As of version 4.3, ControlDesk Next Generation (dSPACE’s experiment software) provides major innovations for automotive, avionic and industrial applications. For example, camera images can be recorded with a video instrument via an integrated camera interface and replayed in synchronicity with measurement recordings. And for avionics, there is a new Primary Flight Display (PFD), with Altimeter, Artificial Horizon, Heading Indicator and Airspeed Indicator instruments.

The video instrument and camera interface are used to record and replay video and bus data synchronously (shown here is ControlDesk 5.0 with its new user interface).
Video Instrument and Camera Interface

There are numerous applications where it is useful to record camera images synchronously to the measurement values displayed in ControlDesk®. Such images improve the quality with which the real-world effects of control events are assessed and visualized. Users can let their creativity run free. Here are just some of the possible applications:

- Validating interaction between windscreen wiper control and the rain sensor
- Visualizing control events in ADAS applications
- Visualizing actions of industrial robots/production machines

ControlDesk provides the camera interface and video instrument that these activities require. Either an industrial-standard camera or a simple USB camera can be connected. And not only can the videos play synchronously to a measurement in real time, they can also be repeated any desired number of times, and exported if necessary.

Avionics Instruments

Measurement values from avionics applications can be visualized with the realistic cockpit instruments provided by ControlDesk: the Altimeter, Artificial Horizon, Heading Indicator and Airspeed Indicator. Used on a ControlDesk layout, these give a realistic impression of an aircraft’s movements, whether measured or calculated.