

HRC High Speed Raw Data Converter

The Comfortable Software for converting High-Speed Video Sequences

High data quantities, complex calculations

High-speed cameras produce considerable amounts of data which are stored on the hard disk as so-called Raw Data. Depending upon the camera manufacturer and type of sensor, this raw data is stored in a wide range of formats. This data must then be converted into a readable format such as AVI, JPG or TIF for visualisation and evaluation. To enable the resultant amount of data to be managed, compression processes are used which further slow processing time. This process, which is dependent upon the type of camera used and the quantity of images to be processed, can take up to several hours.

Parallel oder serial

Until now, when several raw data sequences had to be converted, these were dealt with as a serial process, i.e. consecutively. HRC offers parallel batch processing which at the moment caters for 4 raw data sequences, providing the clear advantage of a gain in time. Results obtained from systems already supplied to customers show that a 4-time better speed advantage can be attained just by parallel processing of the raw data sequences.

Bayer pattern or chessboard architecture

Whereas most camera manufacturers work with Bayer pattern for colour masking, Weinberger employs chess-

board architecture and high-quality colour algorithms. This is where the performance ability of the HRC software really comes into its own. It has been proven that HRC can provide a 20-time increase in computing speed without any loss of quality.

When time plays a role

Users of HRC attest to a radical reduction in the time needed before the test data is available. Whereas in the past an average of 40 minutes was necessary until all test videos were ready, today's average is 3 minutes. Users certify 13-time acceleration for crash tests in daily use.

Simple to operate, clearly understandable architecture

HRC is intuitive, with a simple-to-operate user interface. All tasks can be performed easily with just a few mouse clicks and without any complicated prior training being necessary. This ease of use is made apparent by the logical support of the business processes using intelligent automation functions. For example, automatic filter settings can be made for different camera positions. When differing raw data files are opened, the program automatically applies your pre-set image processing filter correctly for the relevant sequences. With just one click, these files are then available for conversion. With just a few more mouse clicks, a complete test of perhaps 20 recordings can be converted and made available for evaluation



HRC

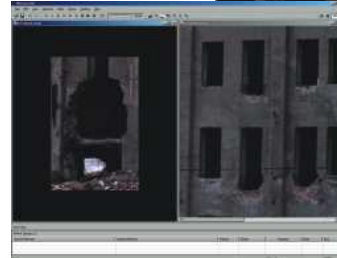
FEATURES

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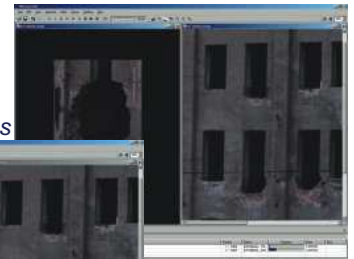
HRC supports the following working steps:

- Selection of several raw data files
- Arrangement of several raw data files in a queue
- Fastest computation of raw data files
- Parallel AVI conversion with a double-core processor
- Writing AVI files with the names of the raw data files

Selection of several raw data files



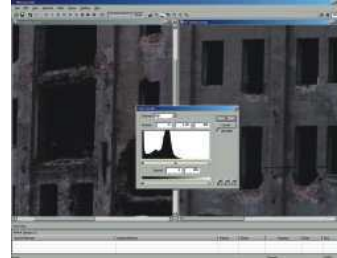
Parallel AVI conversion



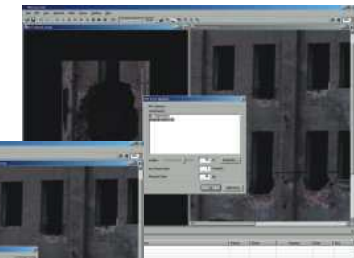
The HRC image processing filter module integrates rapid image processing filters into the rapid interpolation of the raw data. The following image processing filters are integrated:

- Manual white balance
- Automatic white balance over white point
- Gamma correction
- Brightness and contrast
- Colour intensity
- Definition
- OSD with text input and time in msec.
- Comfortable filter chains (templates) with OSD
- Indeo 5.1 (compression) with all parameters

Color levels



Indeo 5.1 compression



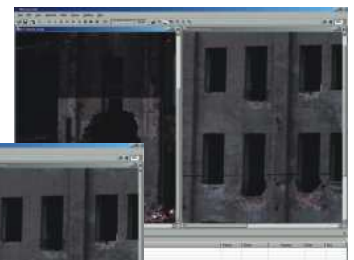
HRC additional functions provide increased productivity during practical use. The following working steps are supported by HRC:

- Opening MME projects
- Preview display with SmartTemplates for automatically arranging filter chains as sequences
- Using MME project variables; also together with OSD filter
- Take over data titles from MME project variables
- Watch-dog index for automatic raw-data processing
- Crop function
- Zoom function
- Reduction of image resolution

Use of MME-project variables



Crop-function



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