
FinishLynx Release Notes Version 7.50



FinishLynx Version 7.50 Release Notes

New IdentiLynx Features

+ There is now support for IdentiLynx cameras' native ACM. This is a separate capture checkbox ("Automatic (IdentiLynx Motion)") that only appears for IdentiLynx cameras. You can control the trigger, size, and active area in the camera dialog. You can also set the active area by selecting image in an event and selecting "Image|Set|Object active area" in the menu.

+ You now get frame times when using an IdentiLynx camera without any EtherLynx cameras booted. You can also create a manual start in this setup to see elapsed times in the image (rather than time of day). All times (frame times and manual start time) come from the PC clock.

+ You can now retain the overlay setup of your IdentiLynx camera so that it will appear in the next event you create (or load). After creating the overlays you want in the IdentiLynx pane select "Image|Retain overlays".

When this feature is active a checkmark will appear next to the menu item. To clear the retained overlays simply select "Image|Retain overlays" again and the checkmark will go away.

When an event is loaded or created the retained overlays will automatically be added for you. You can remove these overlays and/or add more overlays without affecting the retained overlays.

General New Features

+ If enabled, "Show Lines" and "Split Lines" now appear in full screen mode.

+ When "Find Object" doesn't find an object because it's at the end of the image, it asks whether you want to search from the beginning. If you choose "No" (the default) then the next time you run "Find Object" it will start from the last object found. (In other words, it will find the first object in whatever new image has been added.)

+ There is a new hidden setting (Event\Image\FindObjectMode, default 1) that controls how image is scrolled when using the "Find Object" command. A value of 0 gives the old behavior (move the hash to the object, center if off screen), a value of 1 always centers the hash, and a value of 2 moves the object to the current location of the hash (centered if the hash is not currently visible).

+ There is a new "Crop to results..." function. What it does is crop out all of the image except for the image around each result's evaluated time.

Selecting this option brings up a dialog box where you can set the Leader, Trailer, and Range. The Leader and Trailer are how many frames before and after the result's evaluated time will be kept in the picture. The Range works the same as the recently added Range parameter in the "print results with image" function. If left blank, all current results will be used. This function works for both line scan and area scan images. Separate Leader and Trailer values are remembered for the two kinds of images since the reasonable values for each are so different.

+ There is a new "Cropped Image Warning" that comes up if you try to save an event that has had the "Crop to results" or "Keep selection" functions run without subsequently uncropping the image. Since these functions can potentially remove a lot of image with one simple command you must confirm that you want to save the event in this state. Note that if you are doing a "Save as" (which will leave an uncropped copy of the event behind) then you do not get the warning. The first "Save" or "Save as" done on an event does not leave a copy behind, so you will get the warning.

If you really don't want to see this warning you can set \Event\WarnCropped to 0.

+ There is a new "File|Reload" command that is enabled when an event is opened in Reader mode. This is used to load the latest info that the capture computer has stored in the .evn file. This is useful when using Reader mode and Time Trial mode together, as starts will typically come in after the reader computer has opened the event. (This command is equivalent to saving the event, closing the event, and then re-opening the event.)

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+ When the on-screen running time is set to stop (controlled by hidden setting Scoreboards\StopDispTime) the precision used is now the "Options|Results Tab|Default Precision" value. It used to be hard coded at hundredths.

New EtherLynx Features

+ There is now support for setting size and active area in EtherLynx ACM. These settings work the same as the size and area settings for internal photo eye.

+ Camera booting and timer sync is much improved for multi-NIC systems.

The short of it: You can have more than one NIC installed and active, and FinishLynx will find which one has cameras attached and will properly boot and timer sync those cameras. (FinishLynx will do this without having to set BaseIPAddress.)

New Scoreboard Features

+ Two new scoreboard scripts have been added: "Adaptive16x128.lss" and "Adaptive16x128Sprints.lss".

+ The User 1-3 fields are now accessible through the scoreboard interface. They are documented in Example2.lss. Note that these fields have codes above \0f, which means that to use them you *must* use the full two byte "version 2" code. The two byte codes can be freely mixed with the single byte codes, so if you are adding these fields to an old style script you can leave the rest of the script unchanged.

+ There is a new ARMED/RUNNING results header field in the scoreboard output. This new field is listed in the comments section of the Example2.lss script.

New Results Features

+ There is a new hidden setting (Event\Image\Hash\AddSplitMsg, default 0) that when set to 1 will cause a warning message when a LapTime split is added from image and there isn't already a results entry for that split. The warning is only displayed if the event's results were loaded from a start list. (This is the same as it works when entering a regular result time.)

+ You can now disable filters in the Result Filters Dialog. Disabled filters are shown in gray and enabled filters are shown normally (in black). There is a new button next to the filter list that shows "Enable" or "Disable" depending on the current state of the selected filter. At the bottom of the dialog is a new setting for how many filters can be enabled at the same time. The options are "Single" and "Multiple." If "Single" is selected then whenever a filter is enabled all other filters will be disabled. "Multiple" obviously allows as many filters to be enabled as you like.

There is a "shortcut" menu for choosing which filters are enabled. If you click in the results area title bar on any columns that don't already have a shortcut menu (Time, Delta Time, and Speed already do) then you'll get a menu of all defined filters with the enabled ones checked. Selecting a filter toggles its state.

+ There is another new option on the Result Filters Dialog that allows you to choose which filters are used when calculating the place field. Selecting "Enabled" will give you the standard behavior, which is that the place field will be assigned based solely on the visible results given the currently enabled filters. Selecting "None" will assign the places with no filters defined. Selecting "All" will assign the places with all filters (even disabled ones) defined.

Selecting "None" is the "quick and dirty" way to see the overall places when looking at just a subset of the results. This will work *if* all results are using the same start time *and* there aren't any manually entered times.

If you select "All" then you have more control over how places are assigned for non-visible results. For a race with different start times for different groups of results you can assign the correct start time to each non-visible result using a disabled filter. Also, if you have a mix of manually entered times and automatic times then they will compare correctly because the non-visible automatic times will have a start subtracted off.

+ There is a new hidden setting (\LapTime\CreateSplits, default 0) which, when set to 1 when a "From Image" LapTime device is active, will cause a "From Image" split to be created each time a result is entered from the image.

+ When the first official time is read the LapTime based place numbers are now cleared for all un-read results. This behavior is controlled by a hidden setting (\LapTime\FillPlaceStyle). The default of 1 gives the new behavior and a value of 2 gives the old behavior.

+ There is a new hidden setting (Event\Image\Hash\ResultPopupKey) that allows you to select which field is displayed in the "Add Result" popup menu. The default of 2 is Affiliation. If you look at this setting in the Hidden Settings Dialog you'll see a list of available fields.

New Print Feature

+ There is a new range field for "Print results with image." This allows you to select which results (if you don't want the first "n") to print with the image. The way you can select results is exactly the same as the LapTime "Active Splits" field.

This can be a simple comma separated list (1,2,3), a bounded range (4-99), or an unbounded range (4-). You can even specify unbounded arithmetic series (1,3,...) or bounded arithmetic series (1,3,...15). The arithmetic series can also go down instead of up (15,13,... or 15,13,...7).

If you'd like to specify which values are **not** allowed (rather than which are allowed) you can begin the entire string with a carat (^). If you'd like to invert the meaning of a single field you can begin the field with a tilde (~).

Some examples:

Accept 1 through 5:

1,2,3,4,5

1-5

1,2,...5

Accept 11 and higher:

11-

^1-10

Accept all odd values:

1,3,...

^2,4,...

Accept all odd values to 15:

1,3,...15

Accept all **but** odd values to 15:

^1,3,...15

Accept 1-5, even values to 20 (except 14), then every third value:

1-5,~14,6,8,...20,23,26,...

Accept all values divisible by 5 except those also divisible by 4:

~4,~8,~...,5,10,...

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FinishLynx 7.30 Release Notes

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Introduction

This document contains release notes describing new features available in:

- *FinishLynx 7.30* (see "FinishLynx 7.30 Release Notes")
- *FinishLynx 7.23* (see "FinishLynx 7.23 Release Notes")
- *FinishLynx 7.22* (see "FinishLynx 7.22 Release Notes")
- *FinishLynx 7.21* (see "FinishLynx 7.21 Release Notes")
- *FinishLynx 7.20* (see "FinishLynx 7.20 Release Notes")
- *FinishLynx 7.10* (see "FinishLynx 7.10 Release Notes"), and
- *FinishLynx 7.00* (see "FinishLynx 7.00 Release Notes").

Obtaining Lynx products and information

There are three ways to obtain Lynx products and information:

- Go to the *Lynx website* (<http://www.finishlynx.com/>) and click the **Products** link
- Call (978) 556-9780 and ask to speak with someone in sales, or
- Send an email to our *sales department* (<mailto:sales@finishlynx.com>).

Obtaining technical support

There are three ways to obtain technical support for Lynx products:

- Go to the *Lynx website* (<http://www.finishlynx.com/>) and click the **Support** link
- Call (978) 556-9780 and ask to speak with someone in tech support, or
- Send an email to the *technical support department* (<mailto:support@finishlynx.com>).

CHAPTER 1

FinishLynx 7.30 Release Notes

This chapter describes new features available in FinishLynx 7.30, since the release of FinishLynx 7.23.

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General New Features

New scoreboard script


The scoreboard script, **Adaptive16x64 Wind.lss**, is now included.

User defined results fields

There are three new user defined results fields, called **User n**, where $n = 1-3$.

The fields allow you to change the text in the language file to something descriptive, such as *phone*, *email*, or *owner*.

The new user defined fields appear in the following places:

- **Results Filter** dialog, which you can access by clicking  in the Results Zone
- **LapTime Results: Key** list, which you can access by clicking **Options | LapTime**, and
- in the **Fields:** list, which you can access by clicking **Options | Results**.

If enabled, the new user defined fields appear on the screen and on printouts. They are read in through the database, including the *lynx.ppl* file, and are written to the *lynx.lif* file.

Note: The Start Time field has been moved three fields to the right. All of the fields, including the new user defined fields, are documented in the comments section of the sample *lynx.evt* file.

Existing Lynx.cfg and Lynx.cdf files not overwritten

The new FinishLynx installer does not overwrite existing *Lynx.cfg* and *Lynx.cdf* files.

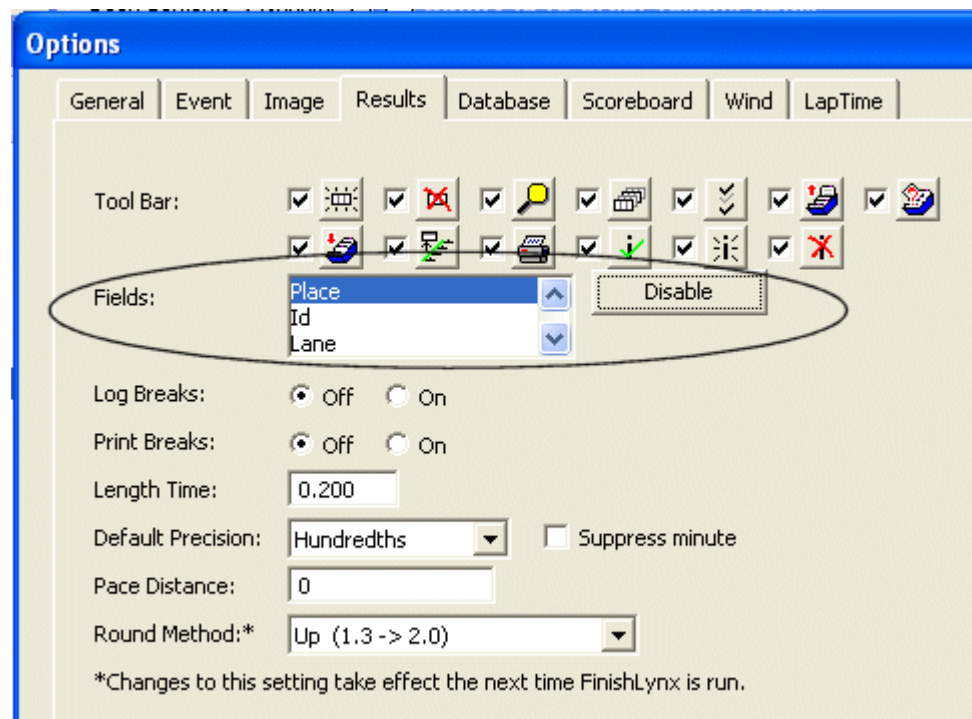
Ability to re-order results fields

You can now re-order the results fields, using the new **Fields:** selector.

➤ **To access and use the new Fields: selector:**

Click **Options...** and then click the **Results** tab.

- Enable or disable a field by clicking to select it, and then click the **Enable/Disable** button next to the selector.
- Re-order fields by dragging and dropping them to a new location in the list.



Results special code sort order changed

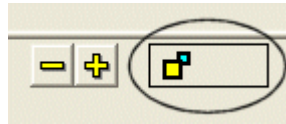
The Results special code sort order has been changed to:

- DNF
- DQ
- FS
- DNS, and
- SCR.

New Focus Helper feature

When FinishLynx is in Align Mode, the **Focus Helper** appears near the top left corner of the screen. The Focus Helper displays a number value that increases as the image becomes more in focus.

The Focus Helper looks like this. When FinishLynx is focusing an image, a number value appears in this box.



Ability to select image in Align Mode

Now when FinishLynx is in Align Mode, clicking the right mouse button allows you to select image either while aligning, or after alignment has stopped.

Note: If you change the zoom level, either select a different camera, or left click in the image, to make the selection disappear.

- **Use with Focus Helper (see "New Focus Helper feature"):**
 - If a region of image is selected, then the Focus Helper operates only on that region.
 - If no region is selected, then the Focus Helper operates on the entire image.

New Hash Time overlay

A new **Hash Time** overlay is included. The Hash Time overlay is a text overlay whose value is automatically updated with the current hash time.

➤ **To access the Hash Time overlay:**

With a FinishLynx image open, click **Image** from the menu bar and then select **Overlay | Hash time....** A **Text Overlay** combination box appears, allowing you to change the font, size, color, and text of the hash time overlay.

Fixed size image selection control available

The fixed size image settings, previously accessible by holding down the Shift key while right-clicking on the image, are now available in a **Selection:** box, which is accessible from the **Options | Image** tab.

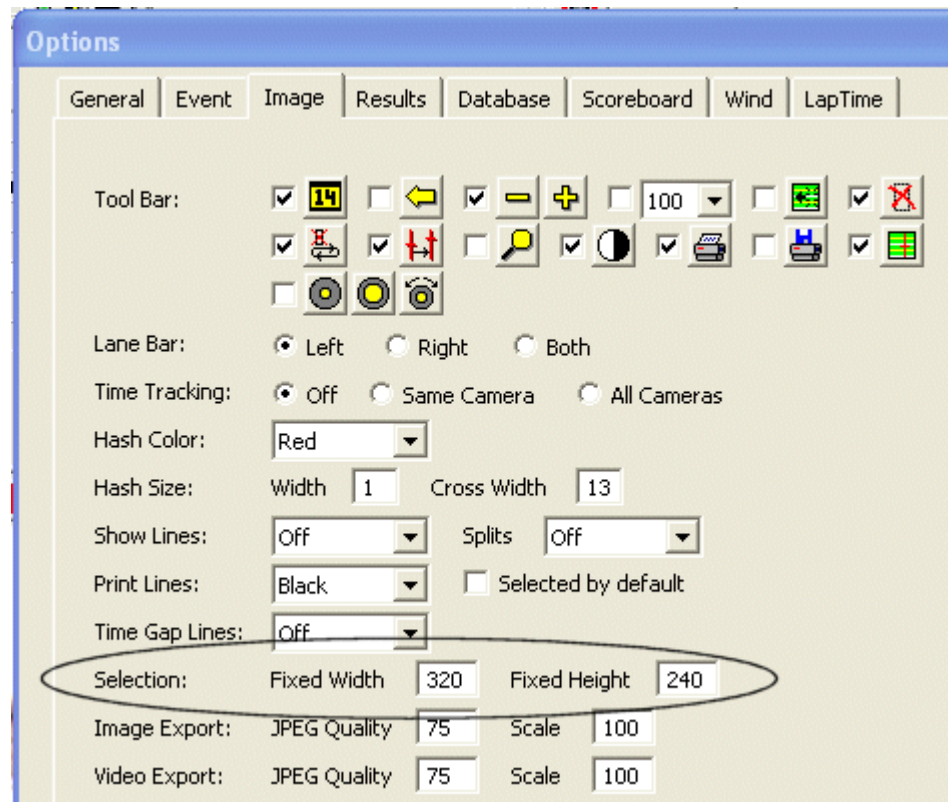
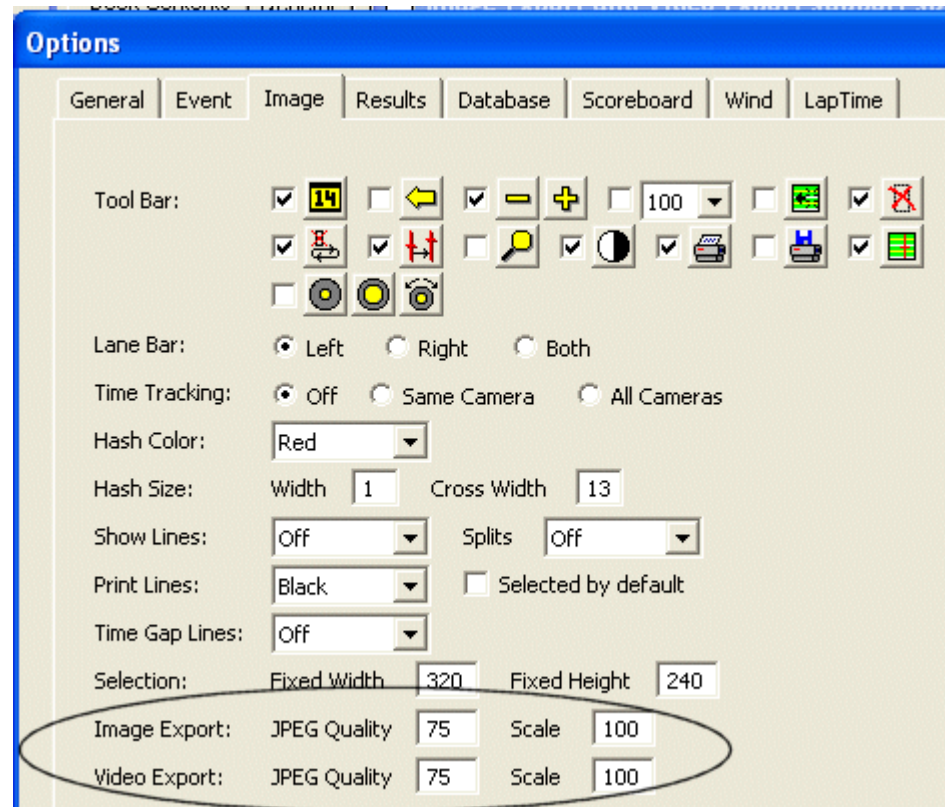


Image Export and Video Export support size reduction

Image Export and **Video Export** now support reducing the size of the exported image or video.

➤ **To reduce the size of exported image or video:**

- 1 Click **File | Options....**
- 2 Click the **Image** tab.
- 3 At the bottom of the Image tab, the **Image Export:** and **Video Export:** options are available, which allow you to enter a percent value from between 1-100; the default for which is 100.



Note: The hidden settings, `\Event\Image\ExportBitmap\Smooth`, and `\Event\Image\ExportVideo\Smooth`, control whether reduced images are smoothed. The default is 1, which means that it is on.

Video Export

Video Export now supports the following:

- overlays, including *hash time overlays* (see "New Hash Time overlay")
- image adjustments (brightness, contrast, gamma, enhancement), and
- selecting only a portion of the frame.

➤ **Notes about video or image recompression:**

If any of these conditions exist, or if the **Video Export: Scale** is set to less than 100, then the video frames must be recompressed to include the image modifications. Each video frame is actually a jpeg image, and when this jpeg image is recompressed, the **Video Export: JPEG Quality** setting is used.

There is a hidden setting, `\Event\Image\ExportVideo\Recompress`, that controls when recompression is done.

- The Recompress default value of **1** behaves as described above. If any image modifications exist, then the frames are recompressed. If no image modifications exist, then the frames are not recompressed, and the original image quality is preserved.
- If Recompress is set to **0**, then recompression never occurs, and the presence of overlays, selection, etc., are ignored during video export.
- If Recompress is set to **2**, then recompression always occurs.

New Lynx LapTime device available

There is a new Lynx LapTime device that is used to receive LapTime information from IsoLynx™.

New IdentiLynx features

Overlays in IdentiLynx images modified

When overlays are added to an IdentiLynx image, they only appear in frames that are part of the current frame selection. If there is no frame selection, then the overlay still appears in all frames.

Smooth zoom enabled for IdentiLynx

Smooth zoom is now supported for IdentiLynx images. This is particularly useful when scaling an IdentiLynx image to an arbitrary size less than 100%. For example, at 60%, zoom diagonal lines in the picture look better with smooth zoom turned on.

Export video menu item available

With an IdentiLynx image open, click **Image** from the menu bar and then select **Export video** to export IdentiLynx video to another source.

CHAPTER 2

FinishLynx 7.23 Release Notes

This chapter describes new features available in FinishLynx 7.23, since the release of FinishLynx 7.22.

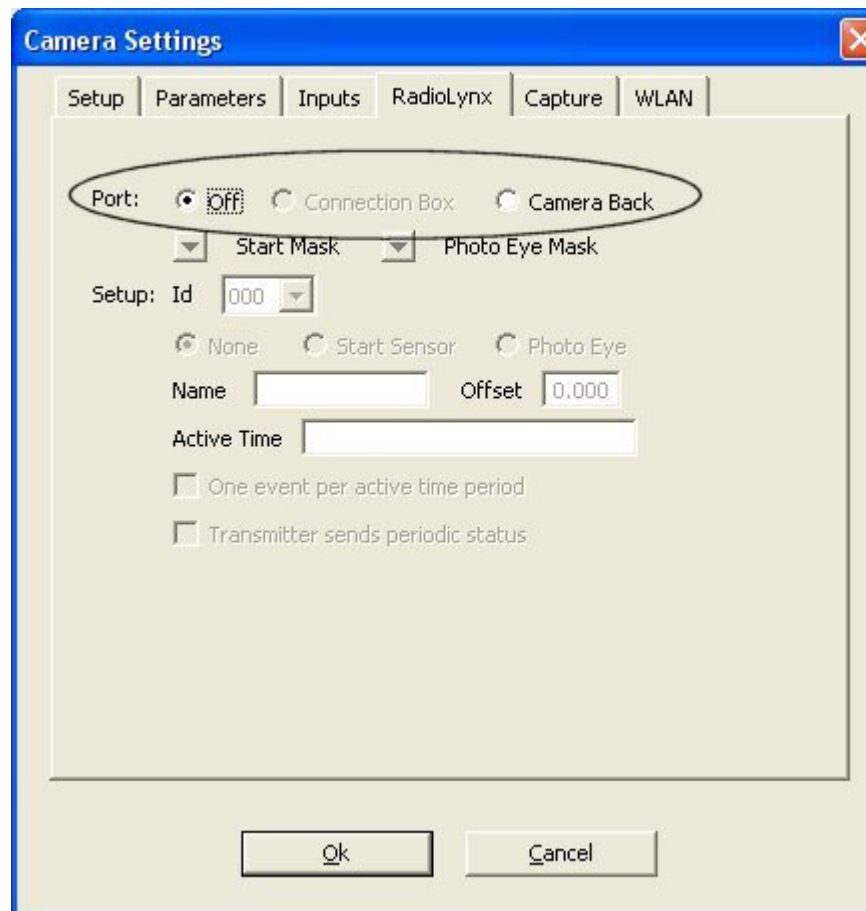
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RadioLynx Connection Box option disabled

When using the EtherLynx Pro® or EtherLynx Fusion® camera with RadioLynx, you will find that the *Connection Box* radio button in the **Port:** selection on the **Camera Settings | RadioLynx** screen is disabled.

Note: This change applies to EtherLynx Pro and EtherLynx Fusion cameras with a hardware revision number of 200 or higher. The hardware revision number is comprised of the last three digits of the serial number marked on the camera's product label.



New Finnish language file added

A Finnish language file has been added.

➤ ***To use the Finnish language file setting:***

- 1** Click **File | Options...**. The **Options** dialog appears.
- 2** Click to select **Finnish** from the **Language:** drop-down list at the bottom of the dialog.
- 3** Close FinishLynx. The next time that you run FinishLynx, it displays using the Finnish language file that you just selected.

CHAPTER 3

FinishLynx 7.22 Release Notes

This chapter describes new features available in FinishLynx 7.22, since the release of FinishLynx 7.21.

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New scoreboard script

Microtab16-9.lss has been updated to support the new style of board that MicroGate is offering. The script is backward compatible with existing boards.

New wind gauge script

The wind gauge script, **DakMDPWind.lss**, has been removed and replaced with a new script, **DakMDP.lss**, which also adds support for the *Daktronics TI-2022* and *TR-3101* displays.

CHAPTER 4

FinishLynx 7.21 Release Notes

This chapter describes new features available in FinishLynx 7.21, since the release of FinishLynx 7.20.

In This Chapter

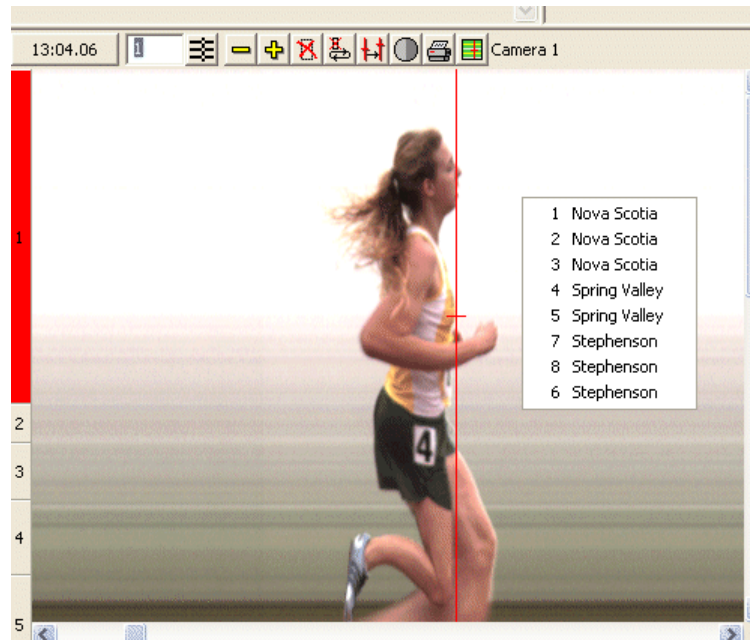
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General New Features

Ability to change results pop-up menu

There is a hidden setting available that controls the maximum number of entries that are listed in the *results pop-up menu*, which appears when you click on a FinishLynx image while simultaneously holding down the **Shift** key.

By default, ten entries appear in the results pop-up menu.



➤ **To change the hidden setting:**

Access: **Event\Image\Hash\ResultPopupMax.**

For assistance and further instruction on changing FinishLynx hidden setting, **contact Lynx technical support** (see "Obtaining technical support").

Pop-up menus time out

Pop-up menus now disappear after five seconds of inactivity.

This is helpful because FinishLynx cannot accept image from a camera while a pop-up is on the screen.

Event does not change when LapTime events get auto-deleted

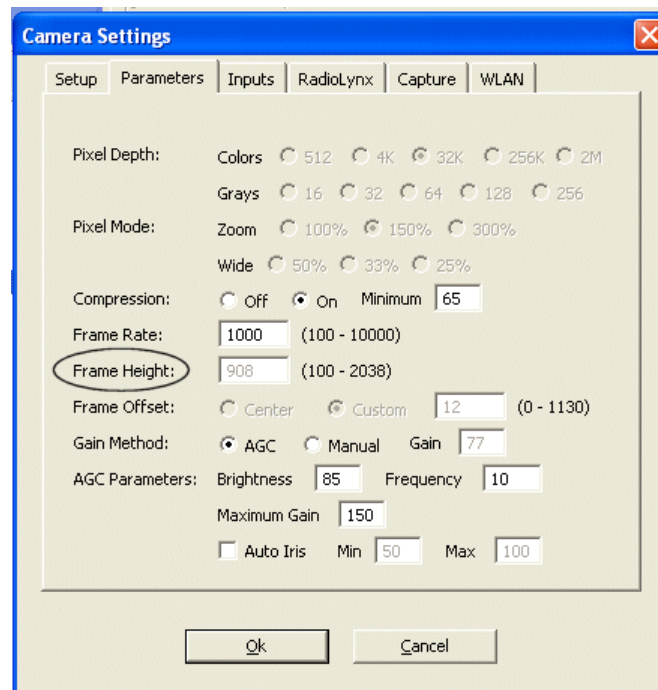
LapTime events are auto-deleted either because they come from the wrong receiver, or because the associated participant has already completed the race.

Now, when LapTime events are auto-deleted, the event does not get marked as having been changed.

Frame Height referred to as "Height"

The word **Height** replaces the word, *Density*, in reference to **Frame Height**.

Frame Height appears in the Hardware Control window, the Event Zone, and the Camera Settings dialog.



Ability to change when event is auto-saved

There is a hidden setting which, when set to a value greater than 0, causes the event to automatically save the LIF file every so many seconds.

The default value is 0.

➤ **To change the hidden setting:**

Access: **Database\LIF\AutoSave**.

For assistance and further instruction on changing a FinishLynx hidden setting, **contact Lynx technical support** (see "Obtaining technical support").

Participant start times are auto-loaded

In Time Trial Mode, the Database now loads participants' start times from the .EVT file, if present. The start times appear after the license field, which is noted in the sample lynx.evt file in the installer.

IdentiLynx image manipulation improvements

You can now zoom in or out on an IdentiLynx image, or you can change the current frame, without FinishLynx requiring you to save the event.

Improved Support for Wireless EtherLynx Cameras

Ability to update firmware

An **Update Firmware** button is now available on the **WLAN** tab of the Camera Settings dialog for wireless EtherLynx 5L300 and 5L400 cameras that require a firmware upgrade to support wireless security.

Click the button to update the firmware. You are notified that the firmware will load the next time the camera is turned on.

Note: Once the camera is turned on again, the Update Firmware button no longer appears on the WLAN tab.

Privacy key activation shows on WLAN tab

The WLAN tab now displays asterisks for the privacy key, if one has been entered.

CHAPTER 5

FinishLynx 7.20 Release Notes

This chapter describes new features available in FinishLynx 7.20, since the release of FinishLynx 7.10.

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General New Features

New installer

FinishLynx 7.20 features a brand new, smaller, installer.

➤ **To install FinishLynx 7.20:**

- 1 Double-click the executable installation file, **FinishLynx-7.20.exe**.
- 2 Follow the steps on the **FinishLynx Setup** wizard to complete the installation.

Note: The new FinishLynx installer checks for the file **FinishLynx-Samples.exe** in the same directory as the FinishLynx installer. If *FinishLynx-Samples.exe* is present, a checkbox on the last page of the installer is enabled. Check this box to run *FinishLynx-Samples.exe*, which installs several sample events for you to practice with.

German language supported

FinishLynx has a new German language file, **de_DE.lng**.

➤ **To select a new language file:**

- 1 Click **File | Options...**. The **Options** dialog appears.
- 2 Click to select the new language file from the **Language:** drop-down list at the bottom of the dialog.
- 3 Close FinishLynx. The next time that you run FinishLynx, it displays using the language file that you just selected.

New scoreboard script

FinishLynx now supports Adaptive Products scoreboards with the script, **Adaptive.lss**.

➤ **To select a new scoreboard script:**

- 1 Click **Scoreboard | Options...** from the Menu bar. The **Scoreboard | Options** dialog appears.
- 2 Click the **New** button to activate the Scoreboard settings.

- 3 From the **Script**: drop-down list, click to select a scoreboard script. FinishLynx automatically populates the settings for that dialog.
- 4 Click **Ok**.

Eraton wind file renamed

The wind file, **ERATON.lss**, replaces the old file, *ERATON_Wind.lss*.

Ability to pause results options to scoreboards

FinishLynx now allows you to pause the results output to scoreboards. This can be used, for example, to prevent any results from being displayed on the scoreboard until they have been certified or double-checked by a race official.

➤ **To pause the results output to scoreboards:**

- 1 Click **Scoreboard** from the main menu.
- 2 Click to select **Hold results** from the drop-down menu.
- 3 Once results have been paused, and you want to then send results, click **Scoreboard | Display results**.

➤ **Hidden setting available:**

There is a hidden setting available, **\Scoreboards\ResultsReleased**, that controls whether results start out paused or not.

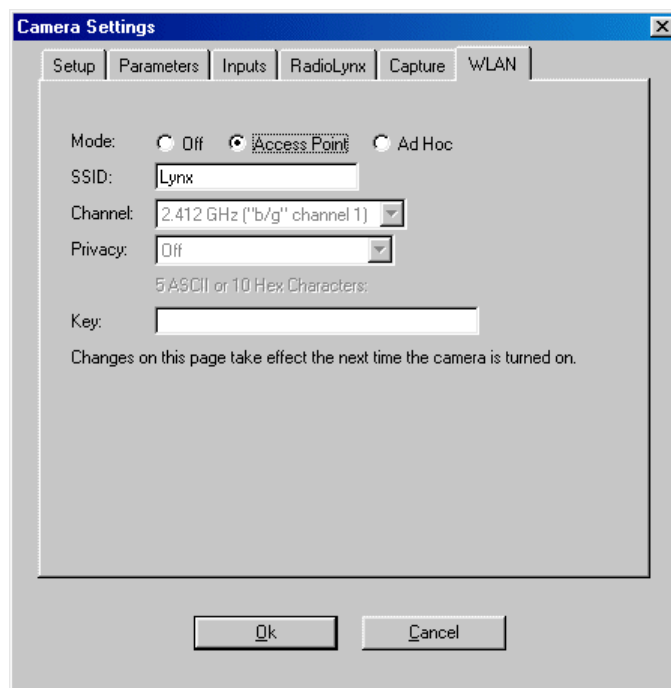
- The default value **1** means that the paused state will not change when an event gets sent to the scoreboard. It remains at the value you previously set it to. When set to 1, the initial state when FinishLynx starts up is *released*.
- The value **0** means that events start in the *paused* state.
- The value **2** means that events start in the *released* state.

WEP support for wireless cameras

Wireless EtherLynx cameras now have WEP support.

➤ **To enable wireless EtherLynx camera WEP support:**

- 1 Contact Lynx System Developers, Inc. to obtain a **Camera Boot Monitor Upgrade**.
- 2 In FinishLynx, go to the **Camera Settings | WLAN** tab.
- 3 Once the boot monitor is upgraded, you can enter the WEP mode and key value on the WLAN tab.



Important: You must run FinishLynx 7.20 or later with a WEP-enabled EtherLynx camera if you intend to use WEP support, otherwise, the camera does not boot properly.

Ability to zoom and scroll in align mode

You can now zoom and scroll an image when you are in FinishLynx's align mode.

When you first align a camera, it starts at *Zoom 100%*. If you change the zoom level and/or scroll position, the Hardware Control window remembers those settings until you select a different camera, when it reverts back to *Zoom 100%* and *scroll offset 0*.

➤ **To zoom and scroll when aligning a camera:**

Click **Image** from the menu bar, and then click to select from the drop-down menu either:

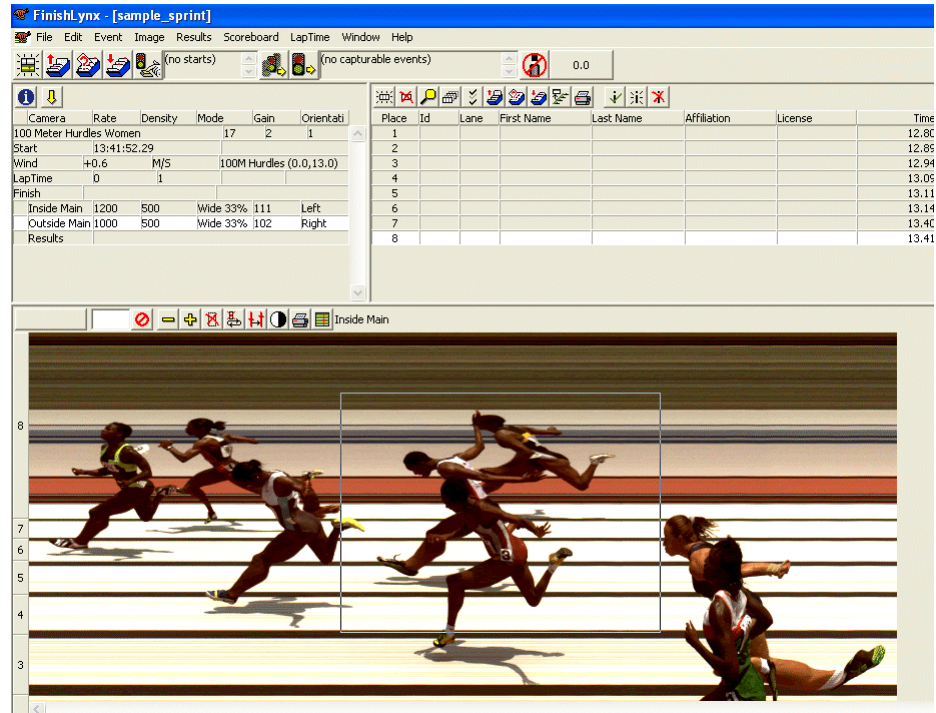
- **Zoom out**
- **Zoom in**, or
- **Scroll new image**.

New size selection box available

You can make a size selection box appear over a FinishLynx image.

➤ **To enable the size selection box:**

Hold down the **Shift** key while **right-clicking** on a FinishLynx image. The size selection box appears.



➤ **Notes:**

- You can move the box around using the arrow keys on your keyboard.
- The default size of the selection box is: 320 x 240 pixels.
- You can change this default size by accessing the hidden settings **\Event\Image\Selection\FixedWidth** and **\Event\Image\Selection\FixedHeight**. If you change the size selection box dimensions, they should be evenly divisible at least by 4, or more if you plan to use the size selection box at zoom levels below 25%. For example, if you want to use the fixed selection box at 1/16 zoom (zoom 6.25%), then the dimensions should be evenly divisible by 16.

New IdentiLynx Features

Greater support for IdentiLynx cameras

IdentiLynx cameras now enjoy greater FinishLynx support.

FinishLynx now opens a command channel to the IdentiLynx camera that is used to set parameters and receive status. The status updates include the current AGC gain setting, which is updated every 3 seconds. This also allows the detection of missing IdentiLynx cameras, which causes the camera line to go red. As with EtherLynx cameras, either re-aligning the camera or updating the settings enables the camera to work again.

Note that if communication is temporarily interrupted, as opposed to the camera powering off and on, and the camera connection indicator goes red, you may need to wait for a minute or two before reviving it.

You can now control several settings through FinishLynx, including:

- **Quality:** the standard jpeg quality setting. It has a range of 8-92.
- **Gamma:** works like it does for EtherLynx cameras, except there is an expanded range, starting with a shutter speed of 1/30.
- **Density:** you select density, which is image height, and FinishLynx automatically chooses the image width to maintain the sensor's aspect ratio.
- **Shutter speed.**
- **AGC or Manual gain:** the AGC has a frequency ranging from 1-15, and a brightness ranging from 1 - 100.

Leader and trailer supported

Leader and trailer features of the FinishLynx image are supported by IdentiLynx cameras, to a maximum value for each of *15 frames*.

Maximum FPS support

The IQEye 511 model of IdentiLynx now has maximum frames per second support. Depending on the current Density/Mode combination, the Rate field indicates the current maximum possible frame rate, which is either 15, 20, or 30 frames per second.

Note: It is possible to not actually enter the frame rate, depending on how the current conditions and settings affect the compression ratio. In particular, if you set the compression quality very high (80 or 85 plus), the frames do not compress much, and the data rate exceeds the camera's capability, causing frames to be dropped.

ACM and Photo Eye capture supported

You can now use **ACM** or a **Photo Eye** to capture FinishLynx image using an IdentiLynx camera.

➤ **How it works:**

If you enable either ACM or Photo Eye capture for an IdentiLynx camera, then when an EtherLynx camera with the same type of capture enabled is actively capturing, the IdentiLynx camera also captures.

All EtherLynx cameras with the same type of capture enabled are read together to decide when the IdentiLynx camera should capture. For instance, if you have two EtherLynx and one IdentiLynx and all are set to ACM, then the IdentiLynx captures when either one (or both) of the EtherLynx cameras are capturing.

Toolbar control for images

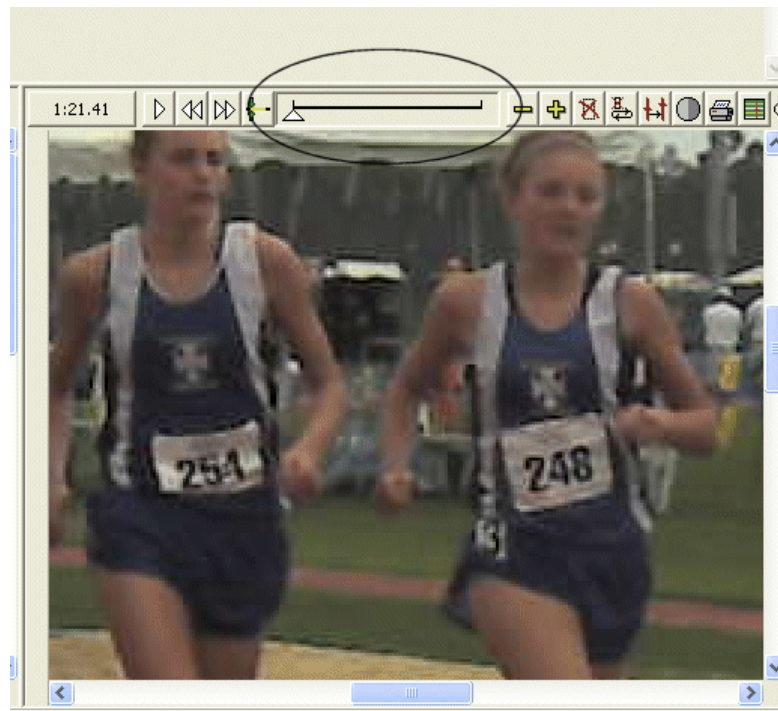
Now there is a video slider toolbar control for IdentiLynx images.

➤ **To operate the video slider:**

Click anywhere on the slider, and the video jumps there. If you click and hold down the mouse and move it around, then the slider and the image follow.

When you make a frame selection, the corresponding portion of the video slider bar turns *yellow*. When the current frame is part of the selection, the slider mark is yellow; otherwise, it is white. When dragging the mark, it is always white.

- Holding down the **Ctrl** key while simultaneously clicking the **Play** button allows you to play just the selected portion of the video.
- Holding down the **Ctrl** and **Shift** keys while simultaneously clicking the **Play** button allows you to repeatedly play the selected portion of the video.
- Holding down the **Shift** key while simultaneously clicking the **Play** button allows you to repeatedly play the entire video.



Ability to select frames in images




You can now select frames in IdentiLynx images.

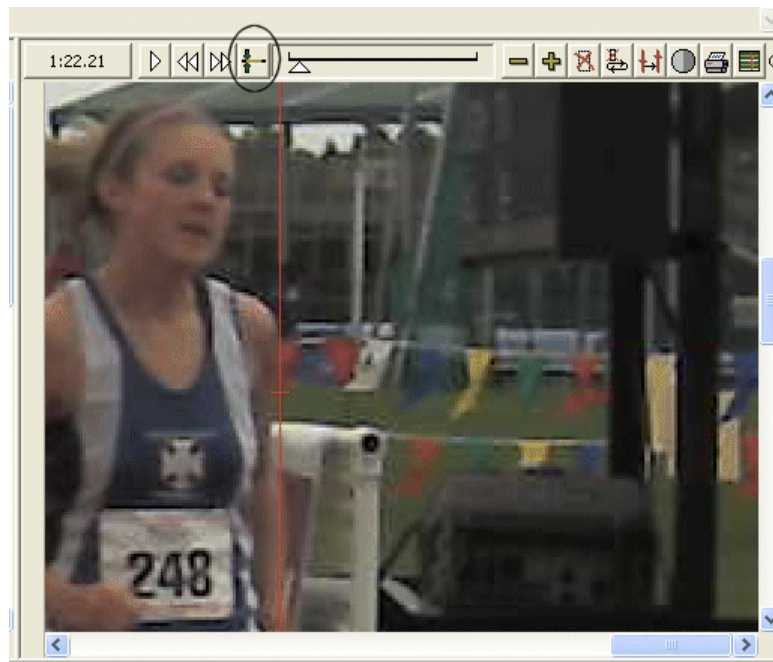
➤ **To do this:**

- 1 With a FinishLynx image displayed, click on the start frame.
- 2 Click **Image | Mark start frame** from the menu bar.
- 3 Click on the end frame.
- 4 Click **Image | Mark end frame**.
- 5 Now you can either crop the selection or *export it to a video file* (see "Ability to export image clips to AVI files").
- 6 To clear the selection, click **Image | Clear frame selection**.

➤ **Note:**

You can also click the icons available above the IdentiLynx image.

- Mark start frame 
- Mark end frame 
- Clear frame selection 



Ability to export image clips to AVI files

You can export Identilynx image clips to AVI files, which can be played by *Microsoft Windows Media Player* or *QuickTime*.

You can either select a range of frames to export, or, if no selection is made, you can export the entire sequence of frames.

➤ **To export frame/s to AVI files:**

- 1** Click **Image | Export video...**. The **Save As** dialog appears.
- 2** Navigate to where you want to save the AVI file.
- 3** Click **Save**.

Note: Windows Media Player does not support AVI videos larger than 2048 pixels wide. This does not affect the IQEye 511 Identilynx camera, which has a maximum width of 1280.

CHAPTER 6

FinishLynx 7.10 Release Notes

This chapter describes new features available in FinishLynx 7.10, since the release of FinishLynx 7.00.

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IdentiLynx camera supported

IdentiLynx is an Ethernet based, full-frame digital video camera that, when combined with any EtherLynx line-scan photofinish camera, produces an integrated photofinish solution that maximizes the functionality of each technology.

The outputs from the two types of cameras are time synchronized, so that you can move the cursor in the photofinish window and watch the video jump to the same moment in time, helping you identify race finishers.

➤ **Notes:**

- IdentiLynx does *not* currently support the ACM Plug-in or photo eye capture. It supports button or timed capture only.
- Use IdentiLynx only with 100BT or better hubs and switches, and computers with 100BT ports.
- IdentiLynx cameras do not currently support "redlining," that is, indication in FinishLynx that contact has been lost.
- Unlike FinishLynx cameras, IdentiLynx cameras use varifocal, *not zoom*, **CS-mount**, *not C-mount*, lenses. Varifocal means that the lenses do *not* hold their focus through the zoom range. Therefore, you need to refocus if you change the zoom. Also, *do not* use any C-mount lenses from Lynx cameras unless you have the appropriate adaptor for a CS-mount.
- There are some default camera settings that are not yet exposed to the FinishLynx user interface, for example, shutter speed and JPEG quality. For some applications, particularly cycling, you might need to change these settings. To do so, boot the camera in FinishLynx first, and then browse to the camera's IP address using a standard web browser. The username is **[root]** and password is **[system]**.

Improve disk throughput while capturing

The amount of data that can be transferred while capturing image has been greatly improved in FinishLynx 7.10.

Two new language files included

FinishLynx now has Finnish, **fi_FI.lng**, and Italian, **it_IT.lng**, language files.

➤ **To select a new language file setting:**

- 1 Click **File | Options...**. The **Options** dialog appears.
- 2 Click to select the new language file from the **Language:** drop-down list at the bottom of the dialog.
- 3 Close FinishLynx. The next time that you run FinishLynx, it displays using the language file that you just selected.

TimeTronics scoreboard supported

FinishLynx now supports the TimeTronics scoreboard with the script, **Timetronics.lss**.

➤ **To select a new scoreboard script:**

- 1 Click **Scoreboard | Options...** from the Menu bar. The **Scoreboard | Options** dialog appears.
- 2 Click the **New** button to activate the Scoreboard settings.
- 3 From the **Script:** drop-down list, click to select a scoreboard script. FinishLynx automatically populates the settings for that dialog.
- 4 Click **Ok**.

Hidden setting allows automatic OS detection

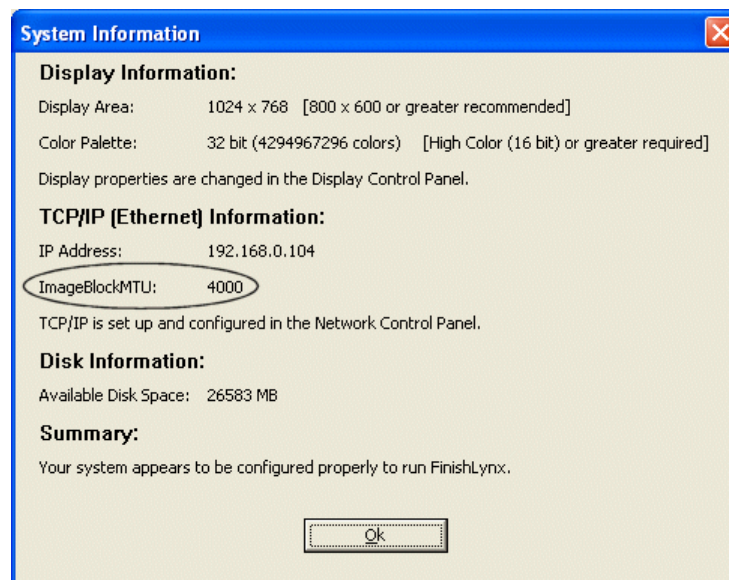
The **ImageBlockMTU** hidden setting now defaults to 0, which allows FinishLynx to detect the operating system and use an appropriate value.

For Microsoft Windows Vista, 1464 is used. For all other operating systems, 4000, the previous default, is used. You can change this setting on the fly.

The currently used ImageBlockMTU value is now displayed in the **System Information Dialog**. If the ImageBlockMTU setting is 0, then the value actually in use, 1464 or 4000, is displayed.

➤ **To access the System Information Dialog:**

Click **Help** from the Menu bar and then click **System info...** The System Information dialog appears.



CHAPTER 7

FinishLynx 7.00 Release Notes

This chapter describes new features available in FinishLynx 7.00, since the release of FinishLynx 6.00.

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General New Features

Synchronize TOD feature (new)

There is a new feature called **Synchronize TOD...** You can use this to synchronize the EtherLynx camera Time Of Day time to another source. You tell FinishLynx what time it *should* have been when a certain event occurred; for example, a start signal or an image frame time.

➤ **To access the Synchronize TOD feature:**

- 1 Click to select **Event** from the Menu bar.
- 2 Click to select **Synchronize TOD...** A dialog appears.
 - If you are synchronizing to a *start signal*, select the start in the main toolbar and then run Synchronize TOD.
 - If you are synchronizing to an *image*, then you need to:
 1. Create an event.
 2. Capture image.
 3. Select the frame to synchronize to.
 4. Run Synchronize TOD.

When a start *and* image synchronized source are both present, you can choose which you want to use in the dialog box. Once Synchronize TOD is run, all previously received starts are removed, and all previously capturable events are not capturable.

Note to NASCAR version users: This is an enhanced version of the **Set Timer...** command, which is no longer available.

High COM port numbers now supported

High COM port numbers are now supported. FinishLynx is now able to access ports up to COM16, and also looks for non-contiguous ports, up to COM128.

Ability to override default start sound

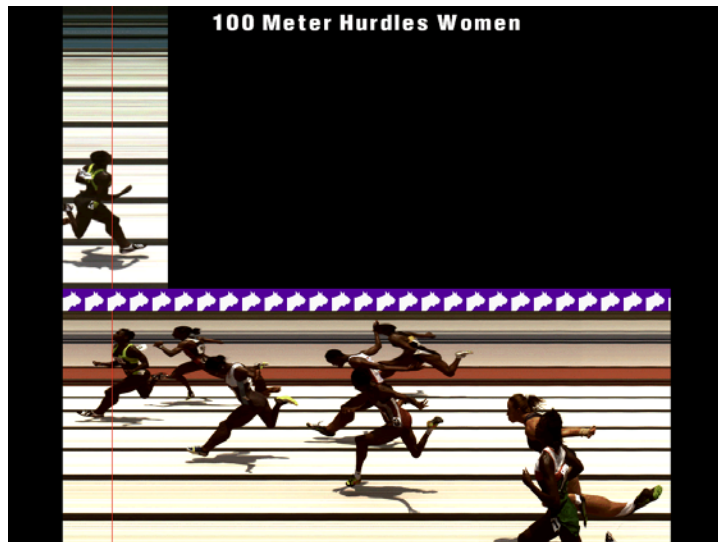
You can override the default start sound by putting a **FinishLynxStart.wav** file in your FinishLynx directory.

New full screen two mode

There is a new **Full screen two** mode that displays two images at once.

➤ **Accessing Full screen two mode:**

Click **Image** from the Menu bar, and then click to select **Full screen mode two**. Both images appear, separated by a default barrier.



When using this mode, the primary, or bottom, image is chosen. This is the current, or last selected, image pane. The secondary, or top, image is the first image found that is not the primary image.

The secondary image is displayed at a zoom level that matches its frame rate to that of the primary image, so that objects in both images will be the same width. The hairline in the secondary image is displayed at the same time as the hairline in the primary image. Also, the secondary image is shifted horizontally, so that the hairlines line up.

Each image is allocated vertical screen real estate, proportional to its height. There is a special file, **FullScreen.tga**, which, if present in the Lynx directory, is drawn repeatedly across the screen where the two images meet. The FinishLynx installer includes a sample FullScreen.tga, but can be replaced with any file, or deleted if you do not want any banner displayed.

➤ **Controlling images in full screen mode:**

Once full screen mode is active, you can control various aspects of the display.

- The arrow keys move the images left, right, up, and down.
- Holding down the **1** key while subsequently holding down an arrow key moves the top image only.
- Holding down the **2** key while subsequently holding down an arrow key moves the bottom image only.
- Holding down the **0** key allows you to again control both images.
- Press the **PgUp** and **PgDn** (page up and page down) keys to move the separation between the two images, giving more space to one and less to the other, if both images do not fit entirely on screen vertically.

Note: When controlling just one image, you can only move it up or down, because the hairlines must remain lined up.

➤ **To exit full screen mode:**

Press the **Esc** (escape) key.

New Image: Set sub-menu

Set is a new sub-menu in the Image menu. It allows you to access several image options, including:

- Set white balance, and
- Set photo eye balance, etc.

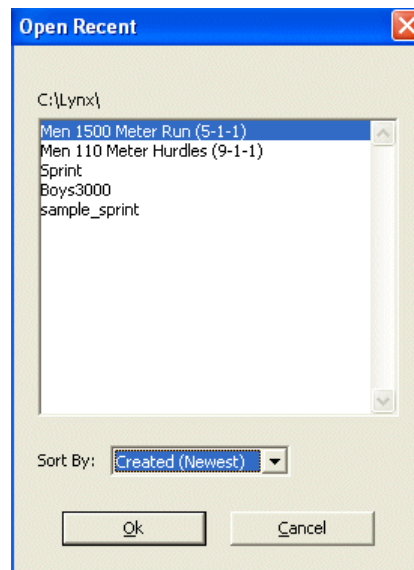
➤ **To access the Set sub-menu:**

Click **Image** from the menu bar and then select **Set**. The Set sub-menu appears.

New Open recent feature

Click **File** from the Menu bar and then click to select **Open recent...**. A dialog opens that lists the events in the current directory, and allows you to sort by:

- name [**Name (A to Z)** or **Name (Z to A)**]
- creation time [**Created (Oldest)** or **Created (Newest)**], or
- modification time [**Changed (Oldest)** or **Changed (Newest)**].



Note: The current directory is the last directory that an event was either opened in, using **File | Open**, or saved in, using **File | Save As**.

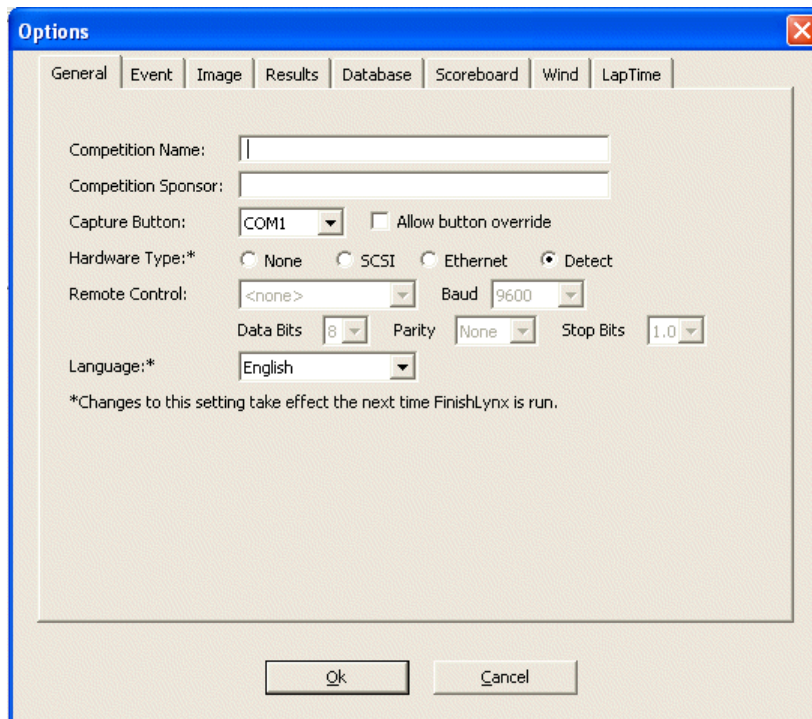
Delta time field uses cumulative split time

The Delta time field now uses the cumulative split time, until at least one result has an official time.

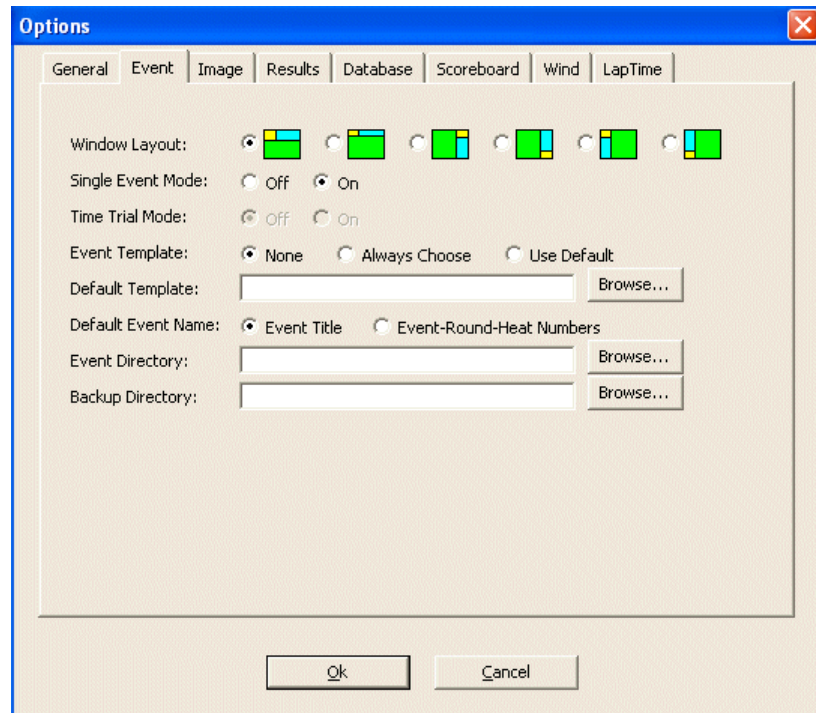
Options dialog has changed

The **File | Options...** dialog has changed as follows:

- The **Hardware** tab has been eliminated. The options that were available on the Hardware tab have been moved to the **General** tab.



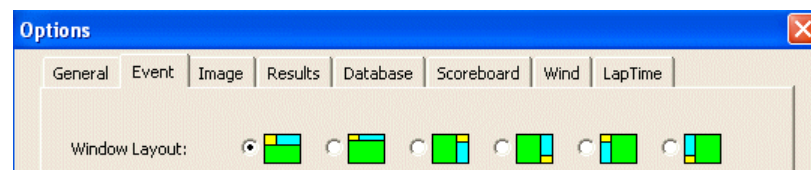
- A new **Event** tab contains all of the settings on the General tab that are event-related.



New Event tab setting

Access the **Options...** dialog and then click the new **Event** tab.

You can now control the arrangement of the event window. The default choice is the standard FinishLynx layout, and there are five alternate choices.



Note: If you change any of the layouts through the hidden settings dialog, the layout is checked for errors, and the icon for that layout is updated. The layout icons do not normally contain any red color, but if a layout has errors in it, then the icon contains red in those portions of the screen that were rejected or left unused by the layout parser.

New Language Files

German language file updated

The German language file has been updated.

➤ ***To use the German language file setting:***

- 1 Click **File | Options...**. The **Options** dialog appears.
- 2 Click to select **German** from the **Language:** drop-down list at the bottom of the dialog.
- 3 Close FinishLynx. The next time that you run FinishLynx, it displays using the German language file that you just selected.

New Russian language file added

A new Russian language file has been added.

➤ ***To use the Russian language file setting:***

- 1 Click **File | Options...**. The **Options** dialog appears.
- 2 Click to select **Russian** from the **Language:** drop-down list at the bottom of the dialog.
- 3 Close FinishLynx. The next time that you run FinishLynx, it displays using the Russian language file that you just selected.

Photo Eye Enhancements

Second photo eye input supported

FinishLynx now supports the second photo eye input on the EtherLynx 5L100, 5L200, and 5L300 (EtherLynx Professional) cameras. This allows you to use any combination of both external photo eyes, and the internal photo eye.

➤ **Notes:**

- The photo eye masking feature in the Scoreboard menu also gives separate access to each of these photo eyes.
- Photo eye capture still uses the original photo eye input, which is now called the **External A** photo eye.


Important: Accessing this port requires a new C-Box. Contact Lynx for more information.

New photo eye capture method

There is a new photo eye capture method, allowing you to simply select all of the capture methods that you want active, including:

- Manual
- Timed
- Automatic, and/or
- Photo Eye.

➤ **To activate the Manual and Automatic Capture methods:**

- 1 Click . The **Camera Settings** dialog appears.
- 2 Click the **Capture** tab.
- 3 Click to check **Manual** and **Automatic**.

Note: Unchecking all options and then clicking Ok defaults FinishLynx to Manual capture.

➤ **To activate the Timed capture method:**

- 1 Click . The **Camera Settings** dialog appears.

- 2 Click to uncheck all options to activate the Timed capture selection, and then click to check Timed capture.

Note: If you check Manual capture when Timed capture is checked, then Timed capture becomes unchecked and deactivates. Manual and Timed capture are mutually exclusive.

➤ **About the new Photo Eye capture method:**

The new Photo Eye capture can be combined with Automatic and/or Manual captures, if you want. When the photo eye beam is broken, capture starts the Leader frames before the current frame. When the beam ceases to be broken, capture stops the Trailer frames after the current frame.

Note: When the photo eye triggers capture to start, capture remains on for at least the Photo Eye Debounce period before the photo eye signal is checked to see if capture should stop. If you are getting too long of a capture period for the size of your object, then it could be that the debounce is too long. You should not set the debounce any shorter than it takes for the photo eye signal to stop ringing.

Photo eye capture allowed without ACM Plug-in

Photo eye capture is now allowed without the ACM Plug-in installed.

Ability to use photo eye as gun signal

Now, selecting **Internal** for the Gun Sensor uses the virtual photo eye as your gun signal.

When set to Internal, the values set in the photo eye area are used for threshold, top, bottom, size, and mask. The photo eye offset is *not* used; however, the gun sensor offset, if set, *is* used.

If you have Gun Sensor set to Internal, then all applicable fields, even those in the photo eye area, are enabled, even if you disable all photo eye sources.

Scoreboard Enhancements

Two new Nevco scripts

The previous four Nevco scripts are replaced with two new ones:

- **Nevco_123.Iss** and
- **Nevco_860.Iss**.

➤ **To select a new scoreboard script:**

- 1 Click **Scoreboard | Options...** from the Menu bar. The **Scoreboard | Options** dialog appears.
- 2 Click the **New** button to activate the Scoreboard settings.
- 3 From the **Script:** drop-down list, click to select a scoreboard script. FinishLynx automatically populates the settings for that dialog.
- 4 Click **Ok**.

New Daktronics script

A new Daktronics script, **Powertime.Iss**, has been added.

➤ **To select a new scoreboard script:**

- 1 Click **Scoreboard | Options...** from the Menu bar. The **Scoreboard | Options** dialog appears.
- 2 Click the **New** button to activate the Scoreboard settings.
- 3 From the **Script:** drop-down list, click to select a scoreboard script. FinishLynx automatically populates the settings for that dialog.
- 4 Click **Ok**.

Fixed width font option available

By default, the Scoreboard Message dialog now has a checkbox that is selected so that text is displayed in a fixed width font.

If you want to send a scoreboard message in a language that is not part of a fixed width font, such as Japanese, Korean, Chinese, Arabic, or Russian, click to *uncheck* that option.

➤ **To access the Scoreboard Message dialog:**

Click **Scoreboard** from the Menu bar, and then select **Edit message...** The **Scoreboard Message** dialog appears. The **Use Fixed Width Font** checkbox is at the lower left corner of the dialog.

TimeNoDelay now set per scoreboard

TimeNoDelay is now set per-scoreboard rather than globally.

Instead of setting `\Scoreboards\TimeNoDelay`, you now need to set `\Scoreboards\n\TimeNoDelay`, where **n** is the scoreboard number, for each scoreboard that you do not want to use the default value of 1.

TimeArmed and TimePaused features supported

Scoreboard scripts now support two new sections, **TimeArmed** and **TimePaused**.

TimeArmed reverts to **TimeRunning** if not present, and **TimePaused** reverts to **TimeStopped** if not present.

These new sections allow greater flexibility in choosing what to send when, and are particularly helpful when triggering objects to appear in ResultTV.

➤ **Example of application of new scoreboard script sections:**

If you want to trigger a logo to appear when the race is over, but not when displaying intermediate times, you can use separate **TimePaused** and **TimeStopped** sections. Each section sends the same data, but only the **TimeStopped** section includes the command to trigger the ResultTV object to appear.

Stop on-screen time option available

There is a new option in the Scoreboard drop-down list, **Stop on-screen time**, that, if selected, causes the on-screen running time to stop when the scoreboard is in either *Paused* or *Finished* mode.

- **To access Stop on-screen time:**
 - 1** Click **Scoreboard** from the Menu bar.
 - 2** Click to select **Stop on-screen time**.

Wind Gauge Enhancements

New script added

ERATON_wind.lss is included, which works with any of the FinishLynx supported wind gauges.

Manually entered wind readings appear in LIF file

Manually entered wind readings are now indicated in the LIF file by **"(Manual)"** appearing after the wind value, in the same field.

This string is found in **\Strings\Database\LIF\WindManual**. You can disable this feature by setting the value to an empty string.

Seiko Timing PC wind gauge improvements

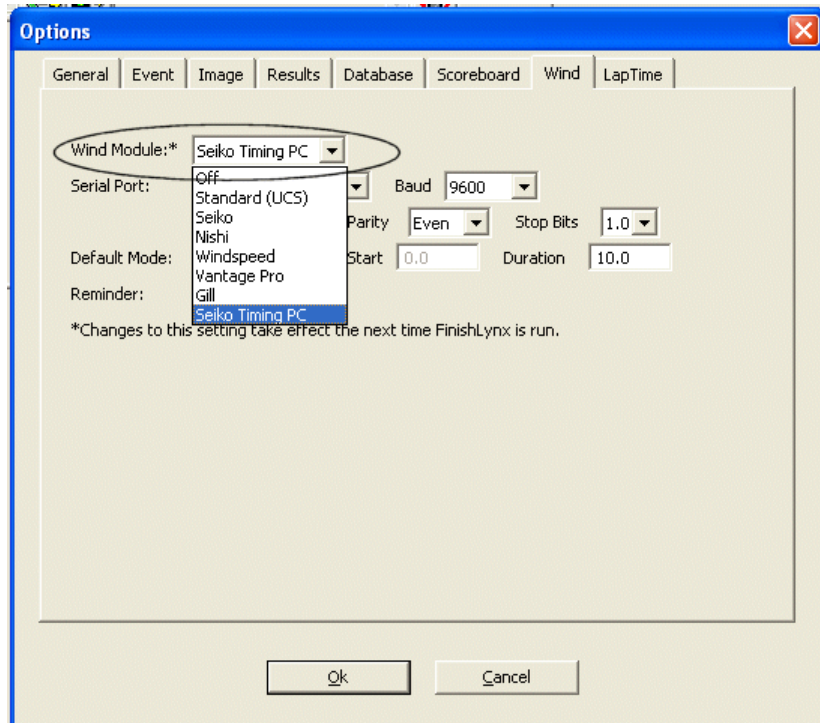
The **Seiko Timing PC** wind gauge works with the **Seiko data simulator**.

Additionally, the Seiko Timing PC wind gauge reads the reaction time data that is part of the data stream. When the reaction time data is received, it is inserted into the current event.

➤ ***To configure FinishLynx's wind gauge settings:***

- 1 Click **File** from the Menu bar and then select **Options...** The Options dialog appears.

- 2 Click the **Wind** tab to display the Wind dialog.
- 3 Click **Wind Module:*** and then select the wind gauge from the drop-down list. FinishLynx is automatically populated with the settings for the wind gauge that you selected from the list.



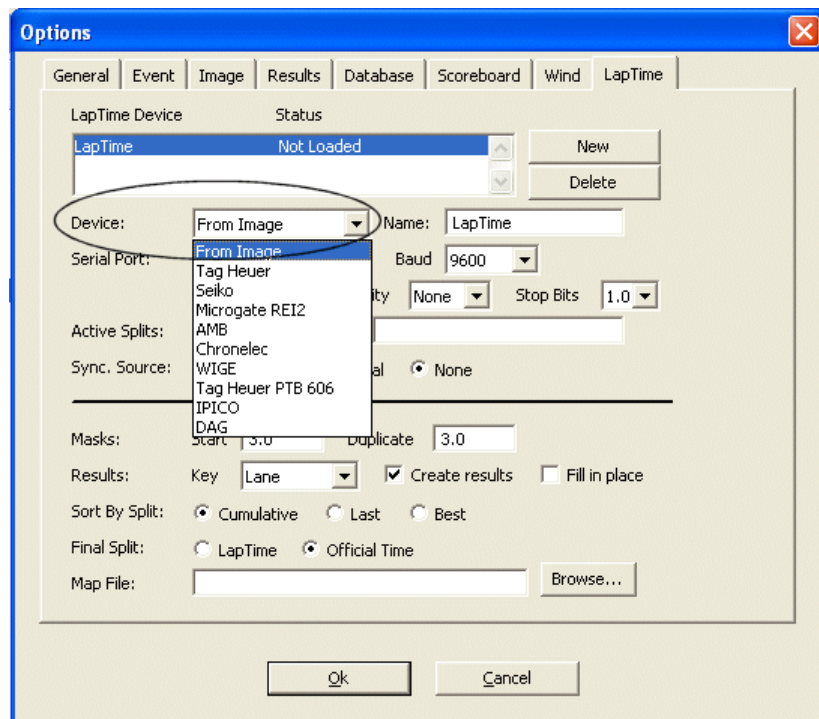
- 4 Click **Ok** and then restart FinishLynx.

LapTime Enhancements

New LapTime devices supported

Selecting a LapTime device

- 1 Click **File** from the Menu bar and then select **Options....** The **Options** dialog appears.
- 2 Click the **LapTime** tab. The LapTime dialog appears.
- 3 Click the **New** button to activate a LapTime device.
- 4 Click **Device:** to display a drop-down list with available LapTime devices.



- 5 Click to select a device from the list. FinishLynx is automatically populated with the LapTime device's correct settings.
- 6 Click **Ok** to return to the FinishLynx main screen.

IPICO LapTime device

A new LapTime device, **IPICO**, is supported.

There is a hidden setting, `\LapTime\IPICO\Suffix`, that defines which kind of IPICO event FinishLynx uses.

- The default is **LS**, for *Last Seen*.
- It can also be **FS**, for *First Seen*.

Note: Be sure to capitalize these letters, because they must match exactly what comes from the LapTimer. As an option, you can make this field empty and use the "raw" values that come on port 10000. You should connect to the device on port 10200, the "first seen/last seen" port. FinishLynx sets this as the default field when you select IPICO.

Tag Heuer PTB 606 LapTime device

Support for the **Tag Heuer PTB 606 LapTimer** has been added.

There are now separate options for the *Tag Heuer PTB 605* and for the *Tag Heuer PTB 606*.

Note: The Tag Heuer PTB 606 is only supported with **Internal Sync**. When you select the 606, the other sync options are disabled.

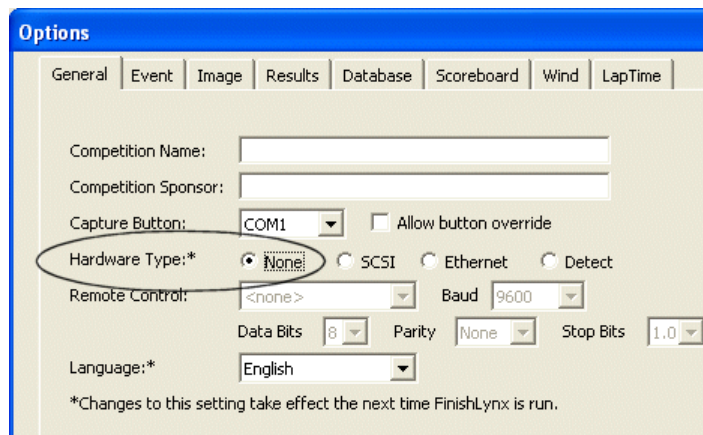
DAG LapTime device

A new LapTime device, **DAG**, is supported.

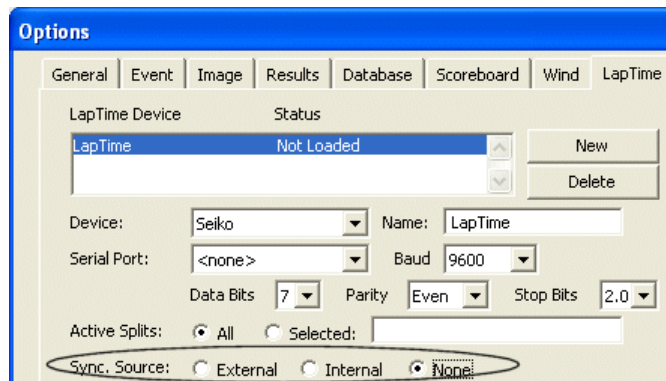
Ability to use manual start with any LapTime device

You can now use manual start with any LapTime device. To configure any LapTime device to use a manual start:

- 1 Click **File** from the Menu bar and then select **Options...**. The Options dialogue appears, with the **General** tab dialogue displayed by default.
- 2 From **Hardware Type:***, click to select the **None** radio button.



- 3 Click the **LapTime** tab. The LapTime dialogue appears.
- 4 From **Sync. Source:**, click to select the **None** radio button.



- 5 Click **OK** to return to the FinishLynx main screen.

Ability for final split to go into results time field

You can now set the hidden setting `\LapTime\FillInTime` to a value of **2** to have the final split time always go into the results time field, even when using an EtherLynx camera.

- A value of **1**, still the default, does this only when **Hardware Type** is set to **None**.
- A value of **0** never does it.

New hidden settings for AMB LapTime devices

There are two new hidden settings for AMB LapTime devices:

- `\LapTime\AMB\IdField`, and
- `\LapTime\AMB\IdStrip`.

The **IdField** value specifies which field in the record should be used by FinishLynx to identify the tag. The default is 3, which is the "internal" ID that has always been used. This can be changed to 8 to use the "external" ID printed on the outside of tags.

The **IdStrip** value is a string of characters that are removed from the ID string. This defaults to an empty string, as the "internal" ID has no characters that should be stripped.

Note: When using the "external" ID, we suggest that you strip the single quote characters that surround the ID and the dash that is part of the ID. To do this, just type "'-", without the double quotes, in the IdStrip field.

EtherLynx Camera Additions and Enhancements

Introducing the new EtherLynx Fusion camera

FinishLynx supports the new **EtherLynx Fusion** camera, **5L400**.

Rate and density fields show max value

The rate and density fields in the Hardware Control Window now show the maximum allowed value.

This is mainly for the benefit of the new EtherLynx Fusion 5L400 camera, since the max rate and density are interdependent.

Full sensor resolution now supported

The full sensor resolution is now supported in the EtherLynx Professional 5L300 zoom modes.

- Rather than 2000 in Zoom 150, you can use **2038** pixels.
- Rather than 4000 in Zoom 300, you can use **4078** pixels.

Frame Offset Option available in EtherLynx Professional

A new Hardware Option, **5LFO**, or **Frame Offset Option**, is available for optional purchase to use with the EtherLynx Professional 5L300 camera.

5LFO allows the active area of the sensor to be arbitrarily chosen, rather than always centered. You can specify this offset in the camera dialog using the new **Frame Offset** setting, just below the **Frame Density** setting.

For an EtherLynx Professional 5L300 camera with 5LFO installed, select **Custom** and type in any valid value. When Custom is selected, a range appears showing the legal values.

An alternate way of setting the offset and density is by taking a picture, selecting the vertical portion of the image that you want to capture, and then selecting the new **Image | Set | Capture area** function.

It is not legal to change the offset and density of a camera in an event after capture has occurred. Therefore, the changes are made to the Hardware Control Window camera object and the current event is closed. If the event was not saved, you are warned to that effect. The event is closed automatically, because if you enable capture again for that event, the new offset and density settings are suppressed, with the old ones still present in the event.

Note: For any camera except the EtherLynx Professional 5L300, when this option is installed, you can only choose **Center**, which has always been available.

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