Start condition of an event

The start condition of an event (trigger, alarm start/stop conditions, ...) is defined by means of three parameters:

1. object
2. object value status
3. validity of the status (normal, inverse)

Object may be an optional type (or item of object of Structured variable type) and must have a (meaningful) value.
Such defined event occurs when the value of the object (1) is in given status (2), eventually opposite status (3).

In some cases (depending on the type of object, the event is defined for), a group of objects (object of Logical group or Object group type) or object of Structured variable type (whole structure, row or column) can be defined as event object (1). The event is being generated if defined group (structure) contains at least one value matching the condition. **Condition is only being evaluated on a value change**.

Value states (20) depends on the type of the object used in the condition. The following table shows all value states available in D2000 systems:

Status	Meaning
Value	Value of @TRUE.
Err	Invalid value.
InLim	Value in limit.
HiLim	Value above high limit (HL object value < VHL).
LowLim	Value below low limit (VLL object value < LL).
Weak	Value in Weak status.
Run	Process is running.
Crash	Process terminated with error (incorrect termination).
Stop	Process stopped correctly.
WDErr	Error in communication with the process D2000 Server - Watch Dog Error (flow of Watch Dog messages between given process and the **D2000 Server** is interrupted).
StON	Station communicates.
StOFF	Station doesn't communicates. The communication has been disabled by operator (through control windows in D2000 HI) or in the station configuration in the process D2000 CNF.
StCOMERR	Soft communication error. Such error occurs after a data transmission is unsuccessful.
StHARDERR	Hard communication error. Such error occurs if the communication with the station is in the status StCOMERR within a time defined by the parameter **Time filter**. If the station value is St_HARDERR then all I/O tags of the station will pass to undefined status.
StSIMUL	Communication with the station is simulated.
StWAIT	The station is in AUTO mode. Communication is stopped. The control object value is @TRUE. Requests for output are postponed and they will be executed when the control object value is @FALSE.
Change	Value change.
VHiLim	Value above highest limit --> object value VHL
VLowLim	Value bellow lowest limit --> object value VLL
ProcAlarm	Active process alarm.
ProcCritAlarm	Active process alarm - critical.
Norm	Condition to start alarm doesn't occur.
Alarm	Condition to start alarm occurs.
Kvit	Alarm acknowledged by operator.
Block	Alarm blocked by operator or the option **Blocked alarm** checked in the alarm configuration.
UnBlock	The process D2000 Alarm is not running and operator unblocks given alarm in Block status.
NoKvit	Condition to stop alarm is met before the alarm is acknowledged - for acknowledge-required alarm.
NoKvitProcAlarm	Process alarm unacknowledged.
NoKvitProcCritAlarm	Process alarm unacknowledged - critical.
PA_NoAlarm	No active process alarm.
PA_ToOn	Process alarm - transition to ON level (TRUE).

PA_ToOff	Process alarm - transition to OFF level (FALSE).
PA_On	Process alarm - ON level (TRUE).
PA_Off	Process alarm - OFF level (FALSE).
PA_Err	Invalid value of process alarm.
PA_Oscillate	Oscillating value of process alarm.
PA_ErrCmdOn	Error in execution of the cm_SetSwitchOn command (ON).
PA_ErrCmdOff	Error in execution of the cm_SetSwitchOff command (OFF).
PA_SwToTrans	Process alarm - change of quadrat value into *Q_Trans*.
PA_SwToOn	Process alarm - change of quadrat value into *Q_On* (TRUE).
PA_SwToOff	Process alarm - change of quadrat value into Q_Off (FALSE).
PA_SwToErr	Process alarm - change of quadrat value into *Q_Err*.
PA_SwTrans	Process alarm - quadrat value is *Q_Trans*.
PA_SwOff	Process alarm - quadrat value is *Q_Off*.
PA_SwOn	Process alarm - quadrat value is *Q_On*.
PA_SwErr	Process alarm - quadrat value is *Q_Err*.
PA_ErrZalCmdOff	Error in execution of the cm_SetSwitchBkpOff command (BACKUP OFF).
PA_HL	Process alarm - HL limit state of the value.
PA_VHL	Process alarm - VHL limit state of the value.
PA_LL	Process alarm - LL limit state of the value.
PA_VLL	Process alarm - VLL limit state of the value.
PA_ToHL	Process alarm - change of value into the HL limit state.
PA_ToVHL	Process alarm - change of value into the VHL limit state.
PA_ToLL	Process alarm - change of value into the LL limit state.
PA_ToVLL	Process alarm - change of value into the VLL limit state.
PA_ErrWriteCmd	Error at setting of the value of output tags.
PA_Change	Process alarm - change of integer or analog value.
PA_SysPrAl	Special type of process alarm used just for two objects of System variable type - SystemError and SystemWarning.

Note:
If a column of structured variable is used as object (1), the list of value types depends on the value type of the column. If the column is *Object* type the list is will not be filtrated (there will be shown all value states).