



Copyright © . 1996 - 2009

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Copyright © 2009

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\_\_\_\_\_ - "Music"  
\_\_\_\_\_ - "Transactions"

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2

3.3?

• / :

- - "owner"

- / - "

- SQL ,

3

30-

ORDER.TXT

( )

4

Trial

Trial , :



- 30 .
- 100 .
- .
- .

## 5

30 .

, 3.30,  
3.xx .  
, ,

email : [dagolubev@gmail.com](mailto:dagolubev@gmail.com)

## 6

[dagolubev@gmail.com](mailto:dagolubev@gmail.com)

## 7

### 7.1

?

– ( )

Microsoft Visual C++

ODBC API,

ODBC.

ODBC

(dBase, Access),

(Oracle, Sybase, Microsoft SQL).

:

ODBC

SQL

( )

-

/

ANSI OEM

SQL

/

LZW

7.2

?

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ODBC.

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Access Oracle.  
( )

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LZW.

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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_(Ctrl+R)  
\_\_\_\_\_(Ctrl+T)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_(Alt+F4)

### 8.1.2

MDI

\_\_\_\_\_(Ctrl+S) \_\_\_\_\_

### 8.1.3

\_\_\_\_\_(Ctrl+S).

### 8.1.4

/

### 8.1.5

### 8.1.6

" " "

### 8.1.7

## 8.1.8

• , :

• ( )

•

•

•

## 8.1.9

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## 8.1.10

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( .                      ). ,

“ ” .

( ) ,

( ) .

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## 8.1.11

.

( .                      ). ,

“ ” .

( ) ,

( ) .

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## 8.1.12

.

( ),

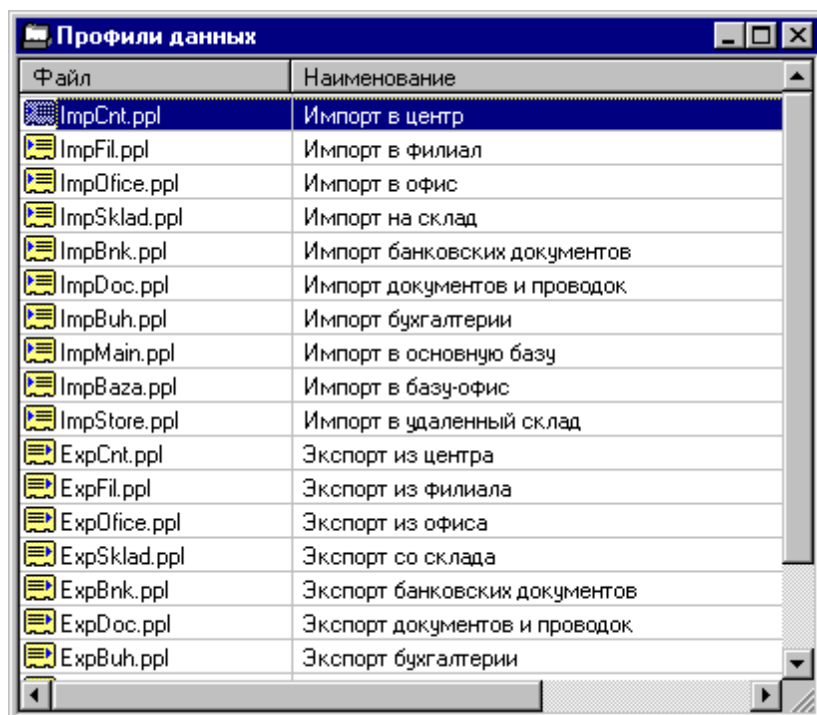
( ).

### 8.1.13

" ( . \_\_\_\_\_ ).

### 8.1.14

### 8.1.15



Trans30.ini ( . \_\_\_\_\_ ).  
[pipeline].

:

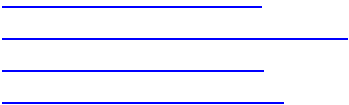


,

Enter.

8.1.16

:



8.1.17

MDI

8.2

8.2.1

- \_\_\_\_\_ (Ctrl+Z
- \_\_\_\_\_ (Ctrl+X)
- \_\_\_\_\_ (Ctrl+C)
- \_\_\_\_\_ (Ctrl+V)
- \_\_\_\_\_ (Del)
- \_\_\_\_\_ (Ctrl+A)
- \_\_\_\_\_ (Ctrl+F)
- \_\_\_\_\_ (Ctrl+H)

8.2.2

8.2.3

Windows

**8.2.4**

Windows

**8.2.5**

Windows

**8.2.6****8.2.7****8.2.8****8.2.9****8.3****8.3.1**

(Ctrl+Ins)  
(F2)  
(F3)  
(F4)  
(Ctrl+Del)  
(Ctrl+Home)  
(Ctrl+Up)  
(Ctrl+Down)  
(Ctrl+End)  
(Ctrl+F4)



### 8.3.2

( ).

### 8.3.3

( ) Trans30.ini. ( ).

### 8.3.4

( ).

### 8.3.5

( ) ( ).

### 8.3.6

( ).  
Trans30.ini.

### 8.3.7

### 8.3.8

### 8.3.9



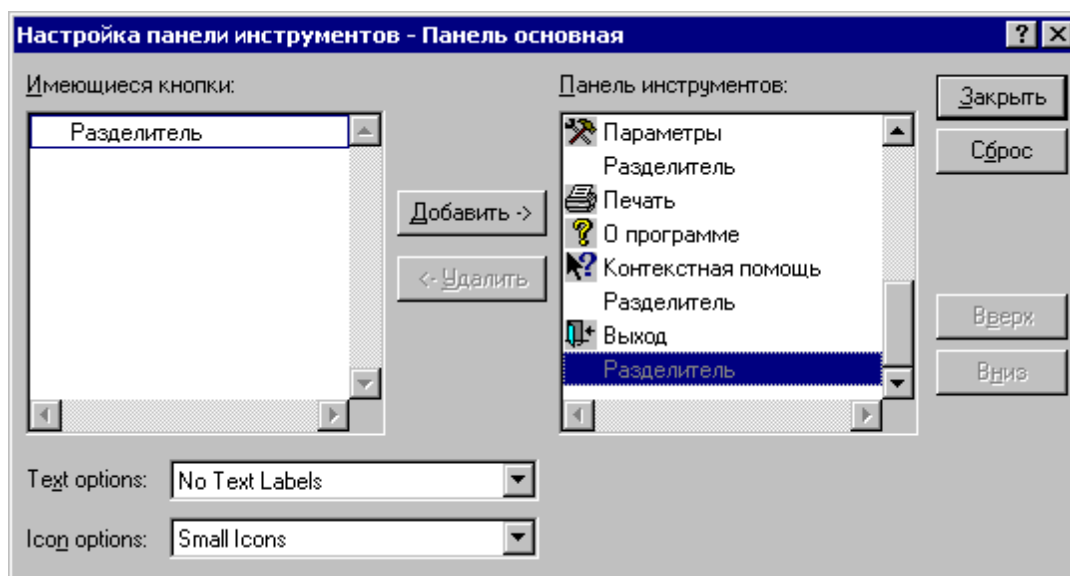
#### 8.4.4

( ).

Caps Lock, Num Lock Scroll Lock.

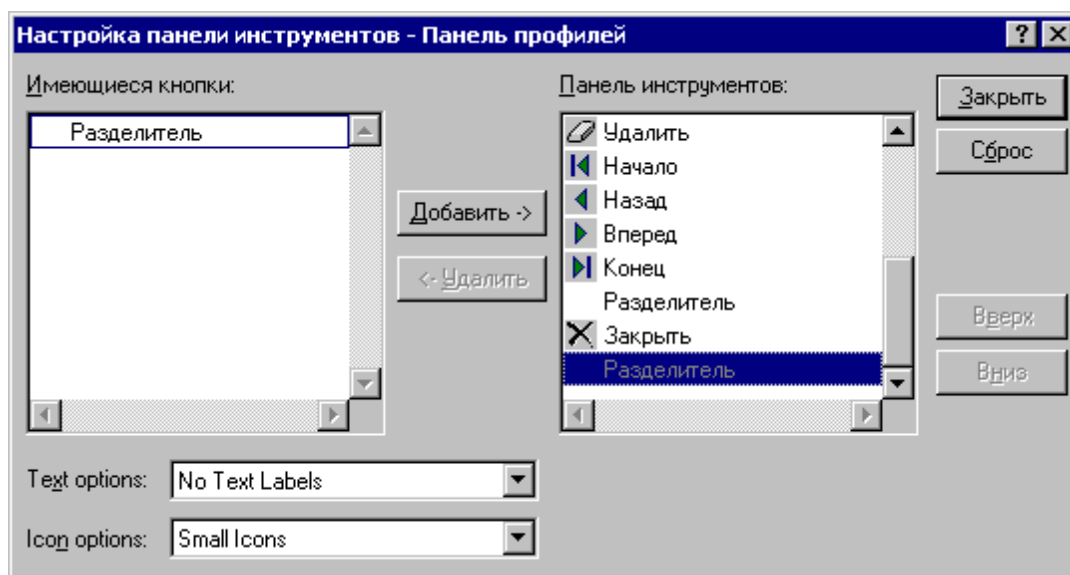
#### 8.4.5

:



#### 8.4.6

:



## 8.5

### 8.5.1

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### 8.5.2

MDI

, .

### 8.5.3

MDI

, .

### 8.5.4

MDI

.

## 8.6

### 8.6.1

\_\_\_\_\_ (F1)

---

---

### 8.6.2

### 8.6.3

?

+F1, . - , Shift

, .

### 8.6.4

## 9

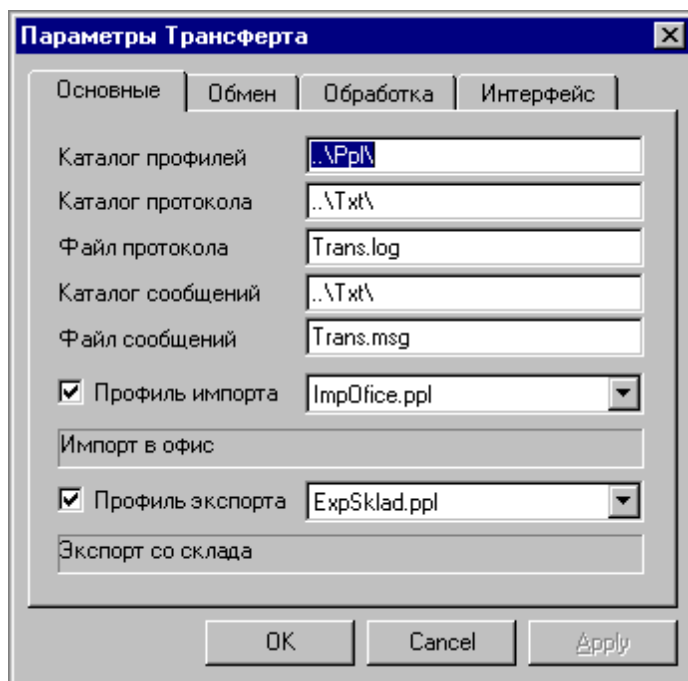
## 9.1

<b>-m</b>	(Minimize)	
<b>-t</b>	(Tray)	Tray
<b>-v</b>	(Verbose)	
<b>-f file</b>	(File)	
<b>-p parm</b>	(Parameters)	

$$[ \quad 1= \quad 1, \quad 2= \quad 2, \dots, \quad N= \quad N ]$$

**-f file,** **file,**

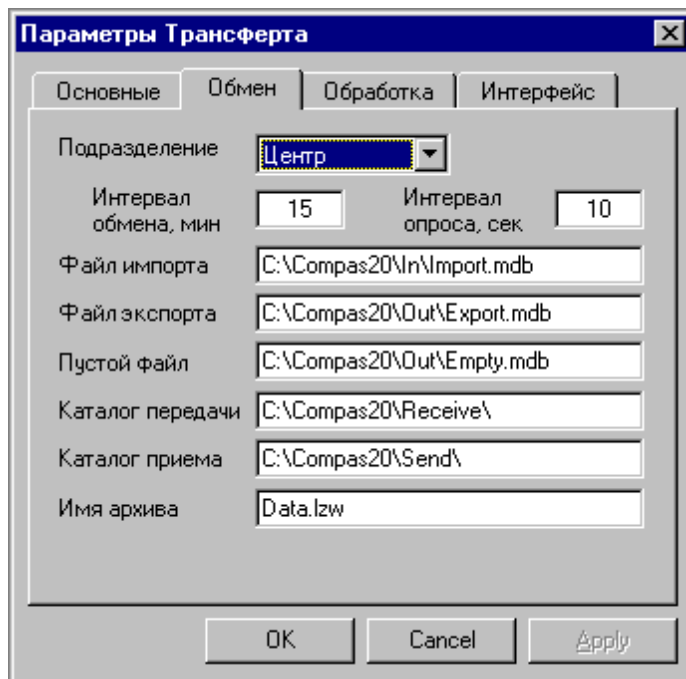
## 9.2



( , 05-12-2002\_23-28-03\_Trans.msg).

\_\_\_\_\_).

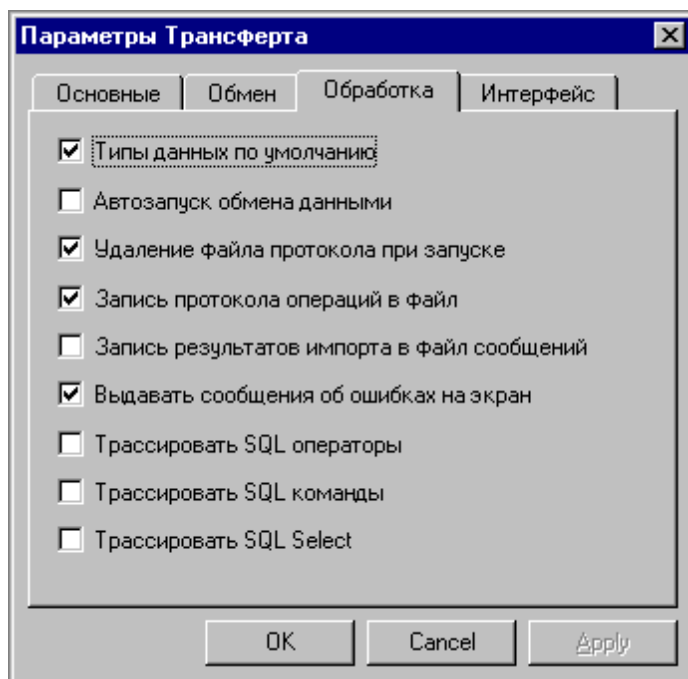
### 9.3



Microsoft Access.  
Microsoft "

LZW

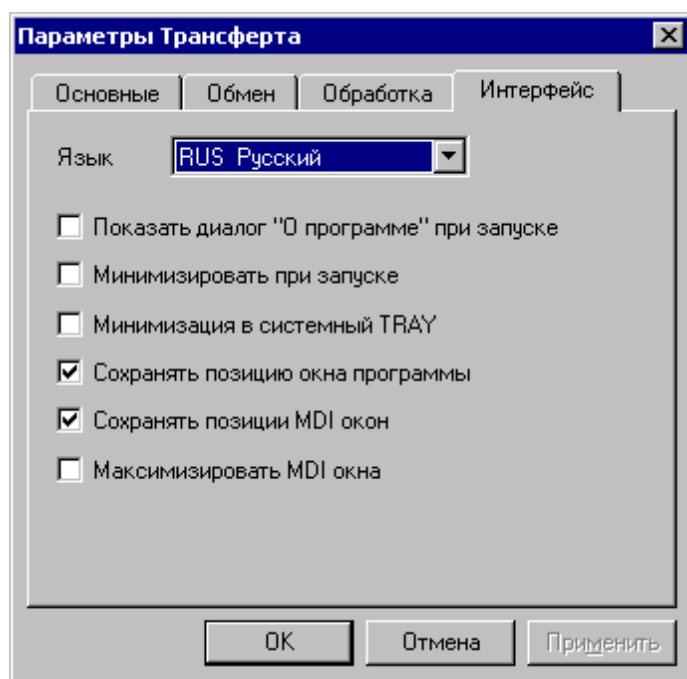
## 9.4



- SQL,
- 
- 
- 
- ( , . . )
- , , ,
- 
- 
- SQL INSERT,
- DELETE UPDATE
- SQL
- SQL Select. SELECT



## 9.5



- .
- " " , " "
- .
- , Tray. Tray.
- , ,
- .
- MDI MDI
- ( , )
- MDI ,

## 10

## ODBC

### 10.1

### ODBC

(Open Database Connectivity - ODBC)

Microsoft.

ODBC

DBF

MDB – Access Basic.

Xbase,

ODBC SQL.

Windows:

DLL. , ODBC

Windows 3.1

16-

ODBC.

Windows 9x, Windows NT,

ODBC.

Windows 2000, Windows XP

32-

32-

ODBC:

( ).

- 
- 
- 

## 10.2

## ODBC

ODBC

ODBC

Microsoft Office

ODBC:

- Microsoft SQL Server
- Microsoft ODBC for Oracle
- Microsoft Access
- Microsoft Excel
- Microsoft FoxPro
- DBase
- Paradox
- Text File

ODBC

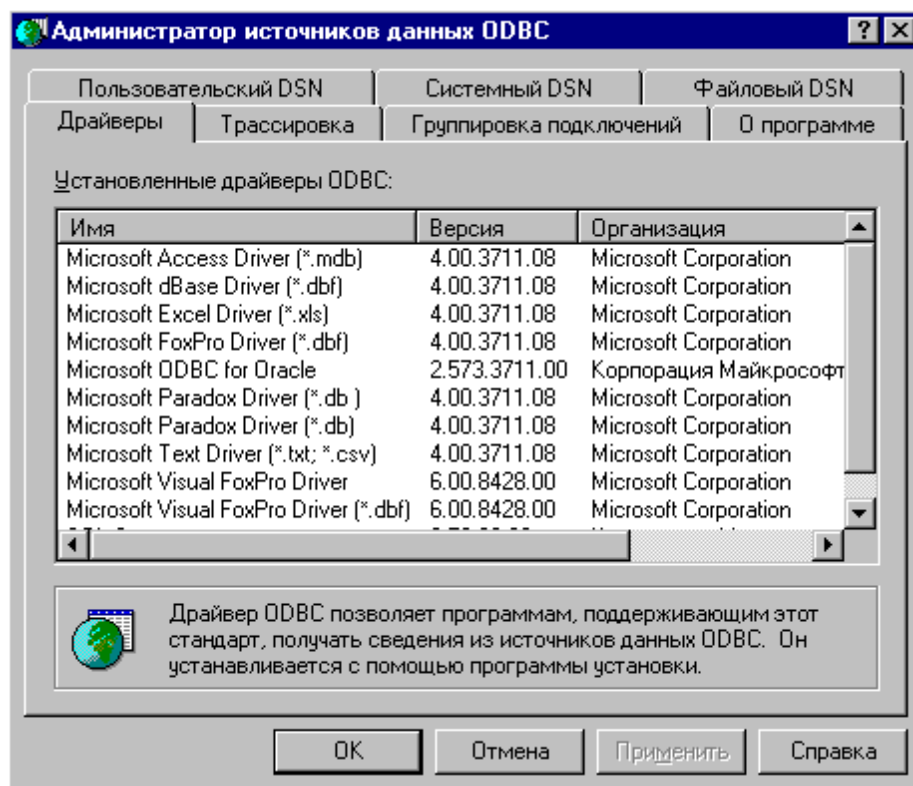
(Control Panel)

Windows, Control Panel

ODBC Data Sources (32 bit) ( ODBC 32 ),

ODBC Data Source Administrator ( ODBC).

Drivers

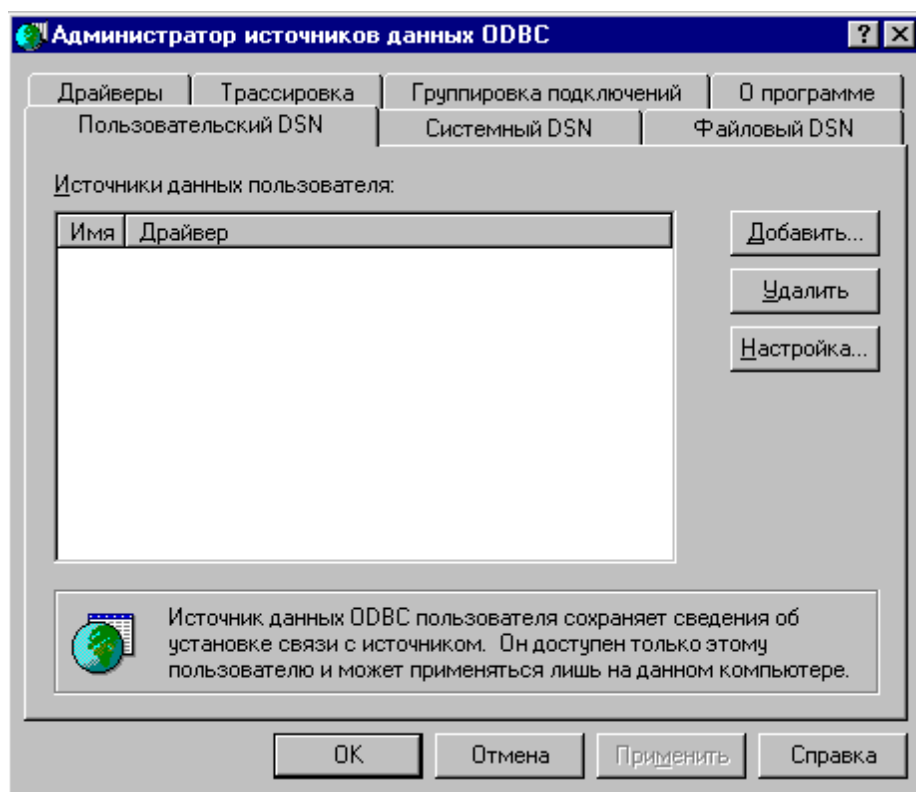


Version ( ) Company  
File ( )

## 10.3

## ODBC

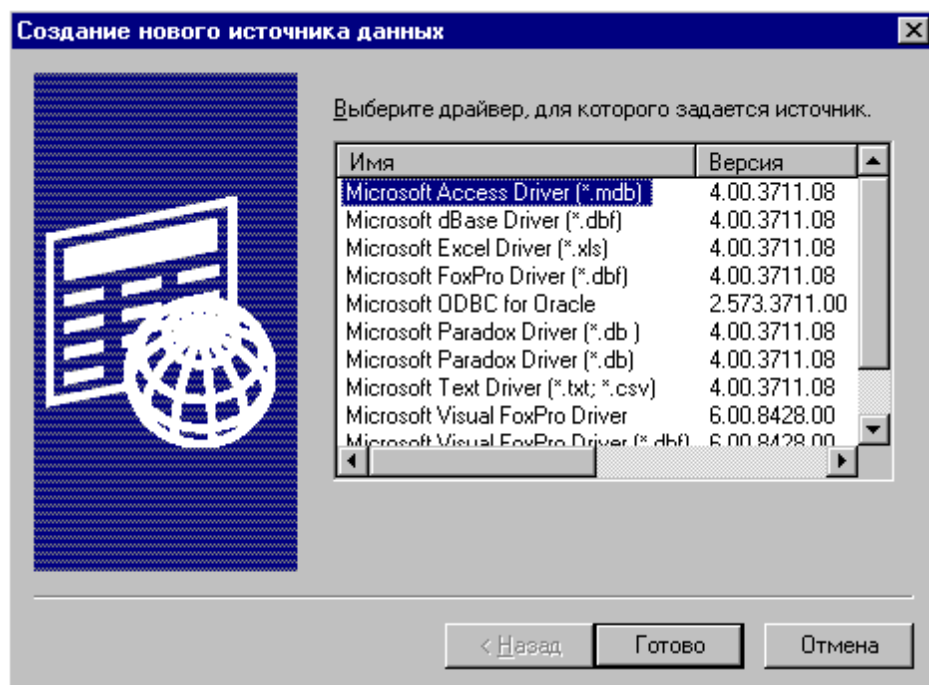
ODBC,  
Microsoft Access.  
1  
ODBC Data Sources (32 bit) ( ODBC 32 ) Control  
Panel ( ). ODBC Data Source Administrator  
( ODBC). User DSN  
( ). System DSN ( )  
) File DSN ( ),  
( ).



2

Add ( ).

Create New Data Source (



3

- Finish. ODBC ( , Microsoft Access Driver), ODBC Microsoft Access Setup, ODBC ,
- Data Source Name ( ).
- Description ( ).
- None,

Установка драйвера ODBC для Microsoft Access

Имя источника данных: TestDB

Описание: Test Database

База данных

База данных: c:\New\Test.mdb

Выбрать...

Создать...

Восстановить...

Сжать...

Системная база данных

☒ Нет

☐ База данных:

Системная база данных...

Драйвер

Время ожидания страницы: 5

Размер буфера: 2048

☐ Монопольный доступ

☐ Только чтение

OK

Отмена

Справка

Дополнительно

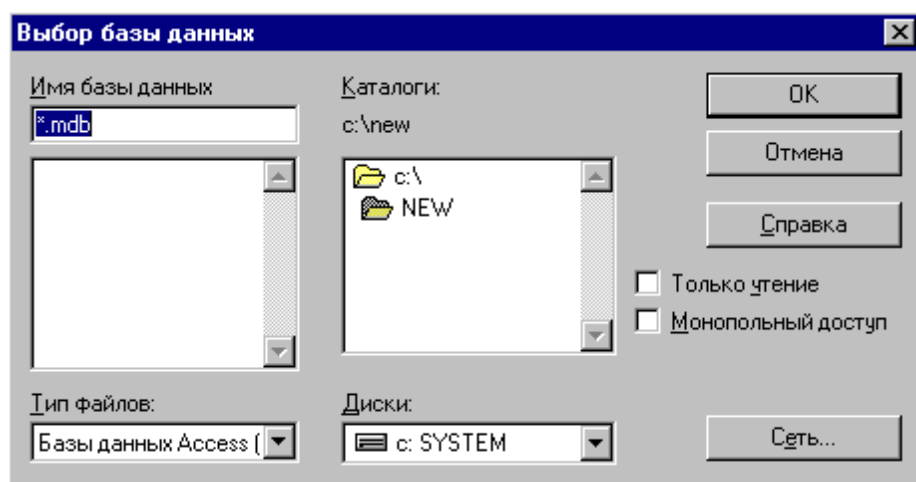
Параметры

4

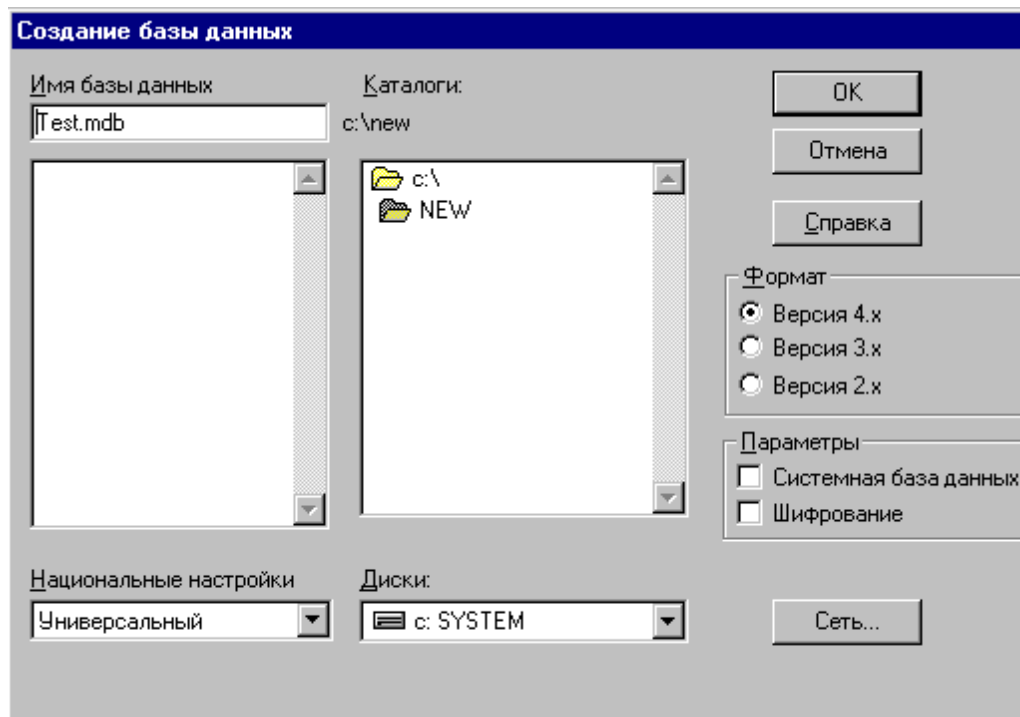
File Open

Select ( ).

ODBC



Access Create ( ). ODBS



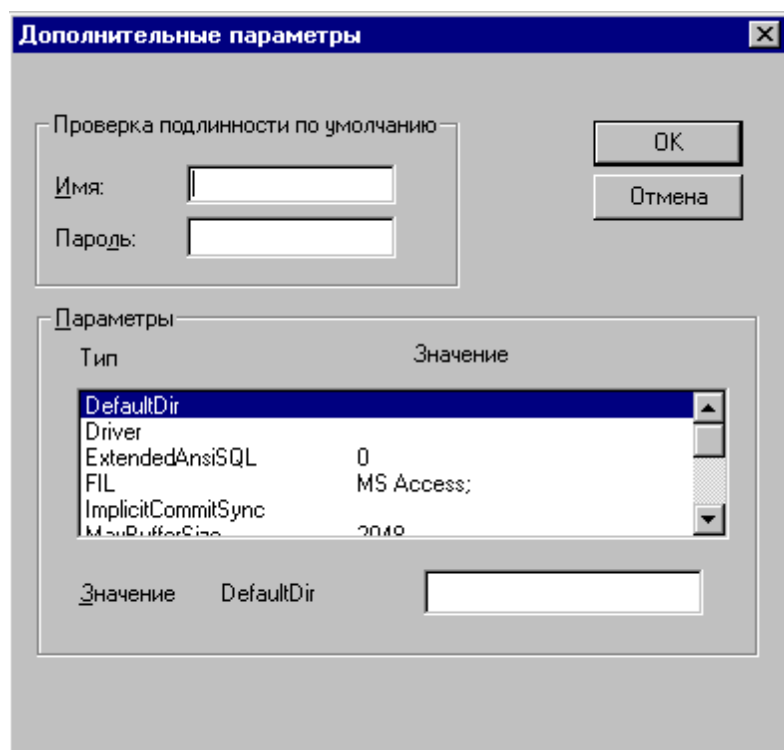
5

Advanced...

Set Advanced Options (

).

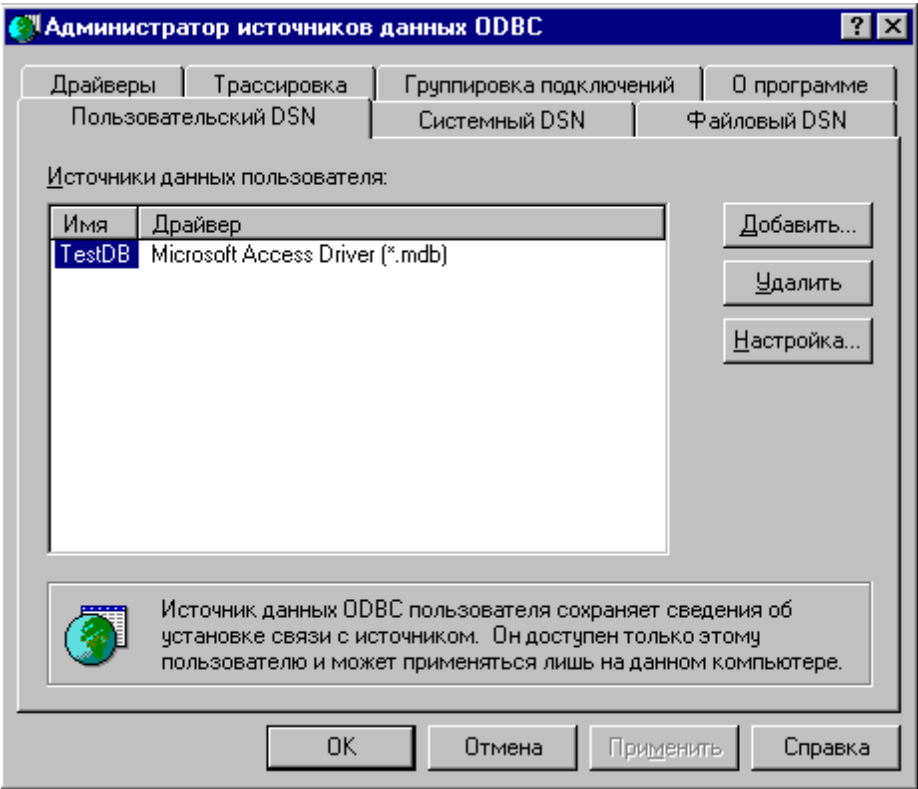
OK,



6

OK ,  
Setup.  
TestDB,  
( ).  
Remove ( ).

ODBC Microsoft Access  
Configure



10.4 ODBC

1. ODBC.

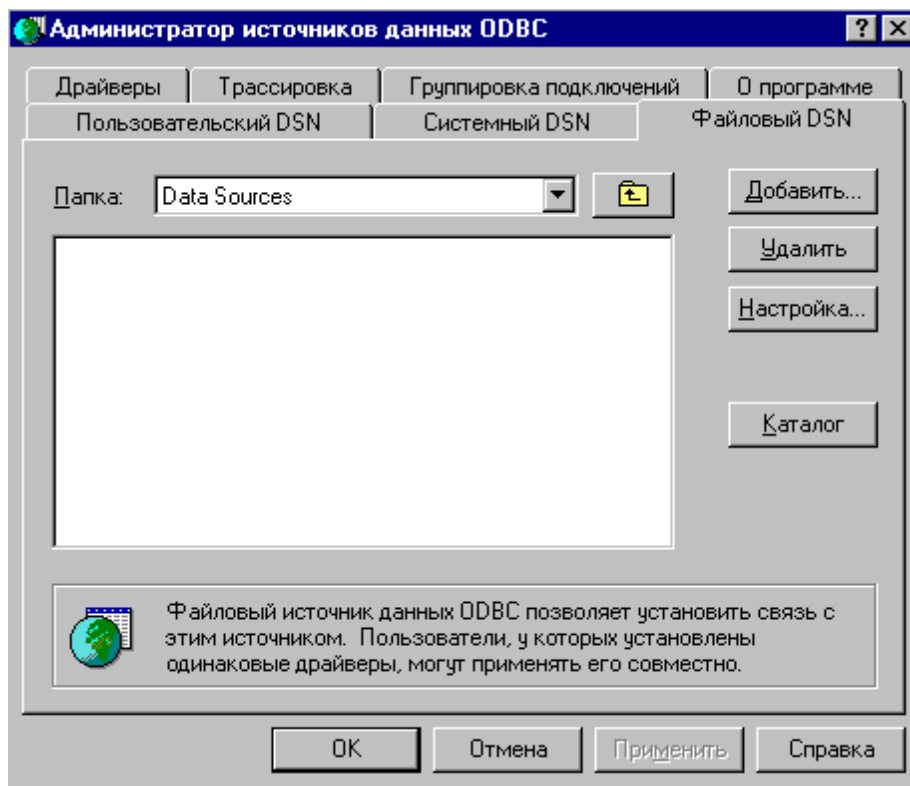
DSN.

ODBC Data Sources (32 bit) ( ODBC 32 ), ODBC Data Source Administrator ( ODBC).

File DSN , Look in ( ).

DSN.

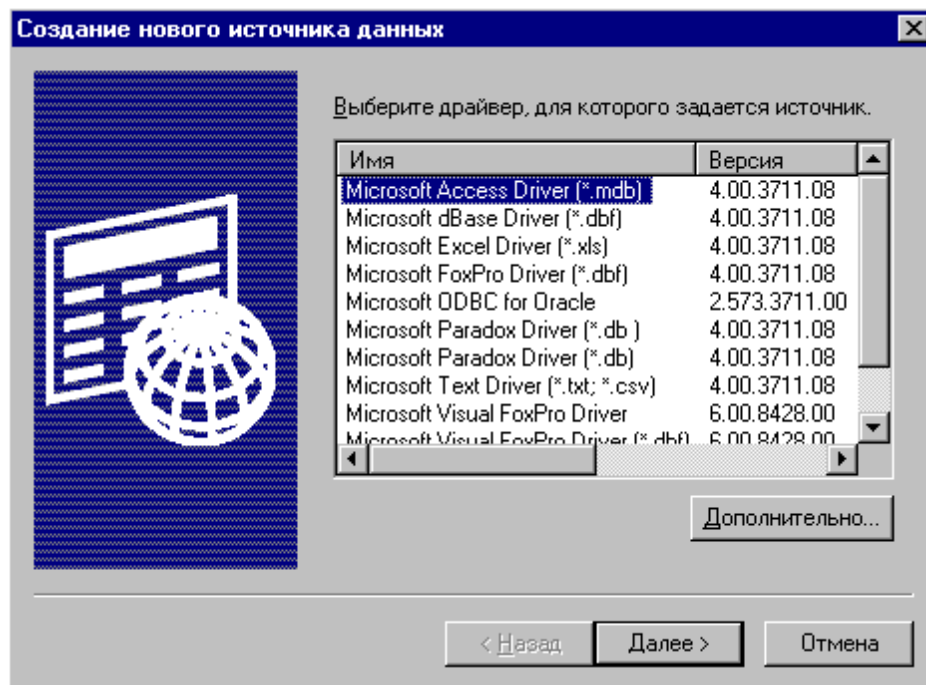




2

Add ( ).

Create New Data Source (



3

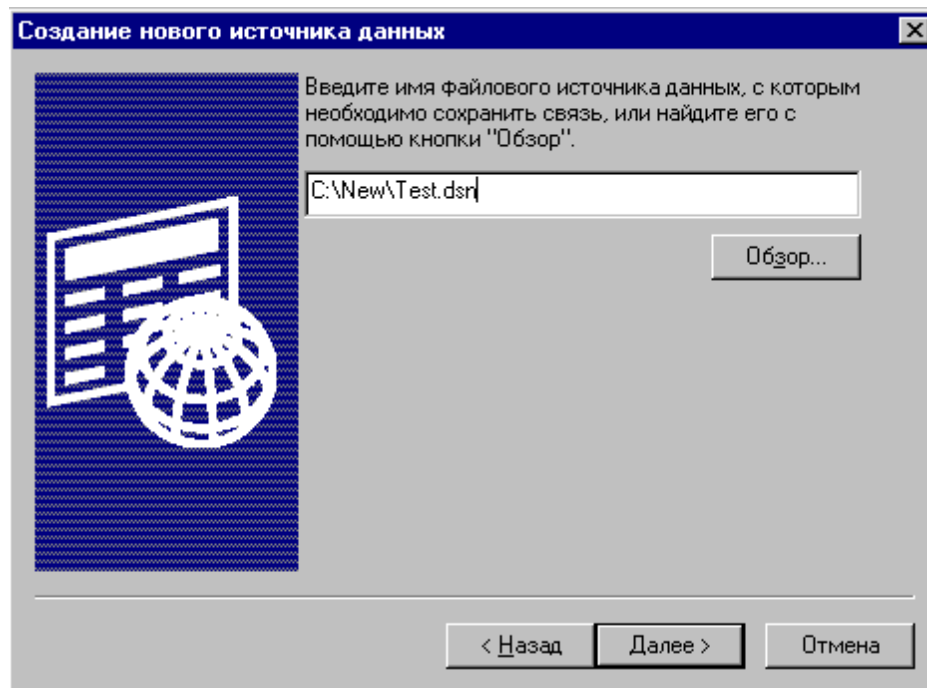
ODBC, Next.  
Create New Data Source (

).  
( )

File Open,

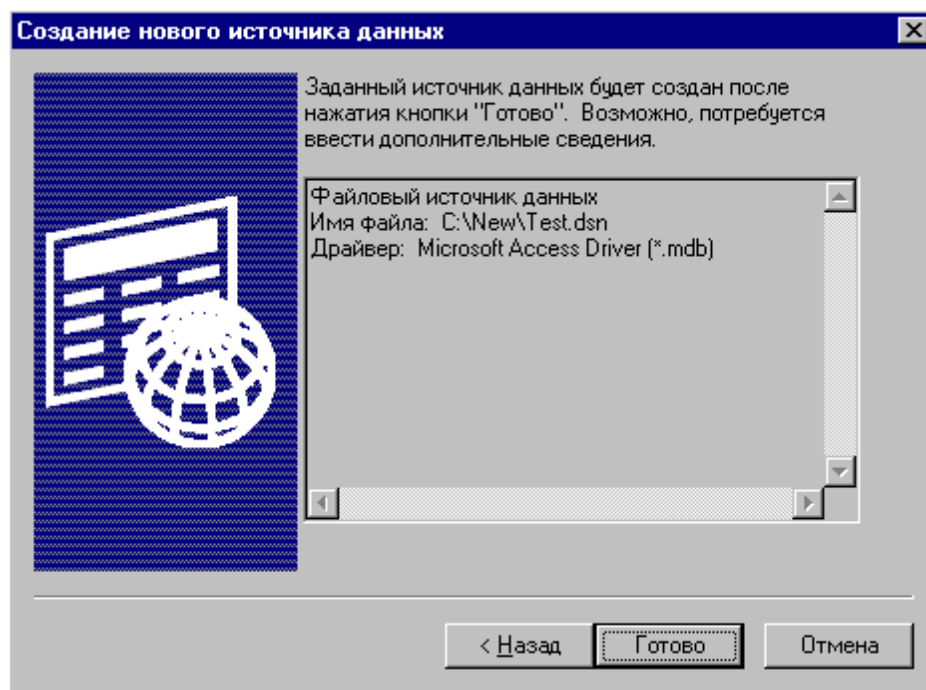
DSN

Browse



4

Next  
DSN,



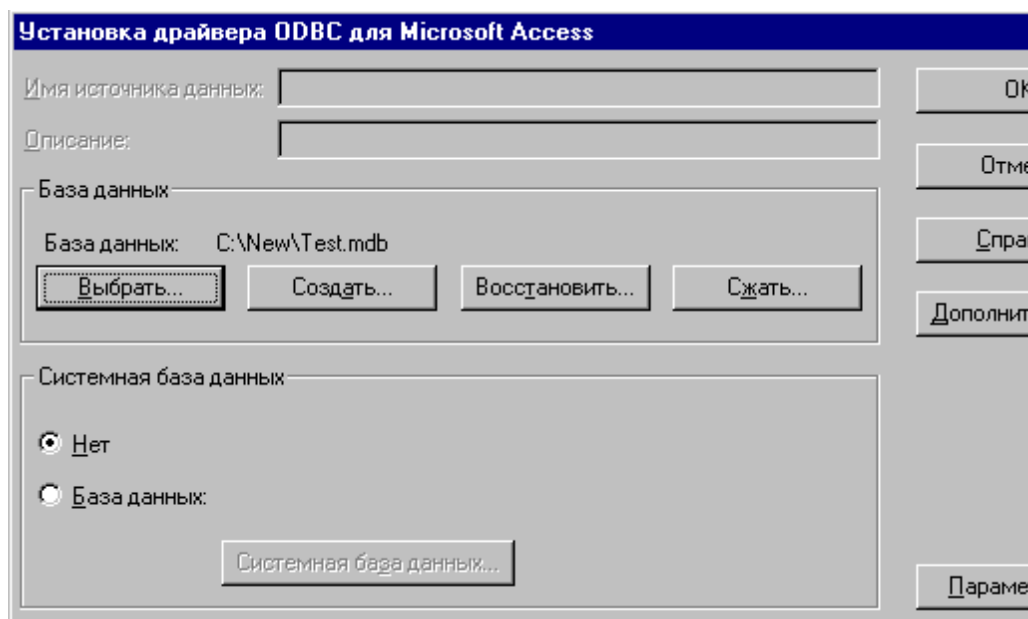
5

Finish

ODBC Microsoft

Access Setup,

Select

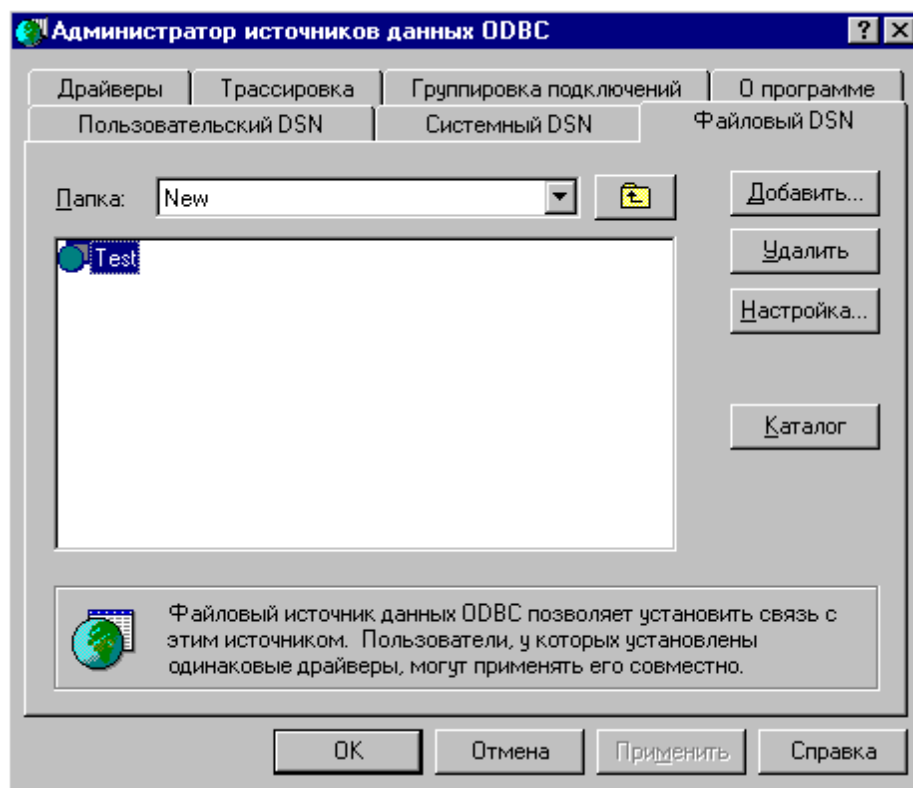


6

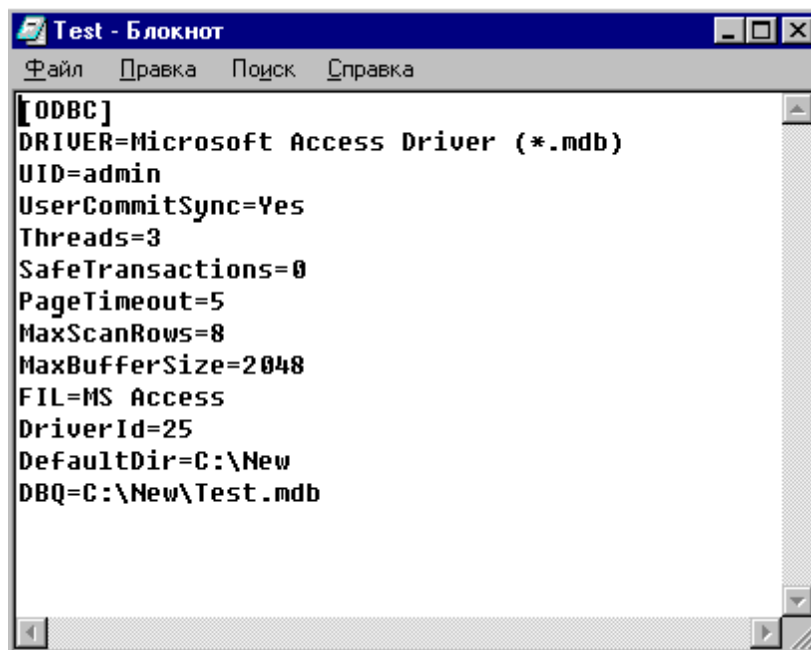
OK,

DSN,

ODBC Data Source Administrator.

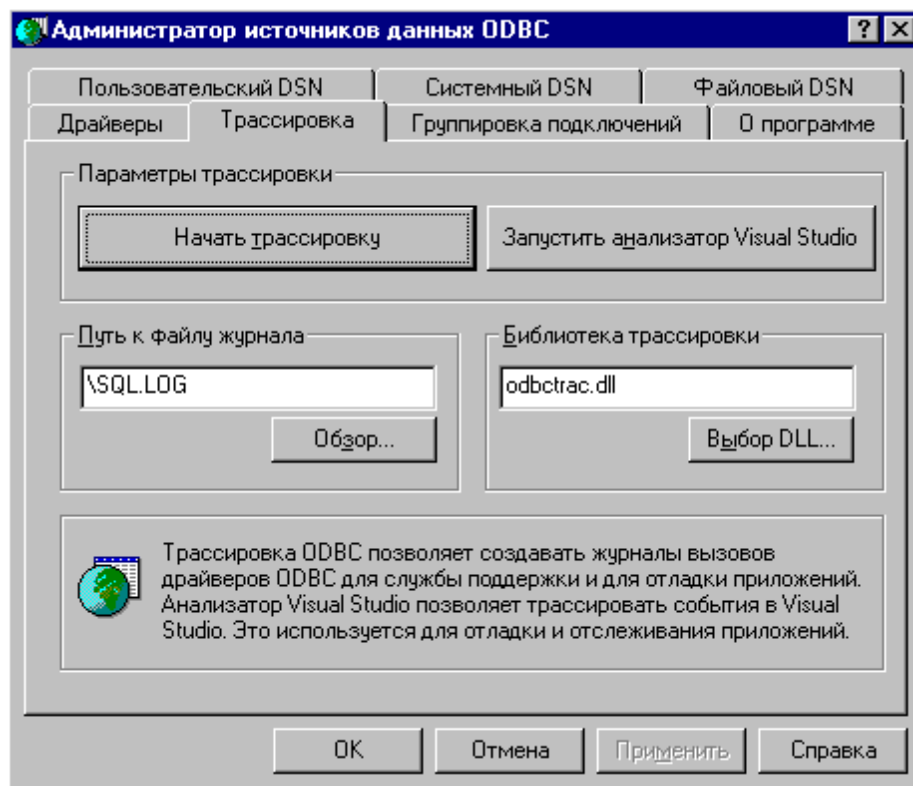


DSN, , , , , .



## 10.5 ODBC

ODBC, Source Administrator ( ODBC) ODBC Data Tracing. Log file Path. Start Tracing Now ( ), Stop Tracing Now ( ).



## 11

### 11.1

#### 11.1.1

\_\_\_\_\_

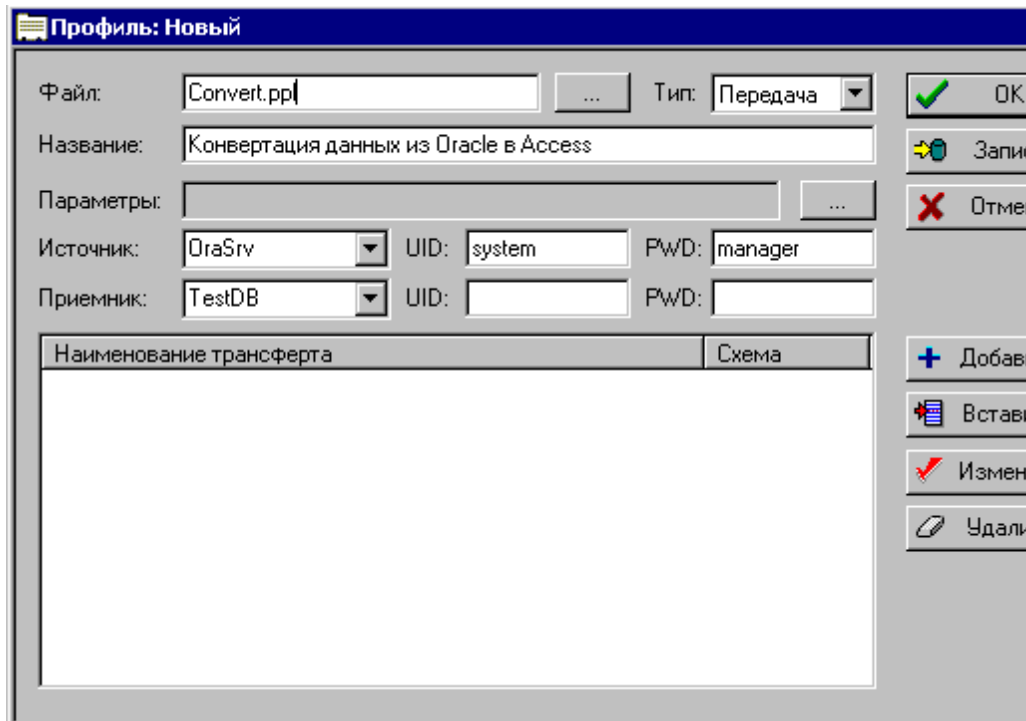
\_\_\_\_\_

\_\_\_\_\_

## 11.1.2

Trans30.ini,

( ..... ).  
 " " " " ( .....  
 ..... ).  
 " " ( ..... Ctrl  
 +Ins).



- PPL. [...],
- — , , ,
- ,
- ,
- [...]
- ( .....  
 ..... ).
- ODBC.
- ODBC ( ..... ODBC).
- UID
- PWD
- ODBC.

ODBC ( ODBC ).

- UID
- PWD

OK.

### 11.1.3

$$[\dots]$$

Параметры

№	Код	Наименование	Тип	Значение
1	dat1	Дата1	date	
2	dat2	Дата2	date	

✓ ОК

✗ Отмена

+

Добавить

+

Вставить

Удалить

- Char, Integer, Numeric, Date, Time, Timestamp (

### 11.1.4

- 
- 
- 
- 

Наименование трансферта	Схема	
Счета на оплату	Комплекс	+ Добавить
Счета за наличную оплату	Комплекс	+ Вставить
Межскладские накладные	Комплекс	✓ Изменить
Расходные накладные	Комплекс	✎ Удалить
Возвратные накладные	Комплекс	
Счета-фактуры расходные	Комплекс	
Документы оплаты расхода	Комплекс	

## 11.2

### 11.2.1

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### 11.2.2

- " " , SQL
- : , , ( . \_\_\_\_\_ )
- \_\_\_\_\_).
- : , OEM ANSI, ANSI OEM.
- , \_\_\_\_\_ ( . \_\_\_\_\_ )
- \_\_\_\_\_).
- SQL . SQL Select
- SQL . SQL Select ( . \_\_\_\_\_ )



Трансферт

Источник

Приемник

Субтаблица

Команды приемника

Команды субтаблицы

Наименование:

Расходные накладные

Схема:

Комплекс

Передача текстовых данных:

Без конвертации

Строка сообщения:

\$date\_sd Расходная накладная.: \$ndprt / \$autokey\_sd

SQL запрос таблицы источника:

select \*  
from sdoc  
where type\_sd = 505 and numref=:nref(i) and  
date\_sd between :dat1(ts) and :dat2(ts)  
order by date\_sd,type\_sd,ndprt,autokey\_sd

SQL запрос субтаблицы:

select \*  
from sdspc  
where numref = \$numref(i) and  
year = \$year(i) and  
type\_sd = \$type\_sd(i) and  
ndprt = \$ndprt(i) and  
autokey\_sd = \$autokey\_sd(i)

OK

Cancel

Apply

### 11.2.3

- SQL



SQL (Structured Query Language)

**Трансферт**

Источник | Приемник | **Субтаблица** | Команды приемника | Команды субтаблицы

Схема БД:     Таблица:     Процесс:

Условие SQL запроса:

Карта полей таблицы:

№	Поле	Флаг	Тип	Длина	Точн	<-	Значение
1	id_ware	T					
2	proc_tax1					<	prc_tax1
3	proc_tax2					<	prc_tax2
4	proc_tax3					<	prc_tax3
5	price_spc	N					

### 11.2.5

- K -  
 N -  
 T -  
 F - /
- Char, Integer, Numeric, Date, Time, Timestamp (
- ( < - ).

Карта полей таблицы: 

Добавить Вставить Удалить

№	Поле	Флаг	Тип	Длина	Точн	<-	Значение
1	sklad	T					
2	code_currency	T					
3	cur_code_curre	T					
4	flag	N					

11.2.6

```
OnChange (
    :
    •
        SQL (Insert, Update, Delete)
        (
            Call).
        ,
        SQL
        (
            Call
        ).
    •
        OnStart - ( )
        OnEnd - ( )
        CallExec - " "
        CallBack - " "
        OnInsert -
        OnUpdate -
        OnDelete -
        ReInsert -
        ReUpdate -
        ReDelete -
        OnChange -
        ReChange -
    •
        OnChange.
```

" " " "

Трансферт

Источник

Приемник

Субтаблица

Команды приемника

Команды субтаблицы

Добавить

Вставить

Удалить

Таблица команд:

№	Команда	Событие	Поле
1	update sdoc set flag=1 where type_sd=\$type_sd and numref=\$numref and ndprt=\$ndprt and autokey_sd=\$autokey_sd	CallExec	
2	update sdoc set flag=0 where type_sd=\$type_sd and numref=\$numref and ndprt=\$ndprt and autokey_sd=\$autokey_sd	CallBack	
3	call BAL_MOD(\$numref,\$year,\$cli1_ndprt,\$cli1_n \$code_currency,\$sumf_sd,^0,\$date_sd,\$flag)	OnInsert	
4	call BAL_MOD(\$numref,\$year,\$cli1_ndprt,\$cli1_n \$code_currency,\$sumf_sd,\$sumf_sd,\$date_sd,\$l	OnUpdate	
5	call BAL_MOD(\$numref,\$year,\$cli1_ndprt,\$cli1_r \$code_currency,^0,\$sumf_sd,\$date_sd,\$flag)	OnDelete	
6	call BAL_MOD(\$numref,\$year,\$cli1_ndprt,\$cli1_n \$code_currency,^0,\$sumf_sd,\$date_sd,\$flag)	ReInsert	
7	call BAL_MOD(\$numref,\$year,\$cli1_ndprt,\$cli1_n \$code_currency,\$sumf_sd,\$sumf_sd,\$date_sd,\$l	ReUpdate	
8	call BAL_MOD(\$numref,\$year,\$cli1_ndprt,\$cli1_r \$code_currency,\$sumf_sd,^0,\$date_sd,\$flag)	ReDelete	
9	update card_spc set date_card=\$date_sd where numref=\$numref and year=\$year and sklac sds_numref=\$numref and sds_year=\$year an	OnChange	date_sd

OK

Cancel

Apply

## 11.3

### 11.3.1

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### 11.3.2

```
PARAMETERS{
[ 1 1( 1)[= 1], ..., N N( N)[= N]]
=<char, integer, numeric, date, time, timestamp>
}
```

```

CONNECT{
Source( DSN=;UID=;PWD= )
Destination( DSN=;UID=;PWD= )
}
TRANSFER{
Name(
)
Schema( <COLUMNS, COPY, COMPLEX> )
ConvertText( <UNCHANGED, OEMTOANSI, ANSITOOEM> )
Source( SQL Select
)
SubSQL( SQL Select
)
Message(
)
Destination( process=<CREATE,ADD,REPLACE,FULL>
owner=<
>
table=<
>
condition( SQL Where
)
columns(
)
)
Detail( process=<CREATE,CLEAR,ADD,REPLACE,FULL>
owner=<
>
table=<
>
condition( SQL Where
)
columns(
)
)
TabCommands(
)
SubCommands(
)
}
...
TRANSFER{
}

```

PARAMETERS,  
TRANSFER.

CONNECT

PARAMETERS

CONNECT

ODBC

ODBC

UID

PWD

TRANSFER

Name

Schema

COLUMNS -  
COPY -  
COMPLEX -

<b>ConvertText</b>	UNCHANGED - OEMTOANSI - OEM ANSI ANSITOOEM - ANSI OEM	
<b>Source</b>	SQL Select .	
<b>SubSQL</b>	SQL Select ( ).	
<b>Message</b>	, ( . _____ _____). ,	
<b>Destination</b>	, : <b>process</b> = CREATE - , ADD - (INSERT ) REPLACE - (INSERT UPDATE) FULL - , , , <b>owner</b> = <b>table</b> = <b>condition</b> = SQL Where ( ) <b>columns</b> = ( . _____)	
<b>Detail</b>	, , Destination.	
<b>TabCommands</b>	( . _____).	
<b>SubCommands</b>	( . _____).	

### 11.3.3

[illegible]

K  
N  
T  
F  
/

COMPLEX

=<BT,TI,SI,BI,I,R,F,DB,DC,N,A,VA,LVA,B,VB,LVB,D,T,DT,TS>

:

1.

**columns**(T:sklad;T:code\_currency;T:cur\_code\_currency;F:flag;N:typ\_rate;N:sum\_link\_sd))

2.

**columns**(T:id\_ware;proc\_tax1=<prc\_tax1;proc\_tax2=<prc\_tax2;proc\_tax3=<prc\_tax3; N:price\_spc))

3.

**columns**(K:ndprt(l)=\$ndprt;K:id\_ware(l)=\$id\_ware;id\_parent(l)=\$id\_parent;  
last\_ware(l)=\$last\_ware;flag\_ware(l)=\$flag\_ware;flag\_made(l)=\$flag\_made;  
comp\_ware(l)=\$comp\_ware;code\_unit(l)=\$code\_unit;code\_country(l)=\$code\_country;  
id\_pro(l)=\$id\_pro;id\_ser(l)=\$id\_ser;name\_ware(VA,80)=\$name\_ware;  
name\_ware2(VA,80)=\$name\_ware2;code\_ware(VA,30)=\$code\_ware;  
code\_gr(VA,255)=\$code\_gr;barcode(VA,30)=\$barcode;marka\_ware(VA,40)=\$marka\_ware;  
okdp\_ware(VA,20)=\$okdp\_ware;post\_ware(VA,30)=\$post\_ware;gost\_ware(VA,30)=\$gost\_ware;  
acnt\_ware(VA,10)=\$acnt\_ware;weight(DB)=\$weight;pack(DB)=\$pack;cost\_ware(DB)=\$cost\_ware;  
count\_ware(DB)=\$count\_ware;t\_tax1(l)=\$t\_tax1;t\_tax2(l)=\$t\_tax2;t\_tax3(l)=\$t\_tax3;  
v\_tax1(DB)=\$v\_tax1;v\_tax2(DB)=\$v\_tax2;v\_tax3(DB)=\$v\_tax3;wdata(TS)=\$wdata;t\_info(LVA)))

### 11.3.4

( 1[; ... M])  
=<OnStart, OnEnd, CallExec, CallBack,  
OnInsert, OnUpdate, OnDelete,  
ReInsert, ReUpdate, ReDelete,  
OnChange. , ReChange. >

=<Insert, Update, Delete, Call >

Insert, Update, Delete

( ):

( )  
OnStart

( )



OnEnd ( )  
 CallExec  
 CallBack  
 OnInsert  
 OnUpdate  
 OnDelete  
 ReInsert  
 ReUpdate  
 ReDelete  
 OnChange  
 ReChange

SQL

\_\_\_\_\_)

:

#### TabCommands(

**CallExec**(update sdoc set flag=1  
 where type\_sd=\$type\_sd and numref=\$numref and year=\$year and  
 ndprt=\$ndprt and autokey\_sd=\$autokey\_sd)  
**CallBack**(update sdoc set flag=0  
 where type\_sd=\$type\_sd and numref=\$numref and year=\$year and  
 ndprt=\$ndprt and autokey\_sd=\$autokey\_sd)  
**OnInsert**(call BAL\_MOD(\$numref,\$year,\$cli1\_ndprt,\$cli1\_numb\_client,  
 \$code\_currency,'0',\$sumf\_sd,\$date\_sd,\$flag))  
**OnUpdate**(call BAL\_MOD(\$numref,\$year,\$cli1\_ndprt,\$cli1\_numb\_client,  
 \$code\_currency,\$sumf\_sd,\$sumf\_sd,\$date\_sd,\$flag))  
**OnDelete**(call BAL\_MOD(\$numref,\$year,\$cli1\_ndprt,\$cli1\_numb\_client,  
 \$code\_currency,\$sumf\_sd,'0',\$date\_sd,\$flag))  
**ReInsert**(call BAL\_MOD(\$numref,\$year,\$cli1\_ndprt,\$cli1\_numb\_client,  
 \$code\_currency,\$sumf\_sd,'0',\$date\_sd,\$flag))  
**ReUpdate**(call BAL\_MOD(\$numref,\$year,\$cli1\_ndprt,\$cli1\_numb\_client,  
 \$code\_currency,\$sumf\_sd,\$sumf\_sd,\$date\_sd,\$flag))  
**ReDelete**(call BAL\_MOD(\$numref,\$year,\$cli1\_ndprt,\$cli1\_numb\_client,  
 \$code\_currency,'0',\$sumf\_sd,\$date\_sd,\$flag))  
**OnChange.date\_sd**(update card\_spc set date\_card=\$date\_sd  
 where numref=\$numref and year=\$year and sklad=\$sklad and  
 sds\_numref=\$numref and sds\_year=\$year and  
 type\_sd=\$type\_sd and sds\_ndprt=\$ndprt and  
 autokey\_sd=\$autokey\_sd)  
**OnChange.cli1\_numb\_client**(call BAL\_MOD(\$numref,\$year,  
 \$cli1\_ndprt,\$cli1\_numb\_client,\$code\_currency,\$sumf\_sd,'0',\$date\_sd,\$flag);  
 call BAL\_MOD(\$numref,\$year,  
 \$cli1\_ndprt,\$cli1\_numb\_client,\$code\_currency,'0',\$sumf\_sd,\$date\_sd,\$flag);  
 update card\_spc set cli\_ndprt=\$cli1\_ndprt,  
 numb\_client=\$cli1\_numb\_client  
 where numref=\$numref and year=\$year and sklad=\$sklad and  
 sds\_numref=\$numref and sds\_year=\$year and  
 type\_sd=\$type\_sd and sds\_ndprt=\$ndprt and  
 autokey\_sd=\$autokey\_sd)  
**ReChange.date\_sd**(update card\_spc set date\_card=\$date\_sd

where numref=\$numref and year=\$year and sklad=\$sklad and  
 sds\_numref=\$numref and sds\_year=\$year and  
 type\_sd=\$type\_sd and sds\_ndprt=\$ndprt and  
 autokey\_sd=\$autokey\_sd)

**ReChange.cli1\_numb\_client**(call BAL\_MOD(\$numref,\$year,  
 \$cli1\_ndprt,\$cli1\_numb\_client,\$code\_currency,#sumf\_sd,^0,\$date\_sd,#flag);  
 call BAL\_MOD(#numref,#year,  
 #cli1\_ndprt,#cli1\_numb\_client,#code\_currency,^0,#sumf\_sd,#date\_sd,#flag);  
 update card\_spc set cli\_ndprt=#cli1\_ndprt,  
 numb\_client=#cli1\_numb\_client  
 where numref=\$numref and year=\$year and sklad=\$sklad and  
 sds\_numref=\$numref and sds\_year=\$year and  
 type\_sd=\$type\_sd and sds\_ndprt=\$ndprt and  
 autokey\_sd=\$autokey\_sd))

### 11.3.5

	ODBC SQL				
	<u>type</u>				
BT	Bit				
TI	TinyInt	3	-128 ~ 127 (	0 ~	
		255)			
SI	SmallInt	5	-32768 ~ 32767 (	0	
		~ 65535)			
BI	BigInt	19	$-2^{63} \sim 2^{63}-1$ (	0 ~	
		$2^{64}-1$ )			
I	Integer	10	$-2^{31} \sim 2^{31}-1$ (	0 ~	
		$2^{32}-1$ )			
R	Real		24	0 ~	
		$10^{38}$			
F	Float			p.	
DB	Double		53	0 ~	
		$10^{308}$			
DC	Decimal			p	
		s. (		). 1 <= p <	
		15, s <= p			
N	Numeric			p	
		s. 1 <= p < 15, s <= p			
A	Char		n.		
VA	VarChar			n.	
LVA	LongVarChar		.		
		ODBC.			
B	Binary		n.		
VB	VarBinary			n.	
LVB	LongVarBinary		.		
		ODBC.			
T	Time	,	.		
D	Date	,	.		

TS                      Timestamp

### 11.3.6

^                      (                      )                      SQL Insert  
 +                      Update.  
 :                      SQL Insert                      Update.  
 \$                      SQL Insert                      Update.  
 ~                      SQL Insert                      Update.  
 #                      SQL Insert                      Update.  
 !                      SQL Insert                      Update.  
 <                      SQL Insert                      Update.  
 %                      SQL

### 11.3.7

-                      ,                      "                      "                      .  
 % .

SQLGetVal	field, table, where expr	field	table where
SQLMaxVal	field, table, where expr	expr. ,	field
SQLMinVal	field, table, where expr	table where expr.	field
SQLAvgVal	field, table, where expr	table where expr.	field
SQLVarVal	field, table, where expr	table where expr.	field
SQLSumVal	field, table, where expr	table where expr.	field
SQLCount	table, where expr	where expr.	table,

## 12.1

---

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[illegible]

## 12.2

```

SQL Insert.
Insert
: OnStart, OnInsert, ReInsert, OnEnd.

```

```

graph TD
    Start(( )) --> OnStart[OnStart]
    OnStart --> OnInsert[OnInsert]
    OnInsert --> ReInsert[ReInsert]
    ReInsert --> OnEnd[OnEnd]
    OnEnd --> End(( ))

```

## 12.3

( , ).

( )

". "

( " ").

" ", ),

" ).

1.

SQL (Insert, Update).

(OnInsert, OnUpdate).

Update

Insert Callback (

).

2.

F ( " ") - OnInsert.

OnInsert.

3.

CallBack F ( " ") - OnDelete.

OnDelete.

CallExec " ".

4.

T

( ).

( )

5.

" ).

6.

T ( ).

SQL

## 12.4

2009



# 12.5

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**ReUpdate**

```
" "
OnUpdate.
SQL,
OnUpdate,
OnUpdate.
```

**OnDelete**

```
SQL Delete.
SQL Delete.
```

**ReDelete**

```
" "
OnDelete.
SQL,
OnDelete,
OnDelete.
```

**OnChange**

```
- .
" "
```

**ReChange**

```
" "
OnChange.
SQL,
OnChange,
OnChange.
```

**CallExec**



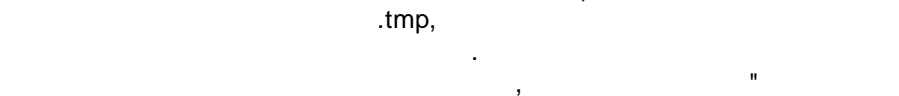
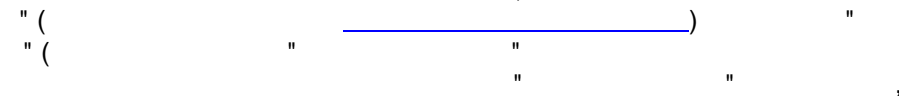






```
" " ( . _____ ).
"
CallExec
.
```

**CallBack**

```
" " ( . _____ ).
"
CallBack
.
```

**12.6**

```
Microsoft Access.
" " ( . _____ ).
.
Microsoft ( ).
Microsoft "
" - "
:
1. " ( _____ ) "
"
```

2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 
11. 

## 13

## 13.1

```

      :  

      - "Books"  

      - "Music"  

      - "Transactions"  

      .\PPL\                                : books.ppl,  

music.ppl, trans.ppl.  

      Microsoft Access.  

      ,                               Microsoft Access.  

                                      ODBC  

      :  

.\In\Import.mdb  

.\Out\Export.mdb
```

## - "Books"

```

import.mdb - Books.

: Authors Books.

Books

Authors.
(+) ID_Author. , Books
id_author, SQL-
Authors.
SQLGetVal().

K ( ).
size Books ODBC
: varchar integer.

```

- "Music"

## 13.4

## - "Transactions"

```

: trans.ppl.

(
).

: Curr Trans.
SQL- SQLGetVal(). Curr Transactions -
balance, Trans
SQLSumVal(), amount
Trans.

SQL-
SQL-
OnEnd.
balance Trans.

```

## 14

### 14.1

```

DBF
DBMS ( )
DLL
LZW
MDB
MDI
ODBC
PPL
PWD
SQL
System Tray
UID
xBase

```

### 14.2

```

PARAMETERS{
[ 1 1( 1)[= 1], ..., N N( N)[= N]]

```

```

=<char, integer, numeric, date, time, timestamp>
}
CONNECT{
Source( DSN=;UID=;PWD= )
Destination( DSN=;UID=;PWD= )
}
TRANSFER{
Name(
)
Schema( <COLUMNS, COPY, COMPLEX> )
ConvertText( <UNCHANGED, OEMTOANSI, ANSITOOEM> )
Source( SQL Select
)
SubSQL( SQL Select
)
Message(
)
Destination( process=<CREATE,ADD,REPLACE,FULL>
owner=<
>
table=<
>
condition( SQL Where
)
columns(
)
)
Detail( process=<CREATE,CLEAR,ADD,REPLACE,FULL>
owner=<
>
table=<
>
condition( SQL Where
)
columns(
)
)
TabCommands(
)
SubCommands(
)
}
...
TRANSFER{
}

```

PARAMETERS,  
TRANSFER.

CONNECT

PARAMETERS

CONNECT

ODBC

ODBC

UID

PWD

TRANSFER

**Name**

**Schema**

COLUMNS -  
COPY -

COMPLEX -

### ConvertText

UNCHANGED -  
 OEMTOANSI - OEM ANSI  
 ANSITOOEM - ANSI OEM

### Source

SQL Select

### SubSQL

SQL Select ( ).

### Message

, ( . )  
 ).

### Destination

,  
 :  
**process** =  
 CREATE -  
 ADD - (INSERT )  
 REPLACE - (INSERT UPDATE)  
 FULL -  
 , ,  
 , ,  
**owner** =  
**table** =  
**condition** = SQL Where ( )  
**columns** = ( . )

### Detail

, , Destination.

### TabCommands

( . )

### SubCommands

( . )

## 14.3

, ,  
 ( . )  
 [ : ] 1[( [, , )]= 1;  
 ...  
 [ : ] N[( [, , )]= N

=<BT, TI, SI, BI, I, R, F, DB, DC, N, A, VA, LVA, B, VB, LVB, D, T, DT, TS>

## 14.4

---

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\_\_\_\_\_( \_\_\_\_\_ ) \_\_\_\_\_

OnStart

( \_\_\_\_\_ )

OnEnd

( \_\_\_\_\_ )

CallExec

CallBack

OnInsert

OnUpdate

OnDelete

ReInsert

ReUpdate

ReDelete

OnChange

ReChange

SQL

( \_\_\_\_\_ )

\_\_\_\_\_

:

#### TabCommands(

**CallExec**(update sdoc set flag=1

where type\_sd=\$type\_sd and numref=\$numref and year=\$year and  
ndprt=\$ndprt and autokey\_sd=\$autokey\_sd)

**CallBack**(update sdoc set flag=0

where type\_sd=\$type\_sd and numref=\$numref and year=\$year and  
ndprt=\$ndprt and autokey\_sd=\$autokey\_sd)

**OnInsert**(call BAL\_MOD(\$numref,\$year,\$cli1\_ndprt,\$cli1\_numb\_client,  
\$code\_currency,^0,\$sumf\_sd,\$date\_sd,\$flag))

**OnUpdate**(call BAL\_MOD(\$numref,\$year,\$cli1\_ndprt,\$cli1\_numb\_client,  
\$code\_currency,#sumf\_sd,\$sumf\_sd,\$date\_sd,#flag))

**OnDelete**(call BAL\_MOD(#numref,#year,#cli1\_ndprt,#cli1\_numb\_client,  
#code\_currency,#sumf\_sd,^0,#date\_sd,#flag))

**ReInsert**(call BAL\_MOD(\$numref,\$year,\$cli1\_ndprt,\$cli1\_numb\_client,  
\$code\_currency,\$sumf\_sd,^0,\$date\_sd,\$flag))

**ReUpdate**(call BAL\_MOD(\$numref,\$year,\$cli1\_ndprt,\$cli1\_numb\_client,  
\$code\_currency,\$sumf\_sd,#sumf\_sd,\$date\_sd,#flag))

**ReDelete**(call BAL\_MOD(#numref,#year,#cli1\_ndprt,#cli1\_numb\_client,  
#code\_currency,^0,#sumf\_sd,#date\_sd,#flag))

**OnChange.date\_sd**(update card\_spc set date\_card=\$date\_sd

where numref=\$numref and year=\$year and sklad=\$sklad and  
sds\_numref=\$numref and sds\_year=\$year and  
type\_sd=\$type\_sd and sds\_ndprt=\$ndprt and  
autokey\_sd=\$autokey\_sd)

**OnChange.cli1\_numb\_client**(call BAL\_MOD(#numref,#year,  
#cli1\_ndprt,#cli1\_numb\_client,#code\_currency,#sumf\_sd,^0,#date\_sd,#flag);

call BAL\_MOD(\$numref,\$year,  
\$cli1\_ndprt,\$cli1\_numb\_client,\$code\_currency,^0,#sumf\_sd,\$date\_sd,#flag);

update card\_spc set cli\_ndprt=\$cli1\_ndprt,  
numb\_client=\$cli1\_numb\_client

where numref=\$numref and year=\$year and sklad=\$sklad and  
sds\_numref=\$numref and sds\_year=\$year and  
type\_sd=\$type\_sd and sds\_ndprt=\$ndprt and

```

    autokey_sd=$autokey_sd)
ReChange.date_sd(update card_spc set date_card=#date_sd
where numref=$numref and year=$year and sklad=$sklad and
    sds_numref=$numref and sds_year=$year and
    type_sd=$type_sd and sds_ndprt=$ndprt and
    autokey_sd=$autokey_sd)
ReChange.cli1_numb_client(call BAL_MOD($numref,$year,
$cli1_ndprt,$cli1_numb_client,$code_currency,#sumf_sd,^0,$date_sd,#flag);
call BAL_MOD(#numref,#year,
#cli1_ndprt,#cli1_numb_client,#code_currency,^0,#sumf_sd,#date_sd,#flag);
update card_spc set cli_ndprt=#cli1_ndprt,
    numb_client=#cli1_numb_client
where numref=$numref and year=$year and sklad=$sklad and
    sds_numref=$numref and sds_year=$year and
    type_sd=$type_sd and sds_ndprt=$ndprt and
    autokey_sd=$autokey_sd))

```

## 14.5

	<u>ODBC SQL</u>				
	<u>type</u>				
BT	Bit				
TI	TinyInt	3	-128 ~ 127 (	0 ~	
		255)			
SI	SmallInt	5	-32768 ~ 32767 (	0	
		~ 65535)			
BI	BigInt	19	$-2^{63} \sim 2^{63}-1$ (	0 ~	
		$2^{64}-1$ )			
I	Integer	10	$-2^{31} \sim 2^{31}-1$ (	0 ~	
		$2^{32}-1$ )			
R	Real		24	0 ~	
		$10^{38}$			
F	Float			p.	
DB	Double		53	0 ~	
		$10^{308}$			
DC	Decimal			p	
		s. (		). 1 <= p <	
		15, s <= p			
N	Numeric			p	
		s. 1 <= p < 15, s <= p			
A	Char		n.		
VA	VarChar			n.	
LVA	LongVarChar		.		
		ODBC.			
B	Binary		n.		
VB	VarBinary			n.	
LVB	LongVarBinary		.		
		ODBC.			

T  
D  
TS      Time  
Date  
Timestamp

## 14.6

^      (      )      SQL Insert  
Update.  
+      SQL Insert,      Update.  
:  
\$      SQL Insert      Update.  
~      SQL Insert      Update.  
#      SQL Insert      Update.  
!  
<      SQL Insert      Update.  
%

SQL

## 14.7

			%. . :
SQLGetVal	field, table, where expr	expr. ,	field table where
SQLMaxVal	field, table, where expr	table where expr.	field
SQLMinVal	field, table, where expr	table where expr.	field
SQLAvgVal	field, table, where expr	table where expr.	field
SQLVarVal	field, table, where expr	table where expr.	field
SQLSumVal	field, table, where expr	table where expr.	field
SQLCount	table, where expr		table, where expr.

