

## **SPOT 5.6.11, 2021 2nd Quarter Release**

1. A bug which could cause a crash when applying the bright pixel filter to a mosaic image was fixed.
2. An issue with the live mode exposure being incorrectly retrieved for still acq when live mode was stopped before it had a chance to properly compute exposure was corrected.

## **SPOT 5.6.9, 2020 4th Quarter Release**

1. An old oversight which resulted in 65535 being shown for the black level being shown in the image acq information dialog when viewing an image from a file where black level subtractions was disabled for the image acquisition was fixed.
2. Substantial changes were made to the mouse click and drag behaviors in image windows.
3. A mistake which prevented GPU demosaicing from working when acceleration (decimation) was enabled was fixed.
4. A modification to try to fix a problem with color enhancement being improperly enabled for live mode when another setting (eg. pct of pixels at tgt) was changed was made.
5. The installer was updated to include a newer version of The Hasp installer to fix a Windows 10 crashing problem.

## **SPOT 5.6.5, 2020 2nd Quarter Release**

1. A minor change was made in the way that the SPOT TWAIN driver makes calls to the TWAIN Data Source Manager DLL when there is an image to transfer or the user wants to close the TWAIN connection. For some reason, TWAIN transfers suddenly stopped working for Quest Diagnostics in Feb/March 2020, and this change apparently fixed the problem.

## **SPOT 5.5.1, 2018 4rd Quarter Release**

1. The HDR feature was added. A new camera-based license scheme was added to handle HDR licenses.
2. Mac OS only-A bug which caused the image setups list and other items to be hidden on the SPOT control bar was fixed.
3. Mac OS (10.14) only-An issue which caused SPOT application windows to fail to appear on startup was fixed.
4. Windows only-An issue which caused some dialogs (eg. activation code dialog) to fail to get keyboard focus on application startup was fixed.
5. Windows only-An issue which caused jitter while scrolling live image windows while live mode was running was fixed.
6. An "Initialize Camera" command was added to the macro feature.
7. A bug which affected live mode gamma for Insight CMOS cameras was fixed.
8. A bug which could cause manual exposure settings to be misinterpreted was fixed.

## **SPOT 5.4.3, 2018 3rd Quarter Release**

1. Windows only-The live mode frame rate for Insight CMOS cameras on computers with slower

- NVIDIA cards was improved.
2. A bug which prevented live mode auto-brightness from working correctly with Insight CMOS cameras and certain imaging area settings was fixed.
  3. A bug which could result in a crash when reading certain TIFF files was fixed.
  4. Mac OS only-A bug which caused the live image window to display black when trying to display monochrome image was fixed.
  5. Mac OS only-A bug which could cause a crash when trying to update text in a text edit control was fixed.
  6. Mac OS only-A mistake in the handling of mouse clicks on the window title bar close button was corrected.
  7. Mac OS only-The layering behavior of floating windows with the “keep on top” attribute was corrected.
  8. The imaging area “fit monitor” option was added to “basic” mode.
  9. A bug which affected the operation of the macro “Acquire Flatfield”, “Acquire Bias Frame”, and “Acquire Background Image” under certain circumstances was fixed.
  10. An “Image Settings” item was added to the image window popup menu in “basic” mode.
  11. An issue which resulted in corrupted images occasionally being returned by Insight CMOS cameras until re-initialization was resolved.
  12. The positioning and scrolling behavior when zooming in and out on images was improved.
  13. A bug which caused color live mode images from 1394 cameras to become all black when color corrections was enabled was fixed.
  14. A bug which caused 48 bpp images to become corrupted when applying HSL adjustments was fixed.
  15. Logic was added to restrict the use of NVIDIA GPUs for demosaicing to GPUs with compute capability 3.0 and higher, and an option to explicitly disable GPU image processing was added to the software.
  16. An “Initialize Camera” macro command was added.

### **SPOT 5.4.1, 2018 2nd Quarter Release**

1. The live mode frame rate was improved for Insight CMOS cameras. The best results are currently attainable on Windows systems with NVIDIA GPUs.
2. Live mode that changed for Insight CMOS cameras to show full image resolution.
3. The ability to change the current calibration was added to the measurement dialog for live mode.
4. An option to use the mouse wheel to change the zoom level on image windows was added.
5. An option to set the imaging area to fit one of the monitors was added.
6. The ability to navigate through document windows using Alt-Left and Alt-Right keys was added.
7. Changes were made to the popup context menus on the live image window.
8. A new popup context menu was added to image document windows.
9. The *Bonjour* service (needed for ethernet camera support) was removed from the SPOT Windows installers.
10. Windows TWAIN only-A problem with the image transfer process where multiple images were being transferred was fixed.

11. Mean and standard deviation values were added to the display on the RGB histogram adjustment dialog.
12. Windows only-A bug which prevented popup context menus on some edit controls was fixed.
13. Windows only-A bug which prevented files from being deleted was fixed.
14. Windows only-A bug which could cause document windows to move inappropriately was fixed.
15. Windows only-A bug which could cause menu items on popup context menus to be inappropriately enabled or disabled was fixed.
16. Windows only-The installer was enhanced to install appropriately signed device drivers based on the version of Windows running on the target machine.
17. A "Reload Image" macro command was added.
18. A bug which prevented boolean values from being retrieved properly from custom dialog radio buttons in macros was fixed.
19. Some minor improvements were made to the behavior of the image magnifier window.
20. A bug which could cause the macro "Set Variable" command to fail to properly set the variable value when the value was another variable was fixed.
21. The behavior of the live mode zoom level slider was changed slightly.
22. A bug which could cause an application crash when resuming live mode after a pause with auto brightness enabled for ethernet and USB cameras other than Insight CMOS.
23. The live mode imaging area setting behavior was improved so that the application remembers the original setting for reset after the live image dialog is close.
24. A bug which made it difficult to type into the control for the gamma adjustment on the image setup editor enhancements pane was fixed.
25. A problem with exposure computation on USB and ethernet cameras when an enhancement gamma value less than 1 was corrected.
26. A bug which prevented the setting of minimum exposure in the image setup editor auto-exposure pane under certain circumstances was fixed.
27. The behavior of the RGB histogram adjustment dialog was improved slightly.
28. Mac OS only-The drawing of live images was sped up when the "show pixels when zoomed or stretched" option is not enabled. This improved the live image frame rate under some circumstances.
29. Some improvements were made in the behavior of text controls when pasting text into them.
30. A mistake which could cause image corruption in live mode when acceleration was enabled or disabled was corrected.
31. Some improvements were made to the live mode auto-brightness behavior for USB3 cameras.
32. A bug which could cause the SPOT application to hang while playing a macro with a Delay, Wait Until, or Wait for Sensor Temperature while live mode is running was fixed.
33. The setting for reticle line object length was changed so that lines can be made to fill the image width and height.
34. A bug which caused annotation, calibration mark, measurement, and reticle text to be displayed at an incorrect size in the magnifier window was fixed.

### **SPOT 5.3.5, 2017 4th Quarter Release**

1. Support for the 12MP color Insight CMOS camera was added.

2. The Measurements pane of the “basic” mode Image Settings dialog was modified.
3. A bug which caused flatfield acquisition from mosaic camera in high resolution (pixel-shifting) with auto-exposure to be done incorrectly was fixed.
4. Live mode acceleration was added for Insight CMOS cameras.
5. Time-lapse acquisition from RTsCMOS cameras was improved so that images are properly retrieved after acquisitions are stopped.
6. The user interface for sync output and external trigger input settings was modified.
7. Some improvements in handling sync output activation were made.
8. A bug which caused background subtraction to be done incorrectly when the background image was acquired with a gain less than 1 was fixed.
9. The background subtraction logic was modified to require that the bright pixel filter setting used for acquiring the background image matches the setting for image being corrected.
10. Mac OS only-A problem where a modal dialog window could move behind another window was fixed.
11. Mac OS only-Improvements were made in the handling of system power state change events to prevent system sleep during image acquisitions.
12. Mac OS only-A bug which caused a crash when attempting to print an unsupported text font was fixed.
13. Mac OS only-A bug which could result in floating windows falling behind the menu bar, status bar, or control bar was fixed.
14. Mac OS only-The drawing of ellipse objects was improved so that ellipses are drawn with the correct line thickness.
15. An oversight which resulted in irrelevant resolution controls appearing in the “basic” mode Area pane of the Image Settings dialog was fixed.
16. A bug which could cause a crash when a variable value changed while the Variables dialog was opened was fixed.
17. Support for reading deflated TIFF images was added.
18. A button for merging measurements into the image was added to the Measurements dialog.

### **SPOT 5.3.3, (not yet released)**

1. Support for RTsCMOS cameras was added.
2. A bug which could cause a crash when entering measurement mode from a macro command was fixed.
3. The logic used for resizing images was improved so that it yields better results.
4. An option was added to the macro “Set Variable” command to allow a variable to be set to a random value.
5. A bug which prevented macro playing to be canceled under certain conditions was fixed.
6. The “Noise Filter” feature was replaced with a bright pixel filter feature which only replaces pixels which are brighter than the surrounding pixels. The new feature uses an additive difference and also covers pixels on the outer edges of the image. *Internal Note (do not publish, but communicate to tech and sales): “Bright Pixel Filter” only fixes brighter pixels. “Noise Filter” corrected both bright and dark (or dead) pixels. This is less concerning going forward since we are moving towards SONY image sensors that have much less or zero dead pixels, compared to*

*our old Kodak CCD sensors.*

7. Windows only-Logic was added to synchronize image transfers with slow applications in extended TWAIN mode.
8. Windows only-Logic in the extended TWAIN interface was corrected so that the TWAIN connection will not appear to be open unless the TWAIN data source has been enabled.
9. Logic was added to update the pixel information display on the status bar when an image document is scrolled using the mouse wheel.
10. Windows only-The behavior of some of the menu items (“Cut”, “Copy”, “Paste”, etc.) in the popup menus in editable popup list controls was corrected.
11. Windows only-A modification to the logic for copying objects to the clipboard was made to accommodate a change in the OS behavior.
12. Windows only-Some improvements were made in the handling of image transfers in “extended TWAIN” mode for situations in which there is a latency in image transfers.
13. A bug which could prevent copying images to the clipboard was fixed.
14. The restriction against setting gain to a value less than 1 when not using binning was removed (for cameras which support such gains).
15. A bug which affected measurements without labels was fixed.
16. Mac OS only-An issue which prevented USB cameras from working after the application was quit (with “Force Quit”) and restarted was fixed.
17. A few issues in the custom dialog designer interface were fixed.
18. Improvements to the live image auto-brightness performance were made for USB2 and ethernet cameras.
19. A bug which caused some controls to be incorrectly positioned after a dialog was rolled up and rolled down was fixed.
20. A preferences setting for the base plugins directory was added.
21. Mac OS only-Logic was added to try to prevent the computer from entering sleep mode while the camera is busy with acquisitions.
22. Mac OS only-A bug which could cause the application to become unresponsive when a macro was played with live mode running was fixed.
23. Mac OS only-A bug which caused an application crash when canceling the “Export Measurements” dialog was fixed.
24. Mac OS only-An issue which caused overlays on the live image window to disappear when the SPOT application became inactive was corrected.
25. Mac OS-only-A bug which caused a crash when the live image dialog was closed while the live image pan window was displayed was fixed.
26. Mac OS only-A bug which caused a crash when when the live image histogram window was closed when manual display scaling was enabled.
27. Mac OS only-A bug which could cause a crash when clicking on an empty table control was fixed.
28. Mac OS only-A bug which caused some table controls to be incorrectly ordered was fixed.
29. Mac OS only-A couple of bugs which prevented the shorthand feature from working properly were fixed.
30. Mac OS only-Problems with typing text into table cells were fixed.
31. Mac OS only-An issue which could result in an error message from the OS stating that an

application does not have permission to open a file when using the macro “Drop File” or Image Capture utility was fixed.

32. Mac OS only-Logic was added to use the Delete key (next to the ‘+/=’ key) to move backward through a displayed image sequence.
33. Mac OS only-A mistake which prevented the file name conflict action setting from being saved in the Image Capture utility was fixed.
34. Mac OS only-A mistake which could prevent movie exports from working properly was fixed.
35. Mac OS only-The “Begin” and “Abort” buttons were swapped on a few dialogs.
36. Mac OS only-A bug which caused overlays to disappear when the host windows was moved from one monitor to another was fixed.
37. Mac OS only-A bug which caused crashes and other problems when selecting and replacing text in editable text controls was fixed.
38. Mac OS only-A couple of bugs which could cause the application to crash when modifying images or closing image windows with the pan window displayed were fixed.
39. Mac OS only-A bug which prevented the import of image setups and some other setup items from working when setups with the same names already existed was fixed.
40. Mac OS only-A bug which prevented peripheral device control from working correctly under various circumstances was fixed.
41. Mac OS 10.12+ only-The behavior of windows was modified so that double-clicking on the titlebar will not cause them to maximize.
42. Mac OS 10.12+ only-Logic was added to hide the “Show Tab Bar” item on the View menu.
43. Problems with the behavior of the image metadata pane of the image setup were fixed.
44. Logic was corrected for properly handling the cases where both binning and pixel shifting are enabled concurrently.
45. A bug which could cause an application lockup or crash when acquiring a flatfield from a mosaic camera was fixed.
46. A bug, introduced in rev 12347, which broke live mode auto-brightness when a spot metering area was specified for monochrome and multi-shot color acquisition from 1394 cameras was fixed.
47. A bug which caused modifications to images in a sequence to be lost under some circumstances was fixed.
48. A mistake which caused still images captured with 8-bit readout to be corrupted was fixed.
49. A mistake which caused the wrong area to be used for live mode histogram computation and auto-brightness for 1394 cameras was fixed.
50. The handling of the case where a 1394 camera is powered off or disconnected while live mode was running was improved.
51. A bug which caused a crash when timelapse (sequential) acquisition was done with an Insight CMOS camera and only one image was to be acquired was fixed.
52. The performance of live mode auto-brightness was improved for Insight CMOS cameras.
53. A mistake which prevented the importing of exported taskbars from working correctly was fixed.
54. User-defined calibrations were improved to allow real number values for number of pixels.
55. A mistake which prevented settings from being properly saved after manually computing exposure/gain if the option to use live mode settings had been enabled and is being disabled

was fixed.

56. The minimum exposure for Insight CMOS cameras was increased to 10 $\mu$ s.
57. A mistake which caused minor pixel value corruption on the Insight CMOS camera was fixed.
58. The logic for white balance computation from Insight CMOS cameras was improved.
59. Logic was added to display an error message when the image is too bright for exposure computation from Insight CMOS cameras.
60. Logic was added to fix a problem with Insight CMOS cameras where the first still image acquired after changing the imaging area would be corrupted.
61. A bug which caused the exposure computation area to be used for white balance computation on Insight CMOS cameras was fixed.
62. A bug which caused the image brightness to change when merging annotations, calibration marks, and reticles while display scaling was enabled was fixed.
63. A mistake which caused display scaling for still images to be disabled when live mode auto-exposure was enabled was fixed.
64. A bug which could cause a crash when creating enumeration custom variables with no values was fixed.
65. A bug which caused problems when importing custom variables was fixed.
66. The logic for drawing measurements which they are being created was improved so that phantom lines will not appear.
67. The display of labeled annotation objects in the Image Information dialog was improved.
68. The UI dialog for measurement mode was modified slightly.
69. The ability to delete the current image setup from the status bar in "advanced" mode was added.
70. A bug which caused the image area to have the wrong aspect ratio when the "Constrain Aspect Ratio" option was enabled was fixed.
71. The logic for saving and restoring window position and size was enhanced so that the application now saves and restores the rolled-up state of windows.
72. A bug which prevented newly created "basic" mode profiles from being saved when the application closed was fixed.
73. The missing "Print" menu item was added for "basic" mode reports.
74. A mistake which caused "basic" mode report file names to be given an incorrect file extension was fixed.
75. A mistake which prevented some special characters from being used as text delimiters in the macro "Save Variable" command was fixed.
76. A bug which could cause flatfield correction for high resolution color images from Flex cameras to change the image color was fixed.
77. A bug which affected the enabling/disabling of the sync output setting controls in the image setup editor was fixed.

## **SPOT 5.3.1, 2017 1st Quarter Release**

1. Windows only-All binary components were digitally signed to comply with windows 10 version 1607 requirements.
2. A bug which prevented three-shot background image acquisition from working was fixed.
3. Drop support of PCI and PCIe cameras (PR16xx, XP17xx, PR23xx, XP24xx). Software was not tested on old PCI and PCIe cameras. It should theoretically work, but we will not test or support.
4. Drop support for MAC 10.6 and 10.7. It should theoretically work, but we will not test or support.
5. Matt Laise Software Sales Blurb - With the introduction of SPOT 5.3 we strove to ensure our software adhered to the stringent standards Microsoft implemented to prevent malicious boot operations. In order to meet the new standard in computer security SPOT 5.3 comes with device drivers digitally signed by Diagnostic Instruments and Microsoft. All digital signatures utilize Enhanced Validation to ensure all drivers and installers you are provided originated at Diagnostic Instruments, Inc. With this change you will be able to take advantage of Secure Boot on Microsoft Windows 10 systems; further protecting your computer infrastructure from 3<sup>rd</sup> party exploitation.

## **SPOT 5.2.21, 2016 2nd Quarter Release**

1. Support for the new Insight CMOS mosaic camera was added.
2. Mac OS only-The SPOT application was re-architected to use the Cocoa API.
3. Mac OS only-The SPOT application now handles text in any language or character set for all text entries.
4. Mac OS only-The SPOT Image Capture utility was redesigned.
5. Mac OS only-A file name handling bug which could cause crashes when selecting image setups on OS 10.10 and higher was fixed.
6. Mac OS only-Problems with the macro "Execute OS Shell Command" command were fixed.
7. Mac OS only-A color profile needed by some 1394 cameras was added to the installer.
8. A bug which prevented noise filtering from working properly on mosaic images acquired in 8-bit readout mode was fixed.
9. Improvements were made to the live mode auto-brightness behavior.
10. A bug which would cause a crash when running live mode with an ethernet camera, dual-channel readout, and auto display scaling was fixed.
11. A bug which prevented database image titles from being composed correctly was fixed.
12. A bug which prevented the 29th of February from being recognized as a valid date was fixed.
13. A mistake which prevented three shot color live mode from working was corrected.
14. Windows only-Compatibility with newer versions of WinDriver for USB camera support was improved.
15. Windows TWAIN only-A mistake which could cause crashes when working with certain applications was fixed.
16. Windows TWAIN only-A minor modification was made to comply with the TWAIN 1.9 specification.
17. A bug which could cause the live image gamma from being incorrectly applied was fixed.
18. A bug which could cause the application to freeze when changing exposure or gain settings while

- live mode is running was fixed.
19. Live mode behavior was modified so that exposure is now recomputed when the maximum exposure setting is changed.
  20. The handling of mouse wheel events for scrolling window contents was improved.
  21. The behavior of the magnifier window was corrected so that the image is updated when the window scrolls without a mouse movement.
  22. A mistake in the calculation of the number of time lapse images which could be accommodated in memory was corrected.
  23. A bug which caused exposure duration values to be incorrectly displayed in some circumstances was fixed.
  24. The behavior of the macro "Set Exposure" command was modified so that the exposure used by live mode when the option to apply to live mode is enabled and live mode was previously using auto-exposure.
  25. Some improvements were made in the way that histograms are drawn.
  26. "Set Gain", "Save Current Gain", and "Save Current Exposure" macro commands were added.
  27. A mistake in the handling of decimal characters other than "." in variable strings was corrected.
  28. The behavior of the macro "Set Variable" command was corrected to allow text to be set to an empty string.
  29. "CameraModelNum" and "CurMacroFilePath" automatic variables were added.
  30. A bug which could cause the wrong gain to be saved from live mode auto-exposure when an exposure adjustment factor was applied was fixed.
  31. A mistake which could cause color correction to be disabled by default was corrected.
  32. A bug which could cause the macro "Select Camera" command to fail to work properly was fixed.
  33. A bug which caused certain attribute settings of text objects in saved reports to be lost was fixed.
  34. The logic for setting keyboard focus to report design and dialog design document windows when the mouse is clicked in the windows was improved.
  35. A bug which caused incorrect exposures to be used when live mode was used on color filter cameras using only two colors was fixed.
  36. A mistake which could cause colors to be incorrect for multi-shot live mode when the maximum exposure setting was lower than the actual computed exposure was corrected.
  37. A bug which caused merging of annotations, calibration marks, measurements, and reticles to be done incorrectly when image display intensity scaling was enabled was fixed.
  38. A mistake which could cause the wrong imaging area to be used for live mode after exposure computation was corrected.
  39. Some of the default settings affecting live mode display were changed.
  40. The handling of device added/removed events in the TWAIN driver was improved.
  41. The display of the maximum exposure time in the "basic" mode Image Settings dialog was corrected to show the value in milliseconds.
  42. Some improvements were made to the handling of camera add/remove events in the SPOT application.
  43. A few bugs which caused image metadata variables to be mishandled were corrected.
  44. An option to truncate zeros when formatting text with numeric variable values was added.
  45. A bug which prevented delimited text copy variable value setting from working correctly was

fixed.

46. Some improvements were made to the behavior of the SPOT application in full-screen mode.
47. A bug which prevented large numeric values from being properly formatted as hexadecimal was fixed.
48. Windows Only (rev 17109+)-A work-around for a Windows 10 bug which prevented users from being able to click into editable text controls in the TWAIN and Metamorph drivers was added.
49. Mac OS Only (rev 17158+)-Logic was added to enter SPOT full-screen mode, instead of Apple's incompatible full-screen mode on OS 10.10 and up, when a zoom button (round green button on titlebar) is pushed on an application window.

### **SPOT 5.2.7, 2015 3rd-Quarter Release**

1. A bug which caused the SPOT application to crash when saving an 8bpp Bitmap image file was fixed.
2. The measurement export function was corrected so that it will not export deleted measurements while in measurement mode.
3. A bug which prevented the auto TTL/sync output delay from being set properly was fixed.
4. The live mode auto-brightness feature for 1394 and USB/ethernet cameras was fixed so that it maintains brightness after live mode is paused and resumed.
5. The macro "Set Bias Frame", "Set Background Image", and "Set Flatfield" commands were improved to allow disabling of corrections by supplying an empty string for the names.
6. The macro "Set Flatfield" command was improved so that it applies to live mode while it is running for cameras which support live mode flatfield corrections.
7. A bug which prevented the cropping and a few other editing operation on multiple images in an image sequence was fixed.
8. A bug which caused the live mode auto-exposure image type setting to be lost was fixed.
9. A bug which could cause the SPOT application to crash when generating a report with selected images was fixed.
10. Several memory leaks were fixed.
11. A bug which could cause a crash of the SPOT application when inserting an image into an image sequence was fixed.
12. Image display was improved to reduce flickering while displaying a newly opened image and resizing image windows.
13. A mistake which resulted in a failure to erase the border of live images in full-screen mode when zoom level was decreased was fixed.
14. A bug which could result in incorrect behavior when adjusting the RGB histogram by dragging the handles for monochrome images was fixed.
15. A bug which caused a small memory corruption when initializing cameras was fixed.
16. A bug which could possibly lead to a crash after working with a custom dialog was fixed.
17. A bug which could cause exposure to be miscalculated was fixed.
18. A mistake which resulted in image display scaling settings being ignored when displaying an image after canceling an edit operation was corrected.

19. The macro "Enable/Disable Dialog Closing" was fixed.
20. The behavior of custom dialog text entry objects with the integer attribute was corrected.
21. The remove annotations, calibration marks, and measurement features were fixed so that they apply to other images in sequences.
22. A bug which prevented the clear color filter setting in an image setup from being respected was fixed.
23. A few bugs which resulted in error messages under some circumstances when opening legacy macro files were fixed.
24. MacOS Only-The file rename function was corrected so that file name case changes are handled properly.
25. MacOS Only-A bug which caused the SPOT application to crash when exporting measurements was fixed.
26. MacOS Only-Flatfield correction for 5MP Idea cameras was fixed.
27. MacOS Only-A bug which prevented the Window | Close All and certain other menu items from working under certain circumstances was fixed.
28. MacOS Only-The peripheral device control feature was improved to support "serial modem" type virtual devices.
29. MacOS Only-A bug which could result in text being drawn in an incorrect size was fixed.
30. Windows Only-An issue with printing affecting the paper size which caused the SPOT application to freeze when attempting to print to certain PDF writers was fixed.
31. Windows Only-A bug which prevented text from being drawn well when printing, including to PDF files, has fixed.
32. Windows Only-An issue which prevented file dropping on the SPOT application on some versions of Windows was fixed.
33. Windows Only-The behavior of editable combo boxes on custom dialogs was corrected so that they drop down properly.
34. Windows Only-Some improvements were made to the movie export feature.
35. Windows Only-The SPOT installer was updated to handle the installation of the key driver on Windows 10.
36. A bug which caused still images acquired with 8-bit readout to be corrupted was fixed.

## **SPOT 5.2.5, 2014 4th-Quarter Release**

1. The "Image Type" setting options for exposure computation have been changed. The new "Brightfield" image type sets the target percentage of pixels at full-scale to .0008% instead of 1% as the old type.
2. The behavior of the color correction controls in the "basic" mode Image Settings dialog has been changed so that the controls for irrelevant settings are hidden when color correction is disabled.
3. The macro "If" command has been corrected to work properly with timestamp variables.
4. A bug which prevented custom dialog slider and scroll bar controls with start values less than 1.0 from working properly has been fixed.
5. A bug which affected white balance computation for mosaic USB and ethernet cameras was

fixed.

6. MacOS Only-A bug which could cause the SPOT application to freeze while a sound is playing was fixed.
7. MacOS Only-A few bugs affecting the folder selection dialog were fixed.
8. MacOS Only-The movie export feature was fixed.
9. A mistake which prevented the SPOT application from automatically starting live mode in "basic" mode if live mode was running when the application was last closed was corrected.
10. A mistake which could occasionally lead to an application crash when displaying image file thumbnails was corrected.
11. A mistake which caused selection handles on annotation arrow objects to be cut off was corrected.
12. TWAIN compatibility with some application was corrected.
13. A "Preserve File Path Delimiter Characters" option for text variables was added to the macro "Create Macro Variable" command.
14. The peripheral device control feature was enhanced to support the use of variables in the port name.
15. A bug which prevented digital gain from being applied for image acquisitions from mosaic USB cameras was fixed.
16. The behavior of annotation image objects was corrected so that a gray rectangle will be drawn if no image is available for the object.
17. The "template" option for creating new image setups was eliminated.
18. The process for creating new profiles in "basic" mode was enhanced.
19. A couple of mistakes affecting the editor dialogs for the macro commands for plugins were corrected.
20. A mistake which caused the live image controls dialog to be improperly displayed under certain circumstances was corrected.
21. Windows Only-Support for com ports greater than "COM9" for peripheral devices was fixed.
22. A bug in the custom dialog designer which would cause a crash when duplicating objects with images was fixed.
23. Preferences for hiding the SPOT application in TWAIN mode were added.
24. A mistake which prevented a change in the "offline" setting for a peripheral device to be saved if no other changes were made was fixed.
25. A mistake which prevented annotation labels from being created when interactive annotation mode was entered from a macro command was fixed.
26. Various setting default values were changed as per Philip's instructions.
27. A mistake which prevented the "Apply Threshold" check box from appearing checked in the image setup editor overlay pane was fixed.
28. SpotCamProxy.dll now logs a lot more of its (and therefore SPOT's) activities when the diagnostic logging feature is enabled. The feature can be enabled by placing a file named SpotCamTrigger.txt in the program files directory for SPOT. The logs can be viewed using DebugView running in administrator mode.
29. Added support for Flex Mosaic cameras with new IR window to have their own color profile distinct from the one the old Flex Mosaic cameras used. These color profiles are not stored in

the camera - they are installed by the SPOT installer. So this changes includes installing a new profile in C:\Windows\System32\spool\drivers\color, and storing new info into the camera to direct SPOT to use the new profile instead of the old one. The new file is called something like SPOT Flex\_Apr25-Faust-4.1.icc. Two methods were used to know when to use the new profile. Originally, SPOT did a trick by automatically choosing the new profile based on the camera's hardware revision, if it was 2.1.53 or later. Later I learned how to change the "gamut id" stored in the camera. SPOT uses the new profile whichever method was used to identify the new camera.

30. Fixed alpha formatting of numbers (anywhere variables can be used) to work correctly for numbers higher than 676.
31. When SPOT was already running in extended TWAIN mode, a host application would not be able to initiate a new (extended mode) transfer because the SPOT TWAIN source was unable to locate the SPOT "application". Fixed.
32. The title of the software as it appears EVERYWHERE, in all messages, desktop shortcuts, start-menu, dialog boxes, and text output, except for splash screen and About dialog bitmap was changed from "SPOT Software" to simply "SPOT". This includes the product-name that appears in the "Programs and Features" control panel (the one you use to install or uninstall). Since the actual product that is installed is identified to Windows using this new name, there may be unknown ramifications for upgrades or downgrades based on inconsistency between the old and new names. No such ramifications have been found yet. Note: promotional materials and brochures still have the old name in them; also, quick-install guides have not been changed, and have screen shots showing the old names, and possibly text referring to the old name. Also note: the installer file names have NOT changed (except for the increased version number).
33. (Mac build 13418) The installer has been reworked so that it is signed for Gatekeeper, and the initial problem with the "skf" folder was fixed.
34. (Mac build 13418) The file rename functionality was fixed so that it will handle the changing of case of the file name without changing the actual name or location.
35. (Mac build 13418) The measurement export feature was fixed so that it will not export deleted measurements.
36. (Mac build 13418 ) The handling of TTL/Sync output delays for USB and ethernet cameras was corrected.
37. (Mac build 13418) Range checking on the area controls in the image setup editor was fixed.

## **SPOT 5.2.1, 2014 2nd-Quarter Release**

1. The "Image Type" exposure setting was replaced with a "Pixels at Full Scale" setting which allows the user to specify the minimum percentage of image pixels which should be at full-scale for exposure computation. As part of this change, image setup templates were eliminated.
2. 1394/USB/Ethernet Cameras Only - The exposure computation logic for mosaic acquisition was modified to take the current white balance values into account so that images acquired with the computed exposure and white balance which was used will not be over-exposed in any of the colors if the brightest color in the target image is different than the color with the smallest white balance value.

3. 1394/USB/Ethernet Cameras Only - The live mode auto-brightness logic was modified to improve performance.
4. Some improvements were made to the "Enhancements" pane of the image setup editor and the "Appearance" tab page of the "basic" mode image settings dialog.
5. Some minor bugs affecting text entry, scroll bar, and slider custom dialog controls were fixed.
6. MacOS Only - Changes were made to the file open/save dialogs to make them compatible with MacOS 10.9.
7. MacOS Only - A few bugs affecting the folder selection dialog were fixed.
8. MacOS Only - Several bugs affecting the movie export feature were fixed.
9. A bug which prevented live mode from starting automatically in "basic" mode when the SPOT application was relaunched after having been closed with live mode running in certain circumstances was fixed.

## **SPOT 5.1.29, 2014 2nd-Quarter Release**

1. Support for Flex cameras with the new IR filter was added.
2. A bug which could cause miscalculation of exposure for flatfield acquisition for USB and ethernet cameras when the brightest color is not red was fixed.
3. A bug which affected the performance of live mode auto-brightness in dual-channel monochrome mode on USB and ethernet cameras was fixed.
4. A bug which affected the behavior of custom dialog slider and scroll bar controls was fixed.
5. A bug which prevented the names of custom dialog controls from being deleted was fixed.
6. The macro "If" command was fixed so that it works with timestamp variables.
7. A bug which prevented macro commands from being deleted under certain circumstances was fixed.
8. Windows Only - A bug which could make the application appear to freeze under certain conditions when the calibration or reticle dialogs were open was fixed.
9. A bug which caused numeric values in edit controls to increment or decrement incorrectly under certain conditions was fixed.
10. A mistake which caused the mishandling of the reattachment of ethernet cameras was fixed.

## **SPOT 5.1.27, 2014 1st-Quarter Release**

1. The macro Save Variables command was enhanced with an option to automatically create the destination directory and better file write permission handling.
2. A bug which prevented changes to custom variable attributes from being saved after modification was fixed.

3. A bug which prevented the macro Add Dialog Child command from adding a child dialog after the last child was fixed.
4. A "Masked" option for custom dialog text entry objects was added.
5. A bug which prevented background image correction from working for multi-shot image acquisition from mosaic Flex cameras was fixed.
6. An "exclusive focus" option for custom dialogs was added.
7. A mistake which prevented the 'live text update' settings from being saved when no text was entered for custom dialog objects was corrected.
8. Macro logic was corrected so that the Escape macro command will cause execution to skip over nested blocks/loops which are enclosed within the same block/loop
9. Macro logic was corrected for that "If" commands can be stacked.
10. The behavior of custom dialog list box objects was corrected so that the action for a selection change event is done when an item in the list is double clicked.
11. A "show tick marks" option was added for custom dialog slider objects.
12. MacOS Only - a problem which resulted in an application crash when closing the file 'Save As' dialog on OS X 10.9 was fixed.
13. A bug (introduced in ver 5.1.25) which caused a crash when creating a new report text object was fixed.
14. Improvements in the drawing of image annotation text were made so that text will wrap and clip more consistently as image windows are zoomed or stretched.
15. Windows Only - A minor mistake which caused words at the ends of lines to be marked as misspelled was corrected.
16. A few bugs affecting the behavior of the macro Add Annotation command were fixed.
17. A bug which prevented the macro Prompt User command with the "choice list" option from working correctly was fixed.

## **SPOT 5.1.25, 2013 4th-Quarter Release**

1. A couple of issues affecting the formatting of numeric variable values for negative values and using a thousands separator were corrected.
2. A mistake which prevented titles for database images from being composed properly was corrected.
3. A bug which caused the application to freeze when certain dialogs, including the images settings dialog, were displayed was fixed.
4. MacOS Only- A bug which caused the last character of the selected text string from a popup list when the text was the maximum allowable length was fixed.
5. New "AnnotAutoNumValue" and "AnnotTextRotationDeg" settings variables have been added.
6. A bug which could lead to an application crash when the current camera was disconnected and another camera connected while live mode was running was fixed.
7. A mistake which prevented the pushing of the Close button from closing the reticle editor dialog

was corrected.

8. The logic for the text copy operation in the Set Variable macro command was corrected so that when the operation is to copy text until a specified string, and that string appears at the very beginning of the text being copied, the result is an empty string.
9. Logic was added to prevent crashes when a custom dialog is closed while a macro which it played is still playing.
10. MacOS Only- The logic for handling window resizing was corrected to handle cases where the window is being resized from the left and/or top edges. Prior to OS 10.7, windows could only be resized from the bottom right corner.
11. A mistake which prevented the Close button on the "basic" mode live image dialog from being positioned properly was corrected.
12. A mistake which caused objects with the hidden attribute to disappear when they were resized if the resizing resulted in another attribute change in the custom dialog designer was corrected.
13. MacOS Only- Logic was added to support mouse wheel events in slider controls.
14. MacOS Only- Logic was added to allow the Preferences menu item on the Apple menu to be hidden.
15. MacOS Only- Logic was added to keep the custom dialog design pane in the upper left corner of the document window when the document window is resized from the top or left edges.
16. TWAIN Only- Code was added to set the biSizeImage member of the BITMAPINFOHEADER struct passed to the application TWAIN for native image transfers because at least one application (SoftPath) is unable to handle the bitmap when the biSizeImage value is zero.
17. A bug in the macro calibration mark command editor dialog which could cause a crash was fixed.
18. MacOS Only- The vertical size computation of static text, check mark, and radio button controls was corrected so that those types of controls can be moved and sized properly in the custom dialog designer.
19. Logic was added to get page settings for the system default printer on application startup if no printer has previously been selected for printing images.
20. MacOS Only- The print page setup functionality was re-implemented so that it now works properly.
21. A bug which caused a phantom annotation object to appear when a new object was created with a mouse click and not moved or stretched in image annotation mode was fixed.
22. A new text stamp annotation object type was added.
23. A mistake which caused some new annotation objects to be incorrectly vertically positioned was corrected.
24. MacOS Only- A problem which could cause a strip near the bottom of the report preview dialog to be drawn incorrectly was resolved.
25. A bug which could cause an empty document window to appear when opening an image sequence file was fixed.
26. Several bugs affecting the features which add images to image sequences were fixed.

## **SPOT 5.1.23, 2013 3rd-Quarter Release (QEF)**

Released Sept 6, 2013

1. Windows Only- Corrected installation problem that was in 5.1.21.
2. A bug which caused a crash when adding five image overlays to images was fixed.
3. A bug which caused a crash when showing certain image overlays on live images was fixed.
4. A work-around for an issue which prevented image overlays for being displayed on certain PCs was added.
5. MacOS Only- A bug which caused a crash when copying objects to the clipboard or duplicating objects was fixed.
6. An issue which prevented image acquisitions from three-shot Insight cameras from working correctly was addressed.
7. MacOS Only- The behavior of the macro "Push Dialog Button" command for toggle button objects was corrected.
8. MacOS Only- The installer sets the correct folder permissions for the license file directory in the event that they might be set incorrectly.

## **SPOT 5.1.21, 2013 3rd-Quarter Release**

Released Aug 8, 2013

1. Added Image Overlay module support.
2. MacOS Only-The handling of files dropped onto the SPOT application was improved.
3. MacOS Only-Some issues with AppleEvent handling were corrected.
4. The live image controls dialog now remembers the scroll position and collapsed states of group boxes.
5. The ability to specify auto-formatting for the macro "Prompt User" command and for runtime variables was added.
6. The ability to import and export custom dialog macros was added.
7. The ability to specify macros to be played on various events was added to the custom dialog feature.
8. A custom style for push button objects on custom dialogs was added.
9. The ability to display images on custom dialog push button and toggle button objects was added.
10. The ability to specify separate images for enabled and disabled states of custom dialog static image objects was added.
11. The ability to use PNG files and images with alpha channels on custom dialog objects was added.
12. The ability to create groups of mutually exclusive toggle buttons in custom dialogs was added.
13. The custom dialog designer undo command now works correctly after the dialog has been resized.
14. A few bugs which could cause crashes while editing custom dialogs were fixed.
15. A few issues regarding the playing of macros when custom dialogs close have been fixed.
16. Various improvements in the macro commands for working with custom dialog objects were made.
17. The following new automatic variables have been added: DocWindowType, DocWindowMode, DocNewOrModified, PrefsFilePath, UserDesktopPath, CommonDesktopPath, OpenImgFilePath, SaveImgFilePath, OpenImgSeqFilePath, SaveImgSeqFilePath, OpenRptFilePath, SaveRptFilePath,

MacroFilePath, MovieExportFilePath, BaseMacroFilePath, BaseDialogFilePath, BaseRptFilePath, BaseObjImgFilePath, ImgPixelsPerUnit, AppVisible, AppActive, AppFullScreen, and LiveImgRunning.

18. The following new settings variables have been added: AnnotLineBorderThickness, AnnotTextLineColor, AnnotBkgdFillColor, AnnotTextFontName, AnnotTextFontSize, AnnotTextRotation, AnnotTextJustification, AnnotTextBackgroundMode, AnnotFillObject, AnnotArrowHeadSize, MagnifierWindowWidth, MagnifierWindowHeight, MagnifierMagnificationFactor, CalMarkOrientation, CalMarkColor, CalMarkLineThickness, CalMarkLineEndLength, CalMarkShowText, CalMarkTextFontName, CalMarkTextFontSize, CalMarkTextRotation, CalMarkDecimals, MeasurementColor, MeasurementLineThickness, MeasurementTextFontName, MeasurementTextFontSize, MeasurementTextRotation, MeasurementDecimals, MeasurementShowCircleArea, MeasurementShowCircleRadius, MeasurementShowCircleDiameter, MeasurementShowCircleCircum, MeasurementShowRectArea, MeasurementShowRectLength, MeasurementShowRectWidth, MeasurementShowRectPerim, MeasurementShowEllipseArea, MeasurementShowEllipseMajAxis, MeasurementShowEllipseMinAxis, MeasurementShowEllipsePerim, MeasurementShowRegionArea, and MeasurementShowRegionPerim.
19. Built-in macro variables (“\_argxxx”) were added to facilitate the sharing of values between macros when the “Play Macro” and “Play Dialog Macro” commands are used.
20. A bug which could cause crashes when setting a text variable value and stripping characters with the macro “Set Variable” command was fixed.
21. The behavior of the macro “Loop” command when the number of loop iterations is zero has been corrected.
22. Windows Only-Some image drawing issues which occurred after the computer was “locked” were corrected.
23. Windows Only-A bug which affected the changing of values in tables was fixed.
24. A bug which prevented custom dialog list objects from being populated with the values of bound enumeration variables was fixed.
25. A bug in the custom dialog popup list object which prevented the list from being filled has been fixed.
26. A bug which affected the setting of enumeration variable values in the Variables dialog was fixed.
27. The ability to assign hotkeys to the user prompt dialog buttons in the “Prompt User” macro command was added.
28. MacOS Only-An issue affecting mouse behavior in some dialogs was fixed.
29. A bug which affected cropping of images which had been rotated left and flipped vertically was fixed.
30. Issues affecting macro execution when a custom dialog is shown were fixed.
31. Deleting images, custom dialogs, and report templates from the File | Delete menu item now moves the files to the trash/recycle bin instead of completely deleting them.
32. The behavior of the application when merging annotations, calibration marks, measurements, and reticles was changed so that when color objects are merged into a monochrome image, the image bit depth is automatically changed to color.

33. The macro "Open Image File" command now handles the specification of an initial directory without a file name correctly in interactive mode.
34. The image duplicate feature was redesigned to be easier to use.
35. The image resize feature was modified to do a better job when reducing image size.
36. An option to show or not show the status window for the macro "Delay" and "Wait Until" commands was added.
37. TWAIN Only-Hotkey handling was fixed.
38. A bug affecting the recording of the "Show/Close Dialog" macro command was fixed.

### **SPOT 5.1.3, 2013 1st-Quarter Release**

1. Fixed a problem that ignored the "promote pixel data" option under the auto save setting section within the image setup editor. The image was always saved with that option disabled even if it was enabled.
2. Removed the Quantitative module from the default trial license. The feature will not be enabled unless an additional license is applied to the computer.
3. Fixed a problem that caused images with flatfield correction applied to have a color tint (usually pink) to them. This only affected mosaic cameras with USB or Ethernet interfaces.
4. A problem affecting dual-channel 8-bit readout from ethernet cameras was fixed.
5. MacOS Only-A bug which occasionally caused crashes after displaying the file save dialog was fixed.
6. MacOS Only-A bug which occasionally caused files to be saved without the proper file name extension was fixed.
7. A bug which affected the selection of objects in the dialog designer was fixed.
8. A bug which prevented annotations, measurements, calibration marks, and reticles from being displayed on images in image sequences under certain circumstances was fixed.
9. Windows Only-A bug which could cause crashes when modifying variable values in the Variables dialog was fixed.
10. Windows Only-A bug which could result in infinite repeating when a custom dialog button with the repeating attribute is pushed was fixed.
11. A mistake which prevented image setup metadata settings from being recalled was fixed.
12. The behavior of macros was fixed so that "Else" statements immediately following "If" are handled correctly.
13. A bug in the macro Create Variable command was fixed.
14. A bug which caused unnecessary backup files to be saved when saving reports with data was fixed.

### **SPOT 5.1.1, 2012 4th-Quarter Release**

1. Support for MacOS 10.8 was added.
2. Support for SPOT Ethernet cameras was added.
3. Dropped support for PPC Macs as well as MacOS 10.4 & 10.5.
4. A bug which would cause the MacOS version of the SPOT application to lock up when executing

- a macro command to set or compare variable values under certain conditions was fixed.
5. A bug which could cause a bound variable for a custom dialog list box object to be assigned the wrong value when the selection was changed was fixed.
  6. The behavior of the live image pan window was fixed in the MacOS version so that it is hidden when the live image dialog is rolled up.
  7. The behavior of image thumbnail buttons in the MacOS version of the SPOT application was corrected.
  8. A bug which prevented multi-line text entry objects from being initialized in the MacOS version of the SPOT application was fixed.
  9. The behavior of multi-line text entry objects in the MacOS version of the SPOT application was improved.
  10. A bug which resulted in the failure of some lines from being drawn in the report preview window in the MacOS version of the SPOT application was fixed.
  11. A flaw which allowed windows to be sized incorrectly under certain circumstances has been corrected.
  12. The display of reticles on images is now automatically enabled when reticles are applied. This overrides the application preferences setting that defaults to not show reticles.
  13. A bug which prevented peripheral device commands from being sent by taskbar buttons was fixed.
  14. A bug which caused zeroes to be truncated when displaying exposure values with more than one zero (e.g. 1000 was shown as "1") in the "basic" mode image settings dialog was fixed.
  15. The setting of the ranges for black and white point values in the live image controls dialog was corrected.
  16. A bug which could cause the menu bar to shown when it should not be or hidden when it should be shown in full screen mode in the MacOS version of the SPOT application was fixed.
  17. Information about the current image auto-save settings was added to the application status bar.
  18. The display of popup hint text on the application status bar was corrected.
  19. A couple of bugs which could cause crashes while printing images were fixed.
  20. A bug which could result in taskbars failing to show or hide from macro commands was fixed.
  21. The behavior of windows with the 'keep on top' attribute was corrected in the Windows version of the SPOT application so that they will not fall behind other windows under certain circumstances.
  22. A bug which could cause the SPOT application to lock up when a button which plays a macro is played is pushed repeatedly was fixed.
  23. A bug which resulted in the failure to display one character long text strings on reports and annotations in the MacOS version of the SPOT application was fixed.
  24. The behavior of the tool bars was corrected so that they will always display the correct buttons when being shown after previously having been hidden.
  25. A bug which could result in incorrect values being returned for the automatic variables: "NumDocWindows", "NumImgDocWindows", "NumImgSeqDocWindows", "NumThumbnailDocWindows", "NumRptTemplateDocWindows", "NumDlgDesignDocWindows", "CurSensorTemp", and "ImgSensorTemp" was fixed.
  26. The behavior of editable popup list objects on custom dialogs in the Windows version of the

SPOT application was corrected so that the list pops up correctly.

27. A bug which resulted in users being able to close windows which were locked in place was fixed.
  28. A bug which could cause the SPOT application to lock up when the user tried to close a custom dialog which was not allowed to close was fixed.
  29. A bug which resulted in incorrect enabling of some custom dialog objects with assigned menu item actions was fixed.
  30. The printer setup in the MacOS version of the SPOT was fixed.
  31. A bug which caused the Windows version of the SPOT application to lock up when live mode was started while a macro was paused was fixed.
  32. The default settings for the image magnifier were changed to 2x magnification and a 400x400 pixel window.
  33. A bug which caused the imaging area constrained aspect ratio to be incorrectly displayed as "Same as Monitor 1" was fixed.
  34. A "Merge All Layers" item was added to the list of menu items available for taskbar buttons and custom dialog object actions.
  35. A bug which could prevent live mode from running for USB Xplorer/Pursuit cameras when displaying live histograms was fixed.
  36. A bug which caused "basic" mode profile names and names in the setup import dialogs containing apostrophes and certain other special characters to be displayed incorrectly was fixed.
  37. The logic in the image setup editor was corrected so that black level subtraction can no longer be disabled when image enhancements are using the live image values.
  38. A bug which occasionally resulted in a failure to respond to clicks of the "Color"/"Monochrome" radio buttons in the image setup editor was fixed.
  39. The logic in the live image controls dialog was fixed so that the dialog now remembers the scroll position and which groups were collapsed when it is reopened.
  40. A mistake in the Windows SPOT application in the logic for computing the scroll range for the live image controls dialog was corrected so that the user will always be able to scroll to the bottom.
  41. The logic in the SPOT TWAIN interface was changed so that canceling the camera selection dialog will cause the last used device to be reselected rather than closing the TWAIN interface.
  42. For 24 bpp color acquisitions from mosaic cameras, color enhancements are now done on the full bit depth image data instead of 24 bpp image data.
  43. Support for acquiring monochrome images from mosaic USB and Ethernet cameras by binning was fixed.
  44. The logic for supporting 1394 cameras on Windows 7 and 8 was modified slightly so that 'no response' errors no longer occur in certain situations when small imaging areas are used.
- **SPOT 5.0.27, 2012 3rd-Quarter Release**
    1. Multi-user mode was inoperative in release 5.0.25. (The feature was unavailable.) Restored it (and fixed a preexisting bug in which SPOT would sometimes crash during its restart operation after switching to single-user mode).
    2. [Mac-only, OS 10.7 only] When you rolled a window up ("window shades") and then rolled it back down, window elements would be moved to the wrong position within the window. This affected any window that could be rolled up. For example, the live-image within the live-image

dialog's would migrate (offset) downwards within the dialog when the dialog was rolled up and then down. Fixed.

3. New "static" activation code feature to help tech-support staff assist people with incorrectly-initialized USB key/dongles, which allows resetting those dongles.
4. [Mac-only] Fixed Applescript bugs, which affected certain rare cases.
5. [Mac-only] An Applescript implementer can now set the current image setup as part of the capture command (8295).
6. [Mac-only] No longer crashes when acquiring an image via Applescript or the Image Capture app (which is the same thing, since the Image Capture app runs scripts).
7. [Windows-only] TWAIN interface now sets the internal color bit-depth to 24 bpp if the TWAIN application's manufacturer name starts with "Asprise." (8330, 8308)
8. [Mac-only] USB Pursuit cameras may not have been working with the previous release – I am not sure. A bug which prevented their working was fixed for this release, but it may be a bug that was introduced since version 5.0.25, in which case no customers ever experienced it. This needs to be tested in order to know the answer.
9. [Windows-only] Fixed 1394 memory leak problem.
10. PCI Xplorer and Pursuit cameras were occasionally returning "no response from camera" errors during image acquisition. Fixed.

- **SPOT 5.0.25, 2012 2nd-Quarter Release**

1. [Cross-platform] Szip files and the license manager are no longer used to activate licenses or features in SPOT. Instead, an activation code is entered directly into an "Update License" dialog in SPOT. When using SPOT with the 30-day trial, the "you are using a trial" message box has an "Activate" button, which takes you right to that dialog. Thus, you no longer have to use the "Update License" command from the menu (it's still available as well). As a result, the License Manager has been deprecated. Although it is still installed on the system (as a backup tool for special cases), the Windows installer no longer creates any shortcuts to it, and the Mac installer places it into a "Utilities" subfolder of "SPOT 5.0", so the user is unlikely to encounter it by accident.
2. [Windows] Installing products that included 2 different versions of SpotCam 5.0, and then removing the later one, would cause SPOT 4.7 to stop working. Fixed.
3. [Windows 7] On some systems, turning a connected Firewire camera on was not causing SPOT to automatically select & initialize that camera, and turning it off was not causing SPOT to automatically disconnect it. Fixed. [Unknown why some Windows 7 systems didn't have the problem.]
4. [Windows 7] The first time a Firewire camera is connected, our driver now automatically switches the 1394 bus host controller to "legacy." If the Firewire bus is 1394a, it does so silently. If the Firewire bus is 1394b, it asks the user before doing so, warning him that real 1394b devices that are also connected to that card may suffer in performance because of the switch. This happens only the first time a given serial # of camera is connected. (Subsequently connecting the same camera to another 1394 card on the computer will have no effect. If the Windows update

rolls this change back, we do nothing about it.)

5. [Windows 7] Installers now instruct you to connect your camera, at the end, explaining that it's because administrator password may be required the first time the camera is connected. (Because of the 1394 bus host controller switching feature described above, so this warning appears only on Windows 7.)
6. [Windows] When SpotCam version is too old for SPOT, the error message used to be "Cannot find SpotCam." Now it correctly describes the problem. (It's the SpotCamProxy.dll file that is installed alongside Spot32.exe)
7. [Cross-platform] Messages that appear when you rename calibrations and peripheral devices used to ask "Save as new setup or rename existing setup?" Changed "setup" to "calibration" or "device."
8. [Cross-platform] The About box now lists all the modules that have been purchased (or are in trial) even when they are not active, such as Extended TWAIN or PICSlink, which are not "active" when you start SPOT in the normal manner. In such a case, they are listed as "available" as opposed to "active."
9. [Windows] The title bar of the main application window has been changed from "SPOT" to one of the following, depending on the mode: "SPOT Basic", "SPOT Advanced", "SPOT Basic (trial)", and "SPOT Advanced (trial)."
10. [Mac]: When designing a report, using the freehand, polygon, or polyline drawing tool, and then scrolling the report view up or down, would cause the newly-created line to double up, with the permanent copy scrolling, but with a phantom copy staying in the original position. Fixed.
11. [Mac PowerPC]: (not verified that this was a problem in an actual release) Could not open custom dialogs; it would claim they were not formatted right. Fixed.
12. [Mac, not sure if Windows]: You could crash SPOT by modifying a calibration when the "Measurement" window is open, and the image is set to use that calibration which you are modifying. Fixed.
13. [Mac, not sure if Windows]: Right-justified text in reports (possibly in images) was placed outside the box. Fixed.
14. [Mac, not sure if Windows]: When changing the font of text in a report (possibly in images as well), the "Bold Italic" style would be selected by default even though the text was not bold italic. So whenever you changed a different setting, the style would change as well, unless you actively set it to the original style. Fixed.
15. [Mac, not sure if Windows]: Rotated annotations were drawn incorrectly (how?). Fixed.
16. [Mac, not sure if Windows]: Text annotations would not always clip to the bounding box, and sometimes would incorrectly clip away some of the text that was not supposed to be clipped. Fixed.
17. [Mac, not sure if Windows]: When designing a report, and setting the position of a freehand/polygon/polyline object to "center", and then specifying a width or height, the object would be placed permanently outside of its own bounds. Fixed.
18. [Mac, not sure if Windows]: If, while drawing a measurement, you hit the ESC key, it would close the measurements dialog and leave the measurement you were in the middle of drawing, as is. Now it cancels the measurement instead, which is what you'd expect an ESC key to do.
19. [Cross-platform]: Link Image Zoom Level was not working for the "Zoom In" and "Zoom Out"

commands. Fixed.

20. [Mac]: Printing a report did not work at all. Fixed.
21. [Cross-platform]: In custom dialogs, adding a text edit control with formatted field, handling of literal characters was corrected.
22. [Cross-platform new feature]: In custom dialogs, adding a text edit control with formatted field, added new formatting characters: 'C' (for uppercase alphanumeric), 'c' (for lowercase alphanumeric), and '&' (for alphanumeric without regard to case) were added.
23. The feature label text in the measurements dialog was being displayed improperly. Fixed.
24. If one or more commands following an 'If' or 'Else' in a macro are disabled, the conditional execution is now applied starting with the first non-disabled command.
25. The macro "Add Measurement" command would be parsed incorrectly when the measurement type was "last used" and the "Use Defaults" option was enabled. It would use a default instead of the last value. Fixed.
26. The "Add Annotation" macro command was handled incorrectly when the type was set to "None." Changed the choice to "Select Mode." This is the type which is supposed to enter annotation mode without actually creating any initial annotation.
27. [Cross-platform]: [CMOS Cameras, e.g. USB Pursuit] The live-mode resolution setting is now presented as "acceleration" on the live window itself instead of the controls. Also clarifies that it only affects live mode.
28. [SPOT Advanced]: The live image dialog now has an "Apply Reticle" checkbox. When a reticle has been applied (in image setups) to live mode, this shows up, allowing you to remove or re-add the reticle straight from the live mode window. It will not show up if you have never applied a reticle from the Image Setup window because you need to select the reticle.
29. [TWIN, standard & extended] SPOT would crash when transferring 24 bpp images through the TWIN interface using memory transfer. Fixed. APEasy is known to have caused this.
30. When the video resolution of the main monitor is changed while SPOT is running (e.g., when you plug in a projector, whose resolution is smaller than the screen) SPOT now adjusts windows (which moved off-screen) to have their top-left corner at 0,0.
31. [New feature] The "Hide Layers" dialog in the custom dialog designer was redesigned. Persistence of which layers were showing was added. Ability to control more layers was added. Ability to turn all off or on at once was added. Etc.
32. The warning which came up at camera initialization about unsupported features when using USB Pursuit slider cameras has been removed.
33. [Mac]: Fixed some windows that were incorrectly behind others.
34. The minimum and maximum values for custom dialog numeric text objects would change incorrectly when a dialog was reopened (#257). Off by a factor of 10. Even if you just opened and saved the dialog. Fixed.
35. Actions were not being executed when text was typed into a custom dialog text object (#258). Fixed.
36. [New feature]: Invisible button objects on custom dialogs can now respond to macro "Push Button" commands.
37. [Mac]: SPOT Image Capture utility was not correctly determining if the SPOT image setup had autosave enabled. The utility was probably failing completely (maybe hanging or hanging SPOT).

Fixed.

38. Windows: Ctrl-X, Ctrl-C, and Ctrl-V was not working for text objects with formatting. Affects formatted edit controls in custom dialogs. Fixed.
  39. [Mac]: Prevented potential crashing when displaying tables (e.g. the "Variables" dialog).
  40. [Mac]: The assigned action was not being executed when the selection in a popup list was changed (#267). Affects custom dialogs. Fixed.
  41. SPOT now supports cameras which can turn off their cooler and fan.
  42. Now correct color technology on images acquired from mosaic cameras are always done on the full bit depth data, which improves the quality of the results, instead of doing it after it was reduced to 8-bit depth. Affects only the case of color mosaic sensor with image setup set for 24-bit, and not in live mode. Reduces banding in dark areas.
  43. [Mac]: Prevented potential theoretical crashes when displaying push button.
  44. [Mac]: Corrected the appearance [it was behind when it should have been in front] of the information window on the live image histogram.
  45. [Mac]: Fixed the measurement export feature. The dialog to pick the file was not working. Feature was severely disabled or dead.
  46. Flatfield correction, bias frame subtraction, and background subtraction now work when using "Enhanced IR" readout. User would see a "file incompatible" error message when Enhanced IR turned on.
  47. The size of text drawn on images (unmerged annotations, measurements, etc.) relative to the image pixels has been made consistent between different computers and OS platforms. When you show an image on a machine with different display resolution from the one on which it was created, the text would change in size. A 'back door' method for restoring the old text font scaling behavior with a preferences file entry was added.
  48. Various cosmetic corrections and improvements were made in the dialogs.
  49. [Cross-platform]: Mosaic pixel shifting camera, acquiring a background subtraction image, when doing a ROI with top-left not equal to (0,0), the resulting image would be all wrong. Fixed.
  50. [Mac]: Right-button-up mouse events were not being handled. Fixed.
  51. [Mac, maybe only OS 10.5+]: Fixed movie export. Movie export would create a movie in which all the frames looked just like the background color (all black).
  52. [Mac]: Will hopefully have fixed threading building blocks to get it to work on the Mac. This speeds up color corrections on multi-core machines by sharing the work among all available cores. About 10-15% speedup expected.
  53. [Cross-platform]: [Sony-sensor cameras only] If you create a new image setup, the default sensor response mode would have been set to enhanced IR mode; now it's set to normal mode.
- **SPOT 5.0.15, 2012 1st-Quarter Release**
    1. Added "Update License" menu item.
    2. Fixed defect which resulted in live mode color enhancement settings being lost when the application was closed or the image setup was changed.
    3. Fixed a defect that allowed white balance changes from live mode to apply to a locked image setup.
    4. Fixed defect which resulted in incorrect palettes being applied to grayscale images opened from JPEG files which were created by applications other than SPOT.

5. Fixed defect which could result in an application crash after creating a polygon or polyline annotation object with only one point.
6. Added macro command to merge annotations, calibration marks, measurements, and reticles.
7. Changed "Merge Annotations, Calibration Marks, Measurements, and Reticle" menu item to "Merge All Layers".
8. Fixed a defect which prevented the live image histogram from being displayed properly when the histogram display was opened while live mode was running with auto-exposure and display scaling.
9. Corrected a defect that prevented the re-initialization of a camera after it was disconnected when only one camera was installed.
10. Added a way, through a preferences file, to make grabbing a slider control thumb easier.
11. Changed the default ICC rendering intent from absolute to relative. This change affects the SPOT application because it never specifies a specific rendering intent.
12. Fixed a defect which would result in extended TWAIN transfers failing under specific circumstances.
13. Fixed a defect which prevented long names in database fields from being displayed.
14. Fixed defect which caused the SPOT app to crash when failing to display a database image.