



Data And Digital Video Collection

The Single Most Important Function Of A Video Inspection Unit

Video inspection equipment is a commodity today and many Vendors can provide the hardware to inspect sewer pipe, however, the collection of the data and video is a far more complex issue, which is often not addressed by Users in their specifications. Cobra submits a detailed specification of its capabilities to ensure the User has available the best possible data and video collection hardware in the industry for review and consideration. The system submitted by Cobra often far exceeds specifications published by users and provides the Owner with a comprehensive data and digital video collection package.

OFFICE DATABASE FOR DATA STORAGE

Cobra provides a true multi-user client server relational database (CIMST™) for office applications, which stores the data collected from the field units on any network. Unlike an MS Access data base, as provided by vendors such as WinCan, EasyCam or SubCam, which are designed for single user applications, CIMST™ provides easy and fast access to the inspection records to all PCs having access to the database on User's networks. This not only allows the user department to view the work uploaded to the database but also any engineers or managers requiring access to the data.

This powerful functionality allows any CIMST™ User to access inspection data across networks. Furthermore, the user can access video files, which are linked to the CIMST™ database.

VIDEO STORAGE

Storage of video files on CD/DVD is not very practical and very difficult to manage. It is no different than having a videotape library. Any CD/DVD must be copied before distribution to a User. In many cases the disks do not get returned to the central storage after distribution. Additionally, a master library requires overhead and management costs to maintain the video files. Network storage eliminates the need to store the video files on optical disks (CD/DVD) and the need to maintain a CD/DVD video library.

VIDEO FORMATS/ MPEG COMPRESSION

Cobra provides video compression and storage in MPEG 1, 2 and 4 formats. The new MPEG 4 code has the quality of MPEG2 at 50% of the storage of MPEG 1. The net result is that a municipality will get MPEG 2 quality if MPEG 4 is used but can store twice the amount of video with MPEG 4 vs. MPEG 1 and four times the amount of video vs. MPEG 2. This is a significant reduction of video storage density for an improved quality of video over MPEG 1 format.

The storage of video files on a one Terabyte storage array is as follows:

MPEG 1	1.5Mb/s	1000 Hours
MPEG 2	4Mb/s	400 Hours
MPEG 4	786Kb/s	2000 Hours

VIDEO STORAGE

Video files need to be stored in high-density hard drives. These can be USB 2.0 removable drives or fixed drives depending on how the data is to be transferred to the office for processing. Video files and data can be transferred to optical disks in the field if that is the selected method of storing the video files. CD-RW or DVD-R hardware is provided in the trucks if specified.

Cobra offers solid-state drives for the collection and transfer of video files to ensure absolute integrity of the data, however, the cost of such disks is significant and may not be practical for long-term storage.

VIDEO STORAGE ON NETWORKS

Cobra offers network storage for the video files on the Cobra Video Pipeline Storage Array. The storage array is scalable and additional Terabyte storage hardware can be added as required (see chart above for videos per terabyte). Any User with rights to access the video server can play the video files on a standard Windows Media Player, available on every PC.



RECORD/PAUSE FEATURE IN VIDEO COMPRESSOR

The CobraTouch™ Data Logger has a Record/Pause feature not required by many city specifications. This unique feature, not available in other video compressors, allows the Operator to pause the video at any time during the inspection. The Operator can continue the inspection without having closed the MPEG file and can pause as many times and as long as necessary during the inspection.

REAL TIME PREVIEW OF STORED VIDEO IN THE FIELD

An additional feature that is not specified in many cities' specifications is an MPEG preview screen. This preview screen allows the Operator to view the stored video in real time as it is being captured. This feature ensures that the video being compressed is of optimum quality. The Operator is able to adjust the video characteristics during the inspection 'on the fly'.

DATA COLLECTION IN THE FIELD

The CobraTouch™ CDL 9000 Series Data Logger uses an interactive touch screen as the primary input device rather than a keyboard and mouse in order to speed up the inspection process and make crews more productive. The data collection software runs on Windows XP. The video compressor is integrated into the data logger and operates without any input from the operator. A copy of CIMS™ can be provided with each data logger if the user wishes to transfer the data to the CIMS™ database in the field. The CobraTouch™ can be installed on any inspection unit that is in use today.

DATA EXPORT FROM CIMS™ DATABASE

The output of the Cobra database will meet the User's specific requirements. Cobra will write the output files in any format required, eliminating the requirement to provide a brand name database format. CIMS™ has numerous data transfer utilities:

- PACP output utility certified by NASSCO
- PACP import utility in CIMS™ enabling data from any certified PACP system to be imported into CIMS™
- WRc sewer.dat plus a number of variations
- NEZTEK transfer utility to enable data from Hansen IMV7 to be used and transferred back to the Hansen database
- DBF outputs for the transfer of data to GIS platforms
- ASCII comma delimited output of data is offered in a number of formats

HARDWARE AND SOFTWARE SUPPORT

Cobra provides in-house support for all of its hardware and software products. Support is available in person either at our office or yours, by telephone, or online.

CONCLUSION

Inspection data is becoming increasingly important. It is the critical component in the inspection process. In today's market, balancing the need for reliable inspection equipment with data collection is essential. Cobra is uniquely positioned to address your data collection needs with in-truck validation of data with MPEG files utilizing the CobraTouch™ Data Logger. It's simple and quick with easy transfer of data & video files to office databases.

The comprehensive Cobra Data & Video Collection System far exceeds industry specifications and provides an inclusive data and video management system not considered by many users.

The expense of collecting data and video is significant and it is incumbent on the User to make the best possible use of available technology as offered by Cobra Technologies™ rather than opt for a less viable single user MS Access database which limits user access to the inspection's data and video files.



So Advanced ... It's Simple

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