

# New for MOTION ANALYSIS / Server



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New features and options for MOTION software

## Highlights

### Image grabbing

- camera control now is supporting Redlake HG100k, Weinberger Visario imagers and further models
- direct use of native file formats of high resolution highspeed cameras of Redlake (Redlake Type2 for HG100k) and Weinberger (SPV10 for Visario)

### Expanded use of MME data structure

- toolbar buttons for open, store and close of MME-projects
- opening of all selected sequences or photos at the same time
- when adding new movies into a MME-project the corresponding calibration file will be added automatically
- selectable number of characters to be used for display of channel Items in Signum project tree
- a linked application can be started automatically by double clicking the corresponding MME element
- when importing a MME project, links to corresponding movies will be updated

### batch mode for standardized measurement with VBScript plug ins

- automatic evaluation of similar tests using the same number of imagers, markers and objects. The first test could be defined as reference test. The following tests can be analyzed automatically using the plug in up to the printout of the corresponding measurement diagrams. You are able to define new projects, using the plug in and predefined reference projects which then can be used for setting up, calibrating and tracking of markers.
- calculation of positions of markers and all corresponding measurement results.
- automatic documentation and archive of test results

### expanded analysis for diagrams

- now x-y and x-t curves can be displayed. Scalable diagrams which can be printed as high resolution vector plots are supporting customer specific layouts, too
- selectable ISO-MME filters for diagrams
  - CFC 1000 ISO 6487\* / SAE J211:MAR95
  - CFC 600 ISO 6487\* / SAE J211:MAR95
  - CFC 180 ISO 6487\* / SAE J211:MAR95
  - CFC 60 ISO 6487\* / SAE J211:MAR95

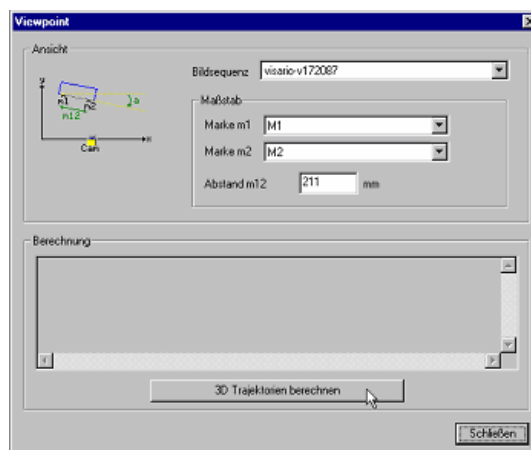
- comfortable selection of colors
- store and recall of of diagram profiles including all necessary presets
- store and recall of complete workspaces with all opened windows and plotted diagrams
- export of movies with integrated diagrams

### Extended 2.5D analysis

- this modul can be used, when a movement can be watched by two imagers with same or similar view. Each imager is only able to record the movement in a part of the time intervall. Result will we a combined tracking curve, showing the complete movement in the measurement interval.

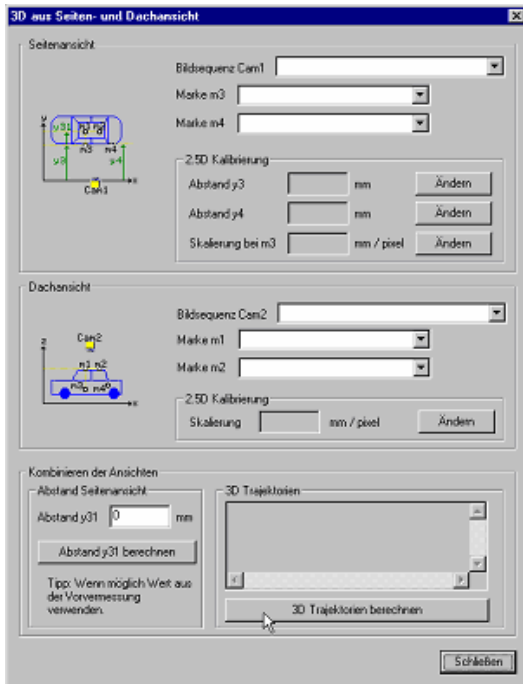
### Viewpoint3D

- this module is calculating 2.5D trajectories, if the movement of the objects is not perpendicular to the optical axis of the camera and standard 2.5 D measurement procedures will get wrong results. The object movement has to be in one plane, the camera has to be calibrated and you have to know the distance between two markers on the object.



## Ortho3D

- This module can be used to calculate 3 D trajectories out of one top and one side view. The imagers have to be calibrated and you have to use at least 2 different markes with known distance in every view.

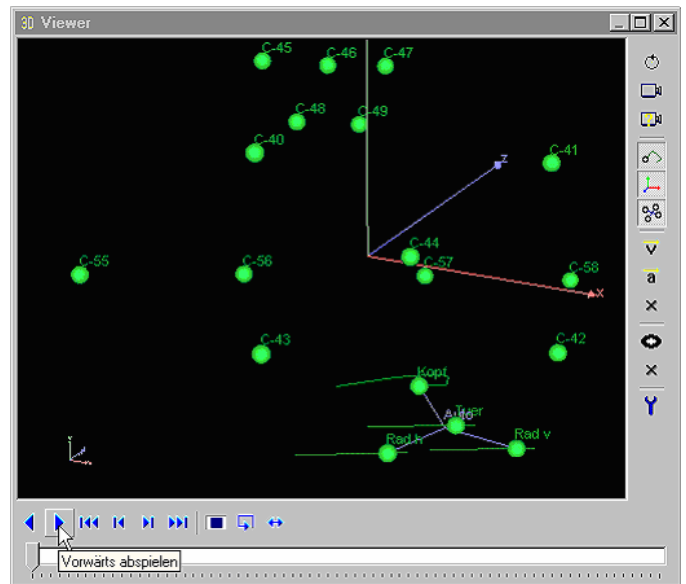


## 3D diagrams

- new curve definitions for 3D diagrams
- integrated 3D viewer to show object movements from various viewing angles. You have to use at least two cameras with Analysis 3D module of MOTION. Object positions, orientation and object groups can be directly used from MME-project trees. When opening the 3D viewer, the scene can be viewed from one imager position as start for further evaluations.
- 3D viewer is using a new window type for synchronized display with corresponding image sequences.
- trajectories from 3D analysis can be displayed as diagrams. View point can be moved with viewer.
- drag and drop functionality for diagram definition
- 3D curve definitions can be stored for further use

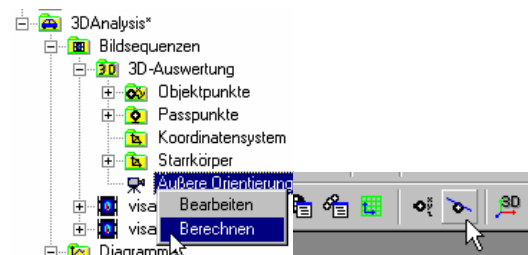
## CustomerViewer

- MME- data structure can be stored together with customer specific standalone viewer on a storage media (DVD, CD-ROM)
- image sequences, tracked objects and diagrams can be displayed synchronous on a pc without the need to install the MOTION software
- integrated viewer can be used for linked MME - data without any limitations



## 3D Tracking

- after tracking of objects in an image sequence, this objects can be used automatically in a second sequence for 3 dimensional setup and prediction, using epipolar lines. Interpolated positions can be projected on the corresponding epipolar lines, too.
- You have to use 2 image sequences with similar views and there must be at least two visible markers in all sequences. Cameras have to be calibrated, pass points to be defined and orientation to be calculated before. In one of both sequences the corresponding objects have to be tracked first.



## sequence output

- export of movies with integrated diagrams
- export of movies also supporting MPEG - formats

