Technical Document

Thomson ST20xx SIP-MGCP swap procedure in Lab environments

V 1.0

July 2009

INDEX

1 Introduction

Thomson recommends ordering ST20xx phones with the desired protocol, SIP or MGCP. This document covers a procedure to convert ST20xx SIP phones to MGCP and vice versa when the above is not possible.

2 Warning

2.1 Environment Setup

This operation is not meant to be done by users, but by qualified personnel, and is not suited for massive reprocessing of phones, but for lab environments, since involves some risks.
In particular, disconnecting the power during one of the upgrade phases will cause the phone to become unusable.

Moreover, with the latest SIP firmware releases v2.67 and 4.67 (and above), it is not possible anymore to swap directly from MGCP to SIP and vice versa.
Thomson doesn't recommend direct swap between MGCP <=> SIP v2.6x (or v4.6x). This may cause the phone crash and become unusable.

Thus an additional step is necessary:
ST2030:
MGCP -> SIP v1.66 -> SIP v2.6x
SIP v2.6x -> SIP v1.66 -> MGCP

ST2022:
MGCP -> SIP v3.66 -> SIP v4.6x
SIP v4.6x -> SIP v3.66 -> MGCP

This rule applies also if you need to downgrade from SIP v2.67 or 4.67 (and above) to very old SIP firmware like v1.50. You need an additional step :
SIP v2.67 -> SIP v1.66 -> SIP v1.50.

2.2 Firmware version / DSP file correspondence table

ST2030 :

Firmware version	DSP file
MGCP v1.xx	v1.00 MGCP (ST2030MEC_v100_dsp.zz)
MGCP v1.55 and above	v1.01 common (ST2030_dsp_v101.zz) or v1.00 MGCP
SIP up to v1.53	v1.00 SIP (ST2030_ SIP_v100_dsp_4way.zz)
SIP v1.54 and above	v1.01 common (ST2030_dsp_v101.zz) or v1.00 SIP
SIP v2.67 and above	v3.10 (v2030_dsp_v310_r11.1.zz)

ST2022 :

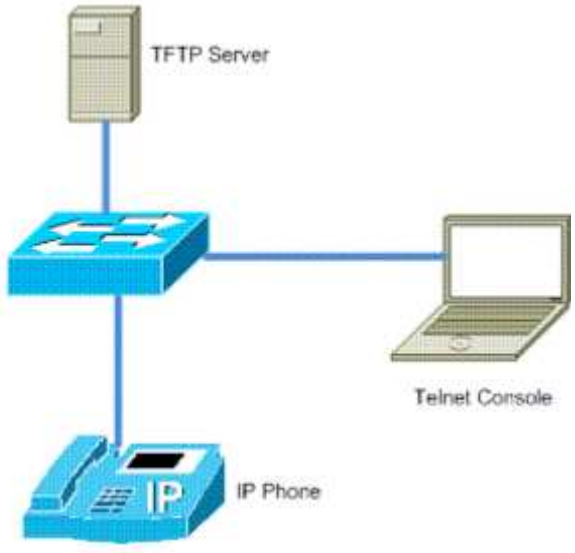
	Firmware version	DSP file
	MGCP v3.xx	v3.00 MGCP (ST2022m_DSP_v300.zz)
	SIP v3.xx	v3.00 SIP (v2022s_dsp_v300.zz)
	SIP v4.67 and above	v3.10 (v2022_dsp_v310.zz)

Basically, you must ensure that the phone will never reboot with an incompatible firmware-DSP combination.

3 Environment Configuration

3.1 Environment Setup

Environment setup is depicted below, the TFTP Server and Telnet Console can be running on same PC.
IP phone, TFTP server, and telnet console are connected to a local network and all network parameters must be properly configured.



3.2 Prerequisites

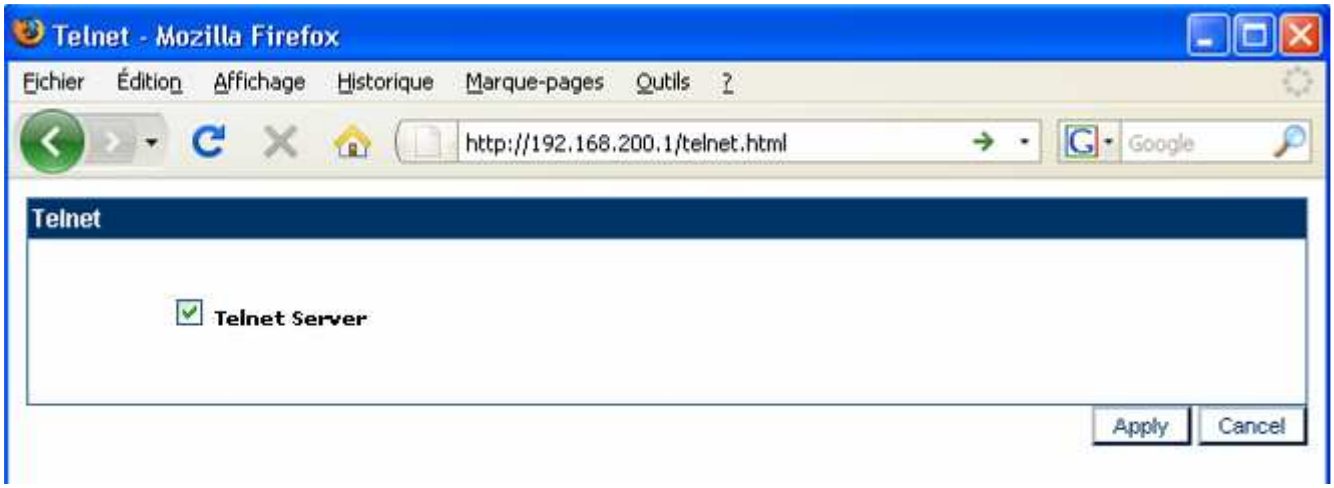
1. ST20xx(SIP) release files including DSP, application image, boot file and telephone configuration.
All files must put into proper TFTP server folder. Boot files are normally not provided with release packages since they are not to be changed. Should you need to perform this procedure, get in touch with your technical support to get these files.

2. ST20xx(MGCP) release files including DSP, application image, boot file and telephone configuration.
All files must put into proper TFTP server folder. Boot files are normally not provided with release packages since they are not to be changed. Should you need to perform this procedure, get in touch with your technical support to get these files.
3. ST2022(S) Administrator access ID and password
4. ST2022(M) Administrator access ID and password

4 Enable Telnet service

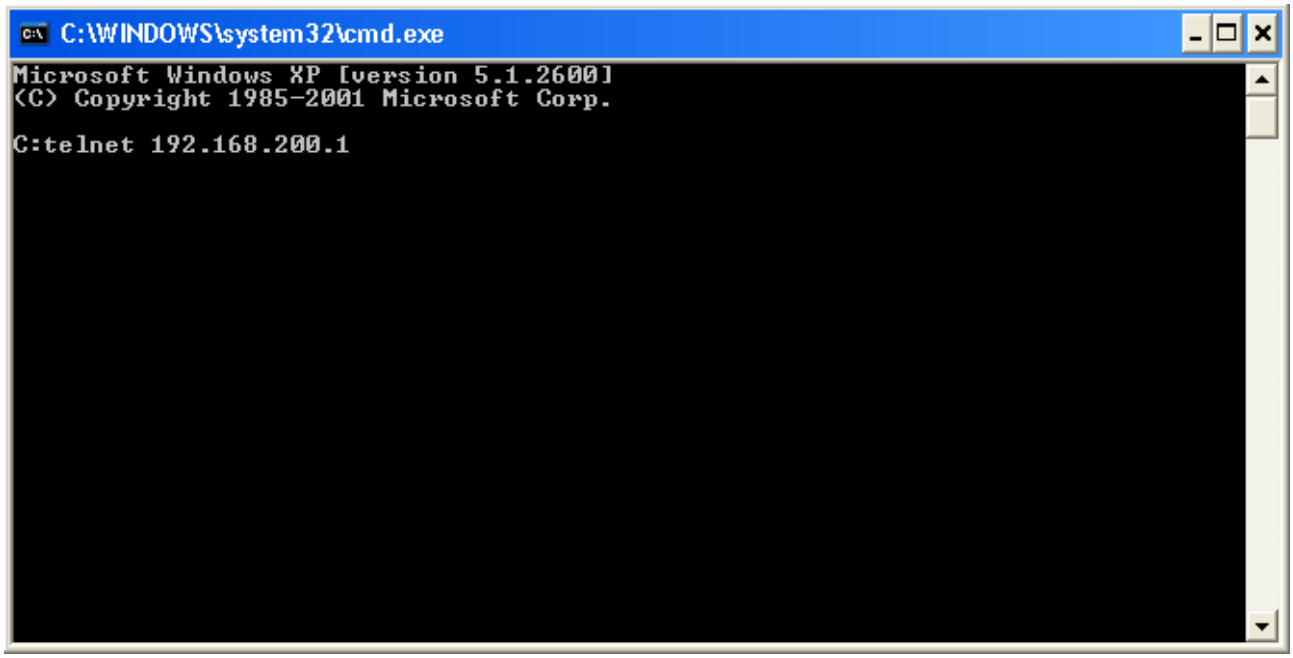
By default, the Telnet service is disabled for security reasons.
So the Telnet service must be enabled before trying to open a telnet session on the phone.
Enter the following URL on you web browser: http://ip_address_of_the _phone/telnet.html
In this example, it is assumed the phone has the IP address 192.168.200.1.
Then enter the username and password (same as the web interface):
Username (default): administrator
Password (default): 784518

Then check off the Telnet Server and click on Apply to activate it.

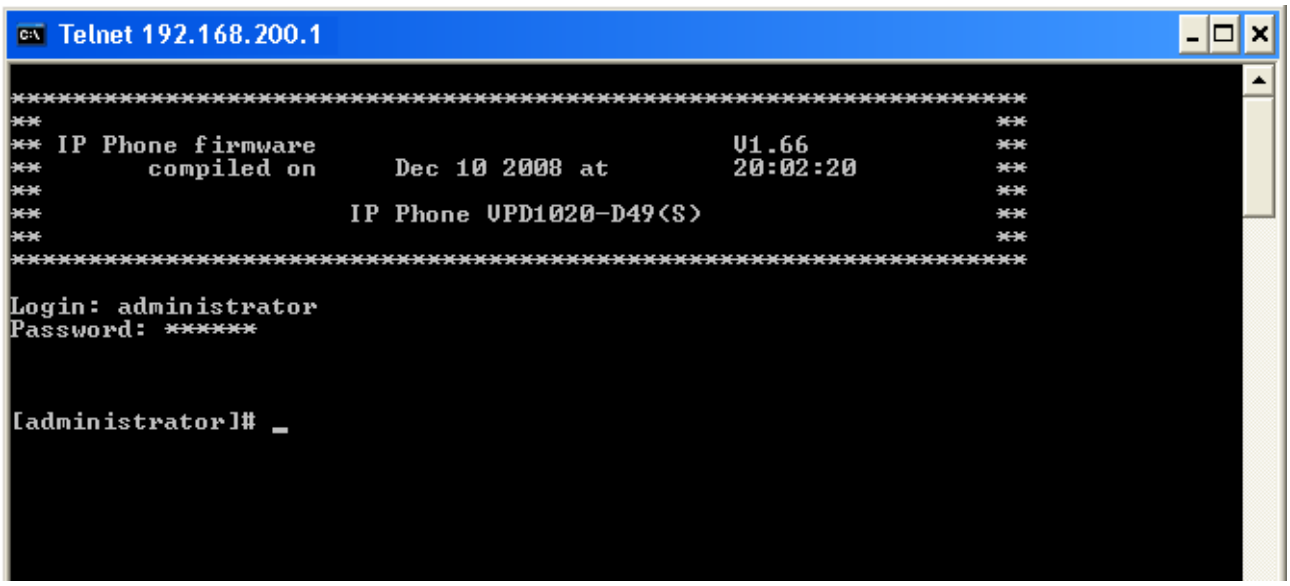


5 Open a Telnet session

In Windows OS: Click on “Start” , select “Execute”, type “cmd” then press “Enter”
In the CMD window, type “telnet <ip address>”



Enter the usename and password:
Login (default): administrator
Password (default): 789234



6 Upgrade Process description and Examples

NOTE: a combined telnet/web GUI procedure can be followed if more convenient. All commands below encompassing tftp can be done using the web gui, either with tftp or http. Telnet interface is needed for the rest of steps.
I you choose to use the web gui, **don't reboot** the phone between the application image upgrade and DSP upgrade.

6.1 SIP Software upgrade to MGCP

The target MGCP load in this example contains the following elements:

- DSP code. DSP filename: ST2022m_DSP_v300.zz
- Application. Application image filename: v2022MC.070806.3.55.2.zz
- Telephone configuration: TelConf2022MC_v3.55.2.txt

And for this example it is assumed the TFTP server address is 192.168.200.10

Description	Telnet Command
1 Telnet to IP Phone	
2 Use SIP administrator access account to login	
3 Upgrade application image	tftp 192.168.200.10 v2022MC.070806.3.55.2.zz
4 Upgrade DSP	tftp 192.168.200.10 ST2022m_DSP_v300.zz
5 Clean all configurations	sys set rel 0 ffs format ffs commit ffs commit flash clean nmm reboot immediate

6 Use MGCP administrator access account to login	
7 Upgrade application image again	tftp 192.168.200.10 ST2022m_DSP_v300.zz
8 Upgrade telephone configuration	tftp2 telcfg 192.168.200.10 TelConf2022MC_v3.55.2.txt
9 Reboot	Reboot

6.2 MGCP Software upgrade to SIP

The target SIP load in this example contains the following elements:

- DSP code. DSP filename: v2022s_dsp_v300.zz
- Application. Application image filename: v2022SG.081010.3.65.1.zz
- Telephone configuration: TelConf2022SG_v3.65.1.txt

And for this example it is assumed the TFTP server address is 192.168.200.10

Description	**Telnet Command**
1 Telnet to IP Phone	
2 Use MGCP administrator access account to login	
3 Upgrade application image	tftp 192.168.200.10 v2022SG.081010.3.65.1.zz
4 Upgrade DSP	tftp 192.168.200.10 v2022s_dsp_v300.zz
5 Clean all configurations	sys set rel 0 ffs format ffs commit ffs commit flash clean nmm reboot immediate
6 Use SIP administrator access account to login	
7 Upgrade application image again	tftp 192.168.200.10 v2022SG.081010.3.65.1.zz
8 Upgrade telephone configuration	tftp2 telcfg 192.168.200.10 TelConf2022SG_v3.65.1.txt
9 Reboot	Reboot

6.3 SIP v2.67 Software downgrade to SIP v1.66

The target SIP load in this example contains the following elements:

- DSP code. DSP filename: ST2030_dsp_v101.zz
- Application. Application image filename: v2030SG.081210.1.66.2.zz
- Telephone configuration: TelConf2030SG_v1.66.2.txt

And for this example it is assumed the TFTP server address is 192.168.200.10

Description	Telnet Command
1 Telnet to IP Phone	
2 Use MGCP administrator access account to login	
3 Upgrade application image	tftp 192.168.200.10 v2030SG.081210.1.66.2.zz
4 Upgrade DSP	tftp 192.168.200.10 ST2030_dsp_v101.zz
5 Clean all configurations	sys set rel 0 ffs format ffs commit ffs commit flash clean nmm reboot immediate
6 Use SIP administrator access account to login	
7 Upgrade application image again	tftp 192.168.200.10 v2030SG.081210.1.66.2.zz
8 Upgrade telephone configuration	tftp2 telcfg 192.168.200.10 TelConf2030SG_v1.66.2.txt
9 Reboot	Reboot

End of the document