

PRVView

Version: 2.0.00

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1. About PRVView

Purpose *PRVView* enables transparent communication to a DSS (Digital Sub Station) through the *Autic PRV driver*, just like the *Visonik DUS* command. It also presents the Time Switch Catalogues (TSC) in an easy way.

1.1 System requirements

Minimum Pentium 133 with 16 MB RAM, 2 MB hard disk space. Windows 95/98 or NT 4.0 (servicepack 3) installed. Citect 5.21 using the *Autic PRV Driver*.

1.2 Installation

1.2.1 Installation of program

From diskette Insert diskette 1. Select *Start-Run*, enter **A:SETUP**.

From CD Insert the CD, the setup program is automatically started.

1.2.2 Configuring CTAPI and the search paths

PRVView is an application that is not integrated as part of the Citect system, but it may be started from within Citect using the *EXEC* command. This enables the possibility to run *PRVView* from a graphics page. Using the start parameter */TAG* it is possible to immediately open the folder that corresponds to the desired DSS.

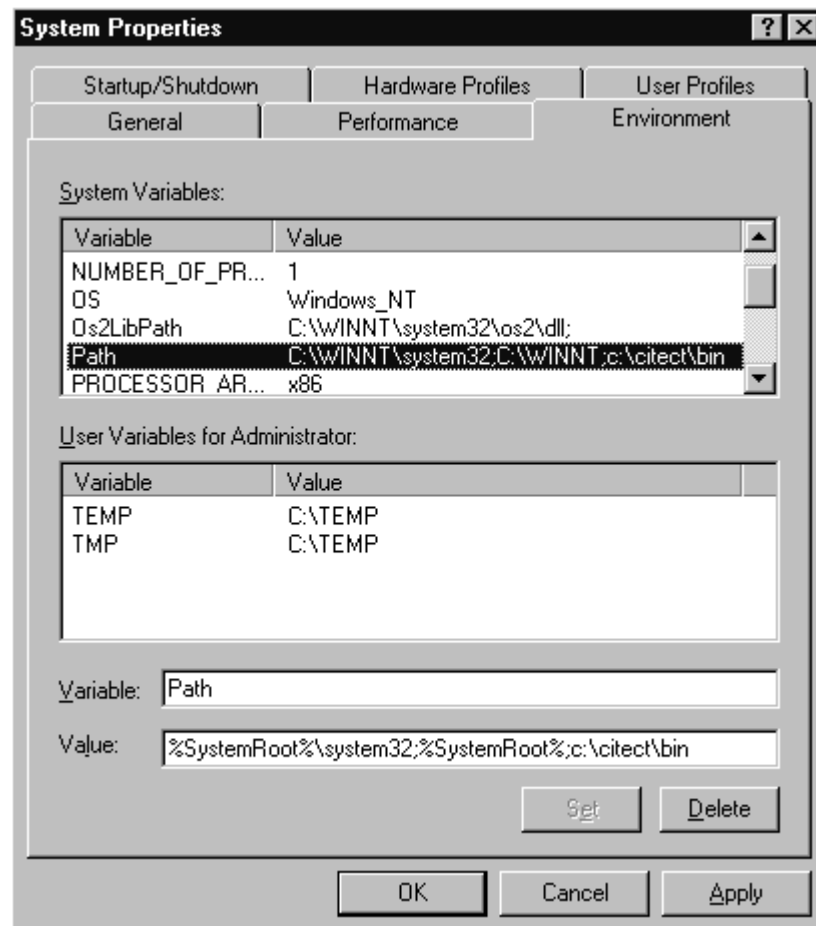
Though *PRVView* is an external application, it communicates through the well known CTAPI that is built into Citect. To enable communication through CTAPI, the search path must include the *CITECT\BIN* folder.

For Window 95/98 is this enabled by simply adding *CITECT\BIN* in the *AUTOEXEC.BAT* file, i.e. add:

```
set path=%path%;c:\citect\bin
```

etc in the end of the file. The computer has to be restarted for the changes to take effect.

For Windows NT the necessary changes are made in Control Panel - *System - Environment*, and the environment variable *Path*.



It is not necessary to restart the computer for these changes to take effect.

1.2.3 Configuring Citect

I/O Device

When transparent communication to a DSS takes place, all other communications to that device must be shut off. This will result in a I/O Device off-line state (i.e. *#COM*). Because of this there is a necessity to use a virtual device located at the same channel for the transparent communication (communication to a device in an off-line state is prohibited by Citect).

This virtual I/O device (using the *SYSTEM* address) will never go off-line, no matter of the state of the DSS. The communication from *PRVView* passes CTAPI and uses a tag defined at the virtual I/O device as a communication channel. Below is a typical example of a addressing setup.

The screenshot shows a window titled "I/O Devices [PRV2]". It contains the following fields and controls:

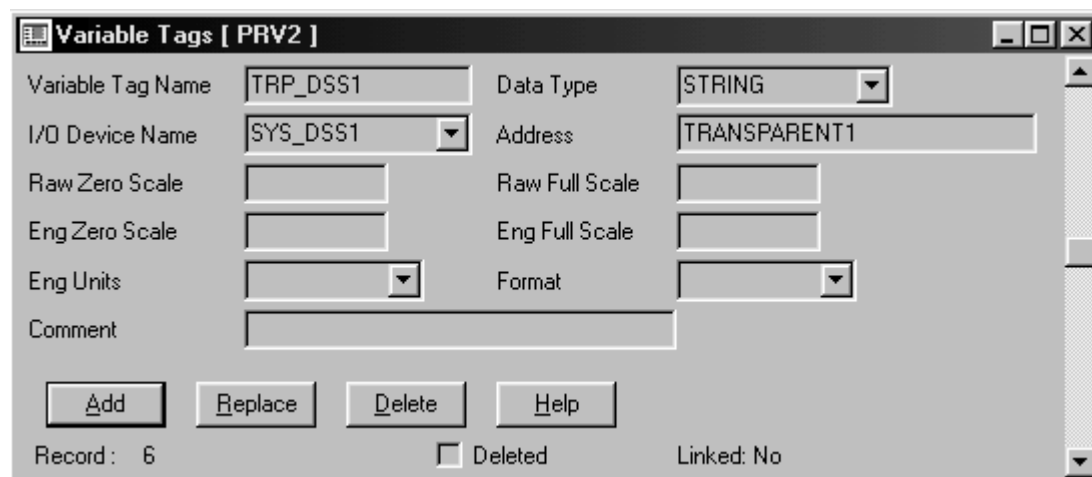
- Server Name: IOSEVER
- Name: DSS1
- Number: 1
- Address: (empty)
- Protocol: PRV (dropdown menu)
- Port Name: PORT1_BOARD1 (dropdown menu)
- Comment: (empty)
- Buttons: Add, Replace, Delete, Help
- Record: 1
- Deleted: ☐

This is the physical I/O device, *DSS1*. Observe that no address is entered, which is completely correct. The DSS will automatically be assigned to the internal address 1, which is used later on (this is *not* related to the *Number* parameter). The reason why a DSS does not need a unique address is that each DSS communicates using a unique combination of the Board/Port settings, either using TCP/IP or through COMX.

The screenshot shows a window titled "I/O Devices [PRV2]". It contains the following fields and controls:

- Server Name: IOSEVER
- Name: SYS_DSS1
- Number: 2
- Address: SYSTEM
- Protocol: PRV (dropdown menu)
- Port Name: PORT1_BOARD1 (dropdown menu)
- Comment: (empty)
- Buttons: Add, Replace, Delete, Help
- Record: 2
- Deleted: ☐

This is the virtual device, *SYS_DSS1*, that is used for the transparent communication with *PRVView*. It must have the address *SYSTEM*, and be located at the same board/port combination as the related physical device. This I/O device is sometimes mentioned as the 'System Device'. *Number* must be unique as usual (with reservation to the redundancy settings). This is a physical device from Citect's point of view, but it should have only one tag defined, see below.



The image shows a Windows-style dialog box titled "Variable Tags [PRV2]". It contains several input fields and buttons. The "Variable Tag Name" field is set to "TRP_DSS1". The "Data Type" dropdown is set to "STRING". The "I/O Device Name" dropdown is set to "SYS_DSS1". The "Address" field is set to "TRANSPARENT1". There are empty fields for "Raw Zero Scale", "Raw Full Scale", "Eng Zero Scale", "Eng Full Scale", "Eng Units" (a dropdown), and "Format" (a dropdown). A "Comment" text area is at the bottom. Below the fields are four buttons: "Add", "Replace", "Delete", and "Help". At the very bottom, it says "Record: 6", a checkbox for "Deleted" (which is unchecked), and "Linked: No".

It is through this tag, *TRP_DSS1*, that *PRVView* communicates to the physical I/O device at the same channel as the virtual device. The *Variable tag name* is of course not critical (just like the naming of the virtual and physical devices). The address must however always be *TRANSPARENT1*, which means that it is a transparent channel to the DSS with address 1 at the same board/port combination. As mentioned earlier, there is only one physical DSS per board/port combination and it was automatically assigned the address 1. This tag must be defined using the transparent I/O device (*SYS_DSS1* above).

PRVView.INI For *PRVView* to know which tag that corresponds to a certain DSS, the variable tag name has to be entered in the *PRVView.INI* file. Read the appendix to get a description of this file.

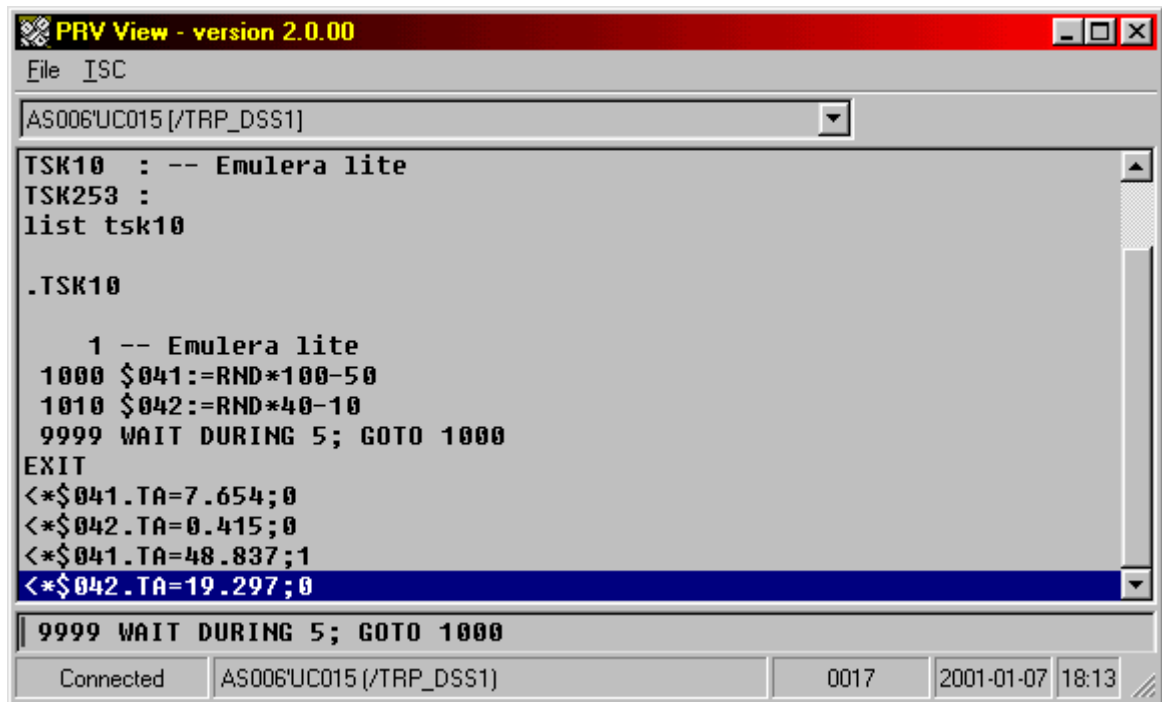
1.2.4 Registering

PRVView is not an open software. I.e. without registering, all functions but reading TSCs are disabled (demo mode). At startup time, *PRVView* checks for a sentinel (i.e. *Dongle*), and returns its identification number in a message box. Please contact the *Autic Registration Centre* to get a registration key. The personell will ask for the Dongle Id.

When a valid registration key is entered in the *PRVView.INI* file, *PRVView* will run in full mode with no limitations.

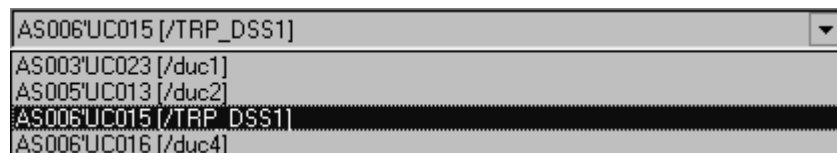


2 PRVView



2.1 Objects in the PRVView form

2.1.1 The DSS dropdown list



DSS's

All in *PRVView.INI* defined DSS's are shown in this dropdown list.

The related variable tag names are shown within brackets. By selecting a DSS in the list, a transparent connection to that DSS is made.

2.1.2 Reply list

The 200 last DSS replies are shown in this list box. If one row is double-clicked, that rowed is copied to the input field.

2.1.3 Input field

Command

Commands are sent to the DSS by entering them in the command field and pressing Enter. *Ctrl/P* and *Ctrl/E* may also be sent.

2.1.4 Information field

This field views information about the connected DSS..

2.2 Menu choices

2.2.1 File - Disconnect

Disconnects an active transparent connection.

Timeout

There is a timer that prevents the user from forgetting a connection. When the timer expires, it will automatically disconnect an active connection. The timer is reset by all commands that are sent from *PRVView* to the DSS. The default timeout is 2 minutes (120 s). The timeout may be changed in *PRVView.INI*.

2.2.2 File - Exit

Exits *PRVView*. If any transparent DSS connection is active, it is automatically disconnected.

2.2.3 TSC - TSC form

Opens the TSC form, which by default is placed above the *PRVView* form.

2.2.4 Startup parameters

There are only two parameters that may be used at startup:

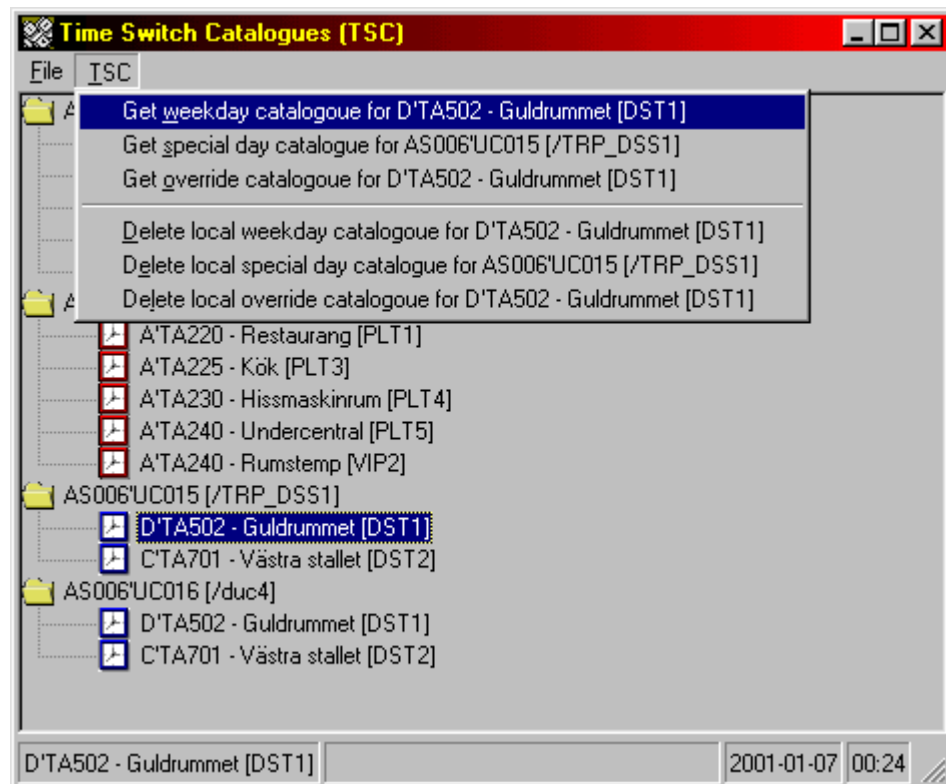
/LOCAL

PRVView is run in local mode. Only TSC's that are saved on disk may be edited. No DSS dialog is possible.

/TAG

Runs *PRVView* with the TSC form open. If a tag is entered immediately following this parameter, i.e. **/TAG:TRP_DSS1**, the TSC form will expand the corresponding folder and give it focus.

3 TSC form



3.1 Objects in the TSC form

3.1.1 Treeview TSC's

All defined DSS's and their corresponding TSC's are shown in this treeview. The related destination names are shown within brackets. By double clicking a DSS, it will be expanded or collapsed. By doubleclicking a TSC, it will be showed (and uploaded from DSS is necessary).

PRV/PRV2

A red icon indicates that the TSC is assigned to an EKL-X/PRV1 and a blue icon indicates a PRV2.

3.1.2 Information field

The selected TSC is viewed to the left. In the middle is the actual status, i.e. active up-/downloads to/from DSS.

3.2 Menu choices

3.2.1 File Expand/Collapse All

Expands or collapses the entire treeview.

3.2.2 File - Exit

Closes the TSC form.

3.2.3 TSC - Get Weekday Catalogue (WDC).

Uploads the desired TSC. If the TSC has been uploaded any time before (i.e. saved to disk) it may be read directly from disk. This is significantly faster than upload the TSC from DSS every time it will be changed.

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Starttime	08:00	08:00	08:00	08:00	08:00		
Stoptime	17:00	16:00	16:00	16:00	15:00		
Startvalue	1	1	1	1	1		
Stopvalue	-	-	-	-	-		

Schedule

☒ Weekdays (1)
☐ Specialdays (0)

Buttons: Delete, Copy, Cancel, Save

Weekday Catalogue

The scroll bar to the right is used to change schedule. There may be up to eight start-/stoptimes in every schedule.

Schedule

There are two different schedule collections. One for normal weekdays, and one for special days. The special days are defined in the SDC (Special Day Catalogue). The number within parenthesis indicates how many schedules that are defined for each schedule collection.

Start time

The time when the start value is feed out to the destination. If a stop time is given (time interval), the start value will be feed out to the destination once per minute (by default). The destination is shown within brackets in the form caption.

Stop time

The time when the start value no longer will be feed out to the destination. When this time

has passed, the stop value will be feed out to the destination.

How to enter the time

The time may be entered in many different ways, i.e.

9 is interpreted as 09:00

9.30 is interpreted as 09:30

9.3 is interpreted as 09:03

09:30 is interpreted as 09:30

9,30 is interpreted as 09:30

9:30 is interpreted as 09:30

09:30 is interpreted as 09:30

Start value

Will be feed out to the destination at the start time or between the given time intervals.

Stop value

Will be feed out to the destination when the stop time is passed (if given). This value may be a dot (.), which indicates to the PRV that it should use the default value.

Delete

Deletes the active row.

Copy

Copies the active column to the column immediately to the right.

Cancel

Returns to the TSC form without saving any changes.

Save

Saves the TSC (even if it is not changed). The TSC is first saved to disk and then to the DSS if desired.

3.2.4 TSC - Get Special Day Catalogue (SDC).

Uploads the desired TSC. If the TSC has been uploaded any time before (i.e. saved to disk) it may be read directly from disk. This is significantly faster than upload the TSC from DSS every time it will be changed.

AS006*UC015 [/TRP_DSS1]

Specialday Catalogue

Day

☒ Nothing
☐ Mo ☐ SD1
☐ Tu ☐ SD2
☐ We ☐ SD3
☐ Th ☐ SD4
☐ Fr ☐ SD5
☐ Sa ☐ SD6
☐ Su ☐ SD7

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24 Sö	25 Sö	26	27	28	29	30
31						

Year

☒ 2001 ☐ 2002 ☐ 2003 ☐ 2004 ☐ 2005 ☐ 2006

Month

☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun
☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☒ Dec

<-- -->

Cancel Save

Colours

Sun- and holidays are red coloured. Today is blue and all other are black. In the above example, christmas eve and christmas day 2001 are marked as sundays, and will be treated as sundays by the DSS.

Day

Selects what type of day the day the user selects will become.

Monday-Sunday

All days of the month are shown. Holidays and sundays are red. Today is blue.

Year

The desired year to update.

Month

The desired month to update.

->

Scans the calendar for the next special day.

<-

Scan the calendar for the previous special day.

Cancel

Returns to the TSC form without saving any changes.

Save

Saves the TSC (even if it is not changed). The TSC is first saved to disk and then to the DSS if desired.

Example

To change new years eve to a sunday, you first select the year **2001**, month **Dec**, day **Su** to select the day type, then **31**. The text **Su** to the right of **31** shows what day type is selected to that day of month. Save the TSC using **Save**.

Change more than one year

*To change more than one year at a time, press **Shift** when the day of month is selected. This date for all selectable years will then get the same day type (in the example above, 2001-2006).*

3.2.5 TSC - Get Override Catalogue

Uploads the desired TSC. If the TSC has been uploaded any time before (i.e. saved to disk) it may be read directly from disk. This is significantly faster than upload the TSC from DSS every time it will be changed.

Override catalogue

Start-			->	Stop-		
Date	Time	Value		Date	Time	Value
2001-02-27	00:00	1	->	2000-02-28	23:00	0
			->			
			->			
			->			
			->			
			->			
			->			
			->			
			->			

Delete

Cancel Save

Override catalogue

The scroll bar to the right is used to change schedule. There may be up to eight start-/stoptimes in every schedule.

Startdate/-time

The time when the start value is feed out to the destination. The destination is shown within brackets in the form caption.

Stopdate/-time

The time when the start value no longer will be feed out to the destination. When this time has passed, the stop value will be feed out to the destination.

Start value

Is feed out to the destination during the time interval.

Stop value

Is feed out to the destination when the stop time is passed.

Delete

Deletes the active row.

Cancel

Returns to the TSC form without saving any changes.

Save

Saves the TSC (even if it is not changed). The TSC is first saved to disk and then to the DSS if desired.

3.2.6 TSC - Delete local weekday catalogue

Deletes the local weekday catalogue disk file.

3.2.7 TSC - Delete local special day catalogue

Deletes the local special day catalogue disk file.

3.2.8 TSC - Delete local override catalogue

Deletes the local override catalogue disk file.

Appendix A - PRVView.INI

Alla DSSs and TSCs that are to be used must be defined in this file.

[General]

This is the registration key that comes from the *Autic Registration Centre*.

```
; Registration Key from Autic registration centre
RegistrationKey=48A2DC-553410-2E6FD7-87685B
```

This time is the transparent communication timeout.

```
; Timeout for the automatic disconnection of inactive DSS dialog
DisconnectTime=120
```

If the DSS haven't answered within this time, then the up-/download of the TSC is considered as failed.

```
; Timeout used when TSC's are read
GetTSCTimeOut=10
```

If the local disk file TSC always is to be used (if it exists), set this parameter to 'yes'. If set to 'no', then *PRVView* will always ask if it finds a disk TSC file.

```
; Set to 'yes' to make PRVView using local disk TSC's (if they exist).
; If set to 'no' a question is made wheter you like to read it from DSS
; or use the local disk TSC
AlwaysUseLocal=no
```

If set to 'all', then all DSS will be in the dropdown list, no matter of the individual setting below.

```
; 'all' indicates that DSS dialog is allowed for all defined DSS's
; 'none' indicates that DSS dialog is never allowed
; 'default' indicates that the individual setting for each DSS below
; is to be used
DialogMode=default
```

It's easier to do debugging if the *PRVView* form isn't hidden when the TSC form is viewed. The TSC form is always placed above the *PRVView* form, but may be moved if the user wants to see the communication that takes place when any TSC is up-/downloaded.

```
; 'yes' make PRVView to hide the dialog window when the TSC window is
; opened
HideDialogOnTSC=no
```

This is the text resource file extension. If no extension is entered here, *PRVView* will scan its directory for all text resource files (named *PRV_Lang.nnn*, where *nnn* is the country code). It's free to make any own text resource files, but *PRVView* is shipped with both english and swedish files (.044 and .046).

```
; The language file used (named PRV_LANG.046 etc). If set to nothing,
; PRVView will scan its directory for language resource files and present
; them to the user at first start
Language=046
```

Because of the slow performance of the devices, there has to be delays inserted otherwise the PRV will drop characters. These delays are configurable below.

```
; Delays used when TSC's are read. All time values are in seconds.

; When 'Connect' has been made, before 'EXIT' is sent.
DelayA=1
```

```

; When 'EXIT' has been sent, before 'LIST WDC' etc is sent.
DelayB=1

; When 'LIST WDC' etc is sent and all rows have been received (PRVView
; waits for 'EXIT'), thereafter, three pauses is made using this time
; interval (default 3 x 2 sec's)
DelayC=0

; When 'Disconnect' is made, before control is returned to the user
DelayD=0

[SaveDelay]
; Delays used when TSC's are written. All time values are in seconds.

; When 'Connect' has been made, before the first 'EXIT' is sent.
DelayA=1

; When the first 'EXIT' has been sent, before the second 'EXIT' is sent.
DelayB=2

; When the second 'EXIT' has been sent, before '.WDC' etc is sent
DelayC=2

; When the '.WDC' etc has been sent, before the first row is sent.
DelayD=3

; After each TSC row that is sent (same delay is used before 'EXIT' is
; sent).
DelayE=2

; When 'EXIT' has been sent. This delay is sent twice (2 x 2 sec's).
DelayF=1

; Yet another delay before 'Disconnect' is made.
DelayG=1

; When 'Disconnect' is made, before control is returned to the user
DelayH=0

;
; Some rules for how to arrange the row numbers in PRV1. If the row number
; to be used is busy, PRVView increases it until it finds a free row
; number.
;
[SaveOptionsPRV1]

; The desired first row number in OVC's
OVStartRow=1

; The multiply factor for the PLT number (if it is a PLT destination that
; is saved)
OVCMultiplyPLT=0

;
; Some rules for how to arrange the row numbers in PRV2. If the row number
; to be used is busy, PRVView increases it until it finds a free row
; number.
;
[SaveOptionsPRV2]

; The desired first row number in OVC's
OVStartRow=1

; The multiply factor for the PLT number (if it is a PLT destination that
; is saved)
OVCMultiplyPLT=0

```

In the dropdown list are only the DSS's viewed that are defined with a 'yes' as the first parameter. This parameter may be overridden by the *DialogMode* parameter.

Each DSS must be defined, otherwise *PRVView* won't know what variable tag name to use for the transparent communication through the virtual device. A descriptive text (i.e. placement of the DSS, object description etc) may also be entered.

```

;
; For Citect:
; Transparent channel tag name (t ex 'PRV1')=Dialog allowed (yes/no or
; 1/0), Type (prv1/prv2 or 1/2),<nothing>, Descriptive text
;
; For PRV DDE I/O Server:
; Topics (t ex 'PRV1')=Dialog allowed (yes/no or 1/0), Type (prv1/prv2 or
; 1/2), Node (i.e. 'IOSERVER1'), Descriptive text
;

```

Each DSS's TSCs must also be defined. In the *[Topics]* section, all DSSs are defined, and later on in this file all individual DSSs have its own section. The section name is the same as the tag name. All destinations that are to be used and some descriptive text must be entered.

```

[Topics]
duc1=yes,1,,AS003'UC023
duc2=yes,prv1,,AS005'UC013
TRP_DSS1=yes,prv2,,AS006'UC015
duc4=yes,prv2,,AS006'UC016

[duc1]
plt1=A'TA220 - Restaurang
plt3=A'TA225 - Kök
plt4=A'TA230 - Hissmaskinrum
plt5=A'TA240 - Undercentral
vip2=A'TA240 - Rumstemp

[duc2]
plt1=A'TA220 - Restaurang
plt3=A'TA225 - Kök
plt4=A'TA230 - Hissmaskinrum
plt5=A'TA240 - Undercentral
vip2=A'TA240 - Rumstemp

[TRP_DSS1]
dst1=D'TA502 - Guldtrummet
dst2=C'TA701 - Västra stallet

[duc4]
dst1=D'TA502 - Guldtrummet
dst2=C'TA701 - Västra stallet

```