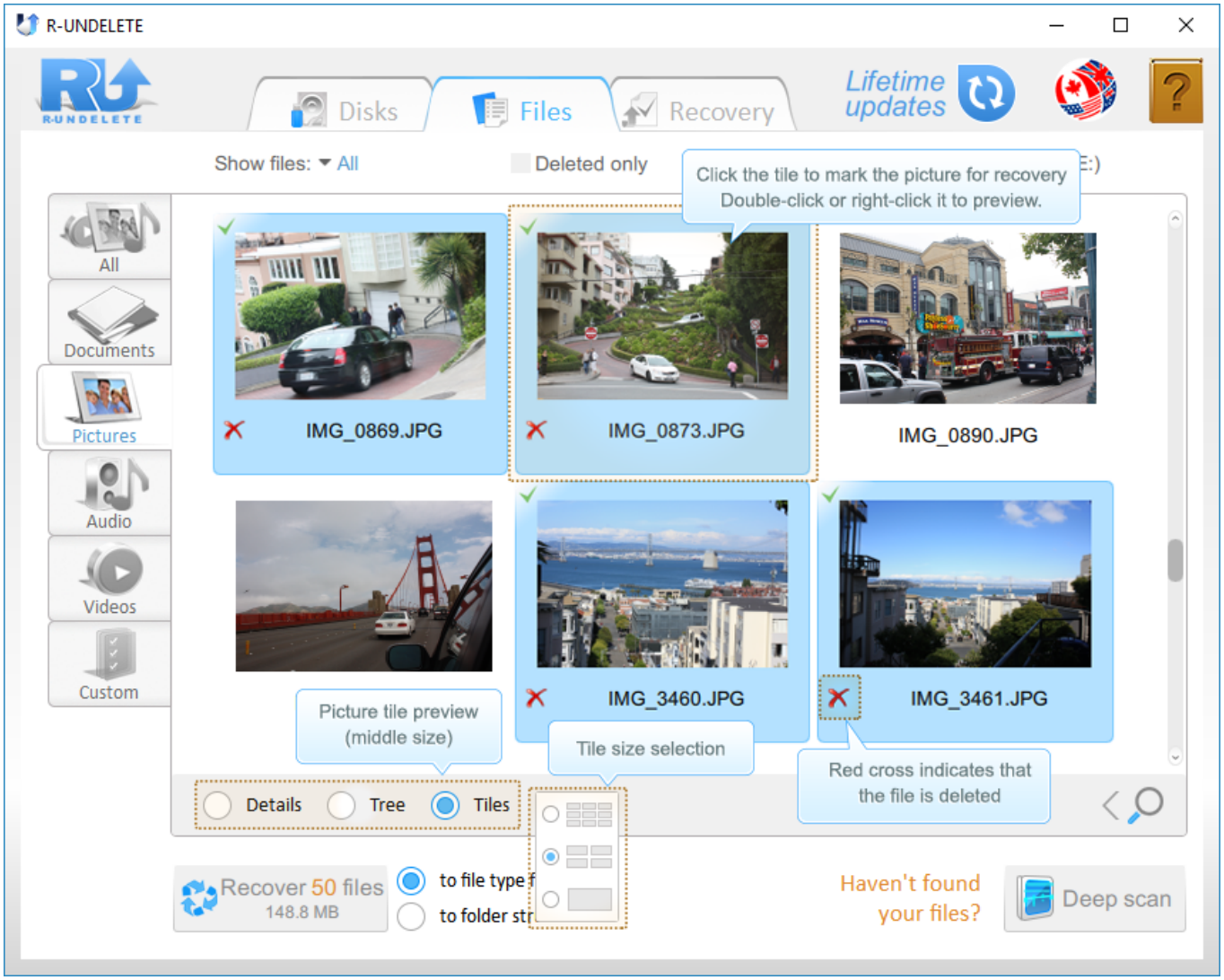

File viewer - Picture tiles

File viewer for Video, and Audio files

R-Undelete plays video and audio files in a separate viewer window. They can be shown (including embedded pictures) even without their respective applications installed.

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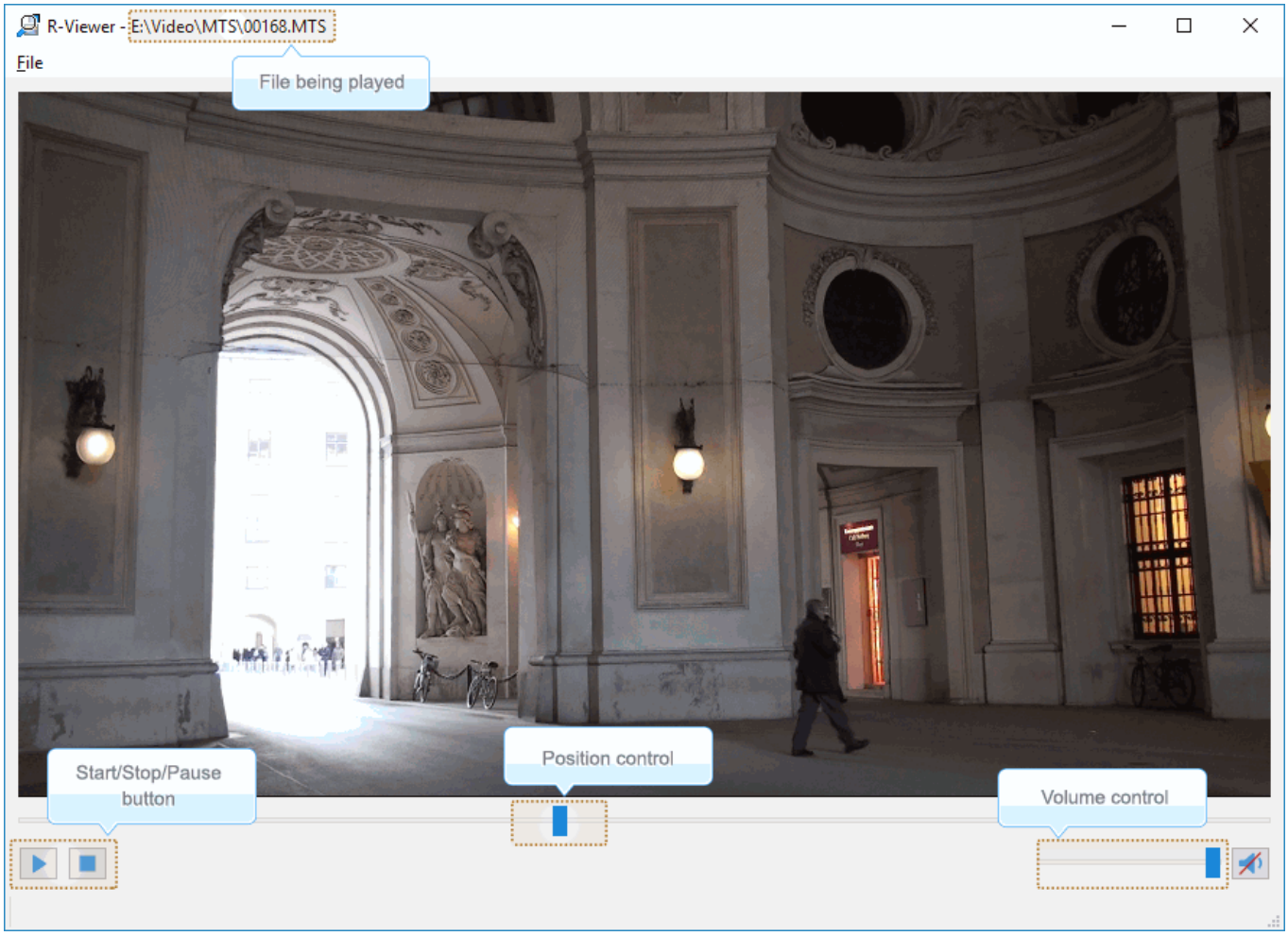

File viewer - video/audio files

File viewer for Microsoft® Open® Libre Office Documents

R-Undelete shows those documents in a separate viewer window. They can be shown (including embedded pictures) even without their respective applications installed.

Documents can be zoomed in/out for better viewing.

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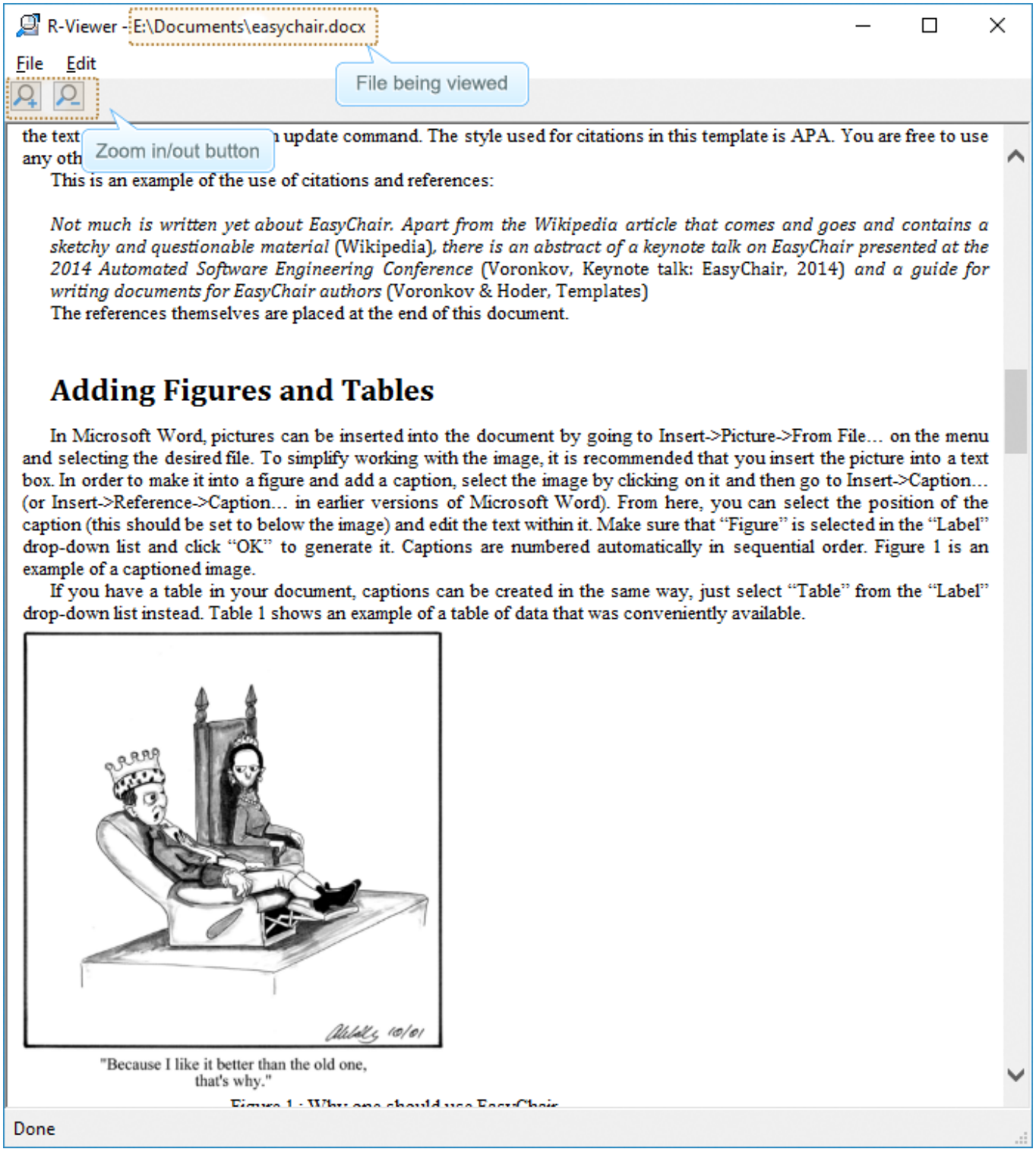

File viewer for Adobe Acrobat pdf files

R-Undelete shows those documents in a separate viewer window even without Adobe Acrobat installed.

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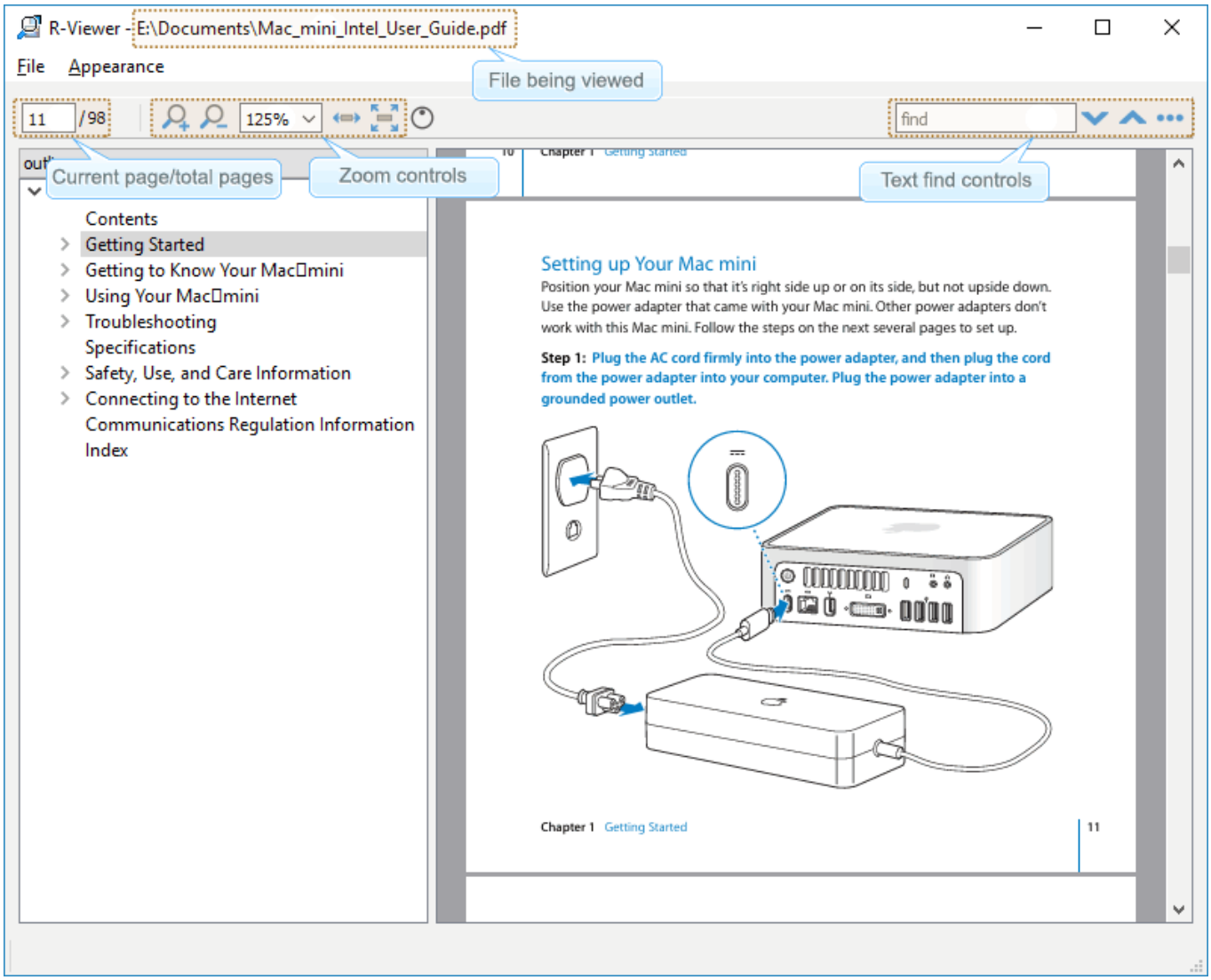
The viewer allows the users to jump to a required page, zoom the document, and search for a required text.



File viewer - Adobe Acrobat pdf documents

The documents can be shown in different layouts and rotated. Click the View menu and select the required options.

Supported file types:

Documents

MS Office and Open?Libre Office files, even without the programs installed:

- Word??Writer documents: docx
- Excel??Calc spreadsheets: xlsx
- PowerPoint presentation: pptx

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Office 97-2003, without the program installed

- Word documents: doc
- Excel spreadsheets xls
- PowerPoint presentation ppt

Adobe Acrobat document: pdf

Multimedia Files

Video formats: AIFF, ASF, AVI, BFI, CAF, FLV, GIF, GXF, HLS, QuickTime, 3GP, MP4, Matroska, Maxis XA, MPEG-DASH, MPEG program stream, MPEG transport stream (including AVCHD), MXF, Material eXchange Format, SMPTE, MSN Webcam stream, NUT, Ogg, OMA, RL2, TXD, WTV.

Audio formats: 8SVX, AAC, AAC+, AC-3, ADPCM, AMR-NB, AMR-WB, Amazing Studio PAF Audio, Apple lossless audio, QuickTime, ATRAC, CELT, DCA (DTS Coherent Acoustics), DPCM, DSD (Direct Stream Digitial), DSP Group TrueSpeech, DST (Direct Stream Transfer), DV audio, FLAC (Free Lossless Audio Codec), G.723.1, G.729, GSM, IAC (Indeo Audio Coder), iLBC (Internet Low Bitrate Codec), IMC (Intel Music Coder), Interplay ACM, MACE (Macintosh Audio Compression?Expansion), MACE (Macintosh Audio Compression?Expansion), MLP (Meridian Lossless Packing), Monkey's Audio, MP1 (MPEG audio layer 1), MP2 (MPEG audio layer 2), MP3 (MPEG audio layer 3), MPEG-4 Audio Lossless Coding (ALS), Musepack SV7?SV8, Nellymoser Asao, AVC (Audio for Video Codec), PCM A-law?mu-law, QCELP?PureVoice, QDesign Music Codec, RealAudio, Vorbis, Voxware MetaSound, WavPack, Westwood Audio, Windows Media Audio, Xbox Media Audio

Graphic files

3DS Max thumbnail (max), AAA logo (bpr), ACE texture (ace), ADEX (img, rle), AIM Grey Scale (ima, im), AIPD image (aipd), ARF (arf), AT&T Group 4 (att), AT&T multigen (icn), AVHRR Image (sst), AVT RAW (raw), AWD (awd), Ability Photopaint Image (apx), Access (g4, acc), Aces200 (ace), Acorn Sprite (acorn), AdTech perfectfax (adt), Adobe Illustrator (ai), Adobe PhotoParade(images) (php), Adobe Photoshop (psd), Advanced Art Studio (ocp, art, pic), AirNav (anv), Album bébé (frm), Alias Image File (pix, als, alias), Alpha Microsystems BMP (bmp), Amapi (2d), Amica Paint (ami, [b]), Amiga IFF (iff, blk), Amiga icon (info), Amstrad Cpc Screen (cpc), Analyze (avw), Analyze-7 (img), Andrew Toolkit raster object (atk), Apollo HDRU (hdru, hdr, gn), ArcInfo Binary (hdr), Art Director (art), Artisan (art), Artist 64 (a64), Artrage (ptg), Artweaver Document (awd), Astronomical Research Network (arn), Atari grafik (pcp), Aurora (sim), Auto F/X (afx), AutoCAD DWG (dwg, dwt), AutoCAD DXF (dxf), Autocad CAD-Camera (img), Autodesk Animator (fli, flc), Autodesk QuickCAD thumbnail (cad), Autodesk SKETCH thumbnail (skf), Autodesk SketchUp component (skp, skb), Autologic (gm, gm2,

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gm4), Award Bios Logo (epa), Axialis Screensaver(images) (ssp), B3D(images) (b3d), BFLI (bfl, bfli, fli, flp, afl), BIAS FringeProcessor (msk, img, raw, flt), BLP textures (blp), BMF (bmf), BSB/KAP (kap), BYU SIR (sir), Bert's Coloring (bmg, ibg), Bfx Bitware (bfx), Bio-Rad confocal (pic), Blazing Paddles (pi), Bob Raytracer (bob), Brender (pix), Brooktrout 301 (brk, 301, brt), Brother Fax (uni), Buttonz & Tilez texture (til), CALS Raster (cal, cals, gp4, mil), CDU Paint (cdu), CGM (cgm), CImage (dsi), CMU Window Manager (cmu), CP8 256 Gray Scale (cp8), CSV (csv), Calamus (cpi, crg), Camera RAW (raw), Canon EOS-1D Mark II RAW (cr2), Canon Navigator Fax (can), Canon PowerShot (crw), Cartes Michelin (big), Casio QV-10/100 Camera (cam), Casio RAW (bay, raw), Chinon ES-1000 digital camera (cmt), Cisco IP Phone (cip), Cloe Ray-Tracer (clo, cloe), ColoRIX (rix, sci, scx, sc?), CompW (wlm), CompuServe GIF (gif, giff), Computer Eyes, Digital Vision (ce), ComputerEyes Raw (ce1, ce2), Contax RAW (bay, raw), Core IDC (idc), Corel Draw Bitmap(preview) (cdr), Corel Draw Pattern(preview) (pat), Corel Flow(preview) (bmf), Corel Metafile Exchange(preview) (cmx), Corel PhotoPaint 6.0 (cpt), CoverDesigner(images) (ncd), CoverDesigner Template(images) (nct), Crayola (art), Creative PC-CAM RAW (bay, raw), DBW Render (), DIV Game Studio Map (map), DIV Game Studio Multi Map (fpg), DKB Ray-Tracer (dis), DNG (dng), DPX (dpx), Dali Raw (sd0, sd1, sd2), Datacopy (img), Degas & Degas Elite (pi1, pc1, pi2, pc2, pi3, pc3, pi4, pi5, pi6), Deluxe Paint, Electronic Arts (lbm, ilbm), Dicom (dcm, acr, dic, dicom, dc3), Digital F/X (tdim), Digital Research(GEM Paint) (img, gem), Direct Draw Surface (dds), Discorp CMP Image (cmp), DjVu (djvu, djv, iw4), DolphinEd (dol), Doodle Atari (doo), Doodle C64 (dd), Doodle C64(Compressed) (jj), Dr Halo (cut), Draz Paint (drz), EA Sports FSH (fsh), EPS Interchange Format (epi, ept), ERI-chan(Entis Rasterized Image) (eri), ESM Software Pix (pix), Ecchi (ecc), Eclipse (tile), Edmics (c4), Egg Paint (trp), Electric Image (ei, eidi), Embroidery (bmc), Encapsulated Postscript (ps, eps), Encapsulated Postscript (Preview) (eps), Enhance Simplex (esm), Enhanced Compressed Wavelet (ecw), Epson RAW (erf), Eroiica (eif), Everex Everfax (efx, ef3), Explore(TDI) & Maya (iff, tdi), FIF(Iterated System) (fif), FIT (fit), Face Painter (fpt), Fast Piecewise-constant (pwc), Fax Group 3 (g3, fax), Fax man (fmf), Faxable PCX (fcx), Faxable TIFF (ftf), Fenix Map (map), Fenix Multi Map (fpg), FileMagic (mag), Flash Image (fi), FlashCam Frame (ncy), FlashPix Format (fpx), Flexible Image Transport System (fts, fits, fit), Foculus RAW (bay, raw), Fontasy Grafik (bsg), Fremont Fax96 (f96), Fugawi Map (fx3), Fuji S2 RAW (raf), Fun Painter II (fp2, fun), Fun Photor (fpr), Fuzzy bitmap (fbm, cbm), GRS16 (g16), Gamma Fax (gmf), GeoPaint (geo), Gfa Raytrace (sul), GigaPaint Hi-res (gih), GigaPaint Multi (gig), Gimp Bitmap (xcf), Gimp Brush (gbr), Gimp Icon (ico), Gimp Pattern (pat), GoDot (4bt, 4bit, clp), GunPaint (gun, ifl), HD Photo (wdp, hdp), HDRI (hdr, hdri), HF (hf), HP-48/49 GROB (gro, grb), HP-49 OpenFire (gro2, gro4), HPGL-2 (hp, hpg, hgl, plt, hpgl, hpgl2, gl2, prn, prt, spl), HRU (hru), HSI Raw (raw), Half-Life Model (mdl), Hasselblad RAW (3fr), Hayes JTFax (jtf), Hemera Photo Image (hpi), Hemera Thumbs (hta), Heretic II MipMap (m8), Hi-Eddi (hed), Hires C64 (hir, hbm), Homeworld Texture (lif), IBM Kips (kps), IBM Printer Page Segment (pse), IM5(Visilog) (im5), IMNET Image (imt), IOCA (ica, ioca, mod), IPLab (ipl), IPod thumb (ithmb), ISS (iss), IcoFX (ifx), Icon Library (icl), Imacon/Hasselblad RAW (fff), Image Capture Board (icb), Image Magick file (mif, miff), Image Speeder (ish), Image System(Hires) (ish), Image System(Multicolor) (ism), Image Systems RLC2 Graphic (rlc), ImageLab (b&w, b_w), ImagePro Sequence (seq), Imaging Fax (g3n), Imaging Technology (img), Img Software Set (img), Inshape (iim), InterPaint(Hires) (iph), InterPaint(Multicolor) (ipt), Intergraph Format (itg,

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cit, rle), Interleaf (iimg), Iris CT (ct), Iris Graphics (iris), J Wavelet Image Codec (wic), JBIG (jbg, bie, jbig), JBIG-2 (jb2), JFIF based file (jb2), JPEG /JFIF (jpg, jpeg, jif, jfif, J, jpe), JPEG 8BIM header(Mac) (jpg, jpeg, jif, jfif, J, jpe), JPEG XR (jxr), JPEG-2000 Code Stream (jpc), JPEG-2000 JP2 File Format (jp2, j2k, jpx, jpf), JPEG-LS (jls), Jeff's Image Format (jif), Jigsaw (jig), Jovian VI (vi), Jpeg Network Graphics (jng), JustButtons animated bitmap (btn), KONTRON (img), Khoros Visualization Image file (vif, viff, xv), KinuPix Skin (thb), Kiss Cel (cel), Koala Paint (koa, kla), Koala Paint(Compressed) (gg), Kodak Cineon (cin), Kodak DC120 Digital Camera (kdc), Kodak DC25 Camera (k25), Kodak Photo CD (pcd), Kodak Pro Digital RAW (dcr), Kofax Group 4 (kfx), Kolor Raw Format (kro), Konica Camera File (kqp), LSS16 (lss, 16), LView Pro (lvp), LaserData (lda), Leaf RAW (mos), Leica RAW (bay, raw), Light Work Image (lwi), LucasFilm Format (lff), Lumena CEL (cel), LuraDocument Format (ldf), LuraDocument.jpm Format (jpm), LuraWave Format (lwf), LuraWave JPEG-2000 Code Stream (jpc), LuraWave JPEG-2000 Format (jp2, j2k, jpx, jpf), MAKIchan Graphics (mag), MGI Photosuite Project(images) (pzp), MGR bitmap (mgr), MRC(Medical Research Council) (mrc), MTV Ray-Tracer (mtv), Mac Paint (mac, mpnt, macp, pntg, pnt, paint), Mac icon (icns), Macintosh Quickdraw/Pict (pic, pict, pict2, pct), Mac OSX Resource (rsc, rsrc), Maggi Hairstyles & Cosmetics (fff), Male MRI (pd, t1, t2), Male Normal CT (fre), Mamiya RAW (mef), Marks Russel File (mrf), Mavica (411), Maw-Ware Textures (mtx), Mayura Draw (pdx), MegaPaint (bld), Megalux Frame (frm), Micro Dynamics MARS (pbt), Micro Illustrator Uncompressed (mil), Micrografx Picture Publisher 4.0 (pp4), Micrografx Picture Publisher 5.0 (pp5), Micron RAW (bay, raw), Microsoft Image Composer (mic), Microsoft Paint (msp), Microtek Eyestar (img), Mindjongg Format (ipg), Minolta DiMAGE RAW (mrw), Mobile FAX (rfa), MonkeyCard (pdb), MonkeyLogo (pdb), MonkeyPhoto (mph), MrSid (sid), Msx 2 Screen (sc2), Multiple Network Graphics (mng), NCR Image (ncr), NIST ihdr (pct), National Imagery Transmission F. (ntf, nitf), NeoBook Cartoon (car), Neochrome(ST & TT) (neo), Neopaint Mask (npm), Neopaint Stamp (stw), NewsRoom (nsr, ph, bn), Nifti (img), Nikon RAW (nef), Nokia Group Graphics (ngg), Nokia Logo File (nlm), Nokia OTA bitmap (otb), Nokia Operator Logo (nol), OAZ Fax (oaz, xfx), OS/2 Bitmap (bmp, bga), Olicom Fax (ofx), Olympus RAW (orf), Open Image Library Format (oil), OpenEXR (exr), Optigraphics (ctf), Optigraphics Tiled (ttf), Optocat (abs), Oric Hires (hir), Oric TAP (tap), Os/2 Warp (bga), PABX background (pix), PAX (pax), PC Paint/Pictor Page (pic, clp), PCO (b16), PM (pm), Page Control Language (pcl), Paint Magic (pmg), PaintShopPro Browser Cache File (jbf), PaintShopPro Brush (pspbrush), PaintShopPro Brush (jbr), PaintShopPro Frame (pfr, pspframe), PaintShopPro Image (psp, pspimage), PaintShopPro Mask (pspmask), PaintShopPro Mask (msk), PaintShopPro Pattern (pat), PaintShopPro Picture Tube (tub, psptube), PaintShopPro Texture (tex), Palm Pilot (pdb), Panasonic DMC-LC1 RAW (srf), Panasonic LX3 RAW (rw2), Panasonic RAW (bay, raw), Pegs (pxs, pxa), Pentax *ist D (pef), Pfs Art Publisher (art), Photo Deluxe (pdd, pdb), Photo Filtre Studio (pfi), PhotoFantasy Image (fsy), PhotoFrame (frm), PhotoStudio File (psf), PhotoStudio Stamp (stm), Photomatrix (cat), Pic2 (p2), Picasso 64 (p64), Picture Gear Pocket (prc), Picture It! (mix), Pixar picture file (pic, pxr, picio, pixar), Pixel Power Collage (ib7, i17, i18, if9), Pixia (pxa), Pixibox (pxb), Planetary Data System (pds, img), Playback Bitmap Sequence (bms), Pocket PC Bitmap (2bp), Pocket PC Themes(images) (tsk), Polychrome Recursive Format (prf), Portable Bitmap (pbm, rpbm, ppma), Portable Document Format (pdf), Portable Greyscale (pgm, rpgm), Portable Image (pnm, rpnm, pbm, rpbm, pgm, rpgm, ppm, rppm), Portable Network Graphics (png, apng), Portable Pixmap (ppm, rppm), Portfolio

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Graphics (pgf), Portfolio Graphics Compressed (pgc), Portrait (cvp), Poser Bump (bum), Postscript (ps, ps1, ps2, ps3, eps, prn), PowerCard maker (crd), PowerPoint(images) (pps), PowerPoint Presentation(images) (ppt), Print Master (pm), Print Shop (psa, psb), Printfox/Pagefox (bs, pg, gb), Prism (cpa), Prisms (pri), Psion Series 3 Bitmap (pic), Psion Series 5 Bitmap (mbm), Punk Productions Picture (ppp), Puzzle (pzl), Q0 (q0, rgb), Qdv(Random Dot Software) (qdv), Qrt Ray-Tracer (qrt), Quake Texture (wal), Quantel VPB (vpb), QuickTime Image Format (qtif, qti), RAW DVR (raw), RIPTerm Image (icn), Radiance (rad, img, pic), Rainbow Painter (rp), Raw (raw, gry, grey), Rawzor (rwz), Rayshade (pic), Red Storm File Format (rsb), Ricoh Digital Camera (j6i), Ricoh Fax (001, ric), Ricoh IS30 (pig), Rm2K XYZ (xyz), Rollei RAW (rdc, ia), RoverShot RAW (bay, raw), RunPaint(Multicolor) (rpm), Saracen Paint (sar), SBIG CCD camera ST-4 (st4), SBIG CCD camera ST-X (stx, st4, st5, st6, st7, st8), SciFax (sci), SciTex Continuous Tone (sct, ct, ch), Seattle Film Works (sfw), Seattle Film Works multi-image (pwp, sfw), SecretPhotos puzzle (xp0), Sega SJ-1 DIGIO (sj1), Sharp GPB (img), Siemens Mobile (bmx), SIF MICHEL-Soft (sif), Sigma RAW (x3f), Silicon Graphics RGB (rgb, rgba, bw, iris, sgi, int, inta), Sinar RAW (cs1, sti), Skantek (skn), Slow Scan Television (hrz), SmartDraw 6 template (sdt), SmartFax (1), SmoothMove Pan Viewer (pan), Softimage (pic, si), Solitaire Image Recorder (sir), Sony DSC-F1 Cyber-shot (pmp), Sony DSC-F828 RAW (srf), Sony PS2 TIM (tm2), Sony Playstation TIM (tim), Sony RAW (sr2, arw), Spectrum 512 (spu), Spectrum 512(Compressed) (spc), Spectrum 512(Smooshed) (sps), SPOT (dat), SriSun (ssi), Stad (pic, pac, seq), Star Office Gallery (sdg), Starbase (img), Stardent AVS X (x, avs, mbfs, mbfavs), Starlight Xpress SX (RAW), Stereo Image (jps), ST Micro RAW (bay, raw), Structured Fax Format (sff), Sun Icon/Cursor (icon, cursor, ico, pr), Sun Rasterfile (ras, rast, sun, sr, scr, rs), Sun TAAC file (iff, vff, suniff, taac), Syberia texture (syj), Synthetic Universe (syn, synu), SVG (svg), TG4 (tg4), TI Bitmap (92i, 73i, 82i, 83i, 85i, 86i, 89i), TIFF Revision 6 (tif, tim, tiff), TMSat image (imi), TRS 80 (hr), TealPaint (pdb), Teli Fax (mh), Thumbnail (tnl), TilePic (tjp), Tiny (tny, tn1, tn2, tn3), TopDesign Thumbnail (b3d, b2d), Total Annihilation (gaf), Truevision Targa (tga, targa, pix, bpx, ivb), Ulead Pattern (pst), Ulead PhotoImpact (upi), Ulead Texture(images) (pe4), Usenix FaceServer (fac, face), Utah raster image (rle, urt), VIPS Image (v), VITec (vit), VRML2 (wrl), Venta Fax (vfx), Verity (vif), Vicar (vic, vicar, img), Vidcom 64 (vid), Video Display Adapter (vda), Vista (vst), Vivid Ray-Tracer (img), Vort (pix), Vue d'esprit (vob), WAD(Half life) (wad), WSQ (wsq), WaveL (iwc), Wavefront Raster file (rla, rlb, rpf), WebShots(images) (wb1, wbc, wbp, wbz), Weekly Puzzle (jig), WebP (webp, wep), Whypic (ypc), WinFAX (fxs, fxo, wfx, fxr, fxd, fxm), WinMIPS (pic), Windows & Aldus Metafile (wmf), Windows Animated Cursor (ani), Windows Bitmap (bmp, rle, vga, rl4, rl8, sys), Windows Clipboard (clp), Windows Comp. Enhanced Metafile (emz), Windows Compressed Metafile (wmz), Windows Cursor (cur), Windows DIB (dib), Windows Enhanced Metafile (emf), Windows Icon (ico), Winzle Puzzle (wzl), Wireless Bitmap(level 0) (wbmp, wbm, wap), Word Perfect Graphics(images) (wpg), Worldport Fax (wfx), X Windows System dump (xwd, x11), X11 Bitmap (xbm, bm), X11 Pixmap (xpm, pm), XV Visual Schnauzer (p7), Xara(images) (xar), Xerox DIFF (xif), Ximage (xim), Xionics SMP (smp), YUV 16Bits (yuv, qtl, uyvy), YUV 16Bits Interleaved (yuv, qtl, uyvy), YUV 4:1:1 (yuv, qtl), YUV 4:2:2 (yuv, qtl), YUV 4:4:4 (yuv, qtl), ZX Spectrum Hobetta ($s, $c, !s), ZX Spectrum Snapshot(sna), ZX Spectrum standard (screen scr), ZZ Rough (rgh), Zeiss BIVAS (dta), Zeiss LSM (lsm), Zoner Callisto Metafile(zmf), Zoner Zebra Metafile (zbr), Zsoft Multi-

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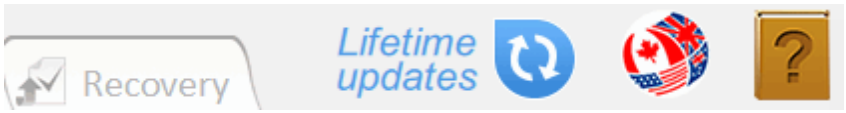
```
page Paintbrush (dcx), Zsoft Publisher's Paintbrush (pcx, pcc, dcx), byLight
(bif)
```

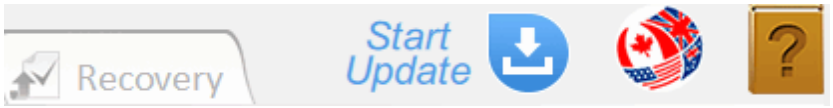
3.4 Life Time Update

Life Time Update guarantees that R-Undelete will always stay up-to-date with all new features and bugfixes. For the paid R-Undelete version, Life Time Update is an everlasting investment for file undelete protection.

R-Undelete shows the update status automatically on the Lifetime updates button.



When updates become available, R-Undelete will notify that an update is available.



Click the button, and R-Undelete will start downloading the update files. You may stop that by clicking the Stop Download button.

The update will then be installed. R-Undelete may request you to restart the program to complete the update.

Once the update is over, the Lifetime updates button will return to its initial appearance until the next updates become available.

3.5 Interface Languages

You may change the interface language of R-Undelete. Click the Language button and select the required one.

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Languages supported: English, French, Spanish, German, Russian, Portuguese, Traditional and Simplified Chinese, and Japanese.

IV Advanced Options

4.1 Deep Scan

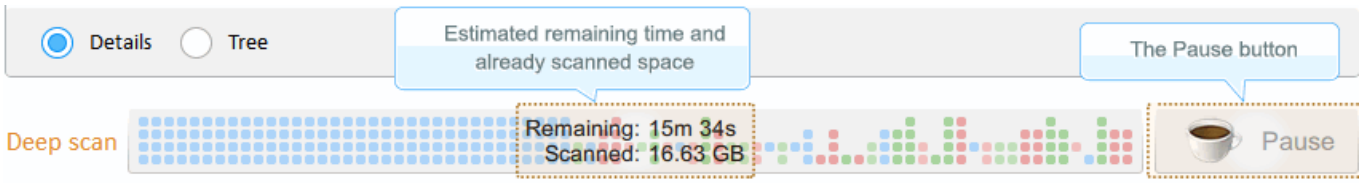
Deep Scan should be used when lost files have not been found during Quick Scan. During this procedure, R-Undelete deeply analyzes all data on the disk including parsing information about files and searching for files using their file signatures 44.

While Deep Scan starts, additionally found files are added to the corresponding tabs automatically. All file search settings and marking will be cleared.

Deep Scan is also greatly improves estimations for chances of successful file recovery 43.

To start Deep Scan click the Deep Scan button on the Files tab.

Deep Scan progress appears at bottom of the the R-Undelete window.



Deep Scan in Progress

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Depending on your hardware, scan time may vary, even within the same scan process, and may be quite lengthy for large disks. Deep scan may be paused then resumed it by clicking the Resume scan button.

R-Undelete stores the scan information for a scanned storage device or its disk(s) and loads it automatically once the storage device is connected again.

It also warns the user that the scan information is obsolete if it's seven or more days old and deletes it after 30 days.

If R-Undelete finds a previous partition 42 with a different file system, it shows a special message:

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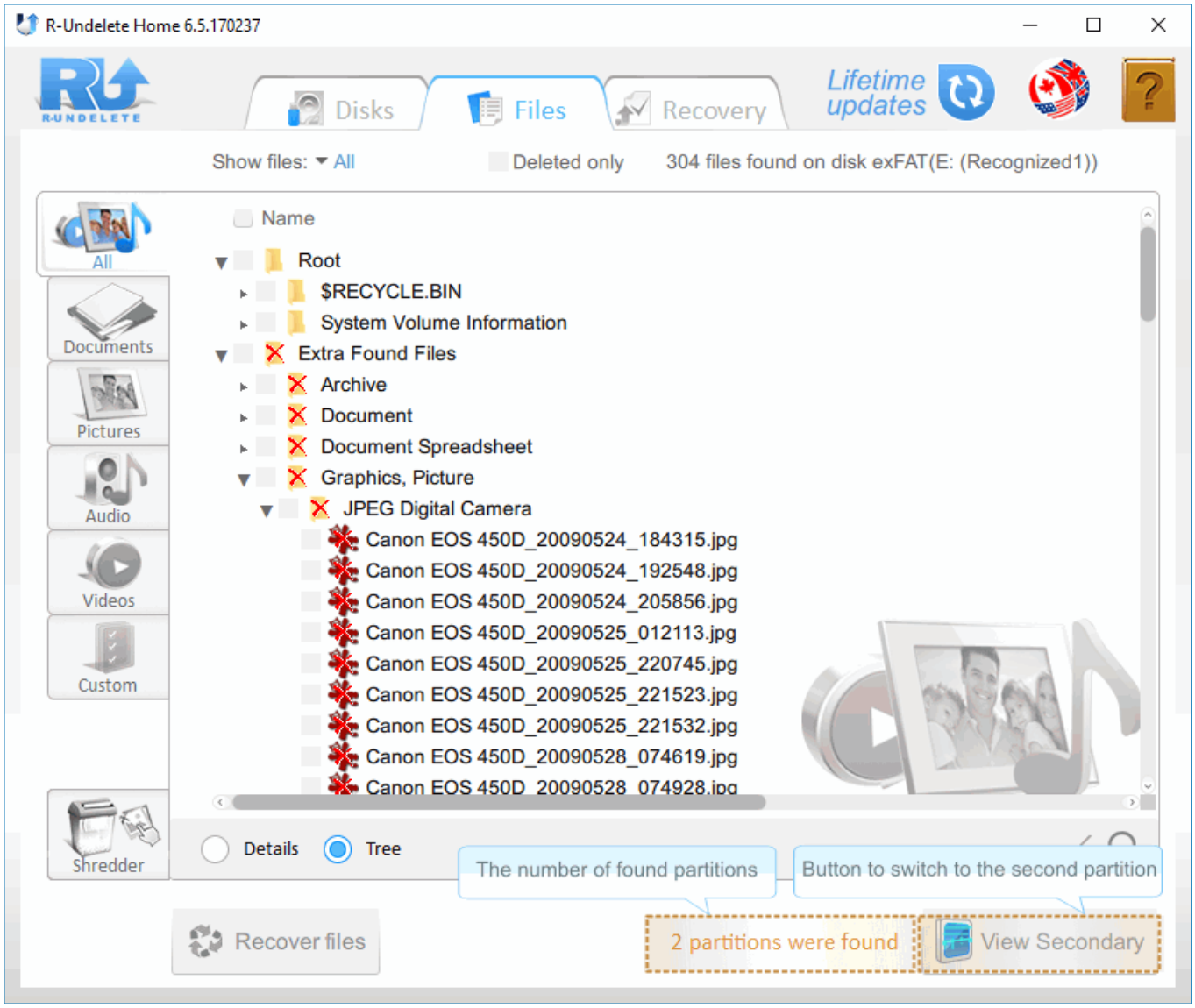

Deep Scan - two partitions

You may switch to the second partition and recover files from it:

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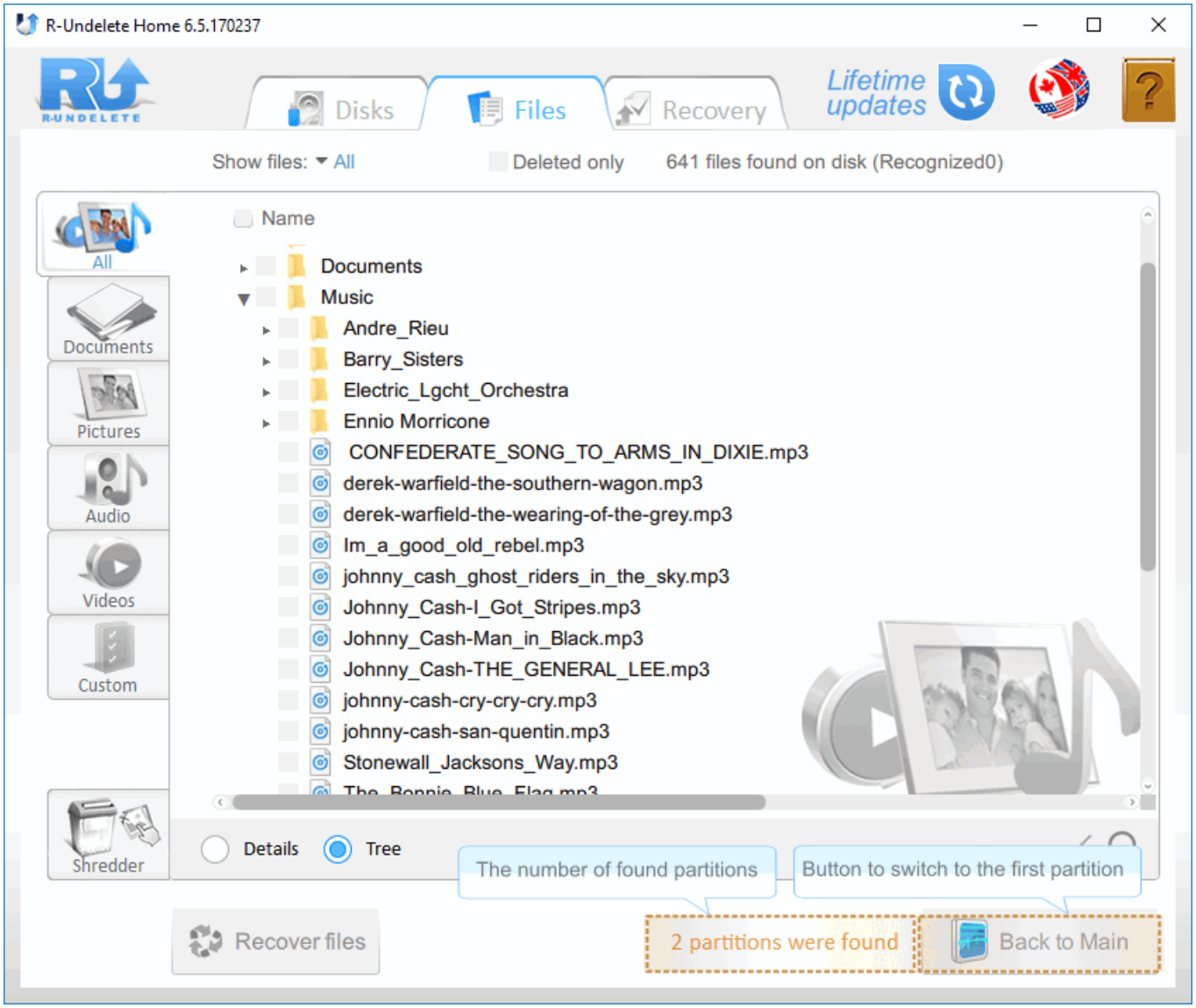

Deep Scan - second partition

4.2 Disk Images

Images[50] are very useful if there is a risk of total data loss due to hardware malfunction. If bad blocks are constantly appearing on a hard drive or its S.M.A.R.T. state is poor, an image of this hard drive should be immediately created. All data search and recovery can be done from this image.

To create an image,

1. Right-click a disk and select Create Image on the shortcut menu. Highlight the required field.

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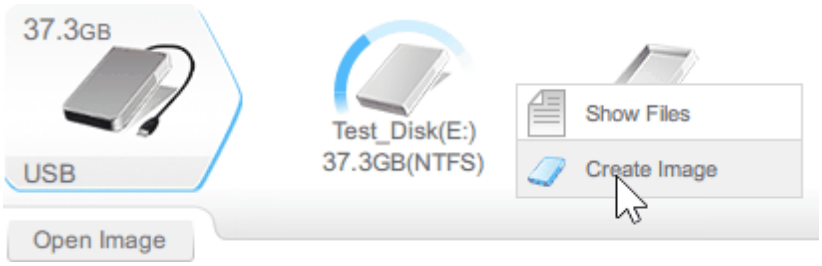
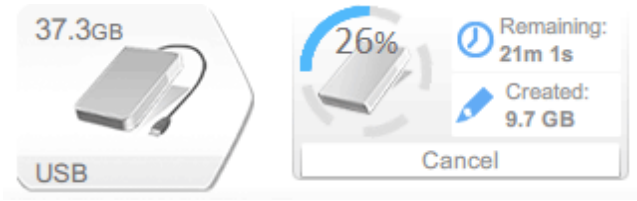


2. Select a place to store the image file and click the Save button.
R-Undelete will start creating the image showing the progress.



To load an image,

* Click the Open image button and select the file with the image.
The image will appear. You may recover files from that image as if it was a real device.

4.3 S.M.A.R.T. Monitoring

The hardware conditions of a drive can be checked by viewing its S.M.A.R.T. 50 data. To see it, right-click the drive and select S.M.A.R.T. on the shortcut menu.

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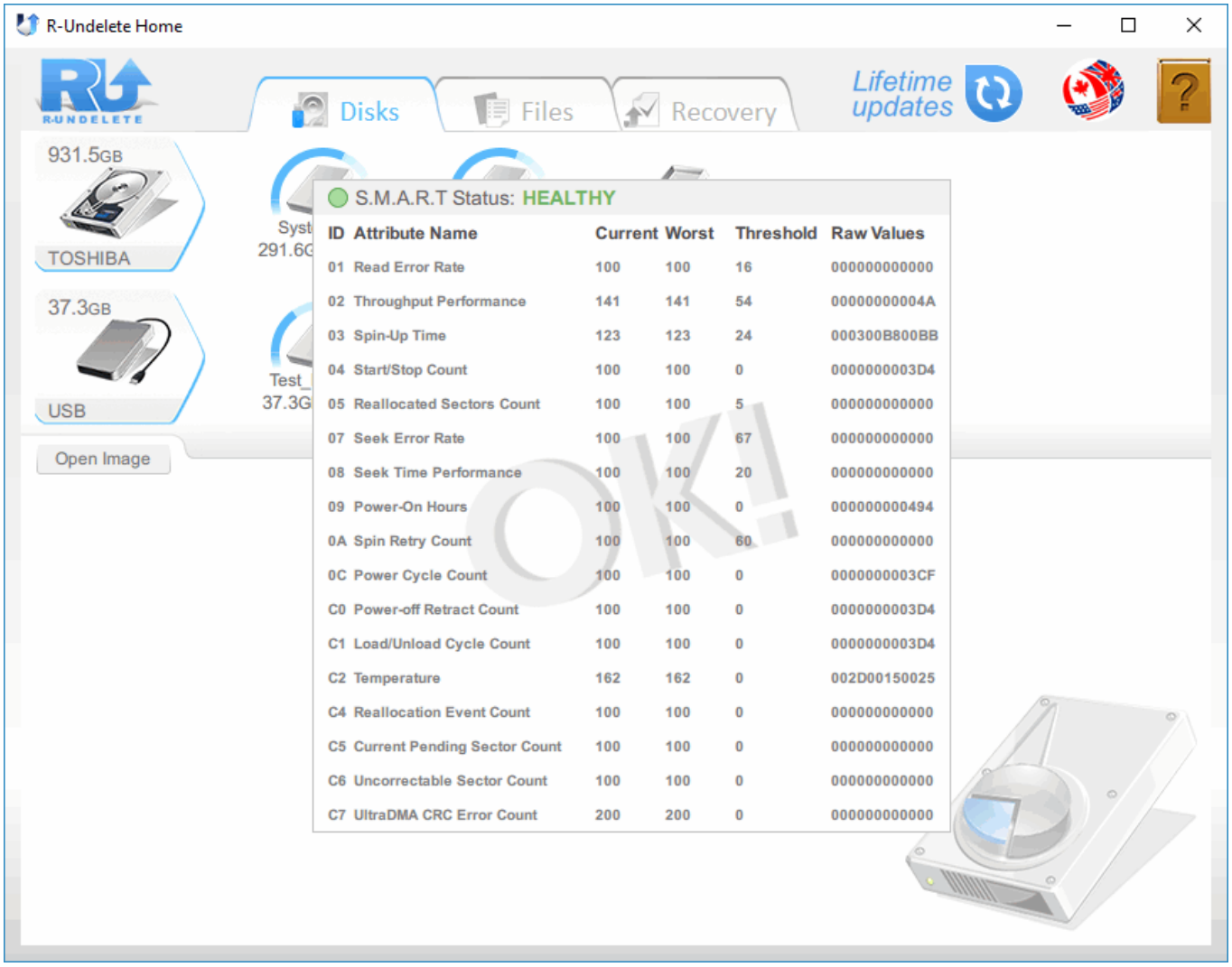

Disks panel with the S.M.A.R.T. data of a healthy disk

When R-Undelete determines hardware problems with a hard drive, it shows the exclamation mark on the drive icon. Check the S.M.A.R.T. data and decide what to do with the hard drive.

The yellow exclamation mark signals hardware problems:

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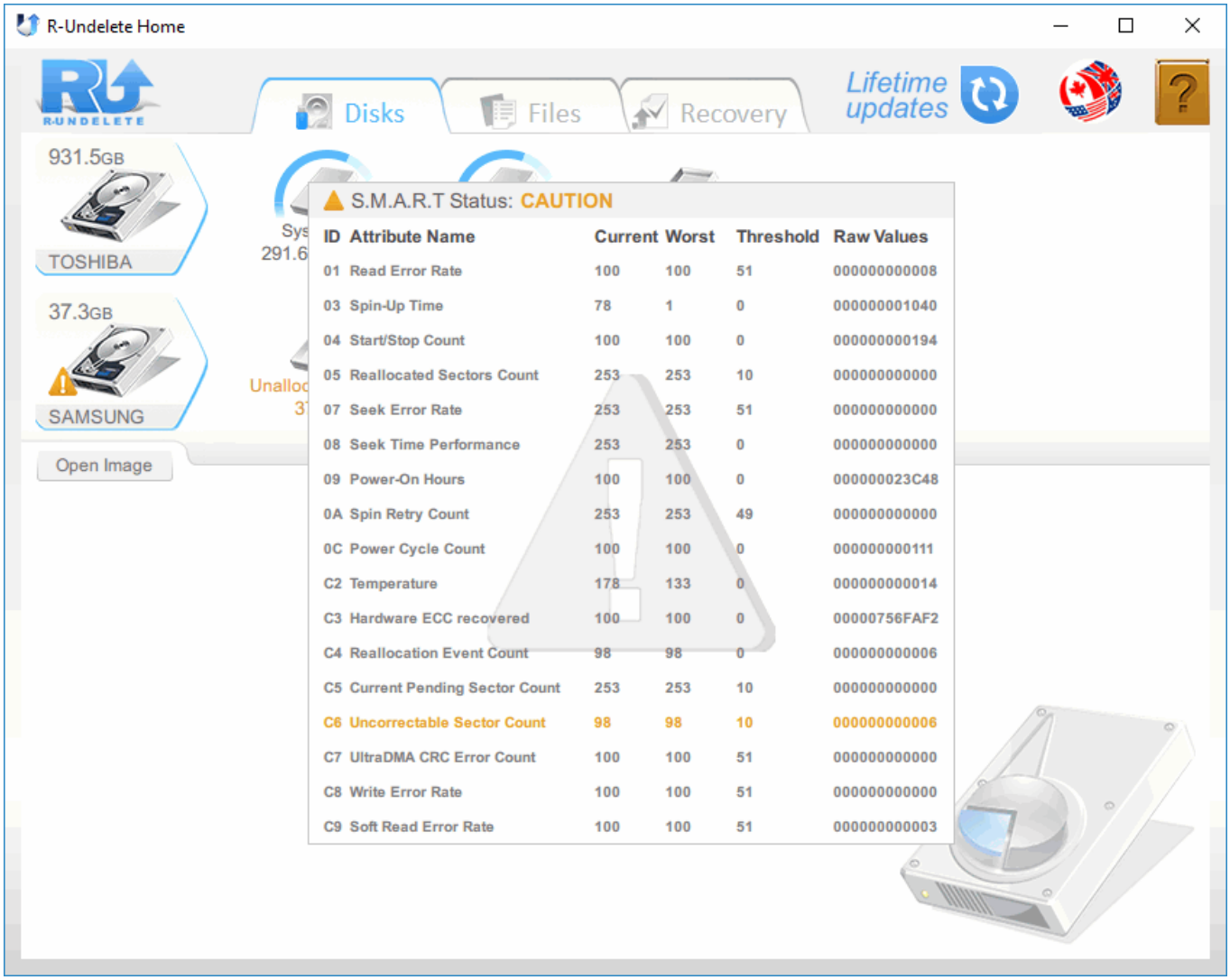

Disks panel with the S.M.A.R.T. data of a disk with small hardware problems

This sign indicates that some small problems with the disk are possible in the future, caution is required when working with the hard drive, and these parameters should be checked regularly.

Disk imaging 29 is recommended. Then files may be recovered later from that image.

The red exclamation mark signals that the hard drive is in critical condition:

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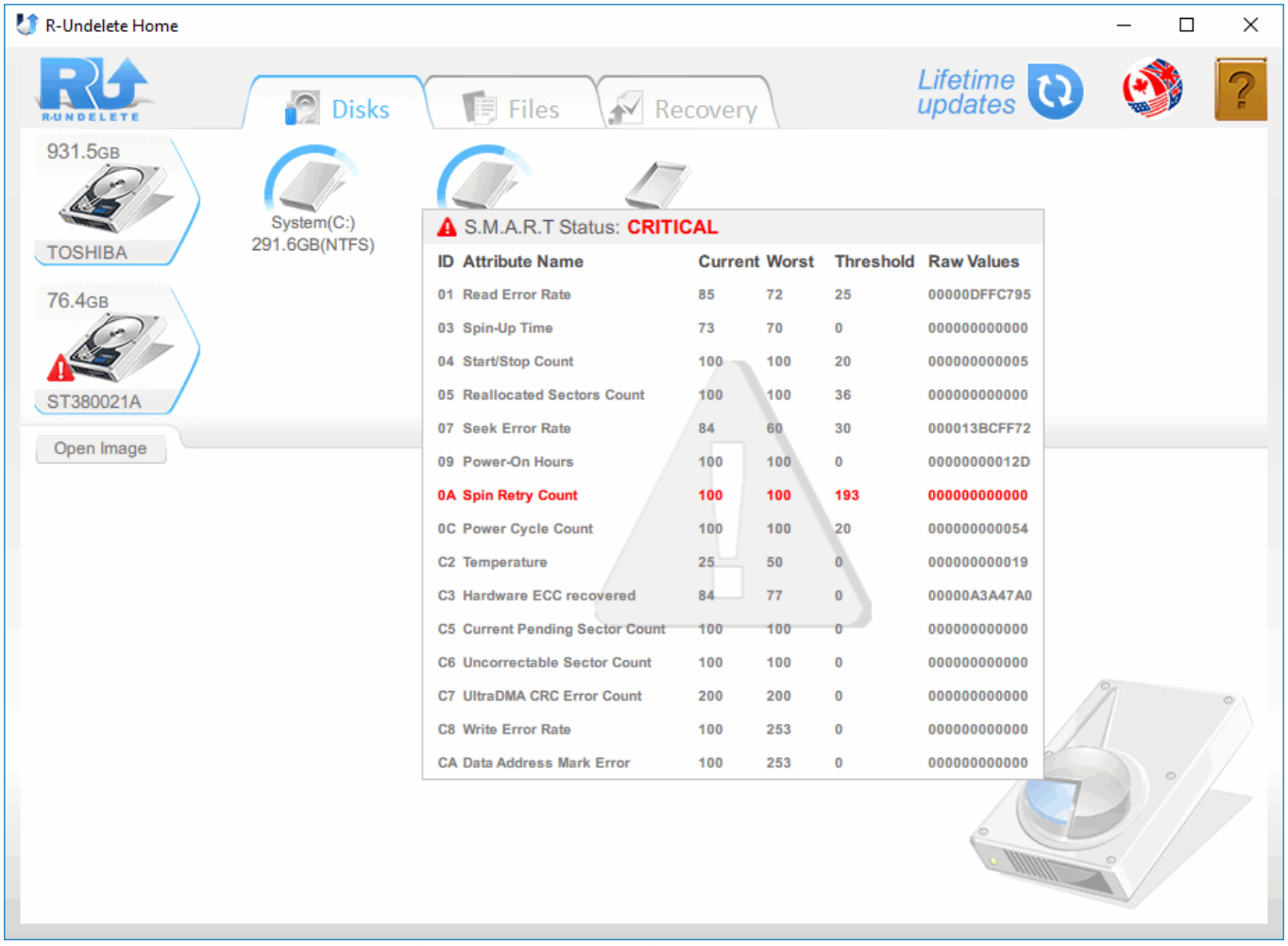

Disks panel with the S.M.A.R.T. data of a disk with heavy hardware problems

This sign indicates that the hard drive conditions are critical and chances of hardware failure are high. The best recommendation for this case is to stop working with the hard drive and bring it to professional data recovery specialists. Work with the disk is possible, but at your own risk. Disk imaging 29 is very strongly recommended. Then files may be recovered later from that image.

4.4 Shredder

You may shred deleted files to render their content completely unrecoverable. During this procedure, the content of these files will be zeroed out and any attempt to recover them will retrieve files that cannot be opened.

- Select the deleted files you want to shred, right-click them, then select Move to Shredder on the shortcut menu.

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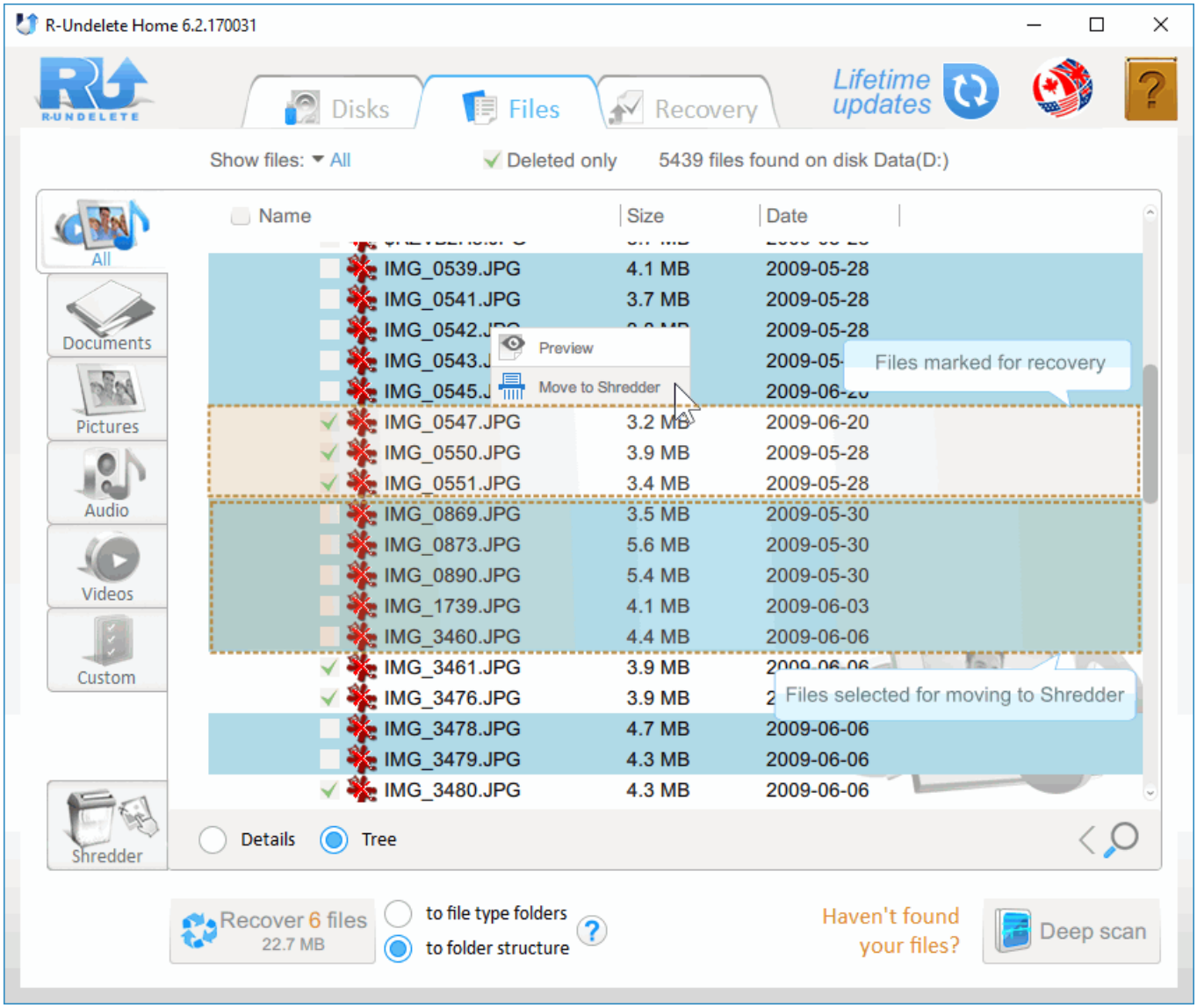

Files panel.

Use the mouse cursor and arrow?Shift?Control keys to select the files. Please note that the selected files rather than the marked files will be moved to Shredder.

You may use the link on the File viewer to move the file being viewed to Shredder.

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File viewer panel.

- Switch to the Shredder tab, view the files on it, and click the Shred button.

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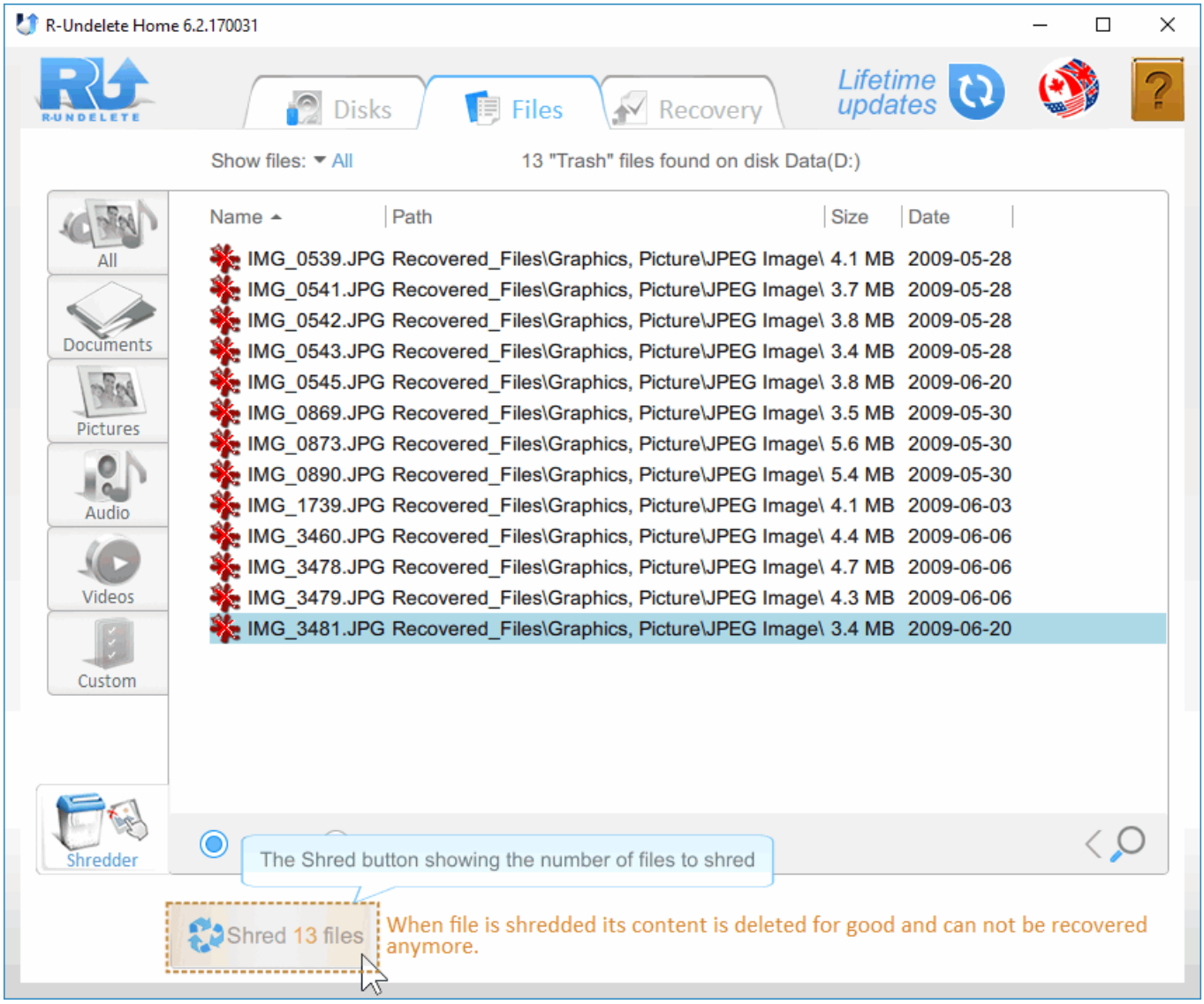

Shredder tab.

You may move the files from the Shredder tab back to their original places. Right-click the files and select Remove from Shredder on the shortcut menu.

R-Undelete shows shredded files with a special icon.

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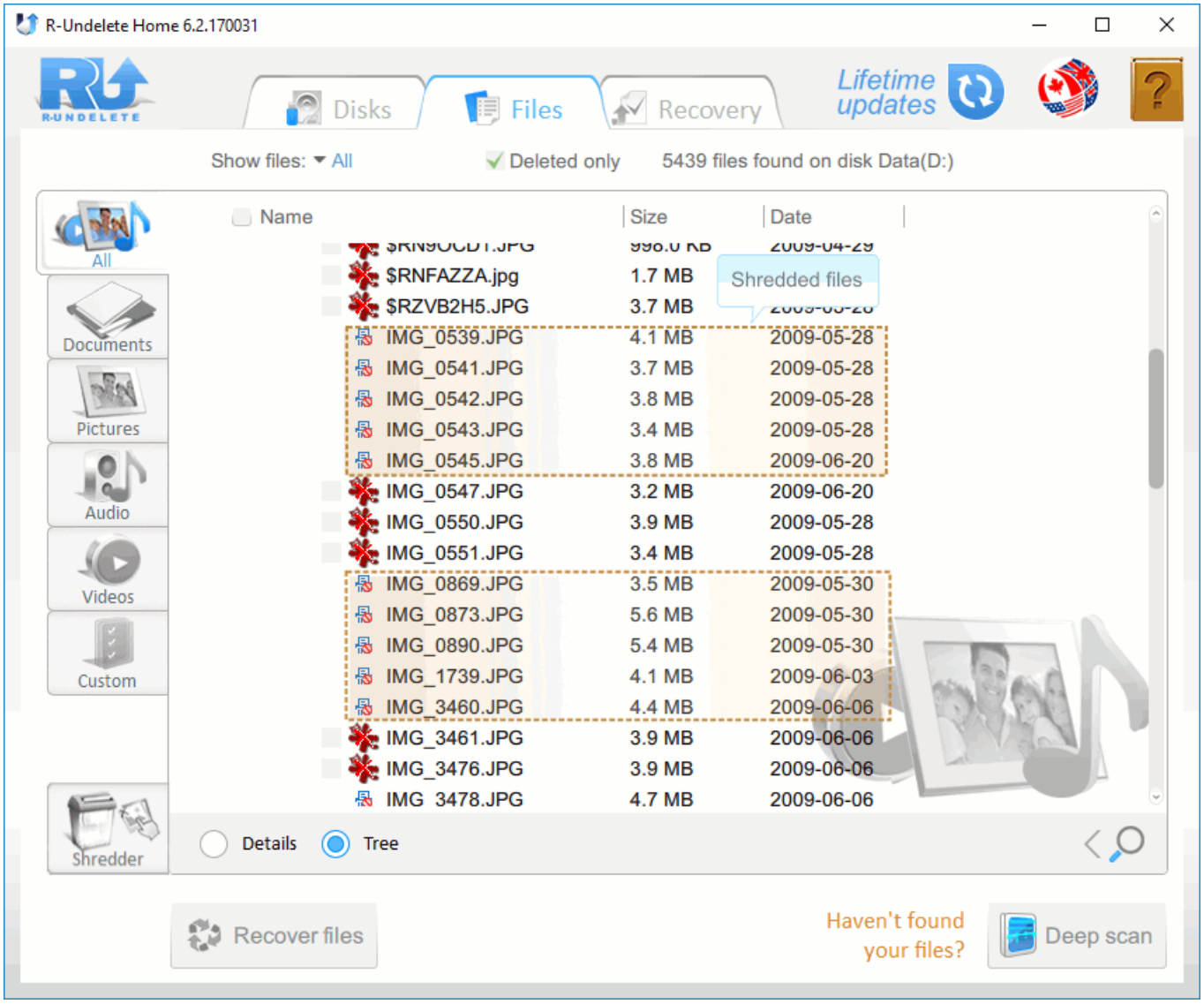

Files panel with shredded files.

Please note that shredded files cannot be marked for recovery.

When the disk is reopened, the shredded files will be shown as normal ones, but their content will remain zeroed out.

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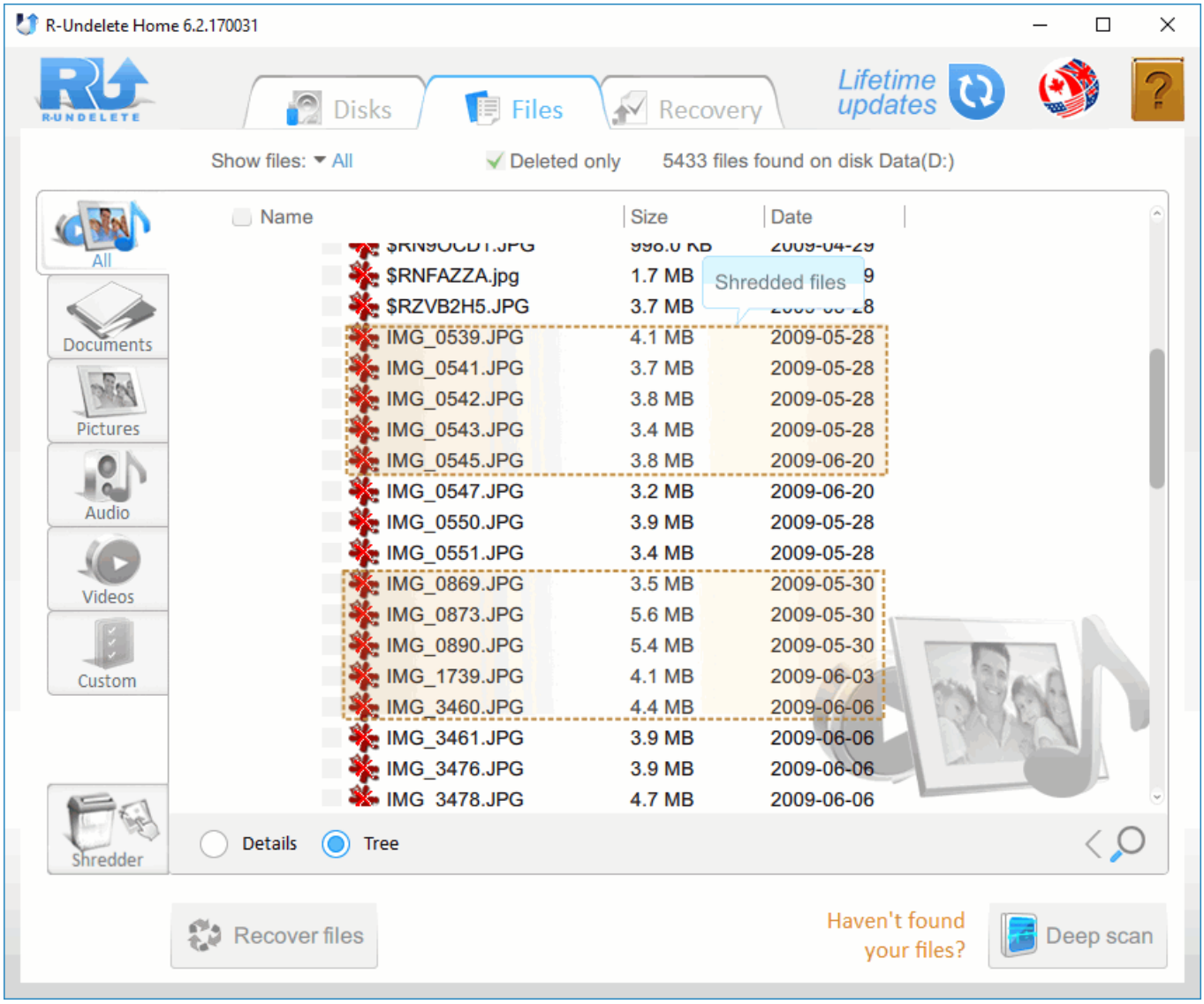

Files panel with shredded files.

4.5 Upgrade

There are two license types for R-Undelete:

R-Undelete Home

R-Undelete Home is free for home users. It recovers files from FAT?exFAT storage devices, like external USB hard drives and sticks, and digital photo and video camera memory cards. In addition to Quick Scan 43, R-Undelete Home uses the Deep Scan 26 procedure to find files using their file signatures 44, which makes R-Undelete Home is an ideal solution for recovery lost digital photos, movies, and music.

This free version also allows its users to evaluate how the software recovers lost files from the NTFS and ReFS file systems, for which it is fully functional to save recovered files smaller than 256KB. Regardless of this limitation, all recovered files can be viewed in the build-in

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viewer to estimate recovery chances before you upgrade the Home version for recovery from NTFS disks.

R-Undelete

R-Undelete has no limitations and recovers lost files from NTFS, NTFS5 (created or updated by Win2000/XP/2003/Vista/2008/2012/2016/Win7/Win8/Win10) and ReFS/ReFS2+ (Resilient File System, Windows 2012/2016 Server) disks as well as recovers them from FAT (FAT12, FAT16, FAT32, exFAT) disks. Moreover, it can recover files from any storage volumes visible to the host OS. Those can be software and hardware RAIDs, Windows Storage Spaces, and alike.

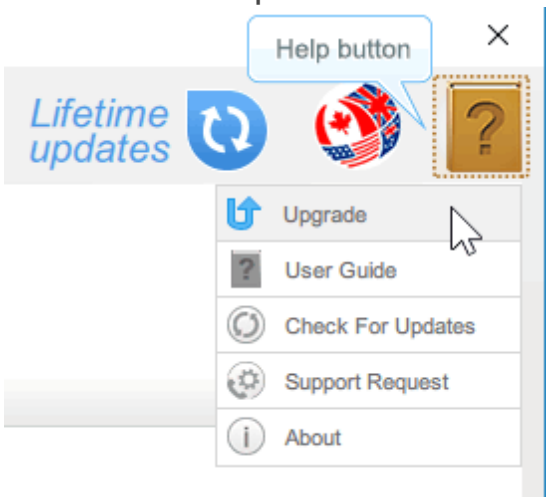
Upgrading to R-Studio

If for any reason you want to switch the license to our professional data recovery tool R-STUDIO, R-Undelete can be upgraded to R-STUDIO for the initial price difference.

Upgrading to R-Undelete

This procedure can be done on-the-fly even during file recovery operations. The program doesn't have to be restarted.

1. Click the Help button and select Upgrade on the shortcut menu



or select About on the shortcut menu and then click the Upgrade button on the About dialog box.

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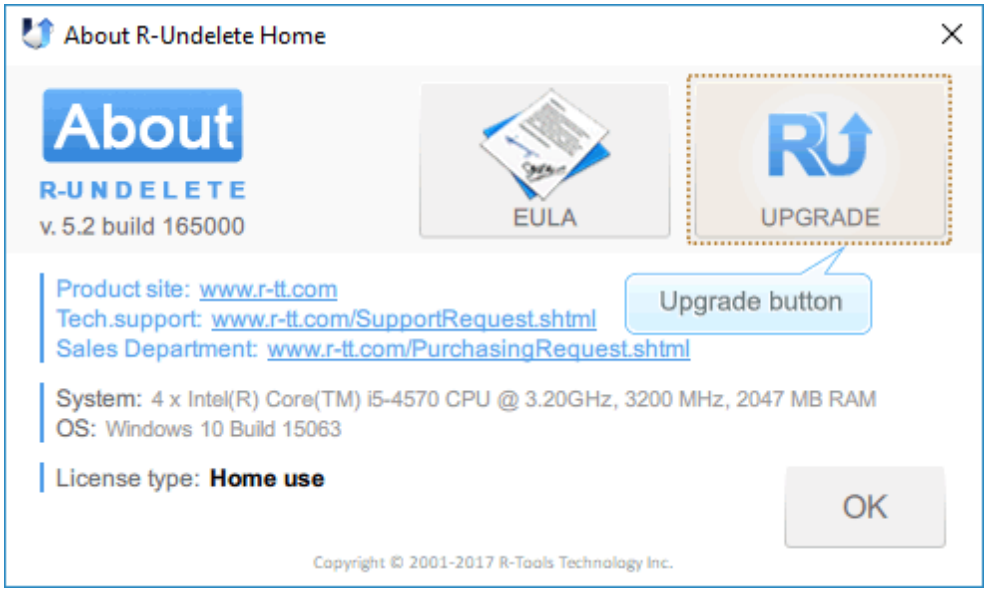
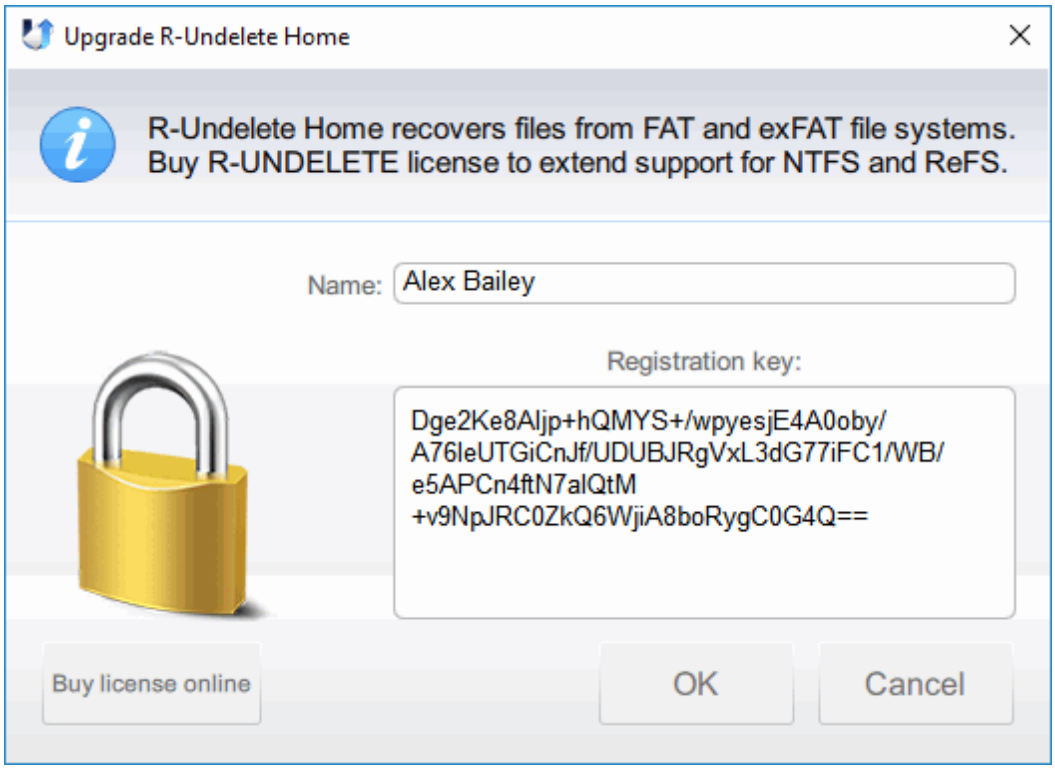


2. Enter the license key and click the OK button
The license key can be bought online on the R-TT, Inc site.



Copy and paste the key, do not try to type it in manually.

3. Read the License Agreement and click the Agree button

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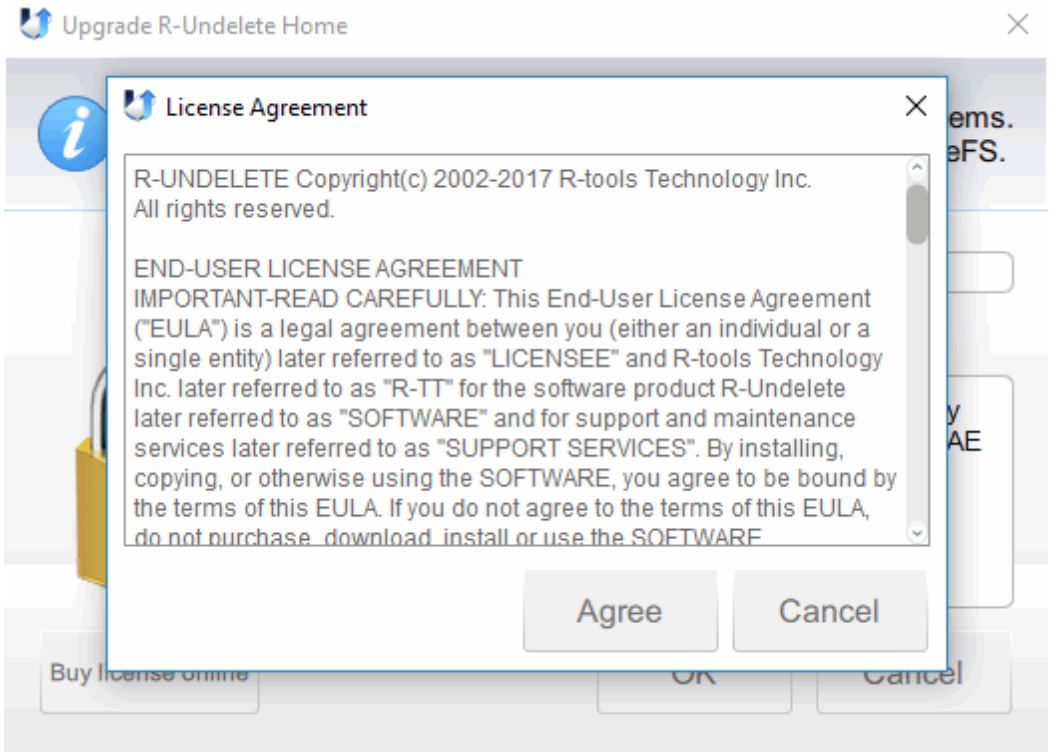
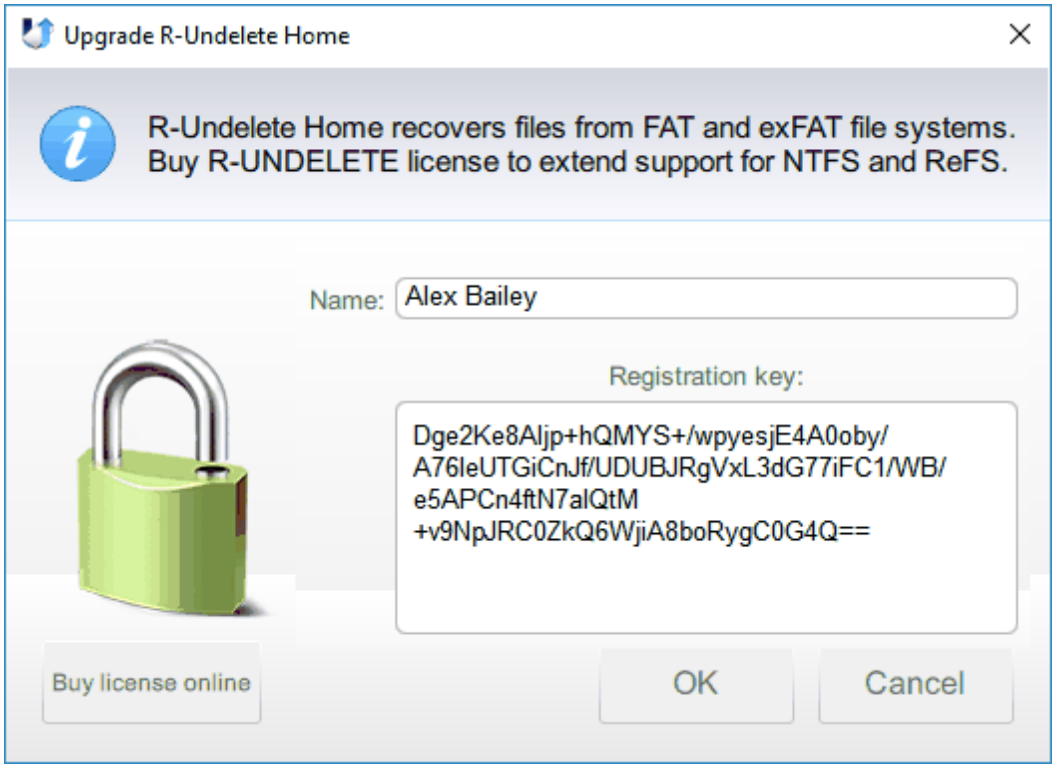


The lock on the dialog box will turn into green:



And the About dialog will change its appearance.

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Now R-Undelete can deliver all its power in file recovery.

V Definitions

Hard drive

A hard drive (often abbreviated as HD, or HDD) is a storage device that permanently stores and retrieves data on a computer. It consists of a spinning magnetic disk to which data is written using a read?write magnetic head on a mechanical arm called an actuator, all inside of an air-sealed casing.

Partition and (logical) disk

A partition is an area on a physical storage device separated from other device segments. For the operating system and computer users, although the separation is pure logical, it appears as an independent storage device with a separate file system. There are several reasons for such partitioning. For example, Windows 10 creates several service partitions, apart from the system partition (disk C:), like boot and recovery partitions that it uses to ensure system stability and recoverability. Another reason to separate the system and user data partitions is if the system has to be re-installed, the user data will remain untouched.

To be accessible for the computer user, a partition must have an assigned letter. In this case such a partition is called a logical disk and is referred to by its letter.

SSD and NVME storage devices

SSD Device Icons

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	SSD storage devices.
	NVME storage devices: SSD devices connected to the computer through a special interface.

A solid-state drive (SSD) is a storage device that stores data on nonvolatile solid-state flash memory and has no moving parts, unlike hard drives or optical disks. They are much faster than traditional hard drives and more shock-resistant, but their life span is shorter and storage space is more expensive. NVME devices are SSD devices connected to the computer through a special interface.

Peculiarities of file recovery from SSD and NVME storage devices

All considerations below are applicable for files deleted from or without Recycle Bin. If you must recover files after a system crash, it will not differ much from file recovery from conventional hard drives.

SSD devices have some specific obstacles for file recovery, especially for files deleted from or without the Recycle Bin. Periodically, Windows issues a special command TRIM that informs the SSD device that some files have been deleted and their storage space is needed no more. Upon receiving this command, the device frees its internal space where the deleted files have resided. When the OS accesses that space, the device simply returns zeros even without reading the actual data. Moreover, Microsoft uses a so called DZAT procedure (deterministic zeroes after TRIM) that fully and permanently cleans that space by overwriting it with zeros. It is impossible to recover files after this procedure.

The main question is when that will happen. Depending on many circumstances, it may take from several seconds to several days. Within this time period, the file data will remain stored on the SSD device, and R-Undelete can recover them.

Usually, Windows executes the TRIM command during shutdown and startup. That is why the main advice for the case of deleted files is to power your computer off by long-pressing the Power button of your computer. Do not shut down it. Then remove the SSD disk from the computer and connect it to another one. Use that second computer for file recovery.

Quick Scan

A disk operation in which R-Undelete quickly analyzes information about files stored on the disk, including search for deleted files. Then it lists all found files in its Files panel.

Recovery chances

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R-Undelete estimates chances for successful file recovery while listing the files. Those estimations may not be quite accurate immediately upon file listing, but Deep Scan 26 greatly improves those estimations.

Recovery chances

	Undefined
	Good
	Above average
	Average
	Below average
	Bad

File mask

A file mask is a pattern of characters and wildcards used to match folder and file names.

File signatures and raw file search

A file signature (sometimes is called as a file magic number) is a data pattern within the file that is unique to certain file types. It can be used to identify the format of the file and recover its content even when the disk file system contains no information about such a file. This method of file recovery is called "raw file search" or search for known file types and used to recover deleted files from damaged, deleted, or re-formatted disks, as well as from partitions with unrecognized file systems. R-Undelete uses raw file search when performing Deep Scan 26.

List of known file types

Document		
AbiWord Document: `.abw`	Adobe PDF document: `.pdf`	Final Draft Document: `.fdr`
FrameMaker Document: `.fm`	Garmin MapSource data: `.mps`	GNU Info Document: `.info`
HTML Document: `.html`	Lotus AMI Pro Document: `.sam`	Lotus Organizer Report: `.rep`
Lotus Word Pro Document: `.lwp`	Microsoft Money Data: `.mny`	Microsoft Office Open XML Document *
Microsoft OneNote section file: `.one`	Microsoft Pocket Streets Map File: `.mps`	Microsoft PowerPoint 2007 XML Document*: `.pptx`
Microsoft PowerPoint Document*: `.ppt`	Microsoft Reader eBook: `.lit`	Microsoft Reader eBook annotations: `.ebo`

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Microsoft Word 2007 XML Document*: .docx	Microsoft Word Document*: .doc	Microsoft Word2 Document: .doc
Microsoft WordPad Document: .wri	OLE Storage	OpenDocument Document
PostScript document:*.ps	QuickBooks Backup File: *.qbb	QuickBooks Primary Data File: *.qbw
Quicken Data: *.qdf	Rich Text Document: .rtf	TEX Document: .tex
Text Document: .txt	TurboTax return file:.tax	Unicode Document: .txt
Word for Macintosh Document: .mcw	WordPerfect Document: .doc	XML Document: .xml
Document: Spreadsheet		
Lotus Spreadsheet: .wks	Lotus3 Spreadsheet: .wk3	Microsoft Excel 2007 XML Document*: .xlsx
Microsoft Excel Document*: .xls	Microsoft Excel2 Spreadsheet: .xls	Microsoft Excel3/4 Spreadsheet: .xls
Quattro Pro Spreadsheet: .wq1		
Document: Database		
Data Interchange Format file: .dif	dBase III Database: .dbf	Microsoft Access 2007 Database: .accdb
Microsoft Access 2007 XML Document: .accdt	Microsoft Access Database: .mdb	Microsoft Linker Database: .lk
Microsoft Program Database: .pdb	Microsoft SQL Database: .mdf	Microsoft SQL Log: .ldf
MySQL Database: .myi	Omnis Studio Database: .df1	Omnis Studio Library: .lbs
Internet-related files		
Compiled HTML file: .chm	Internet shortcut: .url	Microsoft OutLook Personal Folder: .pst
Microsoft Outlook?Inbox offline folder: .ost	Mozilla Firefox browser extension: .xpi	Mozilla Mail Summary file: .msf
Outlook Express Messages: .dbx	The Bat! Address book: .abd	The Bat! Message Base: .tbb
The Bat! Message Index: .tbi	Windows Address Book: .wab	XML document (Unicode): .xml
Font		
Adobe PostScript Font: .pfb	Adobe Printer Font: .pfm	BDF Unix font
BGI font: .chr	CPI DOS font: .cpi	MyTest Font: .mtf
TrueType Font: .ttf	Windows System Font: .fon	

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Graphics/Picture		
3D XML file: .3dxml	3DStudio Mesh: .3ds	Adobe InDesign File: .indd
Adobe Photoshop Image: .psd	Agfa/Matrix Scodl Image: .scd	Alias Wavefront Raster Image: .rla
ArcView Shape: .shp	AutoCAD Binary Image: .dxf	AutoCAD Drawing: .dwg
AutoCAD Image: .dxf	Autodesc Animator Image: .pic	Autodesc Animator Pro color map: .col
Autodesc Animator Pro Image: .pic	Autologic Image: .gm	AVHRR Satellite Image: .sst
Bentley MicroStation CAD Drawing: .dgn	BMF Image: .bmf	Canon RAW graphics file: .crw
Canon RAW graphics file*: .cr2	Canon RAW graphics file: .crw	ColoRIX Image: .rix
CompuServe GIF Image: .gif	ComputerEyes Raw Image: .ce1	Continous Edge Graphic Image: .ceg
Corel Texture Image: .tex	CorelDraw CMX Image: .cmx	CorelDraw Image: .cdr
Cubicomp Picture Maker Image	Dr. Halo palette: .pal	Enhanced MetaFile Image: .emf
Epson Stylus Image: .prn	Erdas LAN/GIS Image: .lan	Fractal Image Format: .fif
Freehand (MX) Database: .fh10	GEM Raster Image: .img	GEM VDI Image: .gdi
GOES Satellite Image: .goe	Graphics Workshop for Windows Thumbnail: .thn	Gridded Binary Image: .grb
Hitachi Raster Image: .hrf	Hotspot Image: .shg	HP Command Language Image: .pcl
HP Raster Image: .rtl	HSI JPEG Image: .hsi	IBM Picture Maker Image: *.pic
iPhoto Image: .attr	Jovian Logic Image: .vi	JPEG 2000: .jp2
JPEG Digital Camera*: .jpg	JPEG Image: .jpg	Kodak PhotoCD Image: .pcd
LBM/IFF Image: .lbm	Lightwave Object: .lwo	Lotus PIC Image: .pic
Macintosh Paint Image: .mac	Macintosh PICT Image: .pct	Microsoft Paint Image: .msp
Minolta RAW image: .mrw	Nikon RAW image*: .nef	Olympus RAW image: .orf
PaintShop Pro Image: .psp	PaperPort Image: .max	PBM Image: .pbm
PGM Image: .pgm	Pictor PC Paint Image: .pic	PIX Image: .pix
PM Image: .pm	PNG Image: .png	PPM Image: .ppm

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Print Shop Image: .pds	QuarkXpress Database: .qxp	QuarkXPress file: .qxd
Quick Link II fax Image: .qfx	QuickDraw 3D Metafile: .3dmf	RenderMan Image: .rib
SGI Image: .sgi	Sigma RAW image: .x3f	Sketch Image: .sk
SmartDraw file: .sdr	SmartDraw template: .sdt	Sony RAW image: .arw
STAD Image: .pac	Sun Raster Image: .sun	SymbianOS Image: .mbm
Tagged Image Format File: .tif	TI Image: .92i	TrueVision Image: .tga
Utah Raster Toolkit Image: .rle	VITec Image: .vit	Windows Animated cursor: .ani
Windows Bitmap Image: .bmp	Windows cursor: .cur	Windows Fax Cover Image: .cpe
Windows icon: .ico	Windows MetaFile Image: .wmf	WordPerfect Graphics Image: .wpg
X PixMap Image: .xpm	X Window Dump Image: .xwd	Xara Drawing: .xar
ZSoft PCX Image: .pcx		
Multimedia: Audio Files		
Advanced Streaming Format file: .asf	AIFF Sound: .aif	Amusic tracker: .amd
aPac Audio: .apc	AudioCD file: .cda	AVR Sound: .avr
CMF Music: .cmf	Creative Voice File: .voc	DiamondWare Sound: .dwd
Digital Speech File: .dss	Digital Voice File: .dvf	EA ASF/MUS Audio: .asf
Extended M3U playlist: .m3u	FLAC Audio	La Lossless Audio: .la
Liquid Audio: .la1	MIDI Instrument definition: .idf	MIDI Music: .mid
MIDI stream: .mds	Monkeys Audio: .ape	MPEG Layer I Audio: .mpg
MPEG Layer II Audio*: .mp2	MPEG Layer III Audio*: .mp3	MUS Music: .mus
Musepack Audio: .mpc	Next/Sun Sound: .au	Ogg Vorbis Audio: .ogg
OptimFROG Audio: .ofr	RIFF MIDI Music: .rmi	RK Audio Sound: .rka
Sierra AUD Sound: .aud	Sony OpenMG Audio: .oma	Super NES Audio: .spc
TTA Audio: .tta	VQF Sound: .vqf	WavPack Audio: .wv
Westwood AUD Sound: .aud	Windows Audio Compression Manager driver: .acm	Windows Media Audio: .wma
Windows WAVE Sound: .wav	X-MIDI Music: .xmi	ZyXEL Sound: .zyx
Multimedia: Video Files		

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3GPP multimedia audio? /video: .3gp	3GPP2 multimedia audio? /video: .3g2	4X Movie Video: .4xm
Adobe Filmstrip Animation: .fsf	AMV Video: .amv	ANIM Animation: .cel
Autodesk Animator: .fli	BCS Video: .bcs	BINK Video: .bik
DeluxePaint Animation: .anm	Director Video: .dcr	DriveCam Video: .dce
DVM Video: .dvm	Eyemail Video: .eye	Flash Video: .flv
Google Video: .gvi	Intel DVI Video: .dvi	Intel Indeo Video File: .ivf
Interplay MVE Video: .mve	Lotus ScreenCam Video: .scm	LZA Animation: .lza
MPEG Video: .mpg	Nancy Codec Video: .noa	NEOchrome Animation: .ani
Nullsoft Video: .nsv	NuppelVideo (MythTV) Video: .nuv	QuickTime Video: .mov
QV-10 Video: .cam	RPL Video: .rpl	Sega FILM?CPK Video: .cpk
SGI movie format: .mv	Shockwave Video: .swf	Smacker Video: .smk
SMJPEG Video: .mjpg	Sony Movie Player Video: .mqv	VideoCD MPEG: .dat
VideoCD Video: .vcd	Vivo streaming Video: .viv	VOB video files: .vob
VP6 encoded Video: .vp6	Windows AVI Video: .avi	Windows Media Video: .wmv
Multimedia Files		
Material Exchange File: .mxf	MP4 file: .mp4	Real Networks audio? /video: .rm
RIFF Multimedia File		
Archive Files		
7-Zip archive: .7z	ACE archive: .ace	AIN archive: .ain
ARJ archive: .arj	ARX archive: .arx	Aladdin Systems StuffIt archive: .sit
BAG archive: .bag	BIX archive: .bix	BOA archive: .b58
BZip2 archive: .bz2	BlackHole archive: .bh	Blink archive: .bli
CPIO archive: .cpio	CRUSH archive	ChArc archive: .chz
Compress archive: .z	FOXSQZ archive: .sqz	GZip archive: .gz
HA archive *: .ha	HAP archive: .hap	HPACK archive: .hpk
Hyper archive: .hyp	InstallShield Cabinet archive: .cab	InstallShield Data archive: .z
InstallShield archive	JAM archive: .jam	JAR archive: .jar
JRC archive: .jrc	LHA?LZARK archive: .lzh	LIMIT archive: .lim

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LZA archive: `*.lza`	LZOParchive: `.lzo`	LZSH archive
LZX archive: `.lzx`	Microsoft Cabinet archive: `.cab`	Microsoft Compress 5 archive
Microsoft Compress 6 archive	PAKLEO archive: `.pll`	Pack archive
QFC archive: `.qfc`	Quantum archive *: `.ark`	Quark archive
RAR archive: `.rar`	RPM archive: `.rpm`	ReSOF archive: `.sof`
SAR archive: `.sar`	SBC archive: `.sbc`	SCO archive *
SQZ archive: `.sqz`	SZip archive	StuffIt archive: `.sit`
TAR archive: `.tar`	UFA archive: `.ufa`	UHArc archive: `.uha`
UltraCompressor 2 archive: `.uc2`	UltraCrypt 2 archive: `.ue2`	WIN-Freeze archive*: `.ice`
WRAptor archive: `.wra`	WinImp archive: `.imp`	YAC archive: `.yc`
YBS archive: `.ybs`	ZIP archive: `.zip`	ZOO archive: `.zoo`
ZZip archive: `.zz`	Apple Safari Web Archive: `.webarchive`	Microsoft Internet Explorer Web Archive: `.mht`
R-Drive Image Archive: `.arc`	R-Drive Image V1 Archive: `.arc`	WinImage Archive: `.imz`
Executable/Library/DLL		
DOS Style Executable: `.exe`	ELF Executable (UNIX)	ELF Library (UNIX)
ELF Module (UNIX)	Java Bytecode: `.class`	Novell NetWare executable: `.nlm`
RDOFF executable	Win32 DLL*: `.dll`	Win32 Executable*: `.exe`
Windows OCX File: `.ocx`		
Development files		
Borland Delphi 6 Library: `.dcu`	Borland Turbo Pascal compiled Unit: `.tpu`	COM Type Library: `.tlb`
Delphi 7 Compiled Unit: `.dcu`	Library: `.lib`	Microsoft .NET XML Resource template: `.resx`
Microsoft ClassWizard file: `.clw`	Microsoft Linker database	Microsoft Precompiled header: `.pch`
Microsoft Visual C++ Database: `.mdp`	Microsoft Visual Studio Database: `.dsp`	Microsoft Visual Studio Solution: `.sln`
Microsoft Program database	Microsoft Visual C++ project	Microsoft Visual Studio workspace: `.dsw`
OMF Object library: `.lib`	VisualBasic Database: `.vbp`	Windows Compiled resource (16bit)*: `.res`
Windows Compiled resource (32bit): `.res`		
Other file types		

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ABBYY Lingvo dictionary: .lsd	File Crypt file: .rzx	Kaspersky Anti-virus data base: .avc
NOD32 Antivirus Update file: .nup	OziExplorer Map data:.map	RegEdit file: .reg
RegEdit file (UNICODE): .reg	Windows Backup File: .bkf	Windows Clipboard file: .clp
Windows Color Profile: .icm	Windows Minidump	Windows National locale: .nls
Windows Password file: .pwl	Windows Policy file: .pol	Windows Registry file: .dat
Windows Registry hive: .hiv	Windows shortcut: .lnk	WinHelp: .hlp
WinHelp Contents: .cnt		

Note: Using scan for Known File Types, R-Undelete can successfully recover only un-fragmented files.

Disk Image

An image is a file containing an exact, byte by byte, copy of a hard drive or a disk. When created, images can be connected to R-Undelete and processed like their original objects.

Images are very useful if there is a risk of total data loss due to hardware malfunction. If bad blocks are constantly appearing on a hard drive or its S.M.A.R.T. state is poor, an image of this hard drive should be immediately created. All data search and recovery can be done from this image.

The Disk Images 29 help page explains how to create and work with images.

Smart technology

S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) is a technology widely used in hard drives and solid-state devices that monitors their reliability conditions to predict possible hardware failures.

VI Contact and Support

To obtain the latest version of R-Undelete, go to:

Product Site: http://www.R-Undelete.com
Sales Department: sales@r-tt.com

R-Undelete Technical Support Team is available 24 hours a day, seven days a week, and has an average response time less than 4 hours.

Tech. Support: support@r-tt.com
Click the Help button and select Support Request on the shortcut menu

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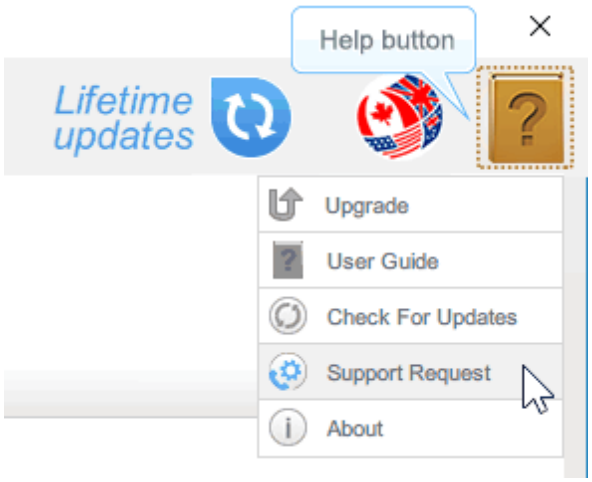

Or send manually your support request to: http://www.r-tt.com/SupportRequest.shtml

File Recovery FAQ: http://www.r-tt.com/File_Recovery_FAQ.shtml
R-TT Forum: http://forum.r-tt.com

VII System Requirements

An Intel-compatible platform running Windows 10 /8.1/8 /7 /Vista /XP /2000 Windows Server 2019 /2016 /2012 /2008 /2003

At least 256 MB of RAM, a mouse, and enough disk space for recovered files, image files, etc.

The administrative privileges are required to install and run R-Undelete.

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