

Protura™ 1.7.5 Robotic Couch System *(Released 07/2019)*

FEATURES / ENHANCEMENTS

- Added Isocenter Rotation Compensation as configuration setting for IGRT Coordinate Systems. An unselected checkbox in this configuration; the Protura shifts will operate the same as previous software versions.
- Removed IGRT Coordinate System Data Type feature.

BUG FIXES

- Corrected Protura shift import functionality for Varian ARIA systems.

Protura™ 1.7.4 Robotic Couch System *(Released 12/2017)*

FEATURES / ENHANCEMENTS

- Elekta XVI Interface updated to work with v4.5 and v5.0

BUG FIXES

- Interlock set to stop Linac when Protura software is not running for configured systems.
- Fixed iCOM problem of buffering when dialogs or message are displayed.
- Fixed Remote Control issue with TheraView when touch guard is enabled.
- Fixed iCOM connection problem taking 30 seconds to cancel.

Protura™ 1.7.3 Robotic Couch System *(Released 6/2017)*

FEATURES / ENHANCEMENTS

- Update to CIVCO Radiotherapy company logo.
- Remove splash screen when launching Protura application.

BUG FIXES

- Fixed close patient event when connected to Elekta iCOM, no longer set pedestal values to dash.

Protura™ 1.7.2 Robotic Couch System *(Released 3/2016)*

FEATURES / ENHANCEMENTS

- Updated Protura split shift functionality when Varian interface is enabled and making a secondary shift. The additional shifts will be performed as All 6 Degrees Protura with no shifts sent to the pedestal.
- Removed Elekta Rotations Only configuration option.
- Updated the About Protura message box to include Unique Device Identification (UDI).

BUG FIXES

- Fixed isocenter rotation point with Protura split shift configuration when Varian interface is enabled.

Protura™ 1.7.1 Robotic Couch System *(Released 1/2016)*

FEATURES / ENHANCEMENTS

- Updated Varian / MOSAIQ interface to include rotated set-up field use case.

BUG FIXES

- No bug fixes.

Protura™ 1.7.0 Robotic Couch System *(Released 11/2015)*

FEATURES / ENHANCEMENTS

- Updated Elekta XVI 5.0 interface to blank out Proposed Values when pedestal is locked.
- Updated Varian interface to re-authorize when Varian requests a second authorization.
- Increased field sizes for Varian / MOSAIQ interface database access fields.

BUG FIXES

- Fixed Varian / MOSAIQ interface when Varian is using Varian Standard Scale.
- Fixed Varian / MOSAIQ interface message "Unable to Retrieve Plan File from thread issues."

Protura™ 1.6.1 Robotic Couch System *(Released 9/2015)*

FEATURES / ENHANCEMENTS

- Translation Values, when interfaced to move the Varian pedestal, have increased acceptable range of motion.
- When unable to calculate shifts from the Varian interface, the proposed values are now blanked out to keep unintended Zero Shifts from being made.
- Move validity is checked when the shift data is entered to provide earlier feedback on if the move will work or not.
- Treatment mode dialogs are no longer off to the left so pedestal and Protura values are visible by default.
- Increased font size on key fields of the main screen.
- Move reduction of angle values to allow hardware to perform the move information with a single button click.
- Varian interface updates rotation angle as move through treatment beams.
- Option to Save Patient Reports with current days moves after a patient record is closed.
- Varian interface update to allow treatment. Previously, move accuracy would have caused system initialization.
- Removed Manual Motion function.

BUG FIXES

- Application not sorting reports in order of newest shifts to oldest.
- Application handling of intermittent network connection has been improved.
- Hardware stops during a move are not clearing out the proposed values.
- Hardware problems during treatment were wanting to initialize the system.
- Varian interface with split motion caused a crash if Move button pressed too soon after the shift data was displayed.
- Alignment instruction updated to prevent hardware collisions.
- When remote system is connected, full handling of IGRT coordinate change not being accomplished.

Protura™ 1.6.0 Robotic Couch System *(Released 3/2015)*

FEATURES / ENHANCEMENTS

- Elekta XVI Interface update to work with v5.0 instead of v4.5.

BUG FIXES

- Application is not supplying a warning that the last Access Key is being removed.
- Application is requiring the user to select the Unlock Pedestal button twice.
- Application is not always displaying the message box with the unlock to be displayed when a remote move occurs.
- Application is not updating a currently modified proposed shift value (still in focus) if the new import matches proposed shift value prior to focus.

Protura™ 1.5.0 Robotic Couch System *(Released 7/2014)*

FEATURES / ENHANCEMENTS

- Varian interface update to operate with MOSAIQ R&V users.

BUG FIXES

- Application does not authorize a treatment beam when multiple messages are received at the same time.
- Application moved Protura to the wrong location when a second remote move is made with dialog box displayed in Protura.
- Application does not display Out of Range message on a non-remote move when configured with a remote system.

Protura™ 1.4.0 Robotic Couch System *(Released 3/2014)*

FEATURES / ENHANCEMENTS

- Remote Control with linac interface update to accommodate workflow using both IGRT systems.
- Varian interface update for change in sign conventions between OBI v1.5 and v1.6.
- Varian interface update for Varian Standard Scale pedestal values.
- Varian interface update for 4DTC v13 Clinac Ready Authorization.
- Application loads with default Varian IGRT systems for Varian scales.

BUG FIXES

- Application inadvertently processes Varian shift data without user saving shifts.
- Application provides unable to get pedestal information when patient first opened.

Protura™ 1.3.1 Robotic Couch System *(Released 10/2013)*

BUG FIXES

- New Patients generated by MOSAIQ have a course named “#None Selected#”.
- Protura does not successfully retry when MOSAIQ is closed and then reopened.
- Protura hardware buttons are enabled when Elekta Treatment is in Progress.
- If the Varian pedestal is rotated during set-up image, the shift and pedestal values will not import into Protura.
- When 4DTC is closed and re-opened, there may be a loss of connection with Protura while Protura still indicates a green light Linac connection.
- Protura hardware buttons are enabled when Varian Protura Authorized and Ready to Authorize dialogs are displayed.
- Varian 4DTC, when pedestal values in 4DTC are out of tolerance for the treatment plan, Protura is not able to acquire the pedestal position.
- When the Remote Control network connection is lost for over 5 seconds, Protura software becomes unresponsive.

Protura™ 1.3.0 Robotic Couch System (Released 07/2013)

FEATURES / ENHANCEMENTS

- Application will interface with Varian 4DTC System.
- Application will create and open patients when opened in the Varian 4DTC System.
- Application will receive pedestal location and set the pivot point via the Varian 4DTC System.
- Application will calculate and load the 6DOF values when saved in the Varian OBI System.
- Application will authorize the Varian 4DTC System for treatment when Protura is in a treatable state.
- Application will close patient automatically when Load/Unload is selected or pressed.
- Range of Motion update to reduce lateral shift limits from +/- 50mm to +/- 25mm.
- System will stop motion if communication with host fails.

BUG FIXES

- If initialization fails and user clicks [Retry], initialization won't occur.
- If a change is made to a Couch Pedestal Configuration resetting the Auto Load/Zero controls (on External Interface Settings), but change is canceled, Auto Load/Zero controls will remain enabled with thresholds reset to 0.
- Range of motion allowed in Manual Motion feature seems different than range of motion allowing in Proposed Values feature.
- Switching quickly from Manual Motion to Proposed Values and back again may result in "No Move Successful" message and no recording of the move.
- Switching quickly from Manual Motion to Proposed Values and back again while Protura is in motion may result in either no recording of the move or an incorrect Start Location being recorded.
- When connection to a remote Patient Data location is lost and reestablished, patient data cannot be accessed unless an exit and restart of the Protura software is done.
- If the Protura software application is closed while error messages are still displayed and software application is re-launched too quickly, an unhandled exception will occur and the Protura computer will have to be restarted.
- If shift data for a patient other than the currently loaded patient is sent to Protura from Elekta XVI System, Protura does not import shift data and does not notify user of reason.
- If connection to Protura hardware is lost, Elekta icon in Status Bar flashes red and green instead of simply displaying red.
- If connection to Patient Data Location is lost after a move starts, the user is only informed after responding to "Move Successful and Ready for Treatment" messages.
- When an update is made to the Auto Load/Zero field in the Configuration | External Interfaces page and the user closes the page, the "Unsaved Changes" error message appears. If [No] is selected, the updates are not saved or discarded.
- When interfaced with MOSAIQ System, if pedestal is locked and a patient other than the current patient is loaded, "Replace Couch Pedestal Location" message may be displayed in some cases. Other times, message is not displayed.
- When an update is made to Couch Pedestal Configuration and alignment procedure is performed, connection to Elekta linac is broken.
- If Touch Guard is triggered during Test Procedure, "Continue to Destination" message does not appear.
- The Touch Guard does not return an error when the Protura is in motion.

- If Protura hardware is powered off and Remote System sends a 'move' command to Protura, Protura does not move and there is no indication to remote system that Protura did not receive command.
- If more than 10 characters are entered into Access Key edit box, placement of cursor moves from end of the field to beginning of the field and final characters in field are truncated.
- If a new patient is created and loaded using Remote Control interface, patient is not automatically selected in Generate Reports dialog.
- If a "Redundant Limit Failure" occurs during a remote move, "Move Failed" message is displayed instead of "Redundant Limit Failure" message.
- If multiple Protura shifts are made during a single treatment session prior to starting treatment, Daily Move Report and Patient Move Report will report all shifts as "Trmt" = Yes, indicating each move resulted in a treatment.
- The Pivot Point is updated even if system reports an error in setting it.
- When a remote system sends settings, the Protura moves to Zero Position.

BUG FIXES (cont.)

- When a remote system sends pedestal position to Protura, system ignores command.
- In a clinical environment with two Protura Systems with Remote Control enabled on one system, when user attempts to import configuration from remote controlled system to 2nd system, data in IP Address field of system is removed.
- When creating or editing patient data (or any data), any values entered beyond length of data entry dialog will not be displayed. Before saving any updated data, tool tip will display previously saved data. Once updated data is saved, tool tip displays entire length of updated data entered.
- When name of an IGRT System is changed, IGRT drop-down lists show both old and new names until Protura is restarted.
- Entering non-ASCII characters in Course Name field using [Alt+] keyboard shortcuts causes an inability to print reports for patient.
- When importing a patient record, if MR Number contains more than 64 characters, the number will be truncated, but the ellipsis (...) indicating there are more characters will not be displayed.
- On a PC running Windows 7, launching Protura from Start menu when another application is open will launch Protura behind open application.
- After clearing an error message, keyboard shortcuts such as [Ctrl+I] (Import) and [Ctrl+O] (Open) will occasionally not work.
- When changes or updates are made to Couch Pedestal Configuration screen, occasionally the first time users select [Save] or [Cancel], the system does not respond.
- When attempting to delete a patient record when current patient record is loaded, system will display an "Unable To Delete Patient" error message. Once error message is dismissed, any keyboard input causes selection in Patient List to change.
- A blinking cursor doesn't always display in the correct location after closing these dialog messages:
 - Couch Pedestal Location Validation Error(s) message
 - Proposed Values Validation message
 - Pedestal Outside Threshold message
 - Protura Application Error message
 - Duplicate Access Key message
 - Configuration Validation Error(s) message

- If Couch Pedestal edit box label includes an underscore character, character is not displayed on main screen.
- When designating a new IGRT system as default in Configuration workflow, Last Modified Date is updated to current date.
- When external interface features are enabled and required fields are empty, if [Save] / [Acknowledge error] / [Cancel] are clicked, interface will not be enabled and red outlines remain displayed around fields even though fields are not editable.
- If Elekta is enabled and prerequisites for connection are not met, system does not display an icon in Status Bar.
- Sometimes when moving to the Zero Position, the Current Values panel does not update values displayed, but continues to display values that were displayed prior to the move. This is intermittent and the correct values are displayed after the move.

Protura™ 1.2.1 Robotic Couch System *(Released 09/2012)*

FEATURES / ENHANCEMENTS

- Application will limit Protura Hexapod movement to rotation only.
- Application will remove MOSAIQ patients with no shift data.

BUG FIXES

- Hardware buttons remain disabled when Touch Guard is configured or when in Manual Motion.
- Zero Position button moves couch to zero while Touch Guard is triggered.
- During a remote move, clicking the [Stop] button in the dialog in Protura does not return an error.
- The “Not at Zero” LED light is off when a patient is opened, a Manual Motion is done, or the Touch Guard is triggered.

BUG FIXES (cont.)

- Protura accepts numbers from 0 to 359, but the XVI system sends numbers from 0 to 360.
- If the Touch Guard has not been triggered during a session and the software [Stop] button is activated, “Continue to Destination” message appears. After Touch Guard is activated once, the software [Stop] button no longer generates the “Continue to Destination” message for the duration of the session.
- In the Elekta System environment, the Protura query only returns the first set of data rather than the second set when:
 - The user acquires a CBCT using the XVI.
 - Offsets are calculated and saved on the XVI.
 - A second set of offsets are calculated and saved.
- When the Test Procedure is moving and the Touch Guard is triggered, Protura stops the current move, performs the next scheduled move, and then stops.
- With “Continue to Destination” message displayed, if a Hardware button is pressed or the Touch Guard is triggered, Protura does not acknowledge it, the move completes and clearing the Touch Guard has no effect.
- Protura displays “Continue to Destination” message during a Manual Motion when the Touch Guard is activated or cleared, or when it is indicated that the pedestal is back at the correct location.

Protura™ 1.2.0 Robotic Couch System *(Released 02/2012)*

FEATURES / ENHANCEMENTS

- Application will create and open patients when opened in Elekta MOSAIQ System.
- Application will receive pedestal location and set pivot point via the Elekta iCOM connection.
- Application will transfer the 6DOF values from the Elekta XVI System.
- Application will allow a 3rd party system (i.e. Vision RT AlignRT camera system) to remote control the Protura robot.

BUG FIXES

- No bug fixes.

Protura™ 1.1.1 Robotic Couch System *(Released 07/2011)*

BUG FIXES

- If an import file is missing one of the Current Couch Pedestal Location values and patient is not loaded but contains previous move information, all values are ignored and values from previous move are loaded.
- If an import file contains a patient with a previous move using an IGRT system other than the currently selected IGRT, the Proposed Values come in as all zero values.

Protura™ 1.1.0 Robotic Couch System *(Released 03/2011)*

BUG FIXES

- Selecting Load/Unload in Protura application when Delay is enabled causes a communication issue between the Hexapod and Protura software.
- If time zone is changed on the computer running the Protura application after configuration is complete, attempts to open Protura software results with a message stating configuration files are corrupt and need to be deleted before the user can continue.

Protura™ 1.0.0 Robotic Couch System *(Initial Release 12/2010)*

FEATURES

- Application allows user to position couchtop using the Hexapod device.
- Application will read a predefined set of information from a file selected by user.