

E-mail: modus@swman.ru

WWW: <http://www.swman.ru>

/ : (495) 642 89 62,(499) 267 79 59

5.20

I.		4
1.	.....	4
	.....	5
	.....	8
	.....	10
	.....	11
	.....	12
	.....	13
	.....	19
	.....	19
	trenenergo.sde.....	19
	10	22
	.....	30
	.....	32
	.....	34
	- 0,4	36
	.....	37
	.....	41
2.	.....	46
	.....	46
	.....	47
	"	50
	"	50
3.	.....	50
	.....	51
	.....	51
	.....	52
	.....	53
	.....	55
	.....	55
	«	56
	.....	57
4.	.....	57
	.....	58
	.....	59
	.....	60

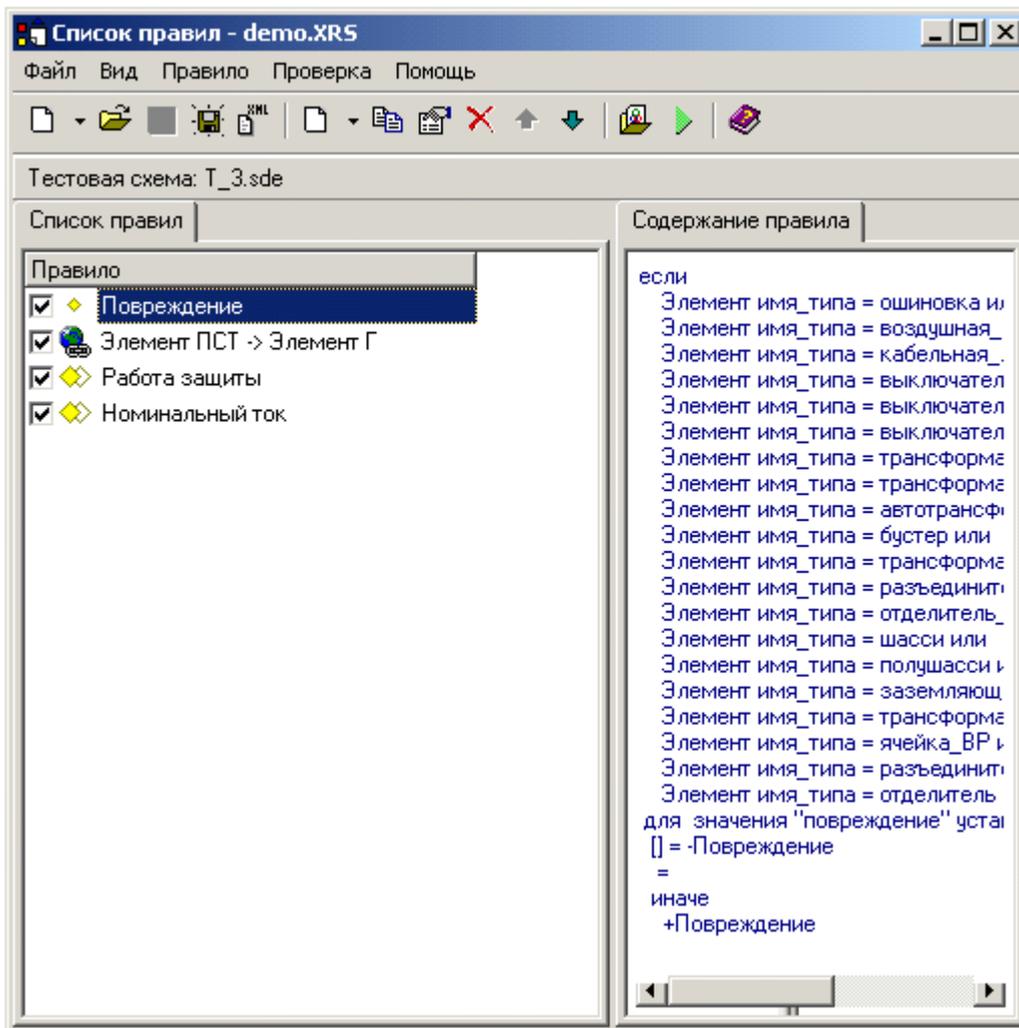
	.....	60
	.....	60
	.....	61
	.....	63
5.	.....	64
	.....	64
	.....	66
	ModusPlugin.tlb.....	67
Delphi6,	SDENavigation.....	71
	.....	71
	.....	72
	.....	73
	Modus.....	73
	(HTSDN).....	73
	(HTSDN2).....	73
	.....	74
	.....	74
	.....	75
	sde (PGUEST).....	75
	.....	76
	(SDEDB).....	76
	.....	76
	.....	77
	.....	78
	.....	78
OPC	.....	79
	.....	79
	.....	79
	SDE (OPCSDE).....	79
	.....	81
	.....	82
	.....	82
	.....	82
	.....	82
	.....	83
	.....	86
	.....	86
	.....	87
	.....	87
	.....	88
	.....	89
	.....	91
	.....	91
	.....	92
	.....	94
	.....	104
	.....	108
	.....	108
	.....	108
	.....	108
	.....	112

.....	113
.....	115
.....	116
.....	116
.....	116
.....	119
.....	119
.....	122

1.

1.1

5.20. –



. 1-1.

(. 1-1.)

XRS

1.1.1



(. 1-2.)

Правило отображения: Повреждение

Описание | Элемент | Таблица соответствия

Название
Повреждение

Применить в момент

- Загрузка
- Масштабирование
- Изменение параметра

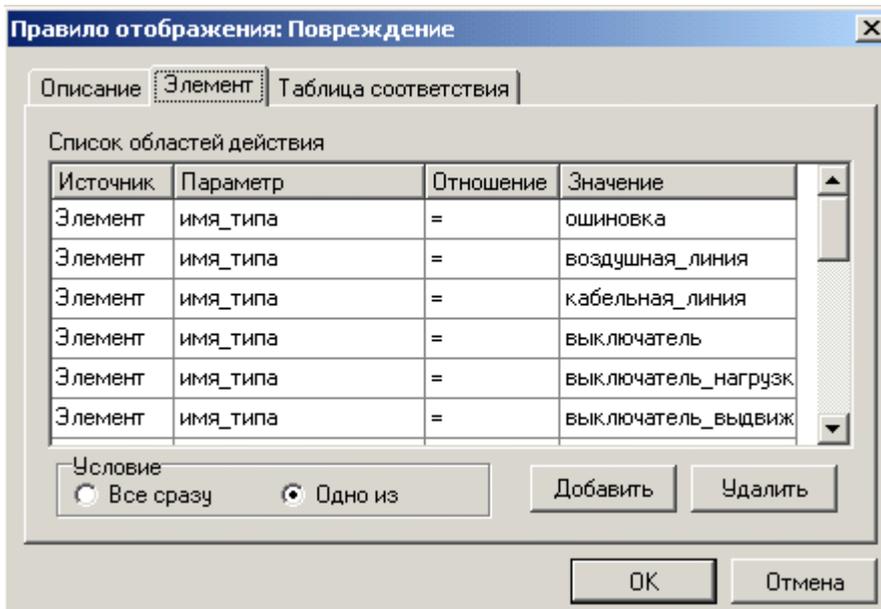
Активное

OK Отмена

. 1-2.

(. . . 3).

(. 1-3.)



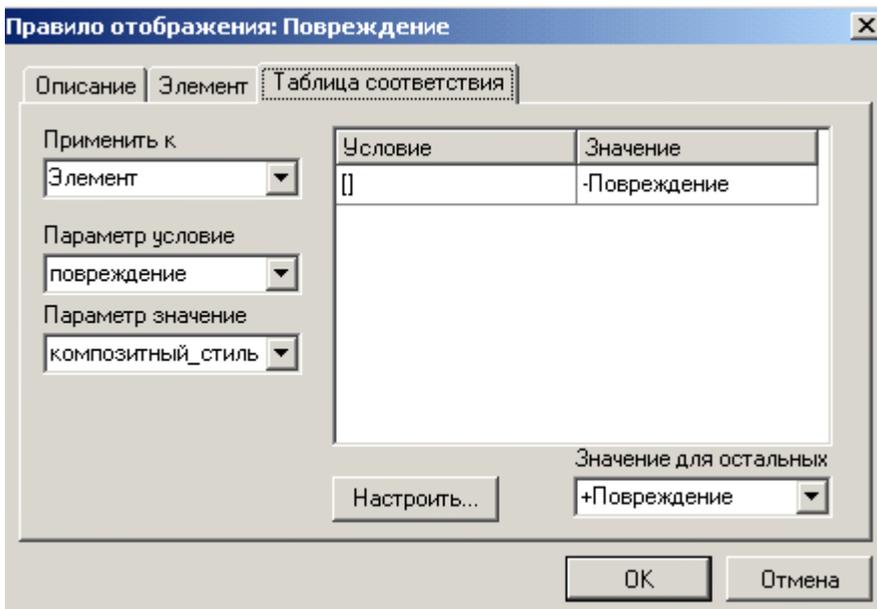
. 1-3.

Enter () « »

(. . 1-3.)

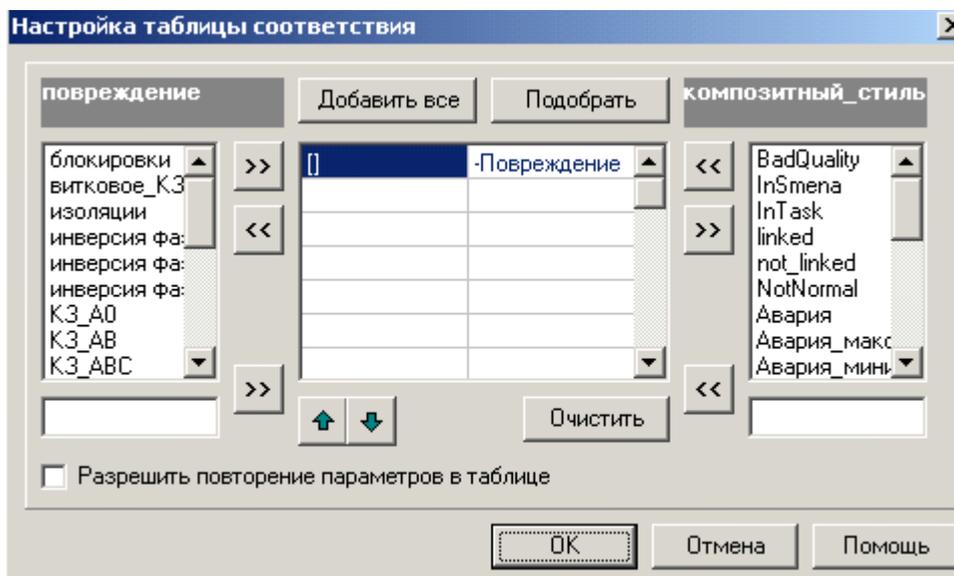
(. . 1-4.)

(. . 1-4.)



. 1-4.

(. . 1-5.)



. 1-5.

1.1.2



1-6.)

Правило формирования гиперссылки

Условие применения: Гиперссылка

Название: Текст меню:

Условия применения: Активное

Источник	Параметр	Отношение	Значение
Элемент	ключ_привязки	<>	
Схема	ключ_привязки	<>	IDЭС_ТрЭ
Элемент	тип_оборудования	<>	ИНД
Схема	ключ_привязки	<>	IDПСТ_ТрЭ_С*

Условие: Все сразу Одно из

. 1-6.

(),

« »

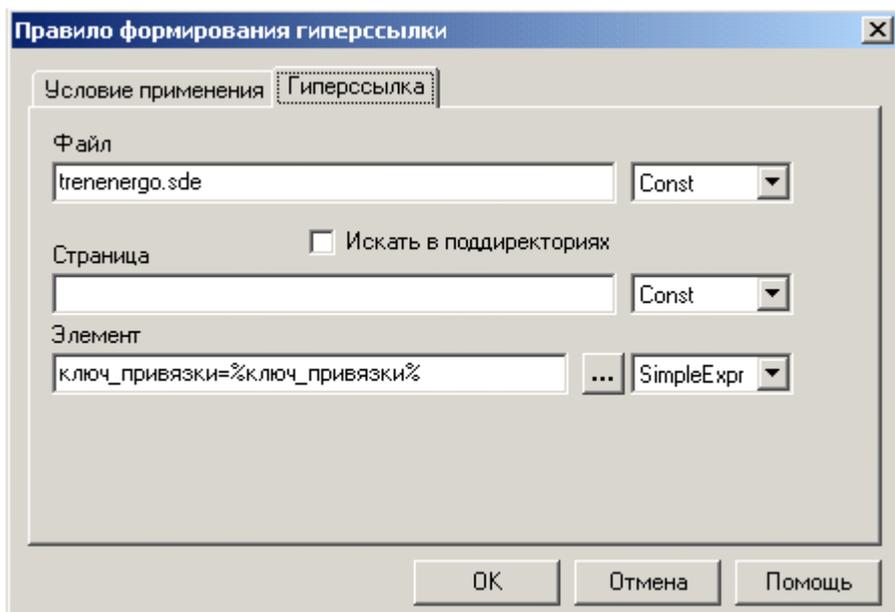
().

(. 1-6.)

Enter () « »

. 1-6.)

(. 1-7.)



. 1-7.

(, trenenergo.sde)

(. 1-6.)

()

(. 1-1.)

1.1.3



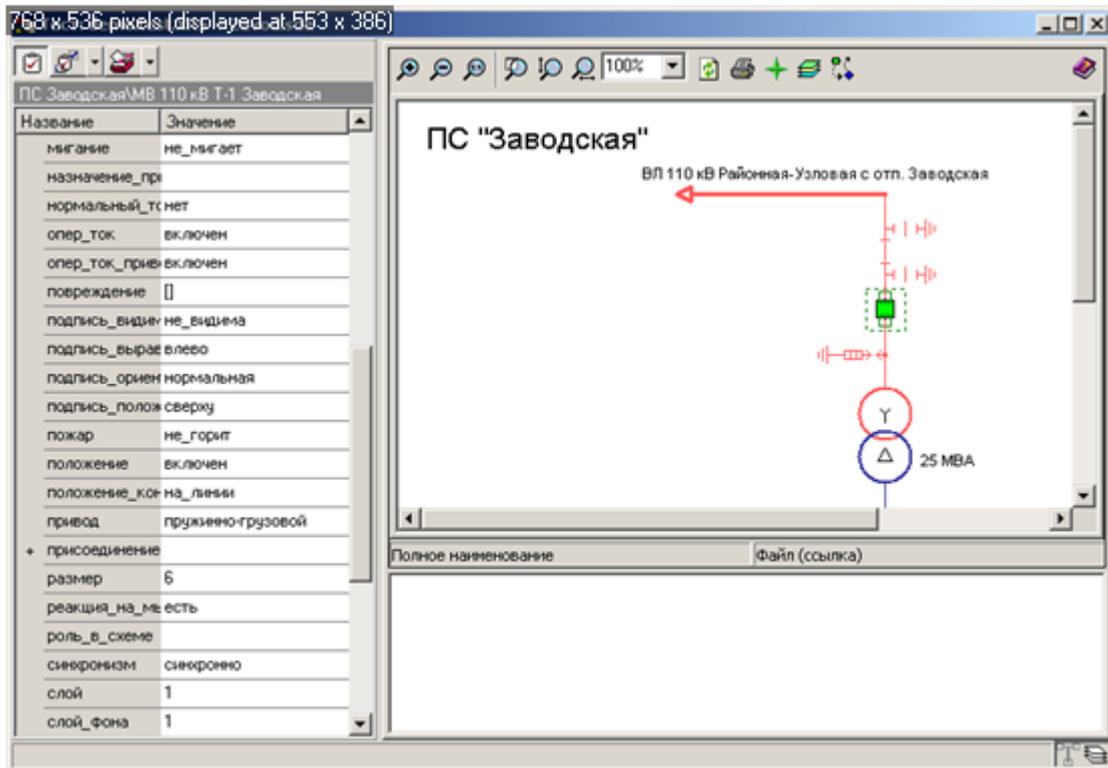


1.1.4

XRS



XRS, (. 1-8.)



. 1-8.

1.1.5

demo.XRH.

sde\trenenergo.sde		()
sde\Seti320.sde		()
\sde\COMBINAT.sde		C
\sde\PLAN\TP\TP3plan.sde		10
		-3

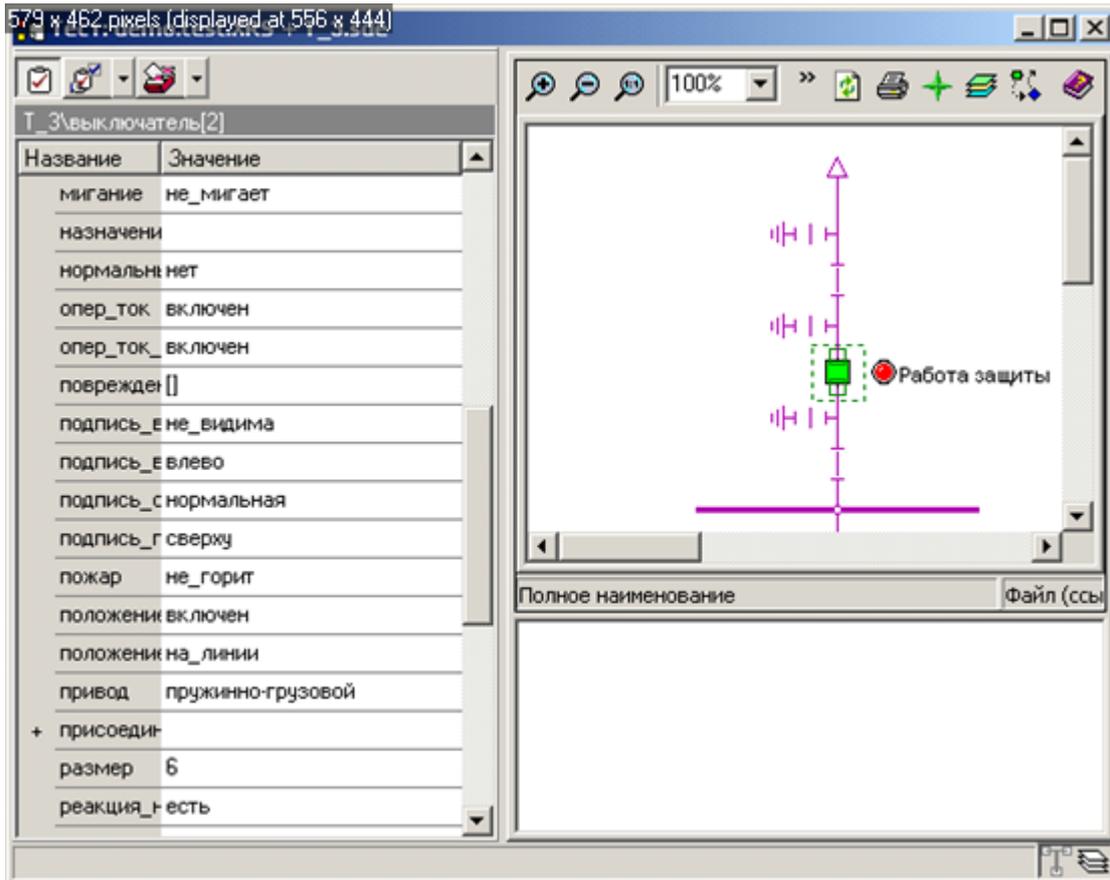
\sde\TP\tp3.sde		10/0,4
\sde\RUB\tp3.kl.sde		-3 0,4 ()
\sde\RUB\tp3.vl.sde		-3 0,4 ()
\sde\RUB\TP3 \TP3_rub1.sde		-3 1 0,4 ()
\sde\VL\ 110 -1 - .sde		-110
\sde\VL_10\ 10 3- 6.sde		-10

1.1.6

, . ,

(. 1-9.) ,

T_3.sde.

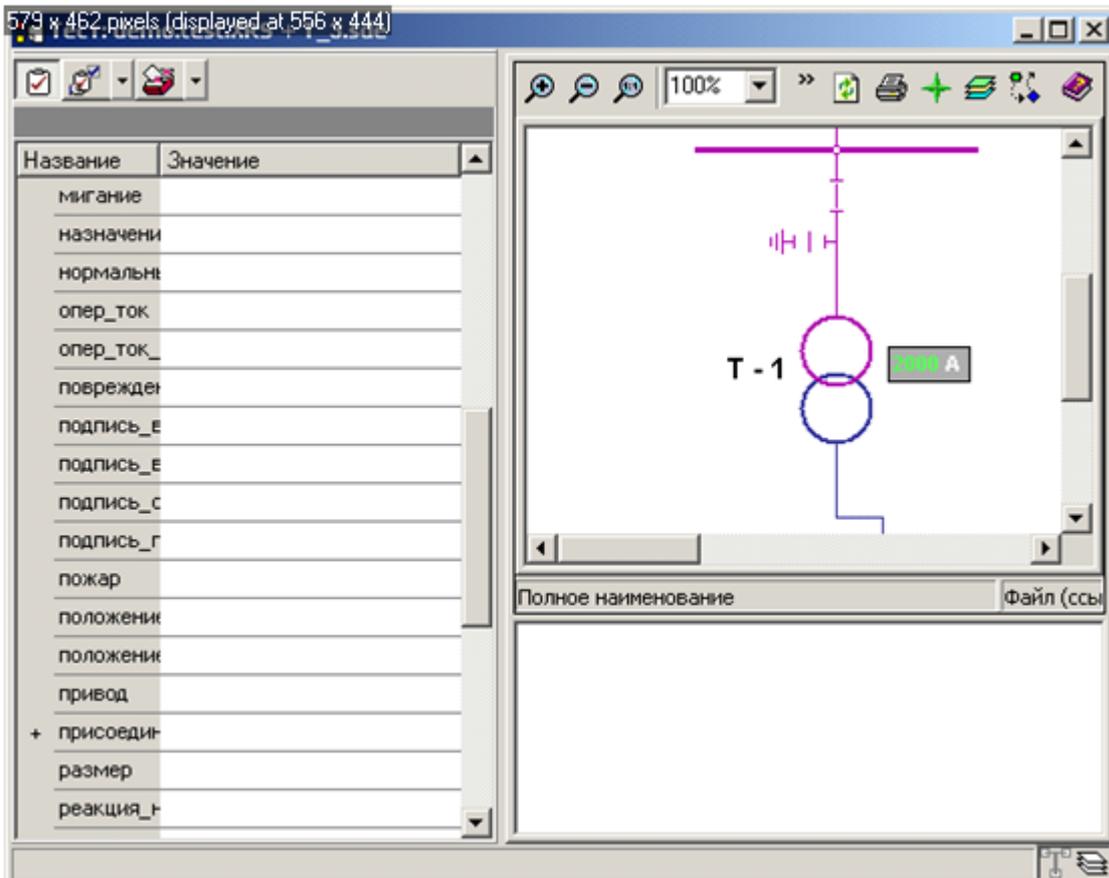


. 1-9.

(

)

(. 1-10.)



. 1-10.

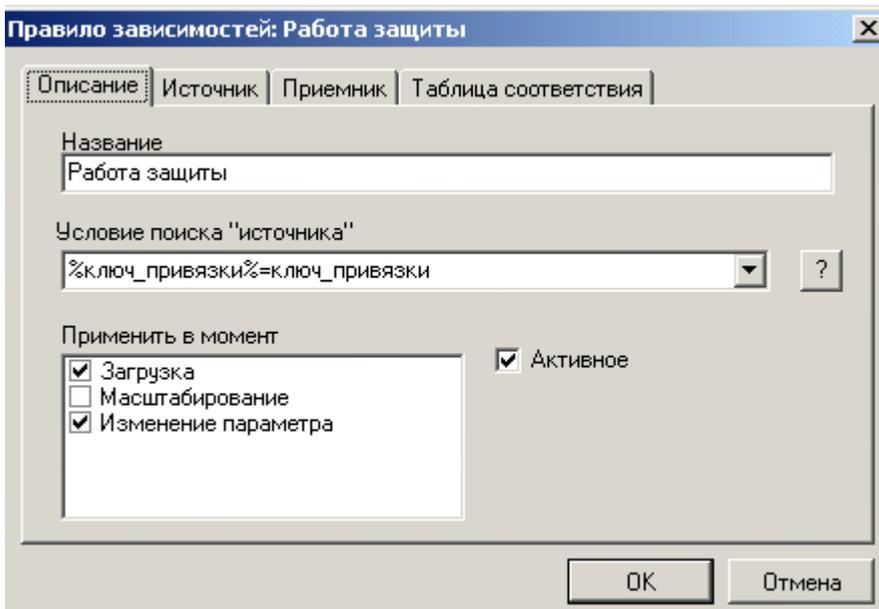
(

)

().



(. 1-11.)



. 1-11.

« »

, « »

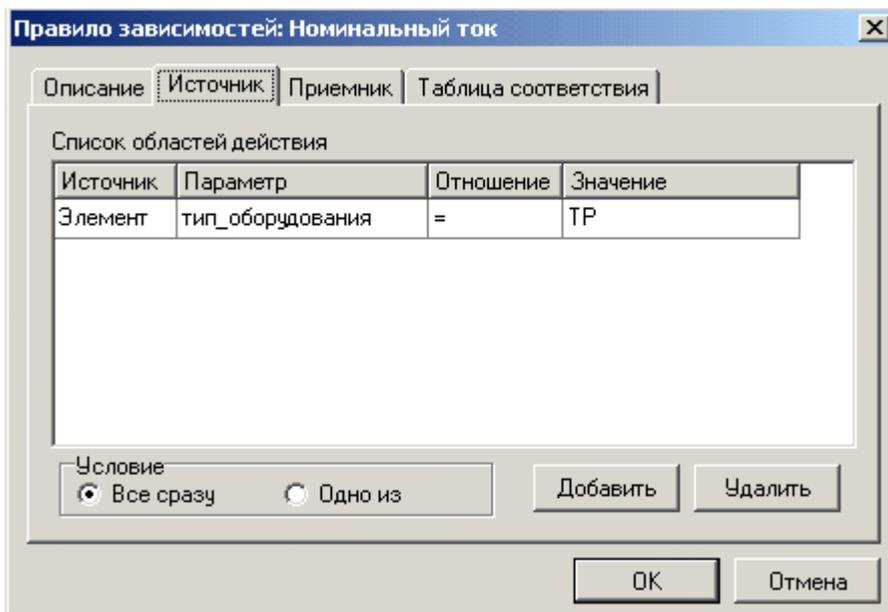


().

(. 1-12.)

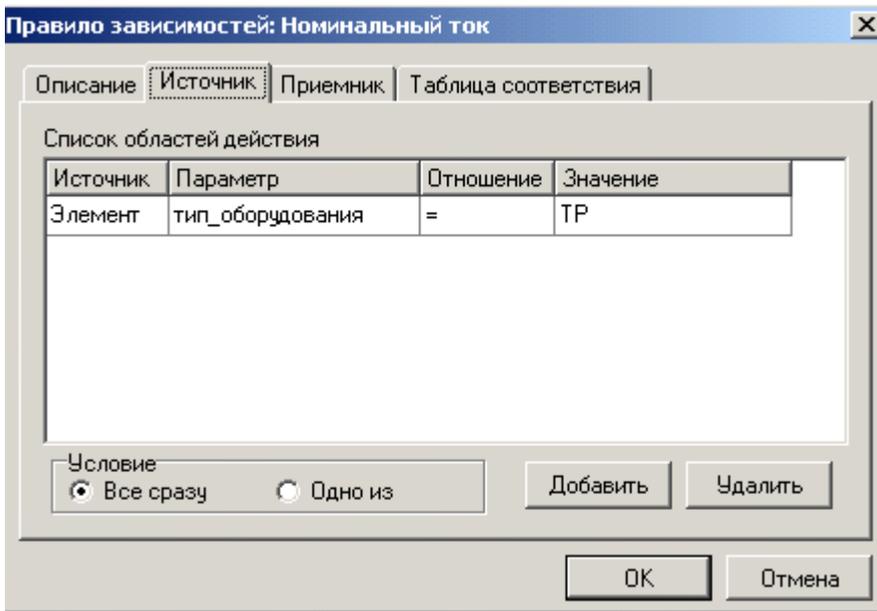
Enter () « »

(.1-12.)



.1-12.

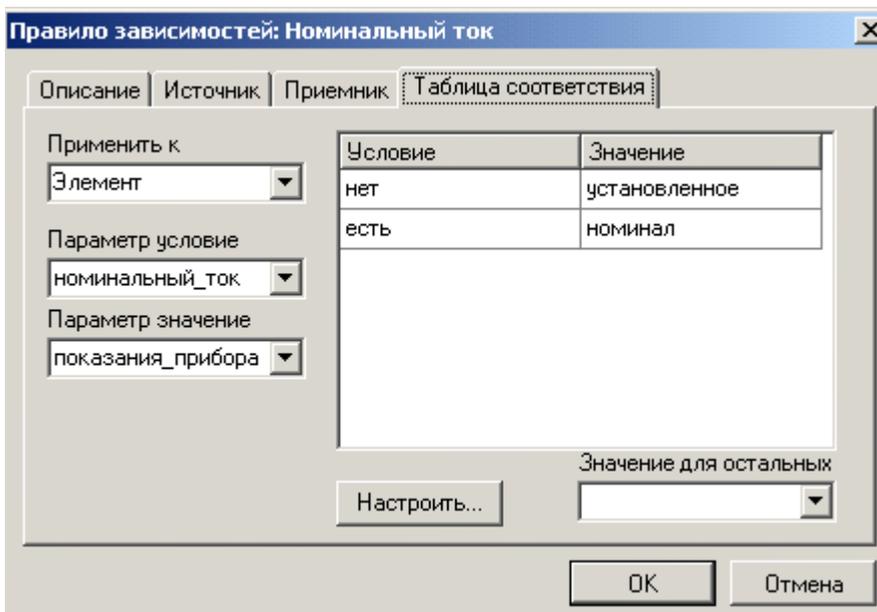
(.1-13.)



. 1-13.

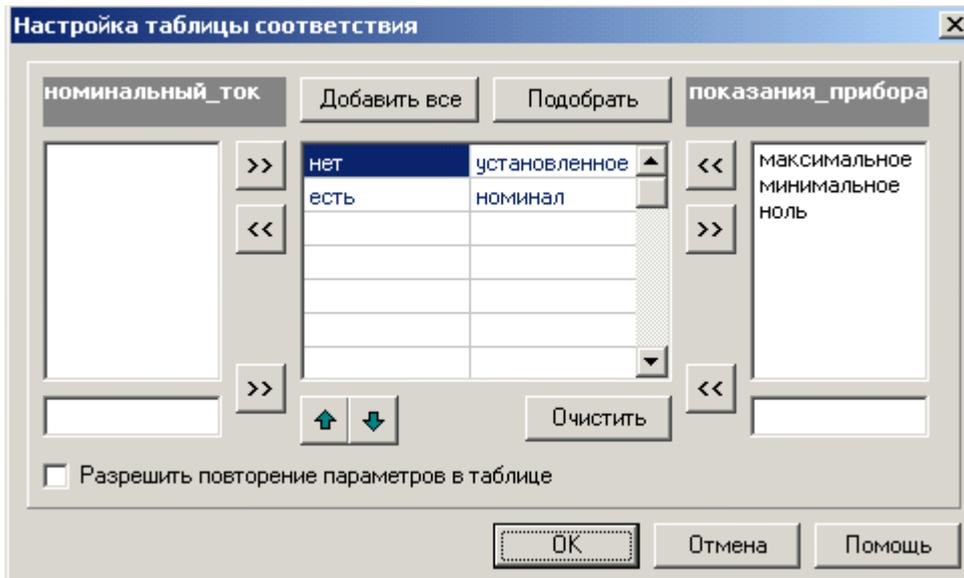
(. 1-14.)

(. 1-14.)



. 1-14.

(. 1-15.)



. 1-15.

1.1.7

1.1.8

1.1.8.1

trenenergo.sde

trenenergo.sde

“ ” , (_ =).

-> (- ->).

:

- <> ()

- = - « »,

-

= ID ,
 - ID .
 :
 File=% [1]%- ()
 , (*.sde)
 Element= =% % -
 .
 :
 110 -1 -> -
 Selsk.sde 110 -1 .
 • **trenenergo.sde**
10 Seti320.sde “ ” .
 10 .
 -> 10 (- 10).
 .
 :
 = ID ,
 - ID .
 = « »
 = ID * - « » ,
 ID - -
 :
 Seti320.sde - ,
 .
 Element= =% % - « »
 « » .
 :

10 -

Seti320.sde

• **trenenergo.sde**

- 110 “ ” .

-> (-).

:

- <> ()

- = ID - - ,

- ID - .

- = - « - » ,

« - » .

:

File= \VL\+% - %+'.sde'- ,

.

\VL - VL, .

+% - % - trenenergo.sde « - » ,

- - (, 110 -1 -).

.sde.

:\VL*.sde (, \VL\ 110 -1 - .sde).

:

110 -1 - -

110 -1 - .sde

• **trenenergo.sde**

10 Seti320.sde “ ” 10 ,

(- =).

10 .
-> 10 (- -> 10).

:

- <> ()
- = - « »,
- = ID - ,
- ID - .
- = 10 - ,
- 10 .

:

Seti320.sde -

Element= - =% - % -

:

I-II .10

-> 10 - 110 Seti320.sde

I-II .10 .

1.1.8.2 10

- 10 Seti320.sde
trenenergo.sde “ ” .
- 10 Seti320.sde
trenenergo.sde “ ” , .

-> (-).

:

◇ ()

◇ ID _Raion - ,

ID _Raion.

◇ - ,

.

◇ ID _Raion_ * - ,

ID _Raion_ *.

◇ ID _Raion_ * - ,

ID _Raion_ *.

◇ RTP* - ,

RTP.

◇ - ,

.

:

trenenergo.sde - ,

.

Element= - =% - % -

1:

1 -

trenenergo.sde .

2:

I-II .10 1 -

trenenergo.sde ,

“ ” , .

10 -> (-).

.

:

- <> ()

- = - « »

- = **ID** - * - ,

« », - **ID** - -

- = **ID** _Raion - ,

- **ID** _Raion.

:

File=% . [1]% - ()

, (*sde)

Element= - =% - % -

:

1 -

Selsk.sde .

• **10** **Seti320.sde**

“ ” .

.

10 -> (-).

.

:

- = **TP*** - ,

TP.

= « »
 = ID _Raion - ,
 - ID _Raion.
 :
 File= \TP\TP+% _ %+'.sde'- ,
 .
 \TP - TP,
 TP - .
 +% _ % - Seti320.sde « », - (,
 3).

.sde.

: \TP\TP*.sde (, \TP\ TP3.sde).

:

3
TP3.sde.

• 10 Seti320.sde

“ ”

Main -> (-).

:

= TP* - ,

TP.

= « »
 = ID _Raion - ,
 - ID _Raion.

– .

File= \PLAN\TP\tp+% %+'plan.sde'– ,

\PLAN – , TP
\TP – TP,

tp – .
+% – % - Seti320.sde « », – (,
3).

plan – .
.sde.
:\PLAN\TP\tp*plan.sde (, \PLAN\TP\ tp3plan.sde).

:
3 –
tp3plan.sde.

• **10 Seti320.sde**
“ ” , .

10 -> (–
).

:
– <> ()
– = TP* – , « »,
– TP
– = ID _Raion – ,

– ID _Raion.

:
 File \TP\TP+% . _ %+'.sde'
 \TP – TP,
 TP – .
 \+% . _ % - Seti320.sde « » _ –
 *.
 Podrobnya_TP3 – .
 .sde.
 : \TP\ Podrobnya_TP3.sde (, \Podrobnya_T\TP\
 Podrobnya_TP3.sde).

Element= _ =% _ % -

:
 1 3 _
 TP3.sde .

• 10 Seti320.sde

“ ” .

Main -> (–).

:
 – <> ()
 – = TP* – , « » ,
 – TP
 – = ID _Raion – ,

– ID _Raion.

:
 File= \PLAN\TP\tp+% . _ %+'plan.sde' – ,
 .
 \PLAN – , TP
 \TP – TP,
 \tp – .
 \+% . _ % - Seti320.sde « » – –
 *. (, 3).
 plan – .
 .sde.
 : \PLAN\TP\tp*plan.sde (, \PLAN\TP\ tp3plan.sde).

:
 1 3 –
 tp3plan.sde 1 .

• “ ” . 10 Seti320.sde – 10

Raion -> (–).

:
 – <> ()- 10
 – = ID _Raion – ,
 – ID _Raion.
 – = – « – »,
 « – » .
 – = – – « – ».

- < ID - ,
 ID - .
 :
 File= \VL_10\+% _ %+'.sde'- ,
 .
 \VL_10- VL_10, .
 +% _ % - Seti320.sde « - », -
 (, 10 3- 6).
 .sde.
 : \VL_10*.sde (, \VL_10\ 10 3- 6.sde).
 :
 10 3- 6 -
 10 3- 6.sde .
 • “ ” .
 10 Seti320.sde - 10
 -> (-).
 :
 - < ()- 10
 - < ID _Raion - ,
 ID __Raion.
 - < VL* - ,
 VL.
 - < - ,
 .
 - < - ,
 .

« _ » = 10 ,
 = ID _Raion - ,
 - ID _Raion.
 :
 File= \VL_10\+% _ %+'.sde'- ,
 \VL_10 - VL_10,
 +% _ % - Seti320.sde « _ », -
 (, 10 3- 6).
 .sde.
 : \VL_10*.sde (, \VL_10\ 10 3- 6.sde).

:
 10 3- 6 56 71
 - 10 3- 6.sde

1.1.8.3

-

“ ”

,
 .
 -> (-).
 :
 - <> ()
 - = * - ,
 - .
 - = - ,

```

:
File= \..\TP\TP+% .# _ %+'.sde' ,
\..\TP \ TP - TP TP,
+% .# _ % - -TP_*
* ( ,
- TP_3plan 3).
.sde.
Element= _ =% _ % -
:
-1 -
TP3.sde -1.

```

• **Seti320.sde** “ ” **10**

```

10 Seti320.sde.
-> Main( - ).
:
_ <> ( )
_ = * - ,
- .
_ = - ,
.

```

:
File= \..\..\Seti320.sde -

Element= _ =% _ % -

:

-1

-

10

Seti320.sde

-1

1.1.8.4

•

“ ”

,

04 -> (-).

:

- <> ()

- = 0,4 - ,

0,4 .

- = - - ,

< _ >

:

File= \..\..\TP\TP+% .# _ %+'.sde' - ,

\..\..\TP \ TP - TP TP,

+% .# _ % - -TP_*

* (,

- TP_3_1_RUB 3).

.sde.

Element= _ =% _ % -

:

. 92 .2 -

TP3.sde .

•

“ ”

0,4 .

-> 04 (- 04).

:

_ <> ()

_ = 0,4 - ,

0,4 .

_ = - - ,

« _ » - .

_ = - ,

.

:

File= ..\tp+% .# _ %+'.kl.sde' - ,

tp -

+% .# _ % -

-TP_*

*

(,

- TP_3_1_RUB

3).

.sde.

Element= _ =% _ % -

:

. 92 .2 - 92 .1

04 -

TP3.sde

1.1.8.5

- **0,4**

“ ”

04 -> (-).

:

- <> ()

- = 0,4 - ,

0,4 .

- = - - ,

« - » - .

- = - ,

.

:

File= ..\RUB\TP+% .# - %+\TP+% .# - %+_rub+%#2-
 - %+'.sde' - ,

..\RUB \ TP - RUB TP,

+% .# - % - -TP_*

* (,

- _95 95).

..\RUB \ TP95

+ \TP+% # _ % - , TP
 -TP_* *
 (, - _3
 3).

..\RUB \ TP3\TP3

%+_rub -

..\RUB \ TP3\TP3_rub

+%#2-

_ % -

-TP_*_*RUB

*

(,

- _3_1_RUB

1).

..\RUB \ TP3\TP3_rub1

.sde.

..\RUB \ TP*\TP*_rub*.sde (, ..\RUB \ TP3\TP3_rub1.sde).

Element=

_ =% _ % -

:

92 .2

TP3_rub1.sde

•

0,4

“ ”

-> (-).

:

◇ ()

◇ ID - ,

ID - .

◇ ID _Raion - ,

ID _Raion.

◇ - ,

TP. = TP* - ,

— < — ,
.
— < — ,
.
— < — ,
.

:
File= \.\TP\TP+% .# — %+'.sde' - ,

\.\TP\TP — TP TP,
+% .# — % - -TP_*
* (,
- TP_3_1_RUB 3).
.sde.

Element= — =% — % -

:
. 92 .2 —
3 1.

1.1.8.6 — 0,4
• — 0,4 “ ”

04 -> (—).

:
— < ()

= 0,4
 0,4
 =
 « »
 :
 File= ..\TP\TP+% .# %+'.sde' -
 ..\TP \ TP - TP
 +% .# % - -TP_*
 * (,
 - TP_3 3).
 .sde.

Element= =% % -

TP3.sde

1.1.8.7

- 10 Seti320.sde
- “ ”

-> Main (-).

:

<> ()

<> ID - - ,

ID - .

= -

« - »,

« - »

= ID _Raion - ,
 ID _Raion.
 < - ,
 .
 = TP* - ,
TP.
 < - ,
 .
 < - ,
 .
 :
 \..\Seti320.sde - ,
 .
 Element= _ =% _ % - .
 :
 1 -
 Seti320.sde 1.
 • -10 “ ”
 « _ _ »
 .
 -> (-).
 :
 < ()
 < ID _ - ,
 ID _ .
 < ID _Raion - ,

ID _Raion.

- < - ,
 .
 - < - « - »,
 « - » .
 - = - - - « - ».
 - = **10** - ,
 - **10** .
 - = - ,
 .
 :
 \.\VL_10\+% - %+'.sde' - ,
 .
 \VL_10 - VL,
 +% - % - TP3.sde « 10
 - (, 10 3- 6).
 .sde.
 : \.\VL_10\ 10 3- 6.sde).
 Element= - =% - % - .
 .
 :
 10 3- 6 -
 10 3- 6.sde .
 • - **0,4** “ ”
 « - - » **0,4**
 .
 -> (- **04**).
 :

$\langle \rangle$ ()
 = 0,4 - ,
 0,4 .
 = - - « ».
 = TP* - ,
 TP.
 = - « »
 :
 ..\RUB\tp+% .# - %+'.kl.sde' - ,
 ..\RUB \ tp - RUB tp, .
 +% .# - % - -TP_*
 * (,
 - _3 3).
 .kl
 .sde.
 =..\RUB\tp*.kl.sde (, ..\RUB\tp3.kl.sde).
 Element= - =% - % - .
 :
 10 « . 92 .2»
 04-
 .
 • - 0,4 “ ”
 « - - » 0,4 (-)
 .
 -> (- 04).
 :

$\langle \rangle$ ()
 = 0,4 - ,
 0,4 .
 = - - « ».
 = TP* - ,
 TP.
 = - 0,4
 « »
 :
 ..\RUB\tp+% .# - %+'.vl.sde' - ,
 .
 ..\RUB \ tp - RUB tp, .
 +% .# - % - -TP_*
 * (,
 - _3 3).
 .vl.
 .sde.
 =..\RUB\tp*.vl.sde (, ..\RUB\tp3.vl.sde).
 Element= - =% - % - .
 :
 10 6« . »
 04- .
1.1.8.8
 • **trenenergo.sde**
 “ ” .
 -> Main (- ->).
 :

```

-      <> ( )
-      <> ID - - ,
-      ID - .
-      <> - ,
-      .
-      <> ID _Raion - ,
-      ID _Raion.
-      <> - ,
-      .
-      <> TP* - ,
TP.
-      <> - ,
-      .
:
File= trenenergo.sde - ,
Element= - =% - % - .
:
110 -1 - Raion.sde
- trenenergo.sde
• " "
- 110 .
10 .
-> ( - ).
:
- <> ( )

```

- < ID - ,
 ID .
 - < ID _Raion - ,
 ID _Raion.
 - < - ,
 .
 - < TP* - ,
TP.
 - < - ,
 .
 - < 10 - , ,
10 .
 - = - ,
 .
 :
 File= \VL\+% _ %+'.sde' - ,
 .
 \VL- VL,
 +% _ % - Raion.sde « », - (, 110
 -1 -).
 .sde.
 : \VL\ 110 -1 - .sde.
 Element= _ =% _ % - .
 :
 110 -1 - Raion.sde
 - 110

• 10 Seti320.sde
 “ ” , 10 .

10 .

-> 10 (- 10).

:

- <> ()

- <> ID _ - ,

ID _ .

- <> ID _Raion - ,

ID _Raion.

- <> - ,

- <> TP* - ,

TP.

- <> - ,

-

- <> 110 - , ,

110 .

:

File= Seti320.sde - ,

.

Element= _ =% _ % -

:

10 10 3- 6 -

TP3.sde .

• - 10 “ ”

10 Seti320.sde

10

-> (-).

:

<> ()

<> ID - ,

ID - .

<> ID _Raion - ,

ID _Raion.

<> - ,

.

= - - - - ,

« - » - - - ..

= 10 - ,

10 .

<> VL* - ,

VL.

= ID _Raion - ,

- ID _Raion.

:

File ..\Seti320.sde - ,

Element= - =% - % -

:

10 1-2 .

10 -

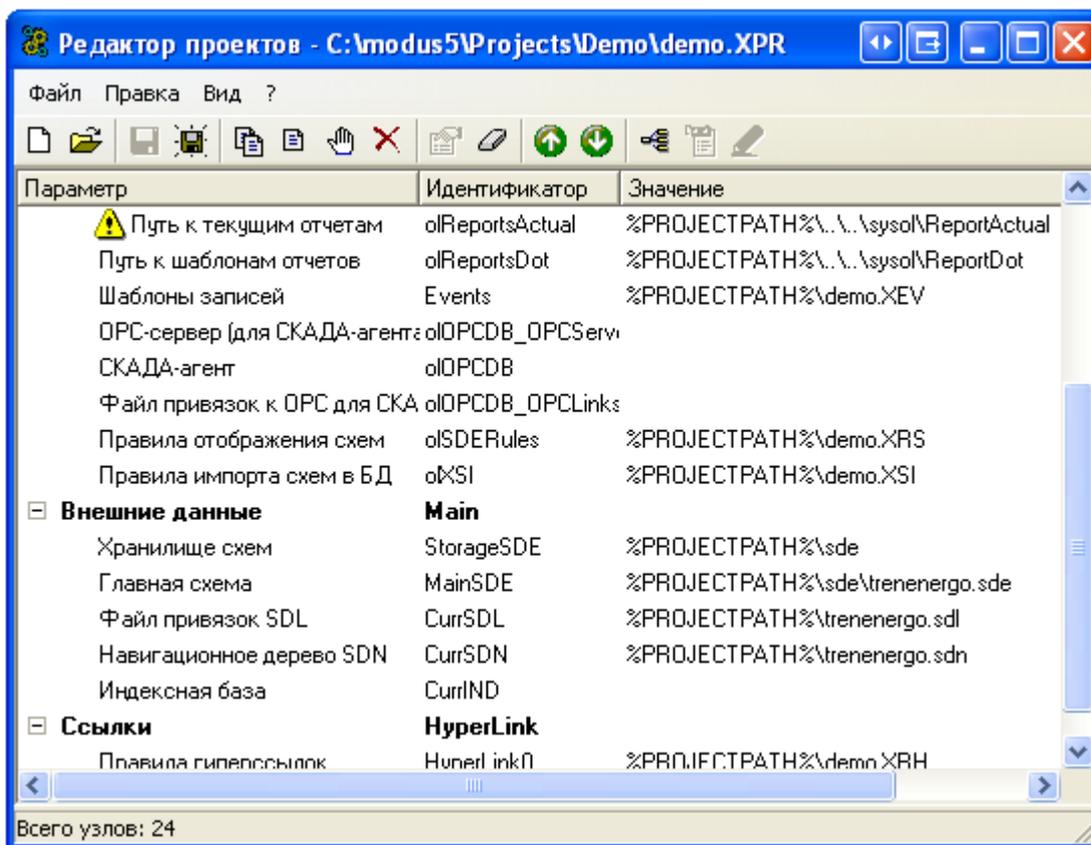
10 Seti320.sde

1.2

xpr. XPR-

1.2.1

(. 1-16.)



. 1-16.



XPR- ;

 - XPR- ;

 - XPR- ;

 - XPR- ;



















- " "





, ,
, ,
, ,

1.2.2

--	--	--	--	--

	OL			
	olGDB		User-1:C:\modus520 \projects\CLEAR.GDB	+
	olEnObject		ID _ _14	+
	olSettings		%PROJECTPATH%\SysOL.ini	
	olArheves		%FIREBIRD%\ARCHIVES	
	olReports		%PROJECTPATH% \..\sysol\Reports	
	olReportsActual		%PROJECTPATH% \..\sysol\ReportActual	
	olReportsDot		%PROJECTPATH% \..\sysol\ReportDot	
	Events		%PROJECTPATH%\DIS.XEV	+
	olSDERules		%PROJECTPATH%\DIS.XRS	
	olXSI		%PROJECTPATH%\DIS.XSI	
	olGDBUser		sysdba	+
	olGDBPassword		*****	+
	olXplFile		%PROJECTPATH%\config\ol.xpl	
	olXfgFile		%PROJECTPATH%\config\ol.xfg	
	LogBookDB			

-				
OPC- (-)	oIOPCDB_OPCTer ver	(), () OPC- () IP-)	Server = 10.10.10.01 Server2 = 192.168.0.10 TeleServer3 = 192.168.0.03	+
-	oIOPCDB	, - (IP-)	localhost	+
-	oIOPCDB_OPCLin ks		%PROJECTPATH%\OPCLinks.opcl	+
	Main			
	MainSDE		%PROJECTPATH%\SDE\cashira.sde	
SDL	CurrSDL	« »	%PROJECTPATH%\FID_SDN\DIS.sdl	
SDN	CurrSDN	« »	%PROJECTPATH%\FID_SDN\DIS.sdn	
	StorageSDE		%PROJECTPATH%\SVN\	
	StorageStandardSDE		%PROJECTPATH%\DIS\DAT	
	HyperLink			
	HyperLink0		%PROJECTPATH%\ - .XRH	
	Integrator			
	inXplFile		%PROJECTPATH%\config\Integrator.XPL	
	inXfgFile		%PROJECTPATH%\config\Integrator.XFG	

	OLPGUESTINI		%PROJECTPATH%\PGuest.ini	
	IDConfigDATA			
	Posters		%PROJECTPATH%\DAT\ .XPST	

1.2.3

,
 ,
 ,
 ,
 « »
 « »
 -
 « »
 « / »
 « »

1.2.4

,
 : /
 XPR-
 (),

1.3

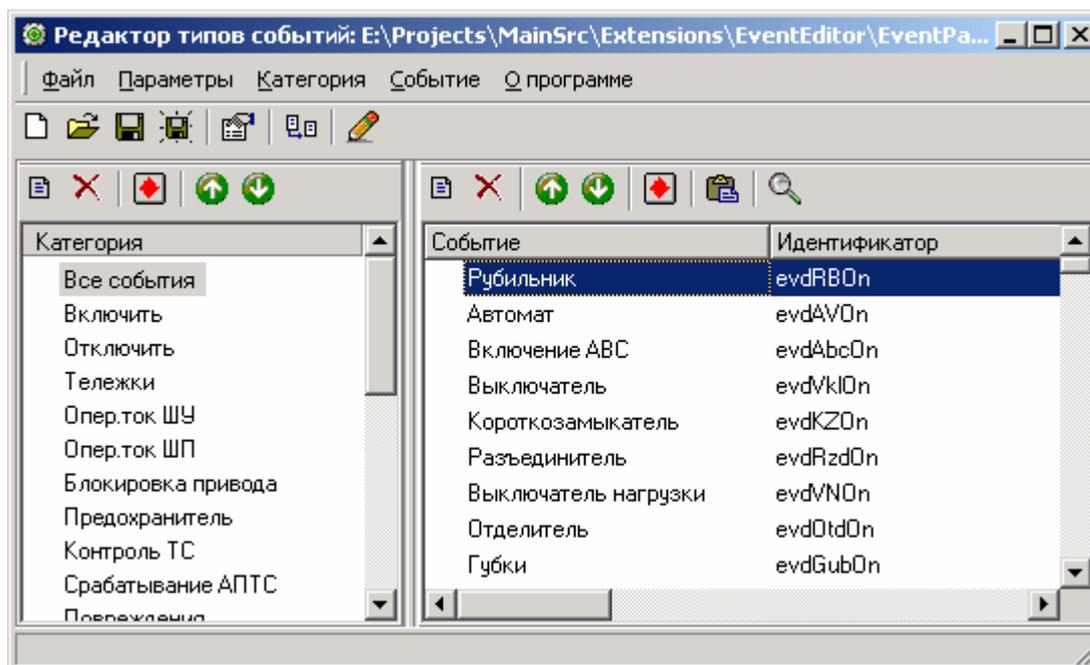
,
 :
 • , ;

1.3.1

XEV.

1.3.2

(.1-17.)

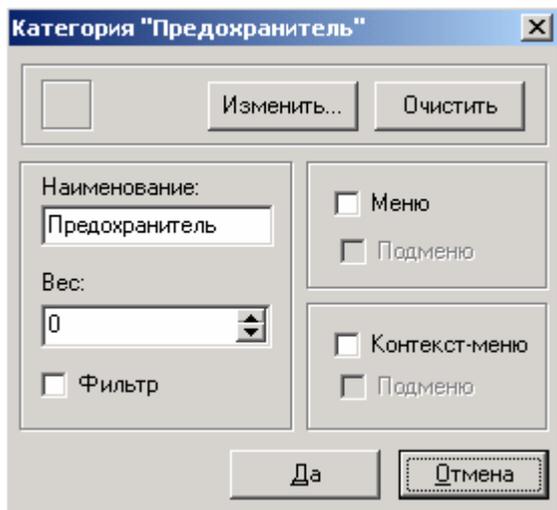


.1-17.

XEV.

1.3.3

(. 1-18.)



. 1-18.

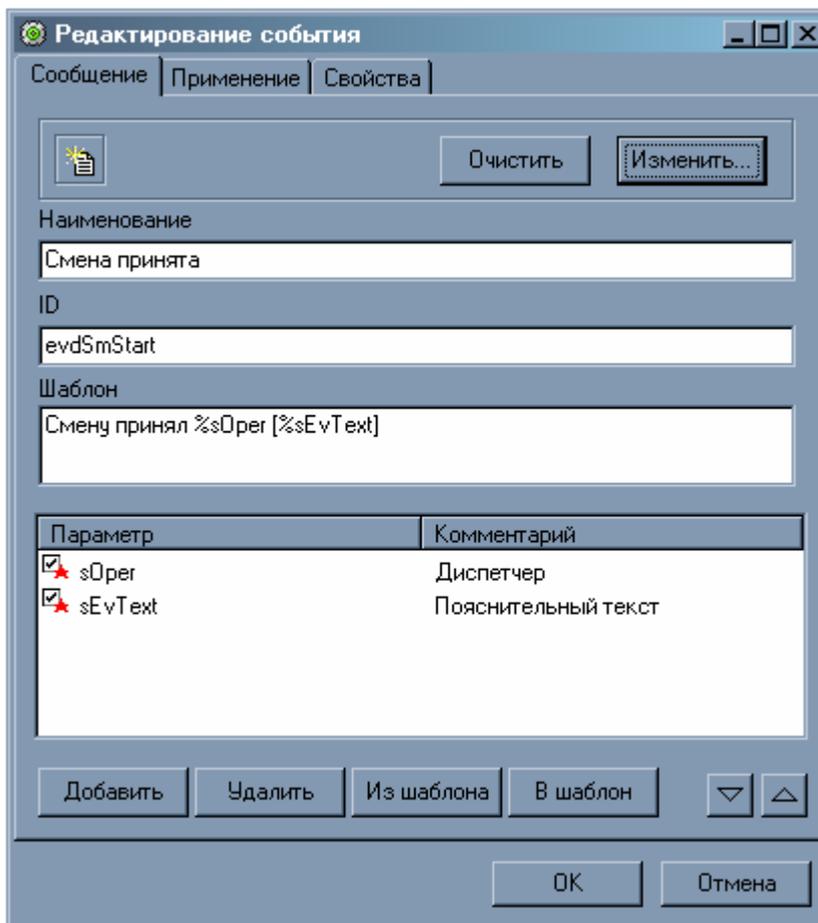
1.3.4

-->

<<

>>

(. 1-19.)



. 1-19.

<<

>>

ID-

%.

« ».

« » (« »)

« »

« »,

!

« »,

« »

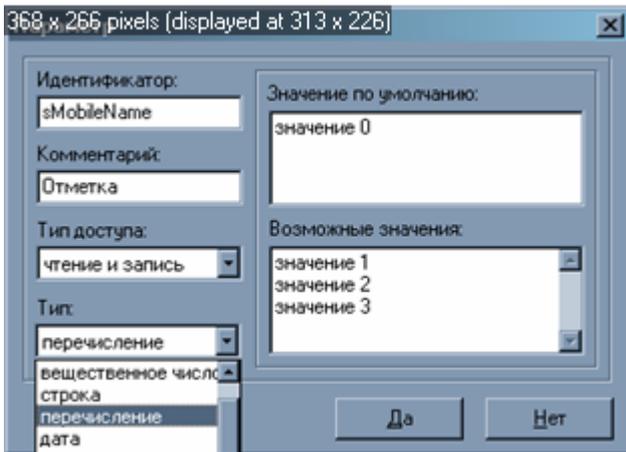
(,)

« ».

1.3.5

1.3.5.1

(. 1-20.)



. 1-20.

1.3.5.2

« ».

sPers (=

sPers).

«

».

:

,

,

,

,

(), (

), (), ().

–

«+» –

.

:

--	

--	--

: sSrcOper.

1.3.6

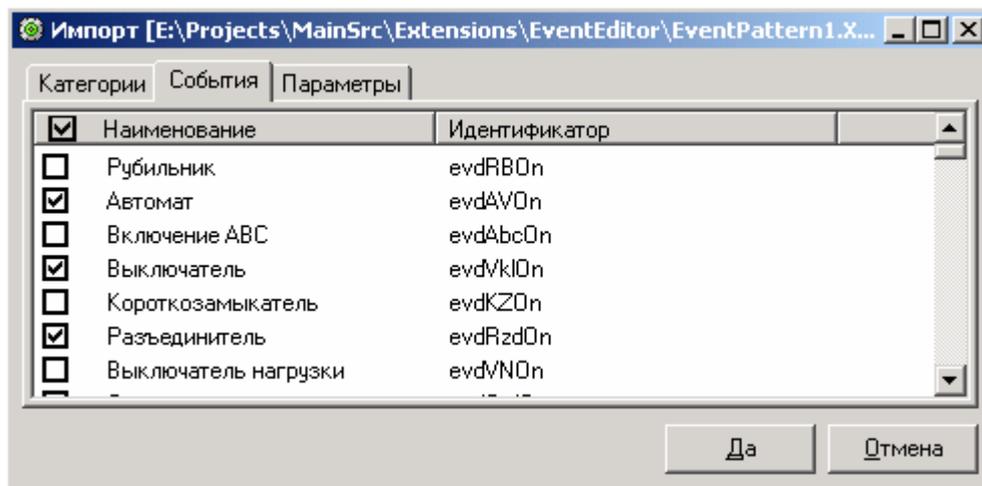
« ».

hev,

(.1-21.)

« ».

« ».



. 1-21.

1.4

() SDE.

-
-
-

1.4.1

.stl .xstl.

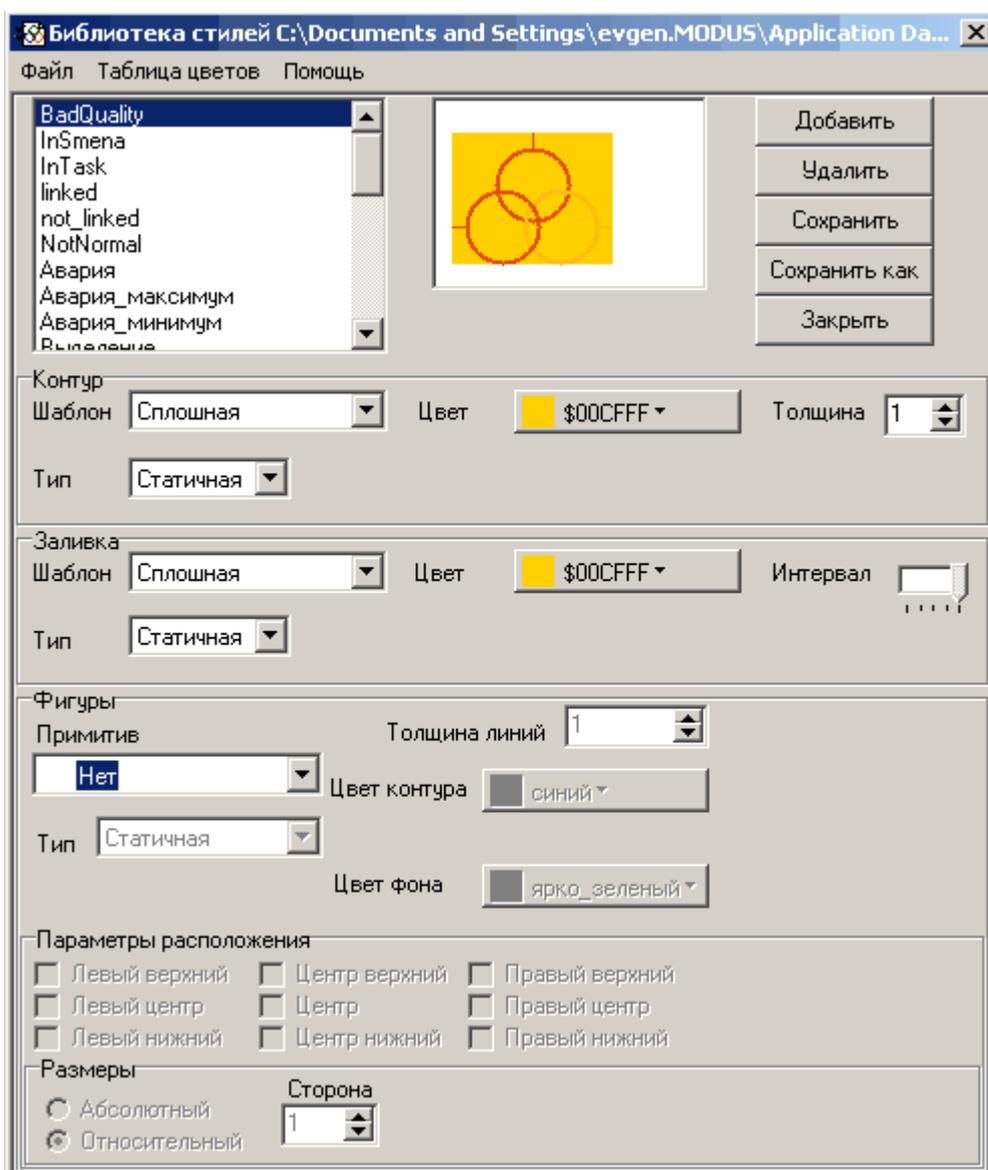
default.stl

DAT.

SDE.

default.stl

(StEdit.exe).

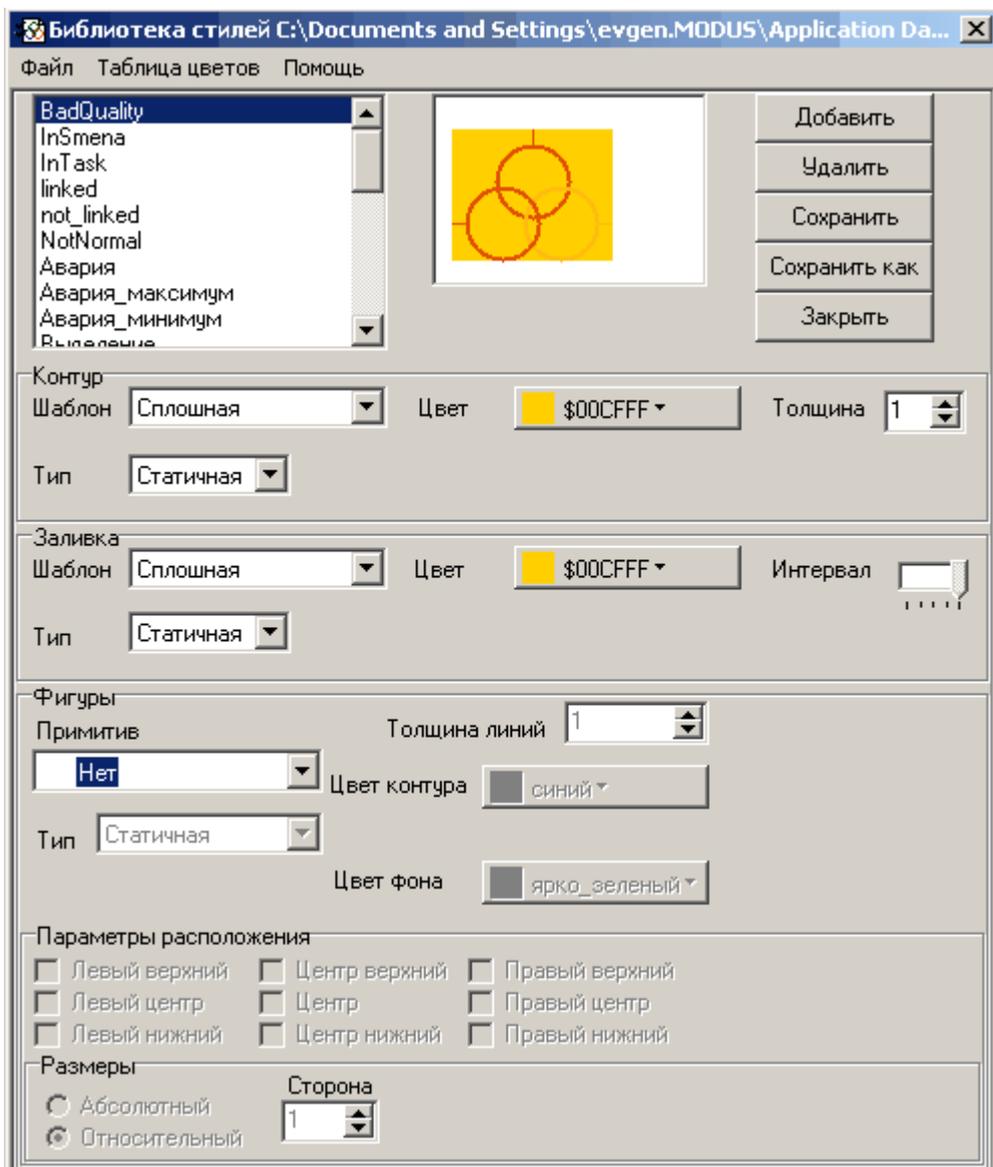


. 1-22.



1.4.1.1

-
-
-



. 1-23.

1.4.1.2

/

Ctrl+N.

3

:

-
-
-

1.4.1.3

,

()

/

Ctrl+O.

,

/

Ctrl+S.

,

(*default.stl* DAT)

: "

?".

,

-

" "

- " "

1.4.1.4

,

" "

" "

,

.

1.4.2

		1. 2. 3. 4. 5. 6. 7.
		...
		1. 2. 3.
		...
		1. 2. 3. 4. 5. 1 6. 2 7. 1 8. 2
		...
		1. 2.
		1. 2. 3. 4.

		5. 2
		6.
		7.
		8. 2
		...
		...
		1.
		2.
		...
		•
		•
		•
		•
		•
		•
		•

1 -

2 -

).

_____.

_____.

- , .

- .

().

_____ , ,

(

).

_____ , ,

," " " " .

_____ ,

().

_____ ,

(

).

1.4.2.1

- Ctrl+N -
- Ctrl+O -
- Ctrl+S -

F1 -**1.5**

Modus.

Modus

(Delphi,

Visual Basic, C++ . .).

COM

Modus

(*.dll)

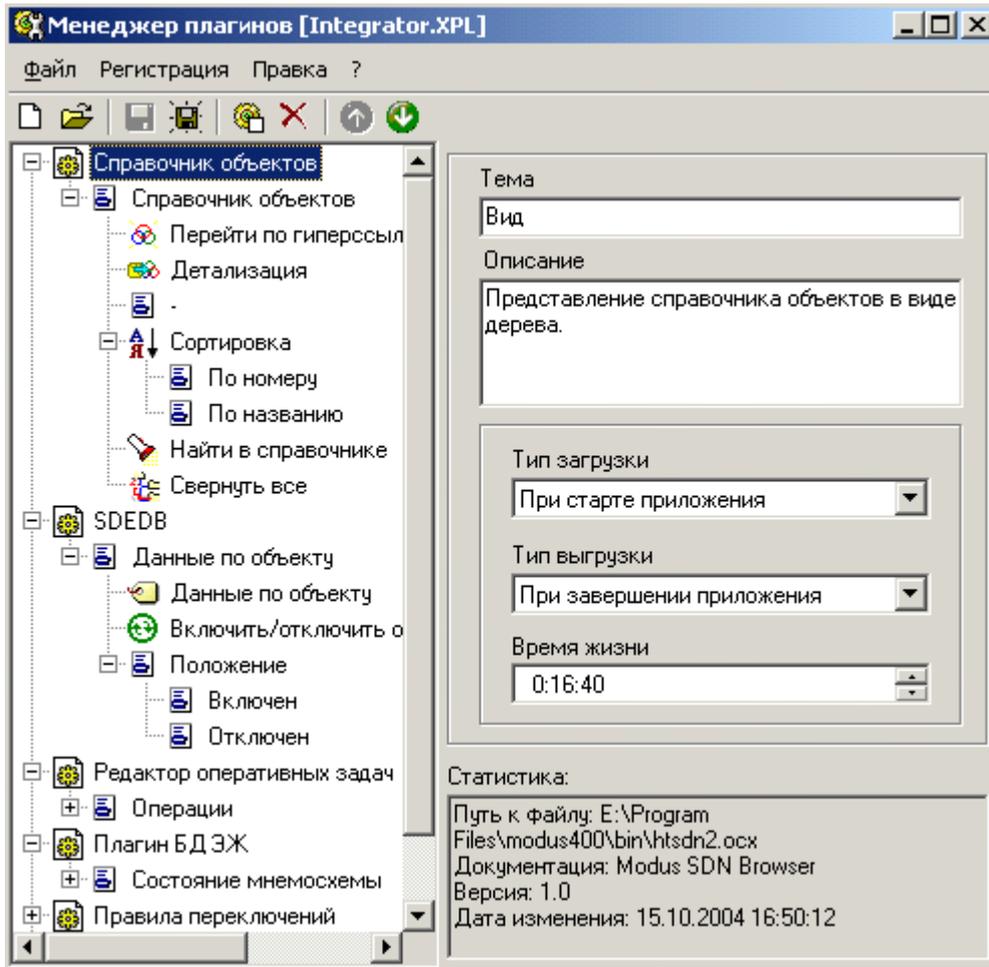
(*.exe).

IPlugin

ModusPlugin.tlb.

1.5.1

/ 5.20/ /



. 1-24.

(/) Integrator.XPL.

XPL.

/



OPCSDE -

OPC

;

PGUEST -

;

HTSDN -

;

SDEDB -

;

1.5.3

ModusPlugin.tlb.

r –

w –

IPlugin		
r Title	BSTR	
r Theme	BSTR	
r Hint	BSTR	
r Description	BSTR	
rw SDEObject	IDispatch	ISDEObject2, ISDEObject2.
r Menu	IPluginMenu	
r Info	IPluginInfo	
Init(SDEApplication: Dispatch);	-	SDEApplication ISDEApplication.
Done	-	(. .).
r StatusInfo	BSTR	
ShowSettingsForm (ParentHandle: long)	long	ParentHandle – ParentHandle 0,
ApplySettingsForm	-	
SaveSettings(Node:	-	Node –

IDispatch)		IXMLDOMElement. XML.
LoadSettings(Node: IDispatch)	-	Node – IXMLDOMElement. XML.
PluginWindows	IPuginWindows	,
IPluginEvents		
OnStart	-	.
OnShutDown	-	.
OnError	BSTR	.
OnUpdateMenu(ID: long)	-	ID ID = -1
OnStateChanged	-	.
OnWindowShow(Name: BSTR)	-	Name. Show IPluginWindows.
OnWindowClose(Name: BSTR)	-	Name. Done IPluginWindows.
OnWindowClick(Name: BSTR)	-	Name. Z –
OnWindowRefresh(Name: BSTR)	-	Name.
IPluginMenu		
r ID	long	.
r Title	BSTR	.
r Menus	IPluginMenus	.
rw Visible	VARIANT_BOOL	.

rw Enabled	VARIANT_BOOL	
r HotKey	BSTR	
r IsActivePlugin	BSTR	
Activate(ParentHandle: long)	long	ParentHandle – ParentHandle 0,
r UseInMenu	VARIANT_BOOL	
r UseInToolBar	VARIANT_BOOL	
r UseInPopupMenu	VARIANT_BOOL	
r UseInAdvancedContext	VARIANT_BOOL	(DreamTreeGrid)
r Picture16	IPicture	16
r Picture256	IPicture	256
r Hint	BSTR	
r Checked	VARIANT_BOOL	
rw ParentTitle	BSTR	IPluginMenus
IPluginMenus		
r Count	long	
r Item (Index: long)	IPluginMenu	Index.

r ItemByID (ID: long)	long	Index.
IPluginWindow		
r Name	BSTR	.
r Title	BSTR	.
r Handle	OLE_HANDLE	.
r FormExists	VARIANT_BOOL	,
r InAutoStart	VARIANT_BOOL	,
Show	-	(
Done	-).
IPluginWindows		
r Item (Ind: long)	IPluginWindow	IPluginWindow Index.
r ItemByName	IPluginWindow	IPluginWindow
rCount	long	IPluginWindow
IPluginInfo		
r LoadInstant	LoadTypes(ltAppStart, ltSDEOpen, ltMenuActivate)	: ltAppStart – ltSDEOpen – ltMenuActivate –
r UnLoadInstant	UnLoadTypes (ultAppClose, ultTimer , ultOnce)	: ultAppClose – ultTimer – (Life Time). ultOnce –
r Life Time	Long	, UnLoadInstant ultTimer.

1.5.4 Delphi6, SDENavigation

1.5.4.1

SdeNavigation

Delphi 6

DLL.

« ».

COM-

impl_SDENavigation

TPNavigation = class(TBasicPlugin, IPlugin, IPNavigation) –

TBasicPlugin

CommonPlug.

– IPNavigation

- IPlugin.

TBasicPlugin

TPluginInfo = class(TAutoObject, IPluginInfo) – IPluginInfo,

TPMainMenuItem = class(TPBasicMenu, IPluginMenu) – IPluginMenu.

TPBasicMenu

CommonPlug.

TPMenuItem = class(TPBasicMenu, IPluginMenu) - IPluginMenu.

TPBasicMenu

CommonPlug.

TPMenuItems = class(TAutoObject, IPluginMenus) - IPluginMenus.

initialization

*TAutoObjectFactory.Create(ComServer, TPNavigation, Class_PNavigation,
ciMultiInstance, tmApartment);*

*TSharedAutoObjectFactory.Create(ComServer,TPMainMenuItem, CLASS_PluginMenu,
LIBID_ModusPlugin, ModusPluginMajorVersion, ModusPluginMinorVersion,
ciMultiInstance, tmApartment);*

TSharedAutoObjectFactory.Create(ComServer, TPMenuItem, CLASS_PluginMenu,

LIBID_ModusPlugin, ModusPluginMajorVersion, ModusPluginMinorVersion, ciMultiInstance, tmApartment);

TSharedAutoObjectFactory.Create(ComServer, TPMenuItems, CLASS_PluginMenus, LIBID_ModusPlugin, ModusPluginMajorVersion, ModusPluginMinorVersion, ciMultiInstance, tmApartment);

TSharedAutoObjectFactory.Create(ComServer, TPluginInfo, CLASS_PluginInfo, LIBID_ModusPlugin, ModusPluginMajorVersion, ModusPluginMinorVersion, ciMultiInstance, tmApartment);

TSharedAutoObjectFactory - TAutoObjectFactory
sharedtlb.pas

(Delphi)

1.5.4.2

DM_Navigation DM_SDENavigation
SDEApplication1: TSDEApplication,

impl_SDENavigation Init

```

procedure TPNavigation.Init(AppHandle: OLE_HANDLE;
  const SDEApplication: IDispatch);
var
  PHandle, H: HWND;
begin
  FSDEApplication := SDEApplication as ISDEApplication;
  ...
  DMNavigation.SDEApplication1.ConnectTo(FSDEApplication);
  ...

```

1.5.4.3

- TBasicPlugin,
,
BroadCast.

1.5.5

Modus

« »).

1.5.6

(HTSDN)

HTSDN

.

,

.

\

,

\

.

(EditSDN).

:

•

ADO.

ODBC driver.

•

SDN.

SDN.

1.5.6.1

(HTSDN2)

,

(

,

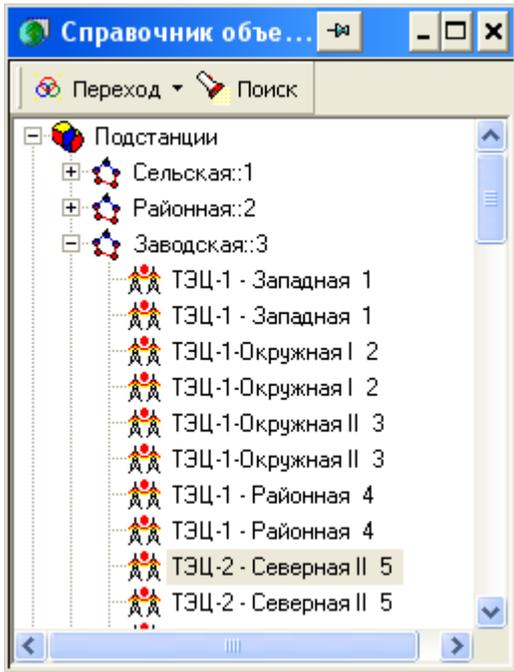
-

,

)

,

.



. 1-25.



1.5.6.2

()

« »

«+»

().

1.5.6.3

()—

1.5.6.4

1.5.7

sde (PGUEST)

PGUEST.dll

SDE.

-
-

-

-

1.5.8

(SDEDB)

SDEDB.dll

SDE.

-

ADO.

ODBC driver.

-

-

(LinksXeme).

1.5.8.1

(SDEDB)

1.5.8.1.1

(,),

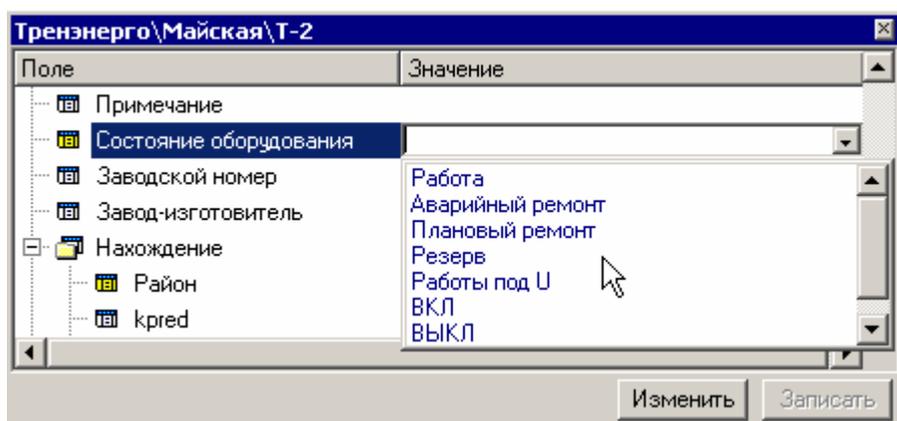
Ctrl.





<<+>>.

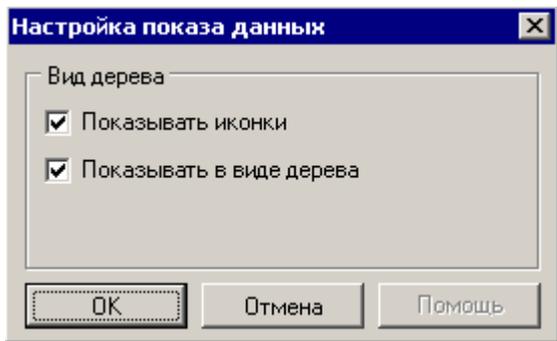
1.5.8.1.2



. 1-26.

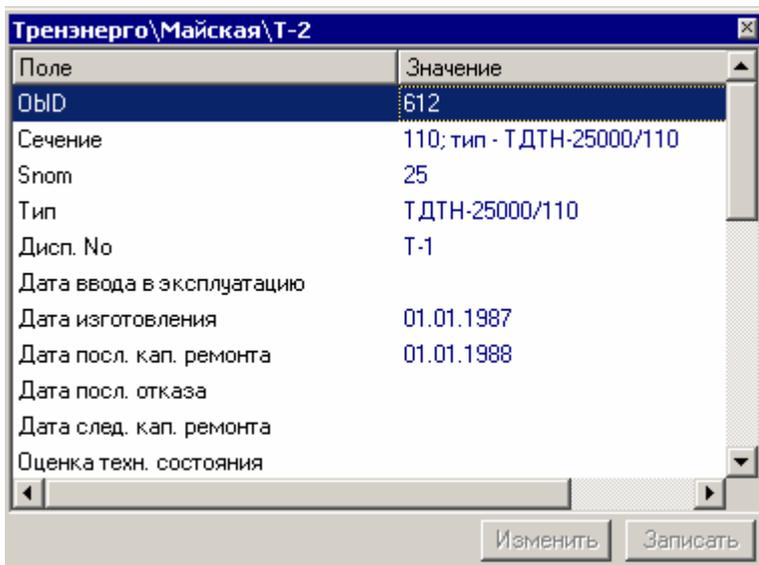
1.5.8.1.3

(.1-27.)



. 1-27.

(.1-28.)



. 1-28.

1.5.8.1.4



1.5.8.1.5 OPC

,
— OPC. OPC
,
OPC ()
OPC.



/

OPC.

1.5.9

1.5.9.1



1.5.10

SDE (OPCSDE).

OPCSDE.dll

SDE.

SDE

(,) OPC

(OLE for Process Control, OPC).

OPC

(SCADA).

SCADA -

(OPC-).

OPC

<http://www.opcfoundation.com>.

OPC

OPC".

(-),

“BadQuality”.

“ ”.

“ ”.

”
，
”
，
”
”
，
”
”

1.5.11.1

”
”
，
，
-
.
， (-
)
”
”
，
”
”
”
”

1.5.11.1.1

”
”
”
”

1.5.11.1.1.1

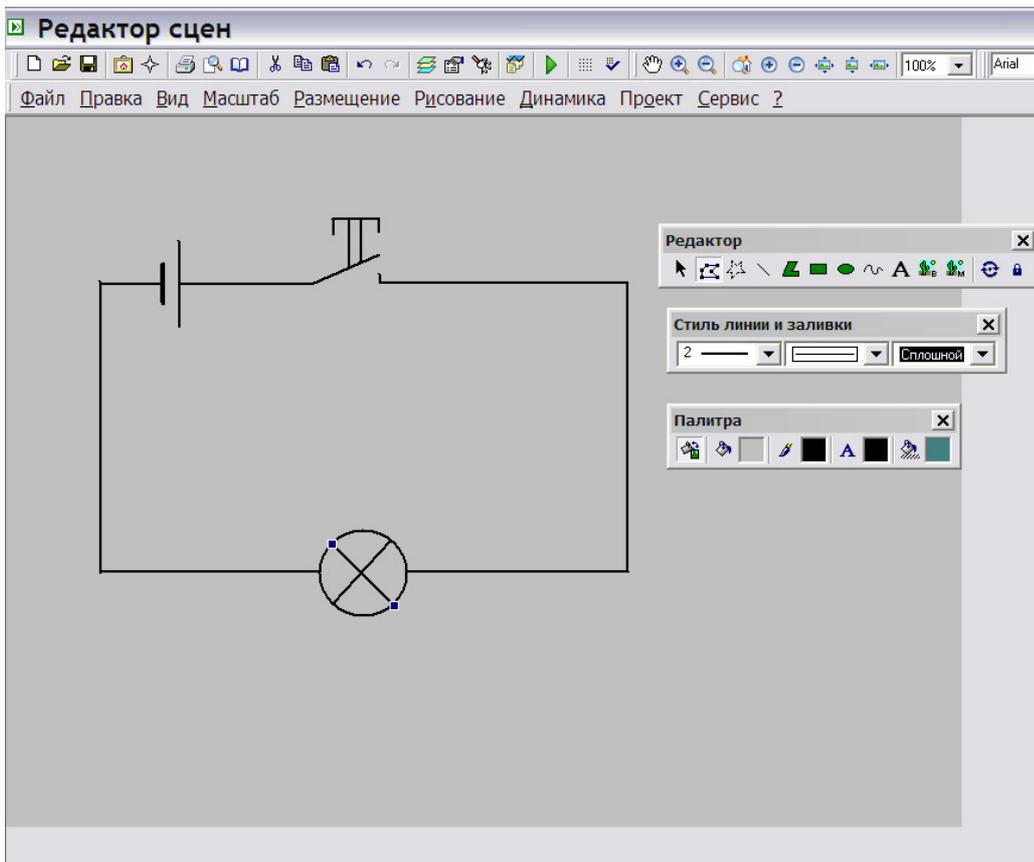
”
”
32- Windows.
Windows XP SP-1, SP-2.
Windows

1.5.11.1.1.2

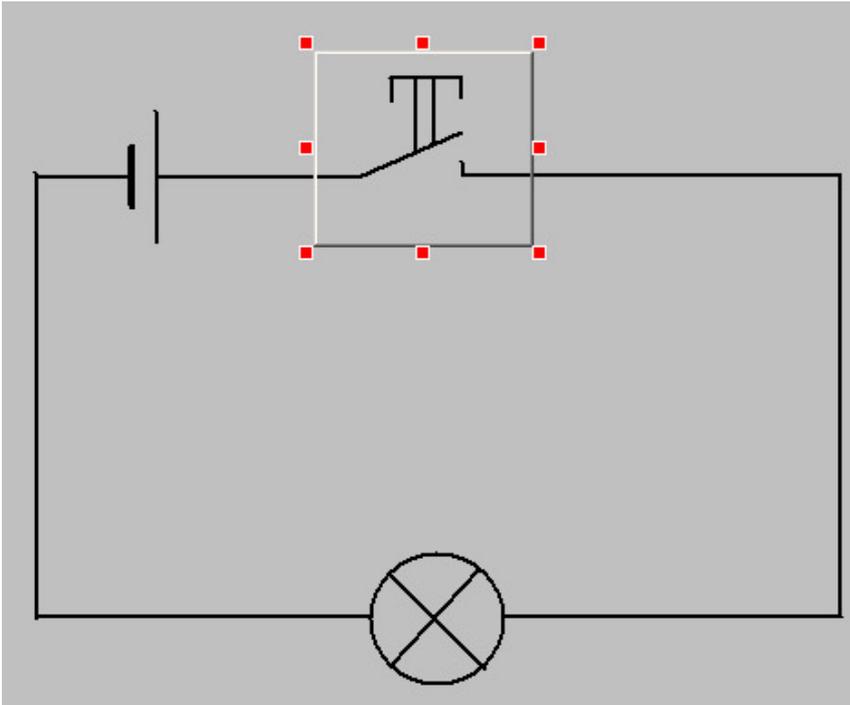
”
”
Celeron-C - 2500
MHz PC-3200 512 B Windows.
，
，
(
).

1.5.11.1.2

" " ,
 , ()
 . (" ")
 .) (" "--> " ").
 " " ,
 " " . (.
 " "). , - " " .
 , , " " .
 (.).



" " " "
 " " "
 (, ,). " " "
 " " "
). , " (



" " (,)

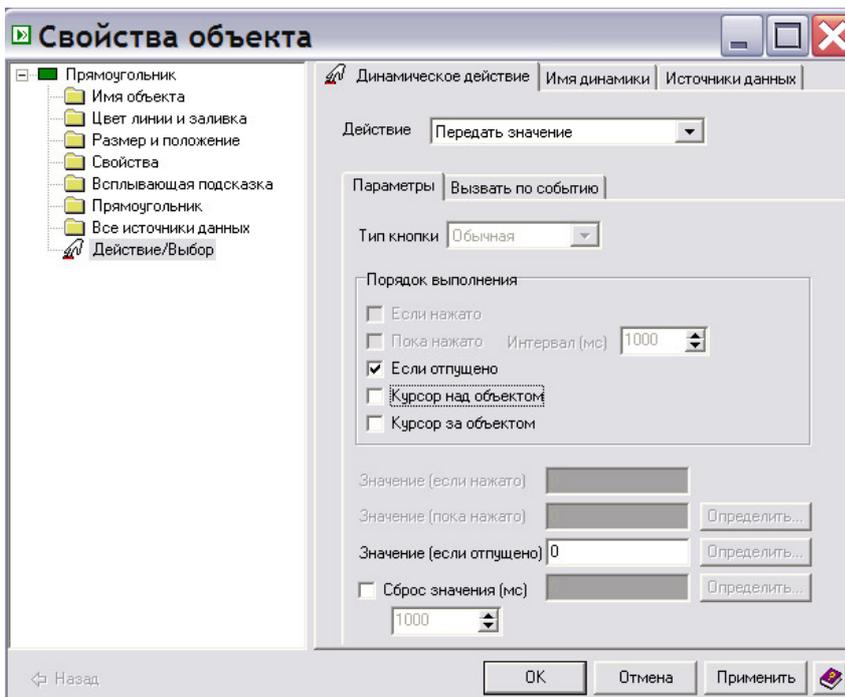
" " --> " " --> " "

" " "

\ "

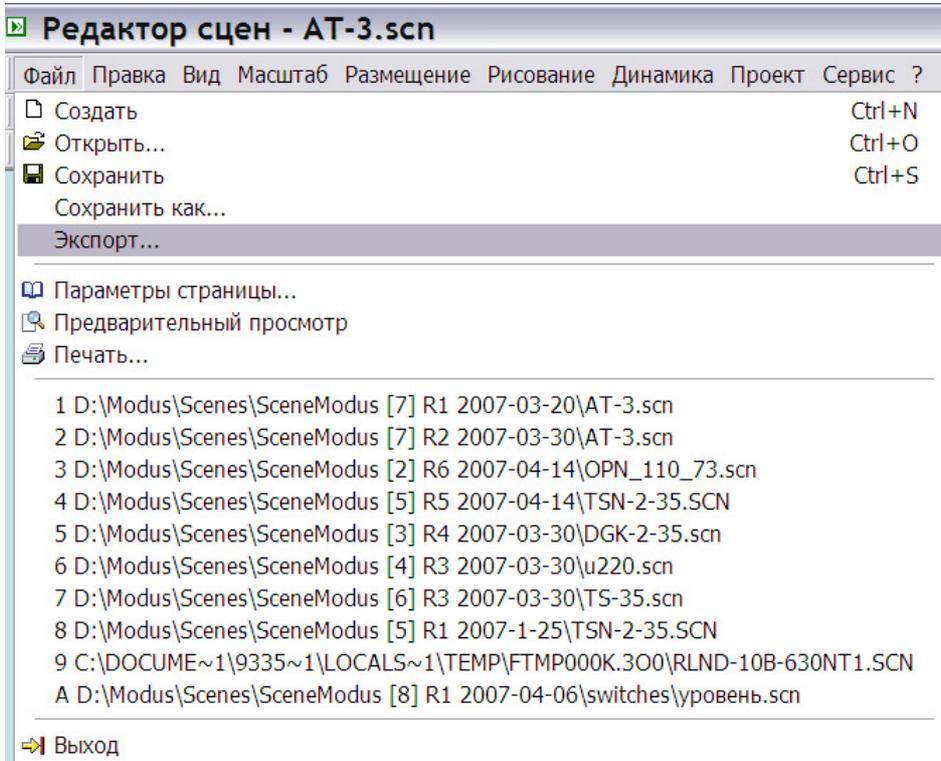
,

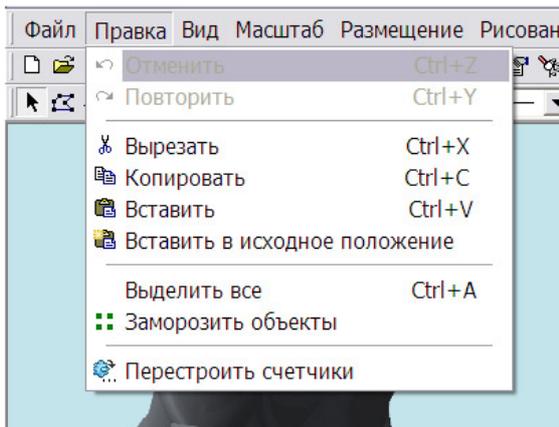
.



,

,



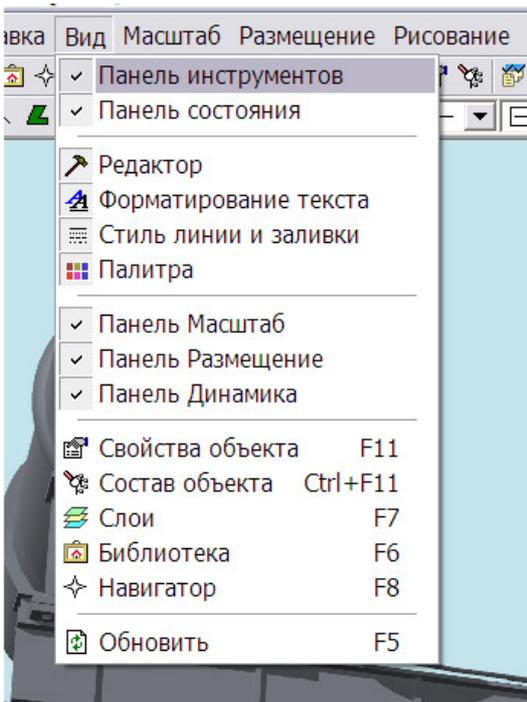


"

"

"

"



)





" "



" "



" "



" "

" "

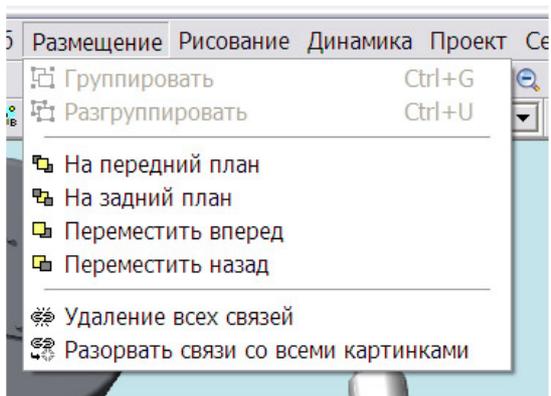
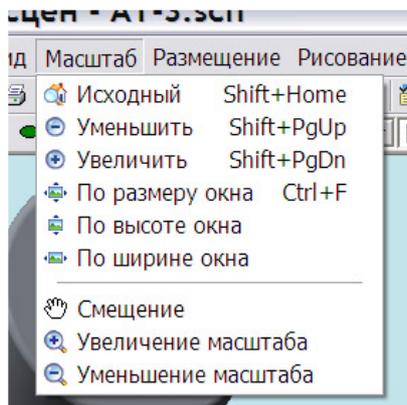
• " "

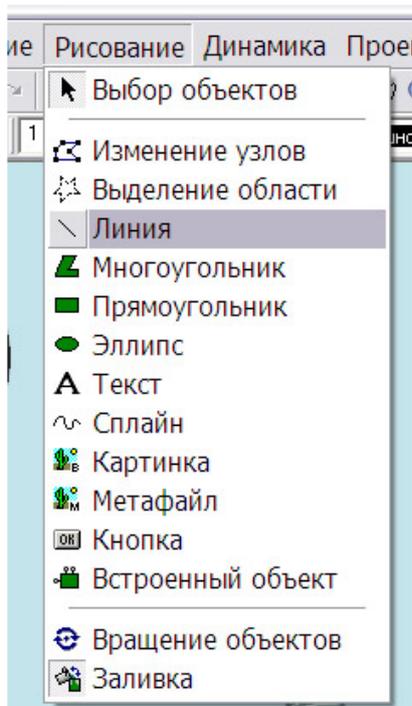
• " "

• " "

• " "

• " "





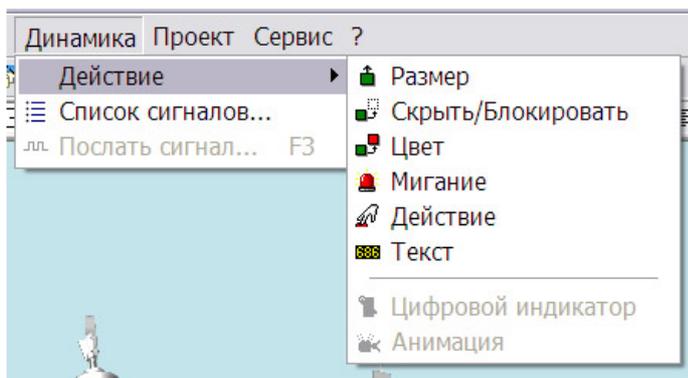
JPG, GIF PNG.

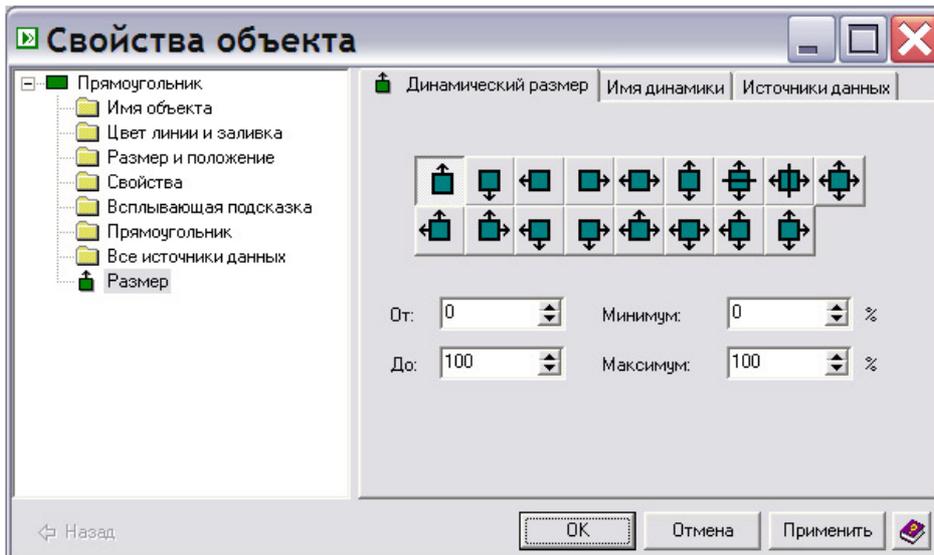
(GIF).

WMF,

; BMP,

EMF





).

70%

(" " " ")

(

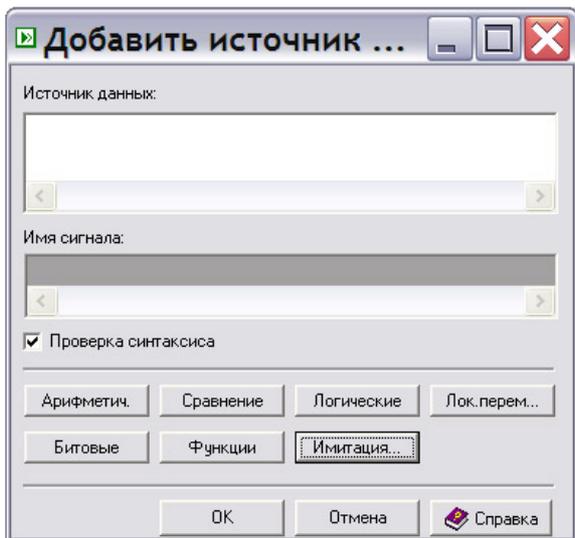
, . ,

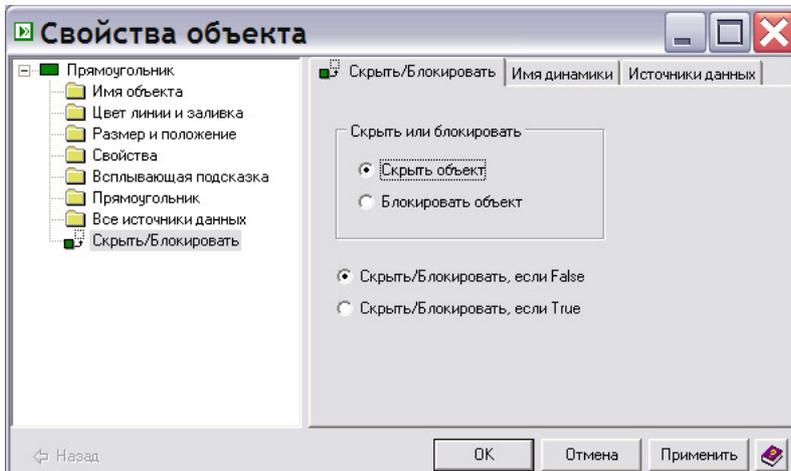
0-100,

20%

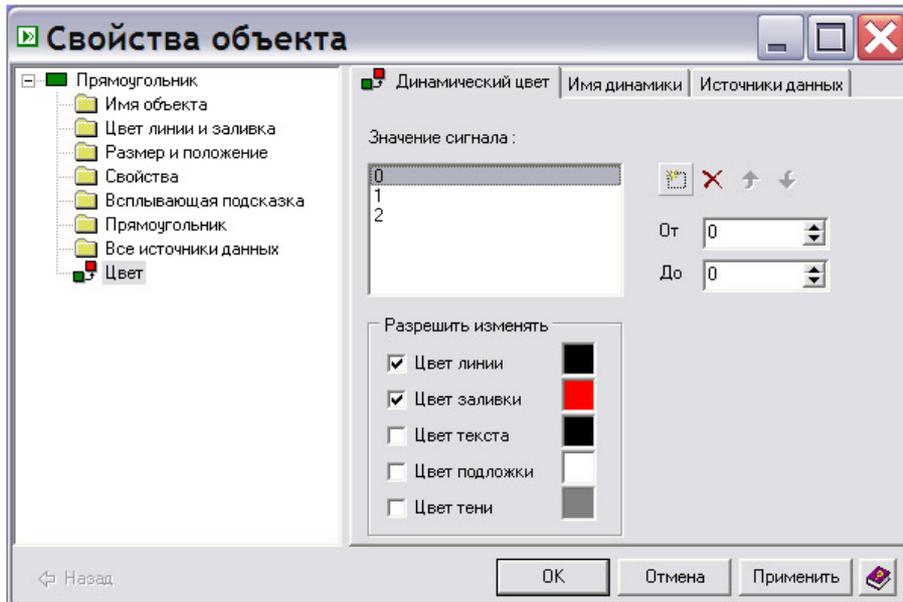
"20"

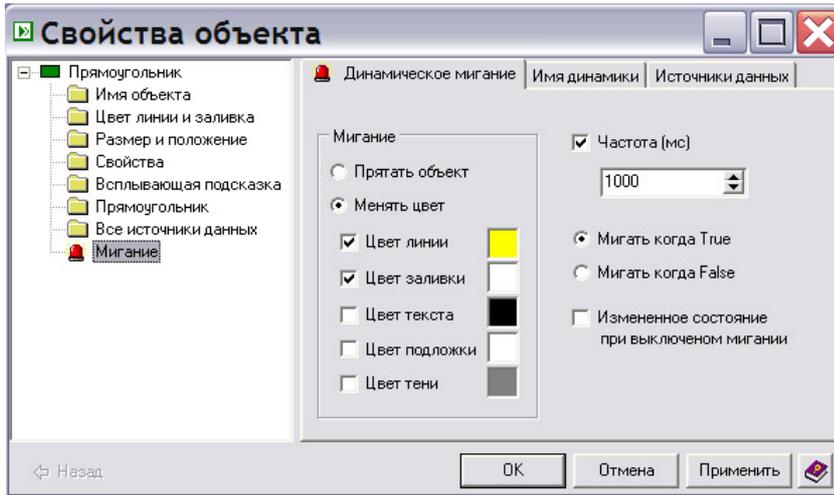
20% 30% (10%).

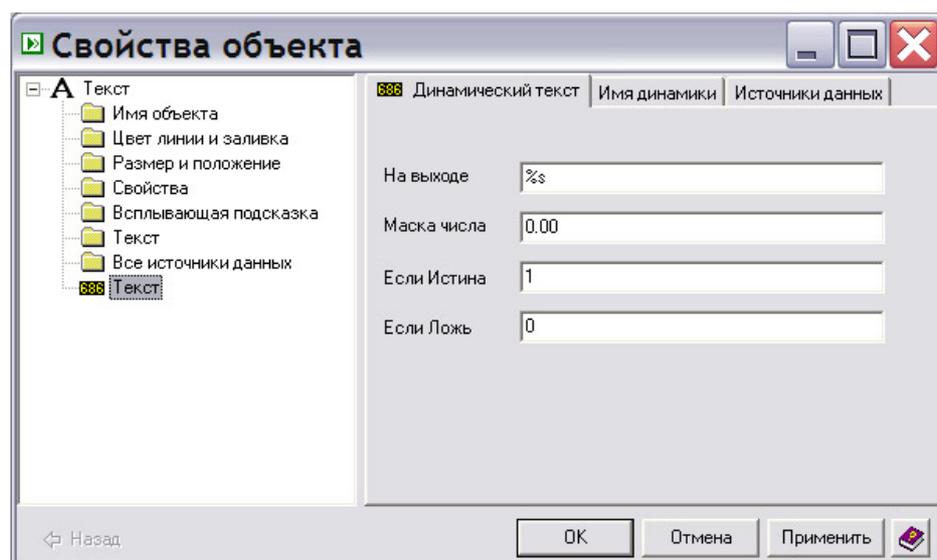




, , ,
 , (" "
). " "
 " \ " "
 " " , " "
 - " , " "
 - " \ , False", " \ , True". (
 True (Integer Double), ,
 .)
 " "
 " "
 .
 " "



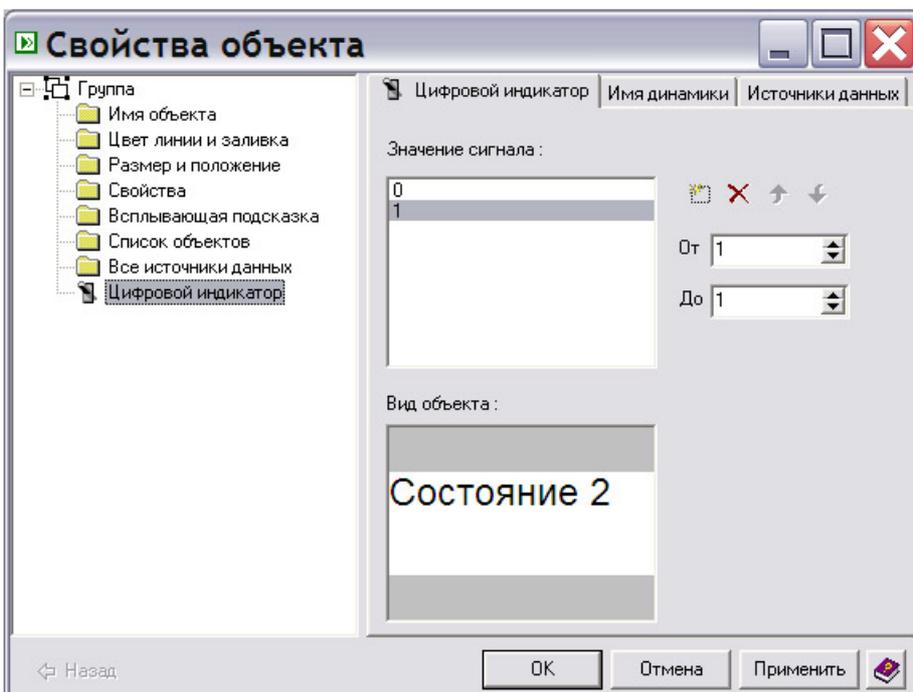




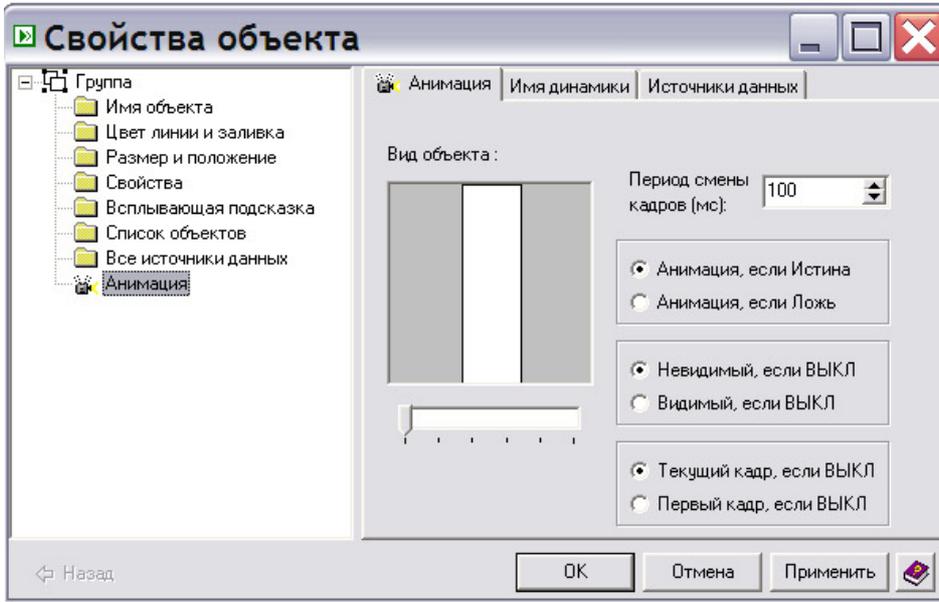
Boolean.

"0" (False).

"1" (True),



(
" ">" "). , " ">" ">
" " , " " "
" . ,
(.). " "
() ,
.
.
" " ,
, ,
, (.).
, " "
, " "
.
" "
" " "
" " , " "
.
, , , ,
" " " " "



, (),

, " "

(.). , -

" " --> " " (

" "), " "

" "

, (, ,)

, (

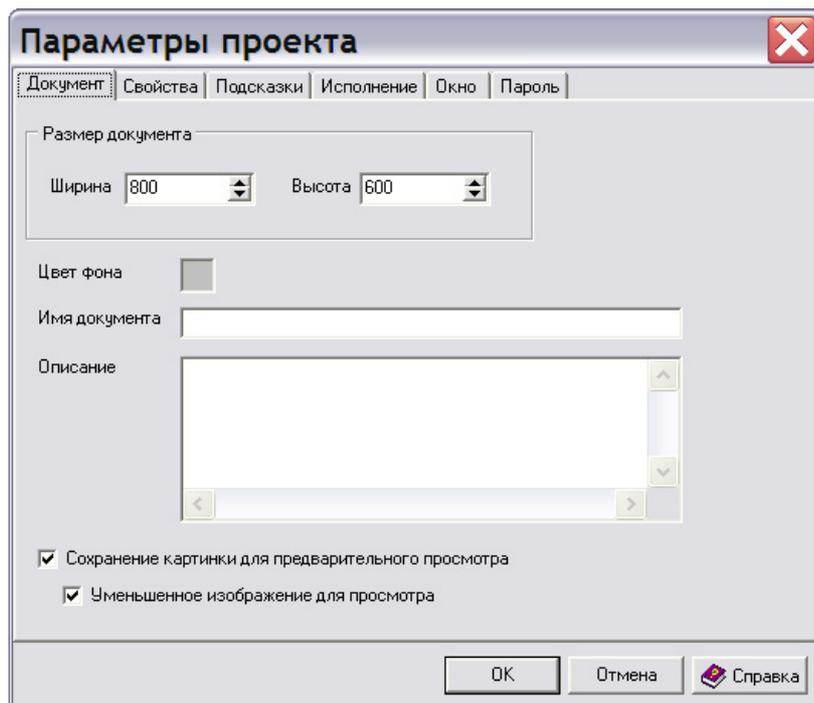
). (

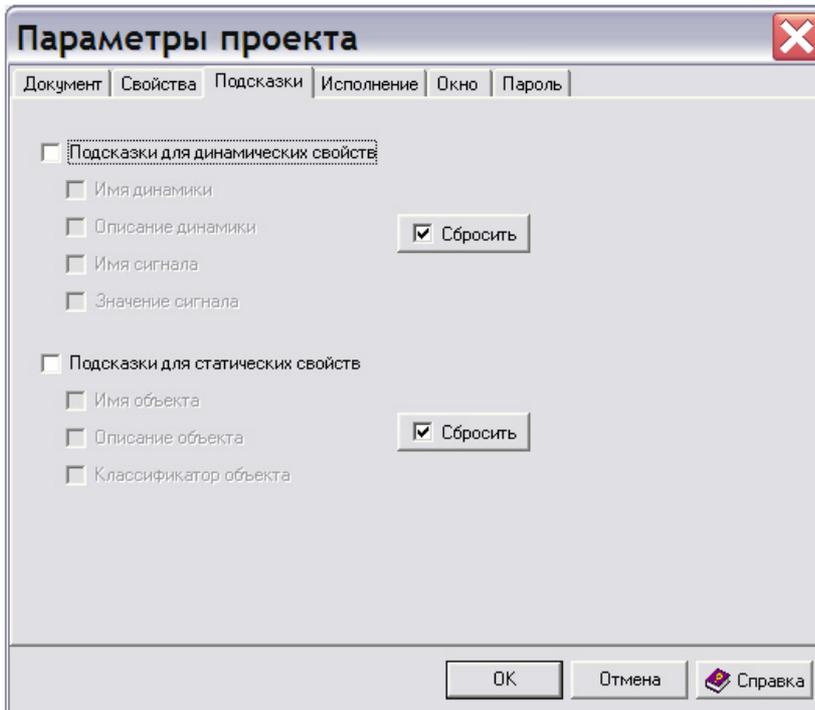
" "). , (

, ,

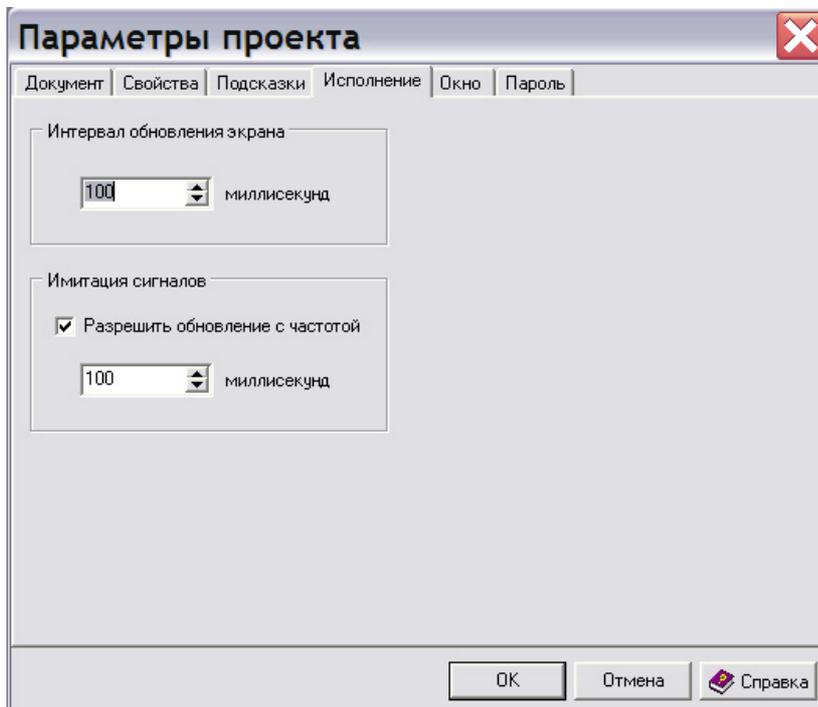
" "

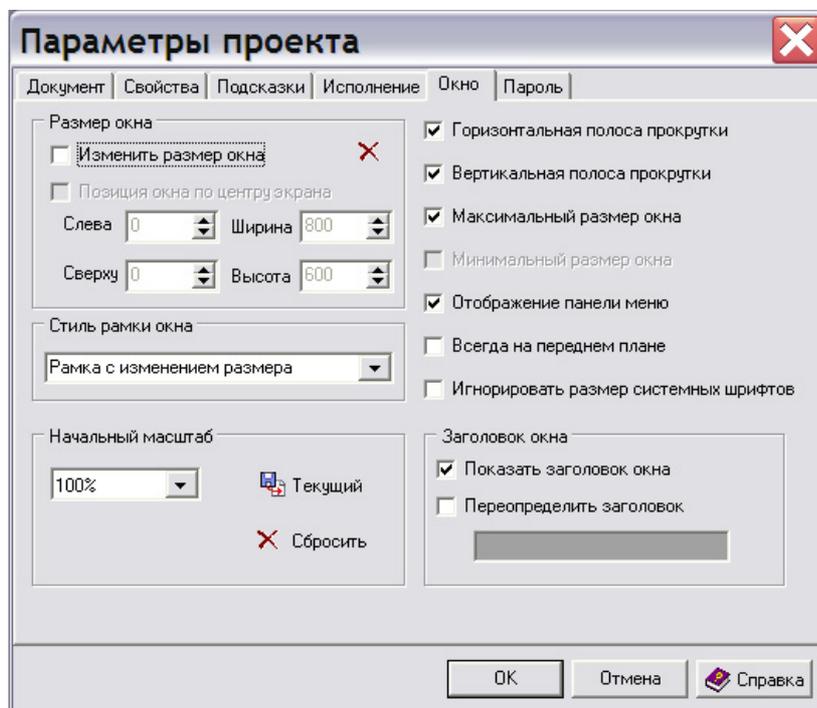
" "

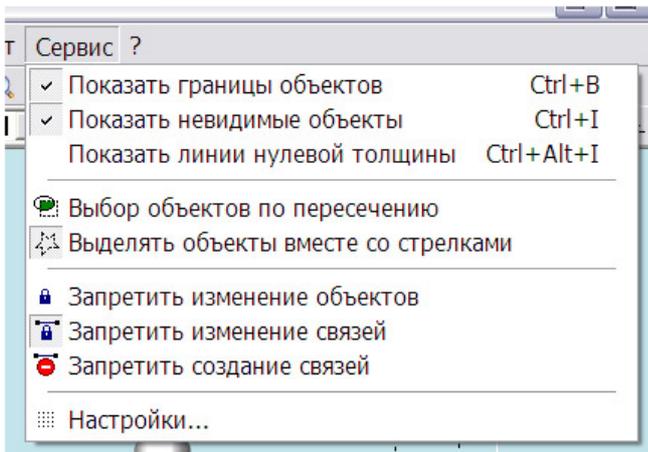




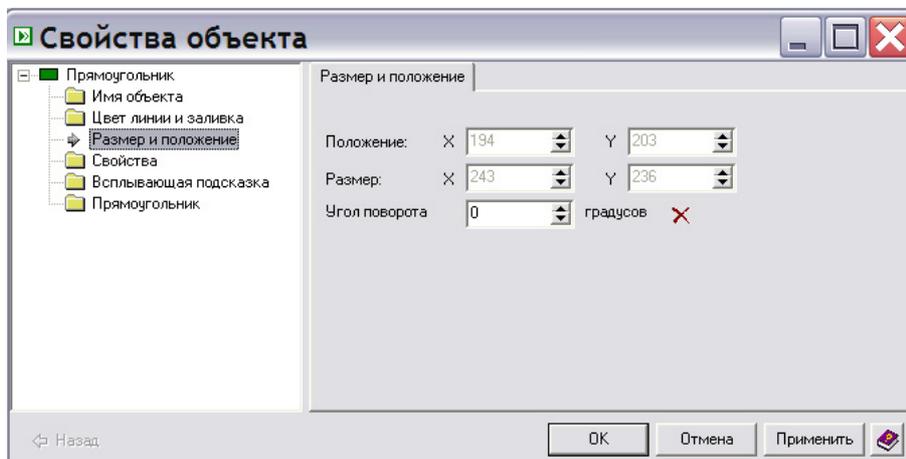
" "

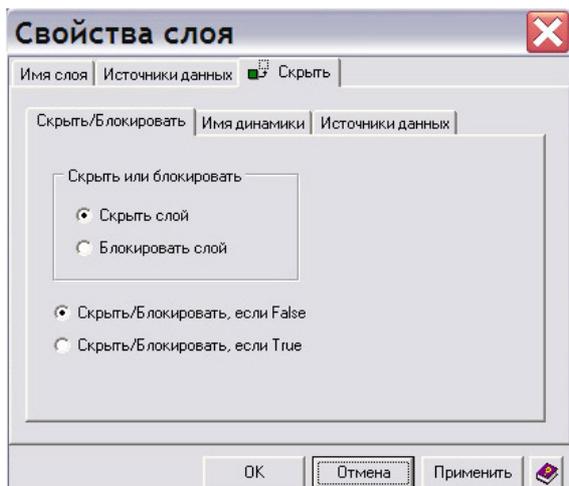






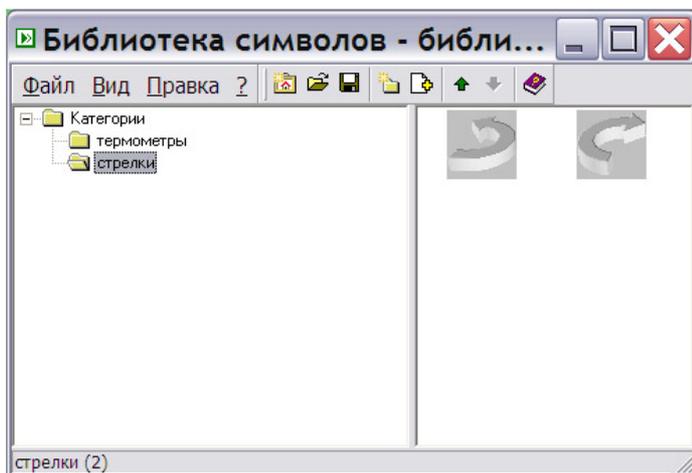
1. ;
2. " ">" ;
3. " ;
4. **F11.**





" "

()



"

"

" "

)

"

"

(

,

"

"

F2.

"

"

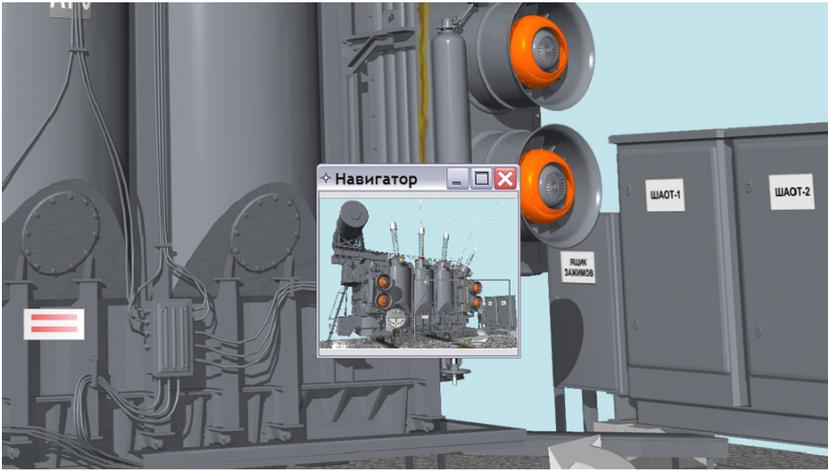
,

,

(

"

")



(, ") .

, , .

1.5.11.1.3.2

;

1. " --> " ;
2. " ;
3. **F9.**

F9,

" > " .
" " ,
" > " .

" " .

1.5.11.1.3.3

: , " " ?

: , , " "

. , " "

" "

, .

, " "

.

: , , ?

. , ?

: XML, ,

, ,

.

: -1 -110/1000 - ?

: - ScnViewer.exe

DatFiles\Scenes\scn*.scn .

(sde). ,

:

1. , , RNDZ-1-110-1000.scn

. DatFiles\Scenes

, , - DatFiles\Scenes\ -110\ | -1-110-1000.xml , ..\..\scn\RNDZ-1-110-1000.scn", ..\..\vbs\RNDZ-1_2-110_220.vbs".

2. DatFiles\Scenes\Scene.XQL -1-110-1000.xml - ().

```

<switch name="имя_сцены" default="">
  <case value="ЗАР1DT" result="ОРУ-220\ВКЛ\ЗАР1DT.xml"/>
  ...
  <case value="RNDZ-1-110-1000" result="ОРУ-110\РЗД\РНД3-1-110-1000.xml"/>
  ...
<switch name="тип_оборудования" default="">
  <case value="РЗД">
    <switch name="класс_напряжения[1]" default="РУ-10\РЗД\КСО-298 СР.xml">
      ...
      <case value="110кВ">
        <switch name="марка" default="ОРУ-110\РЗД\РНД3-1-110-1000.xml">
          <case value="РНД3-110/1000" result="ОРУ-110\РЗД\РНД3-110-1000.xml"/>
          <case value="РНД3-110" result="ОРУ-110\РЗД\РНД3-110-1000.xml"/>
          <case value="РНД3-110/1000р" result="ОРУ-110\РЗД\РНД3-110-1000р.xml"/>
          <case value="РНД3-1-110/1000 Y1" result="ОРУ-110\РЗД\РНД3-1-110-1000.xml"/>
          <case value="РНД3-1-110/1000" result="ОРУ-110\РЗД\РНД3-1-110-1000.xml"/>
          <case value="РНД3-1-110-1000" result="ОРУ-110\РЗД\РНД3-1-110-1000.xml"/>
          <case value="РНД3-1-110/1000р" result="ОРУ-110\РЗД\РНД3-1-110-1000р.xml"/>
          <case value="РНД3-1-110/2000 Y1" result="ОРУ-110\РЗД\РНД3-1-110-2000.xml"/>
          <case value="РНД3-1-110/2000" result="ОРУ-110\РЗД\РНД3-1-110-2000.xml"/>
          <case value="РНД3-2-110/1000 Y1" result="ОРУ-110\РЗД\РНД3-2-110-1000.xml"/>
          <case value="РНД3-2-110/1000" result="ОРУ-110\РЗД\РНД3-2-110-1000.xml"/>
          <case value="РНД3-2-110/1000р" result="ОРУ-110\РЗД\РНД3-2-110-1000р.xml"/>
          <case value="РНД3-2-110/2000 Y1" result="ОРУ-110\РЗД\РНД3-2-110-2000.xml"/>
          <case value="РНД3-2-110/2000" result="ОРУ-110\РЗД\РНД3-2-110-2000.xml"/>
        </switch>
      </case>
    </switch>
  </case>
  ...
</switch>

```

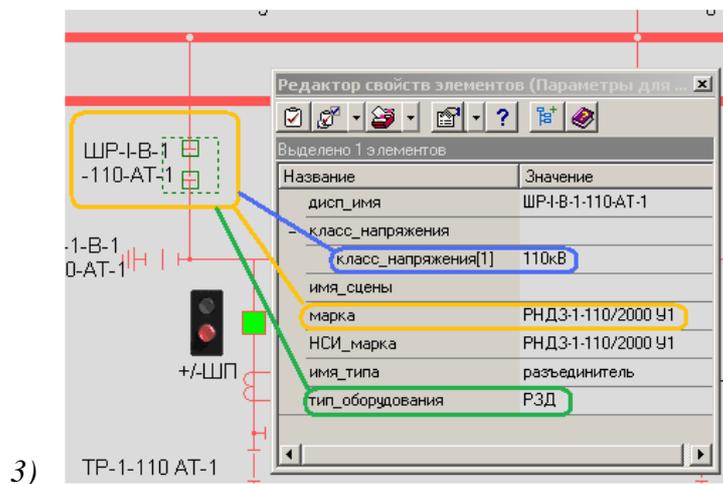
1) _____ = "RNDZ-1-110-1000",
 _____, _____ DatFiles\Scenes\ _____ -110
 \ \ _____ -1-110-1000.xml.

- 2) _____ , _____
 _____ : _____
 a) _____ , _____
 b) _____ 110
 c) _____ , _____ , . . . ,
 _____ default _____ , _____ , _____ -1-110/1000

I

DatFiles\Scenes\ -110

\ \ -1-110-1000.xml



1.5.12

« »

1.5.12.1

PluginManager

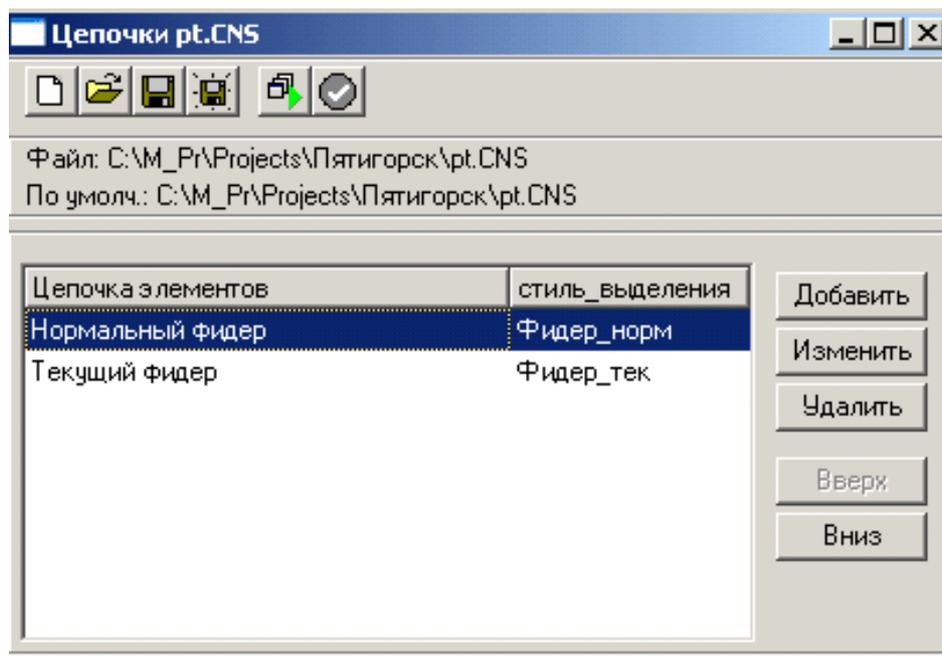
« »

4-



«

».



Параметры формирования и обработки цепочки

Настройки **Условие**

Название:

Глубина поиска: Сдвигать элементы

Стиль выделения: Снимать выделение

« »:

Параметры формирования и обработки цепочки

Настройки **Условие**

Условие

Экспорт TXT

Источник	Параметр	Отношение	Значение	Умолчание
Выключатели				
Элемент	нормальный_токораздел	=	Да	Нет
Щиты подстанций				
ПС/Т РП				
Контейнер	тип_объекта	<>	ТП	Нет
Контейнер	ключ_привязки	<>	РР_6	Да
Контейнер	ключ_привязки	<>	РР_18	Да
Новая группа				
ЛР				
Элемент	имя_типа	=	разъединитель	Нет
Элемент	дисп_имя	=	ЛР*	Да
Элемент	имя_типа	=	выключатель_выдвижной	Нет
Элемент	имя_типа	=	выключатель_нагрузки	Нет

«

».

« »

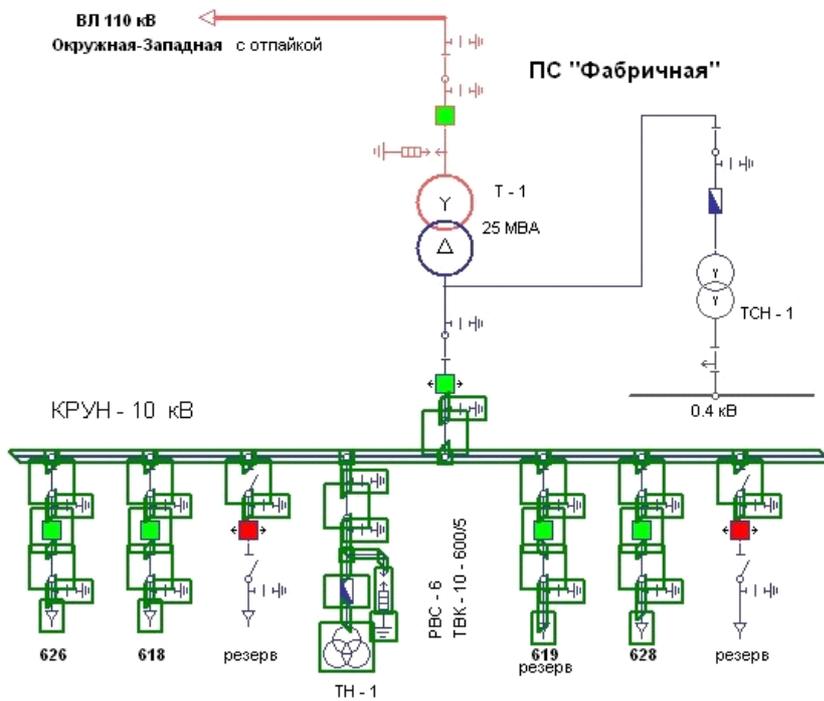
« ».

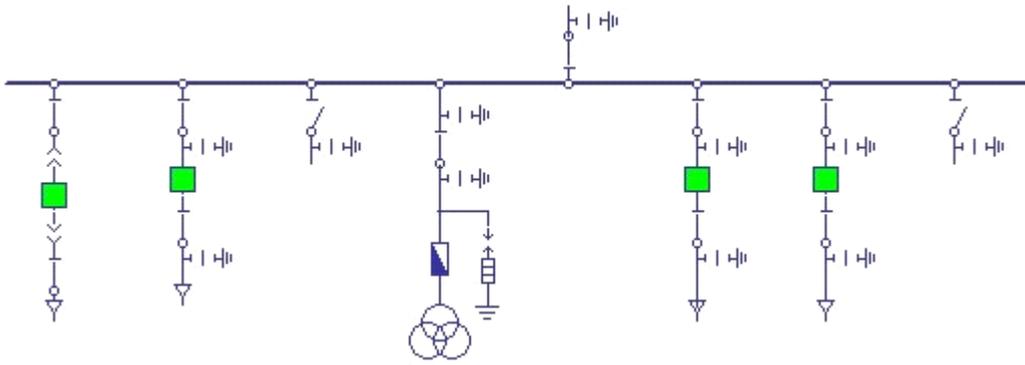
« »
« »
« »

1.5.12.2



« »





PluginInfo 66
PluginWindows 66

SDEApplication 66
SDEDocuments 66

URIAcces 66

82
115
83
89
87
94
82
91
116
116
86
108
88
61
104
91
92
108
108
82
113
112
63
86
82
87