Crestron Voting Module v2
Module Application Guide

Description

This module provides voting functions on a Crestron 2-series processor. All voting functions are completed in the Crestron processor. A PC is required only for optional agenda information import (from Microsoft PowerPoint) or results data export (to Microsoft Excel). This module can also be used to provide "request-to-speak" functionality, triggering microphones to activate or pan/tilt/zoom cameras to move.

This module provides users with the ability to:

- Import agenda information from PowerPoint (via Crestron e-PowerPoint)
- Add "ad hoc" agenda items using a QWERTY keyboard on the Crestron touchpanel
- Export voting results to Excel (via Crestron e-Datalog)
- Rename, store and recall 5 different meeting groups of 15 members each to compact flash. This will store the name of the meeting type, voting rules, the names of each member, and the seating chart.
- Modify and record attendance
- Start and stop voting process
- View voting results on a display device driven by a TPS-G-TPI or C2N-DVP4DI
- Vote yea, nay or abstain
- Select "Unanimous," "2/3," "3/4," "4/5," or "Majority" voting modes
- Set and display a vote count-down timer, allowing delegates a certain amount of time to place their votes
- Vote from either the total number of delegates, or only the number currently present
- Select if the system should automatically close the vote after all votes have been cast
- Utilize a variety of interfaces for the delegates, including Crestron keypads or touchpanels

Compatibility			Processor Requirements	
2-Series Compatible	NOT CNMSX Compatible	NOT System Builder Compatible	Ethernet REQUIRED	Compact Flash REQUIRED

- Request to speak, which will present the chairman with a list of users who are in the queue. The chairman is then able to give any user the floor, remove any user from the queue, remove all users from the queue, etc.
- Assign and store seating arrangements for each group, including flagging some seats as unused to provide a dynamic group size.
- Store a backup of meeting records to the Crestron Compact Flash card.

Contract Programming Services

ControlWorks offers an extensive range of contract programming services in addition to our online module library. This module was developed over the course of voting and request to speak related projects in the course of these activities. Many of our past systems have had additional, unique functionality.

If your application requires more than 15 delegates, access to a specific non-PowerPoint agenda resource, an auditable paper trail of the ballots or any other customization, please feel free to contact us at 440.449.1100 or support@controlworks.com.

Module Application

It is strongly suggested that you load the supplied demonstration program and touchpanel to gain an understanding of the application of the module before you attempt to implement the module in your own program. In fact, many programmers fine it easiest to take our demo program and add A/V and other functionality to it, rather than adding this module to another program. **It will make things very difficult if you do not run and fully understand the operation of the demo program before attempting to use this module in another program.**

In order to use this module, you must have inserted a Compact Flash card into your Crestron processor. ControlWorks supports only the use of SanDisk compact flash cards with Crestron processors. If you are having problems and are using another manufacturer's compact flash card, **do not call** until you have replaced the card with a genuine SanDisk card.

NVRAM disk is not appropriate for this application, as one of the functions is storing a backup of the voting results. The Compact Flash card can be removed and the contents read from a PC in the event that the backup data needs to be accessed.

Copy the contents of the distribution ZIP file into the same folder as your program. Re-synch your program, and then copy and paste the ControlWorks_Voting_v2 module into your program from the demonstration program. Connect the signals to your touchpanels or keypads, the optional e-Datalog symbol, and the optional e-PowerPoint symbol.

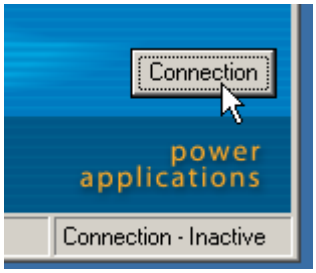
At this point you should be able to run the module successfully. Begin by entering names for the meeting types and users, and creating a seating chart.

Important Note: The user names and seating chart are stored during the shutdown sequence. The input **system_power_off** must be pulsed at the end of the meeting, or your database will not be stored.

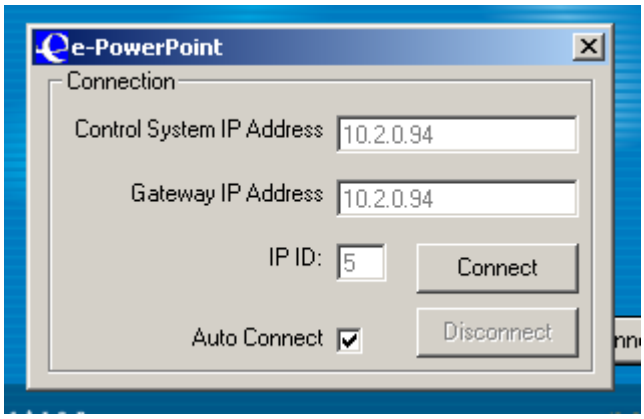
E-PowerPoint Configuration

If you are using the optional agenda import from PowerPoint, you must first install Crestron's e-PowerPoint application on the computer that will supply the agenda. You will also need to add the e-PowerPoint symbol in SIMPL Windows on the same IP ID with the loopback IP address in the IP table (127.0.0.1). See the demo program for an example of the implementation of the e-PowerPoint symbol in SIMPL Windows.

To configure e-PowerPoint's connection to the Crestron processor, install the application on the computer that will host the agenda information, launch the application, and select **Connection**.

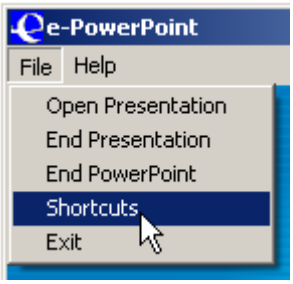


Enter the IP address of the control system processor in both fields, and the unique IP ID you assigned in SIMPL windows. Check the Auto Connect box.

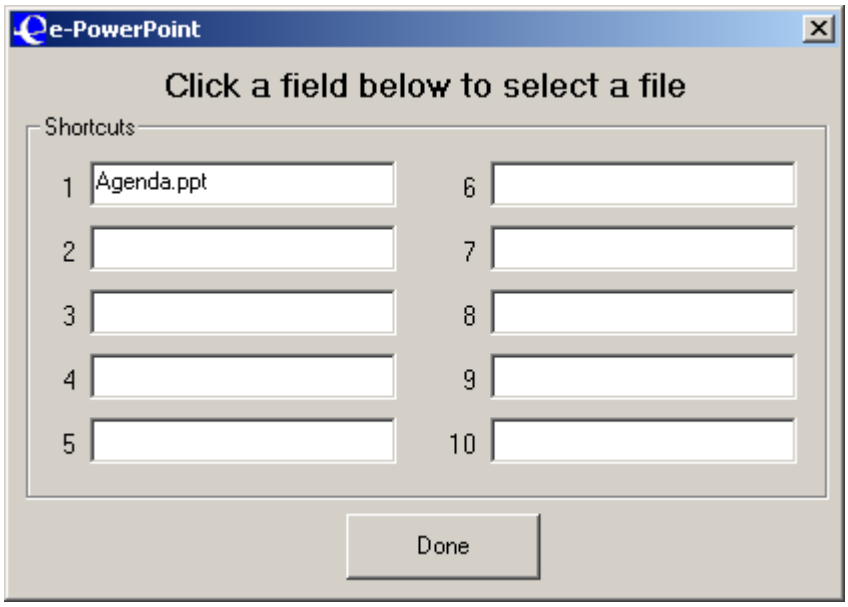


You should now see the connection listed as active in the status bar. If not, close the application and launch it again. Make sure the IP table on the processor reflects the loopback address of 127.0.0.1 on the assigned IP ID.

It is now necessary to setup a shortcut to the PowerPoint file that will contain the agenda information. Choose **File > Shortcuts.**



Click on the text box labeled Shortcut 1. Browse to the file that will contain the agenda information. This PowerPoint file will be opened and read when the user requests agenda information from the touchpanel. The "title" field of each PowerPoint slide should contain an agenda item. This allows users to modify their agenda easily on any computer running Microsoft PowerPoint.

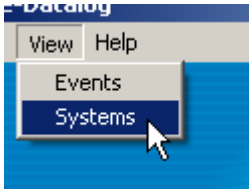


e-PowerPoint will need to be running at all times during the voting process in order for agenda information to be available. If the computer is dedicated to the Voting system, it is recommended that e-PowerPoint be put in the Windows "Start Up" folder.

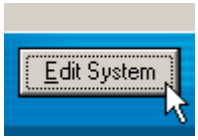
E-Datalog Configuration

If you are using the optional voting results export to Excel, you must first install Crestron's e-Datalog application on the computer that will receive the results. You will also need to add the e-Datalog symbol in SIMPL Windows on the same IP ID with the loopback IP address in the IP table (127.0.0.1). See the demo program for an example of the implementation of the e-DataLog symbol in SIMPL Windows.

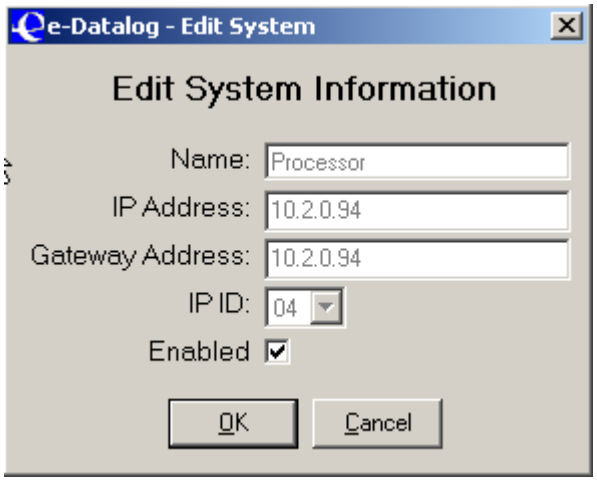
To configure e-Datalog's connection to the Crestron processor, install the application on the computer that will host the agenda information, launch the application, and select **View > Systems**.



If there is no system listed, click **Add System.** If there is already a system listed, highlight it and click **Edit System**.



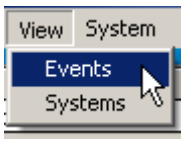
Enter the IP address of the control system processor in both fields, and the unique IP ID you assigned in SIMPL windows. Check the Enabled box.



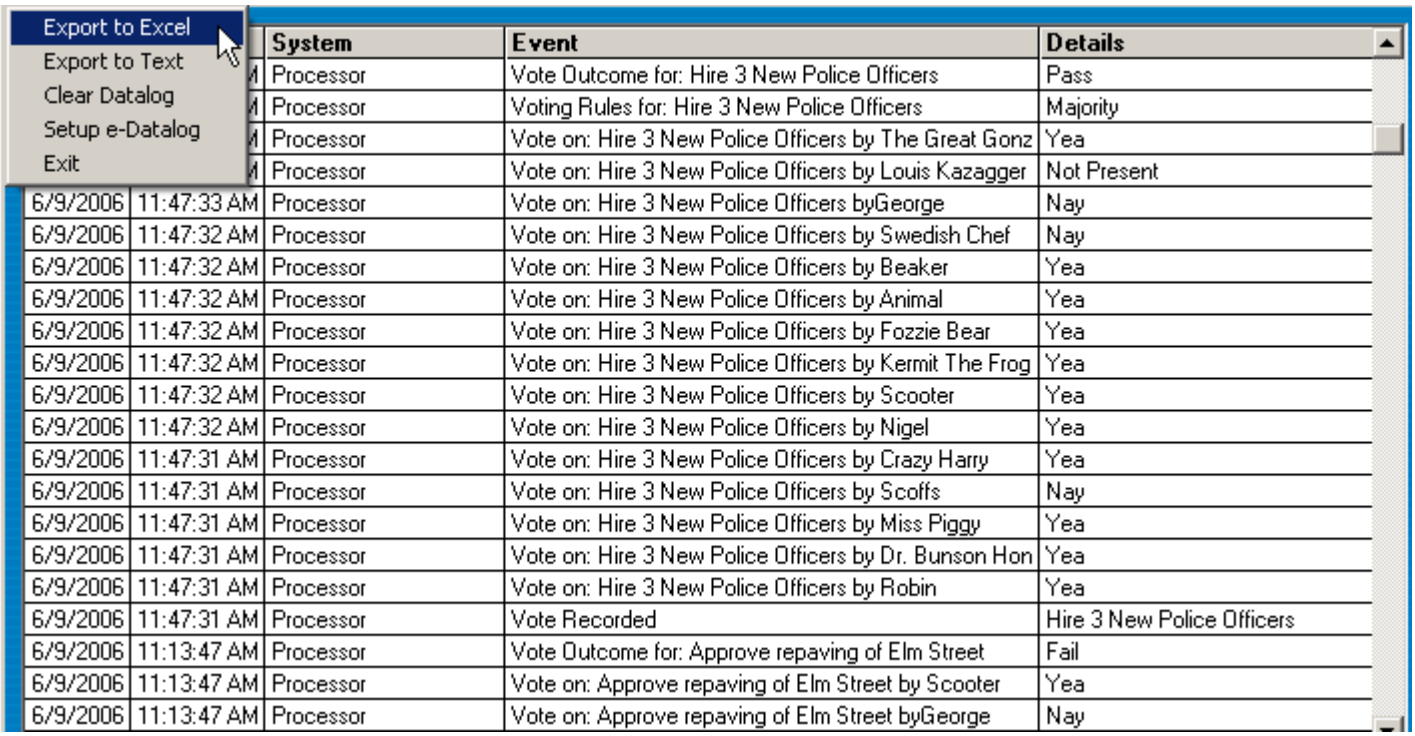
You should now see the connection listed as online in the Systems list. If not, close the application and launch it again. Make sure the IP table on the processor reflects the loopback address of 127.0.0.1 on the assigned IP ID. Confirm that the Enabled box is checked for the system.

System Name	IP Address	Status
Processor	10.2.0.94	Online

In order to view the data that is being recorded during or after a voting session, click **View > Events**.



Once the session is over, click **File > Export to Excel** to copy the data from the Crestron application to a Microsoft Excel file. This allows the users to take a copy of the voting results for use on any computer with Microsoft Excel. If it is desired to clear the Crestron application's records before the next meeting, select **File > Clear Datalog**. This should be done only after a copy has been exported to Excel.



		System	Event	Details
		Processor	Vote Outcome for: Hire 3 New Police Officers	Pass
		Processor	Voting Rules for: Hire 3 New Police Officers	Majority
		Processor	Vote on: Hire 3 New Police Officers by The Great Gonz	Yea
		Processor	Vote on: Hire 3 New Police Officers by Louis Kazagger	Not Present
6/9/2006	11:47:33 AM	Processor	Vote on: Hire 3 New Police Officers byGeorge	Nay
6/9/2006	11:47:32 AM	Processor	Vote on: Hire 3 New Police Officers by Swedish Chef	Nay
6/9/2006	11:47:32 AM	Processor	Vote on: Hire 3 New Police Officers by Beaker	Yea
6/9/2006	11:47:32 AM	Processor	Vote on: Hire 3 New Police Officers by Animal	Yea
6/9/2006	11:47:32 AM	Processor	Vote on: Hire 3 New Police Officers by Fozzie Bear	Yea
6/9/2006	11:47:32 AM	Processor	Vote on: Hire 3 New Police Officers by Kermit The Frog	Yea
6/9/2006	11:47:32 AM	Processor	Vote on: Hire 3 New Police Officers by Scooter	Yea
6/9/2006	11:47:32 AM	Processor	Vote on: Hire 3 New Police Officers by Nigel	Yea
6/9/2006	11:47:31 AM	Processor	Vote on: Hire 3 New Police Officers by Crazy Harry	Yea
6/9/2006	11:47:31 AM	Processor	Vote on: Hire 3 New Police Officers by Scoffs	Nay
6/9/2006	11:47:31 AM	Processor	Vote on: Hire 3 New Police Officers by Miss Piggy	Yea
6/9/2006	11:47:31 AM	Processor	Vote on: Hire 3 New Police Officers by Dr. Bunson Hon	Yea
6/9/2006	11:47:31 AM	Processor	Vote on: Hire 3 New Police Officers by Robin	Yea
6/9/2006	11:47:31 AM	Processor	Vote Recorded	Hire 3 New Police Officers
6/9/2006	11:13:47 AM	Processor	Vote Outcome for: Approve repaving of Elm Street	Fail
6/9/2006	11:13:47 AM	Processor	Vote on: Approve repaving of Elm Street by Scooter	Yea
6/9/2006	11:13:47 AM	Processor	Vote on: Approve repaving of Elm Street byGeorge	Nay

e-Datalog will need to be running at all times during the voting process in order for voting results to be available for export to Excel. If the computer is dedicated to the Voting system, it is recommended that e-Datalog be put in the Windows "Start Up" folder.

Text files containing the voting results from the most recent 5 sessions can also be found on the compact flash card.

A Note on Addressing and Terminology

Whenever the module refers to a "member" it is describing an individual's name in the group database entry. When the module refers to a "seat" it is referring to a particular location and its associated keypad or touchpanel. A "user" refers to the "member" sitting in the "seat."

Please view the seating arrangement page of the demo touchpanel for our recommended addressing strategy. By addressing the center most seat as 1 and working outward, the following benefits can be obtained:

- The user in the center seat (usually the chairman) will appear at the top of the voting lists
- Smaller groups (that contain fewer members) will have all of the votes appear grouped together at the top of the voting results list, rather than scattered throughout the screen

The voting result page in our demo program will display fields **only** for seats that have a member assigned. If a seat has been marked as unused, the field will be hidden to clean up the output. This is done with multimode objects.

Maximum String Lengths

The following are the maximum lengths of the various strings used in this module:

User Names	24 characters
Meeting Type Names	24 characters
Agenda Items	30 characters (limitation of ePowerPoint 1.04, call us to discuss options for using longer agenda items)

Signal and Parameter Descriptions

Bracketed signals such as "[signal_name]" are optional signals

DIGITAL INPUTS

e_powerpoint_launch	pulse to connect to open the agenda in e-PowerPoint. This signal needs to also be connected to the Shortcut1 input of the e-PowerPoint interface.
e_powerpoint_close	pulse to close the agenda in e-PowerPoint. This signal needs to also be connected to the EndPowerPoint input on the e-PowerPoint interface.
system_power_off	pulse to end the meeting. **This process includes saving the user names and seating chart for the current meeting type. This must absolutely be pulsed before selecting a new meeting type.**
page_splash_fb	route from digital feedback indicating the touchpanel is on the splash page
page_main_fb	route from digital feedback indicating the touchpanel is on the main page
page_ad_hoc_agenda_item_fb	route from digital feedback indicating the touchpanel is on the page for entering an ad hoc agenda item on the keyboard
page_member_rename_qwerty_fb	route from digital feedback indicating the touchpanel is on the page for renaming a member on the keyboard OR selecting a member (see demo program)
page_meeting_type_rename_qwerty_fb	route from digital feedback indicating the touchpanel is on the page for renaming a meeting type on the keyboard OR selecting a meeting type (see demo program)
page_seating_chart_fb	route from digital feedback indicating the touchpanel is on the page for modifying the seating chart
qwerty_a … qwerty_capslock	route from buttons for on-screen QWERTY keyboard
record_attendance	pulse to record the current attendance to compact flash and Excel (including status of each member)
attendance_user_xx	pulse to change the current attendance status of the selected user (absent vs. present)
attendance_all_present	pulse to mark all users present
attendance_all_absent	pulse to mark all users absent
vote_start	pulse to begin voting on the current agenda item
vote_end	pulse to stop voting on the current agenda item
vote_clear	pulse after reviewing the results to reset the voting system for the next item.
vote_mode_unanimous	pulse to require 100% of the vote to pass
vote_mode_2/3	pulse to require 2/3 or more of the vote to pass
vote_mode_3/4	pulse to require 3/4 or more of the vote to pass
vote_mode_4/5	pulse to require 4/5 or more of the vote to pass
vote_mode_majority	pulse to require a majority of the vote to pass
vote_timer_minute_up	pulse to increase the amount of time used by the vote timer
vote_timer_minute_down	pulse to decrease the amount of time used by the vote timer
vote_timer_enable	pulse to enable the vote timer. This will start a count down at the beginning of each vote, and automatically close the vote when the time runs out.
vote_timer_disable	pulse to disable the vote timer

vote_auto_close_on ..... pulse to turn “auto close” on. While auto close is on, the system will automatically close the vote once all users have cast their vote.
vote_auto_close_off ..... pulse to turn “auto close” off
vote_body_total ..... pulse to calculate voting results on the basis of the total number of members in the body
vote_body_present ..... pulse to calculate voting results on the basis of the number of members who are current present (based on the current_attendance output)
user_xx_yea ..... pulse when the selected user votes “yea”
user_xx_nay ..... pulse when the selected user votes “nay”
user_xx_abstain ..... pulse when the selected user votes “abstain”
user_xx_request_to_speak ..... pulse when the selected user would like to request a chance to speak
user_xx_cancel_request_to_speak ..... pulse when the selected user would like to give up his or her place in the “request to speak” queue
user_xx_done_speaking ..... pulse when the selected user is done speaking and wishes to relinquish the floor
queue_xx_select ..... route to buttons on the administrator’s touchpanel to select a user in the queue
kill_selected_queue ..... pulse to remove the user selected using the queue_xx_select buttons from the queue
kill_all_users ..... pulse to remove all users from the queue
clear_floor ..... pulse to remove the member who currently has the floor and leave the floor empty
give_selected_user_floor ..... pulse to give the floor to the user selected using the queue_xx_select buttons
give_user_in_queue_1_floor ..... pulse to give the user in queue slot #1 the floor, and advance all other users to the next slot
floor_timer_minute_up ..... pulse to enable the floor timer. This will start a count down when a user is given the floor, and automatically clear the floor when the time runs out.
floor_timer_minute_down ..... pulse to disable the floor timer
floor_timer_enable ..... pulse to increase the amount of time used by the floor timer
floor_timer_disable ..... pulse to decrease the amount of time used by the floor timer
member_xx_select ..... pulse to select a member on the seating chart
seat_xx_select ..... pulse to select a seat on the seating chart for the selected member
meeting_type_xx ..... pulse to select a meeting type at startup. This will load the database of names and seating assignments for the selected meeting type.
meeting_type_xx_rename ..... pulse to select a meeting type to rename
member_xx_rename ..... pulse to select a member to rename

ANALOG INPUTS

This module does not utilize any analog inputs

SERIAL INPUTS

e_powerpoint_slide_name$ ..... route from slide_name$ output of e-powerpoint symbol

DIGITAL OUTPUTS

e_powerpoint_subpage_fb	route to subpage on your character generator (i.e. TPS-G-TPI) that will display the agenda information. This signal is high while agenda information is being displayed.
page_splash	route to the touchpanel join number. This signal goes high when the module requests the panel to be sent to the splash screen.
page_main	route to the touchpanel join number. This signal goes high when the module requests the panel to be sent to the main screen.
page_start_up_progress	route to the touchpanel join number. This signal goes high when the module requests the panel to be sent to the start up progress screen.
page_shut_down_progress	route to the touchpanel join number. This signal goes high when the module requests the panel to be sent to the shut down progress screen.
qwerty_shift_fb	route to feedback for shift button on QWERTY keyboard
qwerty_capslock_fb	route to feedback for caps lock button on QWERTY keyboard
record_attendance_fb	route to feedback for record_attendance button. This will make the button blink while the system is busy recording the attendance.
attendance_user_xx_present_fb	high while the user is marked present
attendance_user_xx_absent_fb	high while the user is marked absent
vote_display_fb	route to subpage on your character generator (i.e. TPS-G-TPI) that will display voting results. This signal is high while voting results are being displayed.
vote_start_fb	feedback for the vote_start button (held high while voting is in progress)
vote_end_fb	feedback for the vote_end button (held high while voting is not in progress)
vote_start_successful	this signal goes high when a vote begins OK. Use this to flip to the voting page on the user's touchpanel (if applicable)
vote_start_unsuccessful	route to a popup message on the administrator's touchpanel. This signal goes high for 3 seconds if the vote cannot be opened because all group members are absent.
vote_mode_unanimous_fb	high when 100% of the vote is required to pass
vote_mode_2/3_fb	high when 2/3 of the vote is required to pass
vote_mode_3/4_fb	high when 3/4 of the vote is required to pass
vote_mode_4/5_fb	high when 4/5 of the vote is required to pass
vote_mode_majority_fb	high when a majority of the vote is required to pass
vote_pass_fb	goes high when a vote passes
vote_fail_fb	goes high when a vote fails
vote_timer_enable_fb	high when the vote timer is enabled
vote_timer_disable_fb	high when the vote timer is disabled
vote_timer_display_fb	route to subpage on your character generator (i.e. TPS-G-TPI) that will display the voting timer. This signal is high while voting is in progress.
vote_auto_close_on_fb	high when "auto close" is enabled
vote_auto_close_off_fb	high when "auto close" is disabled
vote_body_total_fb	high to indicated the system will calculate voting results on the basis of the total number of members in the body

vote_body_present_fb ..... high to indicated the system will calculate voting results on the basis of the number of members who are current present (based on the current_attendance output)

user_xx_yea_fb ..... high to indicate the selected user has voted “yea”

user_xx_nay_fb ..... high to indicate the selected user has voted “nay”

user_xx_abstain_fb ..... high to indicate the selected user has voted “abstain”

user_xx_no_vote_fb ..... high to indicate the selected user did not vote

user_xx_yea_led ..... If using keypads for voting, route this signal to the LED “Yea” feedback of the keypad. The user’s LED will blink while the voting is still active (indicating the vote may be changed) and then latch solid once the vote has closed.

user_xx_nay_led ..... If using keypads for voting, route this signal to the LED “Nay” feedback of the keypad. The user’s LED will blink while the voting is still active (indicating the vote may be changed) and then latch solid once the vote has closed.

user_xx_abstain_led ..... If using keypads for voting, route this signal to the LED “Abstain” feedback of the keypad. The user’s LED will blink while the voting is still active (indicating the vote may be changed) and then latch solid once the vote has closed.

error_no_compact_flash_media ..... Goes high to indicated that there is no compact flash media inserted in the Crestron processor

user_xx_request_to_speak_led ..... If using keypads for request to speak, route this signal to the LED “Request to Speak” feedback of the keypad. The user’s LED will blink while in the queue, and then latch solid when the user is given the floor.

user_xx_cancel_request_to_speak_popup_mv ..... If using touchpanels for request to speak, route this signal to a subpage on the user’s touchpanels. This signal will go high for 3 seconds when the user cancels his or her own request to speak.

user_xx_done_speaking_popup_mv ..... If using touchpanels for request to speak, route this signal to a subpage on the user’s touchpanels. This signal will go high for 3 seconds when the user is done speaking and relinquishes the floor.

user_xx_killed_popup_mv ..... If using touchpanels for request to speak, route this signal to a subpage on the user’s touchpanels. This signal will go high for 3 seconds when the user is removed from the queue by the administrator.

user_xx_has_floor_fb ..... high when the selected user has the floor

user_xx_next_to_speak_fb ..... high when the selected use is next to speak

user_xx_not_in_queue_page_flip ..... If using touchpanels for request to speak, route this signal to flip to the “not in queue” page on the user’s touchpanel.

user_xx_in_queue_fb ..... high when the selected use is in the queue and in position 2 or higher (when the user in queue position 1, user_xx_next_to_speak_fb will be high instead)

queue_xx_select_fb ..... feedback for buttons on the administrator’s touchpanel to select a user in the queue

all_users_killed ..... If using touchpanels for request to speak, route this signal to a subpage on the user’s touchpanels. This signal will go high for 3 seconds when all users are removed from the queue by the administrator.

queue_full ..... high once ten users are already in the queue, and no more can be accepted

floor_timer_display_fb ..... route to subpage on your character generator (i.e. TPS-G-TPI) that will display the floor timer. This signal is high while the floor timer is running.
floor_timer_enable_fb ..... high when the floor timer is enabled
floor_timer_disable_fb ..... high when the floor timer is disabled
member_xx_select_fb ..... indicates the selected member on the seating chart
seat_xx_select_fb ..... indicates the selected seat on the seating chart
seat_assignment_working ..... high when the system is busy working on saving a new seating assignment
lockout_floor_change ..... high when the system is busy processing a new user for the floor, and is not yet ready for another change
meeting_type_xx_fb ..... indicates the currently selected meeting type
meeting_type_xx_rename_fb ..... indicates the meeting type that has been selected to be renamed
member_xx_rename_fb ..... indicates the member that has been selected to be renamed
seat_x_unused_fb ..... High when there is not a member assigned to the indicated seat.

ANALOG OUTPUTS

e_powerpoint_slide_count ..... route to SlidesPagesLines input of e-PowerPoint symbol
e_powerpoint_slide_characters ..... route to SlidesPagesChars input of e-PowerPoint symbol
system_start_up_progress_for_touchpanels ..... route to a bar graph on the system start up progress page
system_shut_down_progress_for_touchpanels ..... route to a bar graph on the system shut down progress page
system_start_up_clock ..... route to a timer on the system start up progress page
system_shut_down_clock ..... route to a timer on the system shut down progress page
current_attendance ..... contains the current number of group members present (as a decimal value)
current_number_absent ..... contains the current number of group members absent (as a decimal value)
votes_yea ..... contains the number of votes cast as yea (as a decimal value)
votes_nay ..... contains the number of votes cast as nay (as a decimal value)
votes_abstain ..... contains the number of votes cast as abstain (as a decimal value)
votes_total ..... contains the total number of votes cast (as a decimal value)
votes_pending ..... contains the total number of votes that have still not yet been cast (as a decimal value)
votes_did_not_vote ..... at the end of the voting process, this will contain the total number of users who did not vote (as a decimal value)
vote_timer_value ..... route to a timer object on the administrator's touchpanel, user touchpanels, and/or the character generator. This value contains the number of seconds left in the vote counter as it counts down.
vote_timer_seed_value ..... route to a timer object above the vote_timer_minute_up and vote_timer_minute_down buttons on the administrator's touchpanel. This value contains the number of seconds that will be used in the vote timer the next time it is started.

user_xx_place_in_queue ..... contains the position in the queue for the selected user as a decimal value. For instance, if the user is the fifth in line to speak, the value is 5d.

user_in_queue_count ..... contains the total number of users currently in the request to speak queue (as a decimal value)

floor_timer_value ..... route to a timer object on the administrator's touchpanel, user touchpanels, and/or the character generator. This value contains the number of seconds left in the floor counter as it counts down.

floor_timer_seed_value ..... route to a timer object above the floor_timer_minute_up and floor_timer_minute_down buttons on the administrator's touchpanel. This value contains the number of seconds that will be used in the floor timer the next time it is started.

sequence_number ..... unique number of the current vote. This number is reset to 1 when a new meeting is started, and advanced with each vote that is taken. This allows operators to identify each vote in the records.

user_xx_mode ..... drives multimode touchpanel objects. Outputs 0 when a seat is "unused" and 1 when seat is "used"

SERIAL OUTPUTS

e_data_log$..... route to DataToLog input of e-datalog symbol

ad_hoc_qwerty$..... route to text field on QWERTY keyboard page for Ad Hoc agenda items

member_name_qwerty$..... route to text field on QWERTY keyboard page for renaming group members

meeting_type_qwerty$..... route to text field on QWERTY keyboard page for renaming meeting types

user_xx_name$..... contains the name of the selected user (based on which seat the user is in)

queue_xx_name$ ..... name of the user in each queue slot

floor_name_slow$ ..... a delayed output field containing the name of the user on the floor. If you are using pan/tilt/zoom cameras and have a delay programmed to prevent the television broadcast from containing movement, use this signal on the character generator.

floor_name_quick$ ..... name of the user on the floor (populates immediately)

member_xx_name$ ..... contains the name of the member (raw off the database, before seating records are considered)

current_meeting_type$ ..... contains the name of the currently selected meeting type

meeting_type_xx$..... contains the names of the five different supported meeting types

Support

This module is supported by ControlWorks Consulting, LLC. Should you need support for this module please email support@controlworks.com or call us at 440-449-1100. ControlWorks normal office hours are 9 AM to 5 PM Eastern, Monday through Friday, excluding holidays.

Before calling for support, please ensure that you have loaded and tested operation using the included demonstration program and touchpanel(s) to ensure that you understand the correct operation of the module. It may be difficult for ControlWorks to provide support until the demonstration program is loaded.

Updates, when available, are automatically distributed via Email notification to the address entered when the module was purchased. In addition, updates may be obtained using your username and password at http://www.thecontrolworks.com/customerlogin.aspx.

Distribution Package Contents

The distribution package for this module should include:

ControlWorks_Crestron_Voting_Module_Help_v2.pdf	this help file
ControlWorks_Voting_v2.umc	Crestron user module to insert in program
ControlWorks_Concatenate_v1.usp	SIMPL+ module that is inside the UMC
ControlWorks_Concatenate_v1.ush	compiled SIMPL+ header
ControlWorks_Subtract_v1.usp	SIMPL+ module that is inside the UMC
ControlWorks_Subtract_v1.ush	compiled SIMPL+ header
ControlWorks_Voting_Member_Name_Storage_v1.usp	SIMPL+ module that is inside the UMC
ControlWorks_Voting_Member_Name_Storage_v1.ush	compiled SIMPL+ header
String Que v1.usp	SIMPL+ module that is inside the UMC
String Que v1.ush	compiled SIMPL+ header
Vote backup cflog v1.usp	SIMPL+ module that is inside the UMC
Vote backup cflog v1.ush	compiled SIMPL+ header
ControlWorks_Voting_Demo_TPS-6000_v2.vtp	example administrator's touchpanel (TPS-6000)
ControlWorks_Voting_Demo_CT-1000_v2.vtp	example user's touchpanel (CT-1000)
ControlWorks_Voting_Demo_TPS-TPI_v2.vtp	example character generator file (TPS-TPI)
ControlWorks_Voting_Demo_v2.smw	example program (PRO2)

Revision History

V2 tom@controlworks.com 2006.07.24

- Added “did not vote” feedback
- Added “current_number_absent” feedback
- Added display of current voting rules to voting timer and voting results pages in demo touchpanels
- Added logic to store the voting rules for each group separately on compact flash
- Added ability to vote by 3/4 and 4/5
- Modified voting timer increment to 5 seconds instead of 1 minute
- Added voting sequence number output
- Added ability to set a seat as "unused" and therefore ignored by all voting calculations and not displayed on outputs. This provides support for groups of different sizes (i.e. City Council has 11 members and School Board has 7)
- Modified demo touchpanel page joins to resolve issues with keyboards if project converted to Xpanel

V1 tom@controlworks.com 2006.06.28

- Initial release in module form.

Development Environment

This module version was developed on the following hardware and software. Different versions of hardware or software may or may not operate properly. If you have questions, please contact us.

Hardware

Crestron PRO2 Processor v3.155.1143
Crestron TPS-6000 Touchpanel v2.002

Software

Crestron SIMPL Windows ..... Version 2.07.32
Crestron Database ..... Version 18.1.5
Crestron Symbol Library ..... Version 387
Crestron Device Library ..... Version 387
Crestron Vision Tools Pro-E ..... Version 3.5.0.7 Build 20060511:2

ControlWorks Consulting, LLC Module License Agreement

Definitions:
ControlWorks, *We*, and *Us* refer to ControlWorks Consulting, LLC, with headquarters located at 701 Beta Drive, Suite 22 Mayfield Village, Ohio 44143-2330. *You* and *Dealer* refer to the entity purchasing the module. *Client* and *End User* refer to the person or entity for whom the Crestron hardware is being installed and/or will utilize the installed system. *System* refers to all components described herein as well as other components, services, or utilities required to achieve the functionality described herein. *Module* refers to files required to implement the functionality provided by the module and may include source files with extensions such as UMC, USP, SMW and VTP. *Demo Program* refers to a group of files used to demonstrate the capabilities of the Module, for example a SIMPL Windows program and VisionTools Touchpanel file(s) illustrating the use of the Module but not including the Module. *Software* refers to the Module and the Demo Program.

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