

User Routines for Symbol Functions

This subsection covers the following topics:

- Symbol Function Syntax
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-

Symbol Function Syntax function sized_window_gloss(win_url)

Symbol Function Syntax

You can make your own symbol functions available via exits in Entire Operations.

Syntax for symbol functions:

```
§!function<parm1,...,parmn>
```

Example: §!RANDOM<20,1>

You should take the following points into consideration for the above example:

- For a function to be recognized, an exclamation point (!, BS2000 ö) or a question mark (?) must always follow the escape character (here §).
- The parameter list is optional and is enclosed in angle brackets (<, >). No spaces are allowed between function name and parameter list.
- Parameters should be separated by commas.
- The total length of the function call may not be longer than 20.
- The symbol functions must be located in the SYSEOR library.
- The parameters are passed to the function in an extra field.
- The Entire Operations Monitor performs logging of symbol replacement. Additional logging may also be performed.
- After successful replacement, the symbol value is written to the active symbol table of the job. The symbol function is **not** called for subsequent replacements. Instead, the value is read from the active table.

The names of the symbol function exits begin with SX. Since the length of the names of Natural objects is limited to **8** characters, the function name (without !) can have a maximum length of **6** characters.

Example 1

The function !RANDOM is handled in the routine SXRANDOM.

The symbol function exists are called with the parameter list NOPXPL-A, so the first line of the exit should be:

```
DEFINE DATA PARAMETER USING NOPXPL-A
```

Meaning of the parameters in NOPXPL-A:

Parameter	Format	Use	
P-CALL-PLACE	(A03)	(in)	Constant SFX.
P-RC	(N04)	(out)	Return code:
			0 Function ok.
			4511 Symbol not found.
P-RT	(A66)	(out)	Return text (can be used for exact error description, optional).
P-OWNER	(A10)	(in)	Network owner.
P-NETWORK	(A10)	(in)	Job network.
P-JOB	(A10)	(in)	Job.
P-RUN	(P13)	(in)	Run number.
P-EXECUTION-NODE	(N03)	(in)	Entire System Server execution node.
P-SYMBOL-TABLE	(A10)	(in)	Name of the defined symbol table.
P-SYMBOL	(A20)	(in)	Function parameter, without brackets.
P-SYMBOL-VALUE	(A54)	(out)	Symbol value (function result).

Notes:

1. In the field P-SYMBOL, **only the function parameters** (without brackets) are transferred. The function names can be identified from the Natural variable *PROGRAM.
2. Any field from NOPXPL-A not listed above may not be used, because its contents are invalid.

Example 2

- Symbol Function
- Master JCL
- Active JCL
- Active Symbol Table

Symbol Function

```

* SYMBOL FUNCTION EXIT EXAMPLE
* SXQS<PARM1>
* CROSSFOOTING OF THE PARAMETER
* -----
DEFINE DATA PARAMETER USING NOPXPL-A
LOCAL
1 #I    (I02)
1 #N    (I02)
1 #SUM  (I02)
1 #A    (A01)
END-DEFINE
* -----
RESET #SUM
F1. FOR #I = 1 TO 20
  #A := SUBSTR (P-SYMBOL,#I,1)
  IF #A IS (N1)
    #N := VAL(#A)
    ADD #N TO #SUM
  END-IF
END-FOR /* F1.
P-SYMBOL-VALUE := #SUM
RESET P-RC P-RT
END

```

Master JCL

```

//SN000001 JOB ,SN,CLASS=K
//IEFBR14 EXEC PGM=IEFBR14
/***
/** +!D<AQ+1>
/** $ !D<AQ+1>
/** 
/** +!QS<4711>
/** $ !QS<4711>
/** 
/** +!QS<+*DATE>          NESTED SYMBOLS
/** +!QS<$*DATE>          NESTED SYMBOLS
/** $ !QS<$*DATE>          NESTED SYMBOLS
/** 
/** +!QS<+!D<AM-1>>      NESTED FUNCTIONS
/** +!QS<$ !D<AM-1>>      NESTED FUNCTIONS
/** $ !QS<$ !D<AM-1>>      NESTED FUNCTIONS
/** 

```

Active JCL

```
//SN000001 JOB ,SN,CLASS=K
//IEFBR14 EXEC PGM=IEFBR14
/*
/* +!D<AQ+1>
/* 19990101
/*
/* +!QS<4711>
/* 13
/*
/* +!QS<+*DATE>          NESTED SYMBOLS
/* +!QS<11/01/96>          NESTED SYMBOLS
/* 18                      NESTED SYMBOLS
/*
/* +!QS<+!D<AM-1>>      NESTED FUNCTIONS
/* +!QS<19990131>          NESTED FUNCTIONS
/* 30                      NESTED FUNCTIONS
/*

```

Active Symbol Table

Symbol	F A Wert	modified by
!D<AM-1>	A E 19990131	EORMON 11.01.96 17:25
!D<AQ+1>	A E 19990101	EORMON 11.01.96 17:25
!QS<11/01/96>	A E 18	EORMON 11.01.96 17:25
!QS<19960131>	A E 30	EORMON 11.01.96 17:25
!QS<4711>	A E 13	EORMON 11.01.96 17:25
X	A E x	SN 10.11.95 13:13