TANDBERG

TC series software

Software Release Notes

TABLE OF CONTENTS

DOCUMENT REVISION HISTORY

Revision 5	Release of TC2.1.2 software, minor version.
Revision 4	Release of TC2.1.1 software, minor version.
Revision 3	Corrected the document number in the left hand corner.
Revision 2	Release of TC2.1.0 software, minor version. Release of TC2.0.1 software, maintenance version.
Revision 1	Initial release of TC2.0.0 software.

SOFTWARE RELEASE NOTES FOR TANDBERG CODEC SOFTWARE VERSION TC2.1.2

Introduction

This release note describes the new features and capabilities included in the TANDBERG Codec software version TC2.1.2 released on 16th of December 2009.

Note: This software applies to endpoints that run the TC software. The endpoints included are Codec C90, Codec C60, Codec C20, Telepresence T1, and the Profile series having one of the above mentioned codec's inside. The TANDBERG MXP endpoints do not run TC software, but rather F or L series software. Statements and functionality in this release note does not apply to the TANDBERG MXP systems. Please see the Software Release Document for F and L series software. The TANDBERG T3 systems must run the software version specified in the TANDBERG TCU release notes.

NOTE: When upgrading between two major releases i.e. from 1.x.x to 2.x.x a valid release key has to be applied after the upgrade (from 2.1.x and above you can enter the key before the upgrade). The key can be entered either through the API or the web interface.

Changes and Improvements since Previous Version

- Corrected an issue which could cause echo when disconnecting and re-connecting microphones, or when turning off and on the echo canceller (ref. #72440)

- Corrected a memory leak in the API, which under certain conditions could cause the system to stop responding after around 190 calls (ref. #72166).

- Added support for new product type: TANDBERG Profile 65"
  Note: This system must run TC2.1.2 or newer. Previous software is not supported.

Supplemental Notes

Software Filenames

The correct software filename is listed in the following table.

TANDBERG TC System	Software	Serial Number Range
AES Encryption	s52000tc2_1_2.pkg	All
No Encryption	S52000tc2nc2_1_2.pkg	All

References

TANDBERG Website	http://www.tandberg.com/
TANDBERG FTP Site	http://ftp.tandberg.com/
TANDBERG Documentation	http://www.tandberg.com/docs

Known Limitations

TANDBERG

Ref. ID	Equipment	Limitations
N/A	Ver. TC2.1.0	The VGA (640 x 480) resolution is currently not supported.
62204	TANDBERG PrecisionHD 1080p Camera Ver. ID:40051	720p50, 720p30 and 720p25 output has no CRC included for HD-SDI. Depending on the device you connect the camera to, you may not get video using this format. The TANDBERG codec will support these formats.
57452	Ver. TC2.1.0 (Overscan/Video)	It is possible for some monitors to over-scan the output of the C90 endpoint, thus displaying the administrative menus off screen. To resolve this issue, it is recommended to change the video output resolution of the C90 to a more compatible monitor resolution.
62204	Ver. TC2.1.0	Startup scripts will not work with Windows end of line. You must use Unix end of line to be able to run multiple commands. Most editors have the option to set which format to use. If you use Notepad ++, you can set Unix format in the Settings/Preferences menu.
67092	Ver. TC2.1.0	Composite and S-Video video input is shaking. However some improvements have been made within TC2.0.
70723	Ver. TC2.1.0	The Do Not Disturb function currently doesn't work for the C20.
70174	Ver. Any	You cannot dial into a gatekeeper or SIP registrar without being registered using the format endpoint@domain or endpoint@ipaddress.
65988	Ver. TC2.0.0	Unable to use capital letters for system name and presets in GUI. The other fields are non capital by design.
71182	Ver. TC2.1.0	When calling on SIP to an endpoint located behind a firewall, it will take up to 15 seconds before you are able to start dual stream.
71181	Ver. TC2.1.0	Interworked call from SIP to H.323 dialing a TANDBERG MXP system with F8.1 will give no video on the MXP system.
	Ver. TC2.x.x	If you upgrade from TC1.x to TC2.x your language will default to English.
	Ver.TC2.x.x	If you run cascaded cameras and the chained cameras are running an old camera code, we have seen that only zoom works when trying to control the chained camera. The solution is to connect the cascaded camera as the first camera in the chain so that the camera is detected and upgraded by the codec.
	Ver.TC2.x.x	If you turn off H.323 as the protocol but leave default protocol as H.323 you will be unable to make outgoing calls unless you edit the URI to include 'sip:' in front of the number or change the default call protocol to SIP.

	Ver. TC2.x.x	HD-SDI may not work with cables shorter than 3 meters. This is due to a jitter issue.
69011	Ver. TC2.x	In the Audio Input Level GUI, you cannot change the level for HDMI input 3 and 4.
70010	Ver. TC2.x	The Ethernet speed settings in GUI or API for the C20 will give unpredictable results and should not be used. This setting must be set to auto.
68401	Ver. TC2.x	Sometimes the camera doesn't go back to its previous position when system wakes up from standby.
68886	Ver. TC2.x	If you change the admin password, you will need to reboot the system before this will be applied to the web server.
66993	Ver. TC2.x	The TANDBERG Codec will reduce the presentation resolution if you are unable to sustain a minimum of 4 frames per second.

POLYCOM

Ref. ID	*Equipment*	*Limitations*
64418	C Series Ver. TC2.1.0 (No Video Polycom VSX Ver. 9.0.5)	Currently if the video source 1 (Precision HD 1080p camera) is set to sharpness then the Polycom VSX will not display video as the TANDBERG codec will transmit w448p, which is not supported by the VSX. Workaround: Set Precision HD 1080p camera to motion.
N/A	C Series Ver. TC2.1.0 (No Video Polycom VSX Ver. 8.0 & 8.5)	The Polycom VSX may display distorted video from the TANDBERG codec. Workaround: Upgrade the Polycom VSX to software version 8.7 or higher.
68026	C Series Ver. TC2.1.0 (Video Fast Updates / Polycom HD8000 Ver. 2.5.0.5 & 2.5.0.6)	Currently there are video fast updates sent from the Polycom HDX endpoint at call rates of 6Mbps and 4Mbps. This will result in poor video quality on the TANDBERG codec.
61688	C Series Ver. TC2.1.0 (Secondary Connection / Polycom RMX2000 Ver. 4.1.0.37)	During a 4Mbps, H323, HD, H.239, AES conference the TANDBERG codec doesn't display any video. This is due to the fact that the incoming video channel from the RMX immediately is closed by the RMX.
70824	C Series Ver. TC2.1.0 (Audio Noise \ Polycom RMX2000 Ver. 4.1.0.37)	Sometimes a TANDBERG endpoint will send a very loud static white noise as audio when connected in a Polycom RMX2000 conference. The noise is due to an encryption error and a workaround will be to turn off encryption.
70677	C20 Ver. TC2.1.0 (Receive H.239 / Polycom RMX2000 Ver. 4.1.0.37)	During a 2Mb, H323, AES, H239, non-HD voice switching conference on the Polycom RMX2000, the C20 does not handle H.239 handoff very well. If you start H.239 from the various participants without stopping it first from the site currently transmitting, the C20 will eventually not receive any H.239.
66993	C Series Ver. TC2.1.0 (H.239 / Polycom MGC	The TANDBERG codec will reduces the H.239 resolution to SVGA (800x600) or VGA (640x480) to be

	Ver. 8.0.2.6 & 9.0.3.1)	able to maintain a frame rate over 4 frames per second.
67181	C Series Ver. TC2.1.0 (No Video / Polycom MGC Ver. 8.0.2.6 & 9.0.3.1)	Currently there is no video displayed on the TANDBERG codec during a 384kbps, Continuous Presence, H.239, AES, H.323 conference with the Polycom MGC MCU.
67179, 67182	C Series Ver. TC2.1.0 (No Video or Video Artifacts / Polycom MGC Ver. 8.0.2.6 & 9.0.3.1)	Currently there are video artefacts or no video displayed on the TANDBERG codec during a H.323, AES, H.239, Continuous Presence conference with the Polycom MGC.
58556	C Series Ver. TC2.1.0 (H.239 / Polycom MGC Ver. 8.0.2.6 & 9.0.3.1)	Currently H.239 does not work as expected during a H.323, 384kbps, AES, H.239, H.263 conference.
61957	C Series Ver. TC2.1.0 (H.239 / Polycom MGC Ver. 8.0.2.6 & 9.0.3.1)	Currently, when H.239 is active from one of the TANDBERG codecs, the conference could be going into a faulty state, which will result in video dropping in and out.
61956	C Series Ver. TC2.1.0 (Video dropped In and Out / Polycom MGC Ver. 8.0.2.6 & 9.0.3.1)	Currently the video will intermittently drop in and out during a 2Mbps or 1152kbps, Voice Switching, H.239, AES conference with the Polycom MGC.
71590	C Series Ver. TC2.1.0 (FECC / Polycom MGC Ver. 8.0.2.6 & 9.0.3.1)	Currently Far End Camera Control (FECC) does not work with the Polycom MGC in a H.323 conference.
71628	C Series Ver. TC2.1.0 (Secondary Connection (Audio Only) / Polycom MGC Ver. 9.0.3.1)	The TANDBERG codec will connect as a secondary connection (audio only) when connected to a H.323 128kbps or 256kbps, AES, H.239, Voice Switching and Continuous Presence conference in the Polycom MGC.

SOFTWARE RELEASE NOTES FOR TANDBERG CODEC SOFTWARE VERSION TC2.1.1

Introduction

This release note describes the new features and capabilities included in the TANDBERG Codec software version TC2.1.1 released on 11th of November 2009.

Note: This software applies to endpoints that run the TC software. The endpoints included are Codec C90, Codec C60, Codec C20, Telepresence T1, and the Profile series having one of the above mentioned codec's inside. The TANDBERG MXP endpoints do not run TC software, but rather F or L series software. Statements and functionality in this release note does not apply to the TANDBERG MXP systems. Please see the Software Release Document for F and L series software. The TANDBERG T3 systems must run the software version specified in the TANDBERG TCU release notes.

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Changes and Improvements since Previous Version

- Corrected an occasional flickering of menu on cold systems (ref. #70789).
- Corrected an occasional video boot (ref. #70212).

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SOFTWARE RELEASE NOTES FOR TANDBERG CODEC SOFTWARE VERSION TC2.1.0

Introduction

This release note describes the new features and capabilities included in the TANDBERG Codec software version TC2.1.0 released on 27th of October 2009.

Note: This software applies to endpoints that run the TC software. The endpoints included are Codec C90, Codec C60, Codec C20, Telepresence T1, and the Profile series having one of the above mentioned codec's inside. The TANDBERG MXP endpoints do not run TC software, but rather F or L series software. Statements and functionality in this release note does not apply to the TANDBERG MXP systems. Please see the Software Release Document for F and L series software. The TANDBERG T3 systems must run the software version specified in the TANDBERG TCU release notes.

New Features

System

Factory Reset

It is now possible to reset the TANDBERG C20 to factory defaults using the power switch on the endpoint. To reset the system, power down the C20, and when in a powered off state:

- Press and hold the power switch for 15 seconds until the green LED on the front of the system turns red.
- Quickly press the power button twice within the next five seconds.

At this point, the configuration will be reset to the factory settings and the second software image will be completely deleted from the system.

Downgrading

It is no longer possible to downgrade a C20 or a C60 from TC2.1 to unsupported software images (i.e. TC1.x is not supported on a C20).

- TANDBERG C20: Lowest compatible software is TC2.0. To downgrade to TC2.0 software you will have to go via TC2.0.1 first. *NOTE!* Using TC2.0.1 you can further downgrade it to non supported software.
- TANDBERG C60: Lowest compatible software is TC1.1.0. To downgrade to software versions lower than TC2.1 you must go via TC2.0.1 first. *NOTE!* Using TC2.0.1 you can further downgrade it to non supported software.

Video

TC2.1.0 software now supports 1920x1200 progressive input resolution at a refresh rate of 60 Hz. TC2.1.0 software now supports 1920x1080 progressive analogue input resolution at a refresh rate of 60Hz.

Protocol

Added support for RTP keep alive on SIP. This is needed to be able to receive dual stream (BFCP) when the system is located behind a NAT.

GUI

Message Box Alerts

The TC-series endpoints now support the ability to display a message box on the user interface, thus increasing the ability for third party control systems to interact directly with the user based on feedback from the UI. This message box is typically initiated from a control system similar to TMS. One usage example could be to give the user a text message prompt asking for feedback on whether to extend a scheduled conference or not. TMS will start to use this feature towards TC software from version 12.5.

Presets

Expanded preset selection on GUI to include camera preset 10 to15.

API

The following commands were added to the API of TC2.1.0. For more information on the API commands, see the document D14128, TANDBERG Codec C90 System Integrator Guide, available at www.tandberg.com/docs.

Message Box

- xCommand Message Alert Display Text
- xCommand Message Prompt Display

Camera Engines

- xCommand Camera PositionReset CameraId:

TANDBERG C20 only:

- xCommand Call Hold
- xCommand Call Resume
- xCommand Join

Noise Reduction

- xConfiguration Audio Input Microphone [1..8] EchoControl NoiseReduction: <On/Off>

Changes and Improvements since Previous Version

Camera

With the TC2.1.0 release, the PrecisionHD 1080p camera will automatically be upgraded to camera software release ID40051. Included in this release is:

- Changed the default gamma curve to comply with Rec. 709.

- Corrected HD-SDI problems seen at 720p25, 720p30 and 720p50.

- Corrected a 1-pixel horizontal misalignment between Y and Cb/Cr.

- Added reset commands for focus, zoom and iris motors.

- Improved the edge enhancement filter.

- Added chroma gain suppression reducing false colours in bright areas and noise in dark areas.

- Fixed an issue which could cause yellow artifacts in high frequency areas.

- Removed multiple auto focus trigs during pan/tilt.

- Improved auto focus.

- Increased manual exposure range.

- Fixed an issue which could cause the camera to not respond to IR commands after running Best View (Ref. 68966).

GUI:

- Corrected 'Composite Output Monitor Role' to reflect that the TANDBERG Codec C60 only has three monitor roles; first, second and presentation (ref. #69652).

- Corrected Japanese language where the word presentation was cut off in the system information screen (ref. #67883).

- Modified the behavior of the global directory, if TMS presents two contact methods for the same contact with the same URI, but with different protocol, the system will now choose to use the preferred dialing protocol. In this event, the contact will only be listed once and when you dial you will use the default call protocol set on the system (ref. #69539).

- Added support for Finish and Polish language.

- Fixed an issue causing the search function in My Contacts to malfunctions if system language was set to other than English (ref. #67884).

- Fixed an issue causing the width of camera preset widget to be adjusted according to first item and not the longest (ref. #68145).

Protocol

- Fixed an issue causing the unit to renegotiate logical channel after flow control. Seen when the unit is transmitting 1080p and "Video receive bit rate optimization" is set to on in a Codian conference (ref. #65513).

- Fixed an issue causing the encryption keys to not be set properly when calling a Codian MCU on SIP (ref. #68994).

- Fixed an issue causing H.239 to not work when dialing through a Codian ISDN gateway (ref. #67727).

- Fixed an issue causing the system to freeze when Microsoft SIP authentication fails (NTLM) (ref. #66546).

- Fixed a reboot caused by illegal SIP Invite seen by testing in laboratory (ref. #67473).

- Fixed an issue causing the unit to enter cyclic reboot if SIP Outbound was set to 'On' and no Outbound Proxies was configured (ref. #69151).

- Changed BFCP behavior to match the behavior of the TANDBERG MXP (ref. #66895).

- Fixed an issue causing a TANDBERG MXP system to not receive dual stream (BFCP) on SIP when added to a MultiSite conference (ref. #66733).

- Fixed an issue where two units directly registered to a VCS Expressway was not able to receive dual stream (H.239) over H.323 using Assent firewall traversal (ref. #69918).

- Fixed an issue that caused no video on a Codian MCU when dialing from a system directly registered on a VCS Express using Assent (ref. #68500).

System

- Fixed an issue causing the C20 to not light the LED alarm light if it was booted up without Ethernet (ref. 68440).

- Fixed an issue causing HTTPS to not work if HTTP was disabled (ref. #67682).

- Fixed an issue causing the microphone mute button on the remote control to become unresponsive when toggling the state during a call or when idle (ref. #69000).

- Fixed a memory leak, which occurred when rotating system logs (ref. #64988).

- Fixed a security vulnerability, which could allow a rogue DHCP server to execute arbitrary commands as root on the affected system. Such an attack has little to no risk for a client situated on a network that is well defended (ref. #67938).

- Added support for entering the release key for new software before software upload. Previously the software had to be uploaded prior to the release key being set (ref. #67810).

- The system can now be forced into standby when presentation source is active (ref. #67476).

- Fixed an issue causing the standby boot action to a fixed preset to malfunction (ref. #67920).

- Fixed an issue which could cause a camera preset to be stored with the wrong focus value (ref. #68529).

- Fixed a security vulnerability which may allow a DoS (Denial of Service) attach if the codec were to process an untrustworthy XML document using expat (ref. #69963).

Video

- Fixed an issue which could cause occasional blinking/black window in a C60 MultiSite call (ref. #66804).

- Fixed an issue causing analogue 1080p and 720p to not work from some PCs (ref. #66724).

- Fixed an issue causing the composite input to be encoded as a 16/9 image (ref. #68366).

- Improved handling of analog signals DVI-A and component inputs by adding jitter removal logic, which could cause visible random video line shifts (ref. #68296).

- Modified the AGC (Automatic Gain Control) for sources with non-compliant component signal, where the horizontal sync depth is too shallow. This will prevent the image becoming too bright when connecting a Sony EVI HD1 camera (ref. #68940).

- Fixed an issue causing zebra stripes in the encoder (ref. #60656).

Audio

- Fixed an issue which could cause a sudden reboot if an endpoint dials into a MultiSite capable endpoint with one or more calls on hold (ref. #68822, #67390 and #68764).

- Fixed an issue causing the button on the TANDBERG Precision Mic 20 to require two presses to change state (ref. #67010).

API

- Formatted API help text to be more readable (ref. #68313).

- Corrected an issue causing time zone to not be set from TMS (ref. #69252).

- Fixed feedback for event 'press key' and 'release key', so the feedback doesn't continue to be transmitted after the 'key release' command (ref. #68108).

- Added baudrate 57600 to the serialport baudrate configuration (ref. #67990).

- 'xStatus Network' will now show DNS domain name (ref. #66096).

- Result set from search in phonebook now returns the amount of total matches in a limited search (ref. #62303).

- xStatus Conference now returns status about far end presentation capabilities (ref. #63334).

- xCommand Video Layout Frame Update now only requires the parameters 'LayoutId' and 'FrameId', the other parameters are now optional (ref. #64786).

- xCommand Video Layout Assign will soon be a hidden command, new commands has been implemented to replace its functionality (ref. #68796):
    - xCommand Video Layout AssignLocalOutput
    - xCommand Video Layout AssignCall
    - xCommand Video Layout AssignPresentation
    - xCommand Video Layout UnAssignLocalOutput
    - xCommand Video Layout UnAssignCall
    - xCommand Video Layout UnAssignPresentation

- Added support for backwards compatibility with regards to setting the SNMP address. This will fix an issue reported for TMS 12.x where TMS constantly will report that the unit has wrong SNMP address (ref. #68374).

- Added support for backwards compatibility with regards to xHistory. This will fix an issue reported for TMS 12.x where Call Detail Records was not registered in TMS.

- Added a timeout error message if the xCommand Phonebook SearchString times out when searching the corporate phonebook:
    - ResultSet Error MessageType: Timeout

Supplemental Notes

Software Filenames

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TANDBERG Website   http://www.tandberg.com/
TANDBERG FTP Site   http://ftp.tandberg.com/
TANDBERG Documentation   http://www.tandberg.com/docs

Known Limitations

TANDBERG

Ref. ID	Equipment	Limitations
N/A	Ver. TC2.1.0	The VGA (640 x 480) resolution is currently not supported.
62204	TANDBERG PrecisionHD 1080p Camera Ver. ID:40051	720p50, 720p30 and 720p25 output has no CRC included for HD-SDI. Depending on the device you connect the camera to, you may not get video using this format. The TANDBERG codec will support these formats.
57452	Ver. TC2.1.0 (Overscan/Video)	It is possible for some monitors to over-scan the output of the C90 endpoint, thus displaying the administrative menus off screen. To resolve this issue, it is recommended to change the video output resolution of the C90 to a more compatible monitor resolution.
62204	Ver. TC2.1.0	Startup scripts will not work with Windows end of line. You must use Unix end of line to be able to run multiple commands. Most editors have the option to set which format to use. If you use Notepad ++, you can set Unix format in the Settings/Preferences menu.
67092	Ver. TC2.1.0	Composite and S-Video video input is shaking. However some improvements have been made within TC2.0.
70723	Ver. TC2.1.0	The Do Not Disturb function currently doesn't work for the C20.
70174	Ver. Any	You cannot dial into a gatekeeper or SIP registrar without being registered using the format endpoint@domain or endpoint@ipaddress.
65988	Ver. TC2.0.0	Unable to use capital letters for system name and presets in GUI. The other fields are non capital by design.
71182	Ver. TC2.1.0	When calling on SIP to an endpoint located behind a

		firewall, it will take up to 15 seconds before you are able to start dual stream.
71181	Ver. TC2.1.0	Interworked call from SIP to H.323 dialing a TANDBERG MXP system with F8.1 will give no video on the MXP system.
	Ver. TC2.x.x	If you upgrade from TC1.x to TC2.x your language will default to English.
	Ver.TC2.x.x	If you run cascaded cameras and the chained cameras are running an old camera code, we have seen that only zoom works when trying to control the chained camera. The solution is to connect the cascaded camera as the first camera in the chain so that the camera is detected and upgraded by the codec.
	Ver.TC2.x.x	If you turn off H.323 as the protocol but leave default protocol as H.323 you will be unable to make outgoing calls unless you edit the URI to include 'sip:' in front of the number or change the default call protocol to SIP.
	Ver. TC2.x.x	HD-SDI may not work with cables shorter than 3 meters. This is due to a jitter issue.
69011	Ver. TC2.x	In the Audio Input Level GUI, you cannot change the level for HDMI input 3 and 4.
70010	Ver. TC2.x	The Ethernet speed settings in GUI or API for the C20 will give unpredictable results and should not be used. This setting must be set to auto.
68401	Ver. TC2.x	Sometimes the camera doesn't go back to its previous position when system wakes up from standby.
68886	Ver. TC2.x	If you change the admin password, you will need to reboot the system before this will be applied to the web server.
66993	Ver. TC2.x	The TANDBERG Codec will reduce the presentation resolution if you are unable to sustain a minimum of 4 frames per second.

POLYCOM

Ref. ID	Equipment	Limitations
64418	C Series Ver. TC2.1.0 (No Video Polycom VSX Ver. 9.0.5)	Currently if the video source 1 (Precision HD 1080p camera) is set to sharpness then the Polycom VSX will not display video as the TANDBERG codec will transmit w448p, which is not supported by the VSX. Workaround: Set Precision HD 1080p camera to motion.
N/A	C Series Ver. TC2.1.0 (No Video Polycom VSX Ver. 8.0 & 8.5)	The Polycom VSX may display distorted video from the TANDBERG codec. Workaround: Upgrade the Polycom VSX to software version 8.7 or higher.
68026	C Series Ver. TC2.1.0 (Video Fast Updates / Polycom HD8000 Ver. 2.5.0.5 & 2.5.0.6)	Currently there are video fast updates sent from the Polycom HDX endpoint at call rates of 6Mbps and 4Mbps. This will result in poor video quality on the TANDBERG codec.

61688	C Series Ver. TC2.1.0 (Secondary Connection / Polycom RMX2000 Ver. 4.1.0.37)	During a 4Mbps, H323, HD, H.239, AES conference the TANDBERG codec doesn't display any video. This is due to the fact that the incoming video channel from the RMX immediately is closed by the RMX.
70824	C Series Ver. TC2.1.0 (Audio Noise \ Polycom RMX2000 Ver. 4.1.0.37)	Sometimes a TANDBERG endpoint will send a very loud static white noise as audio when connected in a Polycom RMX2000 conference. The noise is due to an encryption error and a workaround will be to turn off encryption.
70677	C20 Ver. TC2.1.0 (Receive H.239 / Polycom RMX2000 Ver. 4.1.0.37)	During a 2Mb, H323, AES, H239, non-HD voice switching conference on the Polycom RMX2000, the C20 does not handle H.239 handoff very well. If you start H.239 from the various participants without stopping it first from the site currently transmitting, the C20 will eventually not receive any H.239.
66993	C Series Ver. TC2.1.0 (H.239 / Polycom MGC Ver. 8.0.2.6 & 9.0.3.1)	The TANDBERG codec will reduces the H.239 resolution to SVGA (800x600) or VGA (640x480) to be able to maintain a frame rate over 4 frames per second.
67181	C Series Ver. TC2.1.0 (No Video / Polycom MGC Ver. 8.0.2.6 & 9.0.3.1)	Currently there is no video displayed on the TANDBERG codec during a 384kbps, Continuous Presence, H.239, AES, H.323 conference with the Polycom MGC MCU.
67179, 67182	C Series Ver. TC2.1.0 (No Video or Video Artifacts / Polycom MGC Ver. 8.0.2.6 & 9.0.3.1)	Currently there are video artefacts or no video displayed on the TANDBERG codec during a H.323, AES, H.239, Continuous Presence conference with the Polycom MGC.
58556	C Series Ver. TC2.1.0 (H.239 / Polycom MGC Ver. 8.0.2.6 & 9.0.3.1)	Currently H.239 does not work as expected during a H.323, 384kbps, AES, H.239, H.263 conference.
61957	C Series Ver. TC2.1.0 (H.239 / Polycom MGC Ver. 8.0.2.6 & 9.0.3.1)	Currently, when H.239 is active from one of the TANDBERG codecs, the conference could be going into a faulty state, which will result in video dropping in and out.
61956	C Series Ver. TC2.1.0 (Video dropped In and Out / Polycom MGC Ver. 8.0.2.6 & 9.0.3.1)	Currently the video will intermittently drop in and out during a 2Mbps or 1152kbps, Voice Switching, H.239, AES conference with the Polycom MGC.
71590	C Series Ver. TC2.1.0 (FECC / Polycom MGC Ver. 8.0.2.6 & 9.0.3.1)	Currently Far End Camera Control (FECC) does not work with the Polycom MGC in a H.323 conference.
71628	C Series Ver. TC2.1.0 (Secondary Connection (Audio Only) / Polycom MGC Ver. 9.0.3.1)	The TANDBERG codec will connect as a secondary connection (audio only) when connected to a H.323 128kbps or 256kbps, AES, H.239, Voice Switching and Continuous Presence conference in the Polycom MGC.

SOFTWARE RELEASE NOTES FOR TANDBERG CODEC SOFTWARE VERSION TC2.0.1

Introduction

This release note describes the new features and capabilities included in the TANDBERG Codec software version TC2.0.1 released on 28th of October 2009.

Note: This software applies to endpoints that run the TC series of software. The endpoints included are Codec C90, Codec C60, Codec C20, Telepresence T1, and the Profile series having one of the above mentioned codec's inside. The TANDBERG MXP endpoints do not run TC software, but rather F or L series software. Statements and functionality in this release note does not apply to the TANDBERG MXP systems. Please see the Software Release Document for F and L series software. The TANDBERG T3 systems must run the software version specified in the TANDBERG TCU release notes.

New Features

This software is needed to downgrade a TANDBERG Codec C60 or Codec C20 to a software version less than TC2.0.1. Functionality wise this software is identical to TC2.0.0. If you upgrade any of these units to TC2.1, you will have to install TC2.0.1 to be able to further downgrade the system.

NOTE: The TANDBERG Codec C20 will not work with software less than TC2.0.0.
NOTE: The TANDBERG Codec C60 will not work with software less than TC1.1.0.

SOFTWARE RELEASE NOTES FOR TANDBERG CODEC SOFTWARE VERSION TC2.0.0

Introduction

This release note describes the new features and capabilities included in the TANDBERG Codec software version TC2.0.0 released on 3rd of July 2009.

Note: This software applies to endpoints that run the TC series of software. The TANDBERG MXP endpoints do not run TC software, but rather F or L series software. Statements and functionality in this release note does not apply to the TANDBERG MXP systems. Please see the Software Release Document for F and L series software. The TANDBERG T3 systems must run the software version specified in the TANDBERG TCU release notes.

New Product Abstract

TANDBERG C20

The TC 2.0.0 release introduces support for the new Codec C20. This codec will provide you with absolute quality 1080p30 and 720p60 HD video, ease of installation and management. For more information please visit: http://www.tandberg.com , where user manual, technical specifications and administrator guide will be available for download.

NOTE: The TANDBERG Codec C20 cannot run software versions lower then TC 2.0.0

New Features

Video

- MultiSite support for TANDBERG Codec C60.
    - 3+1 multisite up to 720p30 with dual stream up to WXGA (1280*768) at 15fps.
    - All sites are fully transcoded.
    - Mono audio.
- Support for 1280*720@60fps (frames per second) for all products running TC software. This feature is available if:

- The video input delivers 60fps, like the TANDBERG PrecisionHD 1080p camera.
- The video input must be configured for Motion (default for main source).
- Premium Resolution option must be installed.
- The video input bandwidth must be above the Threshold60fps configuration under Advanced Configuration/Encoder/Threshold60fps.
- Default threshold for 60fps is 2200kbps.

- Added support for encoding 1080p multislice (non NIL mode).
- Improved GUI graphics.
- Quadruple monitor support for the TANDBERG Codec C90.
  - For setting up each remote participant on separate screens and the presentation on the fourth screen.
- Support for the following new video output formats on DVI-D and HDMI: 1920*1200 and 1600*1200.
- Customized wallpaper can now be uploaded from the web interface. Currently only .png file format is supported.
- Support for new DVI-A (analog) input formats:
  - Supported 4/3 resolutions are:
    - 640x480p60
      640x480p72
      640x480p75
      640x480p85
      800x600p56
      800x600p60
      800x600p72
      800x600p75
      800x600p85
      1024x768p75
      1024x768p60
      1024x768p70
      1024x768p85
      1280x960p60
      1280x1024p60
      1280x1024p75
      1600x1200p60
  - Supported 16/9 resolutions are:
    - 1280x720p60
      1280x768p60
      1280x800p60
      1440x900p60
      1680x1050p60
      1920x1080p60
      1920x1200p50
- Support for new DVI-D input resolution of 1920*1200p50.
- PnP monitor support:
  - You can now configure the video output resolutions to auto, this will make the system output the optimum resolution supported by the display.
- Enabled the S-Video/Composite input of the TANDBERG Codec C60/C90

- The Advanced Video Layout API (Virtual Monitor) is now taken out of the Experimental mode and is general available and documented.

- Improved video performance and less latency.

- Added support for customizing scaling:
  - Manual
  - MaintainApsectRatio
  - StretchToFit
  - Off

System

- Added support for turning off call logging.
- Added support for auto answer with microphone off.

Protocol

- Added support for SIP Outbound.

Network

- Auto generated self signed HTTPS certificate:
  - In the event of no HTTPS certificate is uploaded to the system, it will automatically generate a unique self signed certificate.
- The Ethernet speed can now be set manually.
- New improved web server with support for:
  - Configuring advanced configuration.
  - Simple dial and hang up of calls.
  - Time stamped log files.
  - Setting release key.

Audio

- Support for TANDBERG Audio Console, which can be downloaded from http://developer.tandberg.com/web/guest/tools/integrators
- Audio local reinforcement available for the TANDBERG Codec C90:
  - Limited feature.
  - Based upon defining two zones.
  - Allows for having up to two microphones placed in zone 1, to be reinforced in zone 2 (microphones placed in zone 2 will not be reinforced in zone 1).
  - Usage scenario: Small auditoriums.
- Advanced audio API for TANDBERG Codec C60/C90:
  - You can now define custom mixes and routing.
  - Equalizers can be added to inputs and outputs.

- PC application for advanced audio configuration will be released in Q3.
- Audio VU meter is now available in the GUI for the TANDBERG Codec C60/C90.
- Support for the TANDBERG Performance Mic 20, used on the TANDBERG C20 only.
- Added support for adjusting the volume on HDMI inputs (does not apply for C20).

GUI

- Added support for programmable softkeys:
    - The 5 softkeys can be programmed to have different functions for idle and in call. Currently the supported functions are:
        - Video sources.
        - Camera presets.
        - Speed dials.
- Added support for selection of camera presets.
- A display box will now appear when your call has been set on hold.
- Auto complete in call dialog box.
    - Uses recent call list for auto complete
- Added support for Swedish, Norwegian and Italian language.
- Added support for Camera Settings as soft key when moving the camera or accessing the "Camera control" menu
- Added support for Camera Presets as soft key when moving the camera or accessing the "Camera control" menu

API

New commands added to the API. For a description on how to use these commands please refer to the TANDBERG Codec C60/C90 Integrators Guide.

- xStatus Presets
- xCommand Audio LocalInput Add
- xCommand Audio LocalInput AddConnector
- xCommand Audio LocalInput Remove
- xCommand Audio LocalInput RemoveConnector
- xCommand Audio LocalOutput Add
- xCommand Audio LocalOutput AddConnector
- xCommand Audio LocalOutput DisconnectInput
- xCommand Audio LocalOutput Remove
- xCommand Audio LocalOutput RemoveConnector
- xCommand Audio LocalOutput Update
- xCommand Audio RemoteOutput ConnectInput
- xCommand Audio RemoteOutput DisconnectInput
- xCommand Audio Setup Clear

- xCommand Video Layout Add
- xCommand Video Layout Assign
- xCommand Video Layout Frame Add
- xCommand Video Layout Frame Remove
- xCommand Video Layout Frame Update
- xCommand Video Layout Remove
- xCommand Video Layout RemoveAll
- xCommand Video Layout Reset
- xCommand Video Layout UnAssign
- xCommand Audio LocalInput Update
- xConfiguration Audio Input HDMI
- xConfiguration Audio Output HDMI
- xConfiguration Conference [1..1] AutoAnswer
- xConfiguration Network [1..1] Speed
- xConfiguration Network [1..1] IEEE8021X Password
- xConfiguration Network [1..1] MTU
- xConfiguration SIP Profile [1..1] Outbound
- xConfiguration SIP Profile [1..1] Authentication [1..1] Password
- xConfiguration Standby WakeupAction
- xConfiguration Standby BootAction:
- xConfiguration SystemUnit CallLogging Mode
- xConfiguration Video Encoder Threshold60fps
- xConfiguration Video Layout Scaling
- xConfiguration Video Layout ScaleToFrame
- xConfiguration Video Layout ScaleToFrameThreshold
- xStatus Audio Output LocalOutput [5..6] Name
- xStatus Audio Output LocalOutput [5..6] Loudspeaker
- xStatus Audio Output LocalOutput [5..6] Channels
- xStatus Audio Output LocalOutput [5..6] Connector
- xStatus Audio Output LocalOutput [5..6] Input
- xStatus Network [1] IPv4 MTU
- xStatus Preset [1..15] Defined
- xStatus Preset [1..15] Type
- xStatus Preset [1..15] Description
- xStatus SystemUnit Software ReleaseKey
- xStatus Video Layout Site [1] Output [1..5] FamilyName
- xStatus Video Layout Site [1] Output [1..5] FullFamilyName
- xStatus Video Layout Site [1] Output [1..5] FamilyNumber
- xStatus Video Layout Site [1] Output [1..5] GraphicName

- xStatus Video Layout Site [1] Output [1..5] GraphicNumber

- xStatus Video Layout Site [1] Output [1..5] Descriptor

- xStatus Video Layout Site [1] Output [1..5] DescriptorOutput

- xStatus Video Layout Site [1] Output [1..5] Frame

Changes and Improvements Since Previous Version

Camera

With TC2.0.0 release the PrecisionHD 1080p camera will automatically be upgraded to software ID40043. Included in this release is:

- Tuning of the temporal noise filters strength to minimize trailing artifacts.

- Fixed an issue which could cause the pan motor to loose steps when the camera was getting very rapidly commands.

GUI:

- Corrected an issue which could cause the GUI to lock up if you started dual stream at the same time as you were prompt for a password for access to Admin Settings (ref. #65736).

- Time Zone changed for Venezuela to correct value -4.30 UTC (ref. #65596).

- You will no longer be prompted for a menu password if no password is set (ref. #60164)

- Moved Best View from its own soft button to a selection under the new soft button presets.

- If standby control is set to off, the system will now wake up again in the event of an incoming call or a detection of a key press on the remote control, whenever the system is forced into "Standby" using the remotes "Disconnect" button (ref. #61233).

- Clock, date and TANDBERG banner will no longer be shown during camera control (ref. #61611).

- Moved the default highlight field in the phonebook to the search field (ref. #54500).

- Fixed some scaling issues that could appear if you changed output resolution without rebooting the system (ref. #60278).

- Diffserv settings can now be entered using a spin box instead of a slide bar (ref. #62093).

- Calling from recent call list, will now use original call rate set for that call (ref. #59609).

- SIP password is no longer stored in clear text (ref. #57292).

Protocol

- H.323: Added E.164 alias in the Q.931 setup message (ref. #61246).

    - This will allow the Codian GW to present a numeric number as calling number when dialing out on ISDN.

    - This will allow the Codian MCU to use the E.164 number as matching parameter for the feature "Display Name Override".

- H.323: Changed the behavior of the Q.931 connect message to always display the H.323ID as the display element.

- This will allow the Codian MCU to always display the H.323ID as the participant overlay text in a conference, regardless if you dial E.164 (numeric) or dialing using a URI.
  - SIP: Fixed an issue causing the unit to display "in audio call" whilst setting a video call on hold (ref. #61553).
  - H.323: Corrected packet loss based down speeding (ref. #65405).
  - SIP: General stability improvements and several fixes for call on hold and call transfer.
  - SIP: Binary Floor Control Protocol (dual video) stability fixes (ref. #52804).

System

  - Corrected a memory leak which in rear conditions could cause a reboot (ref. #65743).
  - Corrected an issue which could cause the call LED to start blinking outside of a call (ref. #61548).
  - Corrected the setting 'IncomingMultiSiteCall', setting this to deny will now deny incoming calls when you are already in a point to point call (ref. #55306).

Video

  - Fixed composite output to correctly display the following formats: qcif, cif, w288p and 448p (ref. #63659).
  - Removed a vertical visible line that could be visible on the left side of the frame, when showing a presentation (ref. #62778).

API

API commands that have changed since previous version. For a description on how to use these commands please refer to the TANDBERG Codec C60/C90 Integrators Guide.

  - System now accepts commands with a leading blank i.e. " xConfiguration" or " xStatus".
  - Corrected an issue causing the command "xStatus H323 GateKeeper Status" to sometimes incorrectly showing a successful registration (ref. #57334).
  - "xStatus Call" will no longer report "Error" outside of a call.
  - xCommand CallLog Clear – Can now specify LogTag.
  - xCcommand DTMFSend – CallId is no longer required.
  - xCommand Dial – CallType changed to <Audio/Video>, new parameters added ForceNewConference and ConferenceId.
  - xCommand FarEndControl - CallId is no longer required.
  - xCommand HttpFeedback Deregister – FeedbackSlot is no longer required.
  - xCommand Key Click - Duration is no longer a valid argument.
  - xCommand Phonebook Contact Add – Added following arguments: Number, Protocol, CallRate and Device.
  - xCommand Phonebook ContactMethod Add – Added following arguments: Device and Protocol.
  - xCommand Phonebook Search – Added the argument SearchField.
  - xCommand Standby ResetTimer – Delay is no longer required.
  - xCommand Video PictureLayoutSet – Added argument CallId.

- xConfiguration SIP profile 1 - TlsVerify has been removed.

- xStatus Audio input Connectors - Removed

- xConfiguration DoNotDisturb Mode had been replaced with xConfiguration Conference [1..1] DoNotDisturb Mode.

- xConfiguration NetworkServices SNMP HostIpAddress – Added the argument Host [1..3].

- xConfiguration SIP Profile – Extended the Argument Proxy to support up to 4 proxies.

KNOWN LIMITATIONS

TANDBERG

Ref. ID	Equipment	Limitations
N/A	Ver. TC1.2.0	The VGA (640 x 480) resolution is currently not supported.
62204	TANDBERG PrecisionHD 1080p Camera Ver. ID:40042	Currently the only formats supported by the HD-SDI output of the PrecisionHD 1080p Camera is 1080p30, 1080p25, 720p60, 720p30 and 720p50.
57452	Ver. TC2.0. (Overscan \ Video)	It is possible for some monitors to over-scan the output of the C90 endpoint, thus displaying the administrative menus off screen. To resolve this issue, it is recommended to change the video output resolution of the C90 to a more compatible monitor resolution.
	Ver. TC2.0.0	Startup scripts will not work with Windows end of line. You must use Unix end of line to be able to run multiple commands. Most editors have the option to set which format to use. If you use Notepad ++, you can set Unix format in the Settings/Preferences menu.

References

TANDBERG Website   http://www.tandberg.com
TANDBERG FTP Site   http://ftp.tandberg.com

For all documentation, please see the TANDBERG Support Website at
http://www.tandberg.com/support/documentation.php

Interoperability Testing

The following systems have been tested and verified compatible with this software release.

H.323 Gatekeepers/Traversal Servers

Equipment	Software Revision	Comments
TANDBERG Gatekeeper	N6.1	
TANDBERG Border Controller	Q6.1	Both Assent and H.460.18/.19 traversal technologies are supported
TANDBERG Video Communication Server (VCS)	X4.1	Both Assent and H.460.18/.19 traversal technologies are supported

SIP Registrars/Proxies

Equipment	Software Revision	Comments
TANDBERG Video	X4.1	

Communication Server (VCS)		

Gateway Interoperability

Equipment	*Software Revision*	*Comments*
TANDBERG MPS Gateway	J4.3	
TANDBERG Gateway	G3.2	

MCU Interoperability

Equipment	*Software Revision*	*Comments*
TANDBERG MPS	J4.2	
TANDBERG MCU	D3.10	
TANDBERG\Codian 4210	2.4(1.10)	
TANDBERG\Codian 4520	3.0(0.54)	
Polycom MGC50	8.0.2.6	384kbps: H.239 will not work. 384kbps Voice Switched call: H.239 will be sent as SVGA or VGA. When starting H.239 the main video resolution will be downgraded depending on the bandwidth used.
Polycom RMX2000	4.00.1.29	HD on the RMX must be disabled when Continuous Presence (CP) is selected. All testing was done with a CP4 layout. H.239 does not work. Some intermittent connection issues has been seen.

Streaming Servers

Equipment	*Software Revision*	*Comments*
TANDBERG Content Server	S3.1	

Endpoint Interoperability

Equipment	*Software Revision*	*Protocol*	*Comments*
TANDBERG MXP	F8	H323	
TANDBERG MXP	F7.2	H323	
TANDBERG Personal Series	L5.1	H323	
TANDBERG E20	TE1.0.2	H323	
LifeSize Express	LS_EX1_4.1.1(17)	H323	When sending 60fps to LifeSize every other

			frame is skipped by the LifeSize system.
LifeSize Room 200	LS_RM2_4.1.1(17)	H323	When sending 60fps to LifeSize every other frame is skipped by the LifeSize system.
LifeSize Room	LS_RM1_4.0.7(7)	H323	When sending 60fps to LifeSize every other frame is skipped by the LifeSize system.
Sony PCS-1	03.41	H323	Dual stream is limited to 1 FPS. To get video from the Sony, H.263 and H.264 must be disabled using the API command: xConfiguration Experimental CapsetFilter: "H.263PP;H.264".
Polycom FX	6.0.5.17	H323	
Polycom HDX 8000 HD	2.5.0.2-3395	H323	H.239 doesn't work when started from the Polycom system.
Polycom HDX 8000 HD	2.5.0.2-3395	SIP	FECC and dual stream does not work.
Polycom HDX 8000	2.0.2-235	H323	
Polycom HDX 8000	2.0.2-235	SIP	FECC and dual stream does not work.
Polycom HDX 9004	2.5.0.1-3332	H323	When sending 60fps to Polycom every other frame is skipped by the Polycom system.

TANDBERG

Current RFC's and drafts supported in TC2.0.0

- RFC 1889 RTP: A Transport Protocol for Real-time Applications

- RFC 2190 RTP Payload Format for H.263 Video Streams

- RFC 2327 SDP: Session Description Protocol

- RFC 2396 Uniform Resource Identifiers (URI): Generic Syntax

- RFC 2429 RTP Payload Format for the 1998 Version of ITU-T Rec. H.263 Video (H.263+)

- RFC 2617 Digest Authentication

- RFC 2782 DNS RR for specifying the location of services (DNS SRV)

- RFC 2833 RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals

- RFC 2976 The SIP INFO Method

- RFC 3016 RTP Payload Format for MPEG-4 Audio/Visual Streams

- RFC 3047 RTP Payload Format for ITU-T Recommendation G.722.1

- RFC 3261 SIP: Session Initiation Protocol

- RFC 3262 Reliability of Provisional Responses in SIP

- RFC 3263 Locating SIP Servers

- RFC 3264 An Offer/Answer Model with SDP

- RFC 3311 UPDATE method

- RFC 3361 DHCP Option for SIP Servers

- RFC 3420 Internet Media Type message/sipfrag

- RFC 3515 Refer method

- RFC 3550 RTP: A Transport Protocol for Real-Time Applications

- RFC 3581 Symmetric Response Routing

- RFC 3605 RTCP attribute in SDP

- RFC 3711 The Secure Real-time Transport Protocol (SRTP)

- RFC 3840 Indicating User Agent Capabilities in SIP

- RFC 3890 A Transport Independent Bandwidth Modifier for SDP

- RFC 3891 The SIP "Replaces" Header

- RFC 3892 Referred-By Mechanism

- RFC 3960 Early Media

- RFC 3984 RTP Payload Format for H.264 Video

- RFC 4028 Session Timers in SIP

- RFC 4145 TCP-Based Media Transport in the SDP

- RFC 4568 SDP:Security Descriptions for Media Streams

- RFC 4574 The Session Description Protocol (SDP) Label Attribute

- RFC 4582 The Binary Floor Control Protocol

- RFC 4585 Extended RTP Profile for RTCP-Based Feedback

- RFC 4587 RTP Payload Format for H.261 Video Streams

- RFC 4629 RTP Payload Format for ITU-T Rec. H.263 Video

- RFC 5168 XML Schema for Media Control
- RFC 4796 The SDP Content Attribute
- RFC 4583 SDP Format for BFCP Streams
- RFC 5589: SIP Call Control Transfer
- draft-ietf-avt-rtp-h264-rcdo-02
- draft-ietf-avt-rtp-rfc3984bis-06

- draft-ietf-sip-outbound-20: Managing Client Initiated Connections