

# Structured Variable

## Structured variables

The parent of all objects of *Structured variable* type is the object STRUCTS.

The character of object value is an array of rows. Number of rows (the configuration parameter **Array length**) must be other than zero. Row structure is given by a connected object of [Structure definition](#) type (the configuration parameter **Structure type**). Each value within the frame of structured variable contains the following configuration parameters:

- **Log changes**
- **Save start value**
- **Manual control**
- **Start value**
- **Limits (VHL, HL, LL, VLL, Hysteresis)**
- **Status text**
- **Index to transformation palette**

## Configuration parameters

To edit individual configuration parameter click left mouse button on corresponding parameter. According to the type of the parameter, a value is entered by either typing into the input field or selection from the list.

### Log changes

If the option is checked, each value change is to be written into the log database..

### Save start value

If the option is checked, the start value will become a part of the configuration of corresponding item and therefore each value change occurred during the application run is written into the log database. An exception is for an item of [Object type](#). Then the start value is understood to be a reference to an object, not item value. In this case, there are not saved value changes, but changes of the reference, that represents the item (see also the action SET AS for object of EVENT type).

#### Example:

The object Sec is associated with the item SV.StructDef[2]^Obj (that is *Object type*), and the association is changed (e.g. in event) to SysTime during the system run . If the option **Save start value** is not checked, this object change will not be saved in the configuration.

### Manual

If checked, it allows to control the item value during system run. If the item is [Object type](#), this option is applied to the reference to this object in the system (see also the action SET AS for object of EVENT type). Setting a value for such an item causes redirecting the request to the object, the current reference points to (mainly it is not a change of the value).

### Start value

### Limits

### Status text

The parameter can be changed only at the level of an object of [Structure definition](#).

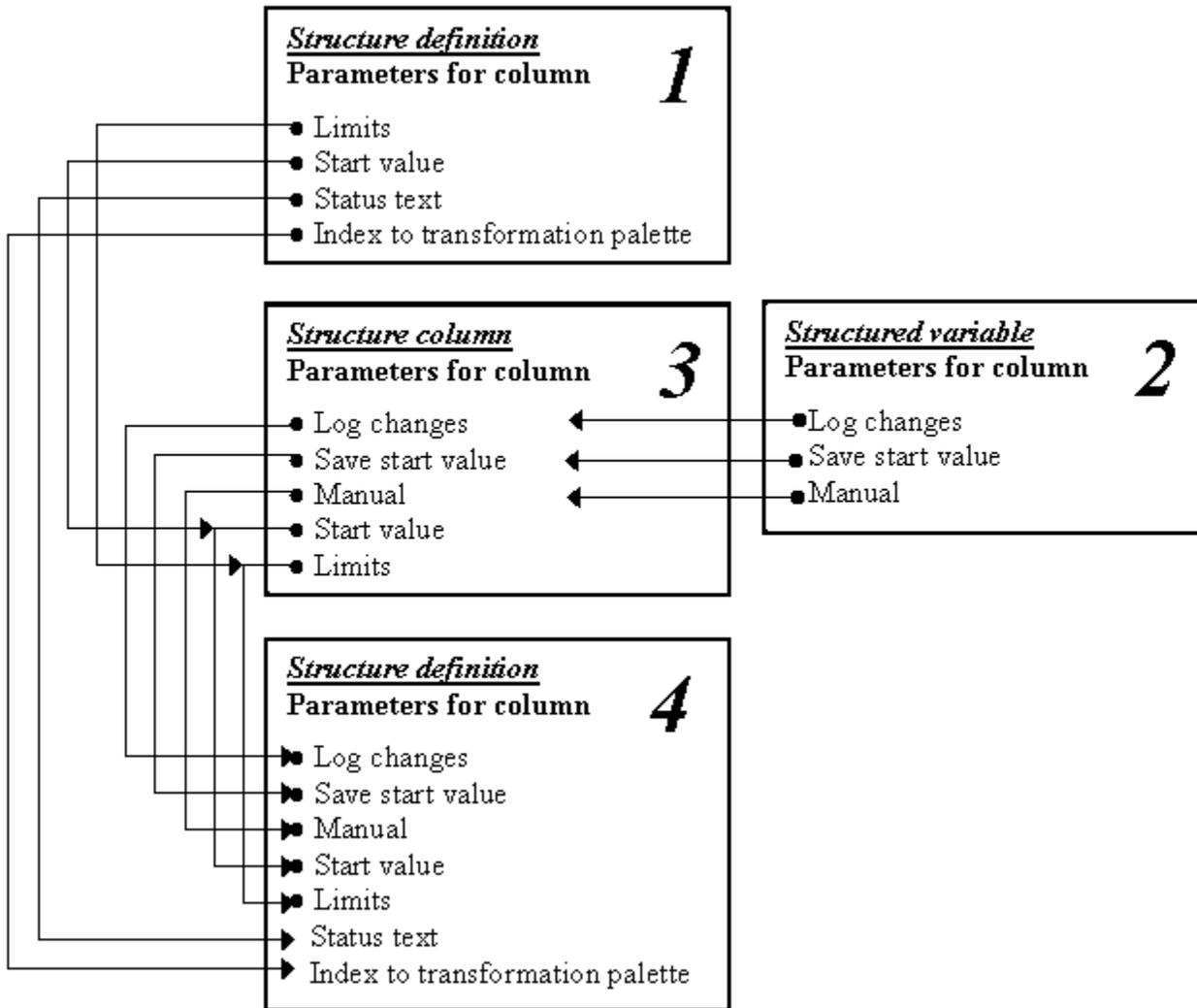
### Index to transformation palette

The parameter can be changed only at the level of an object of [Structure definition](#).

Each value of an item configuration parameter is defined in some way. The definition proceeds:

- from an object of [Structure definition](#) ([figure - section 1](#)) (Status text, Index to transformation palette)
- from *Structured variable* ([figure - section 2](#))(Log changes, Save start value, Manual control)
- from zero row of *Structured variable* ([figure - section 3](#))(Log changes, Save start value, Manual control, Start value, Limits)
- or defined directly on the item ([figure - section 4](#)) (Log changes, Save start value, Manual control, Start value, Limits)

They can be defined at various levels, as it is shown in the following figure:



Configuration of the parameters for *Column* of a *structure* is performed, when there is set up the row of 0.

The figure shows the possibilities of the hierarchical definition of values of the configuration parameters, where arrows represent a possibility of inheritance of the parameter and the symbol ● represents a possibility (and also place) to define the parameter.

## Predefined structured variables

D2000 system contains several predefined structured variables that allows to show some important diagnostic information on the status of the D2000 system. Detailed description of the objects is in the chapter [Predefined structured variables](#).



### Related pages:

- [Structured variable - configuration dialog box](#)
- [Predefined structured variables](#)