Release note for 2.0.5

Notes

As of v2.0.5, the BlackTrax software downloads are for Members in good standing only. Please download the 'BlackTrax Member's Only Downloader' to verify your membership and access the software. You will need at least your BTX Dongle code for this process.

As part of this release, all Motive settings will be reset with the newly installed BlackTrax settings.

Motive now prompts to install an optional third party software called NI-DAQ. This is not required for BlackTrax use and can be ignored.

IMPORTANT: This release requires a BTServer running version July 2016 or later. Legacy servers (Windows 7) and servers with versions prior to July 2016 must download the latest BlackTrax Server Imaging Utility (which includes 2.0.5) instead of this download. Both are accessible from the Member's Only Downloader.

Motive Dongle Date Requirement:

July 26th 2016

Major changes:

- All new Motive 1.10
    - Point Cloud v4 for faster and more accurate reconstruction times
    - Single camera calibration
    - Cameras calibration without needing to re-set the ground plane
    - Custom configuration of Motive settings and displays tailored for BlackTrax use
    - Cameras number themselves based on serial number, not location anymore
    - New GUI design to match BlackTrax and BTWYG
- BTWYG R37
    - Layer groups for better organization
    - Fixture fill in wireframe view
    - Everything from the regular WYSIWYG R37 release including new fixture libraries
- RTTrPL output has been reduced to 50Hz instead of >100Hz
- BlackTrax System Update has received a facelift and now displays the currently installed version of each application

Known issues:

- None

Firmware:
2.7.0.41

Secondary Applications:
BTWYG: 2.37.60.205

Motive: 1.10.1.3

Compatible with RTTrP Versions:
6
1.8.3
1.8.7

Features and Fixes:

Bug

- *Fixed: Legacy RTTrPL output in Follower will now save in the configuration*
- *Fixed: Motive will no longer crash when a recording is stopped with Edit Tools open*
- *Fixed: Motive will no longer crash when saving or removing a take file while playing*
- *Fixed: Motive would crash if you changed the camera visualization colour*
- *Fixed: Refine calibration now pops up the apply dialog*
- *Fixed: Reconstruction bounds are no longer inverted on the X axis in Motive*
- *Fixed: When marker following is on, the following will no longer stop when the camera is panned or rotated in Motive*
- *Fixed: Setting the ground plane would reset the reconstruction bounds*
- *Fixed: Latency will no longer report extremely high values after running for long periods of time*
- *Fixed: Cameras will no longer send partial frames while running at high exposures*
- *Fixed: Frame rate will no longer drop in the streaming output of Motive when the timestamp becomes very high*
- *Fixed: Motive would sometimes report cameras to be in Reference Preset when they are actually in Object Mode*
- *Fixed: Setting a name for a take file in Edit Mode would sometimes fail in Motive*
- *Fixed: Project pane will no longer truncate take names*
- *Fixed: BTWYG's Welcome Screen will no longer launch in windowed mode if it was closed in maximized mode*
- *Fixed: When deleting several layers in BTWYG, each layer will no longer throw an individual error message*
- *Fixed: Animated smoke will now animate again in full screen mode*
- *For a full list of BTWYG bug fixed, please see WYSIWYG R37's full release notes*

New Feature

- *Recalibrate single cameras without needing to wand all cameras or resetting the ground plane (up to 3cm accuracy to other cameras, depending on how shifted the cameras are)*
  - *Determine all cameras needed for the 'Partial' calibration (cameras that have moved and need to be recalibrated)*
  - *Determine two cameras that will act as your 'Anchor' cameras (cameras that have not moved since the last calibration and has good overlap with the cameras determined for calibration)*
  - *Turn off all other cameras via the Camera Pane's checkboxes*
  - *Select all cameras needed for the Partial calibration (do not select the anchor cameras)*
  - *Click on Start Wanding*

- o *A pop up will appear asking you to confirm the Partial calibration, and that only those cameras selected will be re-calibrated*
- o *Wand just those cameras*
- o *Once the calibration is done, you can re-enable the rest of the cameras*
- o *You do not need to set the ground plane after this process*
- *Refine camera calibration now retains the ground plane, no longer requiring you to re-set it after every wanding (up to 1mm accuracy, depending on how shifted the cameras are)*
- *New Point Cloud Engine v4 in Motive resulting in faster and more accurate marker constructions at higher marker counts*
- *Cameras now number themselves based on serial number instead of location (meaning they will not renumber themselves unless cameras are added/removed from the system)*
  - o **Note:** *You may revert back to the old style of camera numbering in Application Settings*
- *Streaming output rate is now displayed in the status bar of Motive*
- *Trim the start and end times of a take file in Motive*
- *Layer groups in BTWYG, allowing better organization of related layers*
- *Layer highlight in BTWYG, only showing the active layer in colour, and all others in greyscale*
- *BTCameras in BTWYG are now 'space hang' enabled, meaning they can be hung without hanging off a pipe or truss*
- *Fixture symbol fill in wireframe view in BTWYG*
- *BTWYG's shaded view now allows you to maintain fixed aspect ratios*
- *New dimensions in BTWYG*
  - o *Continue dimension tool which keeps drawing dimension lines across a linear axis*
  - o *Baseline dimension tool which keeps drawing dimension lines from a referenced base dimension line*
- *For a list of new features including library updates, please see WYSIWYG R37's full release notes*

Improvement

- *RTTrPL output has been reduced to 50Hz to relieve pressure on the network*
  - **Note:** *A new option in Follower called 'Advanced Output' has been added to re-enable the sending of RTTrPL data at rates >100Hz if desired (this is off by default)*
- *Several settings in Motive have been changed to support default settings custom for BlackTrax. These changes include:*
  - *Grid is now BlackTrax blue*
  - *Default grid size is 75*
  - *Markers are now green instead of orange*
  - *Active Marker Labeling is True*
    - ▪ **Note:** *You must still disable this setting when you wish to calibrate*
  - *Selected History Only is set to False*
  - *Show Marker Label is set to True*
  - *Show Marker Count is set to True*
  - *Marker Diameter is set to Set Diameter and Diameter is set to 100mm*
  - *Broadcast Frame Data is now enabled and set to Local Loopback*
  - *Default residual size (before calibration) is set to 15mm*
  - *Size and Roundness Filter is set to None*

- Keyboard layout shortcuts have been changed for the BlackTrax layouts – CTRL+1-5 now control Running, Aiming, Calibration, Configuration, and Recording in that order
    - **Note:** *Keyboard shortcuts will not work until you change a layout using the Drop Down Menu first*
- Zoom to Fit in Motive has been split into two buttons, one for Zoom to Fit All and one for Zoom to Fit Selected
- You can no longer stream NatNet data on the camera network
- Prime 17W cameras now record MJPEG at full frame rate
- SketchUp 2016 file importing has been added to BTWYG
- You can now nudge or move a selection of fixtures along a pipe or straight truss in BTWYG
- In wireframe view, keyboard buttons 1-6 have become shortcuts for the six different wireframe views
- In BTWYG, the Protractor Tool has been replaced with the Angle Dimension, which allows you to measure the angle between two lines without needing to draw freehand
    - In addition, a new Angle Tool has been added to quickly measure the angle between two lines
- BlackTrax System Update will now show you the currently installed version of each application in addition to the new version number
- If several WYG installations are found (even regular WYSIWYG), BlackTrax System Update will continue uninstalling WYG until all versions are removed prior to installing BTWYG

Design Review

- Icons have been added to new Motive and new BTWYG projects in the file menu
- New Motive GUI design to match BTWYG and BlackTrax
- Running and Aiming Layouts in Motive now adds the Reconstruction Pane by default
- Active residual is now displayed in the status bar instead of the 3D view
    - Show Selected Residual option is gone, and is simply on by default in the status bar
- Timeline in Motive (when playing back recordings) now show all three dimensions in the same graph, centered around your current frame
- New BTWYG icon
- BTWYG has reorganized all of the 'Managers' into a single menu (such as Image, Camera, and Video Managers)
- BlackTrax System Update has received a facelift to match the theme of our other server applications
- Added application icons into BlackTrax System Update for each step