

StructCalcOp

%StructCalcOp function

Function	The function performs a given mathematical operation over a part of local structures. This function belongs to the control functions.										
Declaration	<pre>%StructCalcOp(in _recA[fromRowA]^fromColA, IN _recA[toRowA]^toColA, in _recB[fromRowB]^fromColB, in _recC[fromRowC]^fromColC, INT in _operation [, IN BOOL _bInvalidIsZero = @TRUE],)</pre>										
Parameters	<table><tr><td>_recA[fromRowA]^fromColA, _recA[toRowA]^toColA</td><td>Reference to the value of local structured variable field.</td></tr><tr><td>_recB[fromRowB]^fromColB</td><td>Reference to the value of local structured variable field.</td></tr><tr><td>_recC[fromRowC]^fromColC</td><td>Reference to the value of local structured variable field.</td></tr><tr><td>INT IN _operation</td><td>Type of performed mathematical operation.</td></tr><tr><td>IN BOOL _bInvalidIsZero</td><td>Optional parameter. Determines a behavior of mathematical operation in case that some of operands has an invalid value.</td></tr></table>	_recA[fromRowA]^fromColA, _recA[toRowA]^toColA	Reference to the value of local structured variable field.	_recB[fromRowB]^fromColB	Reference to the value of local structured variable field.	_recC[fromRowC]^fromColC	Reference to the value of local structured variable field.	INT IN _operation	Type of performed mathematical operation.	IN BOOL _bInvalidIsZero	Optional parameter. Determines a behavior of mathematical operation in case that some of operands has an invalid value.
_recA[fromRowA]^fromColA, _recA[toRowA]^toColA	Reference to the value of local structured variable field.										
_recB[fromRowB]^fromColB	Reference to the value of local structured variable field.										
_recC[fromRowC]^fromColC	Reference to the value of local structured variable field.										
INT IN _operation	Type of performed mathematical operation.										
IN BOOL _bInvalidIsZero	Optional parameter. Determines a behavior of mathematical operation in case that some of operands has an invalid value.										
Description	<p>The value of parameter _operation determines the mathematical operation according to this table:</p> <table><tr><th>Value</th><th>Mathematical operation</th></tr><tr><td>0</td><td>+</td></tr><tr><td>1</td><td>-</td></tr><tr><td>2</td><td>*</td></tr><tr><td>3</td><td>/</td></tr></table> <p>The mathematical operation is performed as follows:</p> $C = A + B$ <p>where:</p> <p>Symbol A represents an area of local structured variable values which is given by its left upper corner (field _recA[fromRowA]^fromColA) and right lower corner (field _recA[toRowA]^toColA). The structured variable which is used in the first and second parameter must be the same. The dimensions (number of rows and columns) are also defined by this way. They are used in the definition of B and C areas that are defined only by their right upper corner in the parameters.</p> <p>The mathematical operation (defined by a parameter) is performed among the individual appropriate fields of A and B areas. A result is written into the C area.</p> <p>A set parameter _bInvalidIsZero (zeroing of invalid value) is interpreted as follows:</p> <ul style="list-style-type: none">• using the operators + and -, the invalid values are, before a calculation, considered as zero values• using the operators * and /, the result is 0	Value	Mathematical operation	0	+	1	-	2	*	3	/
Value	Mathematical operation										
0	+										
1	-										
2	*										
3	/										
Example	<p>In the following example there is shown an addition of two matrixes.</p> <p>The first matrix is delimited by fields _A[1]^firstColNr (where _firstColNr has value =1) and _A[2]^lastColNr (where _lastColNr is set on consecutive number of the last column of relevant structure). The second matrix is defined by the field _B[1]^firstColNr and consists of two rows and of the same number of columns like matrix in variable _A.</p> <p>The result is written to appropriate fields in variable _C.</p>										

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BEGIN
  RECORD (SD.BIG) _A
  RECORD (SD.BIG) _B
  RECORD (SD.BIG) _C

  REDIM _A[20]
  REDIM _B[20]
  REDIM _C[20]

  INT _firstColNr, _lastColNr

  _firstColNr := 1
  _lastColNr := _A\CNR
  _A[1]^R1 := 1
  _A[2]^R1 := 2
  _B[1]^R1 := 1
  _B[2]^R1 := 2
  %StructCalcOp(_A[1]^_firstColNr,_A[2]^_lastColNr,_B[1]^_firstColNr,_C[1]
  ^_firstColNr,0)

  END

```



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