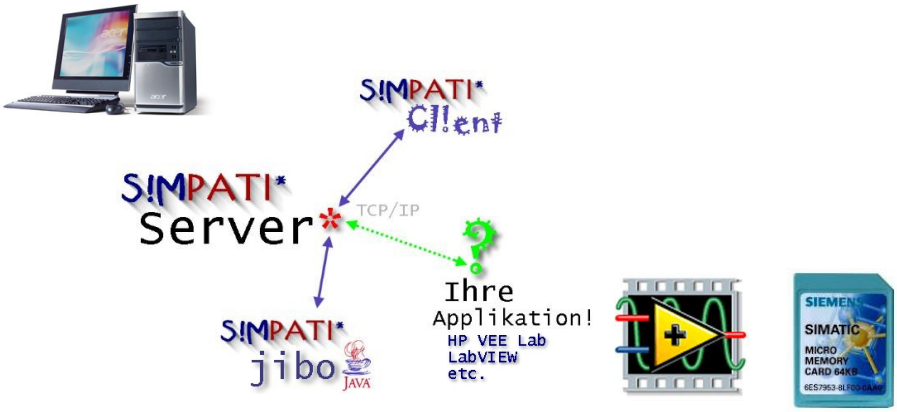
1 S!MPATI* TCP/IP-Interface (simserv)

1.1 Description

Other applications like LabView, HP VEE Lab or Siemens-S7 can communicate via **the TCP/IP socket interface** from Windows with S!MPATI and can exchange all relevant process data.

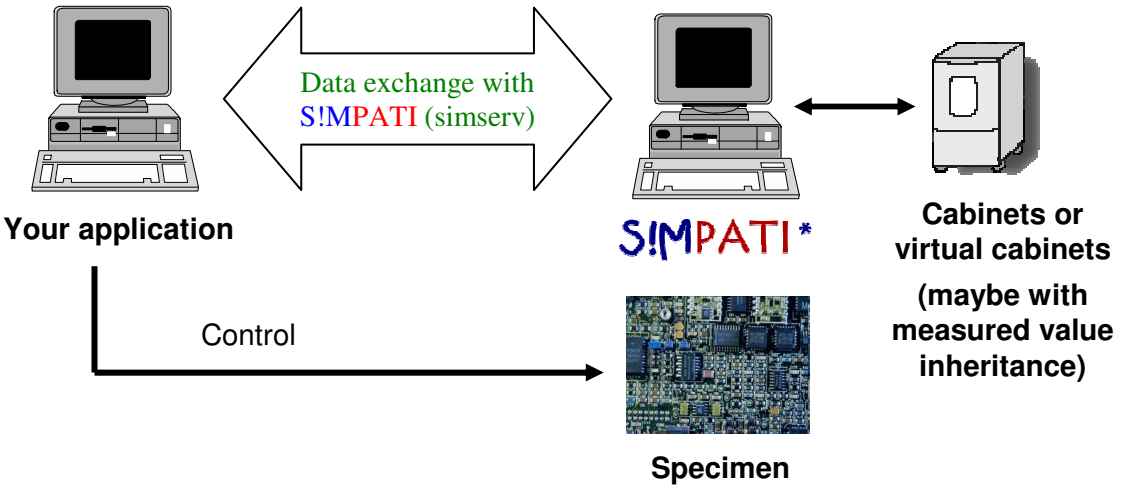


Hint:

The TCP/IP-interface will be supported from SIMPATI version 2.0 on. In older versions maybe not all commands available.

1.2 Function

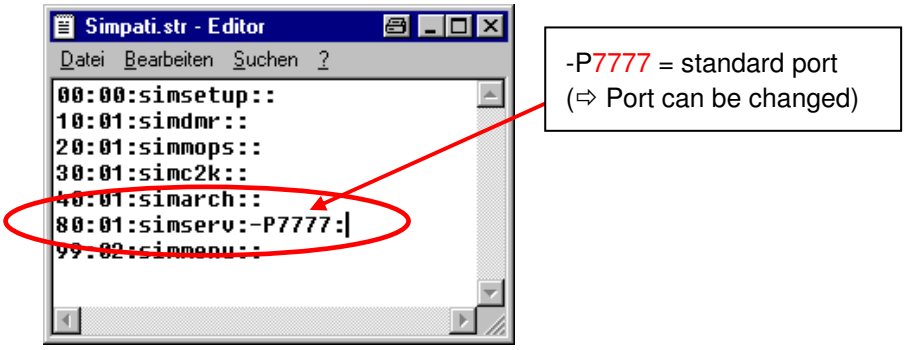
Attached the function is pictured:



1.3 Installation

The TCP/IP-Server software will be started with the entry
80:01:simserv:-P7777: in the file **simpati.str** in the directory ..\simpati\system.

After that a new start of S!MPATI is necessary.



Close S!MPATI before you change the configuration. Open the file with the windows standard-program Notepad/Editor and use a continuous numbering for the entries! Incorrect entries can lead to a crash of the program S!MPATI.

1.3.1 Command procedure

It is not possible to open a permanent connection to the server. Therefore a server can operate with a lot of clients.

For each command the following terminate is to be used:

1. Open connection
2. Send command
3. Read response
4. Close connection

1.4 Function-commands

Attached find the description of the function-commands (Simserv-commands for the data exchange with S!MPATI).

1.4.1 Command Syntax

The command syntax is as follows:

Syntax									
Command	**SR**	**Chamber-ID**	**SR**	**Param. 1**	**SR**	**Param. 2**	**SR**	**Parameter n (up to 4)**	**CR**

SR = Separator = "¶" (ASCII 182)
CR = CarriageReturn (\r) (ASCII 13)

In the event of an error:

Error code	**CR**

Possible error codes:

Error code	**Error text**
-1	Empty command string
-2	Missing Chamber-ID
-3	Invalid Chamber-ID
-4	Chamber not accessible
-5	Unknown Command-ID
-6	Insufficient number or wrong command parameters
-7	No server (in server service command mode)

In a fault-free case a “**1**” is returned.

1.4.2 Examples

Set setpoint Temperature of the 2nd Chamber to 25°C:

11001	¶	2	¶	1	¶	25.0	CR

Hint:

For the first control value Temperature usually the value 1 and for the second control value (e.g. Humidity) the value 2 is used etc.!

Set actual value Temperature of the 2nd Chamber to 30°C:

11003	¶	2	¶	1	¶	30.0	CR

Read the actual value Temperature of the 2nd Chamber:

11004	¶	2	¶	1	¶	CR

Response from the server on a command GET ISTWERT:

1	¶	23.9000	CR

Read the digital channel 1(Start) of the 2nd Chamber:

14003	¶	2	¶	1	¶	CR

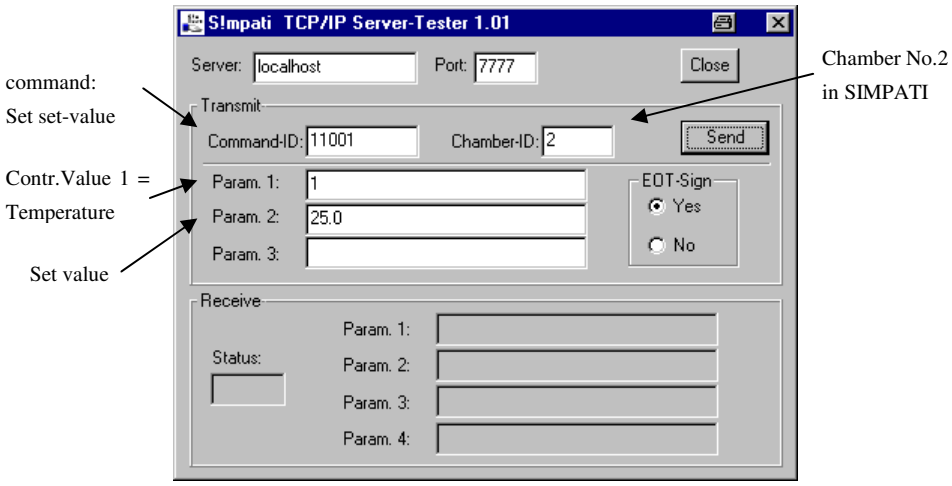
Set the digital channel 1(Start) of the 2nd Chamber:

14001	¶	2	¶	1	¶	1	CR

1.5 Test program

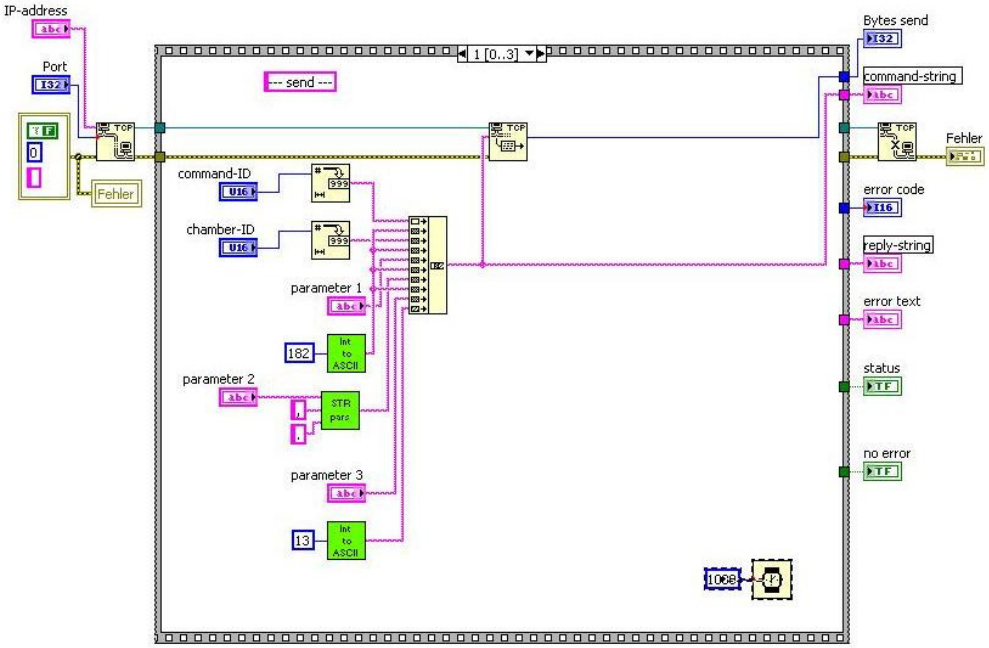
The TCP/IP connection can be checked with the test program „**Servtest.exe**“, which is located in the directory ..\simpati\system.

(before execute point 1.3)



1.6 LabVIEW-Application

Example of a LabVIEW-Application.



Appendix A: Command list

Available functions					
Command	**FunctNo**	**Value 1**	**Value 2+3**	**Response**	
GET KAMMERNAME	10006	Kammerindex		KAMMERNAME	
GET KAMMERTYP	10017	Kammerindex		VÖTSCH	10001
				WEISS DMR	20001
GET REGELGRÖSSE_ANZAHL	11018	Kammerindex		REGELGRÖSSE	
GET DIGITALKANAL_ANZAHL	14007	Kammerindex		DIGITALKANAL	
GET FEHLER_ANZAHL	17002	Kammerindex		FEHLER	
GET BETRIEBSSTATUS	10012	Kammerindex		VORHANDEN	0x1
				RUN	0x2
				WARNUNG	0x4
				FEHLER	0x8
GET BETREBSART	10010	Kammerindex		DATALOGGING	0x01
				MANUAL	0x02
				AUTOMATIK	0x04
				PAUSE	0x08
				BUSY	0x10
GET SCANNING TAKT	10034	Kammerindex		SCANNING TAKT	
CONTROL VALUES	**FunctNo**	**Value 1**	**Value 2+3**	**Response**	
GET NAME	11026	Kammerindex	Wert	NAME	
SET SOLLWERT	11001	Kammerindex	Wert		
GET EINHEIT	11023	Kammerindex	Wert	EINHEIT	
GET SOLLWERT	11002	Kammerindex	Wert	SOLLWERT	
SET ISTWERT	11003	Kammerindex	Wert		
GET ISTWERT	11004	Kammerindex	Wert	ISTWERT	
GET EINGABEGRENZE MIN	11007	Kammerindex	Wert	MIN	
GET EINGABEGRENZE MAX	11009	Kammerindex	Wert	MAX	
GET WARNGRENZE MIN	11016	Kammerindex	Wert	MIN	
GET WARNGRENZE MAX	11017	Kammerindex	Wert	MAX	
GET ALARMGRENZE MIN	11014	Kammerindex	Wert	MIN	
GET ALARMGRENZE MAX	11015	Kammerindex	Wert	MAX	
SET VALUES	**FunctNo**	**Value 1**	**Value 2+3**	**Response**	
GET NAME	13011	Kammerindex	Wert	NAME	

Available functions				
Command	**FunctNo**	**Value 1**	**Value 2+3**	**Response**
GET EINHEIT	13010	Kammerindex	Wert	EINHEIT
GET SOLLWERT	13005	Kammerindex	Wert	SOLLWERT
SET SOLLWERT	13006	Kammerindex	Wert	
GET EINGABEGRENZE MIN	13002	Kammerindex	Wert	MIN
GET EINGABEGRENZE MAX	13004	Kammerindex	Wert	MAX
MEASURING VALUES	**FunctNo**	**Value 1**	**Value 2+3**	**Response**
GET NAME	12019	Kammerindex	Wert	NAME
GET EINHEIT	12016	Kammerindex	Wert	EINHEIT
SET ISTWERT	12001	Kammerindex	Wert	
GET ISTWERT	12002	Kammerindex	Wert	ISTWERT
GET WARNGRENZE MIN	12010	Kammerindex	Wert	MIN
GET WARNGRENZE MAX	12011	Kammerindex	Wert	MAX
GET ALARMGRENZE MIN	12008	Kammerindex	Wert	MIN
GET ALARMGRENZE MAX	12009	Kammerindex	Wert	MAX
DIGITAL CHANNELS	**FunctNo**	**Value 1**	**Value 2+3**	**Response**
SET DIGITALOUT	14001	Kammerindex	DigiNr + 0/1	
GET DIGITALOUT	14003	Kammerindex	DigiNr	DIGITALOUT, 0/1
SET DIGITALIN	15001	Kammerindex	DigiNr + 0/1	
GET DIGITALIN	15002	Kammerindex	DigiNr	DIGITALIN , 0/1
COUNTER	**FunctNo**	**Value 1**	**Value 2+3**	**Response**
SET ZÄHLER	16002	Kammerindex	Wert	
ERRORS	**FunctNo**	**Value 1**	**Value 2+3**	**Response**
GET FEHLERTEXT	17007	Kammerindex	ErrorNr	FEHLERTEXT
SET FEHLERSTATUS	17008	Kammerindex	ErrorNr + 0/1	
GET FEHLERSTATUS	17009	Kammerindex	ErrorNr	FEHLERSTATUS, 0/1
SET FEHLERID	17022	Kammerindex	ID	
AUTOMATIC-MODE	**FunctNo**	**Value 1**	**Value 2+3**	**Response**
SET STARTZPGPRGNUMMER	19014	Programm Nr	Loops	
SET STOPZPGPRG	19015			
SET DOWNLOAD	19001	Programm Name	Programm Platz	
GET PROGRAMMNAME	19031	Kammerindex		KAMMERNAME
GET PROGRAMMSTATUS	19062	Kammerindex		TRUE / FALSE (1/0)
GET PROGRAMMSTART	19064	Kammerindex		Param1: NAME Param4: VORLAUFZEIT + STARTDATUM

Available functions					
Command	**FunctNo**	**Value 1**		**Value 2+3**	**Response**
SET PROGRAMM	19050	PAUSE	0x10		
		MANUAL	0x20		
ARCHIVING	**FunctNo**	**Value 1**		**Value 2+3**	**Response**
SET ARCHIVNAME	18011	Archivname			
SET ARCHIVIERUNG	18009	START	0x1		
		STOP	0x0		
SET ARCHIVIERUNG	19050	START	0x100		
		STOP	0x200		
SET ARCHIVKOMMENTAR	18023	Text			
GET ARCHIVKOMMENTAR	18024	Kammerindex			TEXT

Legend:

Rubrik

SET commands (set values)

GET commands (read values)

Response