DOVideoWCL.DLL - Windows Control Library.

Introduction

As mentioned in previous chapters, the BeamOn USB is a full capture and analysis application with sophisticated capabilities. However, many customers have special analysis demands and tools, yet are lacking data collection capabilities.

The DOVideoWCL.dll control contains easy-to-operate functions and properties that enable measuring beam parameters and creating your own application under Windows XP, Windows Vista, or Windows 7 environment. The DOVideoWCL.dll control was written using Microsoft .Net C#.

This has been tested in LabVIEW 8.6 (National Instruments) as well as C# (Microsoft).

Examples

Examples of a LabVIEW and a C# application are provided with the installation CD disk. All examples assume a rudimentary knowledge of the respective development platforms.

DoVideoWCL - Windows Control Library

Types:

DrawLine { eNone, ePosition, eCursor };	Enumerate of measuring line types.
TypeProfile { eSum, eCross };	Enumerate of measuring profiles types.
PositionUnits { eMilimetr, eRad };	Enumerate of measuring data units types.
Dimension { d2D, d3D };	Enumerate of viewing picture types.
Auto { eOff, eOn };	Enumerate of auto rotate 3D projection value.
BucketType { eCircle, eEllipse, eRect };	Enumerate of power bucket types.
LaserType { eCW, ePulse };	Enumerate of laser type.

Events:

OnNewDataReceved: BeamOn has made a new measurement

Methods:

GetVideoDeviceArray(out **ArrayList** Devices**)** - returns array list of the connected BeamOn video devices.
StopVideo() - Stop BeamOn video device.
StartVideo (UInt16 Num**)** - Start BeamOn video device.
SetLevel (**Int16** Num, **Single** Level) - set clip level.
PointF **GetCurrentPosition** (`int nROI`) - returns current measuring position.
PointF **GetCurrentPeak** (`int nROI`) - returns current measuring peak.
Single **GetGaussCorrelation** (`int NProf`) - returns Gaussian correlation.

Properties:

ShutterTable - get the shutter table values, used by the camera hardware.
Shutter - get or set the shutter value from ShutterTable array.
GainTable - get the gain table value, used by the camera hardware.
Gain - get the gain value from GainTable array.
GainIndex - get or set the index of gain used by the camera hardware.
ShiftGainIndex - get or set the shift index of gain used by the camera hardware.
AveragePictureEnable - enable or disable averaging pictures.
AveragePicture - set or get of number pictures to averaging.
Average - set or get number of measured data for averaging.
NumDevices - set or get number of BeamOn devices connected to you computer.
CurrentDraw - set or get type of cross line.
CurrentProfile - get or set type of mesuring profiles.
ActiveDevice - get or set active BeamOn device.
Unit - get or set type of measuring data units.
FocalLens - get or set focal lens value.
Levels - get or set profile measure levels array.
Position - get measured positions array.
Peak - get measured peaks array.
ProfileWidth - get measured profiles width array.
GaussWidth - get measured gaussian width array.
GaussCorrelation - get measured gaussian corelations array.
ProfileV - get measured Vertical profile data array.
ProfileH - get measured Horizontal profile data array.
Projection - get measured projection data array.
CurrentDimension - get or set view type of picture.
ProjectionWireDensity - get or set projection wire density.
ProjectionAngleTilt - get or set projection angle tilt.
ProjectionStepRotation - get or set projection step auto rotation.
ProjectionAngleRotation - get or set projection angle rotation.
ProjectionAutoRotation - enable or disable projection auto rotation.
Zoom - get current zoom value.
IndexZoom - get or set current zoom index.

EnablePowerBucket – get or set status measuring bucket power.
BucketEnergy – get or set in percent energy inside bucket.
PowerBucket – get or set type power bucket.
BucketAngle, BucketSizeA, BucketSizeB – get characteristics of measuring power bucket.

TypeLaser – get or set type of laser.
TriggerValue – get or set trigger level.

EnableFreezeMode – get or set freeze mode.