Functions (Mathematical Data Processing)

Implemented functions

The expression of object of Eval tag type or ESL scripts may contain functions defined either directly by typing them from the keyboard or selecting from the list of functions. The list of functions can be opened after clicking the button **Functions** in the configuration dialog box of eval tags or in the dialog box for the configuration of event actions.

Types of implemented functions:

- Trigonometric functions
- Mathematical functions
- Date and time manipulation functions
- Character and text string manipulation functions
- Functions evaluating the value flow within a time period
- Functions for definition and analysis of impulsive values
- Special application functions
- Structure variable manipulation functions
- Object value attribute manipulation functions
- System functions
- Other functions

List of implemented functions

Trigonometric functions:

- %ArcCos
- %ArcCot
- %ArcSin
- %ArcTan
- %Cos
- %Cot
- %Sin
- %Tan

Mathematical functions:

- %Abs
- %Div
- %Ln
- %Log
- %Mod
- %ModR
- %Power
- %Rnd
- %Round
- %Sqrt
- %Trunc

Date and time manipulation functions:

- %AddIntervalLocal
- %AddIntervalMono
- %AddTime
- %Day
- %Hour
- %GetCurrentTimeZone
- %GetKnownTimeZones
- %GetTimeZone
- %IsValidTimeZone
- %LocalToMonoTime
- %Min
- %ModTime
- %Month
- %MSec
- %NewTime
- %NextMonth
- %NextTime
- %RelTimeToStr
- %Sec
- %StrMonoToTime
- %StrToRelTime

- %StrToRelTimeEx
- %StrToTime
- %StrToTimeEx
- %SubTime
- %SubTimesLocal
- %SubTimesMono
- %TimeFromItems
- %TimeToStr
- %TimeToStrEx
- %TimeToStrMono
- %WeekDay
- %WeekNr
- %WeekOfYear
- %WeekStartTime
- %Year

Character and text string manipulation functions:

- %Asc
- %FindStr
- %GetStrItem
- %GetStrItemsCount
- %HeadStr
- %Chr
- %IToStr
- %LeftStr
- %LeftTrim
- %LenStr
- %MD5
- %RemoveDiacritics
- %RelTimeToStr
- %ReplaceStr
- %RToStr
- %RightStr
- %RightTrim
- %RxFind
- %RxReplaceStr
- %StrToI
- %StrToR
- %StrToRelTime
- %StrToTime
- %SubStr
- %TailStr
- %TimeToStr
- %ToLower
- %ToUpper
- %Trim

Functions evaluating the value flow within a time period:

- %Ave
- %Avex
- %AvgFloat
- %Imp
- %Impt
- %Integral
- %MaxDif
- %MaxImp
- %MaxImpt
- %MaxInteg
- %MaxR
- %MinR

Functions for definition and analysis of impulsive values:

- %LastImpTime
- %LastImpTimeEnd
- %Pulz
- %PulzB

Special application functions:

- %Bpr
- %EcoAve
- %Eft
- %Es
- %Ew
- %GenD2UID
- %MD5
- %Smv

Structure variable manipulation functions:

- %ColumnAvg
- %ColumnMax
- %ColumnMin
- %ColumnSum
- %GetColDescript
- %GetColName
- %GetColsNr
- %GetItemValue
- %SampleStandardDeviation
- %StructRowStatAvg
- %StructRowStatMax
- %StructRowStatMin
- %StructRowStatSum
- %StructStatAvg
- %StructStatMax
- %StructStatMin
- %StructStatSum

Object value attribute manipulation functions:

- %Case
- %Flag
- %GetValueType
- %NtV
- %NvtV
- %PrevV
- %SaveTimeStamps
- %SetFlags
- %SetFlagsBy
- %SetInvalid
- %SetLimitStatus
- %SetWeak

System functions:

- %DskFreeI
- %DskFreeR
- %FileSize
- %GetComputerName
- %GetD2000Version
- %GetDefaultRegValue
- %GetEnvStr
- %GetInstallDir
- %GetNumberOfProcessors
- %GetRegValue
- %HI_ShellExecute
- %IsTCLEnvironment
- %PerfCounter
- %PerfCounterR
- %SetDefaultRegValue
- %SetEnvStr
- %SetRegValue

Other functions:

- %In
- %IsNull
- %B4ToReal32