



VisualSoft Suite User Manual

VisualArchive 11.0



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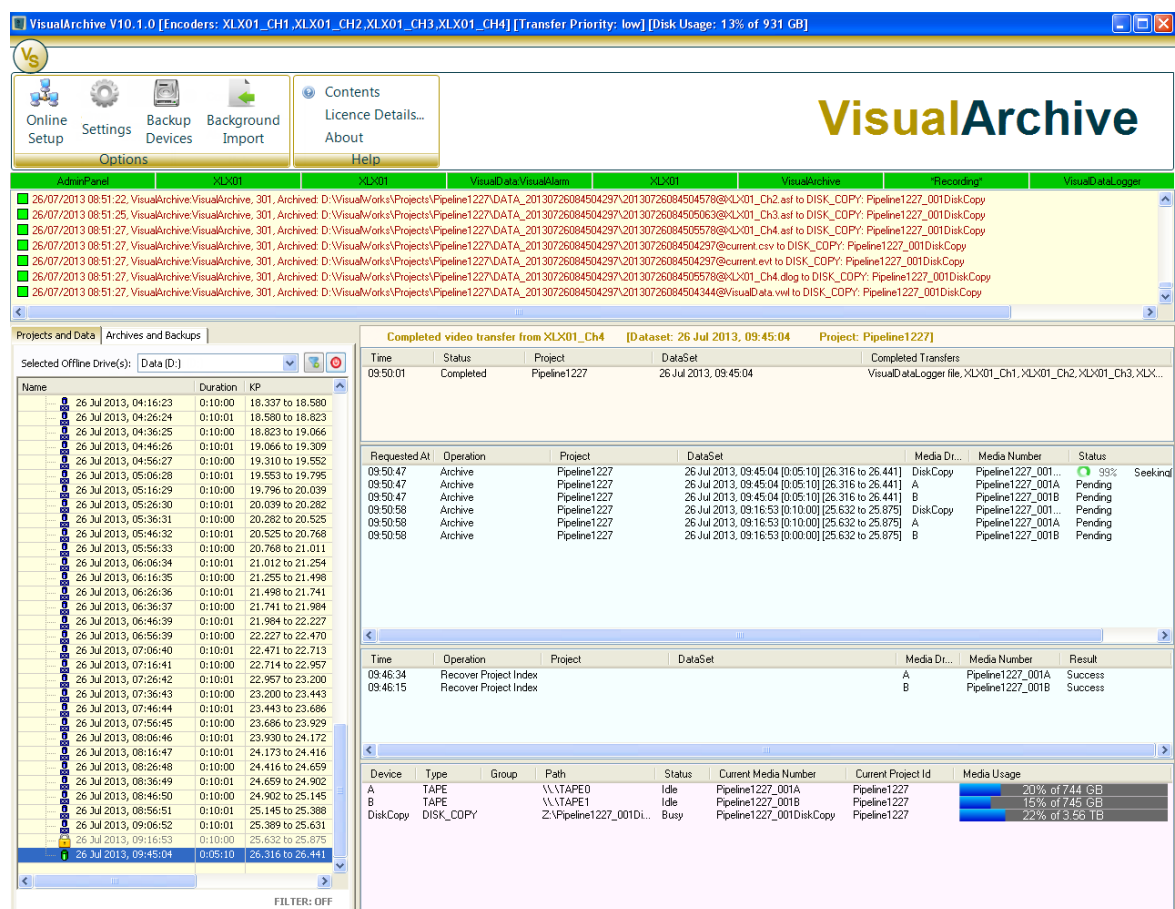
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1 VisualArchive

1.1 VisualArchive Introduction

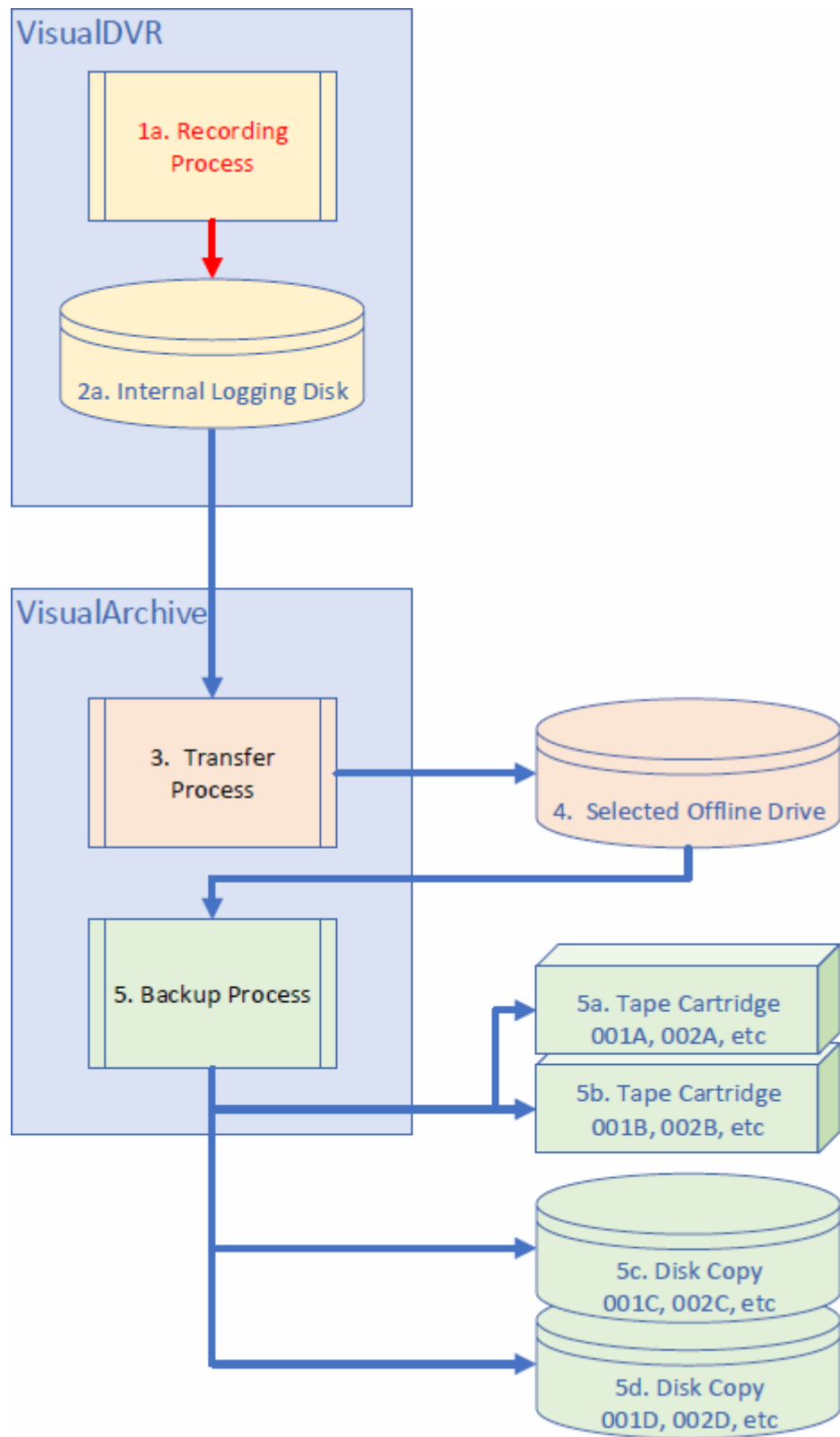
VisualArchive helps you manage and monitor your data, with clear displays of what data is available, and whether or not it has been correctly backed up. **VisualArchive** is a key part of the **VisualSoft Suite** and performs three major roles:

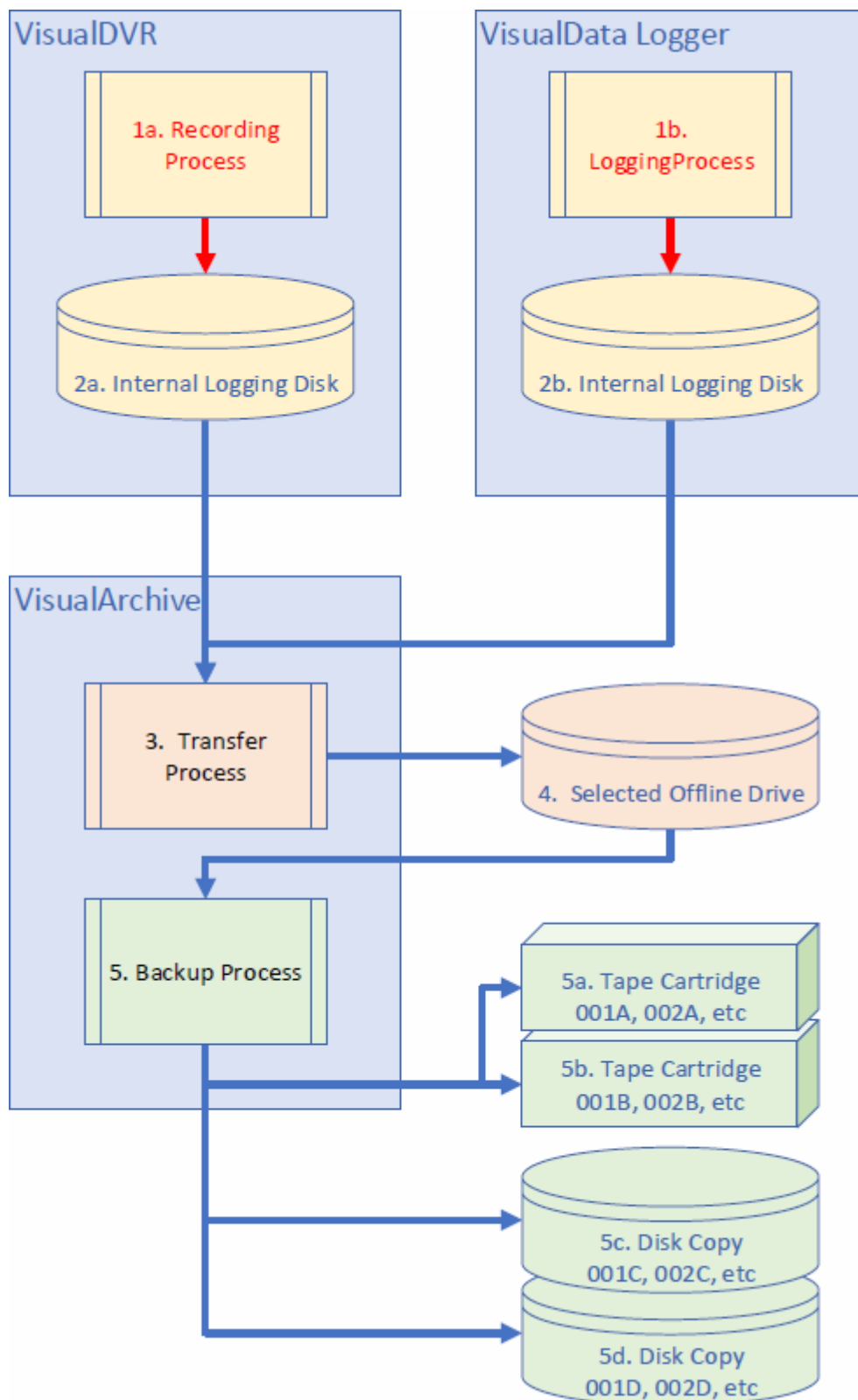
1. **VisualArchive** lets you quickly and easily create Projects for online logging.
2. **VisualArchive** transfers recorded video files and logged data files from the online systems to the offline systems.
3. **VisualArchive** creates one or more fully automated backups of those files after they have been transferred.



1.2 VisualArchive and Data Flow

When using VisualArchive, data and video recorded in the VisualSoft Suite flows through the applications and storage devices in the following ways. If you also use VisualEvent Logger online during video recording then those events are logged by VisualDVR's Recording Process and start out on VisualDVR's internal logging disk before being copied or transferred to other disks with the associated video files.

Option 1: VisualDVR with VisualArchive

Option 2: VisualDVR and VisualData Logger with VisualArchive

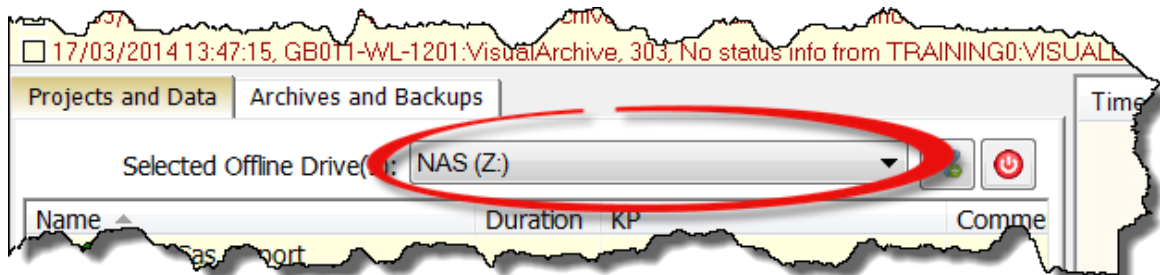
1.3 Quick Start – Basic Setup

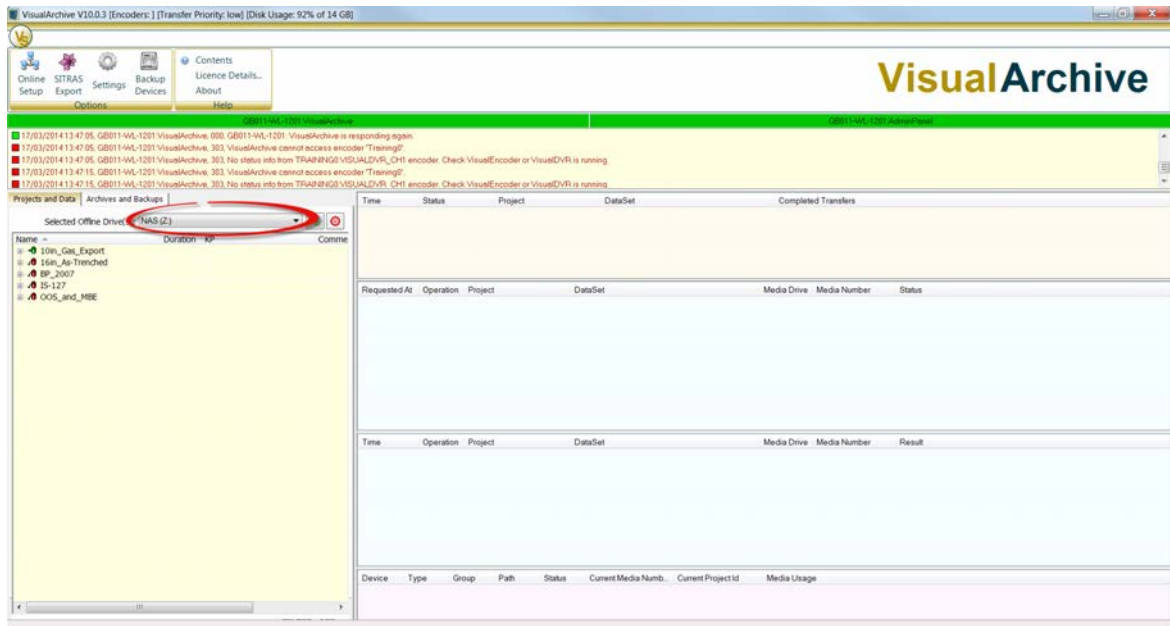
This Quick Start chapter will guide you through the basic, essential setup for the most common operations in VisualArchive. It will not cover everything that is possible in VisualArchive, and will not give all of the details. It is intended to give you the bare essentials to get your system working, and we recommend that you then take the time to read the other sections of the help file or user manual to see what else is possible.

1.3.1 Quick Start: Data Storage

VisualArchive will copy video files from VisualDVR, and data files from VisualDataLogger. It will then make backups of all this video and data. For this to happen you must consider the following points:

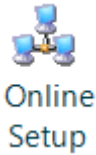
1. You must tell VisualArchive which disk to use for storing all of this information offline.
2. That disk must be visible to VisualArchive and also to any computers where you want to use VisualEdit or VisualReview.
3. The disk must be large enough to hold all of the video and other data that you expect to record during your project.
4. Usually the disk used for VisualArchive is a large capacity [NAS](#) (Network Attached Storage) drive.
5. To select the chosen disk drive, use the drop down list at the top of the Projects and Data tab.
6. Having selected a drive for Project data storage, **it should not normally be changed** until the end of a project.





1.3.2 Quick Start: Online Setup

Before VisualArchive can copy files from the online systems (**VisualDVR** and **VisualDataLogger**) you must tell it which of these online systems you want it to use. This process has been automated as much as possible.



Start by clicking on the "Online Setup" button on the main ribbon or toolbar.

This will open a setup window with three sections; one each for **VisualDVR**, **VisualDataLogger** and **Visual3D-Inspector**.

For each of these applications that you are using click on the Auto Detect button in the relevant section. Note that the **VisualDVR**, **VisualDataLogger** or **Visual3D-Inspector** applications must be running when you use Auto Detect for that particular application. If you are not using one of the applications leave that section blank.

After you click the Auto Detect button, you should then click the relevant Test Access button beside it. This will tell you if the connection has been made successfully.

For more detail, see [Online Setup](#) ⁵³.

If Test Access fails see [Edit Access](#) ⁵⁸ for information about using IP addresses instead of DVR PC names and about using non-standard username and password credentials.

1.3.3 Quick Start: Backup Devices

After VisualArchive has copied the video and data files to the offline storage disk, it will then make one or more extra [backups](#) ¹³. These backups can be to tape or to another disk. For more details of the backup types see [Backup Devices](#) ⁶¹.



Start by clicking on the "Backup Devices" button on the main ribbon or toolbar.





This will open a setup window where you can add new backup devices.

Click on the New button, and then choose a Device Type, a Physical Device and a Device Name. For example if you are using a tape drive, select that as the device type, and then choose your drive in the list of Physical Devices. (If you only have one tape drive Windows will assign it the name Tape0. If you have two, they will be Tape0 and Tape1.) The names can be anything that you like, but we recommend something short but clear. For a pair of tape drives most people use just "A", and "B" as device names.

There are other advanced settings which affect your backup devices. Please see the more detailed information in each topic of the section named [Configure Backup Devices](#) ⁶³.

1.3.4 Quick Start: Online Projects


All video and data recorded by the VisualSoft Suite is grouped into Projects and Sub-Projects. These are best created and managed using **VisualArchive**, and it is best to create them before you start any online logging.

VisualArchive can have a status which is Online, Offline or Closed. An Online Project has a green icon with an arrow pointing into it (). Offline Projects are blue with a "Stop" symbol () , and Closed Projects are red with a tick or check mark (). **VisualDVR** can only record into Projects which are set as "Online" (). It cannot record to Offline or Closed Projects.

Create a new project using a right-click in the blank pale-yellow area of the Project and Data list. This will open a window where you can give the Project a name. The name should be short and clear. Other people need to be able to tell what data should go into that Project, so it might have a pipeline name or a platform name. Many people also include a project number, job number or pipeline number in the name, for example J1234_10in_Export.

If you want to create a Sub-Project, instead of a right-click in a blank row, use a right-click on an existing Project (or even a Sub-Project if you want to make a Sub-Project of a Sub-Project).

Things to check:

- Make sure that your new Project or Sub-Project has a name.
- Make sure that your new Project is set to  Online status.
- Make sure that your new Project is set to Backup to one or more Backup Devices.

1.4 Definitions used in VisualArchive

Definitions of words and terms used in VisualArchive	
Archive	See Backup.
Backup	An extra copy of the video or data files, saved in a different location from the original files. After video and other data files have been transferred to the offline storage system they may be copied onto tapes, added to compressed storage files, or simply copied to yet another disk drive. All of these actions are creating Backups of the video and data files so that if the main offline storage disk (or the files on it) becomes damaged you can continue working with extra backup copies.
Backup Device	A backup device is something which holds "Backup Media". This might be a tape drive with a tape in it, a disk with files and folders on it, or just one big file containing lots of other smaller files rather like a zip a file.
Backup Device Group	You can group different backup devices together so that when the Backup Media (tape, file etc.) on any one of them becomes full they will all increase their Media Numbers at the same time. In this way, if you have two Tape Drives, A and B you will ensure that Tape A2 and Tape B2 both contain the same video and data files because they were started in sync with each other are completed in sync with each other.
Backup Media	A Backup Medium (or plural Backup Media), is a tape, a file or a disk with extra Backup copies of your video and data stored on it or in it.
Media Number	Over time, tapes and backup disks become full and the automated backup processes in VisualArchive will start to use a different tape or disk. As each tape or disk is used it is assigned a unique sequential number – Tape 1, Tape 2, etc. These are called Media Numbers.
Network Attached Storage (NAS)	A NAS drive is a box full of disk drives. It may be configured as one or more volumes. The volumes are shared on the network so that they can be accessed from other other computers on the same network. Different volumes may have different permissions. In normal operation a NAS box has no keyboard or monitor, but you may need to connect these to configure it. Alternatively it is often possible to configure a NAS by connecting remotely using a web browser on another computer.
Transfer	After each video file is recorded, as soon as recording ends, the file is copied from the online recording system to an offline storage drive. This process is known as a "Transfer".

Definitions of words and terms used in VisualArchive**Verify**

After video and data files have been backed up, it is a good idea to check that the backup copy is correct and usable. This is known as “Verifying” the backup.

1.5 Definitions used in the VisualSoft Suite

Definitions of words and terms used in VisualSoft Suite applications	
Data Table	A Data Table is used in VisualEdit and VisualReview to display survey positioning or sensor data in a readable text format. Data Tables may contain information from individual survey sensors or positioning systems logged by VisualDataLogger , or they may contain information from multiple sensors or positioning systems. A Data Table may also contain event or observation records logged online using VisualDVR or in VisualEventing or logged and edited offline using VisualEdit Eventing . Each row of a Data Table has a unique time stamp, with a timing resolution of just one millisecond. Data Tables typically have multiple columns showing a range of information all applicable at the same time.
Dataset	A Dataset is simply group of video and associated survey data files which all cover the same time period. Datasets are displayed in the VisualSoft Project Tree in VisualArchive , VisualEdit and VisualReview where they are shown with a start time and a duration for the video recordings. If you have pipeline data the Project Tree will also show the KP limits of each dataset. On the hard disk each Dataset is a single folder which contains a group of individual but related files such as one or more video files from different cameras, one or more files of position data, a file of observed events, and possibly various files containing other data types like multibeam or profiler data.
Events	The Events list in VisualEdit and VisualReview is a special data table used to hold information relating to what can be seen in the video. The Events list is used for inspection tasks and similar surveys to record the time, position and status of components on pipelines or structures. Other companies may have different words for what we call Events. For example Shell use the word "incident" and Equinor use "observation". Whether you call it an Event or an incident or an observation it describes something that has been seen at a specific time and place during an inspection or other survey.
H.264	A video compression standard, usually stored in MPEG-4 container files, so a VisualSoft .mp4 file contains video compressed using the H.264 standard.
MPEG	A series of video (and audio) standards developed by the Motion Picture Experts Group. The VisualSoft Suite has always included support for MPEG-2 video files, and more recently has also added support for MPEG-1 and MPEG-4.

Definitions of words and terms used in VisualSoft Suite applications	
Processed PT	The Processed PT Data Table is a pre-defined data table used to hold cleaned and corrected pipetracker data and also the position data for the Top of Pipe derived from the pipetracker data.
Processed Survey	The Processed Survey Data Table is a special data table used to hold a simple collection of processed and cleaned position data and other survey data such as pitch, roll, heading and depth. For relatively simple jobs the Processed Survey data table and the Video Position table might be all that you need to provide the data that a client needs. For more complex operations you may also need to add one or more User Defined data tables (see below).
Project	A Project is used in the VisualSoft Suite to group together all related data. This may be for a single pipeline, a single structure, a single survey task or a single client. A Project may or may not contain Sub-Projects (see below), and after a survey has been completed a Project will usually contain multiple Datasets. Projects are usually created in advance before survey work and video recording begins, and will initially be empty. As a survey or inspection task is carried out, more and more data and video will be added to the Project as a sequence of Datasets.
Project Tree	The Project Tree is used to display and manage the hierarchic structure of data and video files used by all applications of the VisualSoft Suite. The Project Tree is made up of one or more Projects, Sub-Projects and Datasets (see below).
Raw Survey	The Raw Survey Data Table is a special data table used to hold the time, position and other survey data recorded by VisualDVR during video recording. VisualDVR can be interfaced to a navigation system and can receive a simple ASCII data string containing survey position and sensor information. The data in this data string are logged to a file and are displayed in the Raw Survey data table in VisualEdit and VisualReview . This Raw survey information can be processed offline to clean or smooth the positioning data, and to apply corrections and offsets.
Sub-Project	A Sub-Project is used to divide the data of a large Project into logical groupings. For example a Project might represent all of the pipelines in one oil or gas field, with Sub-Projects for each individual pipeline. Alternatively a Project may represent one offshore structure with individual Sub-Projects for different parts of that structure.

Definitions of words and terms used in VisualSoft Suite applications

Time Sync or Time Synchronisation	Time Synchronisation is the process of applying the Timestamp information (see above) so that differing data types logged on different computers or to different data files can be linked together.
Timestamp	Each data record or row in each individual data table has a precise time and date associated with it. This timestamp is created at the time of logging and is preserved through all data processing operations. The timestamp allows different types of data to be linked together so that relevant information from different survey sensors or video cameras can be joined accurately and appropriately.
User Defined Table or UDT	User Defined Tables can be used to hold any data of any type you want. Typically they allow the data from individual sensors to be retained at the native time interval and resolution of the relevant logging system so that data is not lost by combining it with other sensors that have a lower timing resolution.
Video Position	The Video Position Data Table is a pre-defined data table used to hold the Easting, Northing, Depth and KP information relating to the position displayed in the video windows. This data table is filled during the data processing operations carried out using VisualEdit Professional , and is usually the source for the position, depth and KP information in the Events table.
WMV	Windows Media Video. A Microsoft video file format based on the MPEG-4 standard. The WMV standard has had a number of versions over time. Most WMV files used by the VisualSoft Suite are either WMV version 8 or WMV version 9.
X-Profiles	The X-Profiles Data Table is a pre-defined data table used to hold the beam information and position data from either mechanical or multibeam profiling systems. The data is logged by VisualDataLogger from either Tritech SeaKing, Reson or Imagenex systems. Other hardware such as R2Sonic will be added soon.

1.6 VisualArchive Display

The **VisualArchive** display has many different windows, each monitoring and displaying different aspects of the data management process.

At the top of the display is a row of buttons on a Microsoft style "**Ribbon**". See [VisualArchive Ribbon](#) ¹⁹ for more details.

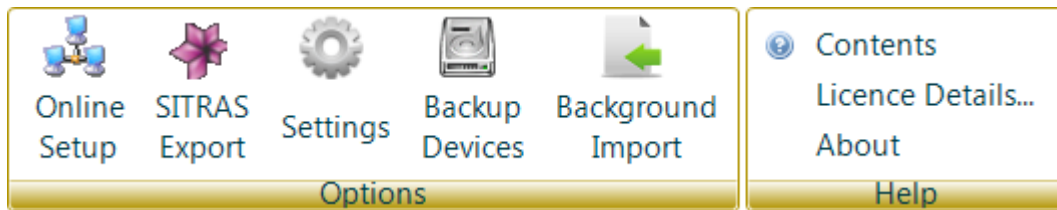
Below the **Ribbon** is a VisualAlarm display, which provides warnings of any problems with the system, not only with VisualArchive but also with any other VisualSoft application on the same network.

The rest of the **VisualArchive** display is divided into two columns, with lists of data and backups on the left, and detailed status information about current, pending and completed tasks on the right.






The screenshot shows the VisualArchive V10.1.0 interface. The title bar indicates the software version and system status. The interface is divided into several sections:

- Ribbon:** A row of buttons at the top for Online Setup, Settings, Backup Devices, Background Import, Contents, Licence Details, About, and Help.
- Alarm Window:** A section below the ribbon displaying system alerts and warnings.
- Disk Selector:** A section on the left for selecting offline drives.
- Project Tree:** A section on the left showing a hierarchical view of projects and data.
- Status Bar:** A section at the bottom showing system status and filters.
- Current transfer:** A section on the right showing the status of the current transfer operation.
- Transfer history:** A section on the right showing a list of completed transfers.
- Backup queue:** A section on the right showing a list of pending backup tasks.
- Backup history:** A section on the right showing a list of completed backup tasks.
- Backup devices:** A section on the right showing a list of backup devices and their status.

1.6.1 VisualArchive Ribbon



The buttons on the ribbon give you quick and easy access to the following items:

 Online Setup	<p>Use Online Setup to configure the links between VisualArchive and the online logging applications (VisualDVR, VisualDataLogger and Visual3D-Inspector). This is where you tell VisualArchive what video and data files to copy from the online system to the offline storage. See Online Setup^[53] for more details.</p>
 SITRAS Export	<p>The SITRAS Export tool converts standard MPEG-2 Transport Stream video into Equinor's non-standard variant of MPEG-2 by changing the normal timestamp data in the video file into Equinor's preferred format. (Normal timestamps are elapsed time from the start of the file, and Equinor's timestamps are absolute UTC time.) See SITRAS Export for more details.</p>
 Settings	<p>The VisualArchive Settings allow you to set the priority of online to offline file copying, control key backup settings, and manage the disk space on your offline storage device. See Settings^[59] for more details.</p>
 Backup Devices	<p>The Backup Devices tool allows you to create New Backup Devices, Edit exiting Backup Devices or Remove unused Backup Devices. It gives you access to the same three tools that you will find if you right click in the Backup Devices window at the bottom of your screen. See Backup Devices^[61] for more details.</p>
 Background Import	<p>Use Background Import to open the progress window, where you can see which files and data are being imported into each project.</p>

1.6.2 Project Tree

The Project Tree shows the basic details (time, KP, status, etc.) of all data on a selected storage drive. Data is held in Datasets, each containing a section of video and associated data. These Datasets are grouped into Projects and perhaps also into Sub-Projects.

For more details about the Project Tree and the data itself see [Projects and Data](#)^[26].

Projects and Data		Archives and Backups	
Selected Offline Drive(s):		Everything Else (E:)	
Name	Duration	KP	
+ 12in-Gas-As-Laid			
+ 16in-As-Trenched			
+ 8in-As-Trenched			
+ BP_2007			
+ BP_2007m			
- IS-127			
01 Mar 2004, 07:09:00	0:30:01	0.546 to 0.861 ▲	
01 Mar 2004, 12:41:58	0:30:01	2.306 to 2.584 ▲	
01 Mar 2004, 13:11:58	0:30:01	2.585 to 2.899 ▲	
01 Mar 2004, 13:41:59	0:30:01	2.899 to 3.223 ▲	
01 Mar 2004, 14:11:59	0:30:01	3.223 to 3.433 ▲	
01 Mar 2004, 14:42:00	0:28:29	3.433 to 3.553 ▲	
+ Documents			
+ NE_Oil_Co			
+ OOS_and_MBE			
+ Zeepipe_P55_2007			
+ Zeepipe_P55_2008			

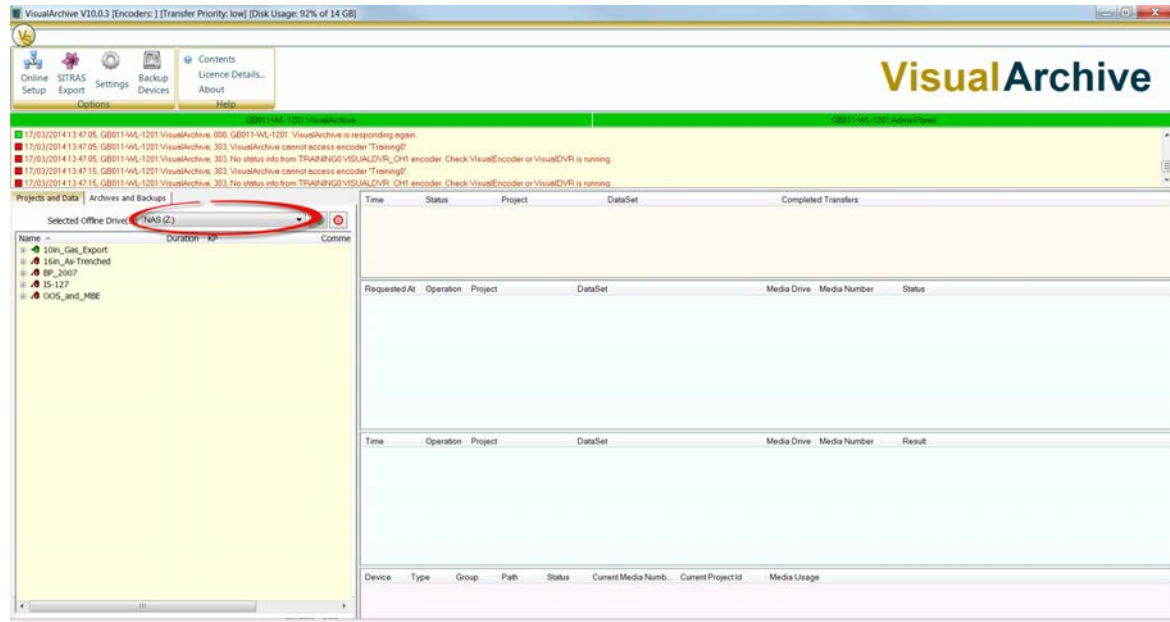
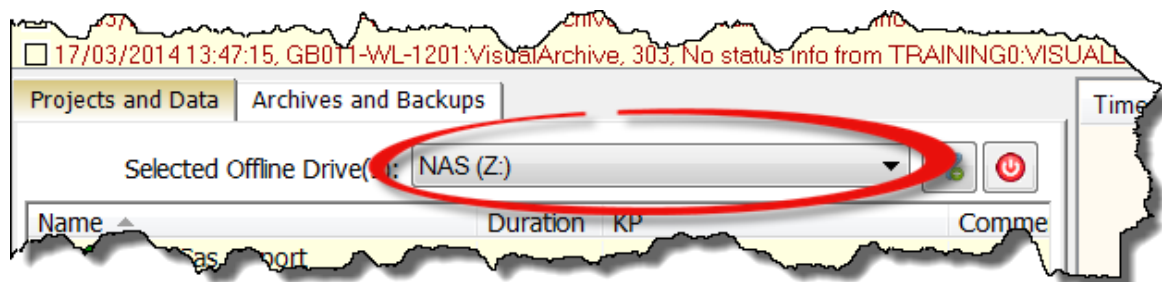
1.6.3 Project Tree Disk Selector

VisualArchive will copy video files from VisualDVR, and data files from VisualDataLogger. You must tell VisualArchive which disk to use when storing all of this information offline. The disk must be visible to VisualArchive and also to any computers where you want to use VisualEdit or VisualReview. The disk must be large enough to hold all of the video and other data that you expect to record during your project.

Usually the disk used for VisualArchive is a large capacity [NAS](#) (Network Attached Storage) drive.

To select a disk drive, use the drop down list at the top of the Projects and Data tab.

NOTE: Having selected a drive for Project data storage, **it should not normally be changed** until the end of a project.



1.6.4 Archives and Backups

The Archives and Backups tab shows the same data that is listed in the Projects and Data tab, but it shows it in a slightly different way.

In the Archives and Backups tab the data is grouped by Backup Media name and number, showing you exactly what files are saved on each Tape, V-Tape or Disk Copy backup device.

Selected Offline Drive(s): Everything Else (E:)

Name	Compl...	Durat
12in-Gas-As-Laid	No	
16in-As-Trenched		
1022-03-001A		
22 Dec 2006, 04:04:16	Centre,P	0:30:
1022-03-001B		
8in-As-Trenched	No	
BP_2007	No	
BP_2007m	No	
IS-127	No	
NE_Oil_Co		
NE_Oil_Co_001A		
NE_Oil_Co_002A		
NE_Oil_Co_003A		
OOS_and_MBE	No	
Zeepipe_P55_2007	No	
Zeepipe_P55_2008	No	

FILTER:OFF

1.6.5 Current Transfer operation

The file transfer display shows each video file while it is being copied from the online recording folder on the VisualDVR to the offline storage drive in VisualArchive. It shows where the file is being copied from, where it is being copied to, and shows how much of the file has been copied and how fast it is going.

 Transferring video from XLX01_Ch1	[Dataset: 04 Aug 2013, 12:09:50]	Project: Pipeline1227]	276.3/288.2 MB	1 secs	39.5 MB/S
---	----------------------------------	------------------------	----------------	--------	-----------

When a transfer is complete the display changes, and the information is also added to the list of completed transfers.

Completed video transfer from XLX01_Ch4	[Dataset: 26 Jul 2013, 09:45:04]	Project: Pipeline1227]
---	----------------------------------	------------------------

Time	Status	Project	DataSet	Completed Transfers
10:00:02	Checking	Pipeline1227	26 Jul 2013, 09:50:17	VisualDataLogger file, XLX01_Ch1, XLX01_Ch2, XLX01_Ch3
09:50:01	Completed	Pipeline1227	26 Jul 2013, 09:45:04	VisualDataLogger file, XLX01_Ch1, XLX01_Ch2, XLX01_Ch3, XLX01_

1.6.6 Completed Transfer operations

The Completed Transfers display shows a list of each Dataset that has been created by the video transfers from online to offline. It lists each video file as a Completed Transfer to show you which cameras, or channels, have been copied into each Dataset.

Time	Status	Project	DataSet	Completed Transfers
10:00:02	Checking	Pipeline1227	26 Jul 2013, 09:50:17	VisualDataLogger file, XLX01_Ch1, XLX01_Ch2, XLX01_Ch3
09:50:01	Completed	Pipeline1227	26 Jul 2013, 09:45:04	VisualDataLogger file, XLX01_Ch1, XLX01_Ch2, XLX01_Ch3, XLX01_

1.6.7 Backup Queue

The archive queue displays the status of operations that are active and pending. All new or modified data sets get archived automatically. In addition the user can select data sets to recover from archive. These operations will form a queue, each entry waiting for a suitable drive to become available.

Requested At	Operation	Project	DataSet	Media Dr...	Media Number	Status	
10:01:18	Archive	Pipeline1227	26 Jul 2013, 09:50:17 [0:10:00] [26.443 to 0.170]	DiskCopy	Pipeline1227_001...	35%	Archivi
10:01:18	Archive	Pipeline1227	26 Jul 2013, 09:50:17 [0:10:00] [26.443 to 0.170]	A	Pipeline1227_001A	Pending	
10:01:18	Archive	Pipeline1227	26 Jul 2013, 09:50:17 [0:10:00] [26.443 to 0.170]	B	Pipeline1227_001B	Pending	

Sometime it is necessary to interrupt the normal flow of Archive operations in order to suspend writing to tape so that tape Erasing of Reconstruction can take place. These operations are accessed via Right Clicking in the VisualArchive Archive Queue window:-

Requested At	Operation	Project	DataSet	Media Dr...	Media Number	Status	
10:01:18	Archive	Pipeline1227	26 Jul 2013, 09:50:17 [0:10:00] [26.443 to 0.170]	DiskCopy	Pipeline1227_001...	35%	Archivi
10:01:18	Archive	Pipeline1227	26 Jul 2013, 09:50:17 [0:10:00] [26.443 to 0.170]	A	Pipeline1227_001A	Pending	
10:01:18	Archive	Pipeline1227	26 Jul 2013, 09:50:17 [0:10:00] [26.443 to 0.170]	B	Pipeline1227_001B	Pending	

Cancel

Cancel All

Move to Start of Queue

Suspend Archiving

Recover Only Mode

Prompt Before Recovering

Highlight DataSet in Project Tree

View DataSet folder in Explorer...

Copy Archive Actions ▶

1. **Suspend Archiving** – Pause the archiving process, so files are not backed-up but leave the files in the archive queue.
2. **Resume Archiving** – Continue automatic archiving of the files in the queue.
3. **Cancel** – Right Click on each file you want to remove from the archive queue – Manually removes files from the archive queue.
4. **Cancel All** – Removes all files from the archive queue. Use with caution!

1.6.8 Completed Backup operations

As soon as a Backup or Verify operation is finished, the status is shown in the list of completed backup operations.

A successfully completed backup lists which key files were backed-up for each Dataset. With each video file, the system will also backup the associated raw position, events and VisualDataLogger data.

A successfully completed verification lists the Dataset that was verified.

Time	Operation	Project	DataSet	Media Dr...	Result
14:40:42	Verify	V10_Release	05 Oct 2013, 14:17:49 [0:15:00] [-0.026 to -0.026]	MyBackup	Success
14:40:31	Archive	V10_Release	05 Oct 2013, 14:17:49 [0:15:00] [-0.026 to -0.026]	MyBackup	Success[Archived:XP-DATA_Ch1\XP-DATA_Ch2\XP-DATA_Ch3\XP-DATA_Ch4]
14:36:16	Verify	V10_Release	05 Oct 2013, 14:17:09 [0:15:00] [-0.026 to -0.026]	MyBackup	Success
14:36:06	Archive	V10_Release	05 Oct 2013, 14:17:09 [0:15:00] [-0.026 to -0.026]	MyBackup	Success[Archived:XP-DVR1_Ch1\XP-DVR1_Ch2\XP-DVR1_Ch3\XP-DVR1_Ch4]
14:25:46	Verify	V10_Release	05 Oct 2013, 14:02:49 [0:15:00] [-0.026 to -0.026]	MyBackup	Success
14:25:35	Archive	V10_Release	05 Oct 2013, 14:02:49 [0:15:00] [-0.026 to -0.026]	MyBackup	Success[Archived:XP-DATA_Ch1\XP-DATA_Ch2\XP-DATA_Ch3\XP-DATA_Ch4]
14:21:05	Verify	V10_Release	05 Oct 2013, 14:02:09 [0:15:00] [-0.026 to -0.026]	MyBackup	Success
14:20:55	Archive	V10_Release	05 Oct 2013, 14:02:09 [0:15:00] [-0.026 to -0.026]	MyBackup	Success[Archived:XP-DVR1_Ch1\XP-DVR1_Ch2\XP-DVR1_Ch3\XP-DVR1_Ch4]
14:10:40	Verify	V10_Release	05 Oct 2013, 13:47:49 [0:15:00] [-0.026 to -0.026]	MyBackup	Success
14:10:28	Archive	V10_Release	05 Oct 2013, 13:47:49 [0:15:00] [-0.026 to -0.026]	MyBackup	Success[Archived:XP-DATA_Ch1\XP-DATA_Ch2\XP-DATA_Ch3\XP-DATA_Ch4]
14:06:08	Verify	V10_Release	05 Oct 2013, 13:47:09 [0:15:00] [-0.026 to -0.026]	MyBackup	Success
14:05:56	Archive	V10_Release	05 Oct 2013, 13:47:09 [0:15:00] [-0.026 to -0.026]	MyBackup	Success[Archived:XP-DVR1_Ch1\XP-DVR1_Ch2\XP-DVR1_Ch3\XP-DVR1_Ch4]
13:56:18	Verify	V10_Release	05 Oct 2013, 13:32:49 [0:15:00] [-0.026 to -0.026]	MyBackup	Success

1.6.9 Backup device configuration and status

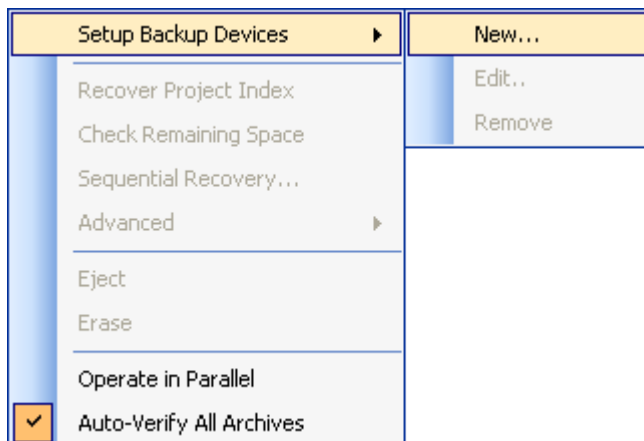
The Backup Device status display shows all available Backup Devices and will show the identification and status of any loaded tape media or selected Virtual Tape files.

The example here shows a "real" tape drive (TAPE0), a "Disk Copy" to the S drive, and a "Virtual Tape" backup to a folder on the D drive.

The real tape and the virtual tape have been grouped together as a "Drive Group" named "A and B" so that their media numbering will be synchronised.

Device	Type	Group	Path	Status	Current Media Number	Current Project Id	Media Usage
A	TAPE	A and B	\\TAPE0	Busy	Pipeline1227_001A	Pipeline1227	21% of 744 GB
B	TAPE		\\TAPE1	Idle	Pipeline1227_001B	Pipeline1227	16% of 745 GB
DiskCopy	DISK_COPY		Z:\Pipeline1227_001Di...	Idle	Pipeline1227_001DiskCopy	Pipeline1227	22% of 3.56 TB

If you right-click on the drive status then a pop-up menu will appear as shown below.



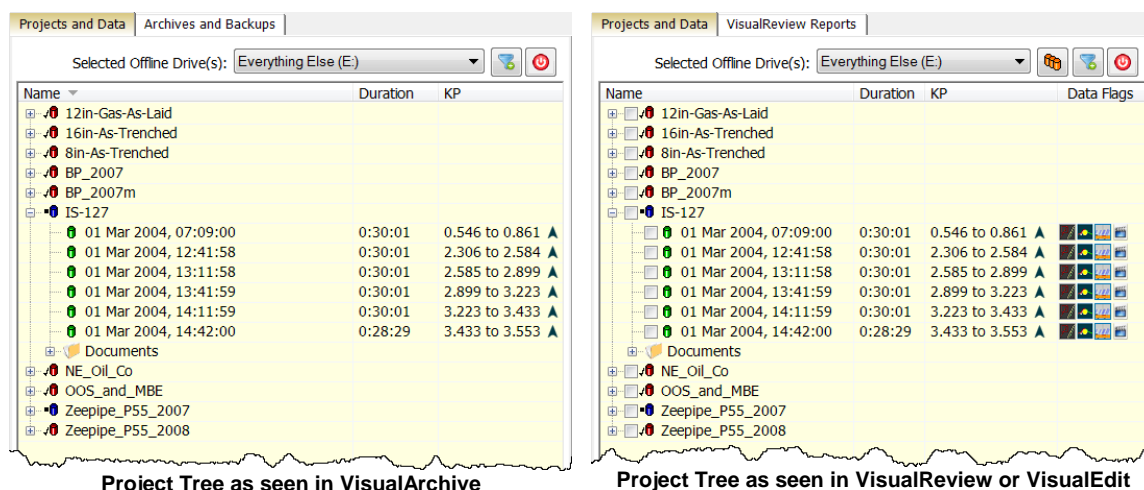
1.7 Projects and Data

The VisualSoft Suite groups all data into Projects, Sub-Projects and Datasets in a hierarchy or “Tree” structure just like the folder structure in Windows Explorer. This “Project Tree” hierarchy is saved using folders and individual files on the disk drive, but it is displayed in a more user-friendly way in the VisualSoft Suite programs. To see how the data and video files are saved on your hard disk see [VisualSoft Files on your Disk](#)⁵¹.

A Project will usually represent one client, one survey or one inspection task, or perhaps just one particular pipeline or structure. Each of these Projects can, if you want, have one or more Sub-Projects inside it to group data and video recordings into smaller sections. For example a “Client” Project for Shell or BP may contain video and data for many different pipelines, each of which will have its own Sub-Project. A “Structure” Project for one jacket inspection might contain different Sub-Projects for different faces or levels of the jacket. It is also possible for Sub-Projects to have other Sub-Projects inside them.

Within each [Project](#)³¹ or [Sub-Project](#)⁴⁰ the video and associated data for the same time period is grouped in [Datasets](#)⁴². In the online recording and logging software a new Dataset is created automatically at regular time intervals, typically every 15 or 30 minutes.

The Project and Data structure is the same in **VisualArchive**, **VisualReview** and all editions of **VisualEdit** but the default display options are slightly different in **VisualArchive** compared with the others. In **VisualEdit** and **VisualReview** there are columns of “Data Flags” to the right of the KP limits. These Data Flags indicate the current status of the data, showing you what does or does not exist, and what has or has not been processed. These status flags are explained in the topic Data Status Flags. The Data Flags are not normally shown in **VisualArchive**.



The Project Tree shows the VisualSoft data that is stored on the selected Offline disk drive. The disk drive can be chosen using the drop-down list at the top of the Project Tree.

Many data management functions can be accessed by right-clicking in the Project Tree window.

Each [Project](#)^[31], [Sub-Project](#)^[40] and [Dataset](#)^[42] has status information which is shown using the icons in the Project Tree.

Each Dataset shows the following information:

- Local date and time when the video and data files were recorded.
- The duration of the video and data recorded in the Dataset.
- The KP limits of the data in the Dataset, with an arrow indicating whether the survey ran in ascending or descending KP direction.

Each Project or Sub-Project can have Comments added to its properties. These are used to save any extra information that you think might be useful for your colleagues or clients.

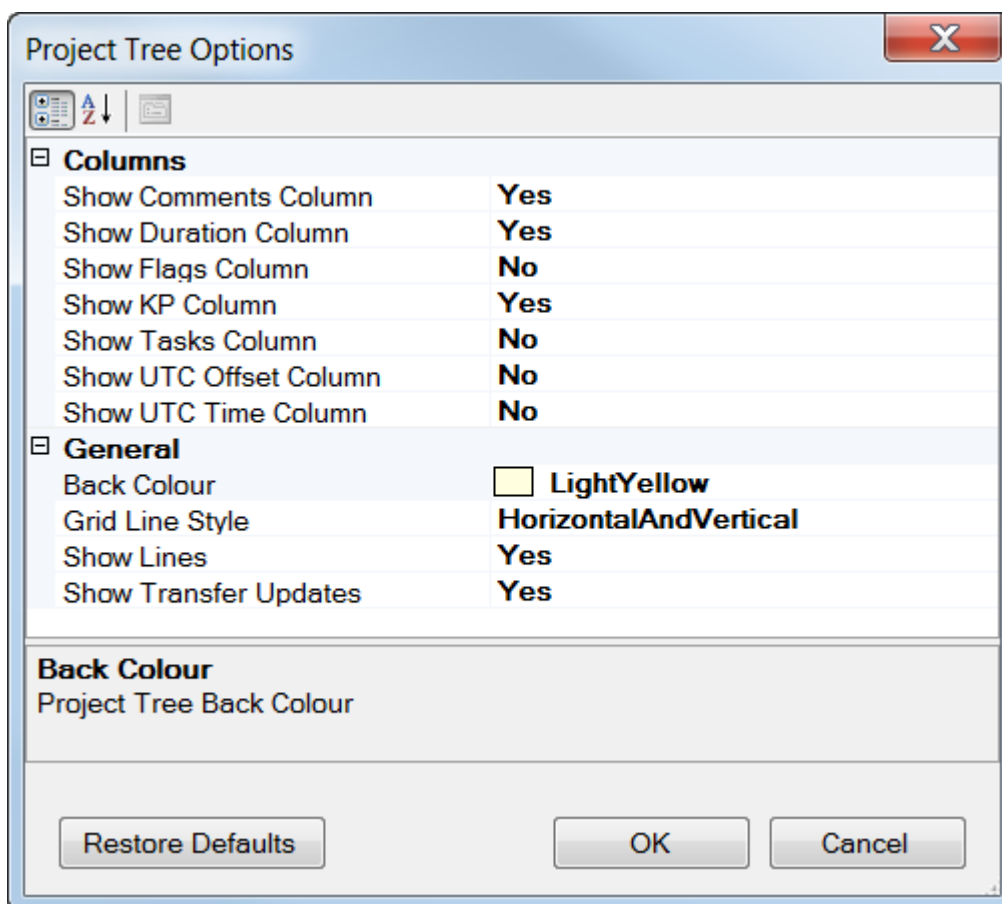
Project Tree Status Bar

The Status Bar at the bottom of the Project Tree shows you whether or not the filter is turned on, and also shows the progress if the Project Tree is being refreshed.

1.7.1 Project Tree Display Options

The Project Tree usually has a pale yellow background, and faint grey lines separating the rows and columns. You can change these colours or hide the grid lines completely, and you can turn individual columns such as "KP" on or off. To do this, right-click in the background area of the Project Tree (not on a Project or Dataset), and select Options from the pop-up menu.

This will open the window shown below. You can click on each setting to make changes. Which columns are shown as defaults is slightly different in VisualEdit, VisualReview and VisualArchive. To return to the default settings for the current application, click the Restore Defaults button at the bottom of the window.



1.7.2 Disk Monitoring

VisualArchive, VisualEdit and VisualReview all monitor the selected offline disk for any changes to files and folders. This allows each of them to update the Project Tree (list of available data) with any changes that are made by the other applications. For example VisualEdit and Review will display new datasets that are created when VisualArchive copies new files from a VisualDVR, and VisualArchive and VisualReview will display changes to available data as you process or import files using VisualEdit.

The VisualSoft applications can monitor the disk for changes in two different ways, a **File System Watcher** or **Directory Polling**.

File System Watcher (recommended)

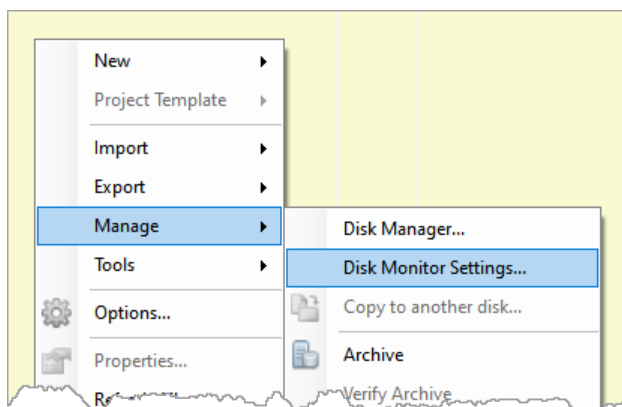
With the File System Watcher the operating system does all of the monitoring work and notifies the VisualSoft application if anything changes. This works for Windows and also for most (but not all) NAS operating systems. In most cases the VisualSoft application can just ask the OS to monitor the folder \VisualWorks\Projects "and all sub-folders and files", but in some cases the OS does not support this and instead the VisualSoft application has to request the monitoring of each folder individually. In that case it is sometimes more efficient to use Directory Polling instead.

Directory Polling

The Directory Polling method means that all of the work is done by the VisualSoft application and instead of waiting to be told about file changes the application has to actively look for them. This involves regularly looping through all of the files on the disk (inside \VisualWorks\Projects) to see if anything is new or updated or removed. This has an impact on the PC performance, especially if you have a lot of data on your offline disk.

Configuring the Disk Monitoring Options

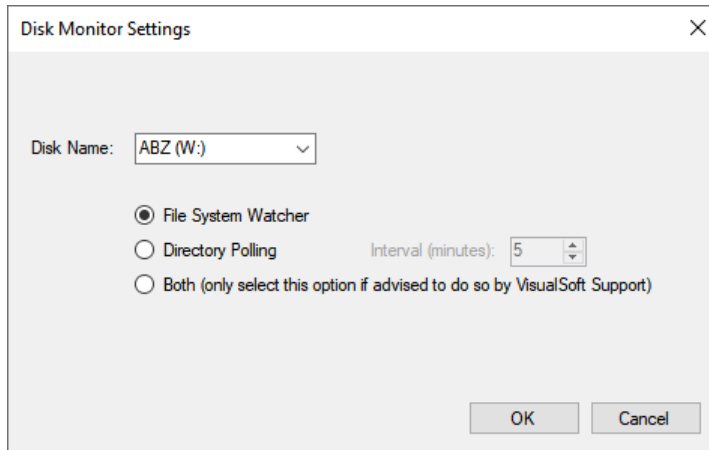
To open the settings for Disk Monitoring, right-click in the Project Tree and select Manage, then Disk Monitor Settings.



This will open a window with options to choose a preferred method for your offline disk. **Be sure to select the correct disk - matching the one set at the top of the Project Tree. This should happen automatically, but always check please.**

If you use Directory Polling, the default search interval is every 5 minutes, but you can set the interval to **between 1 and 15 minutes**. We recommend leaving it on 5 minutes to balance speed and performance.

You can use both monitoring methods at the same time but you should not do this unless our support team ask you to do so. It can put a significant burden on the PC and the software and so should only be used in exceptional circumstances to resolve specific problems.






1.7.3 Projects

Projects are at the top level of the tree structure and can be used for either an individual pipeline or for a wider survey area which will contain a number of pipe surveys or structural surveys. The Project root directory also defines a Backup Media Set: this indicates that all surveys within a root Project will be archived to the same Backup Media Set i.e. a series of tapes with a common tape name prefix e.g. Project1....the first tape of this set will be numbered Project1001A, the second tape Project1002A etc. You can always view the Backup Media Sets and the individual contents of a tape in the [Archives and Backups tab](#) ²².

Project Status Icons


The status of each Project (or Sub-Project) is indicated by one of the following icons:

	Online: Logging & Editing	This project may be selected for logging by VisualDVR .
	Offline: Editing Only	This project cannot be selected for logging.
	Closed: Read Only	<p>This project cannot be selected for logging. The Project has been marked by the users as closed.</p> <p>Note that the data may still be edited – the Read Only status is advisory, and is not enforced by the software.</p>

Create a Project

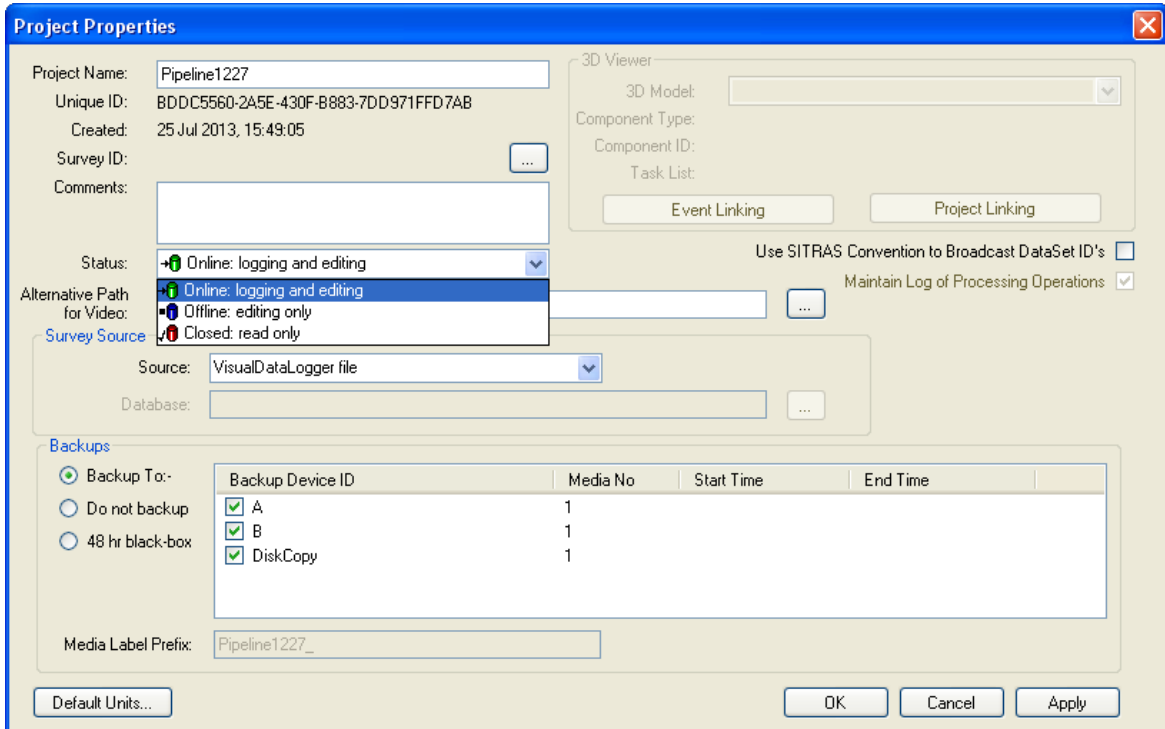
To create a new Project right-click in the blank area of the Project Tree view. In the pop-up menu select, New, Project. A new Project will be created with the name “New Project” and you can type to change the name.

You will see that the new Project has a red icon like this: 

This red icon, with the tick (or check) mark beside it indicates a **Closed** project. These cannot be seen by **VisualDVR** until the status is changed to Online and the icon turns green .





To change the Status to Online, right-click on your new Project and open the Properties where you will be able to select the "Online: Logging and editing" status with the green icon, as shown below.

For more details see [Project Properties](#) ³².



Project Properties

Project Name: Pipeline1227
 Unique ID: BDDC5560-2A5E-430F-B883-7DD971FFD7AB
 Created: 25 Jul 2013, 15:49:05
 Survey ID: ...
 Comments: ...

Status:  Online: logging and editing
 Alternative Path for Video:  Online: logging and editing
 Survey Source:  Offline: editing only
 Closed: read only

Source: VisualDataLogger file
 Database: ...

3D Viewer
 3D Model: ...
 Component Type: ...
 Component ID: ...
 Task List: ...
 Event Linking Project Linking

Use SITRAS Convention to Broadcast DataSet ID's ☐
 Maintain Log of Processing Operations ☒

Backups

☒ Backup To:-
☐ Do not backup
☐ 48 hr black-box

Backup Device ID	Media No	Start Time	End Time
<input checked="" type="checkbox"/> A	1		
<input checked="" type="checkbox"/> B	1		
<input checked="" type="checkbox"/> DiskCopy	1		

Media Label Prefix: Pipeline1227_

Default Units... OK Cancel Apply

Project Properties

VisualSoft Projects have many properties that allow you to configure where the raw data should come from, where and how things are backed up, and for structural inspection – how data should be linked to a 3D drawing.

In the image below you can click to find information about specific properties, or you can look through the list below the image.

Project Properties

Project Name: 16in-As-Trenched
 Unique ID: CC2E46E8-A078-4E38-BC1A-EFDDA88A7016
 Created: 09 Mar 2007, 12:41:16
 Survey ID: ...
 Comments:
 Status: ☒ Closed: read only
☒ Maintain Log of Processing Operations
☐ Use SITRAS Convention to Broadcast DataSet ID's

Linked Drawing Settings
 Linked Drawing: ... Page: ...
 Linked View: ☐
 Component Type:
 Component ID:
 Task List:
 Event Linking Project Linking

Alternative Path for Video: ...

Survey Data Source
 Source: VisualDataLogger file ☒ Apply root project Survey Data Source settings to all sub projects.
 Database: ...

Backups
☒ Backup To:-
☐ Do not backup
☐ 48 hr black-box

Backup Device ID	Media No	Start Time	End Time
<input checked="" type="checkbox"/> A	1		
<input checked="" type="checkbox"/> B	1		

Media Label Prefix: 1022-03-

Default Units... OK Cancel Apply

Project Name

A Project name is used to describe and identify the Project. It will typically include a Project number and the name of the pipeline or structure being surveyed. It should be kept as brief as possible.

Allowable characters are [0–9], [a–z], [A–Z], and hyphens or underscores. Spaces, quotation marks and other punctuation are not allowed.

Examples:

1234_12in_Gas_Export

5379-123_Platform_A3

Keep it brief:

Each VisualSoft Project exists as a folder on a hard disk. That folder has the same name as the Project. The Project folder lives inside X:\VisualWorks\Projects\ where X can be any disk drive.

Each Sub-Project is also a folder on a hard disk. That folder has the same name as the Sub-Project.

Inside Projects and Sub-Projects there will be datasets. Each dataset folder has a name in the form DATA_YYYYMMDDhhmmsssttt (i.e. the date and time of logging).

Inside each dataset folder there will be video and data files, e.g.:
YYYYMMDDhhmmsssttt@PortCamera.asf

Windows allows a total of 255 characters all the way from the drive letter to the suffix of a file name, so you need to make sure that there are not too many levels of Sub-Project and that the names are kept short. If the Project name is "Inspection" then you don't need to specify Inspection in its Sub-Projects. If the whole Project has the pipeline name, then you don't need the pipeline name in the Sub-Projects... and so on.

Unique ID

Each Project that you create is automatically given a "Unique ID". This cannot be changed.

The Unique ID is a way for the software to link backup tapes and disks to the Project they came from – even if the Project Name is changed for some reason. They are also used by VisualArchive to tell whether or not two Projects that have the same name are or are not actually the same thing, for example if two different ships each work on different 10 inch Gas Pipelines and both send their data to the same office.

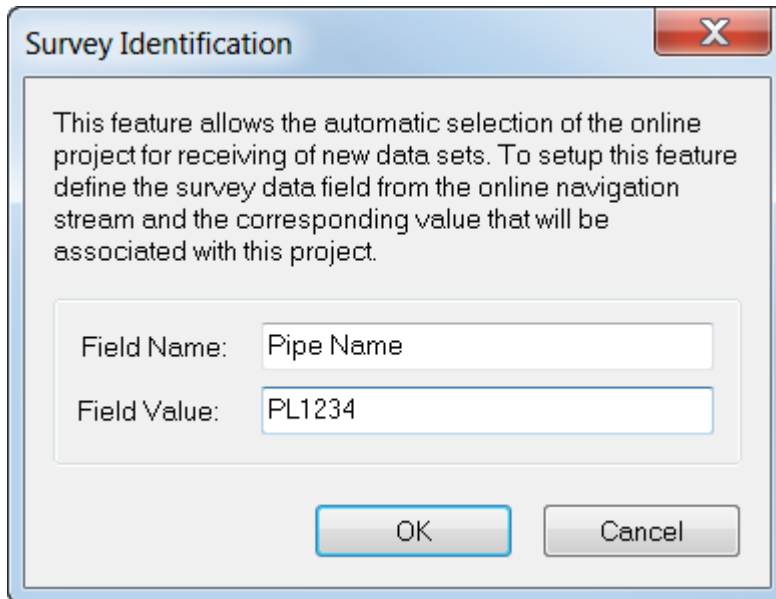
Creation Time

Each Project that you create is automatically tagged with the date and time of its creation. This cannot be changed.

It can be used to help you identify data if the Project name is not sufficient or has been changed.

Survey ID

The Survey ID is not often used, but is available if you want an automated way of sending video and data to a particular project. In VisualDVR you can receive a data string from your online navigation software. Typically this includes the position information for the ROV so that it can be used in the overlay. If you also include a column for "Pipe Name", or "Route File Name" (or something similar) you can then use the data in that column to match to the Survey ID of a Project so that it is the data itself that "tells" VisualArchive which Project to use. In the example below if the text "PL1234" appears in the column named "Pipe Name" of the survey data received by VisualDVR, then VisualArchive will place the video and associated data into this Project.






The image shows a 'Survey Identification' dialog box with a title bar and a close button (X). The main text area contains the following text: 'This feature allows the automatic selection of the online project for receiving of new data sets. To setup this feature define the survey data field from the online navigation stream and the corresponding value that will be associated with this project.' Below the text, there are two input fields: 'Field Name:' with the value 'Pipe Name' and 'Field Value:' with the value 'PL1234'. At the bottom, there are 'OK' and 'Cancel' buttons.

Comments

The Comments allows you to add any notes that you think might be useful. You may want to add a note for colleagues in the office to help them understand what the data is, or you may want to put a more detailed version of the pipeline or project name than is possible in the short space available for the Project Name.

Project Status

The Status of each Project (or Sub-Project) is indicated by one of the following icons:

	Online: Logging & Editing	This project can be selected for logging by VisualDVR . Only the Online Projects are sent to VisualDVR when the user presses F5 in VisualDVR to "Get Projects from VisualArchive".
	Offline: Editing Only	This project cannot be selected for logging.
	Closed: Read Only	This Project cannot be selected for logging. The Project has been marked by the users as closed. This is usually done by the Data Processing team when they have finished their work. (Note that the data may still be edited – the Read Only status is for information purposes only and is not enforced by the software.)

Alternative Path for Video

Most companies, in most circumstances, should not need to use this setting, and SHOULD LEAVE IT BLANK.

The "Alternative Path for Video" is designed for use by very big companies like Shell which have extremely large archives of data and wish to separate the video files from all other types of data. If you are required to do this you will need to have two separate disk drives with identical directory trees – one of them containing video files inside the dataset folders and one of them with the other survey data files. After you have put your data and video into these two separate but identical folder structures you should select the path for the video here, and select the disk with the survey data in the normal [Project Tree disk selector](#)^[21].

Survey Data Source

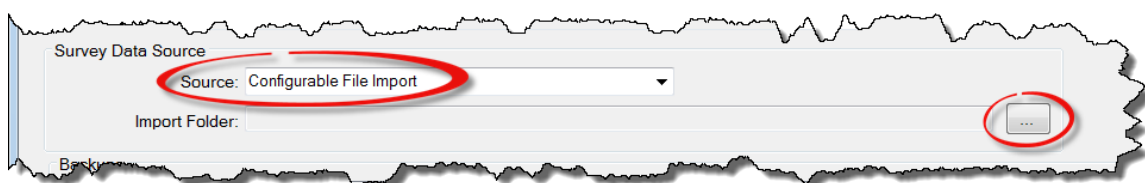
A VisualSoft Project can use survey data logged by VisualSoft's own VisualDataLogger application, or it can use data imported from other logging and processing systems.

In VisualArchive you can configure a Project to use data from any one of the following **Survey Data Sources**:

- **VisualDataLogger files**
- **Configurable File Import** of data files exported from QPS's QINSy. For more details see [Configurable File Import](#)^[36].
- **Configurable File Import** of Equinor's SITRAS data files which can be exported from many processing systems including Eiva's NaviModel or NaviEdit, and QPS's QINSy. For more details see [Configurable File Import](#)^[36].
- **Database** import from 3rd Party relational databases. This has been used in the past and may be used in the future, but is currently disabled. If you would like to use this option, please contact our [sales](#)^[77] or [support](#)^[76] teams to discuss this.


Configurable File Import

The Configurable File Import in VisualArchive currently supports data files from QPS's QINSy or Equinor's SITRAS data files. In the Project properties you can specify a data format and a location for that data. When VisualSoft Datasets are loaded in VisualEdit, the files in the Configurable Import Location are then searched to see if they contain data with times matching the Datasets being loaded. Matching data will be imported automatically, converting it to a VisualSoft format.



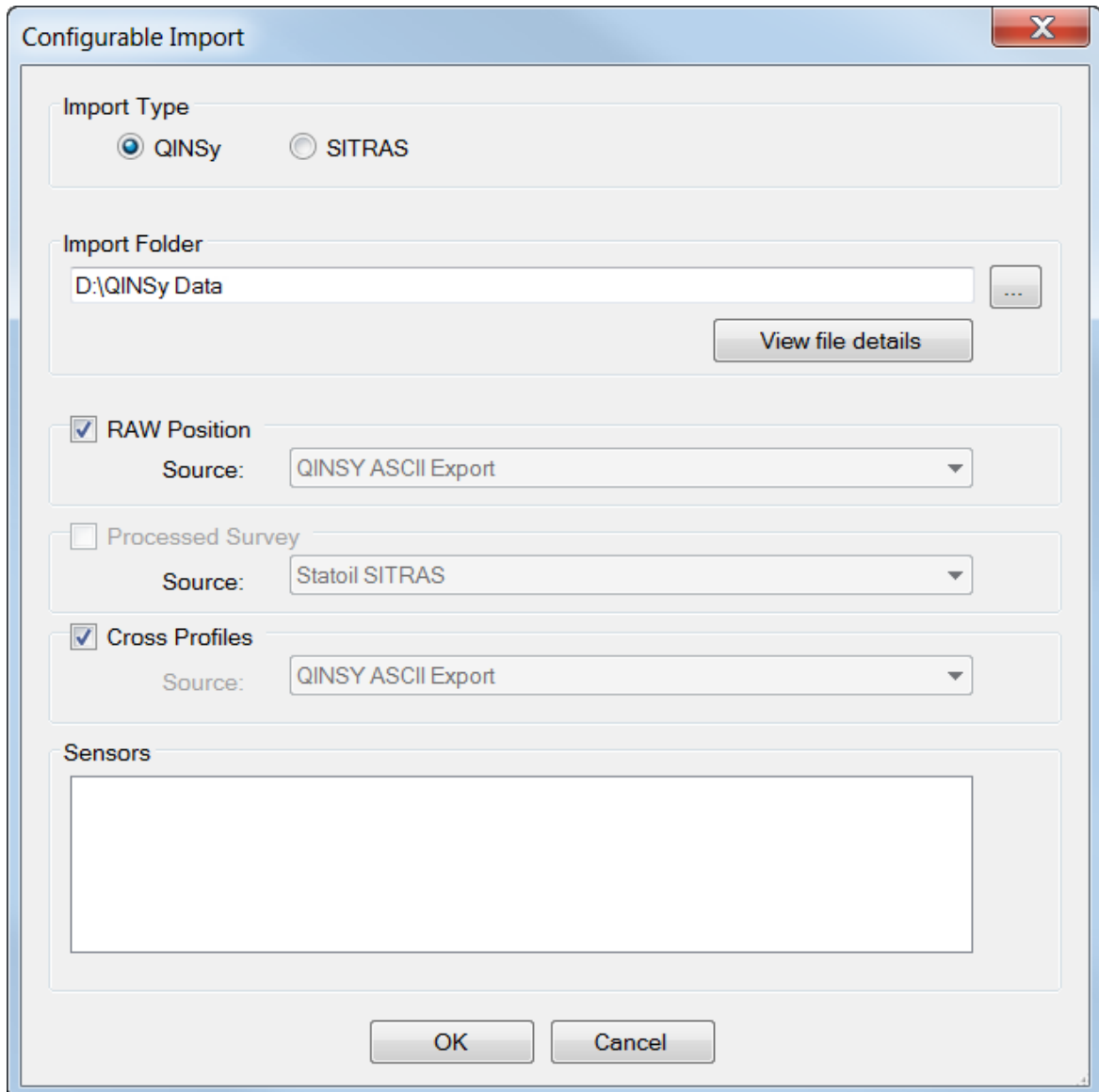
To use the Configurable File Import for a VisualSoft Project, open that Project's properties and then select Configurable File Import in the drop down list of supported Survey Data Sources.

Next, click on the browse button  to open the more detailed configuration window.

Select either QINSy or SITRAS as the type of file to be imported, and then use the small browse button  to locate the folder where these files will be placed. VisualArchive will then monitor this folder for any new files. To view the details of any files already in the selected folder, click on the button labelled "View file details".

If the selected data type is QINSy, you can import Raw Position data and/or Cross-Profiles (which may be mechanical profiler data or multibeam echo-sounder data), and/or Sensor data from equipment such as motion sensors or pipe-trackers. Choose which types you want to import by selecting from the displayed options.

If the selected data type is SITRAS, you can import Processed position data and/or Cross-Profiles, and/or Sensor data from equipment such pipe-trackers. Choose which types you want to import by selecting from the displayed options.



The image shows a 'Configurable Import' dialog box with the following sections:

- Import Type:** Two radio buttons, 'QINSy' (selected) and 'SITRAS'.
- Import Folder:** A text field containing 'D:\QINSy Data' and a 'View file details' button.
- RAW Position:** A checked checkbox with a 'Source' dropdown menu set to 'QINSY ASCII Export'.
- Processed Survey:** An unchecked checkbox with a 'Source' dropdown menu set to 'Statoil SITRAS'.
- Cross Profiles:** A checked checkbox with a 'Source' dropdown menu set to 'QINSY ASCII Export'.
- Sensors:** An empty rectangular box for listing sensors.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

Project Backup Options

Each VisualSoft Project has its own specific backup settings. It is up to you whether or not you want all Projects to backup in the same way to the same devices, or to each use different devices and different options.

There are three main backup options:

1. **Backup to** a list of devices that you select. This is the option that we recommend! It is explained in detail in the help and User Manual for [VisualArchive](#) 5.
2. **Do not backup** at all. We do NOT recommend this. It might occasionally be the right thing to do, but please be careful: If you are not 100% sure what to do, make a backup.




3. **48 Hour Black-Box.** This keeps the files on the offline disk drive for 48 hours, and then automatically deletes them. This might be useful if you don't really expect to need the data, but would like a bit of time to decide. Remember that you can always change the Project to use a normal backup and time during the first 48 hours, before anything gets deleted.

1.7.4 Sub-Projects

Projects can contain one or more Sub-Projects. All Sub-Projects are archived to the same backup media set as the root project. Therefore, if you require a Project to have its own set of backups it must be created as a top level, or "root" Project, and not as a Sub-Project. However, if you have a job consisting of several small tasks then it may be more efficient to group the small project tasks under one main Project representing the whole job. This can make data administration much simpler.

Sub-Project Status Icons

The status of each Sub-Project is inherited from its parent Project and can only be changed by changing the status of the parent Project. The status is indicated by one of the following icons:

	Online: Logging & Editing	This project may be selected for logging by VisualDVR .
	Offline: Editing Only	This project cannot be selected for logging.
	Closed: Read Only	<p>This project cannot be selected for logging. The Project has been marked by the users as closed.</p> <p>Note that the data may still be edited – the Read Only status is advisory, and is not enforced by the software.</p>

Create a Sub-Project

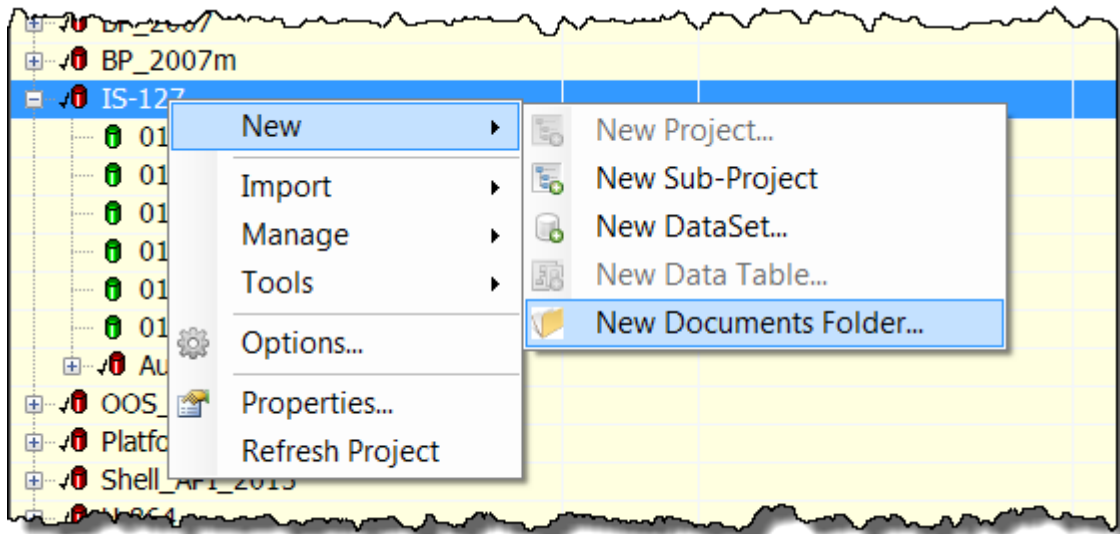
To create a new Sub-Project right-click on an existing Project (or a Sub-Project) in the Project Tree view. In the pop-up menu select, New, Sub-Project. A new Sub-Project will be created with the name "New Project" and you can type to change the name.

You will see that the new Sub-Project has the same status icon as its parent Project.

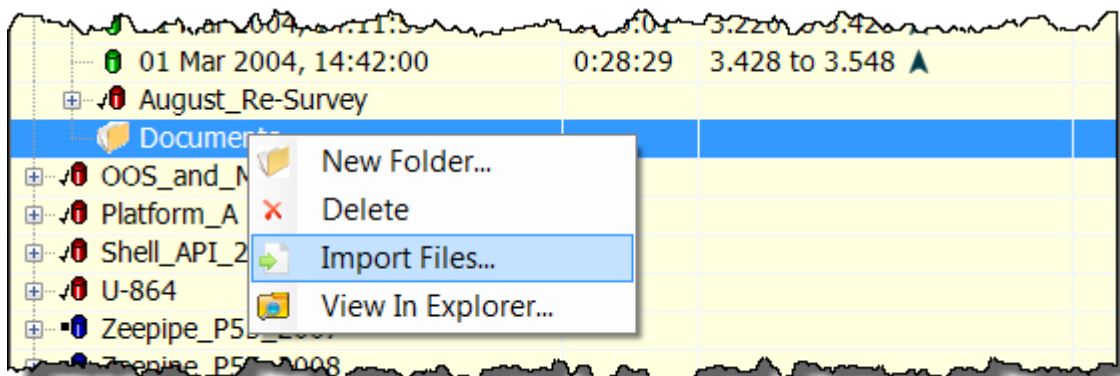
1.7.5 Documents

A VisualSoft Project or Sub-Project can include a Documents folder which you can use to store any type of file that you like. You can use it to store drawings, procedures, or reports inside your VisualSoft Projects. If you right-click or double-click on a file in the Documents folder it will behave exactly the same as if you right-click or double-click on it in Windows Explorer.

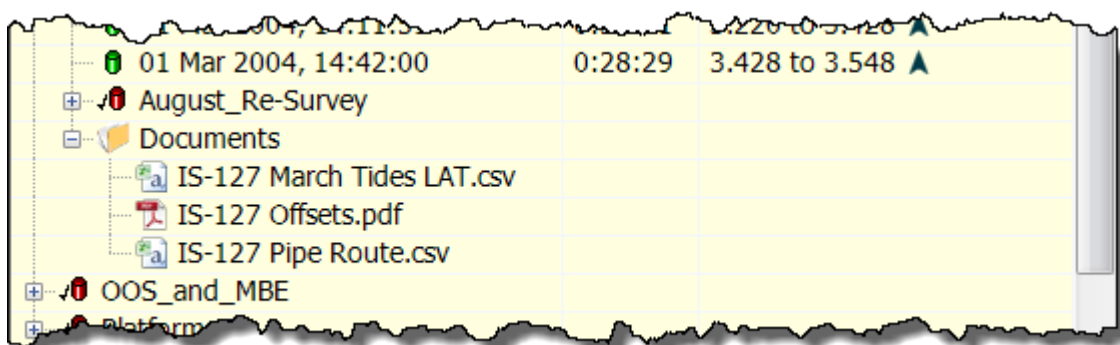
You can create a Documents folder inside any Project or Sub-Project using the right-click menu as shown below.



After you have created a Documents folder you can add files to it, by right-clicking on it to use the Import tool:



The imported files will be shown with the same icons as in Windows Explorer and will behave in the same way when you double-click or right-click on them.





1.7.6 Datasets

Datasets are groups of files logged over one continuous, unbroken time period. A Dataset usually has video files and other survey data such as position and sensor data. All of these files will cover the same time period. The video recording and data logging applications are designed to create a new Dataset at a fixed time interval, usually every 30 minutes but you can change to shorter times if you wish. If you do not stop recording before this time limit is reached the recording and logging will automatically switch to new files at the time limit. In this case there will be no gap between the end of one the files in one Dataset and the start of the files in the next Dataset. In other cases where you manually stop recording and logging, and then start again later there can be gaps between Datasets.

Dataset Limits

Each Dataset shows the following information in the Project Tree:

- Local date and time when the video and data files were recorded.
- The duration of the video and data recorded in the Dataset.
- The KP limits of the data in the Dataset, with an arrow indicating whether the survey ran in ascending  or descending  KP direction.

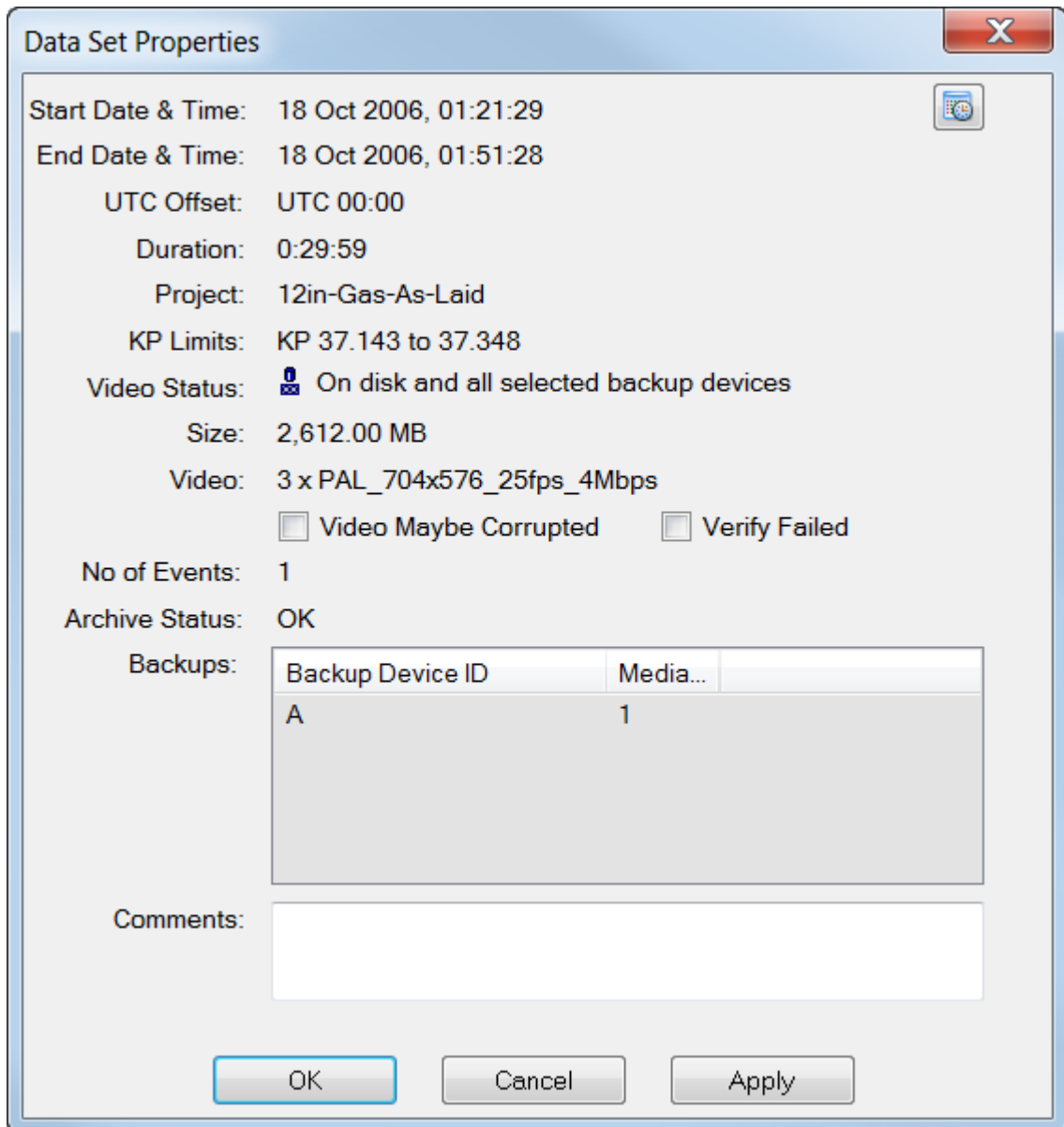
See also: [Dataset Properties](#) ⁴².

Dataset Properties


To display the properties of a Dataset right-click on the Dataset and select Properties from the pop-up menu.

To change the Start Date & Time, UTC Offset or Duration of a dataset click on the button to the right of the Start Date & Time





The 'Data Set Properties' dialog box displays the following information:


- Start Date & Time:** 18 Oct 2006, 01:21:29 (with a clock icon to the right)
- End Date & Time:** 18 Oct 2006, 01:51:28
- UTC Offset:** UTC 00:00
- Duration:** 0:29:59
- Project:** 12in-Gas-As-Laid
- KP Limits:** KP 37.143 to 37.348
- Video Status:**  On disk and all selected backup devices
- Size:** 2,612.00 MB
- Video:** 3 x PAL_704x576_25fps_4Mbps
- ☐ Video Maybe Corrupted ☐ Verify Failed
- No of Events:** 1
- Archive Status:** OK
- Backups:**

Backup Device ID	Media...
A	1
- Comments:**

Buttons at the bottom: OK, Cancel, Apply.

Dataset Start Time

The start time of the Dataset is displayed in this window as local time.

To change the time or to adjust the time offset between UTC and local time, click on the  button to the right of the time and date.

The time can be set manually, or you can use the option to make it match the logged Raw Survey data (which is the Survey Data sent from your navigation software to the


VisualDVR video recorder during the recording). In normal circumstances the time and date in the Raw Survey data should already match the video and dataset start time, but occasionally things go wrong with the online setup, so you may need to reset the dataset start time.

Dataset End Time

The end time of the dataset is displayed in this window as local time. The end time of the dataset is calculated from the start time plus the duration of the video files.

Dataset Duration

The duration of the dataset is displayed in seconds. When the dataset is created by **VisualArchive**, the duration is set to match the length of the first video file.


To change the duration manually, click on the  button to the right of the time and date.

Dataset UTC Offset

The file and folder names used on the disk drive have the data and time of the saved as a UTC timestamp, but the dates and times that you see in VisualArchive, VisualReview and VisualEdit are usually displayed as "Local Time" so that times are adjusted around the world and as daylight saving settings are applied.

The offset from UTC to the applicable Local Time at the location and season where the data was logged and the video was recorded is saved inside each dataset as part of its properties. This setting is taken from the PCs used to record the data.

Occasionally the PCs used for recording and logging might be set to the wrong timezone, or they might not have the correct daylight saving settings. This can cause the data to be saved with the wrong UTC offset.

The UTC offset of each Dataset is displayed in the [Dataset Properties](#)^[42], and it can be adjusted by clicking on the  button to the right of the time and date in the [Dataset Properties](#)^[42].

The UTC offset can also be displayed in the Project Tree as an extra column by turning it on in the [Project Tree Display Options](#)^[28].

Dataset KPs

The KP limits of the dataset are updated automatically from the **Video Position** data table.






If the **Video Position** table does not exist or is empty, the KP limits will be updated from the **Processed Survey** table.

If **Processed Survey** is also unavailable or empty, the **Raw Survey** data table will be used.

If **Raw Survey** is also unavailable or empty, the KP limits will remain as zero.

Dataset Video Status

The status of the video files within each dataset is indicated as follows:







Icon	Status	Description
	Dataset Locked	While VisualArchive is transferring (i.e. copying) a video from VisualDVR to the offline disk drive it places a lock file to stop VisualEdit and other parts of VisualArchive accessing the dataset too early. When the transfer is complete and checked the lock is removed. If the transfer is interrupted or something goes wrong the lock might be left in place. See Managing Lock Files ^[72] for more information.
	Video on Disk only	Video files are on VisualArchive 's hard disk. These files have not yet been written to a backup device.
	Video on Disk & Tape	Video files are on VisualArchive 's hard disk, and have also been written to a backup device. Note: These files might still exist on the online hard disk also.
	Video on Tape only	Video files have been written to a backup device, but no longer exist on VisualArchive 's hard disk. Note: These files might still exist on the online hard disk.
	Video missing	Video files are not on VisualArchive 's hard disk, and have not been written to a backup device. Note: These files might still exist on the online hard disk.

To view more detail about a Dataset, see [Dataset Properties](#)^[42].

Data Status Flags

The Data Status flags are usually only displayed in VisualEdit and not in VisualArchive, but you can turn them on using the [Project Tree Display Options](#) ²⁸ if you wish.

The “Flags” column of the Project Tree displays icons to indicate the status of certain data files in each Dataset.

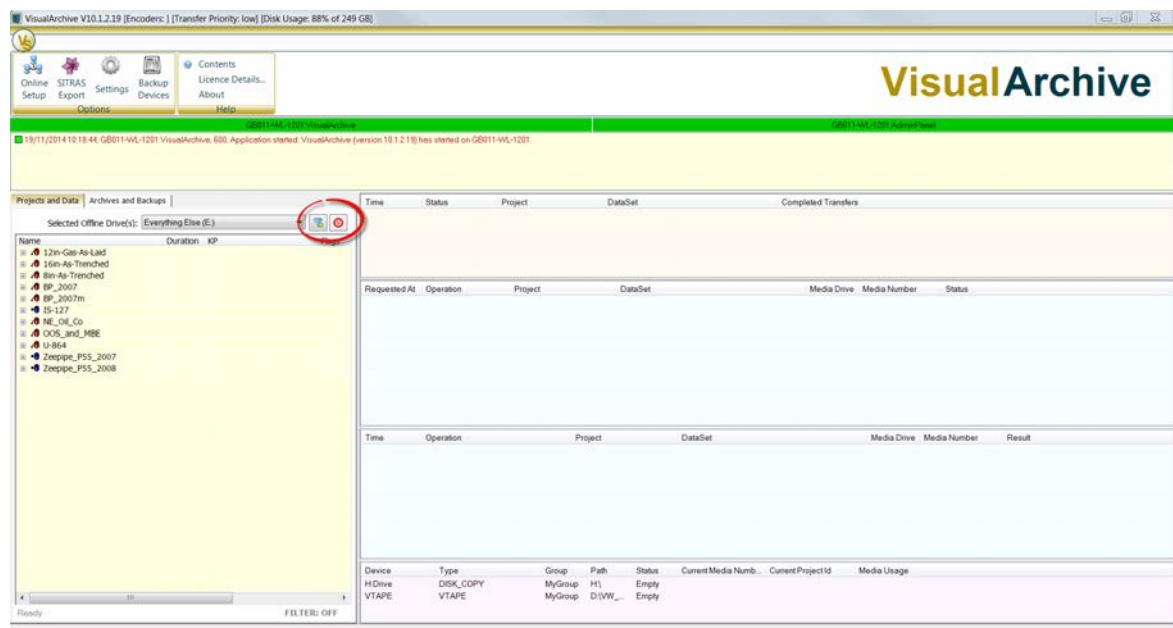
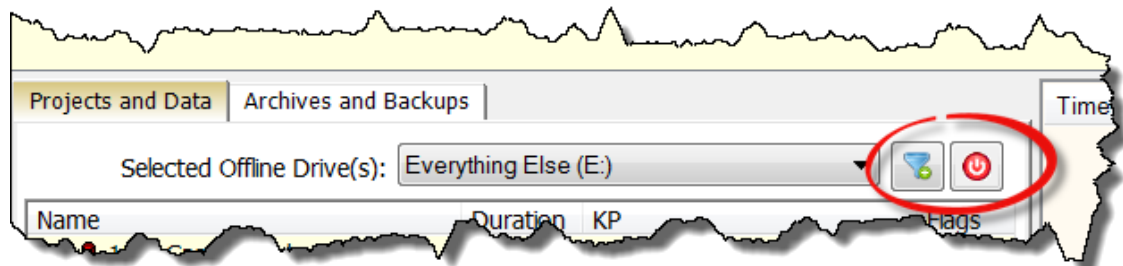
Icon	Status	Description
	Raw position data	There is data in the Raw Survey data table of this Dataset, but not in the Processed Survey data table.
	Raw profiler / MBE / sensor data	There is raw data from VisualDataLogger in this Dataset, but there are no processed cross-profiles.
	Raw (online) event data	There are events in this dataset which were logged online. None of them has been edited, deleted, moved or added offline.
	Processed position data	There is data in the Processed Survey data table of this Dataset.
	Processed profiler / MBE data	Some or all of the cross-profiles in this Dataset have been processed.
	Processed (offline) event data	Some or all of the events in this dataset have been edited, moved, deleted or added offline.

1.7.7 Project Tree Filter

The Project Tree Filter allows you to control which Projects, Sub-Projects or even which Datasets are displayed in the Project Tree. By adjusting the filter settings you can show or hide data based on its start date and time, its recording duration, its KP limits, its online or offline status, or a variety of other properties such as the backup status.

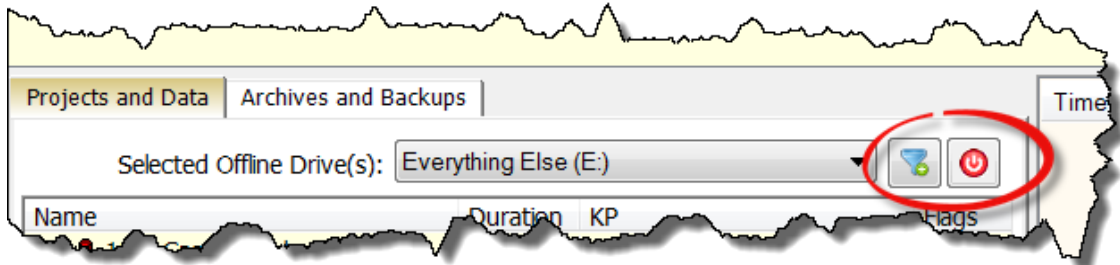
The filter can be configured, with options to save and reload a collection of Named Filters with different settings, and it can be turned on or off.

The buttons to [configure the filter](#)^[49], or to [turn it on or off](#)^[50] are shown just to the right of the disk selector at the top of the Project Tree.



Configure Filters

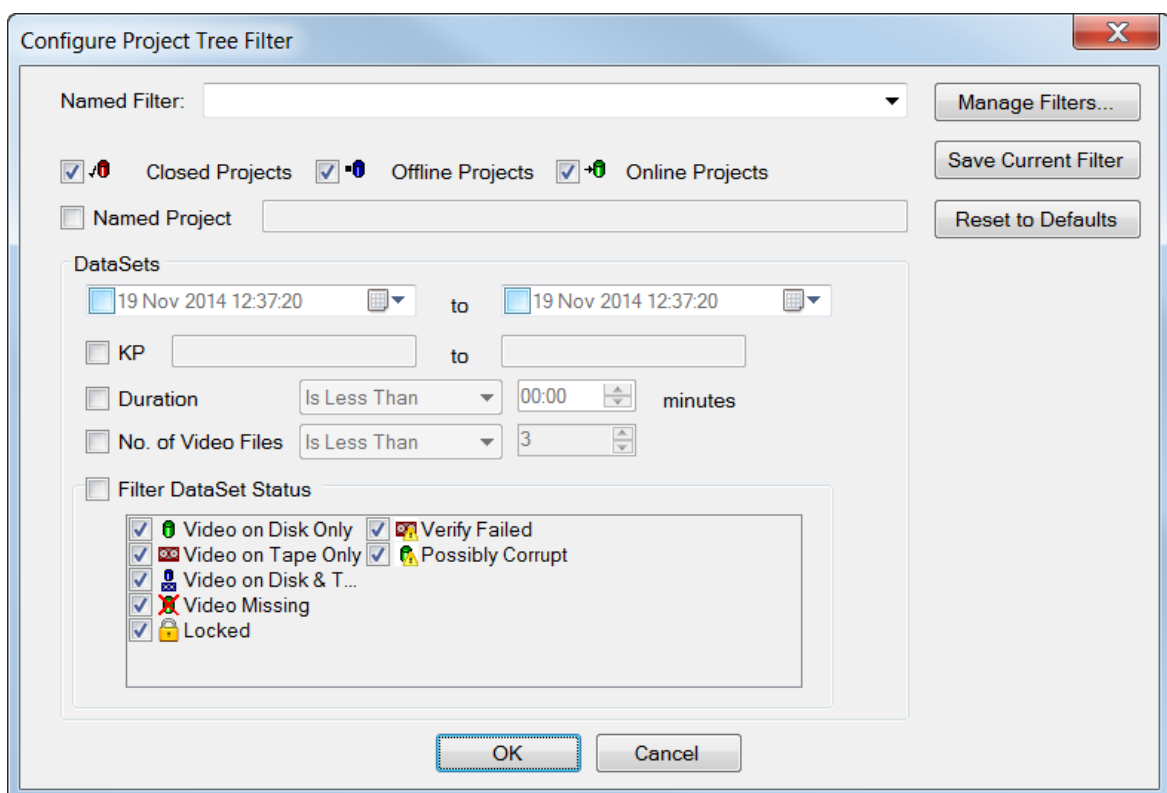
To configure the Project Tree Filters, click on the button at the top of the Project Tree.



This opens a window where you can configure many different types of filter.

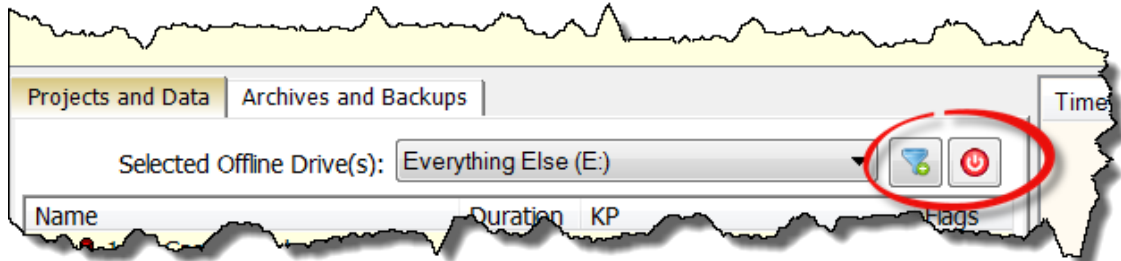
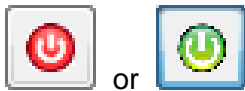
You can filter by Project Status; Closed, Offline or Online, by Project Name, by date and time limits, KP and so on in any combination that you like.


You can save a configured filter so that you can re-use it later. Saved filters can be selected using the drop down list at the top of the window. If you want to delete a saved filter you can do so using "Manage Filters".




Turning Filters On or Off

To turn the Project Tree Filters on or off, click on the button at the top of the Project Tree.



When the filter is Off the button is red , and the text **FILTER:OFF** is shown at the bottom of the Project Tree.

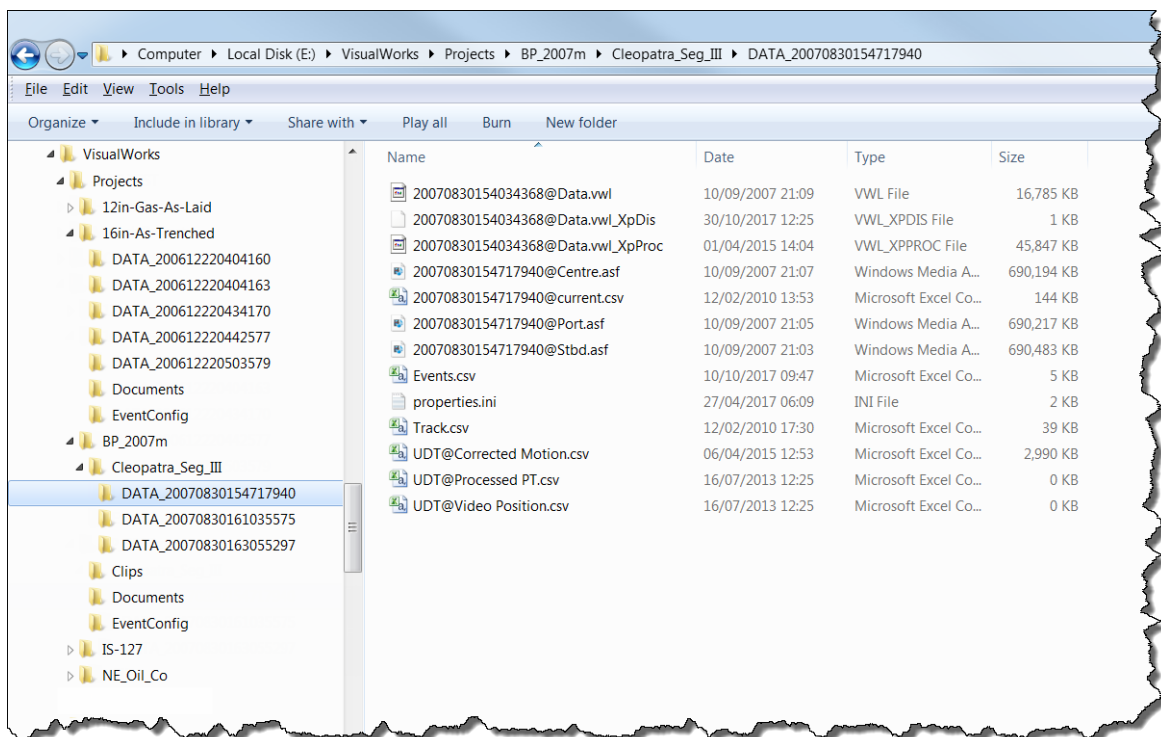
When the filter is On the button is green , and the text **FILTER:ON** is shown at the bottom of the Project Tree.

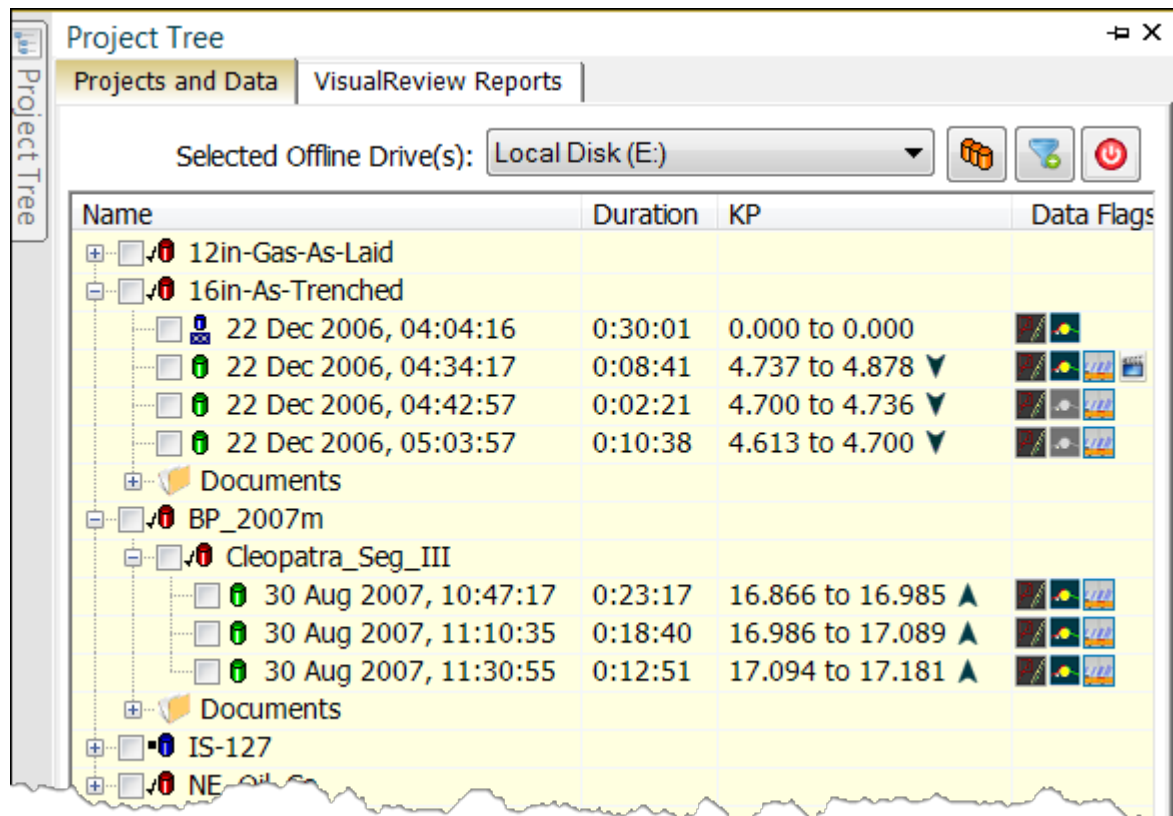
1.7.8 VisualSoft Files on your Disk

At the top of the Project Tree in VisualEdit, VisualReview and VisualArchive is a drop-down list of available disk drives. When you select one of these drives, the Project Tree will automatically show any data that is inside the \VisualWorks\Projects folder on that disk. For example if you select the D:\ drive, the Project Tree will show any data that is inside D:\VisualWorks\Projects.

Any folders inside the \VisualWorks\Projects folder will be displayed as VisualSoft Projects, and folders inside those, at lower levels, will be shown as Sub-Projects or Datasets. Dataset folders are identified by having names that begin "DATA_" followed by year, month, day, hours, minutes and decimal seconds in the format YYYYMMDDhhmmsstt.

In the images below the same folders are shown as they appear in Explorer and then in VisualEdit. Notice that the folders named EventConfig and Clips are hidden in VisualEdit, and how the Documents folders are shown differently from the Project folders like "12in-Gas-As-Laid". The Project Tree display will work which folders contain data and which are for configuration settings or saved video stills and clips and then display them or hide them accordingly.





1.8 Online Setup



Use **Online Setup** to configure the links between VisualArchive and the online logging applications **VisualDVR**, **VisualDataLogger** and **Visual3D-Inspector**. This is where you tell **VisualArchive** what video and data files to copy from the online system to the offline storage.

VisualSoft Suite PC Configuration

VisualDVR selection

DVR / Camera	Online file location	Paired with
DVR-001		
<input checked="" type="checkbox"/> Ch1	\\DVR-001\VisualWorks1\Encoder@DVR-001_Ch1	<input type="button" value="Edit channel"/>
<input checked="" type="checkbox"/> Ch2	\\DVR-001\VisualWorks2\Encoder@DVR-001_Ch2	<input type="button" value="Edit channel"/>
<input checked="" type="checkbox"/> Ch3	\\DVR-001\VisualWorks3\Encoder@DVR-001_Ch3	<input type="button" value="Edit channel"/>

VisualDataLogger selection

ROV-DATA

The PC must have the VisualWorks directory shared as 'VisualWorks'. Only enable this option if you are using VisualDataLogger the online VisualWorks data acquisition applications.

Visual3D-Inspector selection

34U-PC

The PC must have the VisualWorks directory shared as 'VisualWorks'. Only enable this option if you are using the Get Projects From Archive option in Visual3D-Inspector.

For more information see:

[Connecting to VisualDVR](#) ⁵⁴

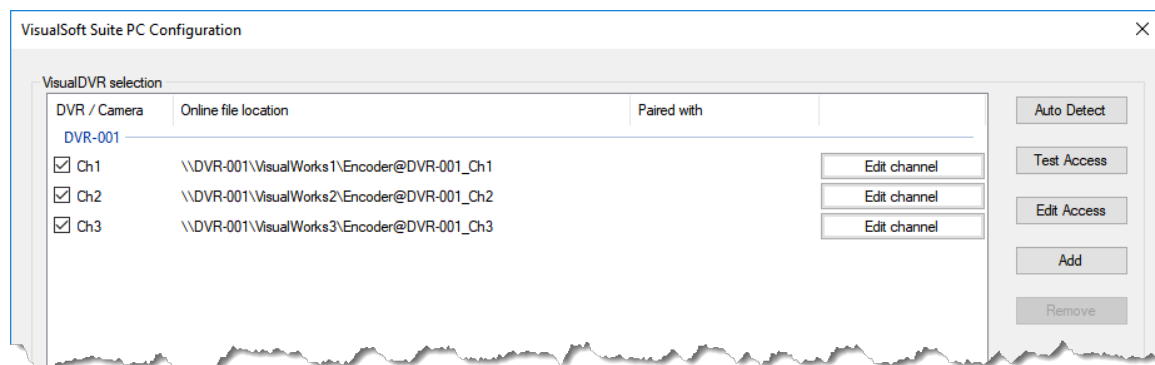
[Connecting to VisualDataLogger](#) ⁵⁷

[Connecting to Visual3D-Inspector](#) ⁵⁷

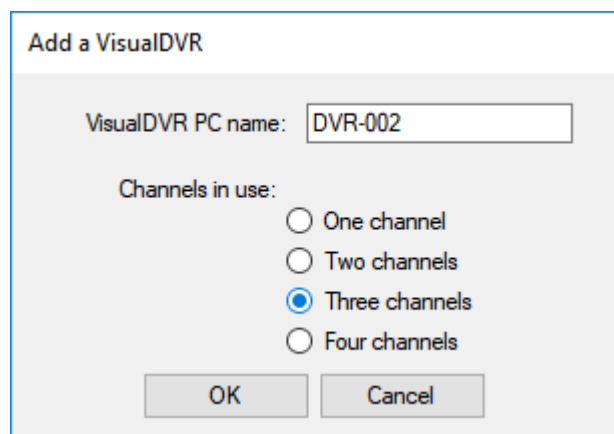
[Edit Access – Credentials or IP Mode](#) ⁵⁸

1.8.1 Connecting to VisualDVR

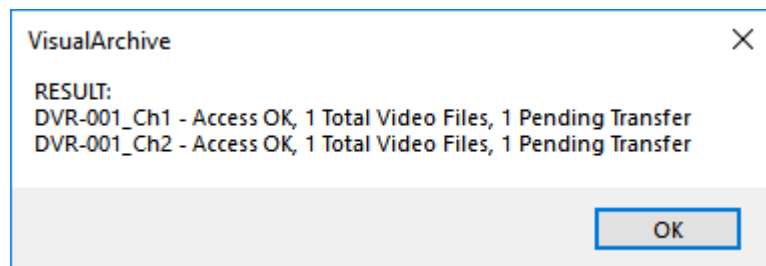
To connect a **VisualDVR** click **Auto Detect**. This will find all **VisualDVR** units that are running on the network, and will discover how many video channels they are setup to record. Note that the **VisualDVR** application must be running when you Auto-Detect. As soon as a DVR / camera has been detected, **VisualArchive** will start to copy videos from the recording disks of the **VisualDVR** to the offline disk in **VisualArchive**.



If you need to setup a connection for a DVR that is not running, click on **Add**. Type the name of the VisualDVR, and select the number of channels to monitor.



Use the **Test Access** button to see if the connection from the **VisualArchive** to the **VisualDVR** unit(s) is working. This will show you if the connection is working, and if so how many video files are on the logging disk, and how many of those files are are "Pending Transfer", i.e. waiting to be copied.



If Test Access fails, see the instructions for [Edit Access](#) ⁵⁸.

Rename video files

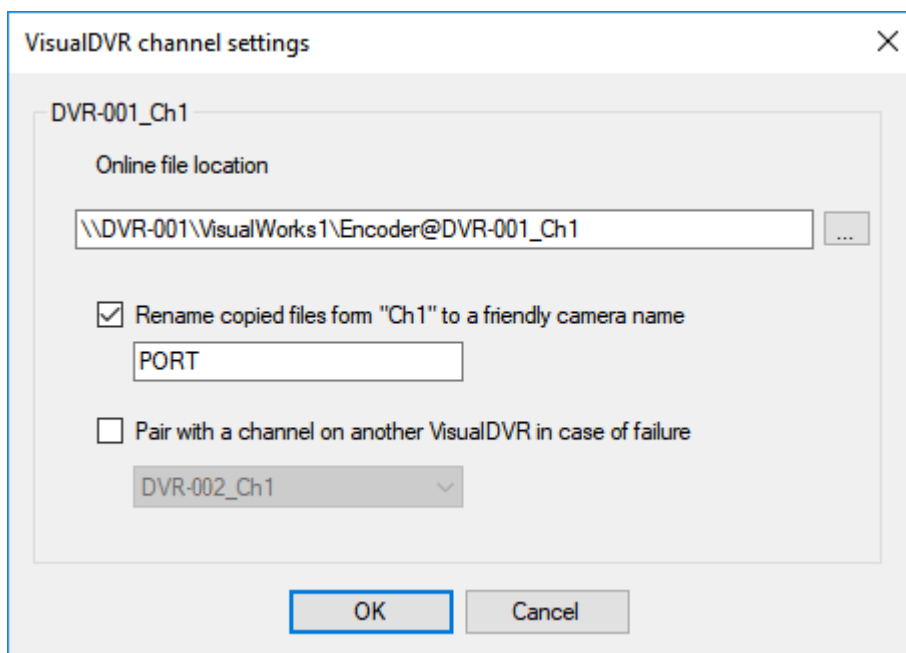
Video files on VisualDVR use file names with channel numbers, like 20191012154358506@DVR-001_Ch1, 20191012154358510@DVR-001_Ch2 and , 20191012154358518@DVR-001_Ch3. Instead of DVR-001_Ch1 you might want to use "PORT". Instead of DVR-001_Ch2, use "CENTRE", and so on.

You can tell VisualArchive to change these names automatically when it is transferring each video from the online DVR to Archive's offline storage.

Select the camera that you want to rename and then click the **Edit Channel** button.



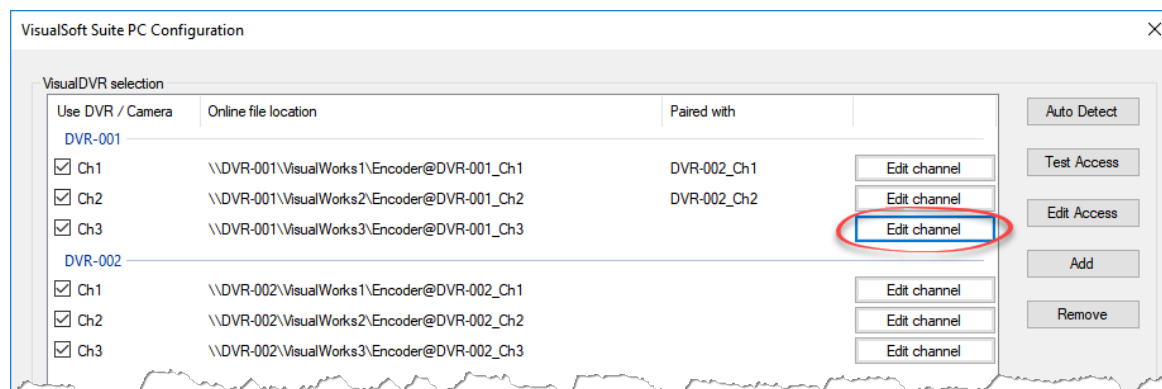
Select the option to "**Rename copied files**" and type the name that you want. In the example shown here, camera number 1 is being renamed as PORT.



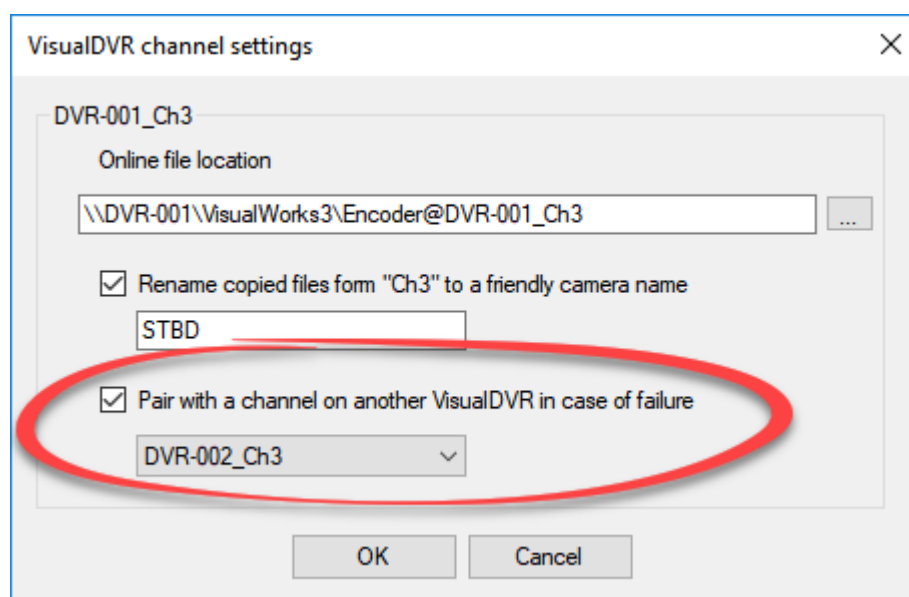
Parallel Pair – Failsafe Recording

If you want extra security during your survey or inspection operations, you can configure two VisualDVR units to both receive and record exactly the same video. You can then tell VisualArchive to treat these two VisualDVR units as a Parallel Pair. This means that when VisualArchive is ready to transfer video from online to offline, it will compare the matching files on the two VisualDVR units and select the best file in each case.

In the example below there are two VisualDVRs, DVR-001 and DVR-002. Channel 1 on DVR-001 has been paired with Channel 1 on DVR-002. Similarly Channel 2 has already been paired. To setup pairing for Channel 3, click on **Edit Channel** as shown.

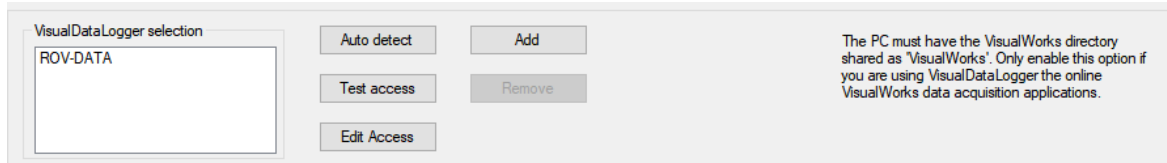


Select the option to "Pair with a channel on another VisualDVR in case of failure" and select the VisualDVR channel that you want. Make sure that it uses the same camera as the channel that you are editing. In the example below channel 1 on DVR-001 is being paired with channel 1 on DVR-002. If anything goes wrong with the channel 1 recording on DVR-001, VisualArchive will automatically copy the file recorded by DVR-002 instead. (In this example it will still get [renamed](#) ⁵⁵ to STBD, because it is paired with a renamed channel. No matter which VisualDVR the file is copied from, the file on VisualArchive's offline drive will have the name STBD.)



1.8.2 Connecting to VisualDataLogger

To connect to **VisualDataLogger** click on the **Auto Detect** button. This will find the **VisualDataLogger** computer if it is running on the network at this time.



Note that the **VisualDataLogger** application must be running when you use **Auto Detect**.

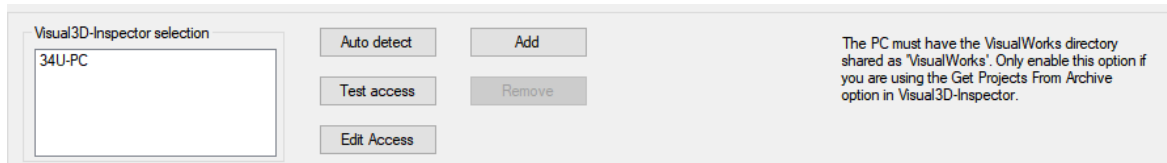
If **VisualDataLogger** is not yet running you can still add it manually by clicking **Add**.

Use the **Test Access** button to see if the connection from the **VisualArchive** to the **VisualDataLogger** computer is working.

If Test Access fails, see the instructions for [Edit Access](#) ⁵⁸.

1.8.3 Connecting to Visual3D-Inspector

To connect to **Visual3D-Inspector** click on the Auto Detect button. This will find the **Visual3D-Inspector** computer if it is running on the network at this time.



Note that the **Visual3D-Inspector** application must be running when you use **Auto Detect**.

If **Visual3D-Inspector** is not yet running you can click **Add** and type the computer name.

Use the **Test Access** button to see if the connection from the **VisualArchive** to the **Visual3D-Inspector** computer is working.

If Test Access fails, see the instructions for [Edit Access](#) ⁵⁸.

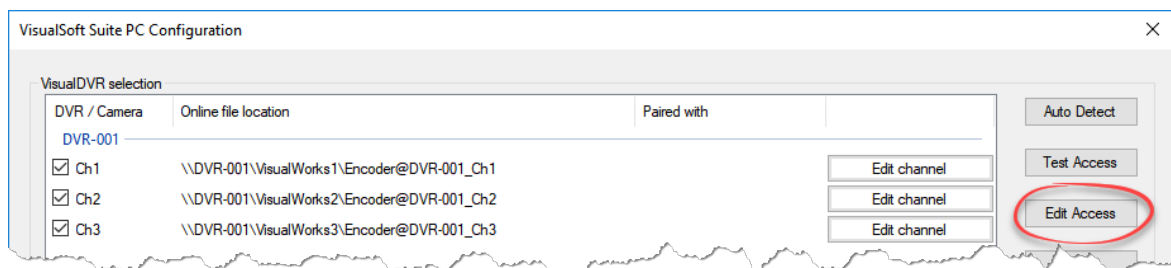
1.8.4 Edit Access – Credentials or IP Mode

All PCs sold or rented by Forum (VisualSoft) have a standard password for the Administrator account.

If the password has been changed, you can override the default setting and tell VisualArchive to use a different password. Sometimes you might also need to use a different user account instead of Administrator – especially if you use your own PC for VisualDataLogger or Visual3D-Inspector, instead one that you got from us.

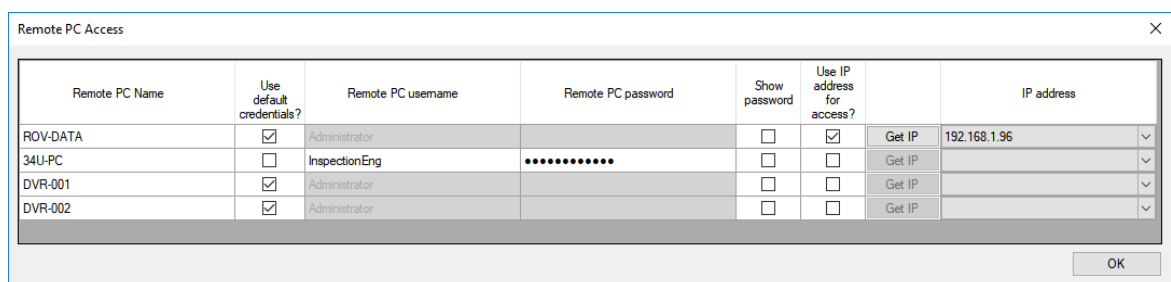
If you use VLANs on your ship, you might find that the PC name doesn't work and you need to access the remote DVR and logger PCs using the IP address instead of the name.

In the [Online Setup](#) ⁵³¹ window, click on **Edit Access**.



To use a different username or password, uncheck the box under Use default credentials, and type a **username and password**. To see the password while you type it, or immediately afterwards, check the Show password box. **Note that for security, if you close and re-open this window, the Show password option will not work unless you type again in the password box. Any password that you type here will be saved in an encrypted format and other users will not be able to see it after you close the window.**

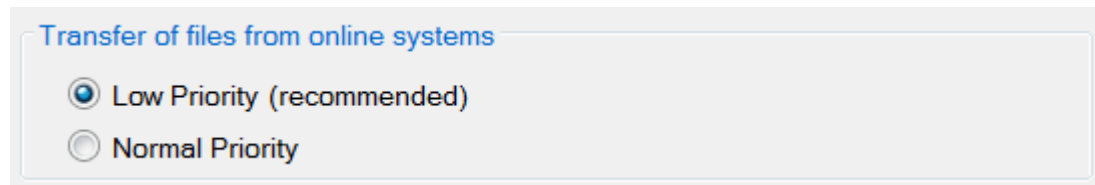
If you need to use the IP address of a remote PC instead of its name, **check the box for Use IP**, then click **Get IP**. If the remote PC has more than one IP address VisualArchive will try to choose one that matches the same range as its own IP address. If you think that VisualArchive has chosen the wrong IP address, you can change the selection in the drop down box.



1.9 VisualArchive Settings

The VisualArchive Settings allow you to set the priority of online to offline file copying, control key backup settings, and manage the disk space on your offline storage device.

Transfer of files from online systems



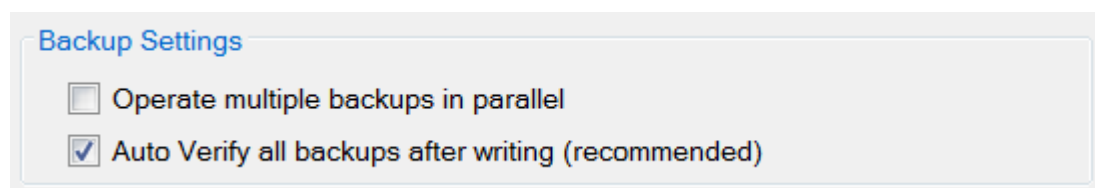
Transfer of files from online systems

☒ Low Priority (recommended)

☐ Normal Priority

The transfer of files from the online recorders to the offline storage disk is usually set to have a low priority, to reduce the chance of it interfering with anything else on the network or on the VisualDVR. If you find that the copying is too slow, you can change this to "Normal" priority.

Backup Settings



Backup Settings

☐ Operate multiple backups in parallel

☒ Auto Verify all backups after writing (recommended)

When backing up to more than device, for example to two tape drives, you can tell the system to write to all of the Backup Devices simultaneously, using the option to operate in parallel. If this is turned off VisualArchive will complete the backup of a file to one device before starting on the backup of the same file to the second device. Operating in parallel can cause problems, especially with two or more tape drives connected with SCSI cables.

There is also an option that lets you turn off the automatic verification of each backup. When this is turned on, every backup is checked as soon as it is made so a file is written to the backup device and then read back to a temporary file which is compared with the original. This is highly recommended and you should only turn off this option if you know that it is causing a problem, for example if the backups are taking too long. If you are in any doubt, please contact the VisualSoft support team for advice.

Disk Space Management

☒ **Use automated offline Disk Space management**

These settings control how VisualArchive uses the available space on the offline disk selected in the Project Tree. If the disk starts to become full VisualArchive can remove old or unused video files to create space for new recordings.

☒ Reserve a fixed free space (GB)

☐ Reserve a percentage of free space

☐ Delete oldest video files

☒ Delete least recently viewed video files

Note: Only video files which are fully backed up will be removed. Video files in "protected" Datasets and Projects will not be removed even if they have been backed up.

The automated offline disk space management controls how much of the chosen offline storage disk is used by VisualSoft Projects. On all offshore systems where you are copying videos from VisualDVRs this should always be turned on. (If you turn it off, the offline storage disk may become full, and no more video will be copied from the online recorders. This in turn may mean that the online disks become full and recording stops.) You can tell VisualArchive how much of the offline storage disk it is allowed to use. When the disk becomes more full than the amount you specify, VisualArchive will start to remove old or unused video files which it knows have been backed up.

You can choose which video files are deleted: It might be the oldest files, based on the time in the file names which is the time when they were recorded, or it might be files that have not been used for the longest time. This is best explained by example: If you are doing an inspection survey of a pipeline that you also inspected two years ago, you might want to be able to compare the new video with the recordings made two years ago. If you also have a project that you are not using, which is only six months old and which has not been viewed for the last five months then you may want VisualArchive to delete those six month old files instead of the two year old files. VisualArchive can do this because every time that you view a dataset in VisualEdit or VisualReview the properties are updated so that the "time of viewing" will be remembered.

If you want to be 100% certain that a Project, or a Dataset will not have its video deleted even if it is very old, and even if you don't use it then you can "Protect" it by right-clicking on it and choosing "Protect" from the Manage menu.

1.10 Backup Devices

A backup device is something which holds "Backup Media". This might be a tape drive with a tape in it, a disk with files and folders on it, or just one big file containing lots of other smaller files rather like a zip a file.

All configured Backup Devices are shown in the Backup Device Status display at the bottom of the VisualArchive window. Each Backup Device has a Name, a Type and a physical device location. The Device Name is used in the automated Media Labels numbering and should be kept short. Before version 8 of VisualArchive the tape drives were automatically identified as A, B and C. This convention is not essential, but it can be continued if you wish, by using these letters as the Device Names when tape drives are added as Backup Devices.

Assigning Backup Devices to Projects

Each Project in the system can have Backup Devices associated with it. You can use the same Backup Devices for more than one Project, or you can select different Backup Devices per Project. For example "Project A" might be backed up to two Tape devices, while "Project B" is backed up to one Tape device, one Virtual Tape device and also to an external USB disk configured as a Disk Copy device. By assigning Disk Copy devices to Projects it is possible to backup different Projects to different external disk drives.

Backup Media Index

Each backup media, whether it is a Tape, a Virtual Tape file, or a Disk Copy, has an index which specifies the location of the data on the backup media, and which is used by VisualArchive when recovering data from the backup device.

In the case of a Tape the index file is stored on the tape itself. In the case of a Virtual Tape it is inside the VTAPE file. For a Disk Copy backup the index is stored in a separate "VisualSoft Disk Copy Index" file with the suffix .vsdci.

Before VisualArchive version 10.1.13 the VisualSoft Disc Copy Index was stored in a .vtape file. This caused confusion with Virtual Tape files which used the same file suffix so the index file name was changed with the release of 10.1.13. VisualArchive can still use old index files, but all new index files will use the new name.

Numbering of Backup Media

Each backup media has a number which is made up of the device name and a sequential number, increasing as each media becomes full and a new one is started.

Grouping Backup Media

Backup devices may optionally be [grouped](#)⁶⁷ together. Devices in the same group will all change their media number at the same time if any one of the devices in the group becomes full. In this way the numbering of a Tape and a Virtual Tape can be kept in sync with each other.

1.10.1 Backup Device Types

VisualArchive supports three different types of backup device:

Tape Drive

A tape drive containing a formatted backup Tape. Multiple video and data files can be backed up to a single Tape. Supported tape hardware includes single tape drives for DLT, SDLT and LTO. Multi-tape changers and auto-loaders are not supported. Each tape has an index of its contents maintained on the tape itself.

Virtual Tape Drive (VTAPE)

A Virtual Tape Drive is simply a disk drive or a folder in which files can be created to mimic the behaviour of tapes in a tape drive. Multiple video and data files can be backed up to a single Virtual Tape file. Files are created with the file suffix ".vtape". Each VTAPE file has an index of its contents maintained in the file itself. It is also possible to configure a VTAPE device to use more than one disk drive, in which case when one drive is full the VTAPE device will automatically start to use the next drive.

Disk Copy

A Disk Copy device is a disk drive on which an exact copy of the selected Project data on the main **VisualArchive** disk volume will be made. This duplicates the original file and folder structure so that the selected disk drive will have a folder \\VisualWorks\\Projects in which the data will be placed.

Each Disk Copy device has an index stored in a separate "VisualSoft Disk Copy Index" file with the suffix .vsdci. Before **VisualArchive** version 10.1.13 the VisualSoft Disc Copy Index was stored in a .vtape file. This caused confusion with Virtual Tape files which used the same file suffix so the index file name was changed with the release of 10.1.13. VisualArchive can still use old index files, but all new index files will use the new name.

1.10.2 Backup Device Status

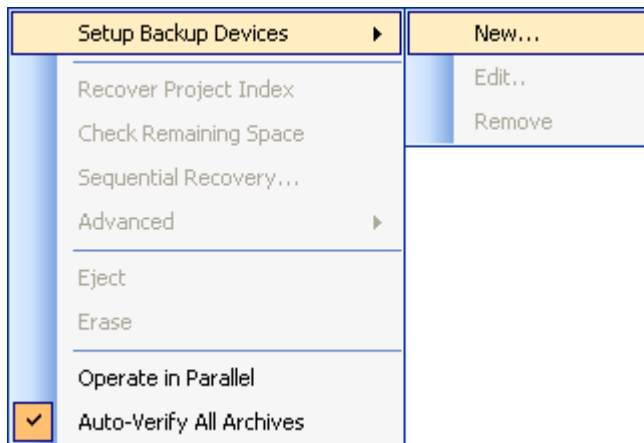
The list of backup devices, and their current status is shown at the bottom of the VisualArchive display.

It shows the names and type of each device, its physical path (tape or disk drive), and information about the current backup in that device, and the amount of space already used.

Device	Type	Group	Path	Status	Current Media Number	Current Project Id	Media Usage
A	TAPE		\\TAPE0	Busy	Pipeline1227_001A	Pipeline1227	<div><div></div></div> 21% of 744 GB
B	TAPE		\\TAPE1	Idle	Pipeline1227_001B	Pipeline1227	<div><div></div></div> 16% of 745 GB
DiskCopy	DISK_COPY		Z:\Pipeline1227_001Di...	Idle	Pipeline1227_001DiskCopy	Pipeline1227	<div><div></div></div> 22% of 3.56 TB

1.10.3 Configure Backup Devices

If you right-click on the drive status window the pop-up menu shown below will open.



Depending on where you right-click when opening the menu, some media-specific options may not be available. For example you can Eject or Format a Tape, but you cannot Eject or Format a Disk Copy device.

To Add, Edit or Remove a Backup Device, select the option to "Setup Backup Devices". This sub-menu has the three options: New, Edit and Remove.

See the following topics for more detail:

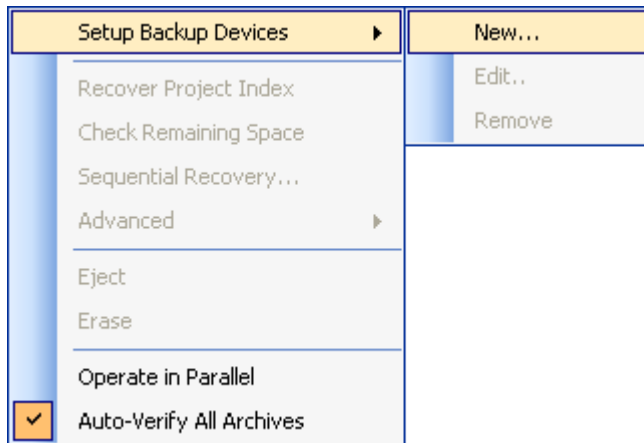
[Add a new Backup Device](#) ⁶³

[Edit a Backup Device](#) ⁶⁷

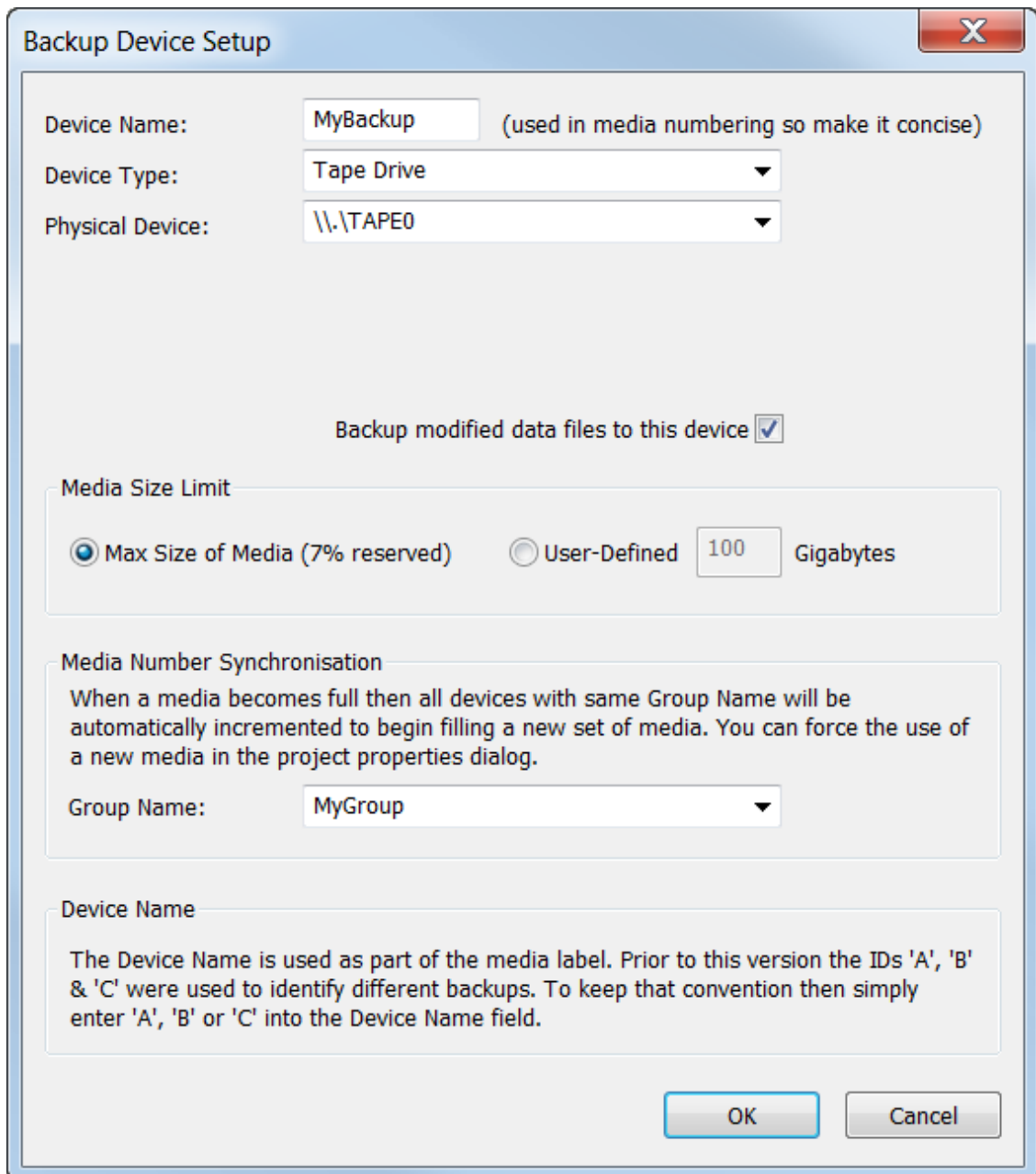
[Remove a Backup Device](#) ⁶⁹

Add a New Backup Device

1. Right-click in the Backup Device Status display at the bottom of the **VisualArchive** window.
2. From the pop-up menu select Setup Backup Devices, and then New.



3. This will open the Backup Device Setup window:



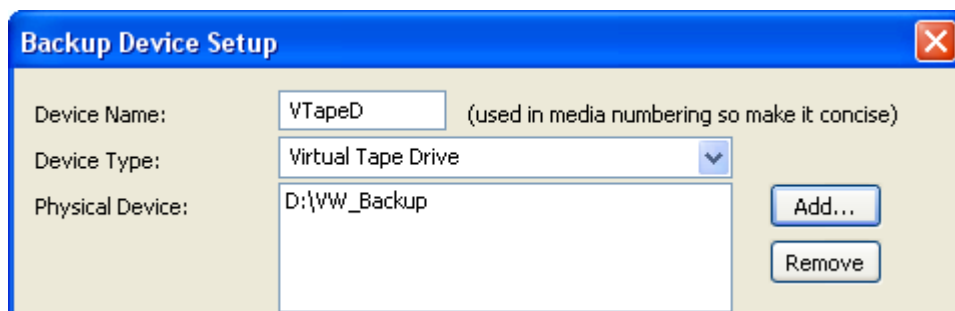
The screenshot shows a 'Backup Device Setup' dialog box with the following fields and options:

- Device Name:** A text box containing 'MyBackup' with a note '(used in media numbering so make it concise)'.
- Device Type:** A dropdown menu set to 'Tape Drive'.
- Physical Device:** A dropdown menu set to '\\.\TAPE0'.
- Backup modified data files to this device:** A checked checkbox.
- Media Size Limit:** A section containing two radio buttons: 'Max Size of Media (7% reserved)' (selected) and 'User-Defined' (unselected). The 'User-Defined' option has a text box with '100' and the label 'Gigabytes'.
- Media Number Synchronisation:** A section with explanatory text: 'When a media becomes full then all devices with same Group Name will be automatically incremented to begin filling a new set of media. You can force the use of a new media in the project properties dialog.' Below this is a 'Group Name' dropdown menu set to 'MyGroup'.
- Device Name:** A section with explanatory text: 'The Device Name is used as part of the media label. Prior to this version the IDs 'A', 'B' & 'C' were used to identify different backups. To keep that convention then simply enter 'A', 'B' or 'C' into the Device Name field.'
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

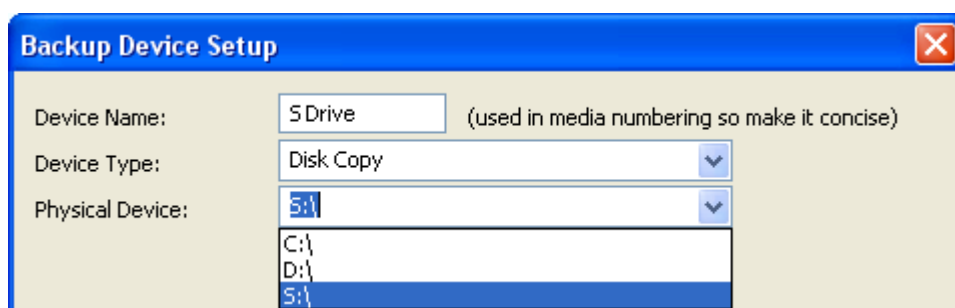
Each device must be given a Device Name which should be short and clear because it is used in the automated naming of Tapes and Virtual Tapes.

Select the Device Type as either a Tape Drive, a Virtual Tape Drive or a Disk Copy.

Select the Physical Device. The available list will be presented differently depending on the chosen Device Type: For a Tape the Physical Device will appear as a drop-down list of available drives (as shown above). For a Virtual Tape you should use the [Add] button to select one of more disk drives or folders as shown below:



For a Disk Copy device you will see a drop-down list of available drives:



4. Backup Modified Data

For all device types, you have an option of whether or not to backup "Modified Data". If this option is selected then all data which is changed or added using the data processing or import tools of **VisualEdit** or **VisualEdit Pro** will be automatically written to the selected backup(s).

5. Media Size Limit

For each Backup Device, of any Type you can limit the size of the media. The default setting is to use 93% of the available space, leaving a small percentage for indexing and to prevent problems of over-running the end of a tape.

If you prefer to do so, you can set a User-Defined limit instead. This can be useful if you want the indexing of Tapes, Virtual Tapes and even Disk Copy devices to match, but note that this can also be achieved using Group Names and Media Number Synchronisation.

6. Media Number Synchronisation

Backup devices may optionally be grouped together. Devices in the same group will all change their media number at the same time if any one of the devices in the group becomes full. In this way the numbering of a Tape and a Virtual Tape can be kept in sync with each other.

To enable Media Number Synchronisation, each device to be synchronised must have the same Group Name. For the first device, type a Group Name in the box. For the other devices you can select the Group Name from the drop-down list.

Grouping Backup Devices

Backup devices may optionally be grouped together. Devices in the same group will all change their media number at the same time if any one of the devices in the group becomes full. In this way the numbering of a Tape and a Virtual Tape can be kept in sync with each other.

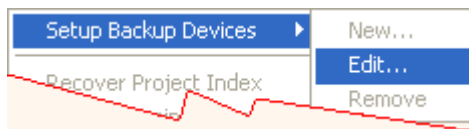
To create a group of Backup Devices, use the right-click menu and select Setup Backup Devices, and then [Edit](#)⁶⁷.

When you add a new backup device, it will be automatically assigned to "MyGroup". You can change this to anything you want.

A Disk Copy device can be very much larger than the media used for tape backups, and larger than the typical size limit set for a Virtual Tape backup. If a Disk Copy device is grouped with one of these smaller devices, then a single disk drive that is being used as a Disk Copy may contain multiple index files, one for each of the media number increments (or tape numbers) of the smaller devices. These VisualSoft Disk Copy Index files (*.vsdci files) should not be removed from the disk drive. They will be needed if you wish to locate and recover files that match those on a specific tape number.

Edit a Backup Device

1. Right-click in the Backup Device Status display at the bottom of the **VisualArchive** window.
2. From the pop-up menu select Setup Backup Devices, and then Edit.



3. This will open the Backup Device Setup window:

Backup Device Setup

Device Name: (used in media numbering so make it concise)

Device Type:

Physical Device:

Backup modified data files to this device ☒

Media Size Limit

☒ Max Size of Media (7% reserved) ☐ User-Defined Gigabytes

Media Number Synchronisation

When a media becomes full then all devices with same Group Name will be automatically incremented to begin filling a new set of media. You can force the use of a new media in the project properties dialog.

Group Name:

Device Name

The Device Name is used as part of the media label. Prior to this version the IDs 'A', 'B' & 'C' were used to identify different backups. To keep that convention then simply enter 'A', 'B' or 'C' into the Device Name field.

OK Cancel

When editing a Backup Device the Device Name and Device Type cannot be changed, but you can change the Physical Device associated with that name, so that you can switch to a different tape drive, or a different Virtual Tape disk or folder if you need to do so.

Backup Modified Data

For all device types, you have an option of whether or not to backup "Modified Data". If this option is selected then all data which is changed or added using the data processing or import tools of **VisualEdit** or **VisualEdit Pro** will be automatically written to the selected backup(s).

Media Size Limit

For each Backup Device, of any Type you can limit the size of the media. The default setting is to use 93% of the available space, leaving a small percentage for indexing and to prevent problems of over-running the end of a tape.

If you prefer to do so, you can set a User-Defined limit instead. This can be useful if you want the indexing of Tapes, Virtual Tapes and even Disk Copy devices to match, but note that this can also be achieved using Group Names and [Media Number Synchronisation](#)^[69].

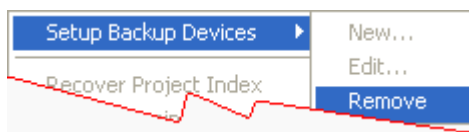
Media Number Synchronisation

Backup devices may optionally be grouped together. Devices in the same group will all change their media number at the same time if any one of the devices in the group becomes full. In this way the numbering of a Tape and a Virtual Tape can be kept in sync with each other.

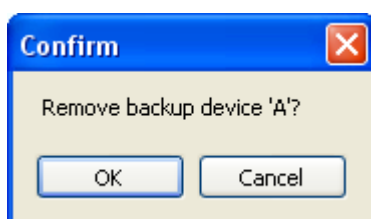
To enable Media Number Synchronisation, each device to be synchronised must have the same Group Name. For the first device, type a Group Name in the box. For the other devices you can select the Group Name from the drop-down list.

Remove a Backup Device

1. Right-click in the Backup Device Status display at the bottom of the VisualArchive window.
2. From the pop-up menu select Setup Backup Devices, and then Remove.



3. This will open a prompt in which you must Confirm or Cancel your choice. This prevents Backup Devices being accidentally removed.



1.10.4 How to change a Backup Tape

There are two ways to change a Backup Tape. It can be left to happen semi-automatically when the tape is full, or you can force a manual tape change at any time you want – for example because you want to send a tape ashore at a crew change.

[How To Change a Full Tape](#)^[70]

[How To Change a Tape Manually](#)

How to change a full tape

When a tape become full **VisualArchive** will automatically eject the full tape, increment the tape number by one, and prompt you to insert a new blank tape. It will ask you to write the new tape number onto the paper label which you should then insert in the slot on the spine of the tape cartridge. Do this before you insert the tape into the drive so that it does not get forgotten. (Bear in mind that the tape could be in the drive for a long time and you might not be there when the tape is ejected.)

1. **VisualArchive** will eject the full tape form the tape drive
2. Insert a cleaning tape in the tape drive to start the cleaning process. This will take a few minutes and is very important. It should be done every time a tape is changed.
3. Eject the cleaning tape
4. Write the new tape number onto the paper label of the tape. (The pop-up message box in VisualArchive tells you what number to use.)
5. Insert the new tape into the drive.

How to force a tape change

In the courses of your operation you may find it necessary to force archive to move o move on to a new tape. The following procedure will allow you to increment the tape to the next media number

1. Right click the main Archive window and select **Suspend** Archiving, and then Cancel All. This will clear your current Archive queue.
2. **Eject** the tape form the tape drive
3. **Insert** a cleaning tape in the tape drive .
4. After this is done, **eject** your tape,
5. Right click in the root of the project and select Properties.
6. Right Click on your tape device you will be given the opportunity to **Start New Tape**.
7. **Insert** your new tape and then right click the main Archive panel and **Resume Archiving**.
8. In the Project panel, right click the root of the project and select Manage -> Archive.
9. When asked if you want to Re-Archive all datasets again, click **No** to ensure you only add those datasets not already Archived to the queue.
10. Archive should now add every dataset not already archived and continue.
11. Right click the main Archive window and select **resume Archiving**

1.10.5 How to change a full Disk Copy Device

When a backup disk becomes full you need to be careful how you change it. The “Backup Device” Name in VisualArchive must stay the same, it is only the disk that is linked to that name which changes. This is rather like changing a tape rather than changing a tape drive – the device name is like the drive, and the physical disk (plus its drive letter) is like the tape.

The following procedure will work when a “Disk Copy” backup device becomes full:

1. **Suspend** archiving in VisualArchive (using the right-click menu in the queue), and Cancel whatever is in the queue (again using the right-click menu).
2. Physically **disconnect** the full backup disk from the PC, but do not remove the “Backup Device” from the VisualArchive software.
3. **Connect** the new empty disk to the PC.
4. If Windows gives the new disk the same drive letter as the old one that’s great; If not, you must edit the properties of the Disk Copy backup device and change the drive letter that is used so that it matched the letter that Windows has assigned to the new disk.
5. Right-click on the Project and open the Properties.
6. Right-click on the relevant Backup Device and increase the “Media Number”. (It will show as "Pending" after it is incremented. This just means that it has not yet been used.)
7. **Resume** archiving (using the right-click menu in the queue)
8. Right-click on the Project and select “Manage”, then “Check Archived”. VisualArchive will scan the project for anything not yet backed up, and will back it up to the new media number as a new file on the empty drive.

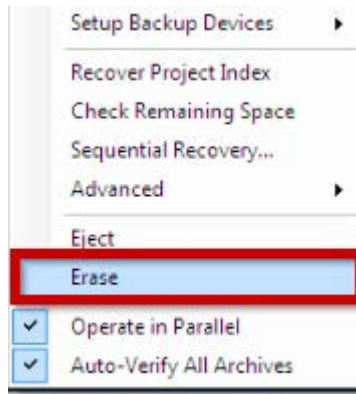
1.10.6 How to Erase A Tape

VisualArchive can erase the contents of a tape so that it can be reused. This should be done with great care, and only after making certain that you either have the data somewhere else, or that you are totally certain that it will never be needed. Before erasing any tape you must make sure that you have the correct tape in the correct drive! We recommend that you remove all other tapes from other drives to ensure that only the correct tape can be erased.

1. Click the main Archive window and select Suspend Archiving, and then Cancel All. This will clear your current Archive queue.
2. Eject the existing tapes for the tape drives
3. Insert the tape to be erased into the tape drive

4. Wait until the ready light has become illuminated on the tape drive
5. Right click on the tape drive device from the backup device window and select erase

Device	Type	Group	Path	Status	Current Media Num...	Current Project Id	Media Usage
A	TAPE	LTO4	\\.\TAPE0	Idle	LTO6 Test 2_002A	LTO6_Test_2	63% of 781 GB
B	TAPE	LTO6	\\.\TAPE1	Idle	LTO6 Test 2_001B	LTO6_Test_2	49% of 2.38 TB



6. A password box will pop up asking if you are sure you wish to erase this tape. If you do wish to erase the tape type the word "erase" into the password box
7. This will add an Erase operation to the Archive Queue
8. Right-click in the Archive Queue window and select Resume Archiving,
9. Once the erase operation has completed right-click in the Archive Queue and select Suspend Archiving, and then Cancel All. This will clear your current Archive queue.
10. Eject the erased tape and place the correct tapes back into the correct tape drives
11. In the Project panel, right click the root of the project and select Manage -> Check if Archived or not
12. Right-click in the Archive Queue window and select Resume Archiving,

1.11 Managing Lock Files

While **VisualArchive** is transferring (i.e. copying) a video from **VisualDVR** to the offline disk drive it places a lock file inside the dataset folder to stop **VisualEdit** and other parts of **VisualArchive** accessing the dataset too early. These datasets are shown with a padlock symbol (🔒) in the Project Tree.

When the video transfer is complete some checks are made to compare the online file (on **VisualDVR**'s logging disk) with the offline file on **VisualArchive**'s disk (usually a NAS). If everything is OK, the lock is removed but if things go wrong the lock is left behind.

If you want to remove a lock file manually you must follow the instructions below:

1. You should test that the videos all play OK in Windows Media Player or equivalent

2. Check that you can fast-forward, rewind and use the time slider or Go To commands to jump from place to place in the video file.
3. Check that the file size is the same as on the **VisualDVR** logging drive (where the file will now be a *.OFF file if it's Windows Media, or a *.MOF for MPEG-2, or a *.M4O for H.264).

If all of these tests show the offline file to be OK, you can manually delete the *.lck file(s). You should then see an automatic refresh of the Project Tree in **VisualArchive** to change the dataset icon and the dataset should also appear in **VisualEdit**'s Project Tree.

1.12 Recover from a Backup Device

It may be necessary to recover Project data from a backup device either due to data being lost or because the data needs to be transported then recovered in a different location such as an onshore office. When the video files are required for video review and are not present on the hard disk then they must be recovered from the tape archive or VTAPE archive.

Normal Recovery – Entire Project

1. Click the main Archive window and select Suspend Archiving, and then Cancel All. This will clear your current Archive queue.
2. Insert the tape from which you wish to recover data.
3. Right-click on the backup device with the correct tape inserted in the devices windows and select recover project index this will allow archive to populate to project tree.
4. Right-click on the project name in the Project Tree of VisualEdit or VisualArchive and select Recover.
5. If you do not have the correct tape in the drive when you select Recover then a window will appear asking you to put in the correct tape. It will tell you which tape you need.

Normal Recovery – Sub-Project or Dataset

1. Click the main Archive window and select Suspend Archiving, and then Cancel All. This will clear your current Archive queue.
2. Insert the tape from which you wish to recover data.
3. If the Project is not already displayed in the Project Tree, right-click on the backup device with the correct tape inserted in the devices windows and select recover project index this will allow archive to populate to project tree.

4. Right-click on a Sub-Project name or on an individual Dataset, or select a group of Datasets and then right-click on one of them. Choose Recover from the pop-up menu.
5. If you do not have the correct tape in the drive when you select Recover then a window will appear asking you to put in the correct tape. It will tell you which tape you need.

Normal Recovery – On a PC that did not create the original backup

Often you may need to recover data on an office PC, or using a PC on a different ship from the one that originally made the backup.

For tape backups this is simple: Put the tape in the drive and right click on the tape device at the bottom of the screen to select Recover Project index.

For Virtual Tape (VTAPE) backups there is an extra step needed because you cannot just put a tape in a drive – instead you must first create an equivalent of that tape drive, a VTAPE backup device. You will need to create a backup device on the recovery PC which matches the name of the backup device used to make the original backup. The backup device name is included in the VTAPE file name. It is the part between the three digit media number and the dot, for example with a file called "**12in_Oil_Pipeline_003 MyBackup.vtape**", you would need to create a VTAPE backup device called "**MyBackup**". When you have created that backup device, you will be able to select the required VTAPE file using the drop down list in the backup device set-up window. Select the VTAPE file with the highest "media number" – the three digits just before MyBackup in this example. The later VTAPE files with the higher numbers will always include the history of what is in the earlier files.

Sequential Recovery – For recovering an entire tape if Normal Recovery doesn't work

1. Click the main Archive window and select Suspend Archiving, and then Cancel All. This will clear your current Archive queue.
2. Select the offline drive to the location you wish to recover the data too whether that is a NAS drive or other storage area.
3. When using a set of tapes we must first recover the project tree, insert the last tape in the sequence.
4. Right click on the backup device with the correct tape inserted in the devices windows and select recover project index this will allow archive to populate to project tree with the correct folder and as we are doing this from the last tape in the sequence this will match the final project tree.
5. Click in Archive Queue window and Select Resume Archiving this will start archive processing the recover index process once completed Click the main Archive window and select Suspend Archiving eject the tape from the drive and insert the first tape in the set (001) right click on the backup device with the correct tape inserted in the devices windows and select sequential recovery click in Archive Queue window and Select Resume Archiving this will start archive recovering from this tape once the operation is completed the tape will be eject and archive will prompt you to insert the next tape in the sequence (002) and so on until all the tape have been used.

2 Contact Details

Forum Subsea Technologies has offices in many parts of the world. The VisualSoft team is mostly based in Aberdeen in the UK, but we also have regional sales staff and some support services in other parts of the world.

The following pages have details of how to contact either our sales team or our support team, by telephone, email or by post.

2.1 Contact Details – Support



Website: f-e-t.com/visualsoft

Most support questions are most easily answered by email:

Using email gives our support team time to think about your problem before they reply, and time to test the software if necessary. If your question is urgent, do not hesitate to telephone us, but even then it may be best to send an email before you call, even if only a few minutes before you call. Sending us an email will allow you to include screen captures, data files and other things that may make it easier for us to quickly and accurately understand your problems.

Support Email (recommended)	visualsoft.support@f-e-t.com
Phone: UK & Global, during UK office hours	+44 (0) 1224 744 000
Phone: UK & Global, outside UK office hours Available for clients with a valid support contract. Operates from 17:00 until 08:30 UK time each night Monday to Thursday, and all through the weekend from 17:00 Friday evening until 08:30 Monday morning.	+44 (0) 1224 363 999
Phone: USA, 24/7 During Houston office hours this will connect you to our US team. At other times, or if the US team is busy, it diverts to the UK team.	+1 713 454 7091

2.2 Contact Details – Sales



Website: f-e-t.com/visualsoft

For address and telephone/fax details, please select the appropriate office for your region:

Aberdeen, UK	FET – VisualSoft Cumberland House Endeavour Drive Arnhall Business Park Westhill Aberdeenshire AB32 6UF UK
Sales and rental enquiries:	visualsoft.sales@f-e-t.com
Telephone:	+44 (0) 1224 744 000

Houston, USA	FET – VisualSoft 10344 Sam Houston Park Drive, Suite 300 Houston TX 77064 USA
Telephone:	+1 713 329 8273

Singapore	FET – VisualSoft Asia Pacific Rental Service
Email	visualsoft.sales@f-e-t.com
Telephone:	+65 9643 7433 / +65 9230 8138

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