Dartfish NotePro
User Guide

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1.1 About NotePro

About tagging

Tagging is a way of making longer videos (match or practice sessions) more useful by identifying the most useful segments.

Historically, reviewing sporting performance on video was a linear process – you play the video and observe the action as it takes place. Of course the fast forward button saves time but finding and replaying important moments in the game or competition essentially remained linear – and slow.

Imagine how useful it would be to be able to mark and label these **events** as the match or practice session happens? You could later jump between them in any order you choose. You could search for specific events by particular outcomes and choose to see related events: "Let me look at all the times our opposition scored" ceases to be a lengthy process of fast forward and play.

This is tagging.

About NotePro

Dartfish's NotePro is a live tagging tool intended for use as the action happens.

1. The user creates his/her button **panel**. There are also options to use one created for you or modify one of the provided panels
2. Start the timer when the game begins
3. Tap the buttons which describe the action as it happens. Panels have different types of tools to create events, add description, identify where the event happened and who was involved.
4. Upload the resulting **Notebook** to **dartfish.tv** - either your own **myDartfish Smart Cloud** or a dartfish.tv **channel**.

At this point the role of NotePro is complete but it is not the end of the process:

5. Import game video (recorded separately - NotePro does not record video) into **myDartfish 360 S** or **Dartfish Champions Software**
6. Also import the Notebook from dartfish.tv. Now you have a tagged video.
7. Tools in the software are used to produce and share match video and highlights video

1.2 The Tagging Panel

The Tagging Panel contains the tools to tag (or create the events index) of a video. It is also used to

➢ Access the **tagging panels** provided with Dartfish
➢ Open panels created by you or sent to you by others
➢ Create or edit new panels.

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The Panels button

The **Panels button** is used to open tagging panels which you have created or those which you have been given. It also gives access to the built-in panels and to create new panels to meet your specific needs (see Creating Tagging Panels).

Tagging panels are saved as files just like Word documents or Excel spreadsheets. In other words, they exist independently of Dartfish software, they can be saved and organized using Windows file management, and can be attached to emails to be shared with others.

The Edit button

Opens the **tagging panel editor**. A **tagging panel** must already be open before the **edit button** can be used.

The tagging panel

Although Dartfish tagging panels allow great flexibility and creativity in how they can be used, the tools on them principally have one of three functions:

1. **Event** tools - used to create events by time stamping the event and assigning it a descriptive value
2. **Keyword** tools - used to add additional keywords to events
3. Grouping tools - used to organize other tools into groups; either to improve the layout visually or ergonomically or to confer shared features on the group

Tagging panels can consist of one or more pages, accessed by **tabs**. **Buttons** and tools for use at different times in the tagging process are placed on different pages to improve the ergonomics of the panel.

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Using Notepro during the game

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2   Using Notepro during the game

2.1   Videoless tagging with Note Pro

The **Note Pro module** is available with the TeamPro editons of Dartfish and it provides an alternative tagging method which does not require the presence of video. Instead of time-stamping events by a position in a video, a timer is used.

Note Pro creates a **Notebook** file, the events from which can be imported into a video file using the **Tagging module** OR can be opened in Note Pro to view content and create frequency tables.

In providing videoless tagging, Note Pro fulfills a similar role to the **Dartfish Note** mobile app but with the benefit of the more sophisticated tagging panels of Dartfish.

Opening panels

Your first step is to create or open a tagging panel. Access to tagging panels is described in the topic The Tagging Panel. Creation of a tagging panel is described in the topic Create a new panel

Defining Notebook properties

Properties such as **file name** and where the Notebook will be located are defined before recording starts, using the Properties panel. See Setting file properties and Selecting a recording location.

Recording events:

Now you are ready to start recording using the following buttons

 Starts the timer. Choose when to start carefully. Particularly if intending to import the Notebook into a video, you should start recording at a moment which will be easily identifiable on the video recording

 Stops the timer

Resumes the timer

The timer must be running in order to use the tagging panel to create events. As you do so, events will appear in the Events List. How to tag is described in the topic Using tagging panels
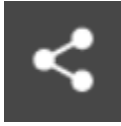
Saving the recording

The Notebook is automatically saved according to the file properties defined before recording is started.

Distributing Notebooks

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Notebooks are saved as files on your PC and these files can be distributed for use by other Dartfish users.

A nice alternative to email or memory stick is to upload to dartfish.tv. To do this click the Share Game button:

Clearing the events list/Starting a new recording

Click the **New Game** button:

2.2 Using tagging panels

Opening panels

Access to tagging panels is described in the topic The Tagging Panel.

Tagging tool and feature summary

Below is a summary of tagging tools that may be found on a tagging panel. However, Dartfish tagging panels are highly variable and versatile, if the use of the tagging panel you use is not obvious it may be necessary to ask for instruction from its creator.

Event button - clicked once to create an **event** with a fixed **duration**. Default color red.
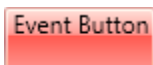
Event Button

Continuous event button - appearance identical to **event buttons** but when clicked, it remains activated until clicked a second time. Used to tag events of unknown **duration** such as possession or phases of play.

Offensive phase   Defensive phase

Keyword button - keyword buttons add **keywords** to **events**. They are not used to create events. Default color blue.
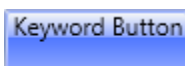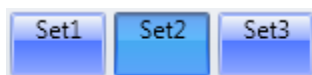
Keyword Button

Persistent keyword button - appearance identical to **keyword buttons** but when clicked, it remains activated until clicked a second time. Used to add a **keyword** to many events. Must be activated before events are created and remains active until clicked a second time.

Text box - a **persistent keyword tool** which adds of a variable keyword to events as they are created.

Match description	French open 2012 fin
Player	Andy Murray
Opponent	Roger Federer

Score panels - a persistent keyword tool which adds the current score to events as they are created.
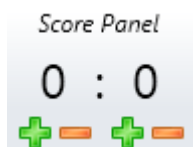
Team manager - Displays a variable set of tagging buttons in a **Team Group Box** or a set of teams and players in a **Player List Selector** according to which team and players are selected. Has buttons to enable addition of teams and players.
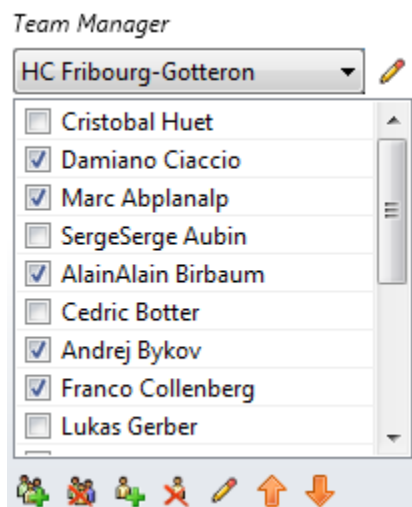
Player List Selector - adds a **persistent keyword** based on the player selected.

Red contestant	GB Taekwondo	Ruebyn Richards
Blue contestant	Switzerland	Paco Cerletti

Tab group box - used to simplify the layout of a panel by grouping related buttons together. Click the tab to see the buttons; often selection of a tab is automated by the action of another button.

Zone tool - records the coordinates of where the image is clicked. Can be either used for event creation or keyword addition.
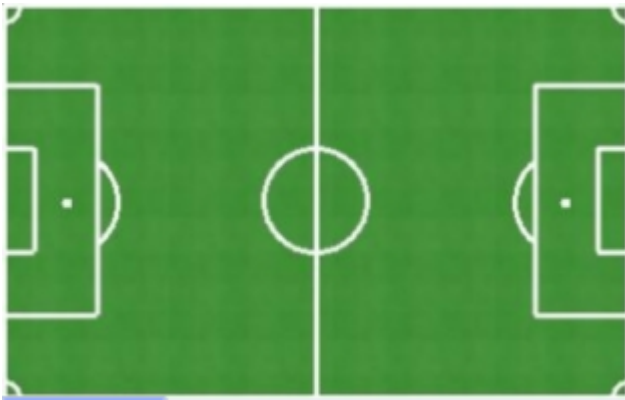
File name template tool - used to set the filename of recordings made during live tagging.

2.3 Using the Team Manager

Adding teams and players

Adding players and teams to the Team Manager is not completed in the tagging panel Editor but after the tagging panel has been created and saved. Buttons at the bottom of the Team Manager allow you to (left to right) add/remove teams and players from the team manager.

You may want to create more than one team if you tag several teams or squads but at least one team must be created before adding players. After adding teams and players, their properties

(such as team/player name) may be altered by clicking the button next to the item to be edited.

Selecting players

Players are selected/deselected by 'ticking' the box next to their name. If the box is ticked, a button representing the player will appear in the team group box linked to this player manager control.

Philippe has been ticked, so…
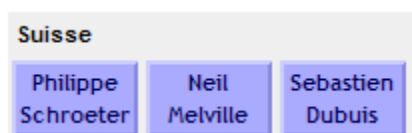
… a button representing him appears in the team group box

Order of players

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Buttons below the **Team Manager** control the order in which players are listed.

The order that players are listed in the **Team Manager** also defines the order that they will appear in the **Team Group Box** and is also the default order for player lists in the **Player List Selector**.

Using other Player Database files

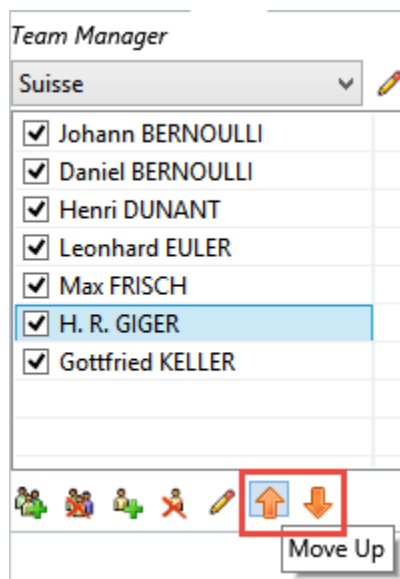When a tagging panel containing a **Team Manager** tool is first saved, a **database** with the same name but the extension '.taggingdb' is created. You can find it in Windows File Explorer, represented by the following icon:

The database is then automatically updated as each team or player is added. Distributing your database for others to use, it is easily done by distributing this file. Other users can then use the file are follows:

1. Open the **tagging panel** in the **Tagging Panel Editor** window
2. Select the tab **Database Editor** at the top of the editor window
3. Click the **Open button** and browse for the tagging database file

2.4   **Using keyboard shortcuts**

Using the keyboard to activate tagging tools can be much more efficient than using the mouse. Buttons which have a **keyboard shortcut** display it below the label; it is used simply by pressing the keys indicated.
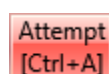
Activating panels to use keyboard shortcuts

Keyboard shortcuts only work when the tagging panel is active. Look for a green line at the top of the panel and if the line is red, click anywhere on the panel to activate it.

Be particularly careful when starting and stopping recording or using the **Play/Pause** controls - clicking anywhere outside the panel will cause tha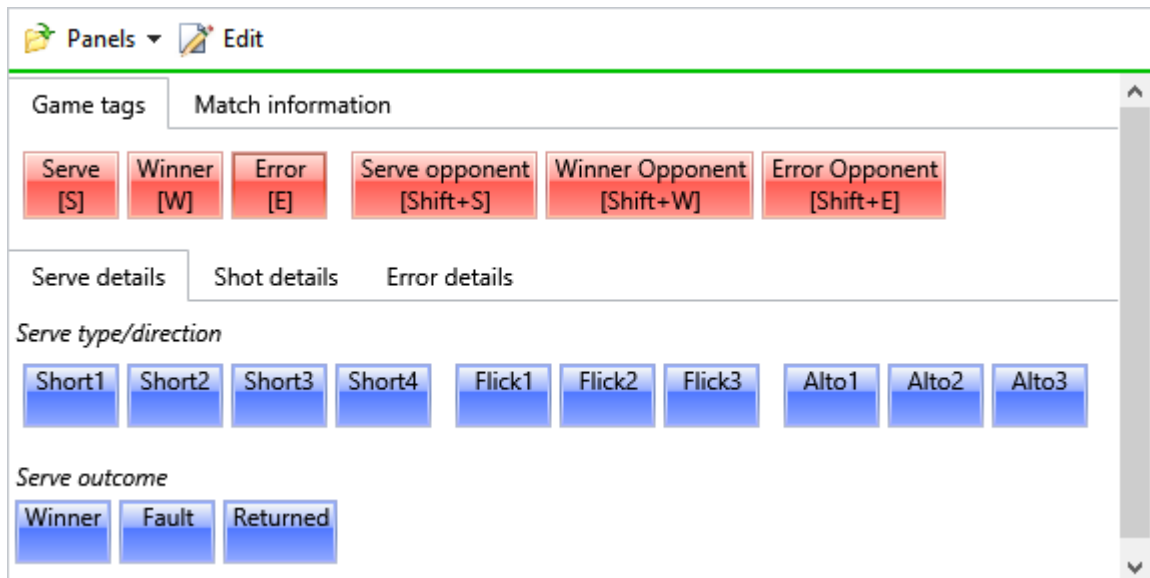t line to turn red again and keyboard shortcuts will not work. The restriction of use of keyboard shortcuts to when the tagging panel has focus allows the use of keyboard shortcuts which might have other functionality in Windows or Dartfish Software.

Score panels can also have keyboard shortcuts but they are not displayed - use the editor to discover whether the score can be updated with a keyboard shortcut or seek advice from the tagging panel's creator.

Hiding shortcut keys from buttons

After memorizing shortcut keys it may be advantageous to remove the display of the shortcut from the buttons label. To do this:

1. Click the **Panels button** at the top of the **tagging panel**
2. Click the option *Show Keyboard Shortcuts* to deselect it
3. Repeat these steps to show shortcuts again

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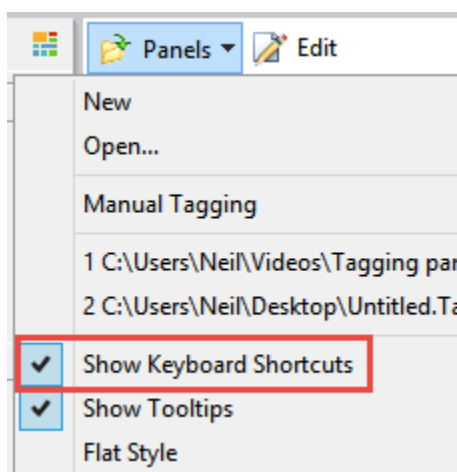
2.5   Using the Game Timer

The game timer functions as a match clock. Start it at the beginning of the game, pause it during breaks in play and stop at the end.

It is used in conjunction with a tagging tool where the **Keyword property** contains a $(GameTime) macro string, For example, a "Shot" button might record the game time when the shot took place.

Displaying the Game Timer

1.   Click the **Panels** button at the top of the tagging panel
2.   Select *Show game timer* from the menu
3.   The **Game Timer** is displayed in the tagging panel toolbar:
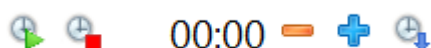
Using the Game Timer

The game timer is a simple stop clock with **Start**, **Pause** and **Stop** capabilities.

However, it does have features whish allow adjustments to the time:

➢   Click the and buttons to increase or decrease the time by one second per click (for example, if you are late to pause the timer during a stoppage in play)
➢   Set a specific time by clicking the **Set** button.
The **Set Game Time** dialog allows you to set the clock to a time of your choosing
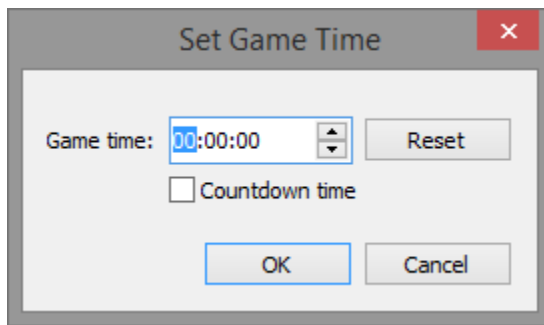
Using a countdown timer

You can also use the Game Timer to show the amount of time remaining in a game or period. To do this:

1. Click the **Set** button
2. Set the **game time** to the total duration of the game or period
3. Select the **Countdown time** check box (see above image)

Limitations

As the Game Timer is a simple stop clock it does have some imitations:

➢ No adjustment for **Preroll**. Whatever is on the clock when a button is clicked is what gets recorded.
➢ No link to video time. If the video **position** is edited, game time values are not adjusted. The methods used to adjust position and duration cannot be used to edit game time.

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Chapter

III

Creating Tagging panels

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3   Creating Tagging panels

3.1   Create a new panel

To create a new **tagging panel**, proceed as follows:

1. Click on the **Panels button** and choose *New* from the menu.
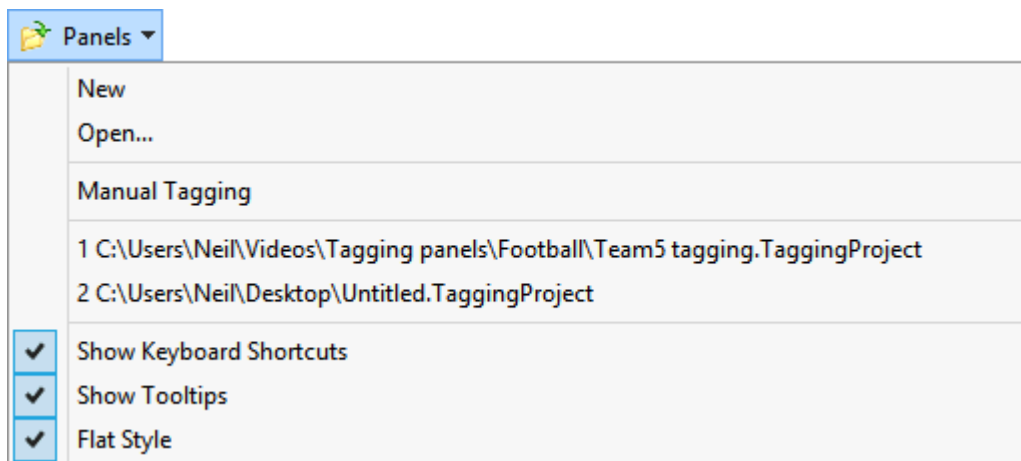
2. Click on the **New Panel** icon

3. Select from the list of new project types. Create a new **Blank Panel** if you wish to start with an empty panel OR base a new panel on one of the built-in tagging panels. This displays the **Tagging Editor window** as shown below

   We recommend starting by using one of the Dartfish built-in tagging panels. Change labels and add/delete buttons as necessary for your sport.

The Tagging Panel Editor
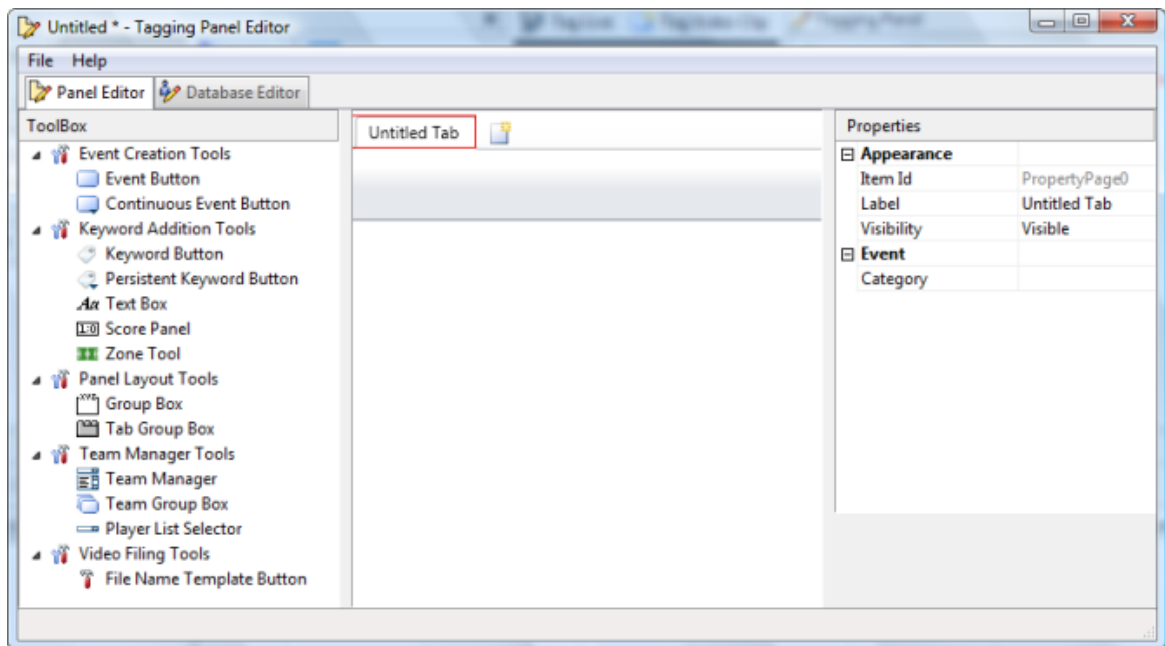
The tagging panel editor has 3 sections, (left to right as displayed above):

1. The **ToolBox** contains buttons and other tools used to create and describe **events**. They are added to your tagging panel by drag and drop.

2. The **Tagging panel editor**. This is where the content and layout of a tagging panel is defined. A new blank tagging panel already contains a **tab group box** allowing you to create a multi-page panel if required.

3. The **Properties** pane. Properties are used to define the appearance and actions of tagging panel tools

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3.2 Planning a tagging panel

Example of a basic **Tagging Panel**:
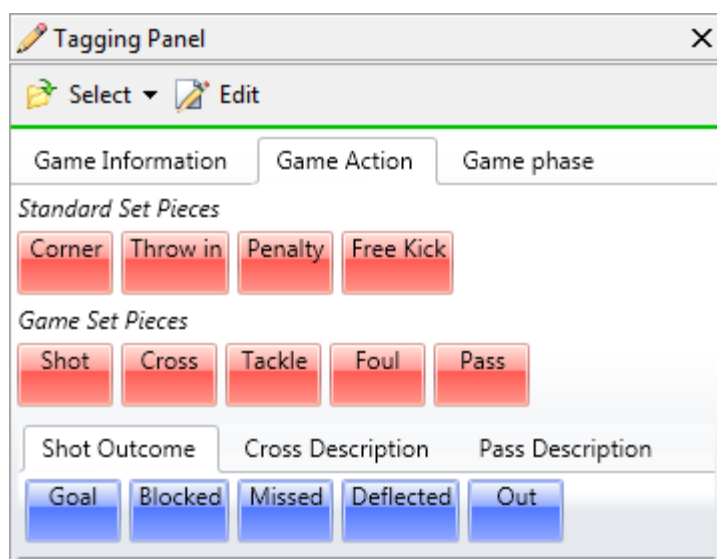
Which events do you want to tag in your sport?

Creating tagging panels requires a clear idea of what you want to tag and how you want to define the events' **durations** and the **keywords** which describe them.

One definition of an **event** could be "a segment of video". You need to decide what are the different types of video segments that you want to denote. Those events are likely to be key moments or highlights within the video.

Many events in your sport or activity are easy to define but perhaps others are less easy, consider this example:

In soccer, ball possession in the opponent's half is a key moment that might be tagged as an "attacking possession". That possession might end in an attempt to score. So do you want to tag two events (attacking possession and attempt) or one (attacking possession; outcome = attempt)?

There is no right or wrong answer to this; your decision will be based on what you want to review; tagging this as two events gives you the capacity to choose whether to review attempts separately from attacking possessions.

From this example it should also be clear that Dartfish allows you to tag events which coincide or overlap.

Which of these events have a fixed duration (e.g. actions) and which are of variable duration (e.g. game phases)?

Dartfish can create 2 types of event.

1. Those where the duration can be predicted so only require a single button click to create an event with fixed duration.
2. Those where the duration of is not predictable and is defined by clicking a button on and then off.

! *Regardless of how the event duration is defined, it is editable after creation.*

How will your events be categorized?

The **events list** is a table made up of rows and columns. Each row contains the **keywords** which describe the event and at the top of each column there is a heading which describes the **category** of information displayed in that column.

When categorizing events you may choose to simply list all events under a single heading such as 'Action' in the example below:

Position	Duration	Action
12 sec	29 sec	Non-attacking possesion
32 sec	5 sec	Tackle Lost
34 sec	5 sec	Tackle Lost
35 sec	5 sec	Tackle Lost
37 sec	5 sec	Tackle Lost
43 sec	5 sec	Tackle Lost
44 sec	5 sec	Foul
1 min 7 sec	3 sec	Aerial Challenge Lost
1 min 7 sec	3 sec	Aerial challenge won
1 min 11 sec	5 sec	Tackle Won

Or you may decide that your events fall into different categories such as 'Set piece plays', 'Open play', 'Phases', 'Possessions' etc.

Placing all events into a single category keeps things simple, but using different categories offers flexibility when it comes to filtering the events list and creating statistics.

! *It is not possible to simultaneously create multiple variable duration events (i.e. those created using the continuous event tool) with the same category. If this is required, it is essential that different categories are used. For example, Team A might have possession but if there are to be different phases of play within that possession then these events should be categorized differently e.g. 'Phase' and 'Possession'.*

How will you describe these events? Events are described by assigning keywords to them.

Creating an event automatically adds 3 keywords; the video **position**, the **duration** of the event plus one user-defined **keyword**. Further keywords can be added to more completely describe the event so you need to consider what additional categories of information are needed. For example: 'Player' and 'Outcome' might be categories of keywords need to fully describe an 'Attempt' event.

Ready to start creating a tagging panel?

Having thought carefully about the questions above, you will have a list of **events** and a list of **keyword categories**. No doubt you have also have some ideas about the keywords which should

go into each category. Now you are ready to turn those ideas into a **tagging panel**.

3.3   Adding/deleting/moving/copying tools

To add a tool to a tagging panel

Items are placed onto the **tagging panel editor** by dragging and dropping them from from the **Toolbox**.

! *New panels always have a tabbed group box with a single page, as show below. In order to place the tool on that page, it should be placed in the area denoted by the red line shown here:*
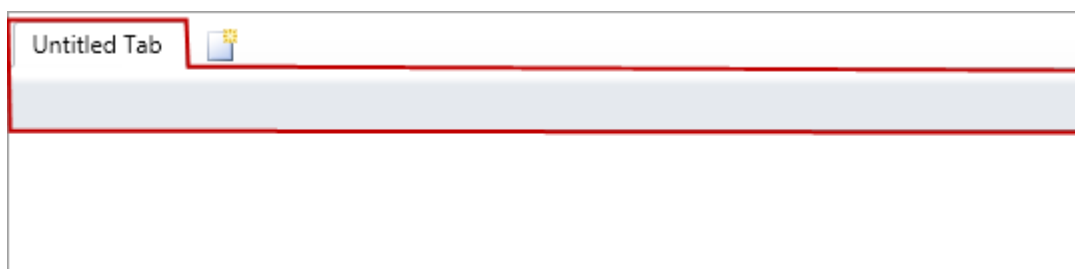
Adding subsequent items also requires care, in the image below, new tools should be placed on the gray shaded area if they are to appear on the same page as the other buttons.
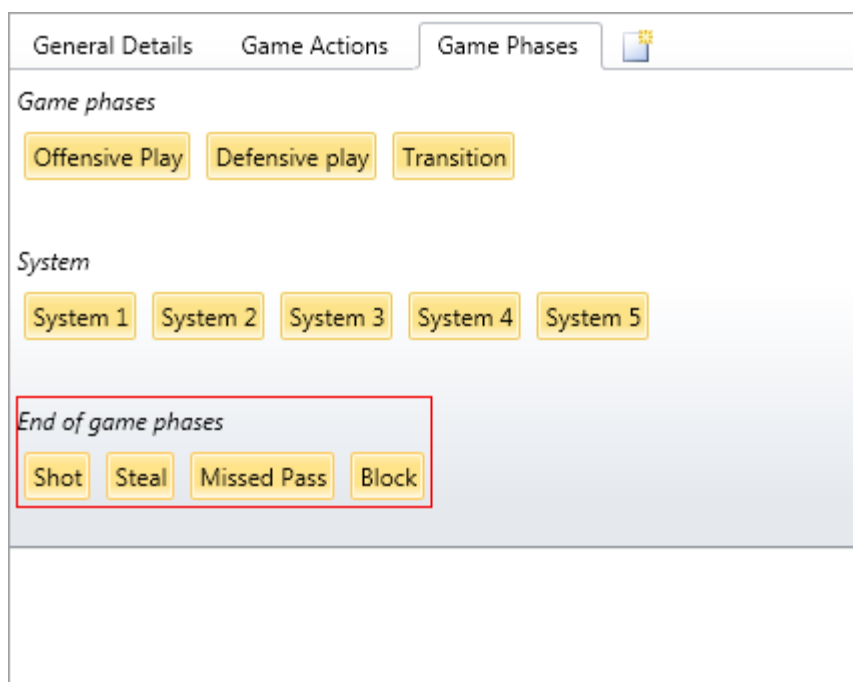
💡 *If placed below the page then that tool will be visible from all pages.*

To move an item

Drag and drop the item you want to move to the new position.

To move a panel layout tool (group boxes etc)

1. Click within the panel layout tool (but not on any button or other tool)
2. A red outline surrounds your selection - use this to identify that you have the correct tool selected
3. Click and drag the panel layout tool to a new location

! *It is not possible to move a group box to between other group boxes. Instead it should be moved above or below the other group boxes which can then be shuffled further to achieve the desired position.*

To delete an item

Right-click on the item and select *Delete* from the context menu.

To copy an item

Drag and drop the item while holding down the CTRL key on the keyboard. Release the item before releasing the CTRL key.

Many tools will have similar properties so creating one button, defining its properties and then copying it can be a very efficient way of creating a tagging panel.

3.4   **Modifying properties**

Items which have been added to the Tagging Editor have their appearance and function modified by changing properties in the Properties panel. There are two types of properties; properties which can take any value and properties which must take one or more fixed values. The methods for modifying these two types of property are described below:

A complete description of properties can be found in the topic Properties list

Modifying 'any' value properties.

1. Click on the tool. This will display the **properties** for that item.
2. Click and type in the second column of the **properties list** to add or modify values.

Modifying 'fixed' value properties.

1. Click on the tool. This will display the properties for that item.
2. Clicking in the second column of the properties list will allow you to select a value using the

buttons that appear. It is not possible to type values. One of two types of button are used:

[...] - selects or creates **property** values from a dialog box e.g. shortcut key property

[▾] - selects **property** values from a drop down list e.g. style property

In the example shown below these buttons are shown as they would appear in the properties panel. Properties such as **Shortcut Key**, **Preroll** and **Trigger** are selected using [...]. Properties such as **Style** are selected using [▾], and properties such as **Category**, **Value** and **Label** are typed.

 Double clicking the property heading in the column on the left is a shortcut to editing properties.

3.5   Panel layout tools

Group boxes

These tools organize the layout of a panel by grouping buttons together. So unless you have a very simple tagging panel, group boxes are likely to be the first tools that you will add to a new tagging panel. They have two functions:

1. To organize the layout of buttons on a tagging panel.
2. To set the **category property** of many buttons simultaneously i.e. tools placed into a group box inherit their **category** from it.

   This is an efficient way of ensuring the category property of buttons is not omitted or inconsistently applied. However it is possible to over-rule the inherited category simply by setting the property of the individual tools.

💡 *If you have already read the topic Planning a tagging panel, you should have a good idea of what categories your events list requires. Start your new tagging panel by adding a group box for each category and set the category property of each to each one of your categories.*

Nesting group boxes

It is possible to place group boxes inside another group box. In the example below, group boxes have been used to organize the layout of players on a soccer pitch.
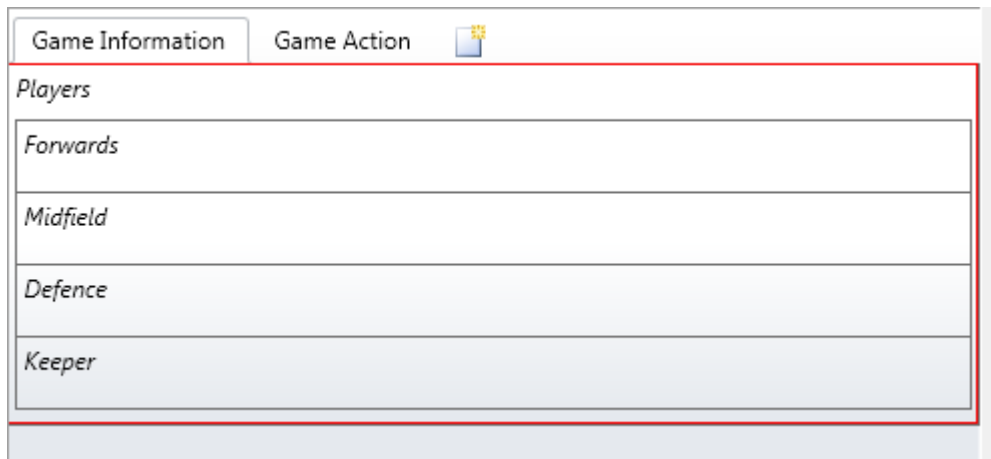
In this image, 'Players' is the selected **group box** and the red line indicates that it contains the other group boxes. Its **category property** is set to 'Players' therefore the other **group boxes** and any buttons placed in them inherit this.

Tab group boxes

The pages of a **tab group box** each behave like a **group box**, the contents of which are only seen when the tab of that page is selected.
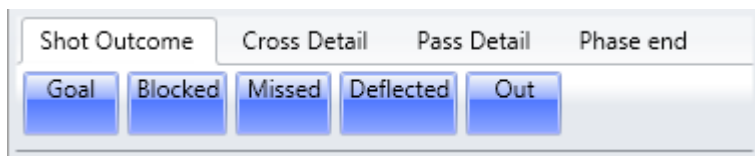
The advantages of a tabbed group box are:

➢ They are a very space efficient way of including many buttons on a tagging panel.
➢ Panels can be created to only show buttons which are relevant to the current event; simplifying the panel and guiding the user to appropriate tools.

💡 *Use the trigger property of a button to automatically select a tabbed group box page. Examples of this method to display relevant buttons as they are required can be seen in most of the built-in tagging panels.*

Adding tabs to a tabbed group box

In the tagging panel editor, new pages are added to a tab group box by clicking the last tab showing the new page icon. The new page displays the label [...] until an alternative label property has been set.

Panel layout tool properties

Property	Description
Label	The text which is displayed on the tab.
Visibility	The visibility property is a way of concealing tagging tools when the user is not required to use them directly. Other tools can be used to trigger the contents of a hidden group box even when not visible.
Orientation	Defines whether the contents of a group box are stacked vertically or placed horizontally within a group box.
Image	An image can be placed as a visual label for the group box. It will be resized to fit next to any text label
Category	The category of a layout tool sets the category of any other tool it contains. Inheritance can be over-ruled by setting the category of individual tools

3.6   Event creation buttons

Event creation buttons are used to add events to the **Events List**. The action of these tools is to create an event described by:

> **Position** - the timestamp of the start of the event in the video clip

> **Duration** - how long the event last for

> **Keyword** - the event is described by a single user-defined keyword. The event can be more fully described using Keyword addition tools after the event is created

> **Name** - the filename that will be used if the event is exported as a video clip. This will be the based on the event keyword but can be modified.

Event buttons

The difference between **Event buttons** and **Continuous event buttons** is how they define the duration. **Event buttons** are used to create events with a fixed duration e.g. a tennis serve might take around 5 seconds to prepare, deliver then witness the outcome. A single click on this type of event button records the event.
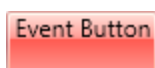
Continuous event buttons

Continuous Event buttons are used to create events where the duration cannot be predicted, e.g. a whole point in a tennis game or an attacking phase in soccer. This button is clicked "on" and "off" as the event starts and ends.

Continuous Event Button

Continuous events are also switched off by activating other continuous events with the same **category property**. For example, this allows you to define the change in possession from one team to another with a single click. This improves the ergonomics of tagging but it makes the categorization of continuous event buttons important: if two **continuous events** are to run concurrently then they must have different **categories**.

Important event creation tool properties

Property	Description
Label / keyword properties	These properties define the keyword to be recorded in the events list. Where the keyword property is not set, the label on the button will be used as the keyword. By setting these properties to different values, it is possible to tag a different keyword to the text displayed on the button.
Category property	Defines the column of the events list where the keyword will be added. Without a category property the button won't record its keyword.
Duration	For event buttons only; this is the fixed duration of the event
Preroll	Defines the number of seconds before the button click that will be included in the event. For example when a shot is made, the button is clicked but you want to define the start of the event 10 seconds prior to this in order to see the action leading up to the shot. An event button with a 10 second preroll and a 15 second duration would define an event starting 10 seconds before the button click and ending 5 seconds after.
Offset start	For continuous event buttons only; the equivalent of preroll. A negative value defines the event start prior to the button click and a positive value defines the event start after the button click.
Offset end	For continuous event buttons only; defines the end of the event before or after the button click.

These are the essential event button properties. Other properties are described in the Properties list topic.

Other event creation tools

The **team group box** tool and the **Zone tool** can be used to create events by setting their **Action property** = event. However, their default action is as keyword addition tools.

3.7   Keyword addition tools

Keyword addition tools are used to add keywords to an event. They do not create events. Keyword addition tools can be one of two types:

> **Keyword tools** - are used after an event has been created to add a keyword to that event only
> **Persistent keyword tools** - are activated before an event and add their keyword as the event is created. They remain active until deactivated and so can be used to add their keyword to many events.

Keyword button

A **Keyword button** assigns an addition keyword value to the last tagged event (or to the selected event in the **Events List**).
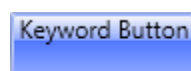
Keyword Button

Persistent keyword button

The persistent keyword button applies its value to all events which are tagged while it is active ("pressed").

Persistent Keyword Button
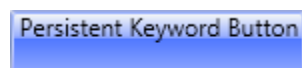
For example, in tennis the name of the server could be assigned to a persistent value button. All events created while that button is active will be tagged with the server's name.

💡 *Persistent keywords can be very useful when the analysis consists of more than one video file. For example to allow you to differentiate between an event which takes place one minute into the "first half" and another which takes place one minute into the "second half". First and second half are the persistent value buttons in this example.*

Text box

The **text box** tool is a **persistent keyword tool** that assigns a variable keyword based on text typed into the box. For example you might use this to include the name and date of the competition or information about the conditions, as illustrated below:
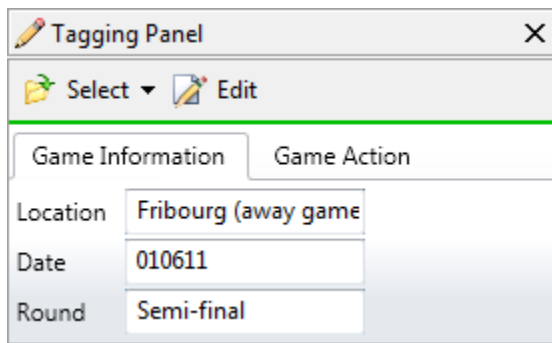
Score panel

The **score panel** is a **persistent keyword tool** that lets you record the current score of the game.

Zone tool

The **zone tool** is used to record where an event takes place based on where an image is clicked. The recorded **keyword** is the coordinates of the clicked position or a **keyword** for designated zones. The **zone tool** is further described in the Zone tool topic

Important keyword addition tool properties

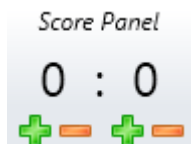| Property	Description
Label / keyword properties	These properties define the keyword to be recorded in the events list. Where the keyword property is not set, the label on the button will be used as the keyword. By setting these properties to different values, it is possible to tag a different keyword to the text displayed on the button. In the case of the textbox tool, the keyword property can be used to define a default text box entry.
Category property	Defines the column of the events list where the keyword will be added. Without a category property the tool won't record its keyword.

These are the essential properties. Other properties are described in the Properties list topic.

Other keyword addition tools

The **Team Manager**, **Team Group Box** and **Player List Selector** can also be used to add keywords to events. Their use is described in the topics Team Manager tool and Team Group Box and Player List Selector

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3.8   The Zone Tool

The **zone tool** is used to record where an **event** takes place by clicking a position on an image instead of clicking a button. The keyword it adds can be either numerical coordinates or a user defined keyword or both. The default image is a soccer pitch but can be changed to any image.

Preparing the Zone tool to record coordinates

1. Set the **Image** property: Any image can be used but it is not resized by Dartfish, so it should be created and edited at appropriate dimensions with image editing software before addition to the panel.

2. Define the grid: **Field height** and **field width** properties are used to define a grid e.g. a **field width** value of 3 would split a soccer pitch into three vertical sections or a **field width** = 100 would split an American football field into 1 yard sections.

3. Define the center of the grid: **Field center X** and **field center Y** properties are used to define the coordinates of the center of the grid. When the **zone tool** is clicked, zones to the left or above the central zone record a negative coordinate, zones below and to the right record a positive coordinate. If left at default settings, the origin will be at the top left corner of the image and the grid area at the top left will record the coordinates (1,1)

    The image below shows the coordinates which are recorded when a zone tool with field height and width=3 and Field center X=2 and Y=2:

4. Set the category: as with all tagging tools, the zone tool requires a category in order to be able to record its keyword in the events list. The default category is 'Field position'

! *Each zone has equal dimensions. For sports with playing areas where the zones are not equal it will be necessary to create a zone tool image which distorts the zones to equal sizes. The grid is not shown. If it is required, it should be defined on the image itself using image editing software.*

Preparing the Zone tool to record text keywords

1. Set the **Zones** property; a new window appears
2. Click the **Add Zone button**
3. Position the new Zone using drag & drop with the mouse
4. Drag the sizing handles in each corner of the zone to define the area

5. Define a **Keyword** property for the zone - this is what will be recorded in the events list when the zone is clicked

6. Define the **Category** property for the Zone. By default this will be the same as the category property for the Zone tool. It is possible to override this if a different category is to be used
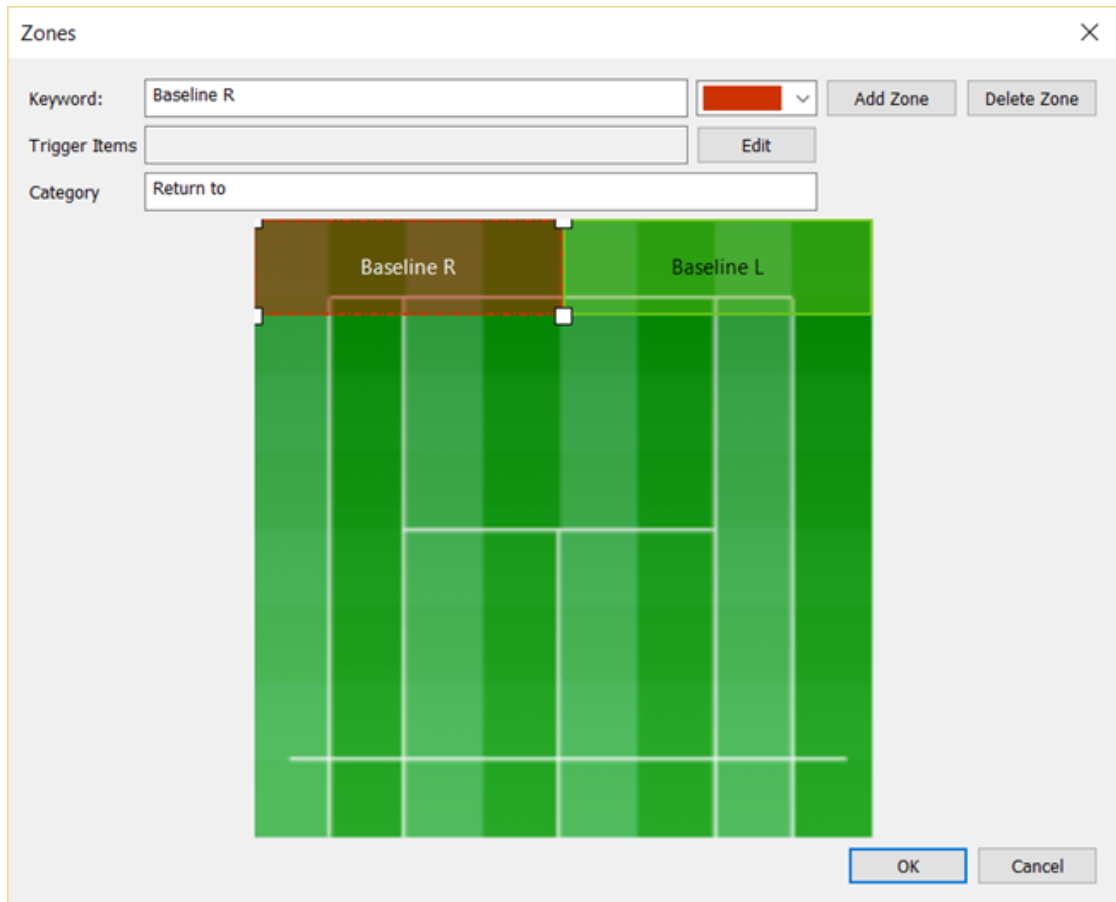
7. Repeat for other zones

Recording both coordinates and text keywords

*   When no text keyword zones are defined coordinates are recorded in the Events List in the column defined by the **Category** property.

*   When text keyword zones are defined, coordinates are no longer recorded.

*   To record both, set the **Coordinates Category** property. Doing so creates a new column in the Events List where coordinates are recorded.

Event creation tool or keyword addition tool?

By default, the zone tool is a keyword addition tool. It can alternatively be used to create events. To do this set the **Action property** to 'Event' and define **Preroll** and **Duration** properties as for an event button.

3.9   Team Manager tool

If you have many players or several different teams to tag, you can use the **Team Manager** to manage a database of all teams and player names, then select only those players taking part in the game. The selected players can be represented on the panel by linking the following tools to it, using their **Team Manager Link property**:

➢   A **Team Group Box** tool - displays buttons representing each player selected in the Team Manager. See Team Group Box topic

➢   A **Player List Selector** - a team and up to ten players can be selected from lists produced by the Team Manager's database. Selections can be used as persistent keywords or linked to the keyword property of other tools. See Player List Selector topic.

Preparing the Team Manager tool

Very little needs to be done with the **team manager** during tagging panel creation. Simply add it to your panel; teams and players will be added after closing the editor.

Setting the **category property** for the team manger is optional. If it is set then a keyword representing the selected team will be recorded when a player button is clicked.

Team Manager databases

The teams and players that you add to a **Team Manager** tool are stored in a database file which is created automatically in the same folder and with the same name as the tagging panel. However, you may want to use a database previously created by you or another Dartfish user.

Use the **Database Editor tab** of the tagging panel editor to select the database file that you wish to use.

Each **tagging panel** can have only one **database** but have many **team managers** enabling selection from different teams and players.

Adding teams and players

Teams and players are added outside the editor as described in the topic Using the Team Manager

💡   *To simplify the layout of a tagging panel it is usually best to put a team manager on a separate page of your tagging panel from the team group box and other tagging buttons. During tagging, most activities will not require frequent access to the team manager; perhaps only before the start of the game.*

Important Team manager properties

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Property	Description
Label	Using a label helps to identify a team manger. This is useful when linking it to a team group box or when more than one team manger is being used.
Category property	The category property is not an essential property for a team manager. If used then a keyword representing the selected team will be added to the events list.

These are the main properties to consider. Other properties are described in the Properties list topic.

3.10 Team Group Box

A Team Group Box is a group box to which buttons are added by selecting players from a linked Team Manager as illustrated below. When there are many potential players which you may choose from, it enables you to display only the buttons required .
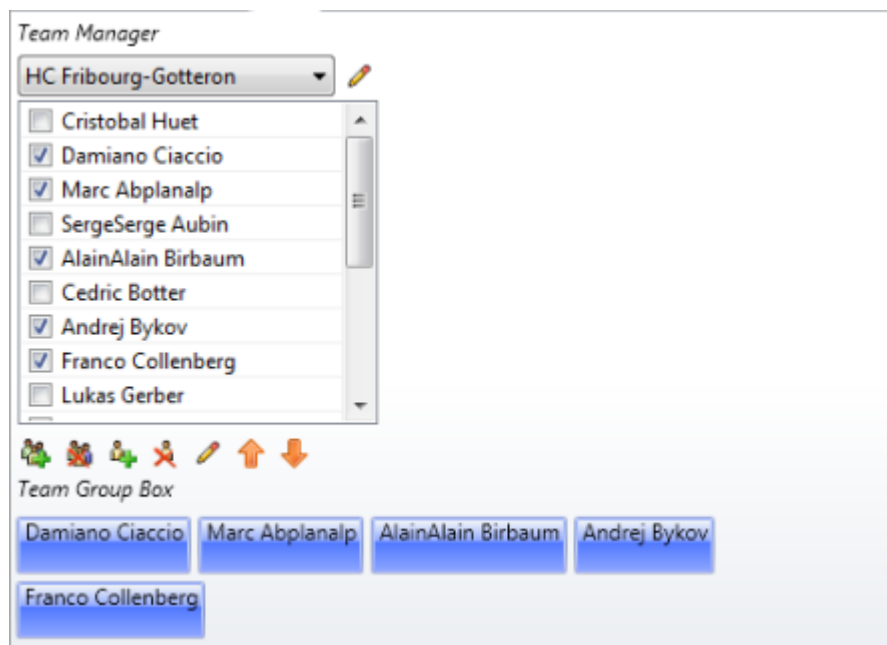
Team group box buttons can add keywords or create events

Team group box buttons are **Keyword** buttons by default. Set the **Action property** to define whether the buttons function as **keyword buttons**, **persistent keyword buttons**, **event buttons** or **continuous event buttons**.

For example, a **persistent keyword button** might be used to tag the 'Server' to all the events created in a tennis game whereas **event** or **continuous event** buttons might be used to tag player possession in soccer.

Linking to a Team Manager

A Team Manager tool must be linked to a **Team Group Box** or a **Player List selector** tool which

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will display the selected player names. To do this, proceed as follows:

1. Select the **team group box** or **Player List Selector**.
2. Double click the **Team Manager Link property** to display the property editor window (as shown below).
3. Select the **Team Manager** to be linked; it is identified by its label and Id.
4. Click the **Add button**. The Team manager on the right is that linked to the team group box.
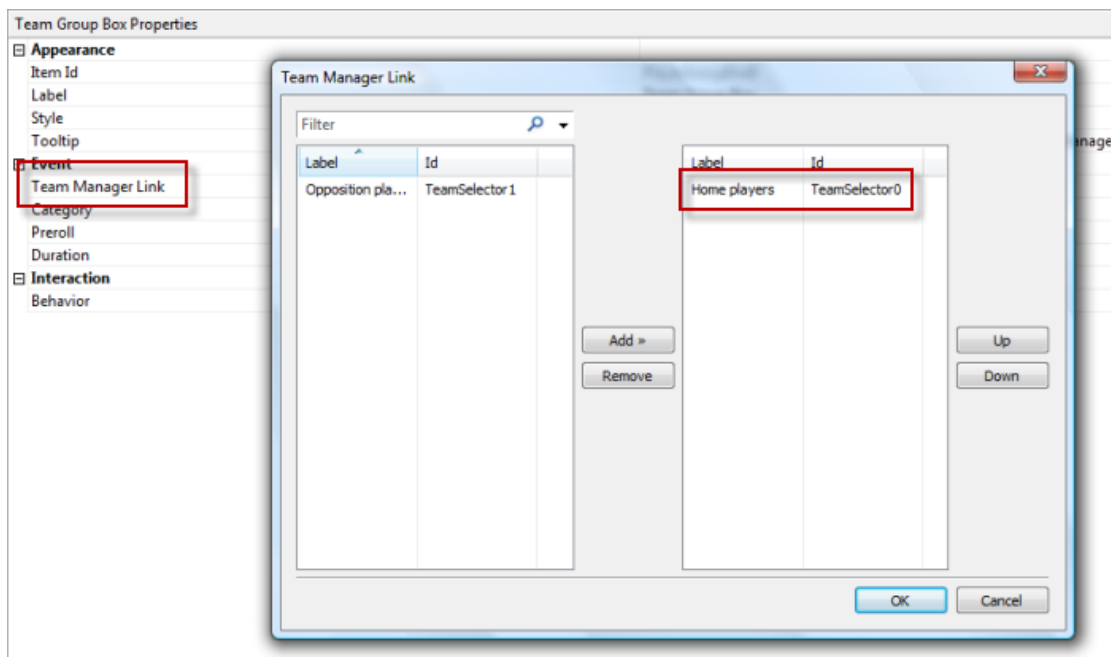
! *Buttons are not added to the Team Group Box in the tagging panel editor. They are added by selecting players from the Team Manager on the completed tagging panel. This allows players to be added or removed during the game.*

Important team group box properties

Property	Description
Team manager link	Establishes a link to a team manager and its database of teams and players.
Category property	Defines the column of the events list where the keyword will be added. Without a category property the tool won't record its keyword.
Action	Defines the button type used in a team group box. The default setting is keyword button but buttons can also be event buttons, continuous event buttons or persistent keyword buttons.
Duration/Preroll	If buttons are event buttons, duration and preroll properties should be set to define these features of the event. See the topic Event creation buttons to learn more about these button types.

These are the essential properties. Other properties are described in the Properties list topic.

3.11　Player List Selector

A **Player List Selector** may be used for several outcomes:

➢ To add a selected player's name as a **persistent keyword** to events
➢ To add multiple player's names as a **persistent keyword** to events
➢ To add a player's name to the keyword recorded by another tool by referencing the **Player List Selector** from the **keyword property** of a button (see Using variable keywords)

Preparing a Player List Selector to record a player's name as a persistent keyword

1. Set the **Category** property for the **Player List Selector** e.g. in the example above, the category "Red Contestant" might be used for the first Player List Selector.
2. Set the **Team Manager Link property** to link the **Player List Selector** to a **Team Manager** tool

Preparing a Player List Selector to record multiple players' names as a persistent keyword

1. Set the **Number of Keywords** property to the number of players required e.g. in the example above, the number of keywords = 5
2. Set the **Category property** for the Player List Selector e.g. in the example above, the category "Players" might be used
3. Set the **Team Manager Link** property to link the **Player List Selector** to a **Team Manager** tool (see the topic Team Group Box for more information on how to do this)

When the **Player List Selector** is used in this way, a single keyword is recorded, listing each player separated by a semicolon (;)

Preparing a Player List Selector to be referenced by another tool

The **Player List Selector** can also contribute the selected player(s) names to the **keyword** property of another tool, an **Event button** for example. In this case, the **Player List Selector** would be prepared as in either of the examples above BUT setting the category property is not required. To learn more about this, see the topic Using variable keywords.

Adding players to a Player List Selector

Players are added using the Team Manager tool

💡 *When you wish to define or describe the actions of a team of players, consider whether the Team Group Box may be a better choice of tool. It uses buttons rather than lists.*

Important Player List Selector properties

Property	Description
Team manager link	Establishes a link to a team manager and its database of teams and players.
Category	Defines the column of the events list where the selected player will be added as a keyword
Number of keywords	Up to 10 players can be selected from one team
Sort Items	Defines whether players are listed alphabetically or in the order in which they appear in the Team manager

These are the essential properties. Other properties are described in the Properties list topic.

3.12   The Filename Template tool

The **Filename template** tool enables tagging panel creators to control the **file name** used to save recordings made when using live tagging. When the user clicks the button it sets the file name for the next video recording.

To use a filename template:

1. Add a **filename template tool** to the tagging panel
2. Set the **label property** to indicate the function of the button
3. Set the **File Name Template property** to the desired file name

💡 *The file name template property can be set to a variable value based on the selection from a Player List Selector tool. See the topic Using variable keywords to learn more.*

3.13   Properties list

By clicking on any item on the **tagging panel editor**, its **properties** are displayed in the **Properties pane**. The properties of each tagging panel element are used to alter their appearance and behavior.

Most tools have three crucial properties which you should set:

1. **Label** – the text that identifies what this tool does.

2. **Keyword** – the keyword that will be assigned to the event (same as label by default)
3. **Category** – the category to which the keyword will be assigned. Think of the **category** as being the **column heading** of the **Events List** in which **keywords** will appear. (see Planning a tagging panel for help to plan the categories that you need).

Properties which alter appearance:

Property	What it does…	Applies to…
Label	Sets the text that is displayed on the item	All
Tooltip	The tooltip is the explanatory text that appears when the mouse cursor is pointed at a button. Use this to explain the function of each button.	All event creation and keyword addition tools
Image	An image can be displayed on a tool to help identify the event or value that it represents. As the Zone tool is based on clicking an image, this property is essential.	Buttons, group boxes, zone tool
Orientation	For a button this defines whether the image is displayed above or to the side of the label. For a group box this controls whether buttons are laid out vertically or horizontally.	Buttons, group boxes
Style	Sets the color of a button	Buttons
Label size	Makes the text on the button bigger or smaller to improve readability, reduce space or to make buttons bigger for touch screen tagging	All tools with a label property
Label style	Makes the text on the button bold to improve visual ergonomics or to make buttons bigger for touch screen tagging	All tools with a label property
Show label	Defines whether the label is visible or not	Buttons
Margin	Defines whether additional space is added between labels and the edge of buttons. Remove the margin to make buttons require less space	Buttons
Image size	There are two possibilities: the image is a fixed size limited by the size of the button or it is the size of the original image	Buttons, group boxes
Button size	Used to define whether all buttons have variable width based on the label size, or the same width, based on the widest label	Group boxes
Visibility	Defines whether a group box and its content are visible. This may be used to hide tools which will be triggered automatically by other buttons. Or, simply to suppress the display of buttons rather than deletion when not required	Group boxes

Properties which affect behavior:

Category	The category property defines the events list column into which a tagging tool's keyword will be placed.	All
	Each tool inherits its category property from the group box in which it is placed. It is therefore an efficient way to categorize buttons of the same category by placing them in the same group box. Override the inherited category by setting the category property for individual tools.	
Keyword	Defines the keyword which will be used to describe the event in the events list. For buttons, the keyword will automatically set to the same value as the label property, however it is possible to record a different keyword if desired. For example, the label might be an abbreviation of the keyword.	All event creation and keyword addition tools
Preroll	Defines the time before an event creation tool is clicked that will be included in the event. Preroll ensures that you don't miss the start of the action.	All event creation tools
Duration	Duration is the duration of the event that will be tagged when this button is clicked. This time includes any preroll that has been set. If the event is not of fixed duration then a *continuous event* button should be used to manually mark the beginning and end of an event.	All fixed duration event creation tools
Offset Start	Offset Start - the amount of video before or after a *continuous event* button being clicked on that will be included in the event. This ensures that you don't miss the start of the action. If a negative number is used, the start of the event is set before the tool is triggered, if positive it will be afterwards	Continuous Event Buttons
Offset End	Offset End – the amount of video before or after a *continuous event* button being clicked off that will be excluded at the end of an event. If a negative number is used, the end of the event is set before the tool is triggered, if positive it will be afterwards	Continuous Event Buttons
Target	Defines where the keyword typed into a text box will be applied:	Text box
	Event category - the keyword is added to the events list	
	Video clip category - the keyword is added to video clips captured with live tagging and appears in the Dartfish library	
Event color	Color codes events. Color coding is used to help distinguish events from each other in the events list and also on dartfish.tv after publishing games or highlights movies	Event buttons
Action	Defines the button type of a team group box.	Team group box

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	The default is for a team group box to contain keyword buttons but this property can be used to select any button type.	
Description	Used to automate the addition of a description to the description field of the events list. The description field is used to annotate events with free text description and is particularly intended to add information to events being published to dartfish.tv	Buttons
Team Manager Link	Used to link a Team Group Box to a Team Manager tool.	Team group box, Player list selector
Number of keywords	Used by the Player list selector to define how many players can be selected	Player list selector
Field width, field height, field center X, field center Y	Used by the zone tool to define the layout and coordinate map of the zone grid. See The Zone Tool	Zone tool
PTZ preset name	Used by the PTZ Move button to identify the IP camera preset to activate	PTZ move button

Properties used to automate tagging (see Automating tagging)

Item Id	A unique identifier for each tool. It is used to identify tools in macro scripts and when setting trigger properties	All
Shortcut Key	Rather than clicking buttons on a tagging panel, using the keyboard Shortcut Key property for event or value buttons can be much more efficient. Note that these shortcuts are displayed in parentheses in each button	All event and value tools
Reset Category	Tools with a reset category property can be used to deactivate other continuous event or persistent value tools. When this tool is clicked, all other buttons using the category specified are reset.	All buttons
Trigger	The trigger property is a list of one or more tools that can be activated when this button is clicked.	All buttons
Visibility	This property is used to hide a group box and all its contents. Used when the action of the hidden tools will be defined by the tagging panel creator and shouldn't be modified by the user or when it will be triggered by other buttons.	Group boxes
Game Time	Used to control a Game Timer. See Using the Game Timer	All buttons

Clicking on a property title in the properties panel displays a description of that property.

Double clicking on the property title allows you to change that property.

3.14 Automating tagging

Large tagging panels with many buttons present two problems to the user:

1. Many mouse clicks might be required to record an **event**, making it hard to keep up with a fast moving game
2. It becomes more difficult to locate the buttons you want to use.

This topic explains properties and features which assist with these problems

Reset Category property

Tools with a **reset category property** can be used to deactivate other **continuous event** or **persistent keyword buttons**. When the tool is clicked, all other buttons with the specified **category** are reset.

This behavior is equivalent to that of **continuous event buttons** (see the topic Event creation buttons) which automatically deactivate all other **continuous event buttons** sharing the same **category**, except that the **reset category property** can deactivate buttons from any other category that you specify.

! *Be careful with spelling and use of spaces - the reset category you specify must match the category of the tools that you wish to reset. However the case used is unimportant.*

Trigger property

The **trigger property** is used to activate or deactivate other tools. This property specifically identifies which tools will be triggered by selecting them from a list.

Examples of the use of the **trigger property** can be seen in some of Dartfish's built-in tagging panels where clicking an event button triggers a page of a **tab group box** revealing **keyword buttons** associated with that event.

For example, when a scoring event is tagged the **trigger property** could be used to activate the **tab group box** which contains a **score tool**.

To set a trigger property:

1. Select the tool which will trigger other tools.
2. In the **properties panel**, double-click the property heading **Trigger**
3. In the trigger dialog (see below) select the tool(s) which will be triggered. Tools are identified by both their label and Id; be careful to select the correct tool in the case where more than one tool has the same label
4. Click the Add button
5. Repeat as often as required to create a list of tools which will be triggered
6. Use the Up and Down buttons to specify the order in which tools will be triggered
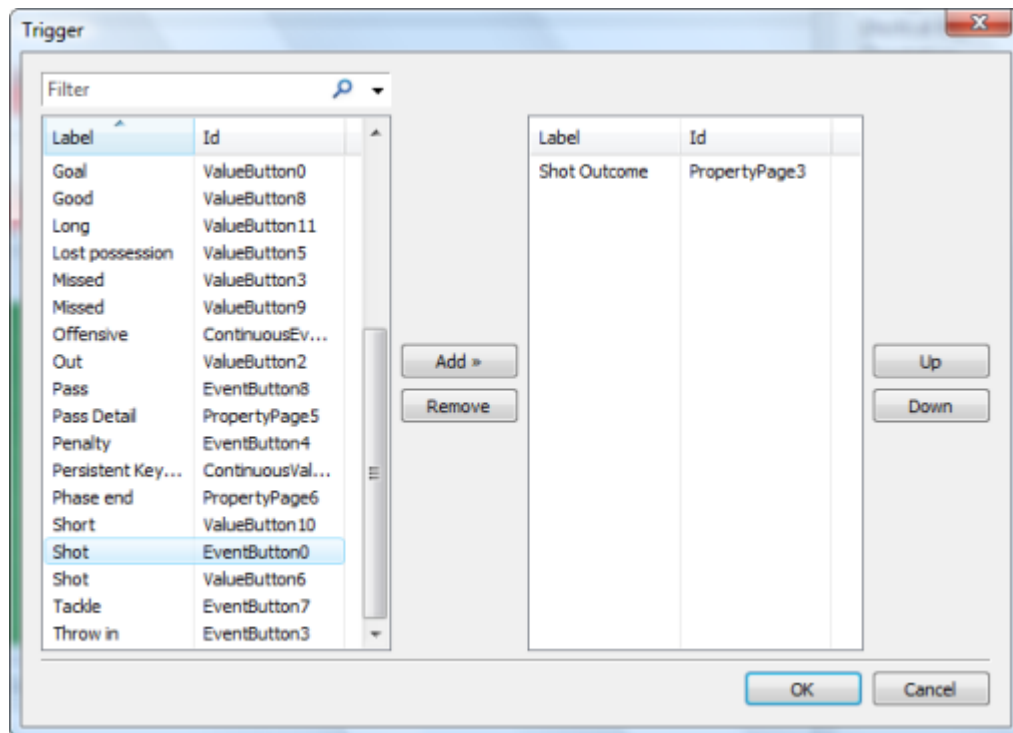
Shortcut key property

Shortcut keys are used to **trigger** buttons without having to use a mouse. This can be useful because once you know which keys to press tagging can be much quicker.

To set a shortcut key:

1. In the properties panel, double-click the property heading **Shortcut key**
2. Type a key, or combination of keys, on the keyboard
3. Click the **Assign button**. This must be done before clicking **OK**

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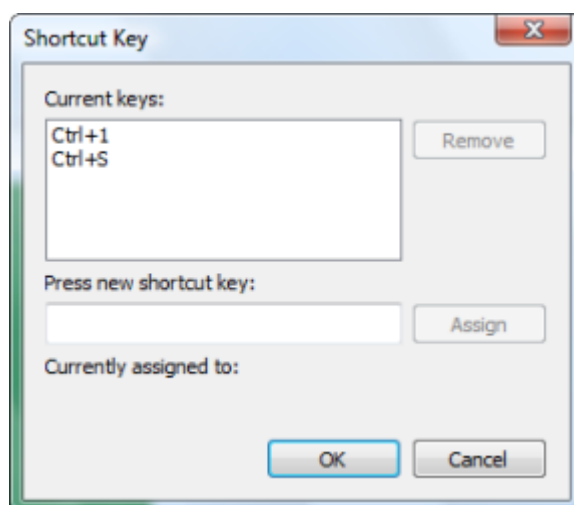
! *As you can see here; more than one shortcut key can be assigned; and any combination of keys can be used e.g. 'S' might be used for a home team shot and 'ctrl+S' might be used for an opposition shot.*

3.15 Using variable keywords

A simple macro can be used to generate a variable keyword or category for a tagging tool.

Syntax

$(Item_Id.property[#])

Example: $(teamlistselector0.keyword1)

➢ **Item_Id** is a unique identification which can be found in the first row of the **properties list** of any tool. Here, it can only refer to a **Player List selector**

➢ **Property** can be either "keyword" or "category". When **keyword** is used, the player selected from the **Player list selector** is the variable keyword generated. When **category** is used, the team is the variable keyword generated

➢ **#** is a number from 1 to 10 which represents which of up to 10 keywords it is possible to select from a **Player List selector**. This is optional, if omitted it is assumed to be 1 and refers to the first keyword.

➢ Text and macros can be combined together to create the desired result, as shown in the examples below

Limitations

➢ Only **keyword** and **category** properties can be set with a macro. The exception to this is the **Filename Template Button** which can also have its **Filename template property** set.

➢ Only a **Player List Selector** can be the source and only its **category** or **keyword** can be referenced.

Example 1 - Personalized event buttons

In the following example, a macro is used to personalize the keyword property of the event buttons:

The macro used to record these keywords in the above events list is, for example:

Keyword = Winner $(TeamListSelector0.Keyword)

Result = Winner Pascal Binggeli

Example 2 - Filename Template tool

Continuing the example above, if a **filename template tool** (see the topic The Filename Template tool) has the following macro for its **Filename template property**:

keyword = Semi-final $(TeamListSelector1.Keyword) versus $(TeamListSelector0.Keyword)

result = Semi-final Serge Ayer versus Pascal Bingelli

3.16   Recording time of day

Events are time stamped with video position. You may also wish to record the time of day with an event. This can be done by including a simple macro script in the **Keyword property** of a button

Syntax

$(WallClock)

For example, the Keyword property 'Goal $(WallClock)' would record a keyword such as 'Goal 15:32:25'.

If, in the above example, you wished 'Goal' and '15:32:25' to be recorded as separate keywords, two buttons would be required; perhaps an Event button with keyword 'Goal' and a Keyword button with keyword $(WallClock). In order to reduce the number of clicks required, the Event button should trigger the Keyword button.

3.17   Recording game time

Events are time stamped with video position. You may also wish to record the match or game time. This can be done by including a simple macro script in the **Keyword property** of a button

Syntax

$(GameTime)

For example, the Keyword property 'Goal $(GameTime)' would record a keyword such as 'Goal 15:32:25'.

💡 *If, in the above example, you wished 'Goal' and '15:32:25' to be recorded as separate keywords, two buttons would be required; perhaps an Event button with keyword 'Goal' and a Keyword button with keyword $(GameTime). In order to reduce the number of clicks required, the Event button should trigger the Keyword button.*

Game Timer

To effectively use the $(GameTime) script you must also display and use the **Game Timer** to set the current game time, allow for breaks in play etc (see the topic Using the Game Timer)

In addition to the Game Timer's controls, it may also be controlled using **Event** or **keyword buttons** on the tagging panel by setting their **Game Time property**. Use the button to execute one of the actions shown below:
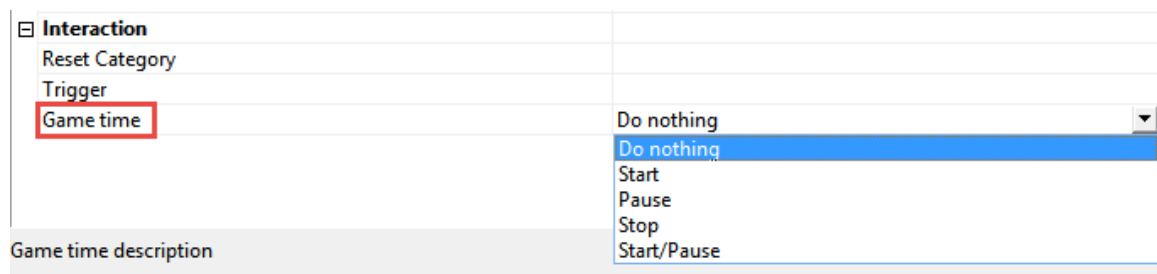
3.18   Saving Tagging Panels

To save your tagging panel:

Select *File* > *Save* (or *File* > *Save As...*) from the **menu bar** of the **Tagging Panel Editor** window.

❗ *It can be seen from this process that tagging panels are saved as files, stored independently of Dartfish software and the video file(s) being tagged. Therefore the important factor in choosing a file name and location for a tagging panel is simply that the user knows where to locate it.*

Distributing tagging panels

Because a **panel** is saved as a file it can be easily distributed to other tagging users, however the following items should also be distributed if they have been used in a panel:

1.   The **tagging database** - if a team manager tool has been used a database file will have been created with the same name and in the same location as your tagging panel. It will have the following icon:

2.   **Image files** - any images included on your tagging panel are referenced as external files

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Chapter

IV

Producing & sharing tagging resources

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4   Producing & sharing tagging resources

4.1   Adding descriptions to events

The description property of events is a free text (rather than keyword) description of an event. It is useful for several reasons, among which are:

➢ The information will be useful to viewers after events published to **dartfish.tv** or exported to the **Storyboard**

➢ The information become part of the properties of video clips created from events and will therefore be visible when these clips are added to the **Storyboard**, turned into **Enhanced Optical Disks** or published to **dartfish.tv**

Adding description using event properties

1. Right-click an **event** in the **Events List**
2. Select *Properties* from the quick menu
3. Type or edit in the **Description** section of the **General** tab

Using The events list description field

1. Right-click any of the **column headings** of the **Events List**
2. Select the *Description* option from the quick menu
3. There will now be a new column of the **Events List** with the heading 'Description'
4. Edit the description by right clicking the **Description field** for an **event** and selecting the *Edit...* option from the quick menu

Using keyword buttons

Event and **Keyword buttons** can be used to automate the addition of a **description** to an event.

When building a **tagging panel** set the **Description property** of the button to the desired text:
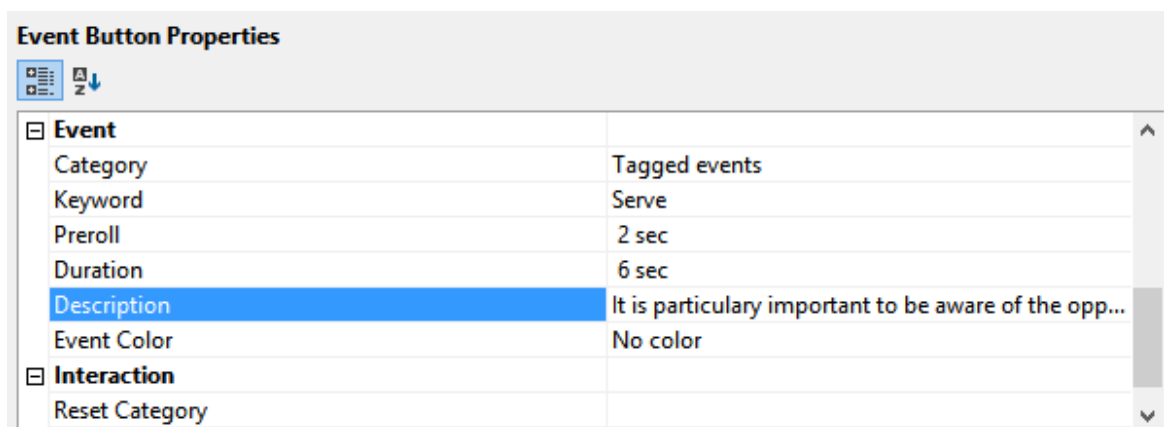
➢ The **Description property** may be set on a button which will also record a **keyword** - perhaps in this case the description explains some technical jargon or some common errors?

➢ **Keyword buttons** may be added to a panel, specifically to add a **description** to an event. In this case, setting the **category property** is optional:
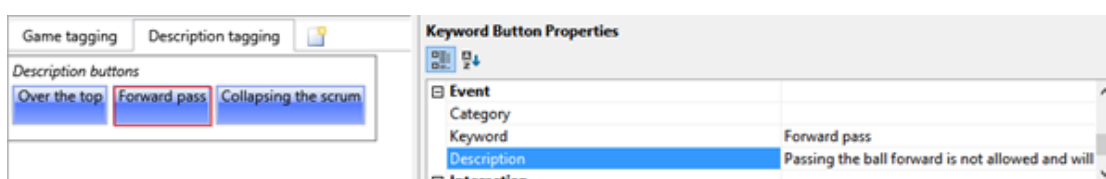
4.2   Exporting Notebooks

To upload a Notebook to dartfish.tv

1. Click the **Share Game** button

2. Sign in using your dartfish.tv account
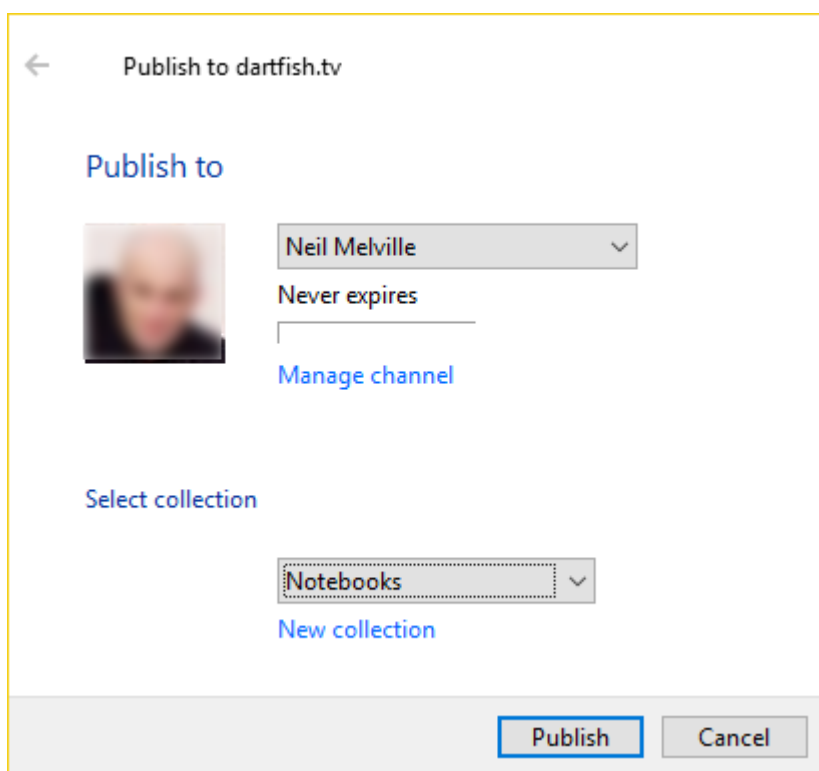
3. Click the **Publish** button to start upload

To export a CSV file of your events list data

1. Click the Import/Export button on the Events List

2. Proceed through the steps to save the CSV file

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The quickest way to get data into a spreadsheet is by Copy & Paste - simply right-click on the data in the Events List and select Copy Events to Clipboard

Chapter

V

Review & edit events

DARTFISH

5 Review & edit events
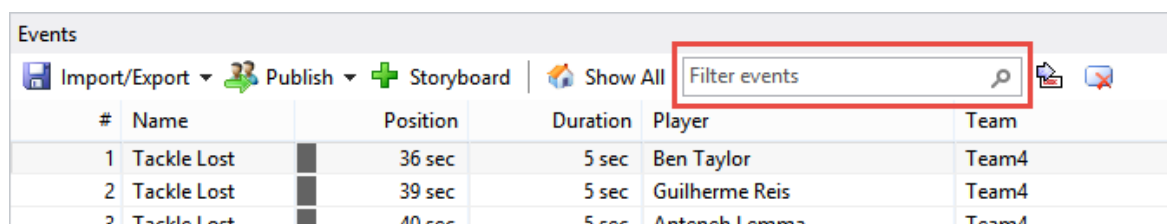
5.1 Filtering and viewing statistics

Tagging will typically result in a long list of events. Locating particular events or analyzing their frequency using the events list alone would be a difficult task. There are three methods for searching for events:

Table filter

The **table** creates frequency and duration summaries by cross-referencing keyword categories. This can be used both to filter and to generate statistics. The **table** is described in the following topic.

Simple filter

The **events list toolbar** has a simple filtering tool which displays events based on an inputted value.

The results of the simple filter can be further refined using the **Keyword filter**.

Keyword filter

To execute a **keyword filter**

1. Click a **keyword** from the list. The **events list** immediately displays events matching the selection.
2. Select additional keywords by holding down the CTRL key as keywords are clicked. When keywords within the same category are selected they behave as an AND search but when selected from different categories an OR search is the result.

   The following example would show shots off goal and shots on goal by player Lemma.

- Version 9 -
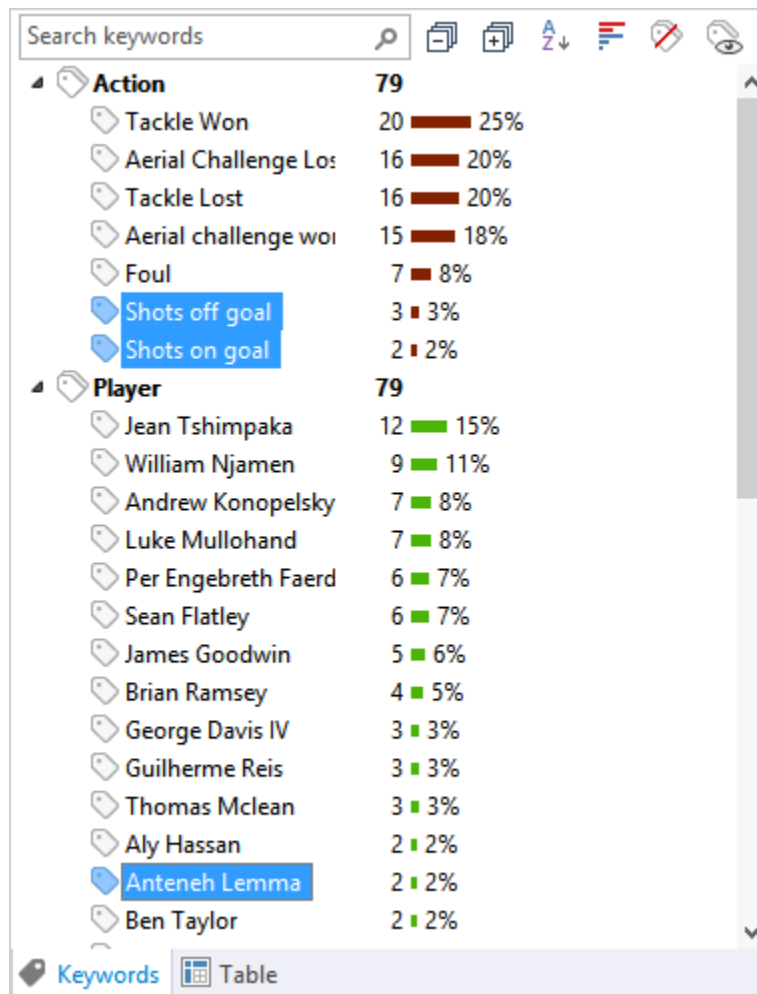
Combined filter

The results of the **simple filter** and the **keyword filter** combine.

For example, the keyword search above could also be carried out in the following way:

5.2   The table search

Tables derive statistics from **events** and also allow filtering for the events relating to those statistics. The default location for the **Tables** panel is to the left side of the **Events list**, docked with the **Keywords panel**.

Creating a table

Tables are constructed using the **categories** of **keywords** featured in the **Events List**. To create a table:

1. Click the **Edit button** (Shown top right of the tables panel in the image below)
2. Drag and drop a **category** from the **Categories list** on the left into the Rows area: A list of corresponding keywords and frequencies of events using them is displayed:
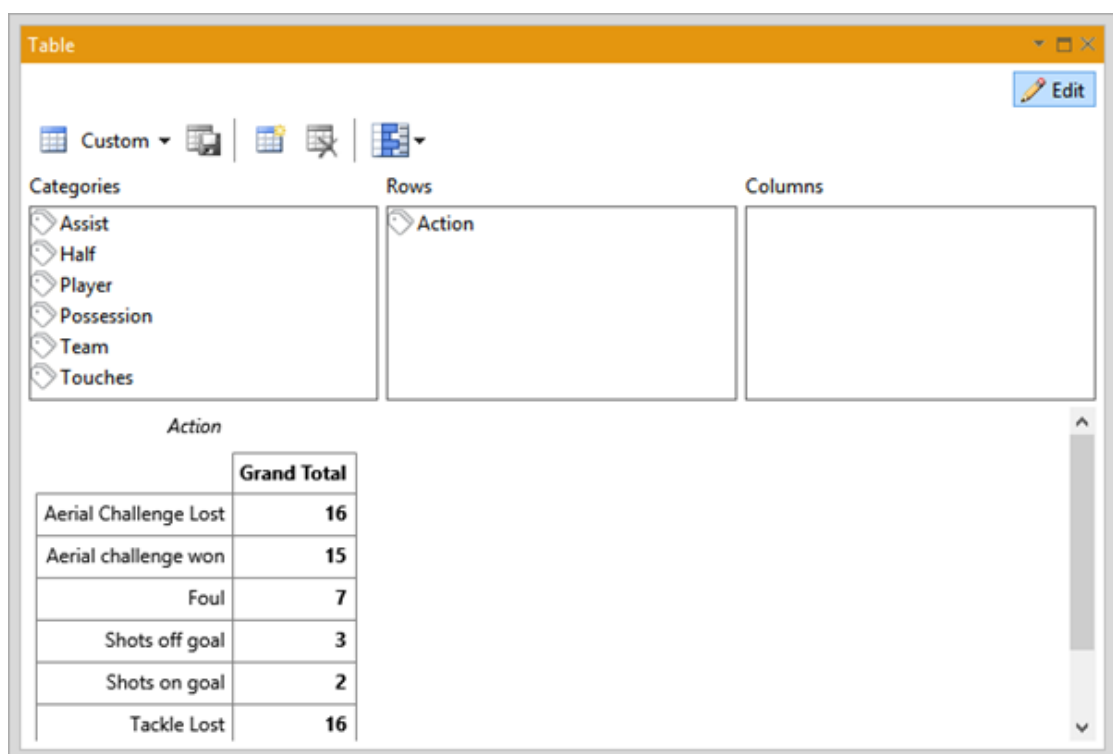
3. Drag another **category** from the **Categories list** into the **Columns area**: A cross-referenced list of frequencies for each of the keywords in each category is displayed:

4. Additional **categories** can be added to either **Rows** or **Columns** areas to create groupings of keywords

5. Click the **Edit button** to hide the editor and maximize the use of space to display the table

💡 *Large tables may not be easily viewed in the default tagging layout. For example, it may be better to dock the table panel with the events list or even make it 'float' over the application. You may wish to review the topic Repositioning panels in the Getting Familiar with Dartfish chapter.*

Removing a category from a table

Categories can be removed from the **Rows** and **Columns** areas by:

➢   Double-clicking them
➢   Drag & drop to the **Categories** area

Saving a table

Click the **Save button** to save a table layout

Previously saved tables can be recalled by clicking the **Custom button**
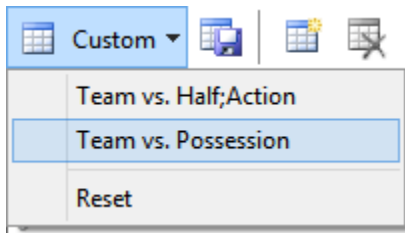
Displaying multiple tables simultaneously

1.   Click the *New Table* button

2.   Construct the new table as previously

Changing the displayed data and formatting the table

By default, tables display frequency statistics. However you can also represent data as a **percentage** of frequency or of total **duration**. Data may also be represented visually in various ways. All of these choices can be made using the **Format Cells menu**:
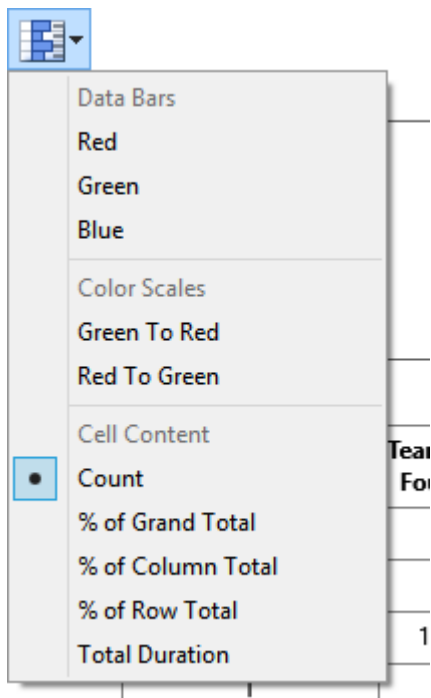
Filtering using a table search

Clicking any number or heading of the table filters the events list to match your selection

Using table data in other applications

Data can be easily reused in other applications e.g. a match report or presentation. To do this:

1. Right click a **table**

2. Choose your copy method of choice from the quick menu (as CSV data or as an image)

3. Paste the data or image into the other application

5.3   Undo searches

Searches reduce the event list to displaying only search results. To see all events, click the **Show all** button above the **events list**.
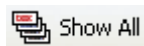
5.4   Editing keywords

An event's keyword information can be added to or changed in 2 ways:

➢ Method 1: Use the **tagging panel** – when an event is selected in the **events list**, its keywords may be changed using the tagging panel's keyword addition tools.

➢ Method 2: Click the right mouse button while pointing at the keyword to be changed and choosing *Edit* from the quick menu. A new keyword may be typed or selected from a list.

💡 *Selections of multiple events can be edited simultaneously using either of these methods*

5.5   Editing event timings

To edit position and duration using the events list

1. Select the **events** to be modified.
2. Click the right mouse button while pointing at the **duration** of one of the selected events and then choose *Edit* from the quick menu.
3. Edit the existing time or type a new one.
4. Press the ENTER key to confirm the change

💡 *It is not necessary to enter a new duration in the full time format displayed. Simply entering the value '10' would set the duration to 10 seconds.*

To adjust timings using the events list

The video **position** of a single event can be modified as described above but when timing of position or duration require adjustment it is possible to add or subtract time in the following way:

1. Select and edit events as described previously
2. Key a + or - in front of the new value depending on whether time is to be added or subtracted

    For example, entering +5 would add 5 seconds to the selected times; entering -1:30 would remove 1 minute 30 seconds; and entering +1:25:00 would add one hour and twenty-five minutes.
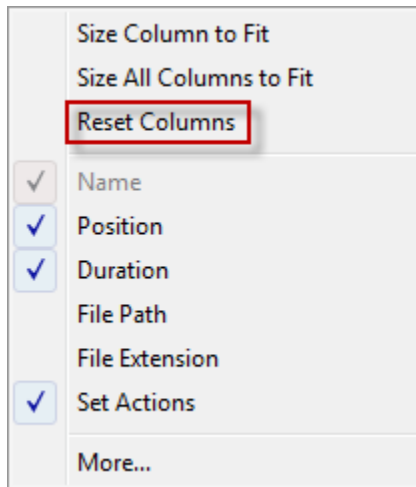
💡 *If unsure about how to apply the correct time format, simply edit the existing value and place a + or - in front.*

5.6   Hiding unused categories

The **Events List** continues to display **categories** used by previous tagging projects even if they are not used by the current tagging session. The categories may be removed from the events list as follows:

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1. Right-click any column heading, and
2. Choosing *Reset columns* from the quick menu that appears.

| Size Column to Fit |
| Size All Columns to Fit |
| Reset Columns |
| √ Name |
| √ Position |
| √ Duration |
| File Path |
| File Extension |
| √ Set Actions |
| More... |

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