

# REMOTE CONTROL API 2.3

## SPECIFICATION

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*Preliminary*

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## 1 Introduction

### 1.1 Description

Remote Control API 2.0 (a.k.a. Remote API) provides an interface for remote devices to communicate with the video conference system. Remote API can be accessed by Command Line Interface using RS232 or Telnet. This document contains information about the use of Remote API, and is intended for system integrators.

Note that Remote Control API 2.0 is applied on EVC series and later models, not available on the legacy H & HVC series.

## 2 Functionality

### 2.1 Telnet Service

The telnet service provides controls to the video conference system. System integrators can retrieve system state and control the system.

Here is an example of telnet service input and output:

```
login 1234
*r ok
**end
action UI/IR/up
*r ok
**end
get System/MACAddress
*r ok
*r data="01:23:45:67:89:AB"
**end
logout
```

The user connects to the system, logs in with password, sends an up remote control key press, gets MAC address of the system, and then logs out.

#### 2.1.1 Login

For security issues, you need the administration password to access the service first. The password can be set from the system UI.

#### 2.1.2 Action command

An ACTION command triggers a certain system operation. For example, move the PTZ camera leftward a step.

### 2.1.3 Get command

A GET command receives certain information of a system. For example, get MAC address of a system.

### 2.1.4 Set command

A SET command sets a parameter of a system. For example, set IP address of a system.

### 2.1.5 Query command

A QUERY command gets a list of options within a parameter. For example, get a list of all supported languages.

### 2.1.6 Keep alive

For security issues, the system kicks users who have no action in 5 minutes. Once a user has been kicked, he should reconnect to the telnet service, and log in again.

To avoid this situation, users can send an NOP command to keep the session alive.

### 2.1.7 Logout

You have to logout from the telnet service at the end of session. Otherwise, the user management will run out of user quota. The upper limit is 10 users at the same time.

## 3 Caveats

None.

## 4 Other Requirement

None

## 5 Design Details

The full Remote Control API 2.0 syntax is introduced in section 5.1. It is a generic command sets, and can be extended to variety of system controls. These typical cases are listed in the later sections.

### 5.1 Remote API syntax

### 5.1.1 Login

Input:

```
login {password}
```

Output:

```
*r ok
```

```
*r error {reason}
```

Log in to the telnet service.

- password Administration password
- reason Reason of error. Typically:
  - invalid access code Wrong password
  - too many users There are too many users

### 5.1.2 Action command

Input:

```
action {xpath}
```

Output:

```
*r ok
```

```
*r error {reason}
```

Trigger a system operation.

- xpath Which Remote API to trigger. See Table 4.
- reason Reason of error. Typically:

- invalid object
- resource busy
- invalid session

### 5.1.3 Get command

Input:

```
get {xpath}
```

Output:

```
*r ok  
*r data="{data}"  
**end
```

```
*r error {reason}
```

Receive information of a system.

- **xpath** Which Remote API data to get. See Table 4.
- **data** Data got from system.
- **reason** Reason of error.

### 5.1.4 Set command

Input:

```
set {xpath} {data}
```

Output:

```
*r ok  
**end
```

```
*r error {reason}
```

Set parameter of a system.

- xpath Which Remote API parameter to set. See Table 4.
- data Data to be set.
- reason Reason of error.

### 5.1.5 Query command

Input:

```
query {xpath}
```

Output:

```
*r ok
*r value="0" alias="{option #0}"
*r value="1" alias="{option #1}"
...
*r value="{#n}" alias="{option #n}"
**end
```

```
*r error {reason}
```

- xpath Which Remote API options to list. See Table 4.
- #n Number of the item. Starts from 0.
- option#n Option string of Nth item.
- reason Reason of error.

### 5.1.6 Keep alive

Input:

```
nop
```

Output:

```
*r ok
```

```
*r error {reason}
```

- **reason** Reason of error.

### 5.1.7 Logout

Input:

```
logout
```

## 5.2 Remote Control Emulation

You can emulate remote control key presses using Remote API.

### 5.2.1 Key press

Input:

```
action UI/IR/{key}
```

Output:

```
*r ok  
**end
```

- **key** See Table 4 for full key list.

## 5.3 Call Control

You can dial or disconnect to an endpoint using Remote API.

### 5.3.1 Call-out

Input:



```
set Call/CallOutTo {name}|{addr}|{bitrate}|{protocol}
```

Output:

```
*r ok
**end
```

Dial to an endpoint. See also Section 5.3.2.

- name        Name of callee. It only effects GUI display when dialing.
- addr        Address of callee.
- bitrate     Bitrate of the call. Check the manual of the target video conference system to see supported bitrates.
- protocol    h323 / sip

### 5.3.2 Call-out status

Input:

```
get Call/CallOutStatus
```

Output:

```
*r ok
*r data="{status}"
**end
```

Get call-out status. You should periodically read this data (recommended: 1 time/sec.) after a dial command until it is success or fail.

- status        Status code
  - 0            Busy
  - 1            Call success
  - 2            Call fail

### 5.3.3 Address of connected endpoints

Input:

```
get Call/EpAddr[{n}]
```

Output:

```
*r ok
*r data="{name}"
**end
```

- n            Nth of endpoint, starting from 1.
- name        Name of Nth connected endpoint

### 5.3.4 Disconnect

Input:

```
action Call/Disconnect[{n}]
```

Output:

```
*r ok
**end
```

Disconnect to Nth endpoint. See also 5.3.5.

- n            Nth of endpoint, starting from 1, which is identical to Section 5.3.3.

### 5.3.5 Disconnect status

Input:

```
get Call/DisconnectStatus
```

Output:

```
*r ok
*r data="{status}"
**end
```

Get disconnect status. You should periodically read this data (recommended: 1 time/sec.) after a disconnect command until it is done.

- status      Status code
  - 0          Busy
  - 1          Done

## 5.4 Phonebook

You can access the phonebook using Remote API, such as contacts list, call history, etc.

### 5.4.1 Get contacts list

Input:

```
query Phonebook/ContactList
```

Output:

```
*r ok
*r value="0" alias="{JSON of contact #0}"
...
*r value="{#n}" alias="{JSON of contact #n}"
```

- JSON of contact#n      Data of contact #N in JSON format. It contains these fields:

Field	Type	Description
id	integer	ID of contact
name	string	Name of contact
h323	string	H.323 address
sip	string	SIP address

group	object	The group object which the contact belongs to. See Table 2.
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Table 1 JSON format of contact

The following is an example of JSON contact data:

```
{ "id": 2, "name": "Aver FAE", "h323": "210.242.161.39", "group": { "id": 2, "group": "Company" } }
```

### 5.4.2 Get groups list

Input:

```
query Phonebook/GroupList
```

Output:

```
*r ok
*r value="0" alias="{JSON of group #0}"
...
*r value="{#n}" alias="{JSON of group #n}"
```

- JSON of group #n Data of group #N in JSON format. It contains these fields:

Field	Type	Description
id	integer	ID of contact
name	string	Name of contact
h323	string	H.323 address
sip	string	SIP address
group	object	The group object which the contact belongs to.

Table 2 JSON format of group

### 5.4.3 Get call history list

Input:

```
query Phonebook/CallHistoryList
```

Output:

```
*r ok
*r value="0" alias="{JSON of history #0}"
...
*r value="{#n}" alias="{JSON of history #n}"
```

- JSON of history #n      Data of history #N in JSON format. It contains these fields:

Field	Type	Description
name	string	Name of contact
addr	string	Address of the contact
epoch	integer	Time of this call since Jan 1, 1980, in seconds.
date	string	Date of this call.
time	string	Time of day of this call.
bitrate	integer	Bitrate of this call, in Kbps.
protocol	string	"h323" / "sip"
direction	string	"Call-in" / "Call-out" / "Call-in failed" / "Call-out failed"
isknown	integer	0 / 1, which means the contact has been added in the phonebook.

Table 3      JSON format of call history

The following is an example of JSON call history data:

```
{ "name": "AVer FAE", "addr": "210.242.161.39", "epoch": 1374127505, "date": "2013/7/18", "time": "06:05", "bitrate": 768, "protocol": "h323", "direction": "Call-out", "isknown": 1 }
```

### 5.5 Xpath of object

Note: The following list is only for reference. Object's xpath and method may be different from versions. The newest updated should be checked using list command.

Xpath	Method	Type	Description
System/AccessCode	get set	type="string" size="128"	
System/AdminPassword	get set	type="string" size="128"	
System/AspectRatio	get set query	type="integer" size="1" min="0"	0:auto/1:"1024 x 768 (4:3)"/2:"1280 x 720 (16:9) "

		max="2"	
System/CheckUpdate	get set	type="integer" size="1"	
System/CurrentNetworkIPv4	get	type="string" size="16"	
System/DateFormat	get set query	type="integer" size="1" min="0" max="2"	0: yyyy-mm-dd/1:mm-dd-yyyy/ 2: dd-mm-yyyy
System/EnableAdmin	get set	type="integer" size="1"	
System/EnableAverService	get set	type="integer" size="1"	
System/EnableKeypad	get set	type="integer" size="1"	
System/EnableNTP	get set	type="integer" size="1"	
System/EnableWebAdmin	get set	type="boolean"	
System/FactoryReset	action		
System/FirmwareVersion	get	type="string" size="48"	
System/Language	get set query	type="integer" size="1"	
System/LocalTime	get set	type="integer" size="64"	Get / set system time in second format 1970/01/01 00:00:00 = 0 sec 2014/06/17 10:39:00 = 1403001540 sec
System/MACAddress	get	type="string" size="18"	
System/ModelName	get	type="string" size="8"	
System/NTPServer	get set	type="string" size="64"	
System/NetworkSetting	get set	type="string" size="255"	*
System/NetworkSettingIPv6	get set	type="string" size="255"	get format: {static auto},{IPv6 address}/{prefix length} set format: 1. static,{IPv6 address}/{prefix length} 2. auto
System/PowerSaver	get set query	type="integer" size="1" min="0" max="5"	
System/Reboot	action		
System/SaveSystemLog	action		
System/ScreenSaver	get set query	type="integer" size="1" min="0" max="4"	
System/Shutdown	action		
System/StorageReady	get	type="boolean"	*
System/SystemDate	get set	type="string" size="64"	Get / set system date in the format 2011/01/01 22:22:22
System/TimeFormat	get set query	type="integer" size="1" min="0" max="1"	0:24-hour/1:12-hour
System/Timezone	get set query	type="integer" size="1" min="0" max="38"	
System/Underscan	get set	type="boolean"	
System/WOL	get set	type="boolean"	
Call/AnswerCall	action		
Call/AnswerCallStatus	get	type="integer" size="1"	0: busy / 1: done
Call/AutoAnswer	get set query	type="integer" size="1" min="0" max="2"	
Call/AutoBitrate	get set	type="integer"	

	query	size="1" min="0" max="10"	
Call/BfcpOpMode	get set query	type="integer" size="1" min="0" max="2"	0:Off/1:UDP/2:TCP
Call/CallInStatus	get	type="integer" size="1"	0: busy / 1: done
Call/RejectCall	action		
Call/CallOutCancel	action		
Call/CallOutStatus	get	type="integer" size="1"	0: busy / 1: success / 2: failed
Call/CallOutTo	get set	type="string" size="255"	Set data "{call-out name}  {call-out address}  {bit-rate}" to call-out
Call/CntBwRatio	get set query	type="integer" size="1" min="0" max="7"	
Call/H239Connected	get	type="boolean"	
Call/Connected[1]	get	type="boolean"	
Call/DisconnectAll	action		
Call/DisconnectStatus	get	type="integer" size="1"	
Call/Disconnect[1]	action		
Call/EnableAES	get set	type="boolean"	
Call/EnableBFCEP	get set	type="boolean"	
Call/EnableFEC	get set	type="boolean"	
Call/EnableQos	get set	type="boolean"	
Call/EnableSIP	get set	type="boolean"	
Call/EnableSRTP	get set	type="boolean"	
Call/EnableSTUN	get set	type="boolean"	
Call/EpIPv4[1]	get	type="string" size="128"	
Call/EpName[1]	get	type="string" size="128"	
Call/EpSystem[1]	get	type="string" size="255"	
Call/EpCallType[1]	get	type="string" size="16"	
Call/EpBitrate[1]/Send	get	type="integer" size="2"	
Call/EpResolution[1]/Send	get	type="string" size="10"	
Call/EpBitrate[1]/Send/Video	get	type="integer" size="2"	
Call/EpCodec[1]/Send/Video	get	type="string" size="16"	
Call/EpBitrate[1]/Send/Audio	get	type="integer" size="2"	
Call/EpCodec[1]/Send/Audio	get	type="string" size="16"	
Call/EpBitrate[1]/Recv	get	type="integer" size="2"	
Call/EpResolution[1]/Recv	get	type="string" size="10"	
Call/EpBitrate[1]/Recv/Video	get	type="integer" size="2"	
Call/EpCodec[1]/Recv/Video	get	type="string" size="16"	
Call/EpBitrate[1]/Recv/Audio	get	type="integer" size="2"	
Call/EpCodec[1]/Recv/Audio	get	type="string" size="16"	
Call/NATPublicIPv4	get set	type="string" size="16"	
Call/H323Name	get set	type="string" size="128"	
Call/H460Status	get	type="integer" size="1"	0: busy / 1: done
Call/UseH460	get set	type="boolean"	

Call/UseUPnP	get set	type="boolean"	
Call/GatekeeperStatus	get	type="integer" size="1"	0: busy / 1: done
Call/UseGatekeeper	get set	type="boolean"	
Call/GatekeeperIPv4	get set	type="string" size="16"	
Call/StartH239/VGA	action		
Call/StopH239Status	get	type="integer" size="1"	0: busy / 1: done
Call/StopH239	action		
Call/StartH239Status	get	type="integer" size="1"	0: busy / 1: success / 2: failed
Call/StartNetworkTestInteractive	action		
Call/H239Resolution/Send	get	type="string" size="10"	
Call/H239Bitrate/Send	get	type="integer" size="2"	
Call/H239Codec/Send	get	type="string" size="16"	
Call/H239RtcpInfo/Send/Fps	get	type="string" size="6"	
Call/H239RtcpInfo/Send/Bitrate	get	type="integer" size="2"	
Call/H239RtcpInfo/Send/PacketLossTotal	get	type="integer" size="4"	
Call/H239Resolution/Recv	get	type="string" size="10"	
Call/H239Bitrate/Recv	get	type="integer" size="2"	
Call/H239Codec/Recv	get	type="string" size="16"	
Call/H239RtcpInfo/Recv/Fps	get	type="string" size="6"	
Call/H239RtcpInfo/Recv/Bitrate	get	type="integer" size="2"	
Call/H239RtcpInfo/Recv/PacketLossTotal	get	type="integer" size="4"	
Call/UdpPortLimitEnd	get	type="integer" size="2"	
Call/TcpPortLimitEnd	get	type="integer" size="2"	
Call/UdpPortLimit	get set	type="integer" size="2" min="1000" max="65495"	
Call/TcpPortLimit	get set	type="integer" size="2" min="1000" max="65495"	
Call/LocalExtension	get set	type="string" size="128"	
Call/LocalMuted	get	type="integer" size="4"	
Call/MaxRecvBandwidth	get set query	type="integer" size="1" min="0" max="10"	
Call/MaxSendBandwidth	get set query	type="integer" size="1" min="0" max="10"	
Call/NATMode	get set query	type="integer" size="1" min="0" max="2"	0:OFF/1:ON/2:AUTO
Call/NATPublicIPv4	get set	type="string" size="128"	
Call/FarMuted[1]	get	type="boolean"	
Call/NetworkTest	get	type="string" size="0"	
Call/NetworkTest/Ack	get	type="string" size="24"	



Call/NetworkTest/Connect	get	type="string" size="24"	
Call/NetworkTest/Send/Video	get	type="string" size="24"	
Call/NetworkTest/Send/Audio	get	type="string" size="24"	
Call/NetworkTest/Recv/Video	get	type="string" size="24"	
Call/NetworkTest/Recv/Audio	get	type="string" size="24"	
Call/ProtocolPriority	get set query	type="integer" size="1" min="0" max="1"	
Call/RecordStatus	get	type="integer" size="1"	0: busy / 1: done
Call/StopRecord	action		
Call/StartRecord	action		
Call/RtcpInfo[1]/Send/Video/Fps	get	type="string" size="6"	
Call/RtcpInfo[1]/Send/Video/Bitrate	get	type="integer" size="2"	
Call/RtcpInfo[1]/Send/Video/Jitter	get	type="integer" size="2"	
Call/RtcpInfo[1]/Send/Video/PacketLossRate	get	type="string" size="6"	
Call/RtcpInfo[1]/Send/Video/PacketLossTotal	get	type="integer" size="4"	
Call/RtcpInfo[1]/Send/Audio/Jitter	get	type="integer" size="2"	
Call/RtcpInfo[1]/Send/Audio/PacketLossRate	get	type="string" size="6"	
Call/RtcpInfo[1]/Send/Audio/PacketLossTotal	get	type="integer" size="4"	
Call/RtcpInfo[1]/Recv/Video/Fps	get	type="string" size="6"	
Call/RtcpInfo[1]/Recv/Video/Bitrate	get	type="integer" size="2"	
Call/RtcpInfo[1]/Recv/Video/Jitter	get	type="integer" size="2"	
Call/RtcpInfo[1]/Recv/Video/PacketLossRate	get	type="string" size="6"	
Call/RtcpInfo[1]/Recv/Video/PacketLossTotal	get	type="integer" size="4"	
Call/RtcpInfo[1]/Recv/Audio/Jitter	get	type="integer" size="2"	
Call/RtcpInfo[1]/Recv/Audio/PacketLossRate	get	type="string" size="6"	
Call/RtcpInfo[1]/Recv/Audio/PacketLossTotal	get	type="integer" size="4"	
Call/SIPAccountActive	get set	type="integer" size="1"	
Call/SIPBindPort	get set	type="integer" size="2"	
Call/SIPTransportProtocol	get set query	type="integer" size="1" min="0" max="1"	
Call/SIPName	get set	type="string" size="128"	
Call/SIPProxyServer	get set	type="string" size="128"	
Call/SIPRegistrarServer	get set	type="integer" size="1"	
Call/SIPTerminalName	get set	type="string" size="128"	
Call/SIPTerminalPassword	get set	type="string" size="128"	
Call/SIPTransportProtocol	get set query	type="integer" size="1" min="0" max="2"	0:TCP/1:UDP/2:TLS

Call/SIPUserName	get set	type="string" size="128"	
Call/STUNPort	get set	type="string" size="128"	
Call/STUNServer	get set	type="string" size="128"	
Call/ResetStackCapability	action		
Call/ShowCallTimer	get set	type="integer" size="1"	
Call/StackCapability/H261	get set	type="boolean"	
Call/StackCapability/H263	get set	type="boolean"	
Call/StackCapability/H263+	get set	type="boolean"	
Call/StackCapability/H264	get set	type="boolean"	
Call/StackCapability/H264HP	get set	type="boolean"	
Call/StackCapability/H264SVC	get set	type="boolean"	
Call/StackCapability/G711/uLaw	get set	type="boolean"	
Call/StackCapability/G711/aLaw	get set	type="boolean"	
Call/StackCapability/G722	get set	type="boolean"	
Call/StackCapability/G722.1/24k	get set	type="boolean"	
Call/StackCapability/G722.1/32k	get set	type="boolean"	
Call/StackCapability/G722.1c/24k	get set	type="boolean"	
Call/StackCapability/G722.1c/32k	get set	type="boolean"	
Call/StackCapability/G722.1c/48k	get set	type="boolean"	
Call/StackCapability/G728	get set	type="boolean"	
Call/StackCapability/QCIF	get set	type="boolean"	
Call/StackCapability/QSIF	get set	type="boolean"	
Call/StackCapability/CIF	get set	type="boolean"	
Call/StackCapability/SIF	get set	type="boolean"	
Call/StackCapability/4CIF	get set	type="boolean"	
Call/StackCapability/4SIF	get set	type="boolean"	
Call/StackCapability/720p	get set	type="boolean"	
Call/StackCapability/1080p	get set	type="boolean"	
Call/StackCapability/Content/H263	get set	type="boolean"	
Call/StackCapability/Content/H263+	get set	type="boolean"	
Call/StackCapability/Content/H264	get set	type="boolean"	
Call/StackCapability/Content/H264HP	get set	type="boolean"	
Call/StackCapability/Content/H264SVC	get set	type="boolean"	
Call/StackCapability/Content/VGA	get set	type="boolean"	
Call/StackCapability/Content/SVGA	get set	type="boolean"	
Call/StackCapability/Content/XGA	get set	type="boolean"	
Phonebook/AddContact	set	type="string"	Set JSON-format data to add a new contact { "id": integer (optional), given to edit existing contact "name": string, must be unique "bitrate": integer (optional) "h323": string (optional) "e164": string (optional) "sip": string (optional) "group":integer, group ID (optional). If not present, the contact will be assign to the default group }
Phonebook/AddGroup	set	type="string"	Set JSON-format data to add a new group { "id": integer (optional), given to edit existing group "name": string, must be unique }
Phonebook/ClearHistory	action		
Phonebook/ClearPhonebook	action		
Phonebook/ContactList	query		
Phonebook/DeleteContact	set	type="string"	Set the ID to delete the contact
Phonebook/DeleteGroup	set	type="string"	Set the ID to delete the group
Phonebook/GetFavorite	query		
Phonebook/GroupList	query		
Phonebook/SearchContact	set	type="string"	<set> to set the search keyword, and then query Phonebook/SearchContactResult
Phonebook/SearchContactResult	query		<query> to get contacts array in JSON

			format: {"id": integer, "name": string, "h323": string, "e164": string, "sip": string, "group": { "id": integer, "name": string }}
Phonebook/SearchGroup	set	type="string"	<set> to set the search group keyword, and then query Phonebook/SearchGroupResult
Phonebook/SearchGroupResult	query		<query> to get groups array in JSON format: { "id": integer, "name": string, }
Phonebook/SetFavorite	set	type="string"	Set JSON-format data to set favorite contact { "id": Integer, must be unique "contact": integer, given to set existing contact }
Playback/Backward	action		
Playback/DeleteList	action		
Playback/Forward	action		
Playback/Pause	action		
Playback/PlayFile	action		
Playback/PlaybackList	query	type="string"	"{fileName.vc},{fileSize}" File size: Mega
Playback/Resume	action		
Playback/Status	get	type="boolean"	0: no playback / 1: playing / 2: paused
Playback/Stop	action		
Audio/KeyTone	get set	type="boolean"	
Audio/LineinInput	get set query	type="integer" size="1" min="0" max="2"	0: Far site/1: Near site/ 2: Both site
Audio/MicGain	get set query	type="integer" size="1" min="0" max="8"	
Audio/MicHdmiOutputPathMerge	get set	type="boolean"	
Audio/MicInput	get set query	type="integer" size="1" min="0" max="2"	0: MIC IN/1: AUDIO IN with AEC/ 2: AUDIO IN without AEC
Audio/Volume	get set	type="integer" size="1" min="1" max="32"	
Video/DefaultLayoutNoContent	get set	type="integer" size="1" min="0" max="3"	
Video/DefaultLayoutWithContent	get set	type="integer" size="1" min="0" max="5"	
Video/SwitchLayout	action		
Video/SwitchSingleDualMonitor	action		
UI/IR/0	action		
UI/IR/1	action		
UI/IR/2	action		
UI/IR/3	action		
UI/IR/4	action		
UI/IR/5	action		
UI/IR/6	action		
UI/IR/7	action		
UI/IR/8	action		

UI/IR/9	action		
UI/IR/back	action		
UI/IR/blue	action		
UI/IR/call	action		
UI/IR/delete	action		
UI/IR/dot	action		
UI/IR/enter	action		
UI/IR/up	action		
UI/IR/down	action		
UI/IR/left	action		
UI/IR/right	action		
UI/IR/hangup	action		
UI/IR/home	action		
UI/IR/info	action		
UI/IR/present	action		
UI/IR/present vga	action		
UI/IR/phonebook	action		
UI/IR/layout	action		
UI/IR/dual	action		
UI/IR/resolution	action		
UI/IR/input	action		
UI/IR/keypad	action		
UI/IR/red	action		
UI/IR/image	action		
UI/IR/far	action		
UI/IR/green	action		
UI/IR/preset	action		
UI/IR/zoom in	action		
UI/IR/zoom out	action		
UI/IR/mute	action		
UI/IR/yellow	action		
UI/IR/vol up	action		
UI/IR/vol down	action		
UI/IR/record	action		
UI/IRLong/up	action		
UI/IRLong/down	action		
UI/IRLong/left	action		
UI/IRLong/right	action		
UI/IRLong/preset	action		
UI/IRLong/zoom in	action		
UI/IRLong/zoom out	action		
UI/IRRelease/up	action		
UI/IRRelease/down	action		
UI/IRRelease/left	action		
UI/IRRelease/right	action		
UI/IRRelease/preset	action		
UI/IRRelease/zoom in	action		
UI/IRRelease/zoom out	action		
Camera/AcceptFecc	get set	type="boolean"	
Camera/ContinuousMove/Up	action		
Camera/ContinuousMove/Down	action		
Camera/ContinuousMove/Left	action		
Camera/ContinuousMove/Right	action		
Camera/ContinuousMove/ZoomIn	action		
Camera/ContinuousMove/ZoomOut	action		
Camera/Coordinate	get set	type="integer" size="8"	
Camera/Exposure	get set query	type="integer" size="1" min="0" max="9"	
Camera/FlickerFrequency	get set query	type="integer" size="1" min="0" max="2"	
Camera/InputSourceSwitch	action		
Camera/InputSourceSwitchStatus	get	type="boolean"	0: busy / 1: done
Camera/LoadPreset	set	type="integer" size="1"	set number N to load from preset #N

Camera/LoadPreset	set	type="integer" size="1"	set number N to load from preset #N
Camera/SavePreset	set	type="integer" size="1"	set number N to save current position to preset #N
Camera/SaveSnapshot	action		
Camera/Sharpness	get set query	type="integer" size="1" min="0" max="3"	0:Off/1:Low/2:Medium/3:High
Camera/StepMove/Up	action		
Camera/StepMove/Down	action		
Camera/StepMove/Left	action		
Camera/StepMove/Right	action		
Camera/StepMove/ZoomIn	action		
Camera/StepMove/ZoomOut	action		
Camera/StopMove	action		
Camera/WhiteBalance	get set query	type="integer" size="1" min="0" max="4"	

Table 4 List of supported Remote API Xpath

## 6 Compatibility Issues

## 7 Notes

## 8 Glossary

## 9 Review Comments

## 10 Reference

## 11 Revision History

Date	Rev.	Author	Content
2010.10.28	0.0	Drama	Draft
2010.12.06	0.1	Drama	Ver. 0.1
2010.12.06	0.2	Drama	Modify example.
2010.12.08	0.3	Drama	Modified login, add logout and add phonebook total count response.
2010.12.10	0.4	Drama	Modified. Root tag from AVerComm to VC.
2010.12.23	0.5	Drama	Modified block diagram and command line response.
2011.01.04	0.6	Drama	Add GetJpeg
2011.01.21	0.7	Drama	Add Error code, object xpath
2011.03.02	0.8	Drama	Modify example. Add object xpath.
2011.03.08	0.9	Drama	Modify nop & logout response.
2011.04.18	0.10	Drama	Modify Xpath of object, session id attach by client.

2011.04.19	0.11	Drama	Modify Xpath of object.
2011.06.24	0.12	Drama	Add password attribute.
2011.11.16	0.13	Drama	Modify logo, and examples.
2011.11.30	0.14	Leav	Add Skype box related objects
2012.01.02	0.15	Leav	Refined objects for VCBridge (previously <b>Skype Box</b> )
2013.07.17	2.00	Leav	Refined for 2.0 specification. Add use cases.
2013.10.18	2.01	Drama	Remove not support command.
2014.06.18	2.02	Iris	Remove not support command. Add Playback commands.
2015.06.23	2.03	Kevin	Update commands for FW version 00.01.12.07.

PRELIMINARY