codimg

User Manual

Version 9.3.13

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Before you start

Before starting to work with Codimg, it is necessary to perform some preliminary tasks to get the most out of the program.

Check system requirements

First, you must verify that your computer meets the technical requirements to use the program. There are two types of requirements: **minimum and recommended.**

- **Minimum requirements.** These include the basic values required for our program to function properly on your computer. If your computer doesn't meet these standards, we can't guarantee that this will happen.
- **The recommended requirements.** Instead, these are the desired values so that Codimg not only works correctly on your computer, but also ensures much smoother operation of our programs.

As the world of computing advances every day and changes are constant, these requirements are constantly evolving. For this reason, we strive to make **this information as up-to-date as possible on our website.**

For this reason, we encourage you to visit our website to confirm that your equipment meets these requirements. You can access this information directly by clicking here, or by visiting our website (www.Codimg.com) and, in **“Resources”,** select the option **“System Requirements”.**

Download, installation and first steps with the program

If you have already completed this process and are ready to start using the program, we have Quick Start Guide for program. This is a video tutorial with the basics to get you started in the world of Codimg.

Operating system considerations (Windows)

Note: This manual has been created for the latest version of Codimg on Windows.

Keyboard shortcuts

At the end of this manual, you can find **an appendix with the keyboard shortcuts of** Codimg.

Keyboard shortcuts are key combinations for performing certain processes in Codimg. These actions can also be performed in other ways: by navigating through menus, typing a longer instruction, or using the mouse.

1. Quick Start Guide

Codimg is a very comprehensive program, with a large number of tools and alternatives. In this manual, **we try to respond to almost all of the program's challenges**, but we understand that it is a very big task.

Maybe not **all users have the patience and time** to browse through all its pages. For this reason, this quick start guide explains the basics to get started with the program.

What is Codimg and how does it work?

Codimg is a **behavioral analysis software** that allows you to digitize observation templates, provide feedback from some of its tools, and extract specific moments from your videos. For example: clinical skills trained, specific behaviors, individual student and resident performance, or any other parameter you can think of.

With the actions you've selected, Codimg will create a database (we call it observations) composed of shorter clips and data that will give you insight into the observed behavior.

The analysis of these clips, thanks to the different tools included in the software, **will provide you with valuable information** about the strengths and weaknesses of your professionals, students, or your research.

Information that **will allow you to make data-driven decisions** about your team's learning and performance, as well as identifying trends and behavioral patterns through the combination of video and data.

What does this quick guide include?

1. How to download, install and activate Codimg
2. The different analysis options in Codimg
3. The three types of observation that exist
4. How to create a digital template
5. How to download and use pre-designed templates
6. Analyze the data on the timeline
7. The data matrix
8. Dashboards

Download, install and activate the license

To begin with, let's download and install the program on your computer.

Before installing the program, it's important to perform a few checks to ensure you can install the program without any problems.

1. Check that your computer meets the **minimum and recommended requirements** to use the program. To do so, we recommend a visit to the section **"Requirements"** on our website (www.Codimg.com).

2. On Windows, make sure you are in administrator mode.

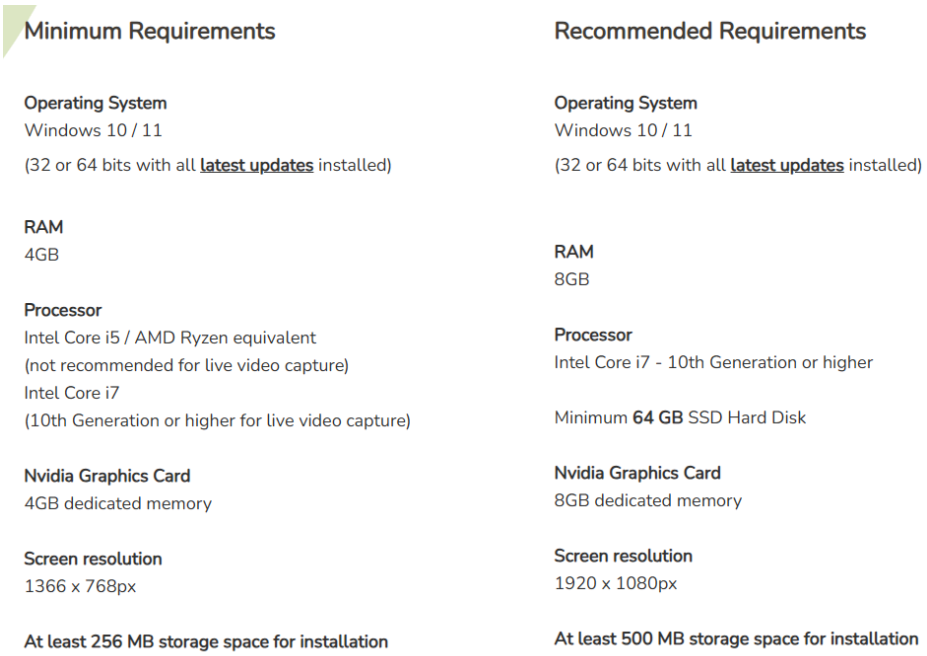


Figure 1: Recommended requirements

3. Confirm that you have all the updates for your operating system.

If you've already performed these checks, you can skip this step, although there is some important information you should keep in mind.

- Can Download the program for free and try it for 30 days on our website. Select the program you want to try, fill in the details, and you'll receive an email with a download link. Click the link and follow the installation instructions. When you're done, you can start your 30-day trial.

- If you have purchased the program, things change a bit. You will receive **an email with the download link and also a license number.**

Click the link and follow the instructions to install the program. Once the installation is complete, open the program. Here you can add your license and email address to activate it.

It is very important to keep in mind that, when installed on your computer, Codimg will create a subfolder structure in your folder **“Documents”**.

The most important folders are **“Databases”** and "**Videos”**, which is where the analyses and observations you have completed, as well as the videos associated with those observations, will be stored by default (you can decide to save them elsewhere, but we recommend that you maintain this structure).

You can open both from the section **“View observations”** of Codimg. We will talk more about this option later.

Different analysis options with Codimg

In the world of research and observation, there are many names for the viewing and tagging phase of actions. At Codimg, however, we call these two processes, which often go hand in hand, **“observation and tagging”** of actions.

There are three different types of registration, which you can find in the program's start menu:

- **Video observation**

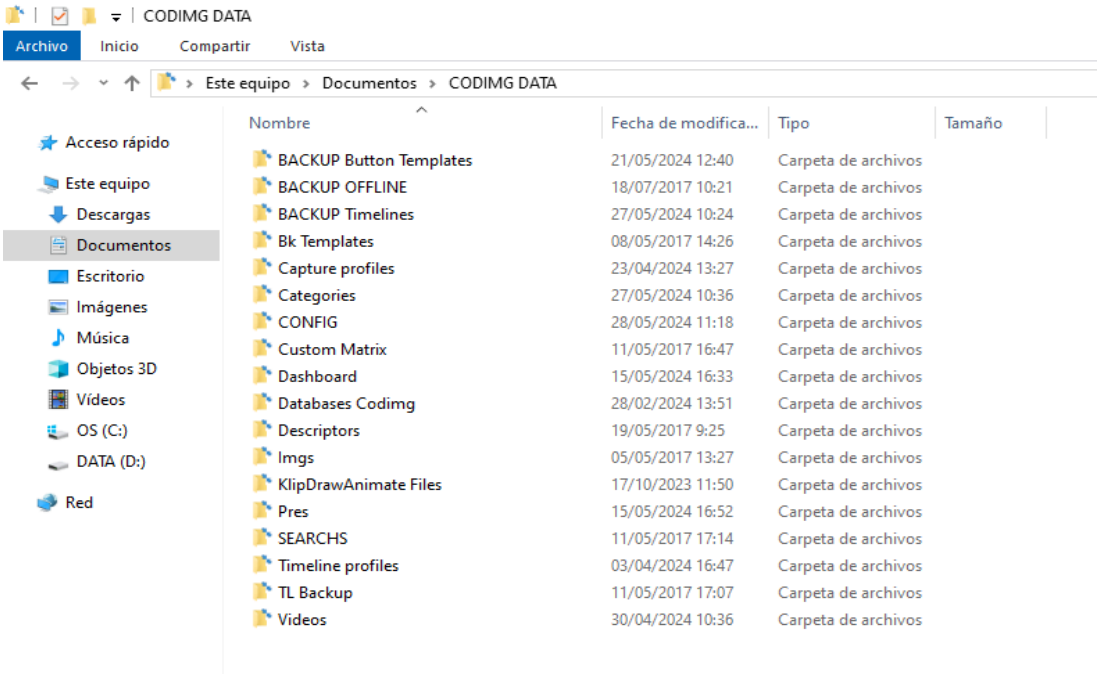


Figure 2: Documents Codimg Data

- **Live observation**
- **Observation without video**

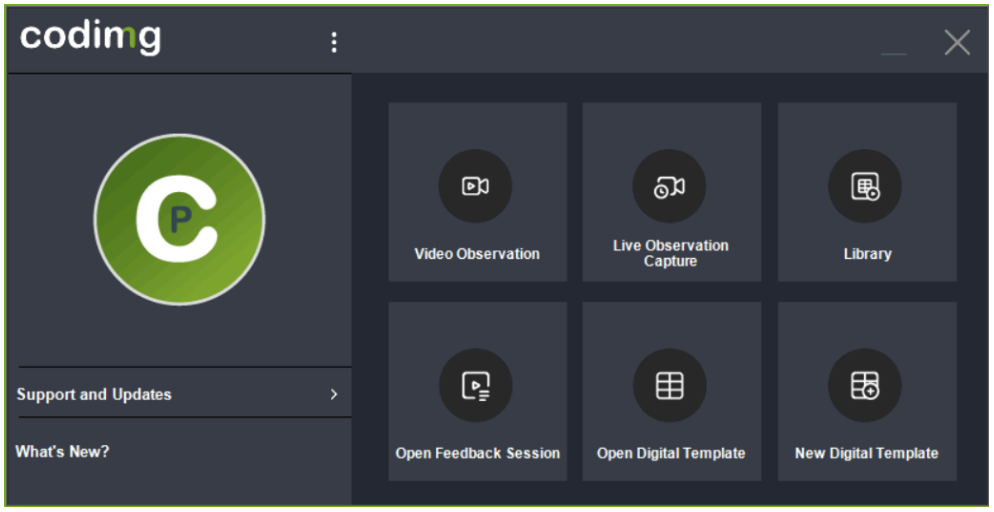


Figure 3: Main menu

They are quite similar, as they all require a digital template to begin tagging. The digital template is a window-like coding panel where buttons are created that correspond to the concepts or items an observer intends to review.

The three types of observation and clipping differ from each other in the origin of the video.

Video observation

This type of observation involves having a pre-clipped video and clipping actions using a template. To do this type of observation and clipping, you need two things:

- A video

- A digital template

In the menu, select **“Video observation”**

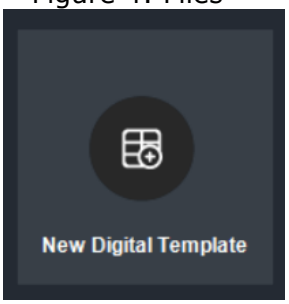
First select the video you're going to work with, then the digital template.

This happens the first time. If you opened the program previously, Codimg would open the last template used.

Next, we find these two options:

- **New digital template (from scratch).** In this case, before starting the observation, you'd have to create it. This process will take a longer or shorter time depending on how complex you want it to be, so we recommend ruling this option out from the start.
- **Open an existing template.** This is the most common case. Create your digital template first, and then choose this option. If you don't know how to create it or don't have time, in the section **“Resources”** and **"Materials"** on our website, you'll find many pre-designed templates for different levels and industries. You can download them completely free and customize them to your liking.

Figure 4: Files



Once the process is complete, three windows appear:

- The video player.
- The digital template
- The play-by-play table

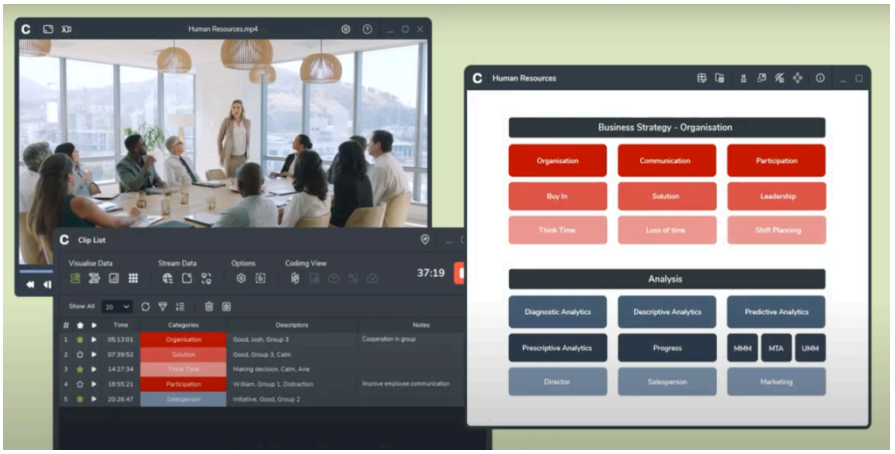


Figure 5: The video player, digital template, and play-by-play

You can move and resize these screens as you wish. If you're working with a secondary monitor or two displays, it's common to place the player on one screen and the other two windows on the other.

The video player is quite similar to any other software on the market, so using it will be quite intuitive. Additionally, there are some specific options that will be covered in this manual.

The observation process begins by playing the video. When an action you want to clip occurs, click the corresponding button in the template.

It's important to understand how buttons work on your digital template. We distinguish two types: **actions and descriptors.**

- **Actions are the main buttons** and represent the most important parameters you want to analyze. For example, in this template, all buttons are actions.

  When a skill occurs, we will click on the action **"ability"**. A clip is automatically generated with this action, as you can see in the play-by-play table.

  In other words, a small video fragment of that action is created and stored in a database for later analysis.

- **Descriptors are buttons that add context to actions.** Following the previous example, we see that this shot was on goal. After clicking on**"Ability'**, we will click on the descriptor **"GOOD"**.

  You could add more descriptors: the time during the practice, evaluations, or which professional led the action.

  You can add as many descriptors as you like. But remember, they'll always be associated with the last action you clicked.

The template contains many more tools and features that make your observation work—and subsequent phases—even more convenient and effective. This is not the focus of this quick guide. You'll learn about them throughout this manual.

All the clipped information is added to the **play-by-play table** (Figure 6) and allows you to provide more context to your video so we can filter our clips later.

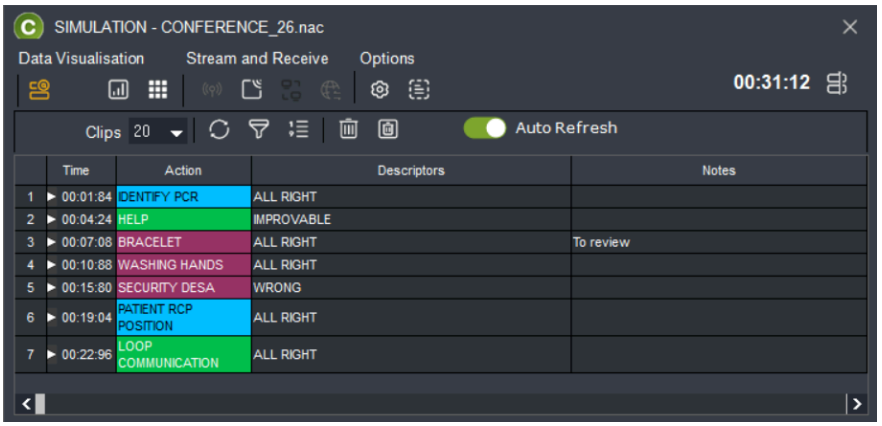


Figura 6: Play-by-play table

We'll continue clicking on actions and descriptors as events unfold. At any time, you can rewind, fast-forward, or jump to any part of the video. In the description, you'll see a specific video showing how to use the playback controls.

The result will be a data analysis with small fragments showing event information and corresponding images. Now it's time to analyze them in the timeline, which you can

access by clicking this icon.

Live observation and tagging

The real-time observation process is practically identical to the previous one. **The difference is in the video source you use (which will be live).**

- It can be your own camera or a video capture (e.g., TV). In these cases, you connect your source to the computer via a video capture card, so that the images can be clipped.

- It can also be a service of *streaming*, a live stream from YouTube, or even an automatic or IP camera. In this case, you can add the link to the settings and the images will be displayed in the video player.

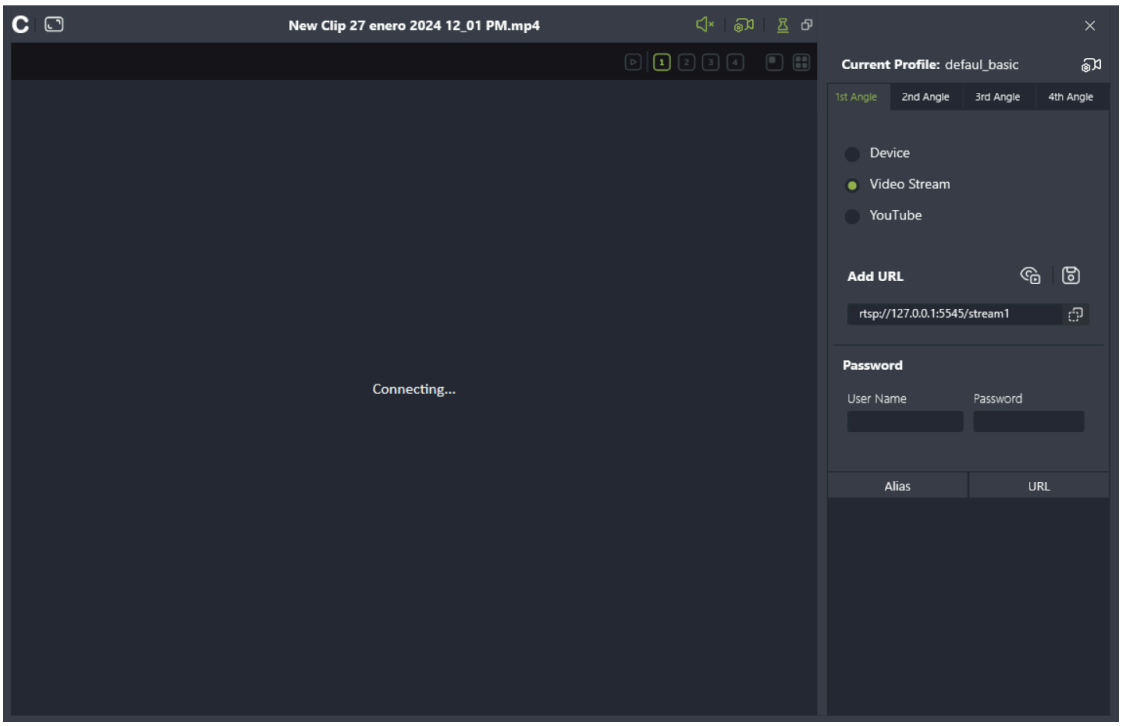


Figure 7: Real-time observation

The process begins by assigning a name to the video capture you're about to initiate. That is, the process of inputting images from your external source into your computer. Next, you must select that source from the available options.

In Codimg Premium, you can combine up to four different cameras for a single analysis, giving you more information from different perspectives.

Once you have the video source ready, just click the clip button (REC) and you can start watching.

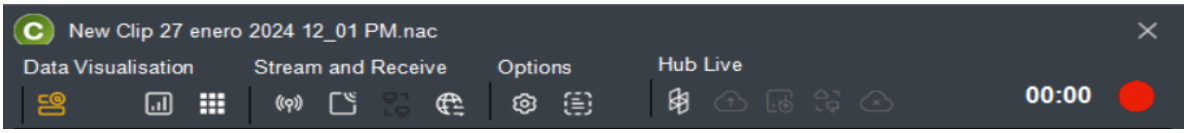


Figure 8: Live play-by-play

From here on, the process is identical to that of observation from the archive.

Observation without video

The difference with the previous two processes is that, in this case, you don't have a video source, but you will have one in later stages.

For example, when you are analyzing an event but you won't get the file until hours later.

The first step is to select a name for your analysis.

Now, the template and play-by-play window will open, but not the player (since you don't have a video source yet). Specify when each period begins and start clipping.

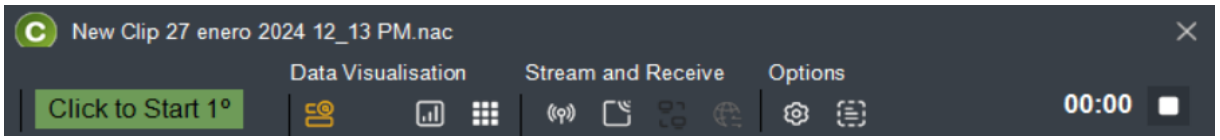


Figure 9: Play-by-Play without video source

Once you have the video, you must open the section **“View observations”,**select the observation and you will be able to synchronize images and data from the marks made.

Figure 10: Synchronizing the analysis with the video

How to create a digital template

To create a digital template from scratch, click on the option **“New digital template”** in the main menu.

Two windows open:

- The digital template (empty)
- The template editing window

We've already explained what types of buttons exist and how they work in the observation phase. Let's now see how to create them:

Double-click on the template to create an action. Again, double-click to edit the name.

Double click + “Control” to create a descriptor. A small red circle, in the upper left corner, identifies this button.

In the template editing window, you have a number of features for editing the template and its content. Using the graphical menu in the left column, you can access different panels or sections with tools for editing the template.

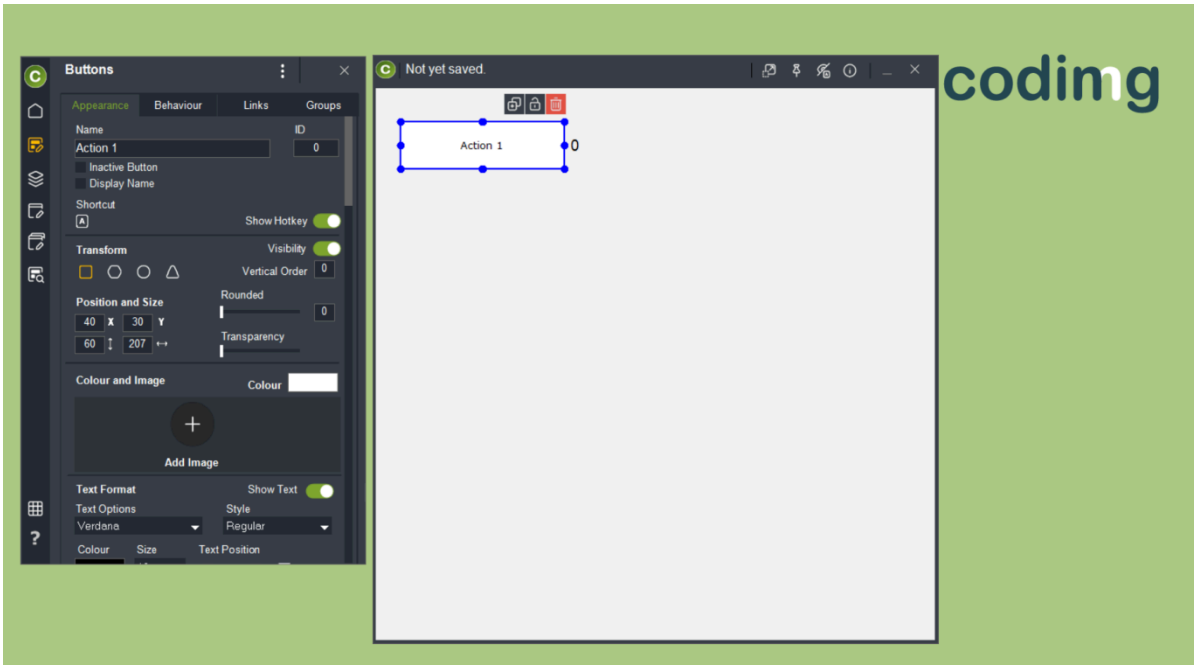


Figure 11: Creating a digital template

The first option allows you to edit the appearance of these buttons (colors, fonts, shapes, etc.), their behavior, and manage button groups. In the case of Codimg Premium, you can also link buttons to each other in the **“Links” tab**.

You can also transform an automatic action into a manual one. This means that, to clip it, you need to make two clicks instead of one: when the action starts and when it ends. You can also create exclusive buttons or even change the clip's duration with the PRE and POST times.

To learn more about creating buttons and templates, you should access the dedicated chapter in this manual.

Remember that on our website (www.Codimg.com) you have a Materials section to download pre-designed templates completely free.

How to analyze data on the timeline

After completing the observation and clipping process, the next phase is to review and analyze the clipped content.**The tool that enables this process is the timeline.**

In the timeline, you'll find multiple tools to filter and analyze your data.

You can access this environment as soon as you complete your observation and registration. You can also access it from the **library section**, which you can access from the start menu.

Two windows open:

- The video player
- The timeline

On the timeline, each line represents one of your actions, and each colored square represents a video clip created during the observation.

If you click on any of these colored squares, you will be able to play the video of the tagged

action.

On the left, you have a list with the same data, but presented chronologically (similar to the play-by-play table).

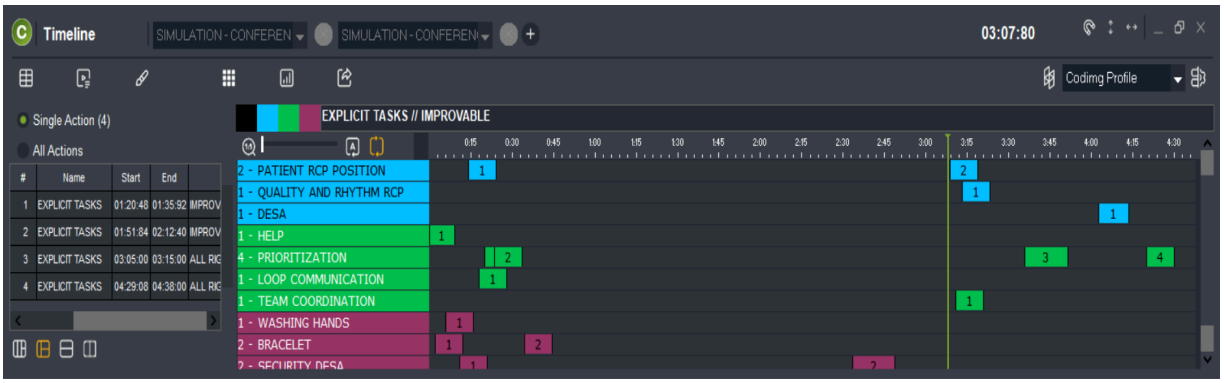


Figure 12: Timeline

At the bottom, you can customize the appearance of the timeline. And in the top bar, you can add various tools for your analysis.

Each user is unique and needs different tools, that's why we have included an option for you to **customize which tools you want to appear** and in what order.

In Codimg Premium, you can open as many videos and their analysis as you like at the same time. In the top bar of the timeline, you can scroll through them and work with larger amounts of information.

In the chapter dedicated to the timeline in this manual, we explain each of these tools in depth.

In this quick guide, we'll focus on the most important and common tools within the timeline.

The data matrix

The data matrix is one of the essential tools for searching and filtering your data and

video. It's a table in which you can see all the combinations of actions and descriptors.

Example: If you want to see clips when "Student 9" used a certain skill, you need to find the intersection between "Student 9" (descriptor) and that particular skill (action). The number in the cell represents how many times these two skills have converged. Click the number to view the clips.

Clicking on the cell will show you all the plays where intersecting buttons were clicked. Clicking on the number in the cell plays the video on the player.

You can also submit these actions to your feedback. We'll cover this in the chapter dedicated to this tool, which concludes the observation.

In Codimg Premium, you can open a matrix with data from multiple analyses (i.e., multiple videos at once). This is known as a multi-matrix. You can also display data from a specific period of the video (dynamic matrix).

In Codimg Premium you can create matrices with only the data you need (custom

matrices) and also create matrices of other matrices for a greater level of depth (submatrices).

Dashboard

A tool to visualize your data and provide much more illustrative feedback or debriefing. With data dashboards, you can transform your clicks into graphs and labels so you can see your analysis at a glance.

Dashboards are associated with a specific template, so you will only be able to see the data collected with the corresponding template.

Although the tool is very intuitive, we recommend reviewing the data dashboards chapter in this manual as it contains many different features.

In general, a dashboard is made up of two types of elements: labels and charts.

Labels can be data labels (reflecting a number or percentage of your clips), text labels (to add written context), and time labels (showing the exact moment in the video).

There are several types of charts: columns, bars, circular, lines, etc.

Once created, you can edit their appearance, including their color, font, size, and position. Clicking on a label or section of a chart will open a player displaying the associated clips.

1.8. Creating a Feedback Session

The final phase of the observation process consists of **creating a "feedback session with the most outstanding actions.**

We open the feedback environment. From here, you can add all the clips in a single feedback session or divide it into lists.

Adding clips to these lists is very easy. When you see a clip you want to add to the feedback session, whether in the timeline, the matrix or the*dashboard*, simply press the 3 key and the clip is automatically added to the selected list.

In the feedback area, you can organize your logs, add text and audio notes, and even add drawings with KlipDraw, among other tools. We'll cover all of these in more detail throughout this manual.

You can export your feedback session as a standalone .mp4 file and share it using standard methods. You can also upload your feedback session to Coding Hub and work with it online from any device, anywhere in the world.

We recommend checking out the Coding Hub manual to learn more about how these two tools interact, taking your analysis to the next level.

1.9 Export and share data

Codimg allows you to export your analysis to different formats. We explained how to export your feedback session in the previous section, but there are other options as well.

The most versatile option is to export your data to Excel or CSV. This is very useful if you want to work with your data in big data visualization software like Tableau, Power BI, or Python.

You can also export the analysis in XML format. This allows you to quickly and easily share your analysis data with other analysts who have access to the video, even if they don't use Codimg, since XML can be used with other timeline-based analysis programs.

2. Start Menu/Panel

When you open the program for the first time, it appears**the start menu (or panel)**. Let's separate it into three zones for easier identification:

- On the left, we can see the**logo**of the program and the sections of**“Support and Licensing”**and **“See what’s new.”**
- On the right, you have**up to six quick access cells**These cells are customizable by the user and are used to select the most common processes you will work with.
- At the top, next to the program name, you have**the icon** to access various general program settings. In this chapter, we'll focus on the most important ones for getting started with Codimg.

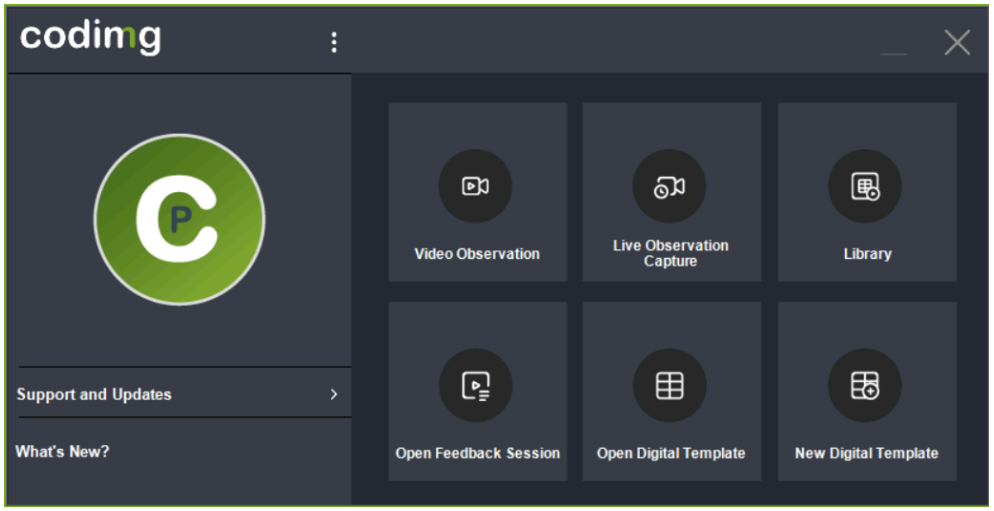


Figure 13: Main menu

Left side of the start menu

Logo

By default, when you first open the program, you'll see your program's logo. However, you can customize your license with your own logo or image.

Simply click on the icon in the lower right corner and select the new image.

Support and license

In this section, you can access different options to help you: learn more about the program, find out how to request technical support, how to update the program, or how to register your license.

What options do we find in this menu?

- **Remote support.**To receive technical assistance in case of questions, information, or to report any incidents with the program.
- **User Manual**. Access the document you're currently reading from within the same program.

- **Coding Hub User Manual.**If you'd like to access the manual for our storage, video analysis, and online communication platform.

- **Video help.**Our YouTube channel features dozens of tutorials for performing various program processes.

- **Check for updates.**Request the latest version of the program to stay up to date with the latest developments.

- **Check for updates automatically.**Instead of having to manually go to**"Check for updates"**By validating this option, the program will update your license—as long as your payments are up to date—to the latest available version.

- **License registration and activation.**To activate and deactivate the Codimg license. Remember that you can have your program installed on as many computers as you like, but only have an active license on one.

- **Codimg version.**This tells you the current version number of your license. This information is useful when requesting support.

Quick access cells

Available options

The first time you access the program, you will find six quick access cells on the right side of the start menu:

En Codimg Premium son:

- Real-time observation

- Observation without video

source- Observation from archive

- Feedback

- library- Codimg

Hub.

That is, these cells respond to the most common tasks when working with Codimg in general terms.

But not all users use Codimg the same way. For this reason, you can configure these shortcut keys to suit your needs.

What are the available options?

New digital template To create a new template from scratch.

Open digital template. To open a created template.

Open database. To open a previous analysis already carried out.

- **Real-time observation.**To start a live data collection or clipping.

- **Observation without video source.**To start a data collection where you don't have a video available.

- **Observation from archive.**Starts data collection from a video.
- **library.**To go to the section**“library”**of the program, where you can find all the work material with Codimg.
- **Feedback.** To open a feedback session with pre-ordered feedback directly.
- **Codimg Hub.** To directly access the home page of our online platform Coding Hub.

Configure quick access cells

To select quick access cells – up to a maximum of six – click on the icon , go to the option**“Menu principal”** and choose from the 9 available options.

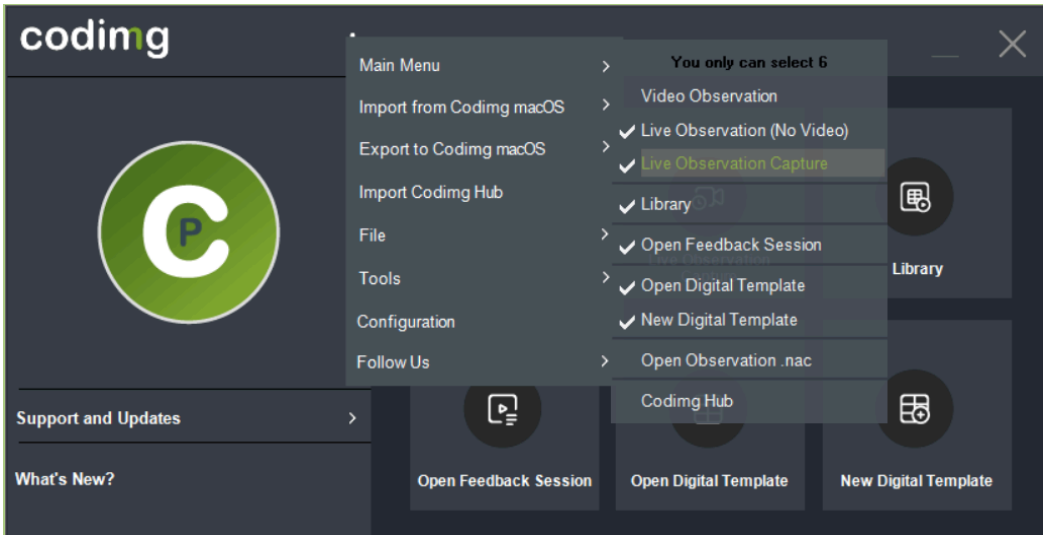


Figure 14: Main menu options

Other tasks outside of quick access

If you want to run an action that is not among the six options chosen for the quick launch cells, you must click the icon , go to the menu**"Archive"** and then select the task.

Options menu

At the top of the start menu, we find the icon , which takes us through several configuration options for the program.

In this chapter we will focus on the most important ones to start working in the program (we have talked about some of them lines above), and we will leave the menus**"Tools"** and **“Settings”**for the final part of this manual with two chapters reserved for it.

What options are available in this menu?

- **Main menu.**To select the quick start cells.
- **Import from Coding Hub.**To open a feedback session downloaded from the Coding Hub platform on your computer.
- **Tools.** Several advanced tools for managing the program. We'll discuss them at the end of the manual.
- **Configuration.**Several advanced configuration options. We'll discuss them at the end of the manual.
- **Follow us.**Find our profiles on various social networks.

3. Observation and clipping

The video analysis process with Codimg consists of several phases: observation and clipping (i.e., data collection), analysis review, debriefing from the dashboard, and

feedback.

The first of these, observation, consists of witnessing an event (i.e., a clinical simulation practice, Ecoe, public feedback session or event susceptible to being analyzed), observing and digitally documenting the different behaviors, learning - we call it clipping - what happens in them for later review.

In Codimg, you can**observe and clip data in three ways:**

- **Observation and clipping from archive.**This means that you take data from an already clipped video.
- **Real-time observation and clipping.**Data collection occurs live, that is, while the event is happening and you receive images on your computer.
- **Observation and clipping without video source.**You collect data, usually live, but without having the video at the moment, but you'll get it later. Then you'll synchronize the data and images.

Observation and clipping from archive

The first of the three types of observation and the most common. This is the work environment in which the event or behavior to be studied is observed from a video file, and the actions that occur are clipped using a fully customizable digital template created by the user.

Note: To perform an observation with Codimg, you need a digital template which contains buttons that represent the actions and descriptors you want to tag. In the next chapter of this manual, we'll explain the process of creating digital templates.

How to start the observation and clipping process from the archive?

Start by clicking on the box**"Observation from the archive"**from the Start menu. You can also access this option from the top menu.

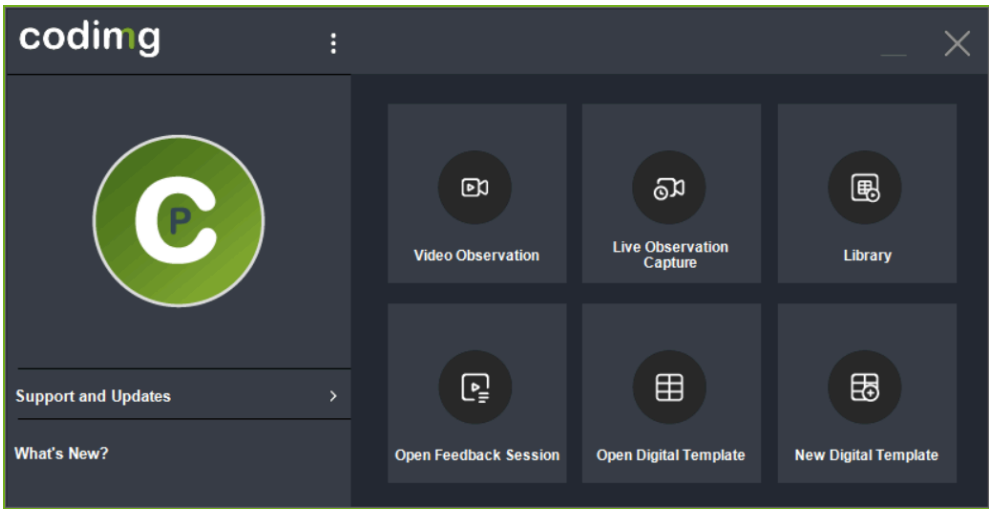


Figure 15: Main menu

Select the video file you want to watch and click on**“Open”.**At the bottom right, you can see the video formats supported by the program.

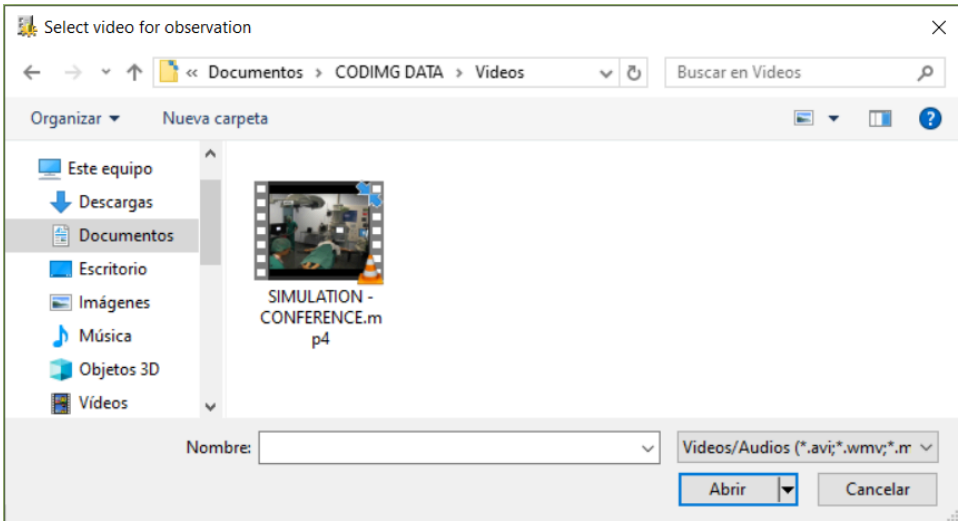


Figure 16: Video folder in Codimg Data Next,

there are two options.

The first,**create a new template**. As we have indicated previously, it is necessary have a template to start an observation. The second option,**If you already have a template, open it.**

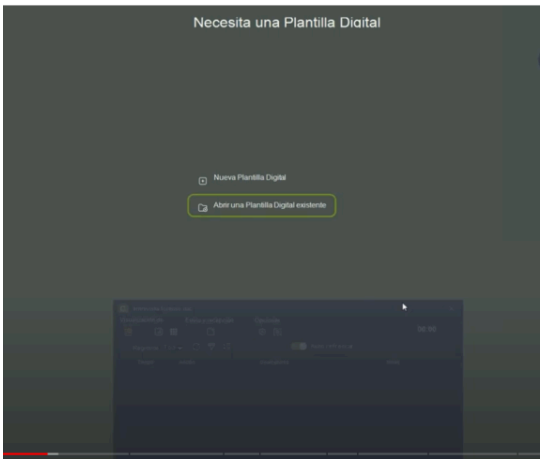


Figure 17: Open an existing template

If you choose the option**“New template”**two windows open.

- A blank button template.
- The

  template editing window.

By choosing this option, you will have to**create the template from scratch**and save it with a name. Once this step is complete, you can start the observation from a file.

However, we recommend that you**you carry out the template creation process previously.**This is a job that requires a certain process of reflection and time.

In the next chapter, we'll explain how to create an action template.

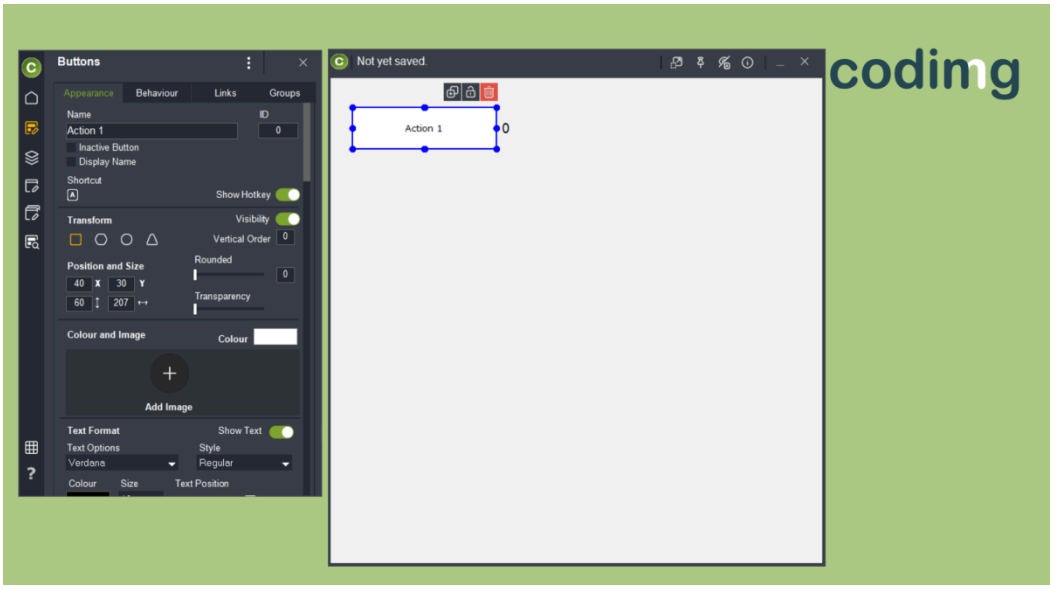


Figure 18: Opening a template from scratch

When selecting**“Open template”**A window will open to select the template you're going to work with (if you've previously created another template, the last one you used will open). Templates are files with an extension (.naccat on Windows).

Once you've selected the template, you can start the observation process from the file. Three windows will open:

- The video player
- The ‘play-by-play’ table.
- The button template.

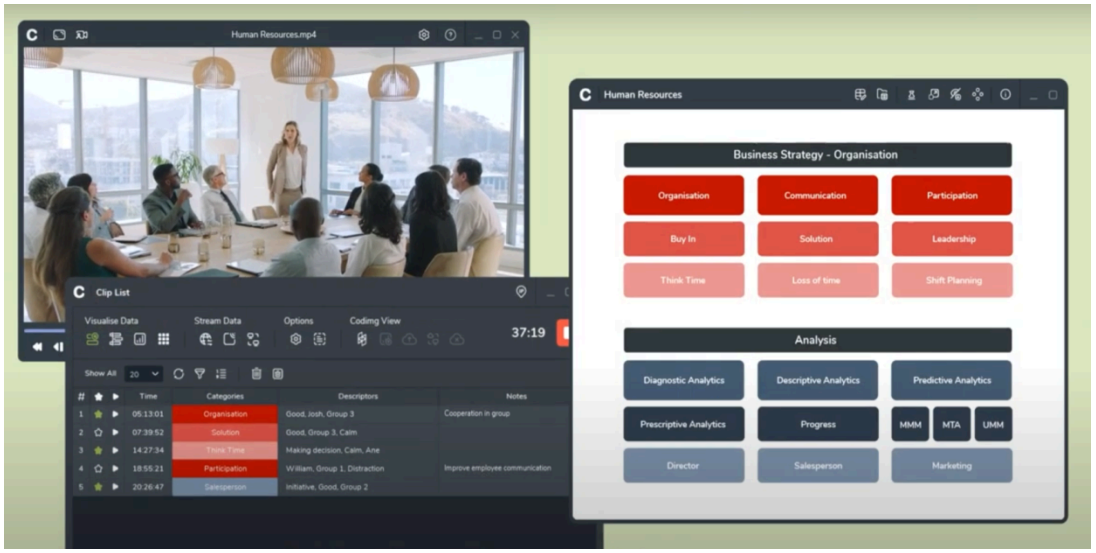


Figure 19: The video player, button template, and play-by-play

Once the template is ready, the next step is to start playback. You can now begin tagging actions.

How should tagging be done?

The user should click on the buttons that correspond to the events that occur in the video.

> **Example:** When a key action occurs during a simulation, you can tag what the action was, who participates and the outcome of that action. For example, you might click "**Communication**" + "**Participant 1**" + "**Good**".

The **action must be tagged first** followed by however many descriptors the observer deems appropriate.

The action is the main button that defines the action and the descriptors are buttons that, as their name suggests, describe the main ones.

Clinical Skill (click) + Particularity of that skill (click) + professional (click) + good (click)

In the next chapter of this manual, we'll explain how to create digital templates with actions and descriptors, and how these buttons work.

As the data is clipped, it can be viewed in the 'play-by-play' window, which is a clip control of all the actions being clipped, accompanied by a wealth of contextual information.

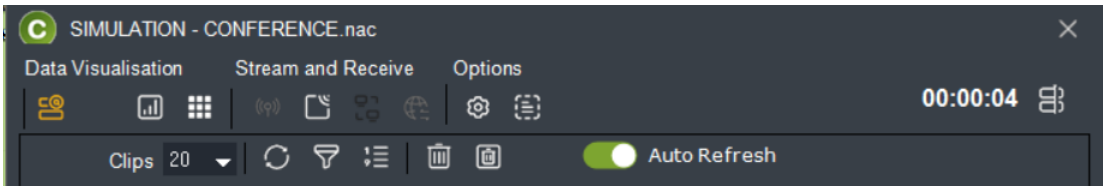


Figure 20: clip of actions in Play-by-Play

Analytics storage

By default, analytics are saved with the same name as the video but with the .nac file extension (Windows):

And Windows:**Documents**>CODIMG DATA >Databases Codimg >My DBs

Data visualization

Within this window, we can distinguish two ways of viewing the data during registration:

Play-by-play table .

A list showing all the logs as they are clipped. The two main columns of the window—from left to right, the third and fourth—show the video click time and the name of the action. On the right, you can see the descriptors included in the log and any text notes.

3	0:07:08	BRACELET	ALL RIGHT	To review
4	0:10:88	WASHING HANDS	ALL RIGHT	

Figure 21: clips in play-by-play

On the far right, you'll see the tag number—out of the total number of tags in your analysis—and a play button in case you need to review the action again.

It is important to note that you can edit some of the information clipped in this window by double-clicking on the column:**action, descriptors and text notes**.

- In the case of actions, a drop-down menu will appear for you to rectify and select the new one.
- In the descriptors, you can delete them by clicking on the icon **"X".** To add them, click on the template while editing.
- To add a text note, just double-click and type.

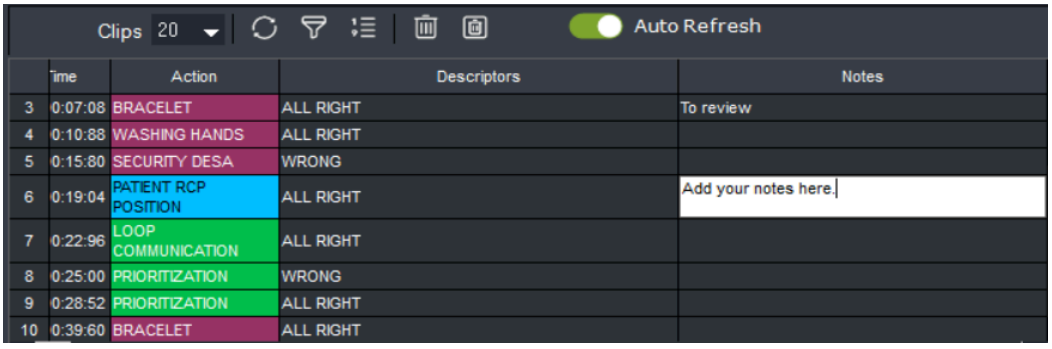


Figure 22: List of clips in play-by-play

From this list, we can select several **display options** (number of clips to display, action filtering or order) and the ability to delete both actions and descriptors.

We can also choose to have this list updated automatically or, on the contrary, have the update be a manual task.

The play-by-play list can be combined with a dashboard.*(dashboard)* and the matrix, the other two icons that you can find in the section"**Data Visualization"**within the play-by-play window.

That is, a new window will open with either of these two tools, displaying the clip data. In upcoming chapters, we'll discuss these two key tools for searching clips.
Once the registration is complete, you can move directly to the analysis phase, which we will discuss later in this manual, by clicking on the timeline icon.

transmitting and receiving

The first of the two is disabled, except for the tool**"Import from Coding View".**This is because this section is geared toward real-time observation, which we will discuss in the next section.

Options

To the right of the previous section we find**"Options"**. It consists of two icons: advanced options and context.

Advanced options. In this submenu, we find different tools to configure our observation and clipping work, both in the use of secondary angles, as well as in the sorting of clips or in the general configuration of the window.

- **Always upload produced clips to Coding Hub (live).**Allows you to send clips to Codimg Hub during a live session using the Quick Produce icon. See more information in Chapter 13 of the Codimg Hub manual.

- **Use keys 1 and 2 to move between clips**and **Use keys 4, 5, 6 and 7 to change video.**These two options override any keyboard shortcuts used involving keys 1 through 7 and trigger the specific action, whether moving between registers or changing angles.

- **Use button nesting.**If this option is not enabled, clustered buttons cannot be registered, even if they are overlapped. More on this option in the chapter on creating templates.

- **Sort clip history by time and creation.**Select how clips are displayed in the list: by their time in the video or by the time they were clicked (sometimes these don't match).

- **Last descriptor sets the time of the action.**To determine what completion time is assigned to an action, it can be the time assigned to the action itself or the time at which the last descriptor was clicked.

- **Allow the same descriptor multiple times in the same action.**When disabled, a descriptor cannot be chosen more than once within the same clip.

- **Descriptors are added only to the last action marked.**If there are multiple active actions, they will only go to the most recently clipped one.

- **Save and load window order.**To maintain the same current layout of windows on the screen.

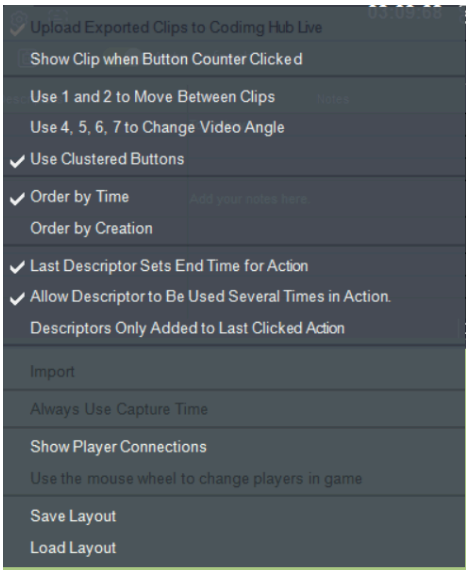


Figure 23: Options

Context. This window allows us to add identifying data about the observation so that each analysis has contextual information: date and time, observation data, etc.

In addition, there is a field dedicated to"**Observations"**in which other details that would not have been accommodated in the previous ones can be added.

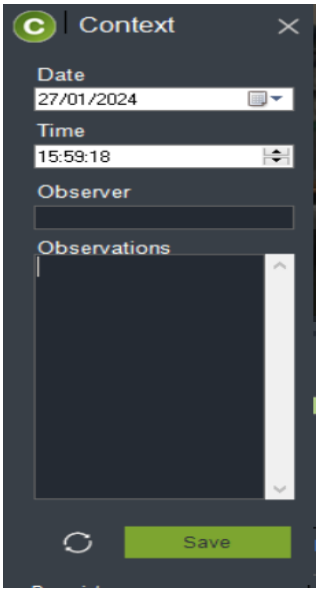


Figure 24: Context

Real-time observation and clipping

Work environment where action clipping occurs live and in person. This is the main difference with viewing from a file, where the user already has the video source available.

That is, the computer is connected to a source that supplies it with live images (a video camera, a*feed* of TV o one *streaming*) and the clipping is made while the events happen.

At the end of the observed event, the user has a video feed and a complete clip of actions, displayed on a timeline where they can easily analyze and manage them.

How to start the real-time observation and clipping process?

Start by clicking on the box **"Real-time observation"** from the Start menu. You can also access this option from the top menu.

Select a name for the video file you want to digitize. Then click the "Save" button.

Note: The video will be saved in compressed .mp4 format.

The next step is to select the button template with which the clipping will be made. As with observation from a file, the user can create a new template or open an existing one.

There are two options below.

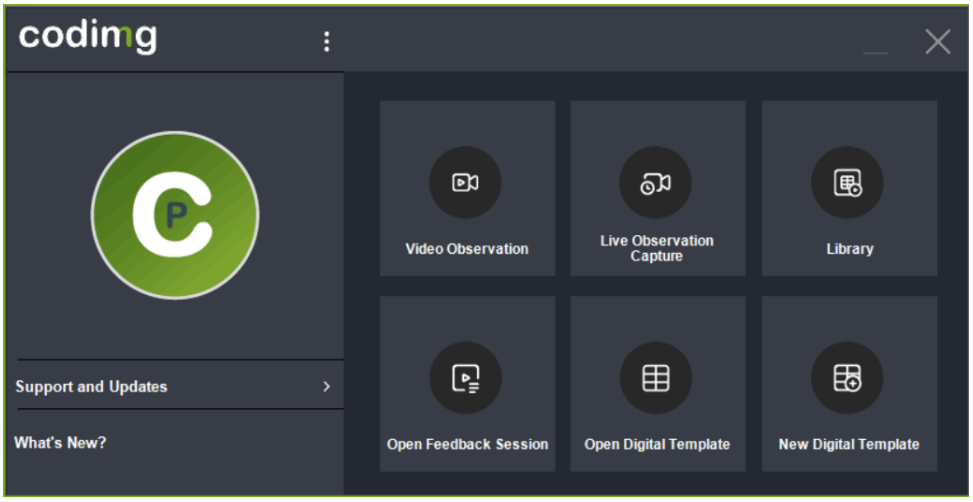


Figure 25: Main menu

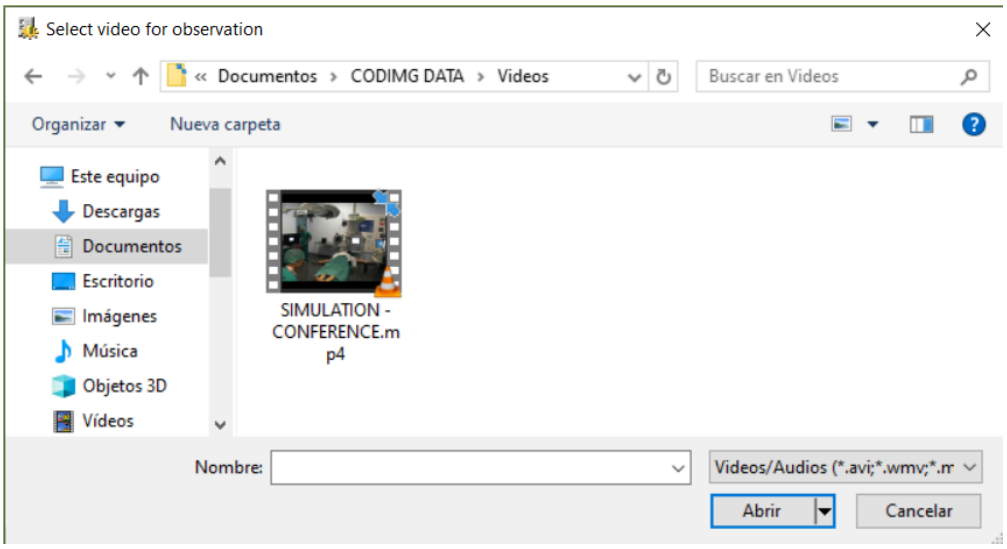


Figure 26: Choosing the video to analyze

The first, **create a new digital template**. As we indicated above, it is necessary to have a template to start an observation. The second option, **If you already have a template, open it.**

If you opt for the option **“New digital template”** Two windows open (Figure 15).

- A digital template of blank buttons.
- The digital template editing window.

By choosing this option, you will have to **create the template from scratch** and save it with a name. Once this step is complete, you can start the observation from a file.

However, we recommend that **you carry out the template creation process previously.** This is a job that requires a certain process of reflection and time.

When selecting **“Open digital template”.** A window will open to select the template you're going to work with (if you've previously created another template, the last one you used will open). Templates are files with a .naccat extension.

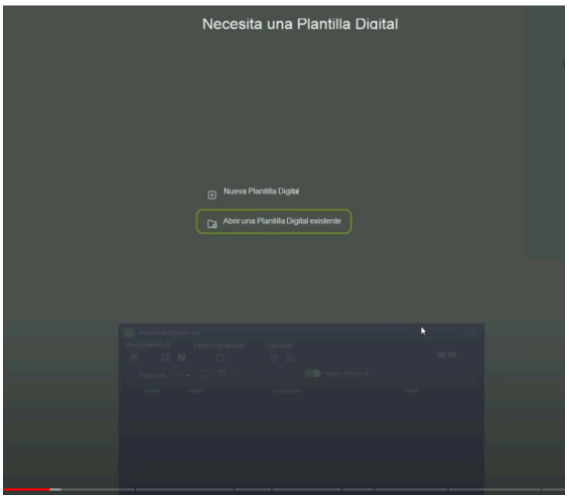


Figure 27: Opening an existing template In both cases, three screens will open:

- The video player (which captures the live video source).
- The play-by-play table.
- The button template.

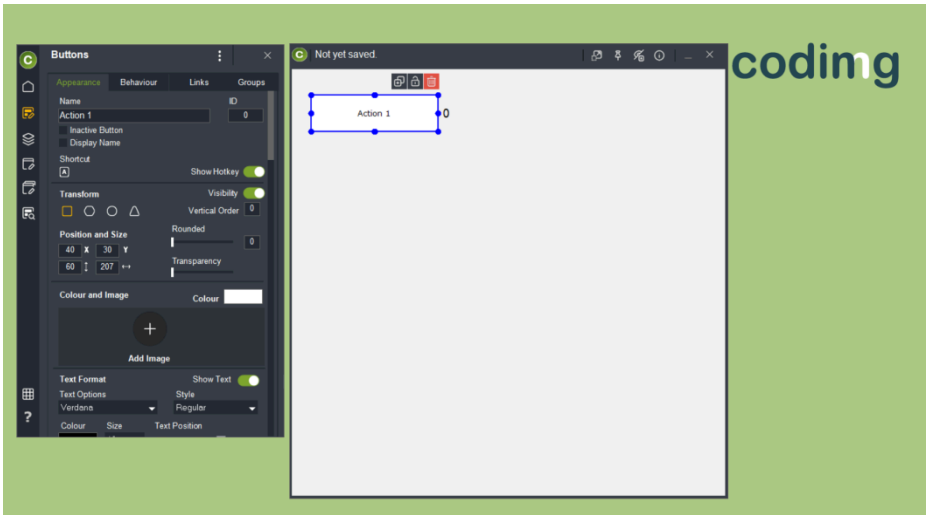


Figure 28: Open a new template

Choosing video sources

In real-time (live) observation, the first step is to**tell the program what the video source will be**that you'll use in your analysis. This video source will be displayed in this player.

They exist**three types of video sources:**

- **Capture devices.** A capture device allows you to convert images clipped with a camera into a format your computer can read. Configure your camera and capture device and select them from the drop-down menu. You can also use a webcam instead of an external camera.

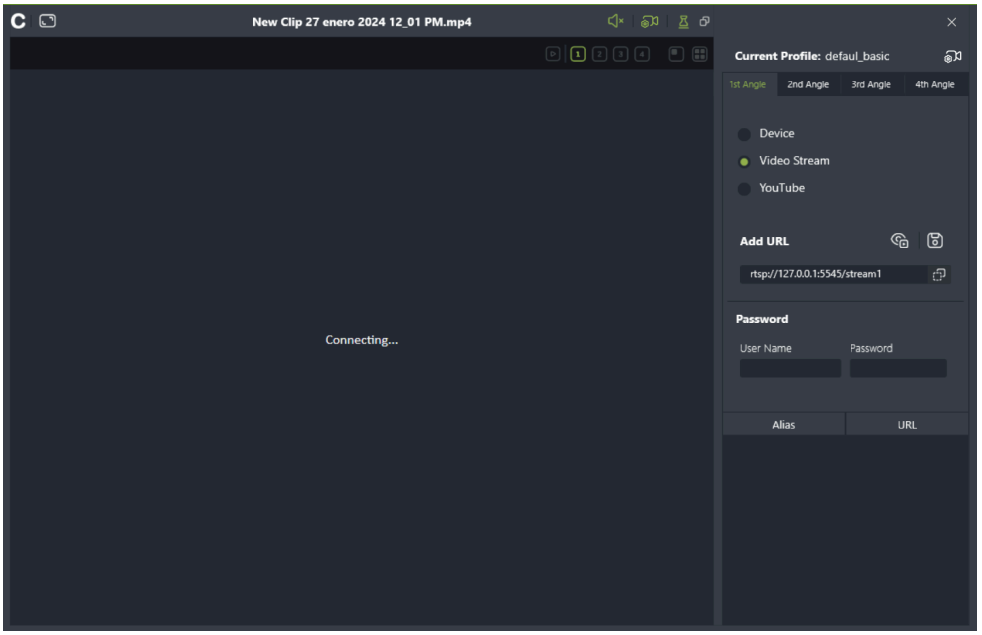


Figure 29: Player in real-time viewing

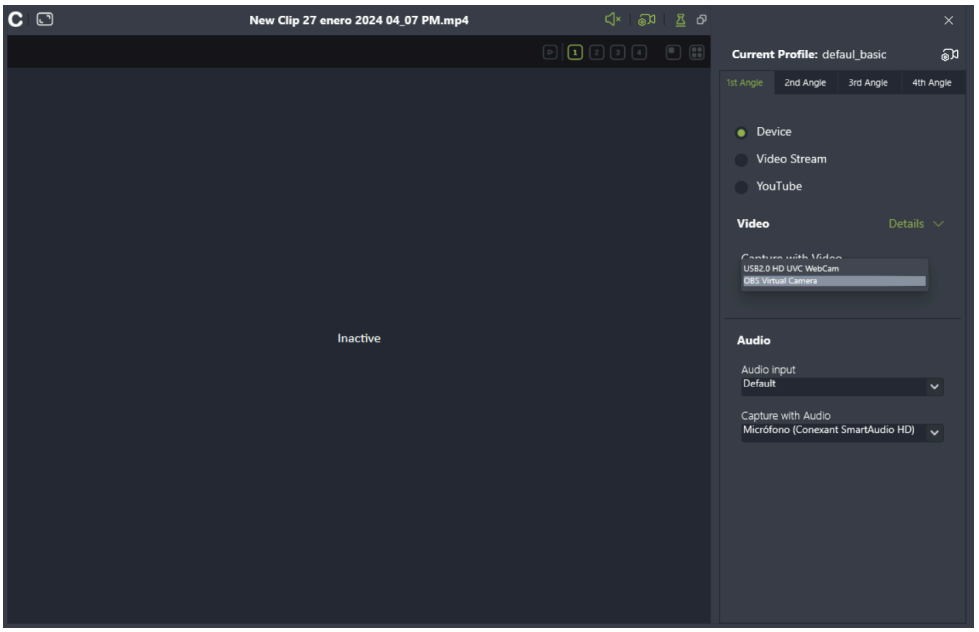


Figure 30: Capture devices

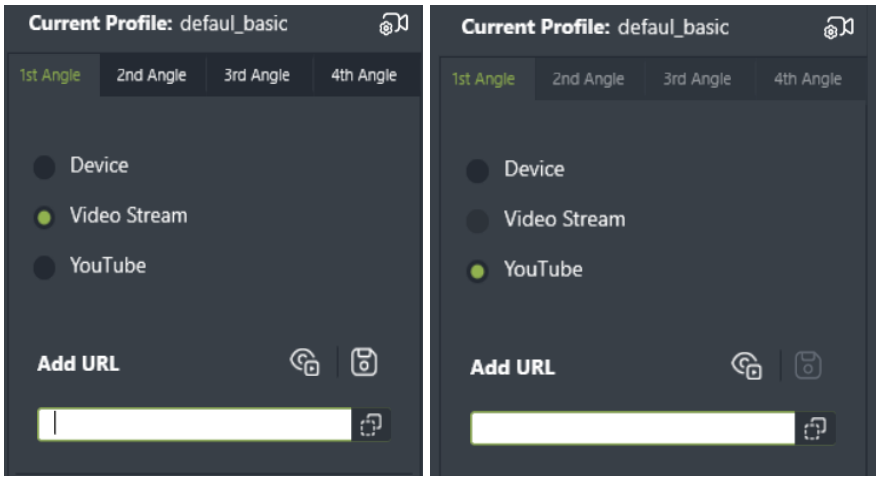
- **Video streaming.** Used to stream video over a network, typically from a camera using an IP/RTSP protocol. Add the corresponding IP address or URL, as well as the username and password, if necessary.

- **YouTube video (live).** Only available for YouTube videos that are being broadcast live. Enter the video URL and wait for the broadcast to begin.

Note: Due to YouTube's transmission protocols, this service may not always be available.

Add secondary angles

With Codimg Premium, you can add**up to four angles**from the same video during real-time observation. This allows for information about an event to be obtained from different perspectives.



(a) Video streaming (b) YouTube URL

Figure 31: Video sources

In the different angles you can combine both capture devices and services.
streams video, although not videos from YouTube.

To add secondary angles, simply click on the corresponding tab and activate the option with the slider button**"Enable angle".**

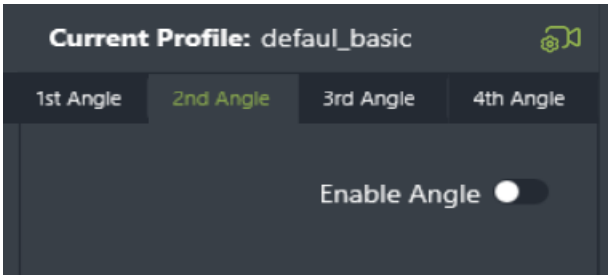


Figure 32: Angles for real-time observation

Secondary angles have the same configuration options as the main angle.

Capture profiles

Once the user has completed the font selection, they can select a few more configuration options. This is known as **Capture Profile.** You can save these settings for future observations. What configuration options does a capture profile offer?

- **Capture with audio.** The user can leave the audio or not from the original video source.
- **Video resolution.** There are three video resolution options (960x540px, 1280x720px and 1920x1080px).
- **Bitrate.** Select the data rate, that is, the number of Kbps that the computer plays per second.

- **FPS.** The number of frames per second.

In this window there are three other options :**“Force CPU”**, **”Stream video”** and **“Send data”**. It is recommended not to edit these options unless instructed by the Codimg support team.

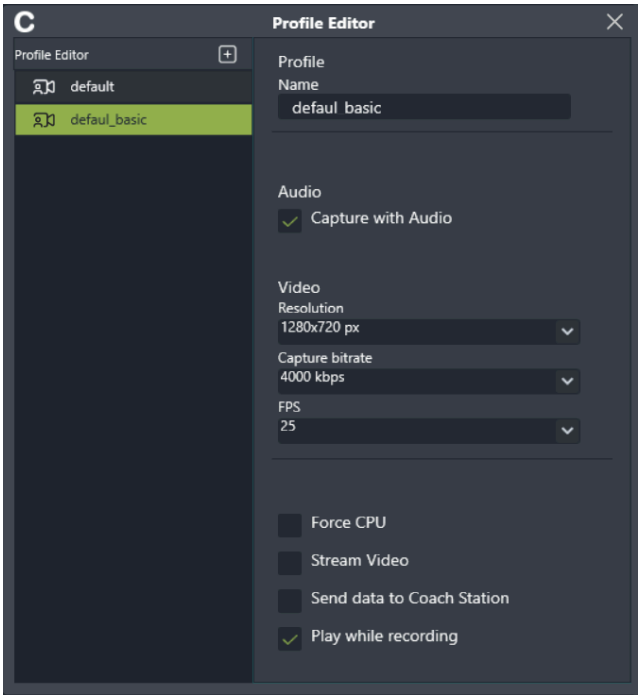


Figure 33: Capture profile

3.2.5. Player display modes

When working with multiple angles, there is the possibility of choosing different views of the player.

There are two main modes:

- **Picture-in-picture (PiP).**A main angle occupies the entire player. Multiple secondary angles can be added. These will be displayed overlaid on the main image. They can be dragged and moved around the player.

Figure 34: Picture-in-picture player display

- **Mosaic mode.**There's a main angle to which you can add multiple secondary angles. If you choose more than one, they share the canvas space and are displayed in a grid.

Figure 35: Mosaic player display

Whenever one of the two main modes is selected, all active angles will be displayed. This means that all video sources will be visible in the player, either overlapping in PiP mode

or sharing space in tile mode.

Clicking on each of the cameras (i.e. icons 1 through 4) will remove them from the player. To add cameras back to the player, press the **Shift + select camera**.

All images can be removed except the main angle, which cannot be removed.

How to change the main angle?

In either mode, deselect all secondary cameras. Only the primary angle will be displayed. Then, click a different angle. This will become the new primary angle.

To verify that this task has been performed correctly, you should observe how your new angle is yellow while the rest are white (see attached image).

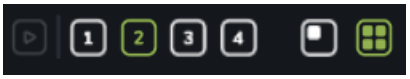


Figure 36: Player display with new angle

Clicking any of the mode buttons will reselect all angles, with the main angle being the last selected.

Player toolbar

At the top of the video player, we see other options for configuring the capture. From left to right, we find the following options:

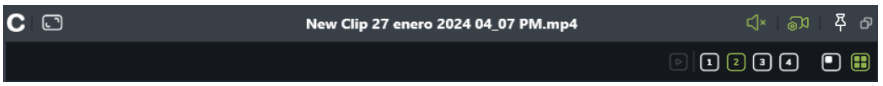


Figure 37: Options for configuring capture

- **Change image resolution.** It allows you to select different sizes and maintain the aspect ratio. These options are detailed in the video player section.
- **Title.** Name of the video being captured.
- **Audio.** Enable and disable the video's original audio. Choose which angle's audio to use.
- **Configuring video sources.** Opens the video sources configuration screen.
- **Pin player to front.** The video player is always displayed in front. This means no other windows can overlap it. They will all be displayed behind the player.
- **Maximize and minimize.** To switch between the selected size and full screen.

Data visualization

The operation of the play-by-play window is practically identical to that of viewing from a file (which we saw in the previous section).

However, in the case of real-time capture there are certain peculiarities that we will observe below.

The main difference **is the REC button to start clipping** of the capture and, therefore, start real-time observation.

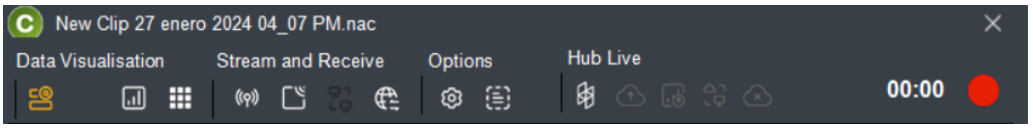


Figure 38: Play-by-play from real-time observation

Previously, we will have selected one or more capture sources and it is time to start clipping.

By clicking the clip button, we can select the start time for video capture. There's an option to have the capture start automatically in 10 seconds by checking the box at the bottom.

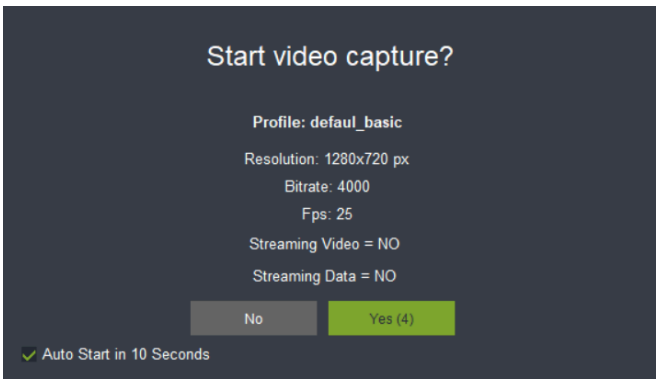


Figure 39: Starting real-time observation

The REC button will change to a STOP button. You can stop capturing at any time by clicking this new button again.

Note: If various video sources have been chosen, each one will be saved as a separate file in the CODIMG DATA folder.

Once video capture has started, the real-time observation process can begin.

From here on, the data collection process is exactly the same as in the case of observation from archives (see previous section).

Data storage

The captured video is saved in the folder you selected at the beginning of this observation. By default, it is stored in:

Documents>CODIMG DATA >Videos
The analyses are saved with the same name as the video but with the .nac file extension (Windows):

And Windows: **Documents**>CODIMG DATA >Databases Codimg >My DBs

Transmitting and receiving

In the top bar of the play-by-play window, we find some options that we didn't talk about during the file observation.

The section of**"transmitting and Receiving"**–now ready to use– allows us to transmit

our clips to other devices through the web server, receive data from a Codimg Codimg View license, and know the local IP.

These options **are explained in depth in the chapter dedicated to live analysis with** Codimg.

Options

The Options menu for this window is already explained in the previous section: both the advanced options and the context.

Codimg Hub

This option allows you to send live logs to a Coding Hub account, as well as screenshots of open dashboards and drawings and animations made with KlipDraw.

These options are explained in depth in the chapter dedicated to live analysis with Codimg and in chapter 13 of the Codimg Hub manual.

Observation and clipping without video source

The actions of a sporting event can be clipped **without opening a video or having a video capture device connected.** For example, while one person is clipping a sporting event, another person may be on the other side of the field clipping the action.

Once the event is over, the database with the clipped actions can be linked to the corresponding video.

Note: To perform any type of observation, you need a digital template. In the next chapter of this manual, we will explain how to create a digital template.

How to start the observation and clipping process without a video source?

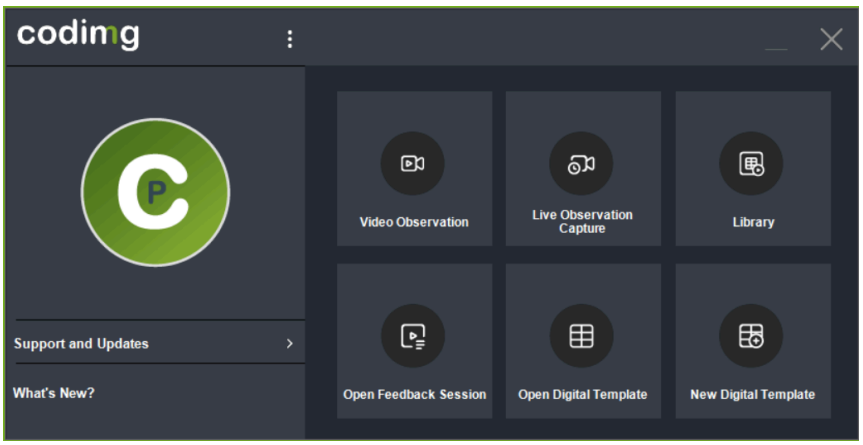


Figure 40: Main menu

Choose a name for the analysis you are going to create (by default, a name with the date and time is selected) and click on **"Accept"**.

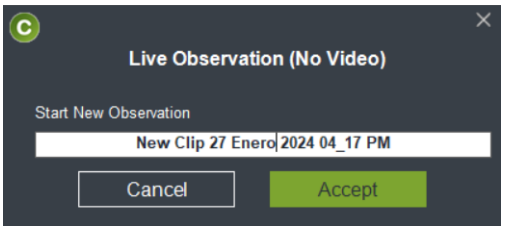


Figure 41: Name clip in observation without video source

The next step is to select the button template with which the clipping will be made. As with observation from a file, the user can create a new template or open an existing one.

There are two options below.

First, **create a new template**. As we indicated above, it is necessary to have a template to start an observation. The second option, **if you already have a template, open it.**

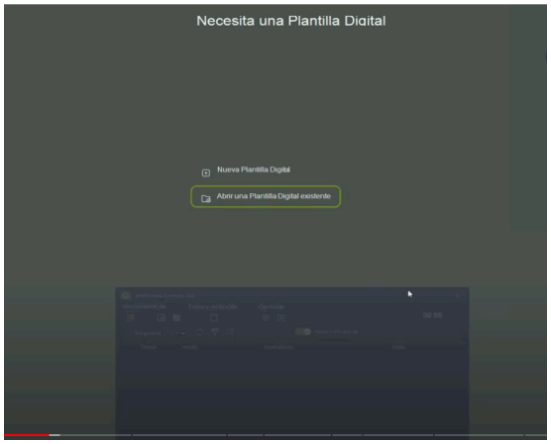


Figure 42: Open an existing template

If you opt for the option **“New template”** two windows open.

A blank button template.

The template editing window.

By choosing this option, you will have to **create the template from scratch** and save it with a name. Once this step is complete, you can start the observation from a file.

However, we recommend that you **carry out the template creation process previously.** This is a job that requires a certain process of reflection and time.

When selecting **“Open template”, a** window will open to select the template you're going to work with (if you've previously created another template, the last one you used will open). Templates are files with the .naccat extension.

Two screens will open:

Play-by-play table

The button template.

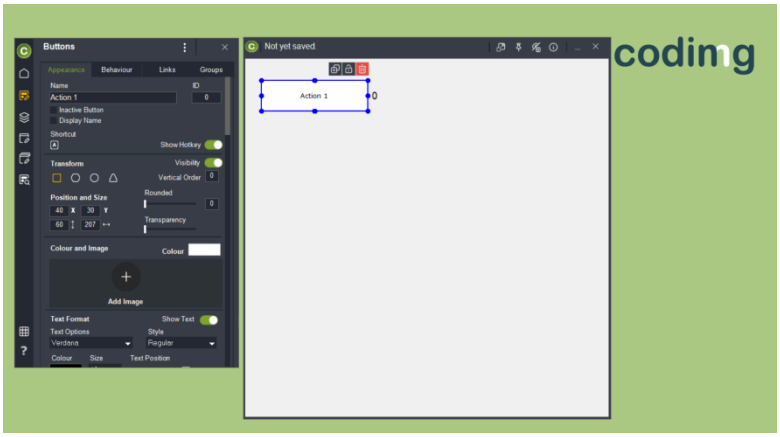


Figure 43: Open a new template

One of the main differences with respect to the other two types of observation and clipping: from archive and in real time, is that there is no video player, as this is the main feature of this type of observation.

The idea is that the observer is present at the event and has the ability to access the video feed afterward, at which point the images and videos will be synchronized.

Start clipping actions and mark periods

The play-by-play window for observing without a video source is virtually identical to the other two types of observation, so we won't go into it in depth.

To start the registration, click on the button "**1°period".** From here, the timer will start counting the time (which will be the reference for synchronizing the subsequent video).

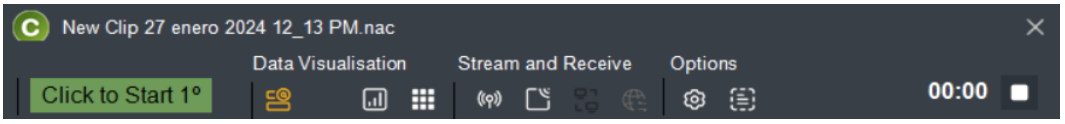


Figure 44: Start of the first period without video source

The left button and the STOP button will change color - to red - as the clipping continues.

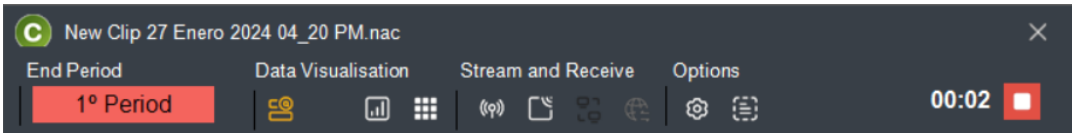


Figure 45: clip during the first period without video source

If the event being observed has several periods or parts, they can be delimited in this type of observation.

Two timers will appear: the first shows the total time since the start, and the second shows the time for the period in question.

A new click on the green button allows you to mark the start of the second (and subsequent) periods.

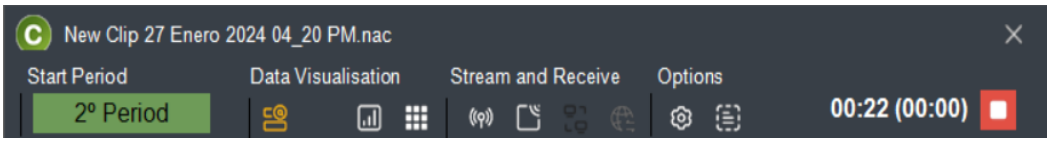


Figure 46: Start of the second period without video source

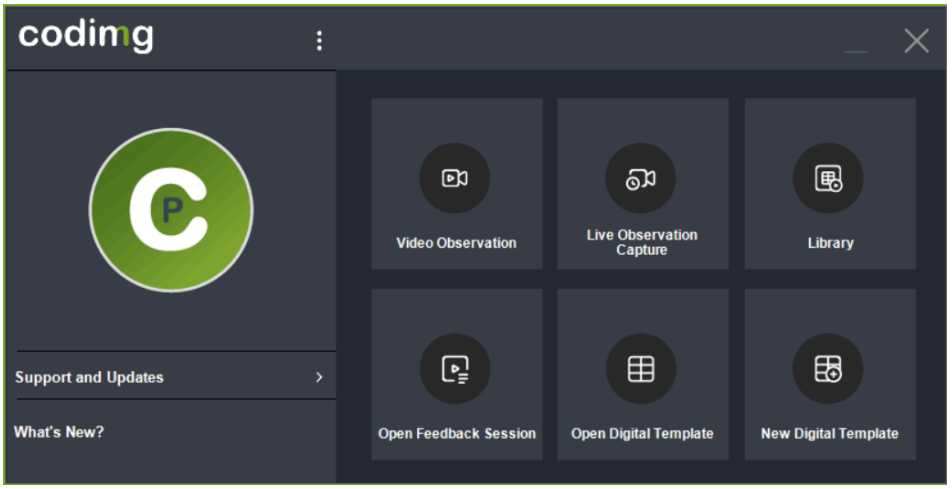


Figure 47: Main menu

This action ends the observation process without a video source.

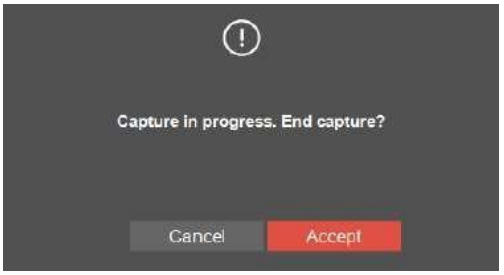


Figure 48: Finish capture

Analytics storage

By default, logs are saved at the address:

And Windows:
Documentos > CODIMG DATA > Databases Codimg > My DBs

Linking an analysis to a video

When clipping an event without a video source, you must link the created database to a video. To do this, click "**library**".

Select the analysis without a video source to be linked (it will appear in red since it has no associated video and the column that should show the video name will say OFFLINE).

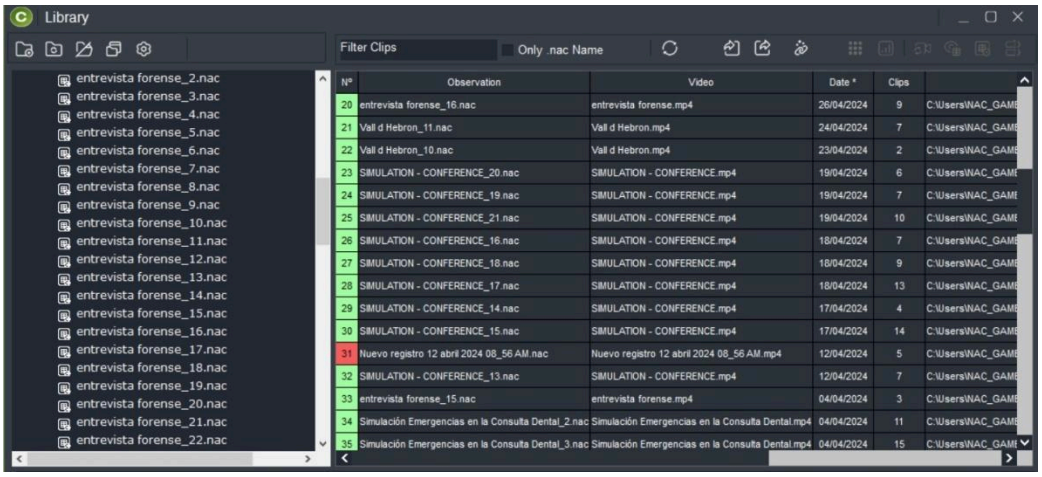


Figure 49: library

Next, double-click the analysis. A window will appear with a message warning that the analysis has no video linked and asking if you want to sync it with a video.

Click on ”**Accept"** to link the video.

Find the video you want to sync in the window that opens automatically.* and click on **"Open"**.

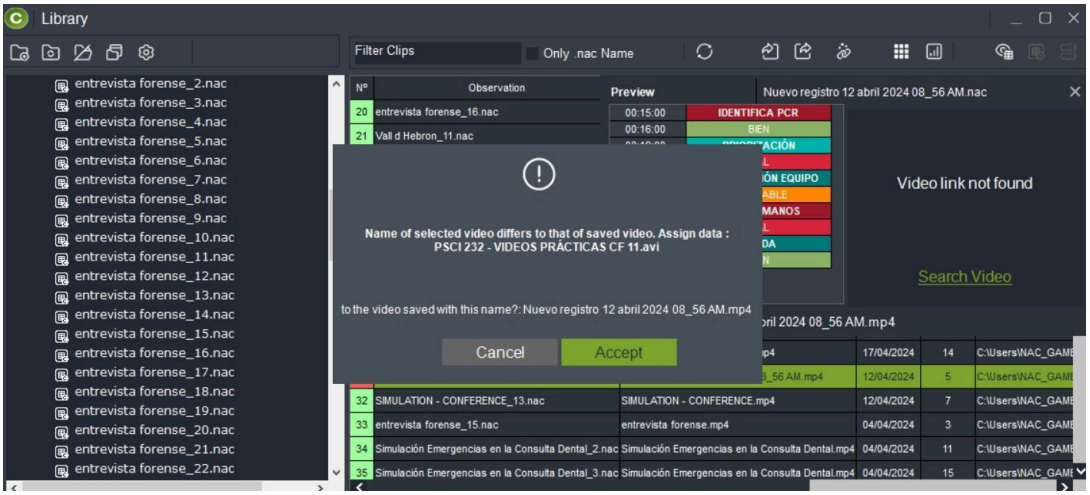


Figure 50: Synchronizing library

The sync window will open. Next, play the video at the bottom of the window and select the time period you want to sync on the right.

When the time and video match, click the button **“Synchronization point”** and confirm the process with a ”**Accept"**.

This is the same for all periods. When you're done, click on **“Go to timeline.”**

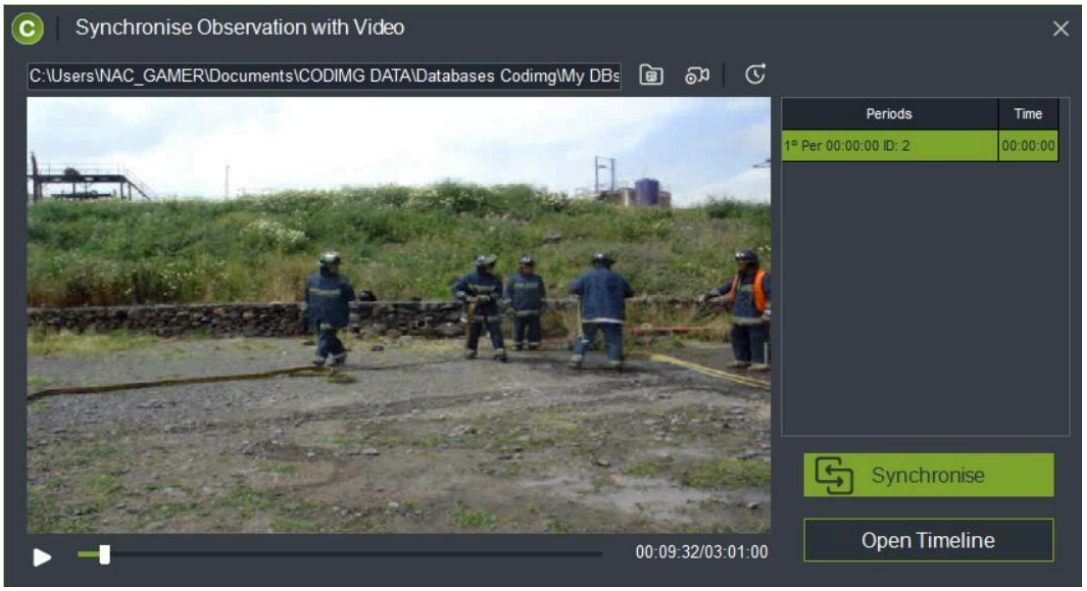


Figure 51: Synchronizing analysis with video

5. Button templates

To carry out any type of observation, it is necessary to have a digital template.

In this chapter, we explain how to create and shape your own digital template and all the options available during its creation.

Before you start: paper and pen

Before we dive into this chapter, we begin the section with a recommendation.

The process of creating a basic template is relatively simple, but it can become quite complicated, given the vast number of tools available and depending on your needs as an analyst.

Therefore, creating a template is often a bit slower than you might initially imagine because it requires a bit of thought. For this reason, we recommend taking some time to organize your ideas on paper before jumping right into the program.

If you're clear about how to organize your data collection, it'll be much easier to turn it into a template. But this is just a tip: you can dive right in and work with the program directly.

In fact, your template will likely change over time, either because you've discovered new features or because your observation isn't a fixed process, but rather a dynamic one.

Create and edit templates

In the program's start menu, click the box **“New digital template”** within the start menu.

This option can also be accessed from the top menu of the Start menu. We'll discuss this option in the final chapter of this manual.

Once the option is selected **“New digital template”**, two windows will open:

The template editing window (on the left)

The button template (on the right)

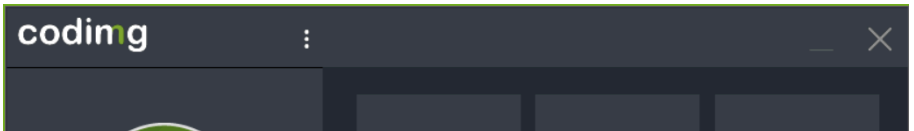


Figure 52: Main menu

In this chapter we will talk about both windows, but we will focus mainly on the first one, the editing window (attached image) since it contains the vast majority of the tools for designing a digital template.

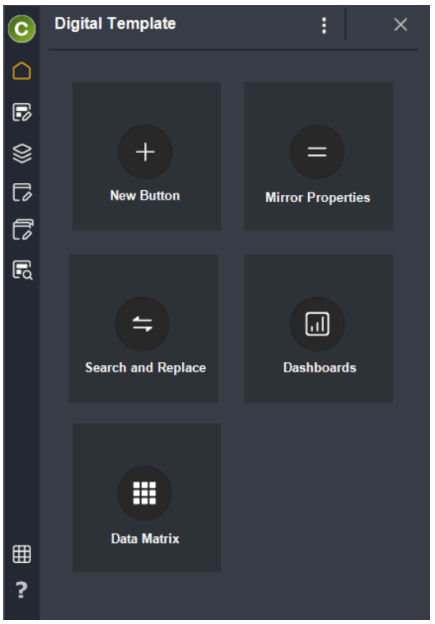


Figure 53: Editing window

The template editing window contains a series of sections, accessed from each of the icons in the left column, as we'll see below.

Note: If any of the icons are disabled, this means that they are only available in a higher version of the software.

Each of these sections is usually focused on one element of the template: buttons, groups, window, sequences, and button summary.

Digital Template / Home. For basic or general tasks that affect the entire workforce.

Buttons. Configures the appearance and behavior of buttons. Essential when creating templates.

Groups*. To define the links and relationships between buttons across groups.

Window. Configures the dimensions, appearance, and layout of the window that hosts the template.

Sequences. In Codimg Premium, you can create up to three sequences within a template. In Codimg Premium, you can create unlimited sequences. Sequences are template windows that are displayed sequentially based on the user's clicks.

Button summary*. Displays a list of the template buttons and additional information for better identification.

At the bottom of the window, in addition to all of the above, we find two other icons that give access to:

Grid. Displays guides on the template for more convenient button layout and organization.

Help. To access help tutorials.

Below, we'll briefly explain each of these options, and in the rest of the chapter, we'll delve deeper into each section to discover all the tools and features available.

Digital Template / Home

This is the section that is displayed by default when selecting **“New digital template”** from the program's start menu.

This view can also be accessed by clicking on the first icon in the left column.

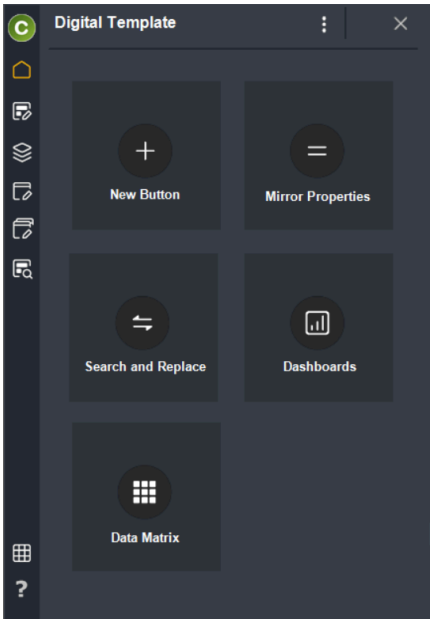


Figure 54: Editing window

What options do we find in this section?

Add new. To create a new button in a template.

Search and replace. Replaces part of the text or a color on several or all of the buttons in the template.

Data matrix. To sort the actions and descriptors in the matrix.

Match selected. To assign the same style or format to two or more buttons.

Create graphic descriptor. To add this functionality to the template.

Dashboard. Create or open a dashboard.

The first tool**“Add new”,**In addition to creating a button in the template, it automatically displays the following panel:**"Buttons"**.

Buttons

In the window **“Buttons”** we dive right into the creation and editing of the buttons that make up the template. This section is divided into three tabs: **Appearance, Behavior and Groups.**

In **"Appearance"**, customizes the appearance of your template buttons.

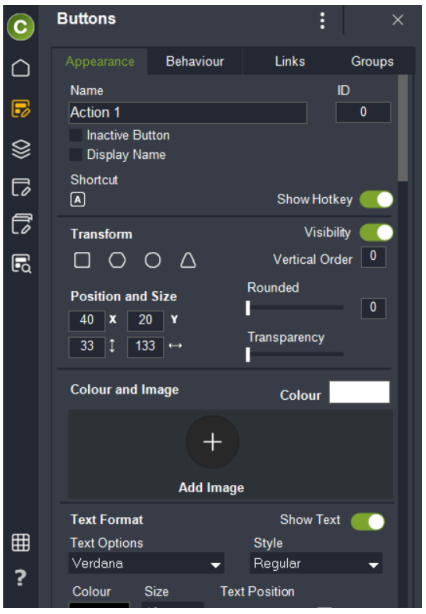


Figure 55: Editing window

In **"Behavior"**, you decide how that button will act when registering actions, whether they are actions or Descriptors.

In Codimg Premium, the tab **“Links”** you can create links between buttons and how they are linked.

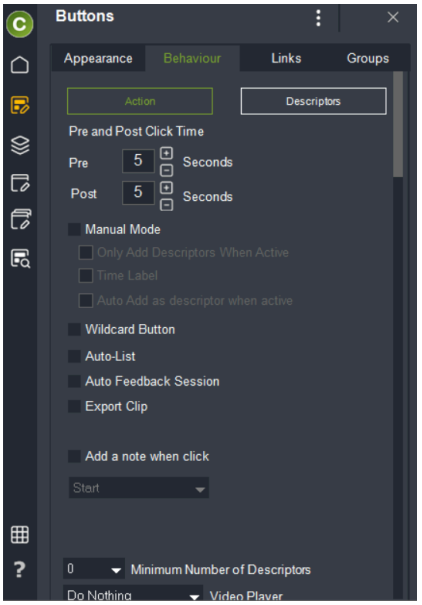


Figure 56: Behavior window

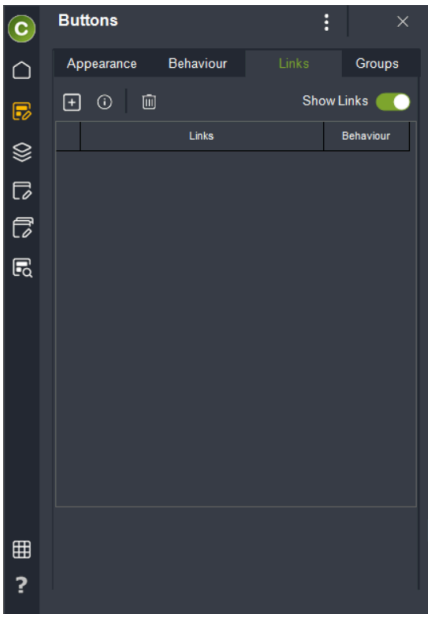


Figure 57: Links window

Within the section **“Buttons”** There is also a tab called **“Groups”* (there is also a section called this)**, where you can check and edit the different associations between buttons.

Later in this chapter, when we talk about creating and editing buttons in your template, we'll explore all the options on these three tabs in depth.

Groups*

As we said a few lines above, there is a section called **“Groups”**, in addition to the section tab **"Buttons"**.

This section manages a template's button groups. Groups are collections of several buttons that, for whatever reason, can be edited together while still maintaining their own individual character.

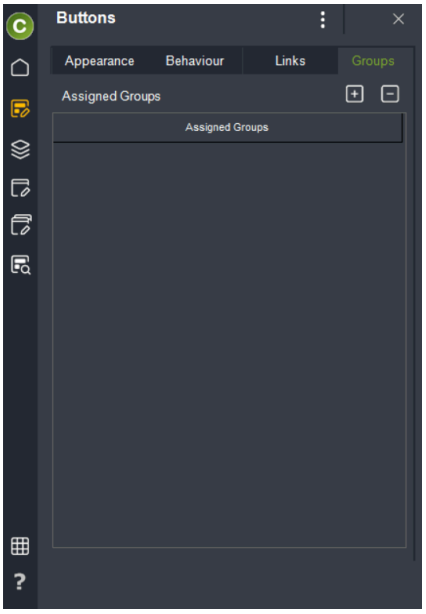


Figure 58: Groups window

One of the most famous examples of groups is the roles in a multidisciplinary team: nurses, doctors, etc. Following this idea, each professional has their own characteristics, but you may also need to see all the actions of your nurses or assistants.

In this case, these professionals are grouped under the criteria they share.

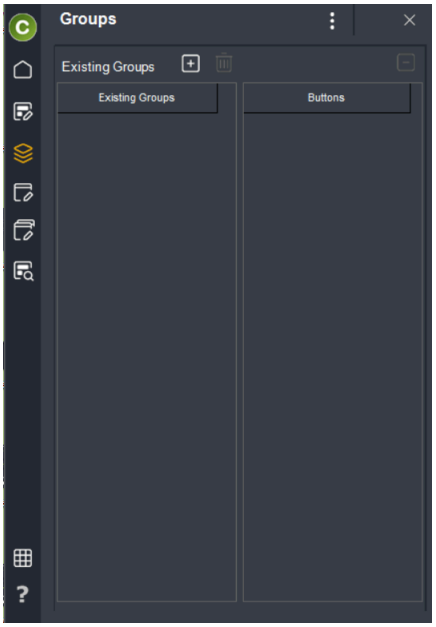


Figure 59: Grouping criteria

Window

In the Window section, you can configure the dimensions, appearance, and layout of the window that hosts the template. You can also assign a password to prevent the template from being modified and add a description to add context.

This section is divided into three tabs: **Appearance, Password and Description.**

In **"Appearance"**, the appearance of the window is customized.

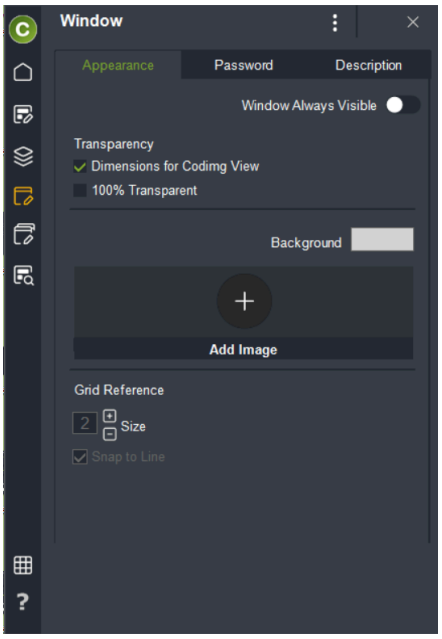


Figure 60: Appearance window

In **"Password",** you can ensure that no one who doesn't have the password can edit the template you created.

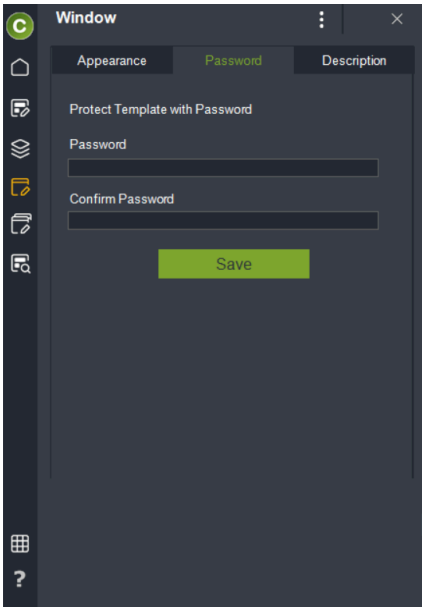


Figure 61: Password window

In **"Description"**, you can add contextual information about the template.

Button finder

From this section you can view all the buttons that the template contains and their features. By double-clicking on any button, it will be selected and will automatically go to the section **“Buttons”** to be able to edit it.

Buttons: types

Before starting to explain each of the sections of the template editing window, it is important to explain the types of buttons—a key element—that exist in a template.

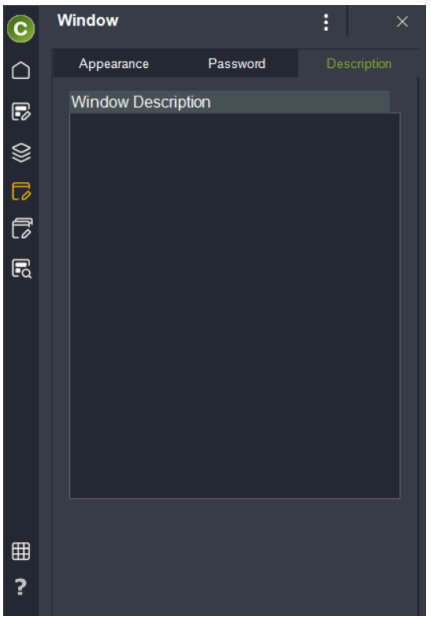


Figure 62: Template description window

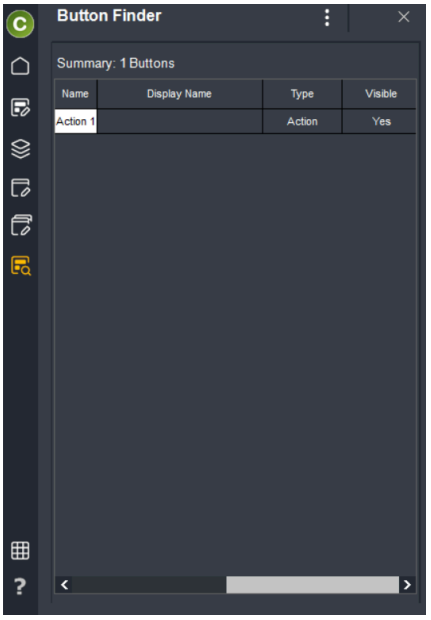


Figure 63: Button Summary

The templates, as we have seen, are organized through buttons that reflect concepts, items and elements of our analysis.

There are two types of buttons: one primary (called actions) and one secondary (descriptors).

This way, when clipping data, you can relate a primary action to one or more secondary actions, with all buttons being independent.

In turn, you will have unlimited buttons to distribute between actions and descriptors.

Actions

As mentioned, this is the main action of the clip. There are several ways to create actions:

- **Double click on the background of the button template** and again, double-click on the newly created button to rename it.

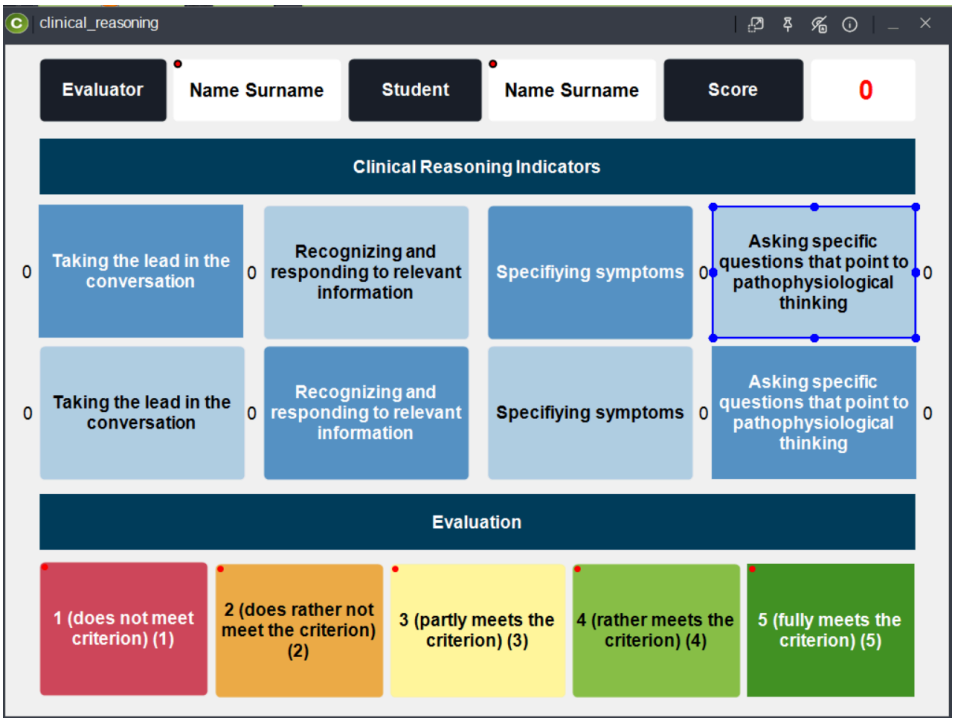


Figure 64: Button template

- Click on the icon **“Add new”** in the section **Start** from the button template editing window.

- With the cursor in the box to add a name within the “Appearance” tab of the view **"Buttons"**, by pressing the key **Enter.**

By default, the new button is created with **the same appearance of the last button created.** However, this can be customized at any time.

Regarding your **behavior**, by default, the actions created are **automatic.** This means that a predetermined time, marked by a number of seconds, will be clipped before and after clicking the button during clipping.

You can also create actions **Manual buttons require two clicks to register:** One click for the start and a second click for the end of the clip (you can also close it with the key **“Esc”**).

Descriptors

In Codimg Premium, descriptors depend on actions and are buttons that describe them. Typically, descriptors define how, when, and where previously clipped actions (actions) occur.

You could say that *Descriptors are like adjectives* for actions.

In Codimg Premium, you can create as many descriptors as you want.

When clipping actions, an action will be accompanied by one or more descriptors for further analysis. Let's look at some common examples of buttons.

For example: Actions (skills) = Cleaning Hands, Leadership, Communication, etc.
Descriptors (participants) = Resident 1, resident 2, etc.
Descriptors (quality) = Good, Bad, etc.

There are several different ways to **create descriptors**:

- **Double-click on the background of the button template** holding down the **"Ctrl" key** and again double-click on the newly created button to rename it.
- Create an action or select an already created button and **change their behavior.**

Change the behavior of a button

To change the behavior of a button (i.e., change it from an action to descriptor or vice versa) you can do it in two ways:

- By clicking the **right mouse button*** on the button you want to modify, a submenu of options will open where you can select the type of button at the top.

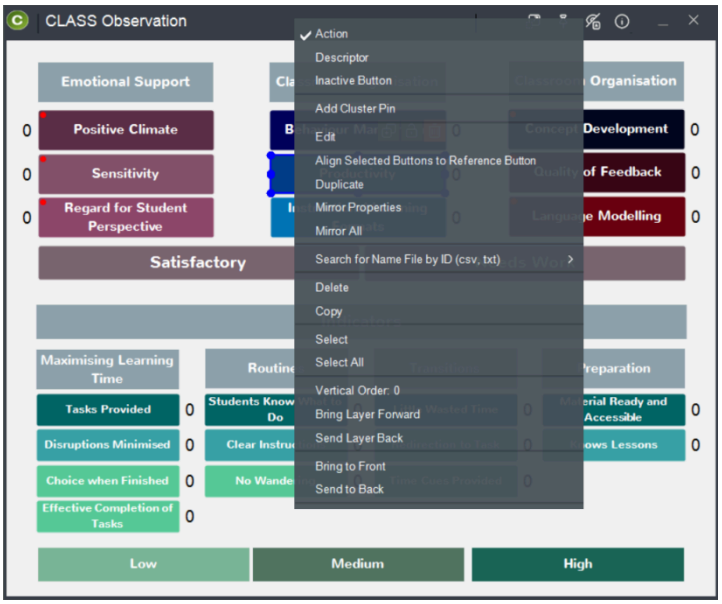


Figure 65: Options in the button template

- Or in the **"Behavior" tab** within the section **"Buttons"** in the digital template editing window.

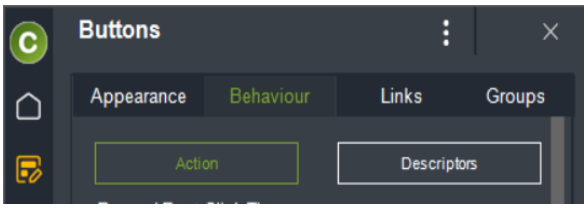


Figure 66: Button type in the behavior tab

How do you know at first glance whether a button is an action or a descriptor?

Visually, descriptors are differentiated from actions by having a red dot in the upper left corner.

Once in the observation environment, you can clip as many actions as you want by clicking

on the actions and then on the accompanying descriptors.

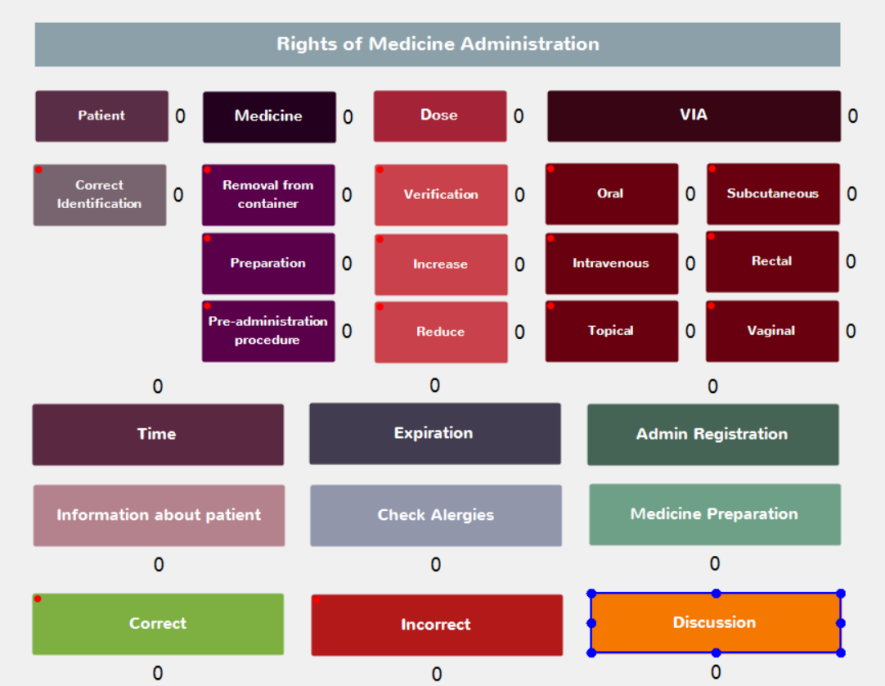


Figure 67: Descriptors marked with a red dot

Buttons Section

All buttons in a template can be customized to the user's needs. There are countless options, which we'll explore throughout this section.

Appearance

To modify graphic aspects of a button, the main tools are found in the tab **"Appearance"** of the section **“Buttons”** from the menu.

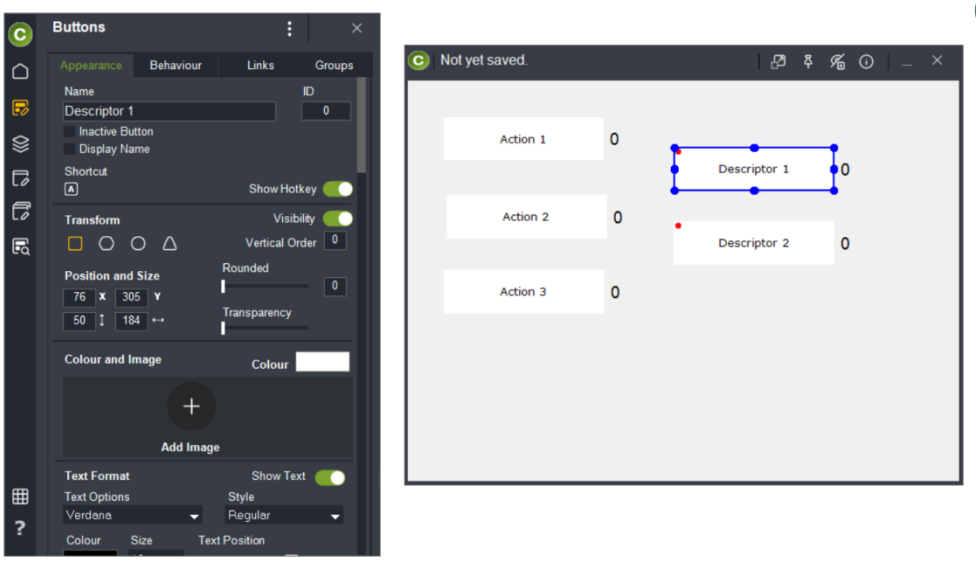


Figure 68: Appearance of the buttons

To edit a button you must first select it (see image above). This appears surrounded by a **blue dotted frame**

In the template editing window, the properties specific to that button are displayed.

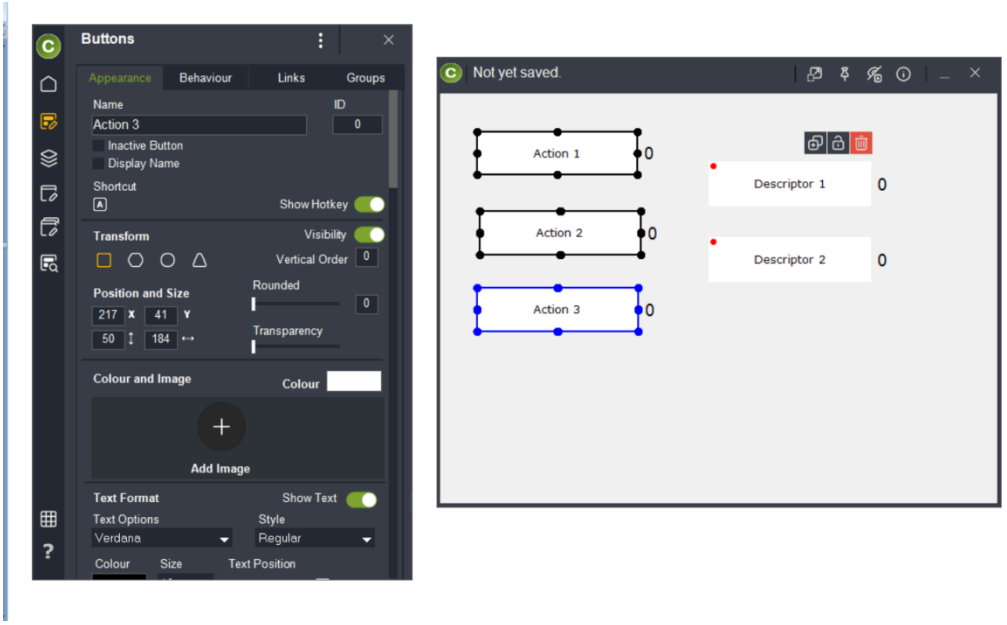


Figure 69: Button-specific properties

If you select multiple buttons, the last one selected will display blue dots and will be the reference. The remaining buttons will display black dots.

There are several ways to select buttons:

- **Click on the button.** If there are several buttons, hold down the Ctrl key.
- **Click on the template background and, without releasing, drag the cursor to create an area.** A black dashed line appears, drawing a selection perimeter. Release the cursor when you've circled all the buttons you want to select.

When you select a button, three icons will appear in the upper right corner. If you select a button,
If you press several buttons at once, this menu does not appear.

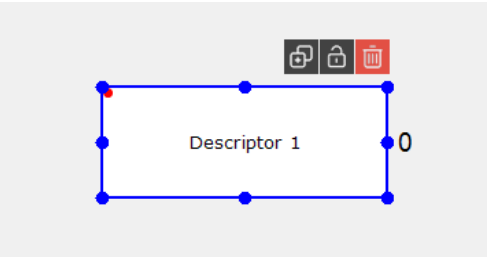


Figure 70: Editing icons

What do these editing icons correspond to?

Clone. Multiply the button as many times as the number

reflects.

Block.A locked button cannot be modified or deleted.

Eliminate. Remove the button from the template.

To undo the last changes made to the template, you can press the combination **“Ctrl”+”Z”**

Naming a button

To give a name to a button, there are two ways:

- **Double click on the button.** The text inside the button will become editable.
- **Edit name in the "Appearance" tab.** Enter the new name and it will be updated in the template.

> **Note:** Two buttons can have the same name but, during the tagging phase, they will be considered to be the same action. The case of the text does not affect how it is tagged.

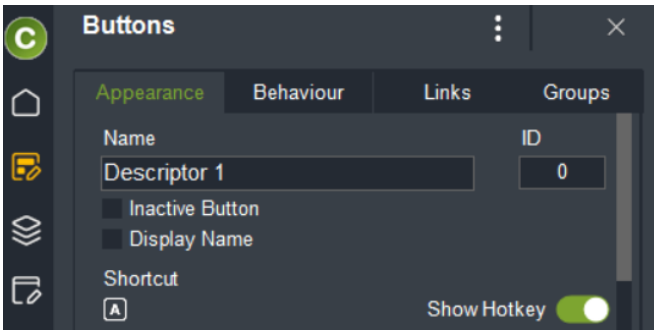


Figure 71: Appearance tab. Rename buttons

ID (txt, csv)*

This tool allows **assign a standard, reusable identification number** for any button in the template.

By assigning an ID to a button, you can change the button name in each analysis without having to redo your template over and over again.

That is, you assign it a name *virtual* (which identifies it) and which in each analysis will have a different nomenclature, the one you decide.

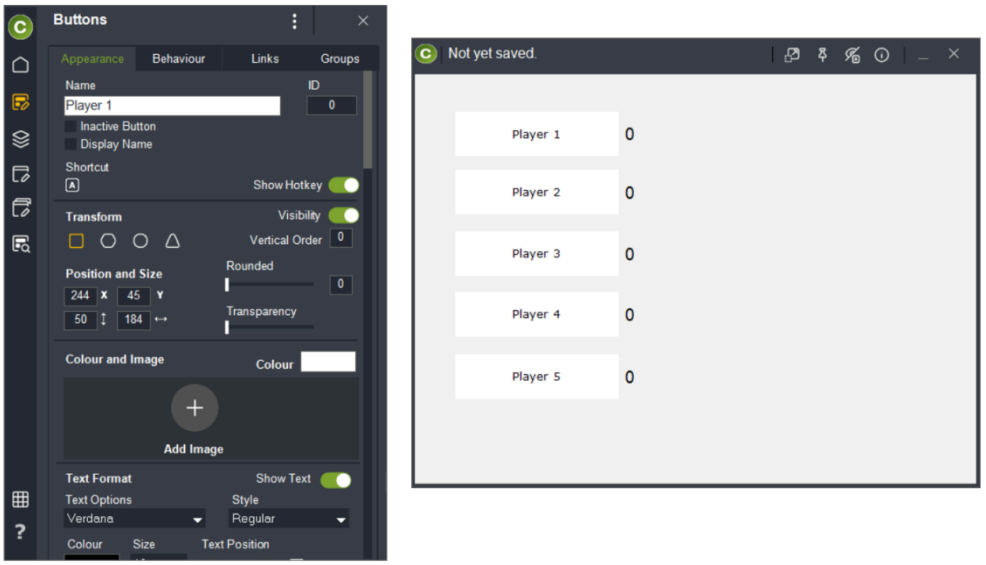


Figure 72: ID for your buttons

As you can see in the previous example, we have assigned each Student an ID. In this case, the **“Student 4”** is ID number 4. Now, let's go to our Notepad or any other program that allows you to save a **“.txt o .csv”**.

You create the file where you assign each button a name, as you will see in the attached image.

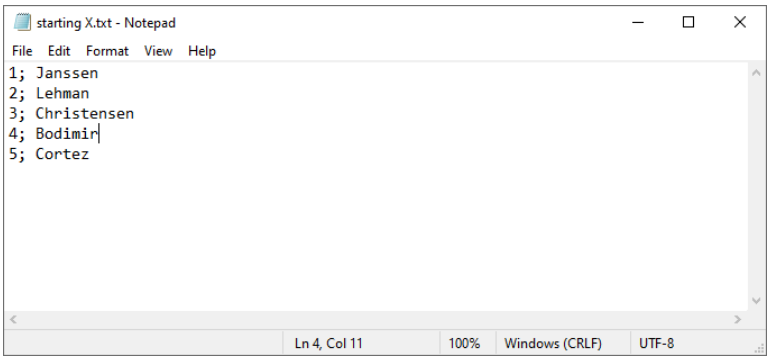


Figure 73: Text file

While editing templates, right-click on the template background and select the option **“Search name file by ID”**.

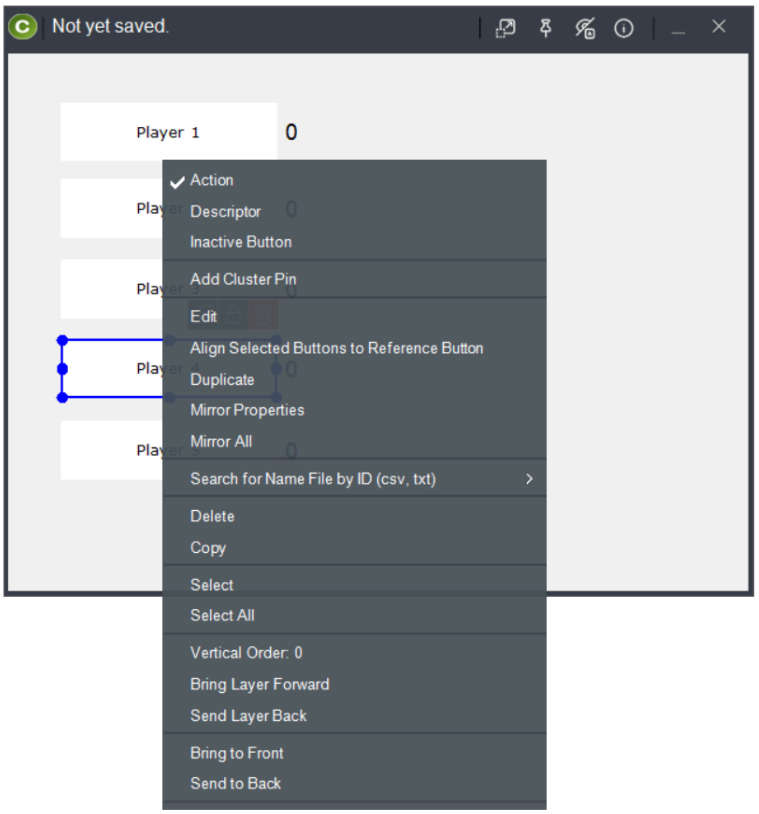


Figure 74: Search file names by ID

You select the file in question and it automatically replaces the buttons with their temporary IDs.

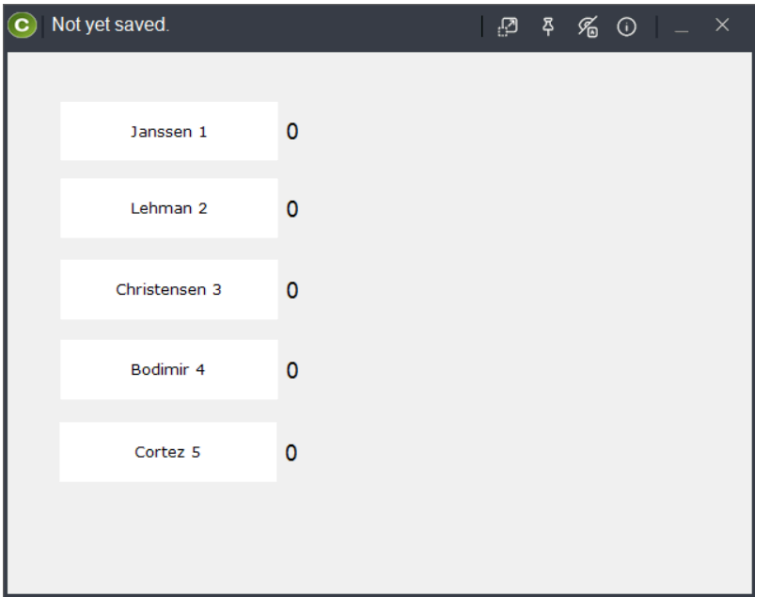


Figure 75: Automatic ID replacement

You can repeat this process as many times as you like. The program also saves the new IDs in case you want to use them again. To do this, simply click the secondary menu again and select the same option.

In a new level, all the IDs used appear.

Create a inactive button

By activating the box **“inactive button”**, the button becomes inactive. This means it's not a registerable button. A inactive button can serve as:

- **Box or header** to visually organize buttons.
- **Container for a marker.** If you want to display an event's scoreboard in your template, you can do so by using a inactive button and selecting the "Show Scoreboard" option. Choose the team whose score you want to display. A number will appear above the inactive button. Hide the text so only the number is visible, and you'll have something similar to what you see in the template shown below.

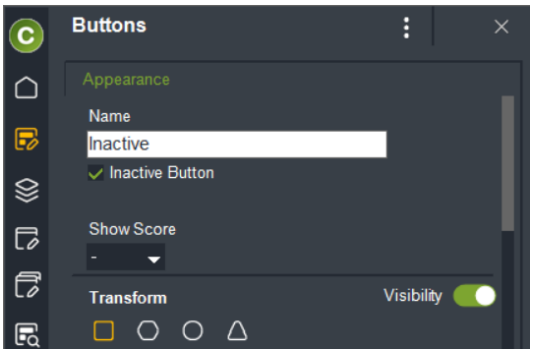


Figure 76: Adding a marker to a inactive button

Below, we show you a template that includes the three most common types of inactive buttons:

- The container buttons (gray and dark green)
- The black buttons that act as headers
- Bookmarks are also inactive buttons

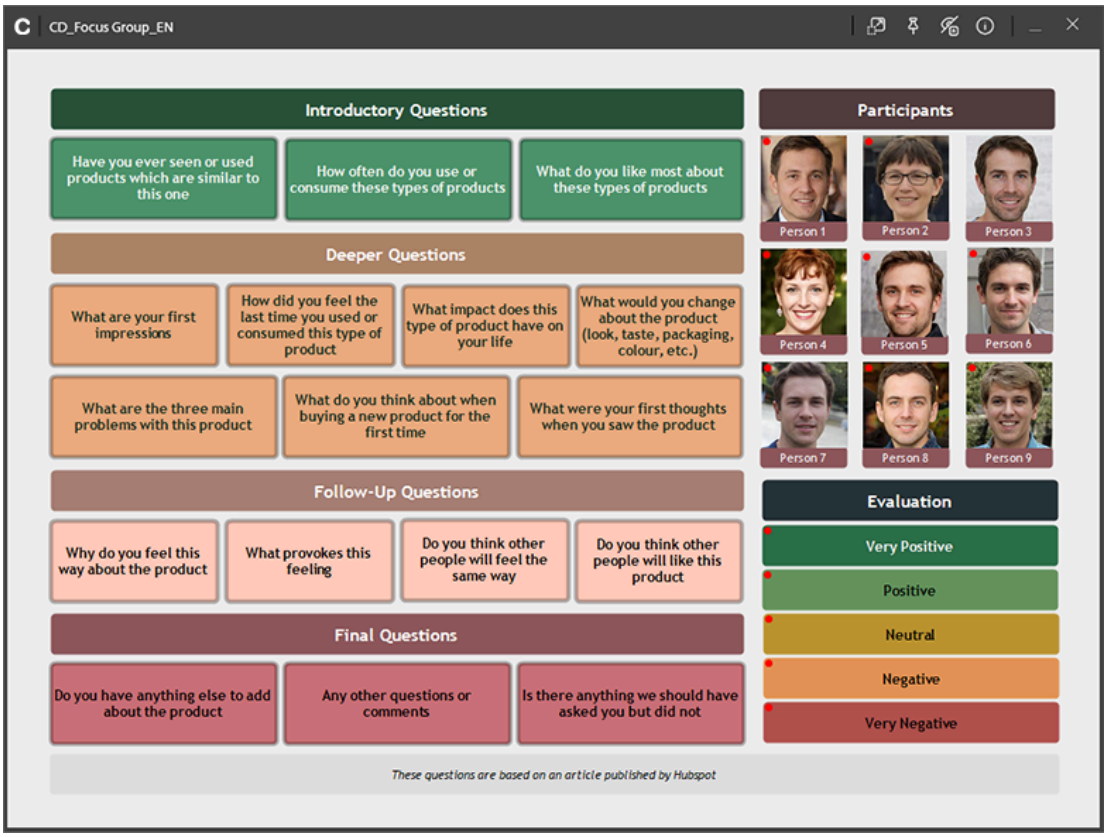


Figure 77: Button template

Assign a display name to a button

The option **“display name”** allows the user to assign **a name to the button other than the real one.** That is, the display name will be displayed in the template, but when working in the timeline, matrix, dashboards, or action finder, the original name will be displayed.

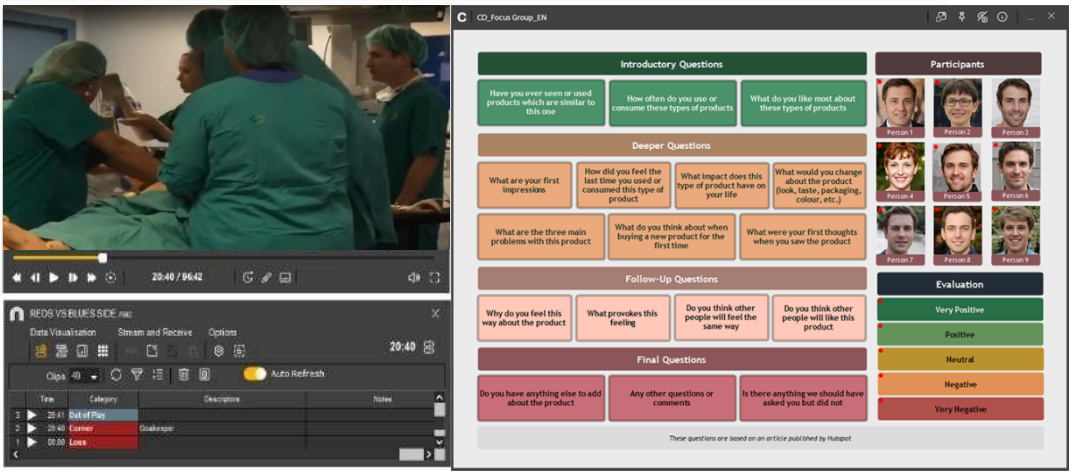


Figure 78: display name shown in the template and real name in the play-by-play

In the image above, the buttons with profiles show professional numbers (1, 2, 3. . .)

but, in reality, they are display names of their roles.

For example: The button contains the text "**1**". But this is only an display name so that the text fits on the button. When the button is clicked and the action tagged, it will appear as "**Doctor 1**" on the play-by-play table, the real name of the button.

Keyboard shortcuts

The tool **"Keyboard shortcuts"** assigns a key to a button on the template, clipping the action when that key is pressed.

There are countless combinations for your keyboard shortcuts: the keyboard buttons, but also different combinations with Shift, Alt, Control.

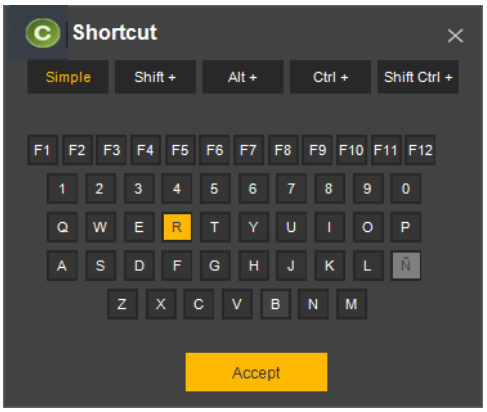


Figure 79: Keyboard shortcut options

When you assign a keyboard shortcut to a button, it appears visually next to the button in the template. You can hide this option on the button slider. **"Show key"**.

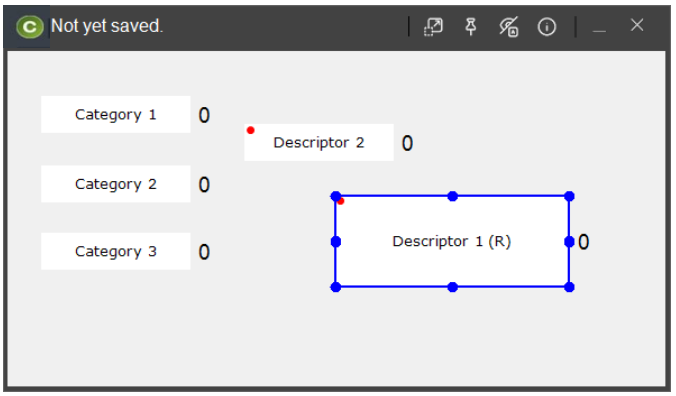


Figure 80: The keyboard shortcut is displayed in the descriptor

Shapes, sizes and position on the template

In this section you can choose the shape of the buttons, as well as their exact location on the template.

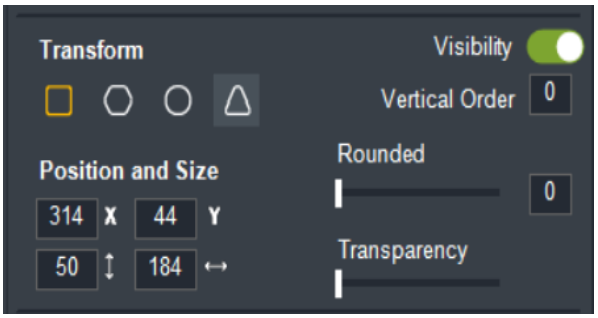


Figure 81: Shapes, sizes and position of buttons

To show/hide a button during action clipping, you have the visibility button. By default, **the shape of the button** is a rectangle but it also has other predetermined shapes: hexagons, circles and triangles.

In the case of a rectangle or square, you can round the corners. To do this, you can move the slider or manually assign a number in the section **“Rounded button”.**

“Position and Size” is used to place a button in an exact position in the template and also to edit its exact size.

Enter a specific value for the coordinate axis in the boxes **“X”** and **"Y"** for position. In the lower boxes, to define the height and width.

You can also change the size and position using the keyboard and your mouse.

- **Shift + mouse wheel*.** Move the button vertically without leaving the axis.
- **Alt + mouse wheel*.** Moves the button horizontally without leaving the axis.
- **Ctrl + mouse wheel*.** Increases and decreases the button size proportionally.

Buttons can also be **“Sort vertically”**, as if they were layers.

By default, the button is created with a value of 0, but it's editable. The higher the number, the higher the button will be. **You can use negative values.**

Right-clicking a button opens an options menu. From there, you can directly edit the template and move a button one layer down or up, as well as to the lowest or highest layer.

Note: If multiple buttons are created on the same layer, the buttons will appear in the order of creation, with the last created being on top.

Finally, you can also regulate the degree of “**Transparency”** of the buttons.

Color and image

You can change the color of the selected button(s), and you can add an image to it.

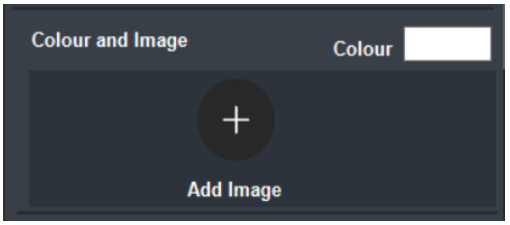


Figure 82: Choose button color

By clicking the checkbox **“Color”** the following window opens:

Both color palettes are quite intuitive and operate in a similar way.

You can click on the different color samples or type in the exact values or color code. The chosen color will be displayed in the box.

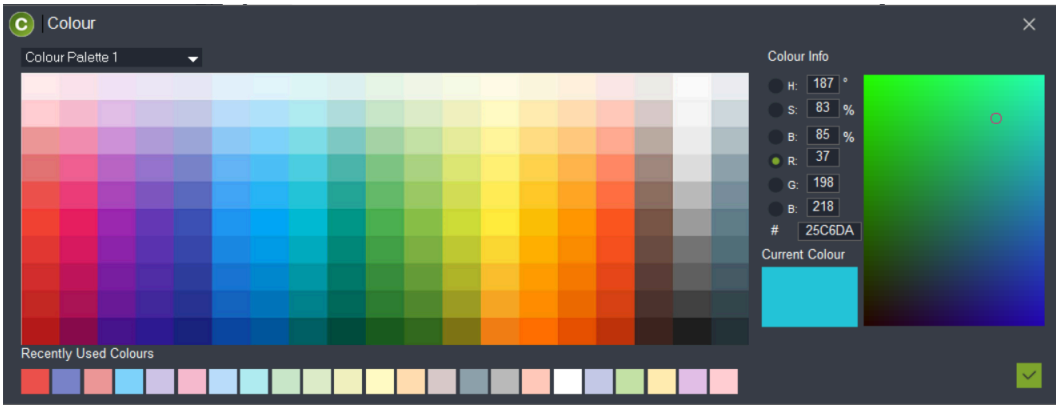


Figure 83: Color window

To confirm the color you must double click on the sample or click on . In addition, the lower part of the window displays the **“Last colors used”** to be able to access them directly.

Add image to a button

To add an image to the selected button you must click on .

Next, browse for the image (Windows Explorer will open). Select the file and validate the action. **Formats** allowed are: .jpg, .jpeg, .bmp and .png.

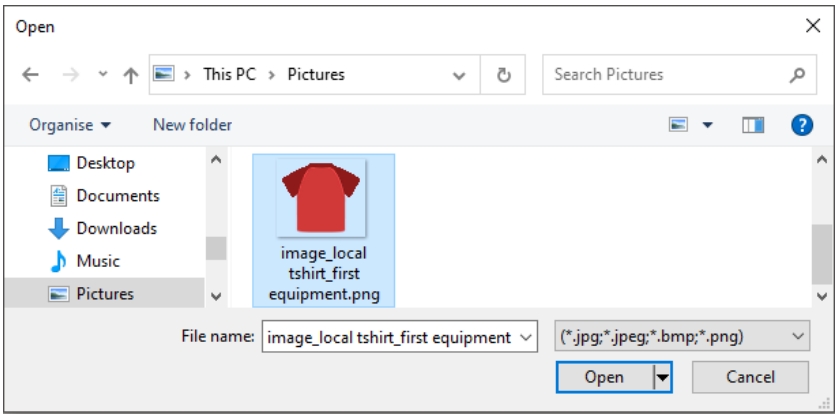


Figure 84: Search image

The selected image is changed with the icon and remove with .

In the drop-down menu at the bottom, you choose from which corner of the button the image will be adjusted. The last option in the list, **“Adjust the image”,** adapts the image to the size of the button.

Text format and style

In this section, you can edit the format, color, and alignment of the text within the selected button. Making the text visible is optional. To hide it, deselect the option. **“Show text”**.

Counter

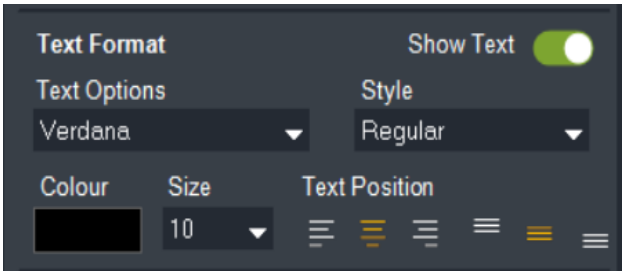


Figure 85: Button text format and style

The counter shows the number of clicks on that button. You can edit its position and color. You can also hide it or have it only appear when you hover over the button.

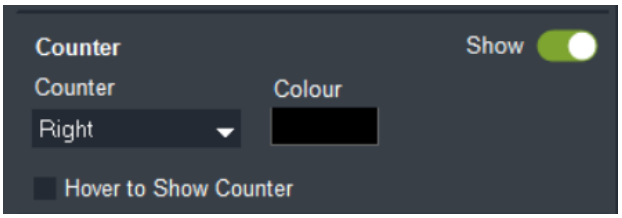


Figure 86: Counter features

If you click on the box **“Show counter only on hover”**, the counter remains hidden unless the mouse cursor hovers over that button.

Template description

Allows you to add explanatory text about the use of the button, which will be displayed by placing the mouse cursor over the button if the box is checked **“Tool Tip Visible”**.

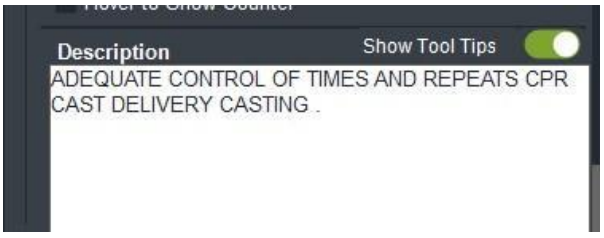


Figure 87: Template description

The pop-up information displayed depends on the characteristics of the selected button. In this example, the button **“Medication”** sample:

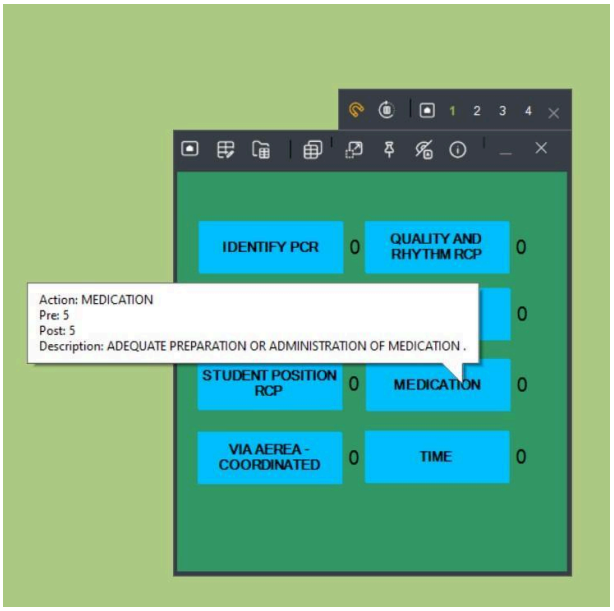


Figure 88: PRE and POST times

- Button type and name
- Preset PRE and POST times
- Description for that button.
- Keyboard shortcut

Behavior (actions)

In the tab of **"Behavior"** we find the options to describe how a button should act each time it's registered. This tab describes both the action behavior and descriptors.

In fact, **there are two views within this tab.** The first of them defines the behavior of the buttons that are **actions.**

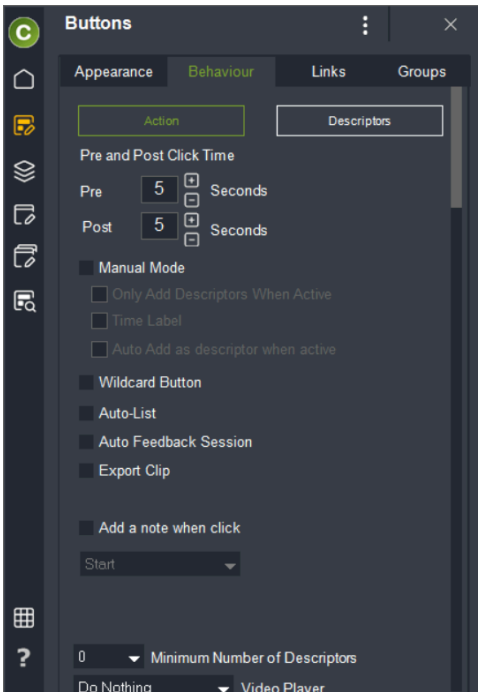


Figure 89: Behavior window. Actions

The second view corresponds to the **Descriptors** and we will see it in the next section.

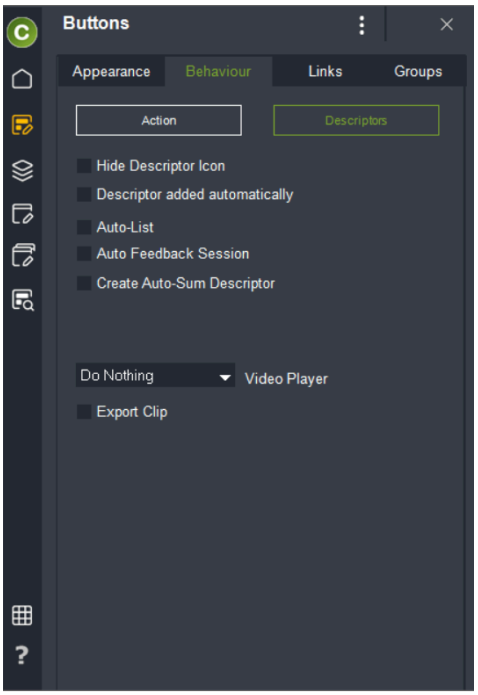


Figure 90: Behavior window. Descriptors

Finally, in a third section, we will focus on the **tools that are common** to actions and Descriptors.

We begin to discover the functionalities of the actions.

Automatic and manual actions

There are two types of actions: automatic and manual.

The **automatic actions** are created by default and require only one click to clip. The resulting clip will have a default time of ten seconds: five before the click and five after. In these cells, you can edit the PRE and POST times according to your needs.

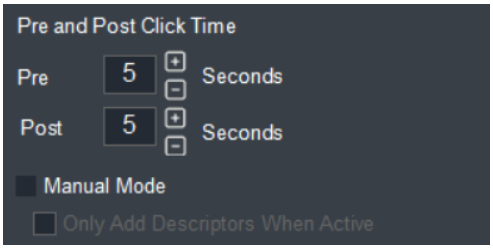


Figure 91: Set PRE and POST time in automatic actions

With the actions **manuals**, however, requires two clicks: one to start clipping and one to stop. You can also close the open manual action with the key **“Esc”.**

Manual buttons are visually distinguished from automatic ones by the gray border that the former have.

A manual button therefore does not have a standard duration, but rather what the user decides it should last.

PRE and POST times

Additionally, these buttons can also include a PRE and POST, which means that the seconds before and after the two clicks are included as part of the log.

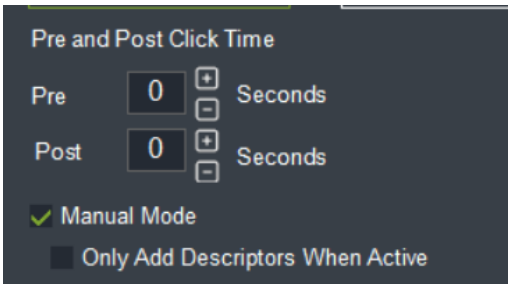


Figure 92: Set PRE and POST time in manual actions

If the box is checked**"Only add descriptors when active"**, this will prevent adding descriptors to closed manual actions. This ensures that descriptors are only added when the manual action is open.

Exclusive buttons

Manual actions present an **exclusion property**, which prevents two or more conflicting manual actions from being open at the same time.

> **For example:** Actions which are opposite, such as **"Start"** and **"End"** or **"Successful"** and **"Unsuccessful"** cannot be open at the same time, otherwise the tagged data would be incorrect. So, an exclusion can be added between these actions meaning that when one is open the other is automatically closed.

To activate this property you must have at least two manual buttons:

1. Next, select one of them. In this example, we select **"Poss B"**.
2. Go to section **"Exclusions"**, at the bottom of the Behavior tab.
3. Select the button to be excluded. In this case **"Poss A"**.

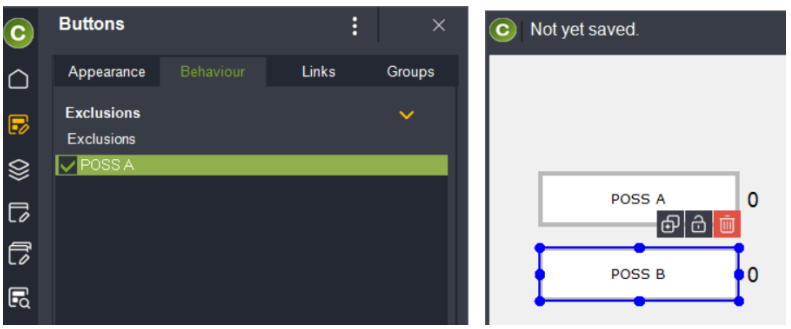


Figure 93: Create exclusions

This means that when **"Poss B"** is active, it can never be **"Poss A"**, as they are mutually exclusive. In fact, when you register one, the other will be automatically deactivated to avoid two clicks.

Manual action behaves as descriptor*

This feature is only useful for manual actions. While a manual button is active, clicking on other actions automatically becomes the descriptor for each of them.

For example: You might have a manual button for Student 1 which is used if they take a leadership role. Now, when you tag other actions such as **"Skill 1"** or **"Skill 2"**, each one will contain **"Student 1"** as a descriptor.

This way, you will have not only the action **"Student X"** while he has intervened in the game but also to each of the clipped actions you will have **"Skill 1 + Student X"** the **"Skill2 + Student X"**.

Wildcard button

The wildcard button allows you to use this 'advantage' for **those actions that you do not identify when they start, but you do know when they end (for example, a system, another protocol. . .).**

The wildcard is activated as a manual action and simply marks the start time of an action you couldn't identify. It's closed by clicking any action, and the entire time in the log, starting with the click of the wildcard, becomes the closing action.

For example: In a debate league, when you see that the opposing team starts a reposte but you are unsure what the strategy is, you can use the wild card button.

At the end of the moment, you have been able to identify the strategy. It is the system **"Descriptive." You click the button that identifies that strategy in your template.**

Codimg assigns all the time, from the start of the wildcard to the close of the action, to the same action **"Descriptive type"**.

Export clip

When clipping an action with a button that has the option **"Export clip"** If checked, a clip will quickly be produced. This means that this click will export a video fragment of the play in question to your computer.

Minimum number of descriptors

This action property allows you to set the specific number of descriptors an action must contain. By default, it is set to zero.

Figure 94: Set minimum number of descriptors

During data collection, if this minimum is not met, nothing happens. When you go to the Timeline, a window will appear detailing which clips do not meet the minimum number of descriptors, allowing you to correct them.

Add to play-by-play window

This checkbox allows that action to be displayed in play-by-play during a live broadcast, that is, during real-time observation. By default, the action is always active. If you

uncheck it, it will not be displayed in this window.

Blocked descriptors

This section allows you to lock descriptors with respect to the selected action to avoid errors during data collection.

The list at the bottom will show the descriptors locked for that action. You can also lock XY coordinates, filter by sequence, or select all.

Behavior (Descriptors)

We now move on to the tab **“Descriptors” in the “Behavior” section**.

Figure 95: Locked descriptors

Descriptors don't have PRE and POST times, as they depend on an action. The time assigned to the descriptor is the time it takes to click.

Hide descriptor icon

By checking this box you can hide your representative red circle.

The descriptor is automatically added to each clip

Useful for those descriptors that you know need to be clipped continuously (e.g., periods of an event).

By enabling this option, every click you make on any action will automatically clip this descriptor.

Visually, the automatic descriptor is recognizable because it has a black border over the red dot characteristic of a descriptor, as you can see in the attached image.

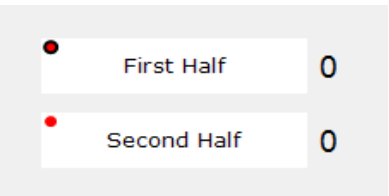


Figure 96: Automatic descriptor

During the registration phase, you can activate and deactivate it directly with the right mouse button.

Create auto sum descriptor*

This property is used in the case where the number of times a descriptor has been repeated during a clip is significant. That is, where **the number of times clicked is relevant** for the observer.

When clipping an action, an additional descriptor will be created in the play-by-play tab showing the number of times it has been clipped.

That is, in addition to each of the descriptors, as many times as it has been clicked, one is added to the end of the clip with the accumulated type **“3 [descriptor name]”** from **“6 [descriptor name]”**.

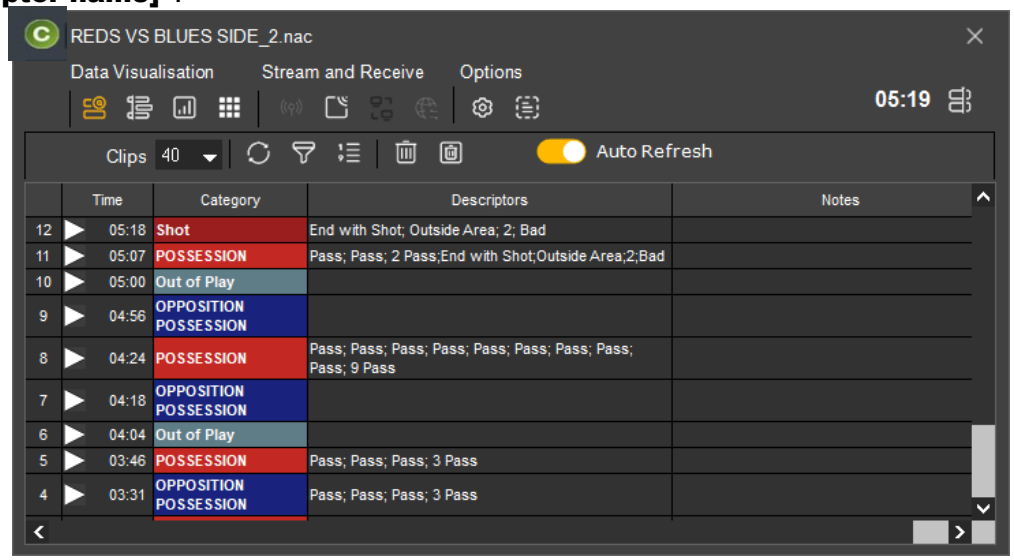


Figure 97: Autosum descriptor in the play-by-play table

In the matrix and in the timeline -and, in general, in any visualization tool- new descriptors of the type will be shown **“3 [descriptor name]”**, **“5 [descriptor name]”** from **“6 [descriptor name]”**.

This will allow a specific display of clips in which a given descriptor has been clipped ‘x’ times.

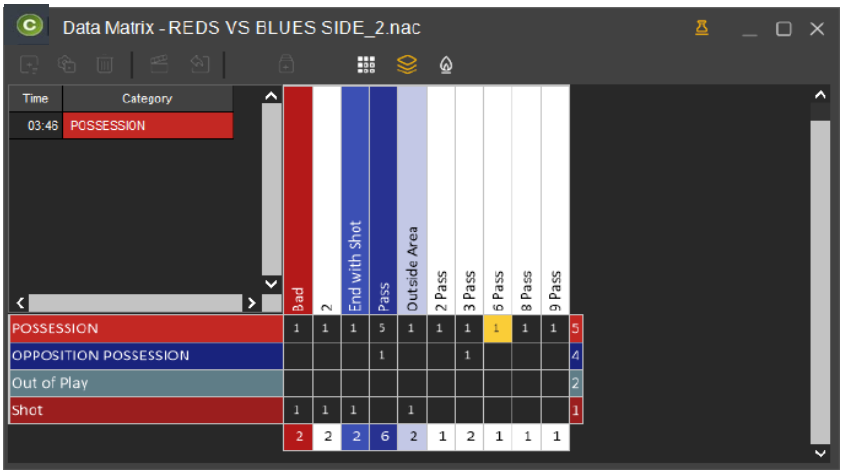


Figure 98: Autosum descriptor in the data matrix

Behavior (Common Tools) Autolists

In Codimg Premium, when assigning the behavior of **"auto list"** to a button, each time it

is registered, the clips are added to a (virtual) list named after the button. When you create your feedback session, Codimg will allow you to add these lists automatically.

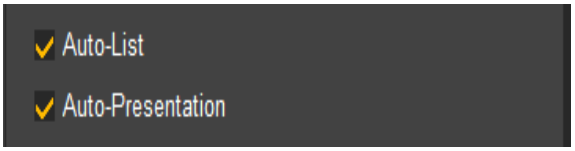


Figure 99: Check the autolists box to activate it

When you create your feedback session—to learn more about this tool, go to the corresponding chapter—the program will remind you that autolists have been created and whether or not you want to add them to the feedback session.

If the answer is yes, the lists will be added to the feedback session. Each list will have the same name as the button.

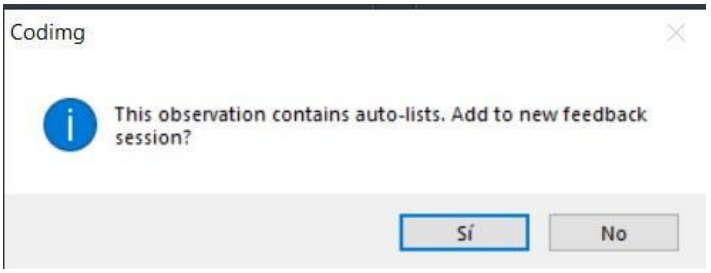


Figure 100: Confirm added autolists

Auto-feedback sessions

Codimg Premium, when you assign a button the behavior of **“auto-feedback sessions”**, each time you click on it, those clips are added to a feedback session (.pre) with the same name as the button. This feedback session will be divided into lists organized by each video you've used.

For example: The auto feedback session behaviour is assigned to the **“Skill X”** action. During the entire year or course, tag the performance of the team in this skill over a period of time. Every time you open the auto feedback session, the list will include the names of the videos, event 1, event 2, etc. **“Skill 1”** clips with be added for each video.

The auto-feedback sessions are located in a folder called **"AUTOPRE"**.

Select the feedback session icon and from the options available in the menu, **“Open existing feedback session”**. In the folder **"AUTOPRE"** you have your auto-feedback sessions.

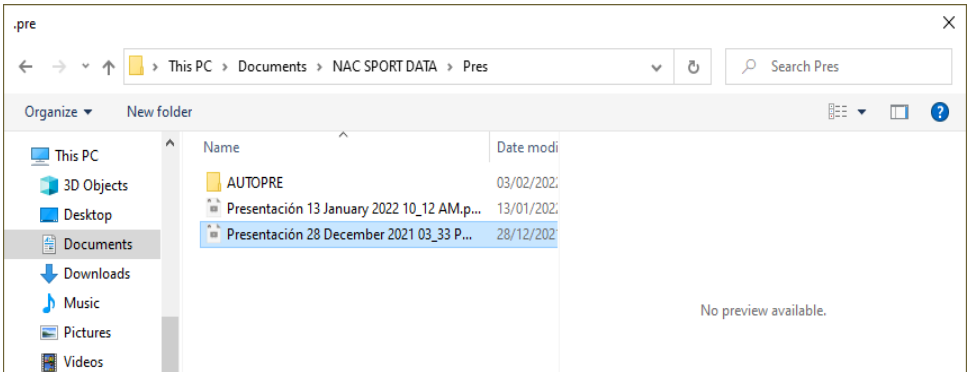


Figure 101: Opening the auto-feedback sessions Folder

We'll talk more in-depth about this tool in the feedback sessions chapter.

Finally, auto-feedback sessions are required to use Coding Hub's Tracking Area tool. You can find more information about how they are linked in Chapter 12 of this tool's manual.

Video player

With this property, you can assign a playback control to any button in the template, such as pausing the video when you click a specific action or skipping forward 10 seconds when you click a specific descriptor.

To set a playback control, simply select the button you want to use and then select the desired behavior from the drop-down menu.

By default it is assigned **“Do nothing”**.

Figure 102: Assign a playback control

For example: When action **“X”** is clicked, the video will play in slow motion.
When descriptor “H” is clicked, the video will go back 10 seconds to see what action provoked **“H”**.

Clustered buttons

In Codimg Premium, clustered buttons allow the user to register multiple overlapping buttons with a single click.

That is, if you have some buttons on top of others in a template, when you click on the common area, both will be registered.

To create these buttons, the first step is to overlap some buttons so that they share the same space, either fully or partially.

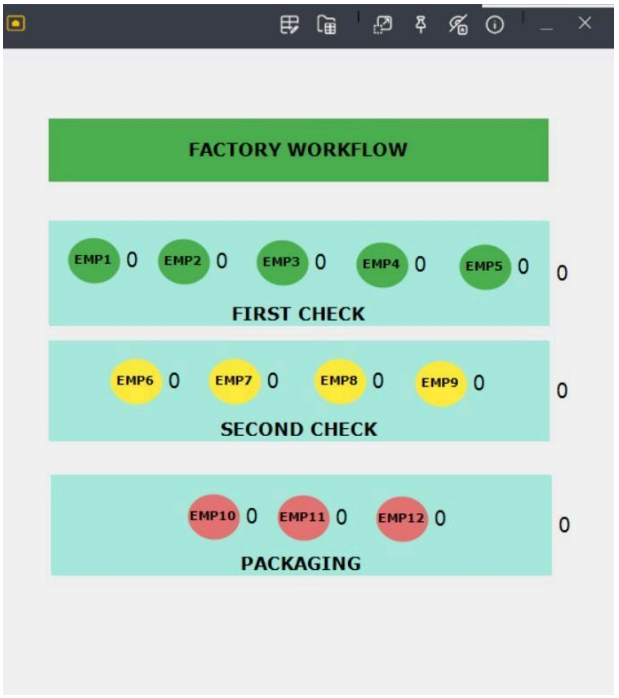


Figure 103: clustered buttons

In the observation and clipping phase, the option must be activated **“Use clustered buttons”**, which is located in the Settings menu of the ‘Play-by-play’ window.

There is the possibility of assigning **a key or keyboard shortcut to an area where two or more clustered buttons share space.** To do this, you must right-click on the template* and choose the option **“Keyboard shortcut for clustered buttons”**.

A round button simulating a pin will be created, and you'll first assign the keyboard shortcut that activates it. Then, place the pin above the nesting box.

Every time you press this keyboard shortcut, all the buttons below it will be logged. In the attached image, we can see a pin with the keyboard shortcut.**"WITH"**.

By clicking with the **"WITH"** During the data collection phase, both the button and the **“EMP12”**
How **“Packaging”**, a button that is located on a lower layer.

Links

In Codimg Premium, you have a tab called **“Links”**.

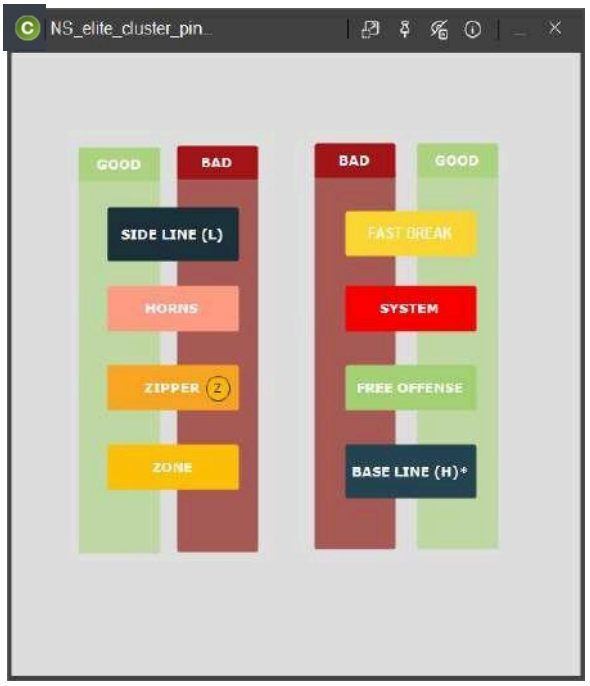


Figure 104: Pin for clustered buttons with keyboard shortcut

Trigger links allow you to link two or more buttons in your template together like chains. This way, when you click on the first link (button) in the chain, the other buttons are automatically registered without having to click on them.

In other words, multiple data can be clipped with a single click if they are linked.

For example: Here's an example from the world of sports. If you want to tag shots on goal in soccer, a shot that ends in a goal is a good action. A shot that misses is a bad action. So, we can create two distinct sequences by clustering these buttons.

Shot (action) < Goal (descriptor) > Good (descriptor)
Shot (action) < Miss (descriptor) > Bad (descriptor)

Clicking on goal or miss will also tag the action and the other descriptor. This means you get three different tags with one click.

How do you create a link between buttons?

To create a link, hold down the spacebar throughout the entire process. Without releasing it, click the first button and drag the virtual line that appears to the second button. You can repeat this process as many times as you like.

The direction and order of button activation

There are two important details when working with links.

The first of them is **the direction.** The first of the two buttons will be the button that activates the other. This will be represented by an arrow extending from the first to the second.

The second important factor is **the activation order.**That is, which clip each click goes to. A button can activate another, but conceptually it's either part of the current clip or triggers the start of the next one.

In Codimg, there are options that cover all of these scenarios (the > icon means the

activation direction).

- **RED:** action > action
- **GREEN:**action > Descriptor
- **CELESTE:** Descriptor > action (the descriptor goes to the previous and next clip)
- **BLUE:**Descriptor > action (descriptor goes to the next clip)
- **YELLOW:** Descriptor > action (the descriptor goes to the previous action)
- **NEGRO:** Descriptor > Descriptor (descriptors go to the previous and next clip)
- **ORANGE:** Descriptor > Descriptor (descriptors go to the next clip)

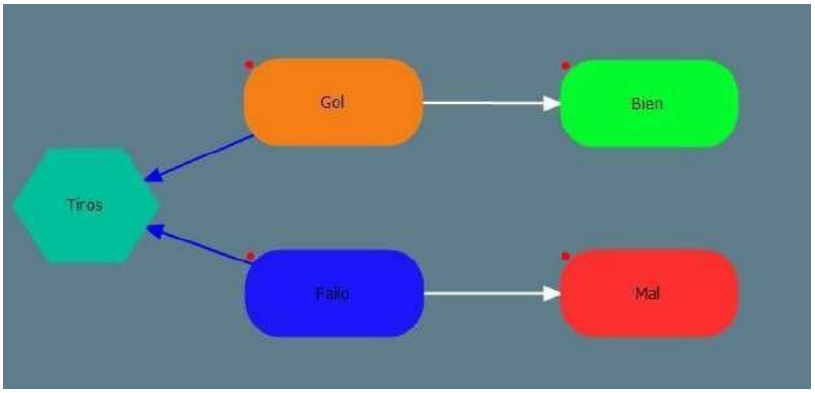


Figure 105: Example of links

- **WHITE:** Descriptor > Descriptor (descriptors go to the previous clip)

When the link is created, the color of the line will reflect which behavior from the list above is currently displayed. In the image above, you can see all the available activation links.

To change the behavior of a link, you have to access the tab **“Links”**. Select the button that sends a link, and in the list, select the drop-down box in the right column.

Deactivation links

Among the links, there's one we haven't talked about before: the deactivation link. Like the previous links, it links two buttons, but instead of activating it, it deactivates the button it's linked to. The color of the arrow in the deactivation link is the same as the previous one **DARK GREY.**

Delays between buttons

In Codimg, you have a tool to increase your level of accuracy when collecting data. Since two buttons are linked, this means that both will be assigned the same clipping time. And not all actions happen at the same time.

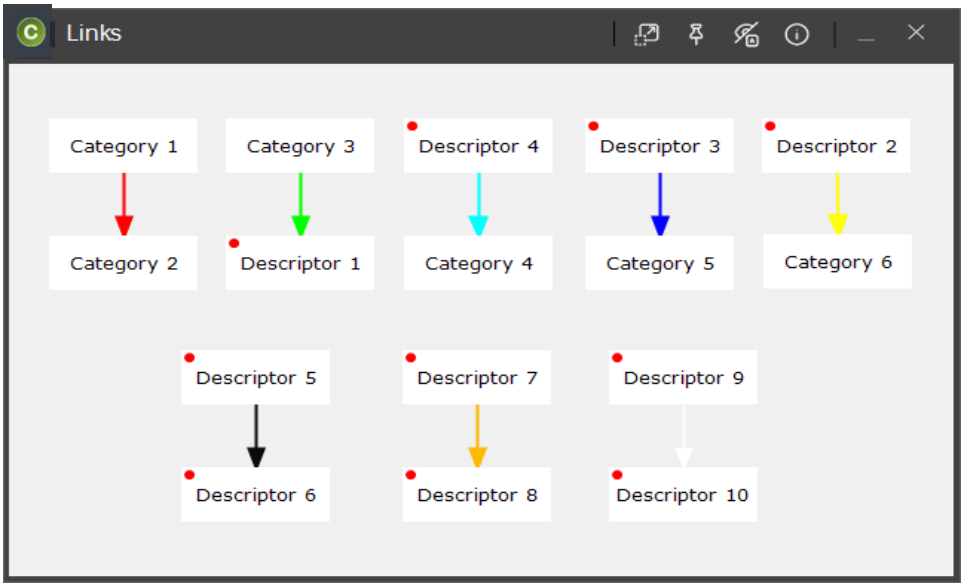


Figure 106: The different types of links

In fact, one might happen 'x' time later than the other. For this purpose, there's something called a "delay" time. In short, it automatically assigns a different time to the click time, with a delay of as many seconds as you've set. There's a maximum delay of 60 seconds.

For example: Goal and shot are linked. Every time there is a goal it is preceded by a shot.

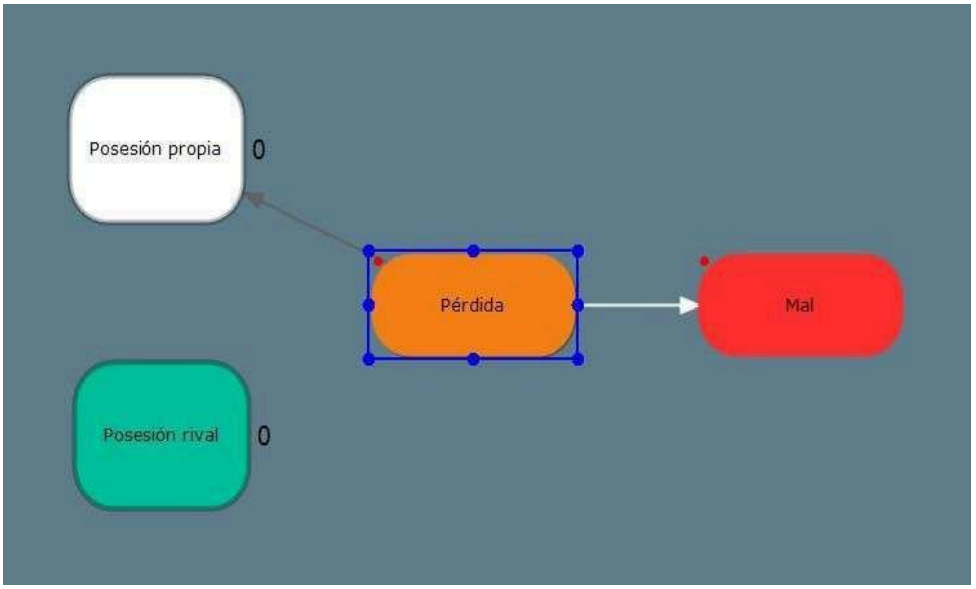


Figure 107: Deactivation link

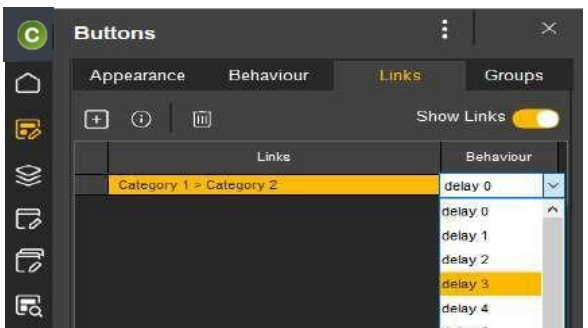


Figure 108: Delay between buttons

Links between sequences

Two buttons from different sequences cannot be linked. If you'd like to learn more about sequence templates, we'll cover this tool later in this chapter.

Groups*

Later in this chapter we explain what groups are. But first, in the section**"Buttons"**, we find a tab called**“Groups”**In it, you can manage the buttons that make up the groups already created in the corresponding section.

Other tools Find and replace

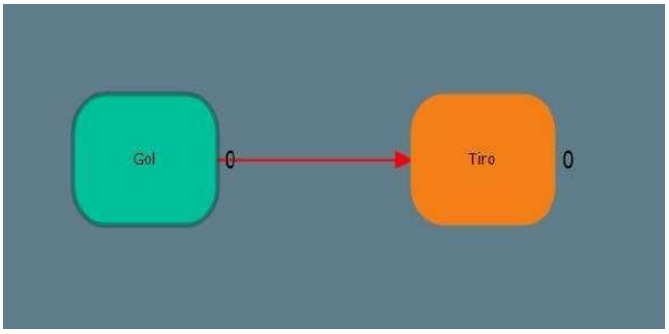


Figure 109: Delay between buttons

Data matrix

With this tool you can change the order of the columns and rows of the matrix, that is, how the actions and descriptors are displayed in the data matrix.

To access the matrix, click on the icon which is found in the section from the button template start menu.

Select the action or descriptor you want to move and drag it to the desired position.

Match selection

You can match one or more of a button's properties with the tool **“Equal selection”**The properties that can be equated are the following:

All Name

Show or hide text color

Text Position Text Format

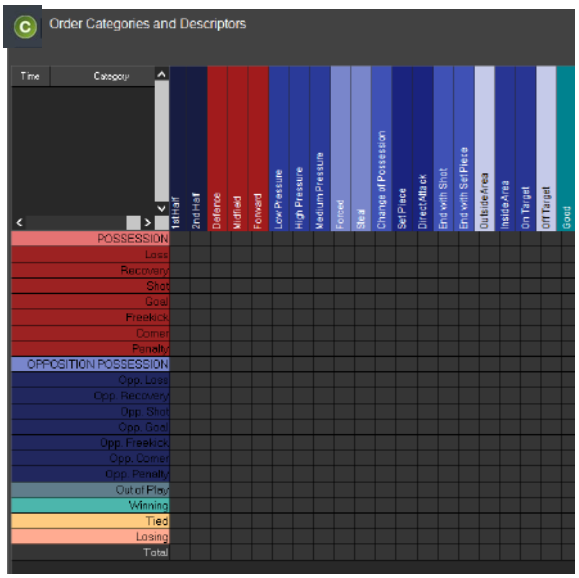


Figure 110: Data matrix

- Background image
- Image position

The properties that can be matched are grouped by **"Appearance"** and **"Behavior"**. Expand each of them and you'll be able to access the options listed above.

To match two or more buttons, you must have a button **"reference"**. Selected buttons inherit the properties of this reference. The reference must be the last selected button.

The reference button is the one with the blue border and the rest have a black border.

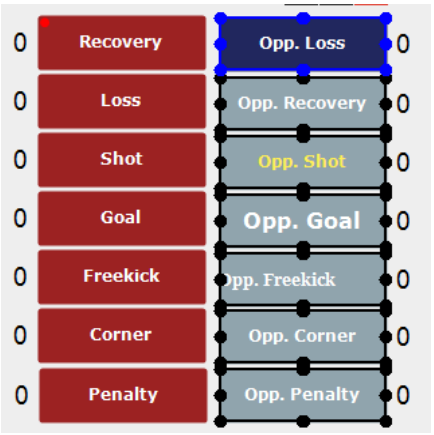


Figure 111: Reference button

Check the boxes for the properties you are interested in copying from the reference button (button surrounded by blue dots) and click

The result will show all buttons with the same properties as the reference button, as we will see below:

The properties of the other selected buttons now act in the same way as those of the reference button.

You can set the maximum number of references that will be displayed at once during data collection.

Check the box **"All"**, so as not to limit it.

Choose 0 and they will only be displayed for a second when added to the registration environment.

You will be able to create new zones in the field on the graphic descriptor, known as **“Zone descriptors”**.

Choose one of the three available formats that the area can have  and use the cursor to set the area to be created.

Define a name for the zone and click on **"Accept"** Each new zone will act as a descriptor for its action. If multiple zone descriptors overlap, the most recently created one always prevails.

The last icon  has the property of **“Edit the shape.”** Clicking this option activates the nodes surrounding the area, and you simply drag them with your cursor or add more nodes by clicking on the area's border until you get the desired shape.

In **“Show text”** decide whether to hide the text in a specific area during action logging. The corresponding descriptor will still be added normally.

Edit the chart of the action figure that is clipped from the tab **"Appearance"**, something we saw in the corresponding section within this chapter.

Dimensions for Coding View

With the option **“Adapting measures to Codimg View”***, the created template automatically adjusts to the dimensions of Codimg View, the Codimg app for data collection from tablets.

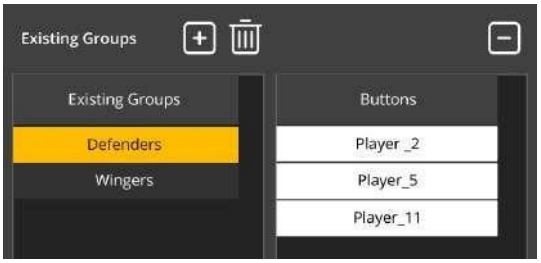


Figure 112: Group with assigned buttons

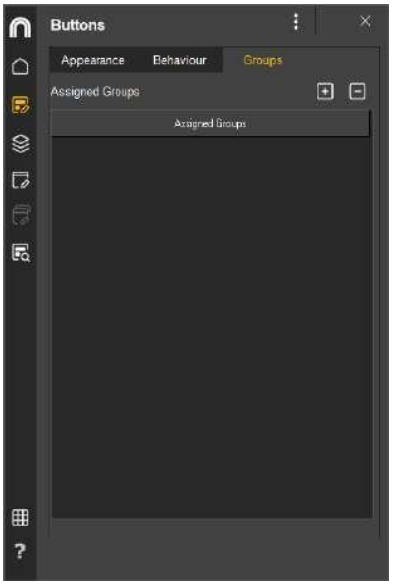


Figure 113: Group with assigned buttons

Background / 100% transparent

With the option **“Transparent background”** the template background disappears.

This is very useful during the registration phase if you only have one screen, as you can overlay the template over the video player (as seen in the attached image).

When you click on the transparent area, you click on what's underneath the template, such as the video player.

Change background color

You can edit the **“Background color”** of the template by clicking on the color block. When the color window opens, choose a swatch and click -

Add one **“Background image”** in the template by clicking on the icon . Select

the image (.jpg, .jpeg, .bmp or .png formats) and click **"Open"**.

If the image quality is too low, it may appear pixelated. In this case, you can change the image by clicking on or remove it with .

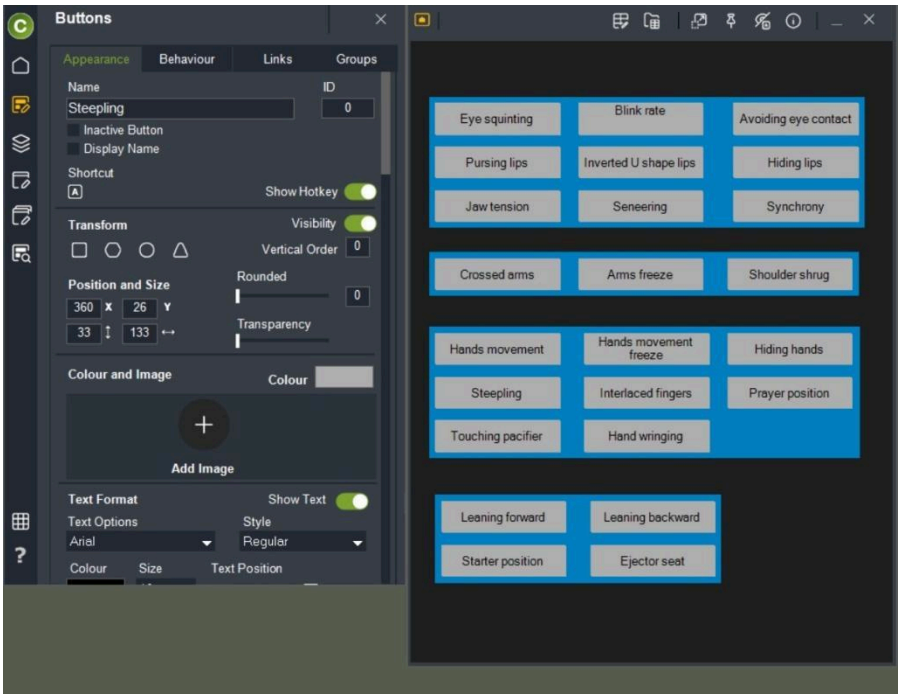


Figure 114: Button template appearance

If the image size does not match the template dimensions, check the box **“Adjust Image”**. It works the same as button images. The background image will adapt to the template's dimensions (although it may distort the image).

Window grid

The tool **“Grid”** allows you to more precisely define the position of the buttons on the template. To activate it, click on , which is located at the bottom of the left column of the template editing window.

You can change the size of the reference grid line with the buttons The higher the value, the larger the box becomes.

If the box is checked **“Snap button to grid”**, the buttons are **“will magnetize”** to the nearest grid.

Password

In the tab **"Password"**, which is the second in the section **"Window"**, the user ensures that the template is locked so that no one can edit it (except those who have the password).

To do this, follow these steps:

- Click on the " tab **Password"** from the Window section.

Figure 115: Appearance of the button template in Coding View

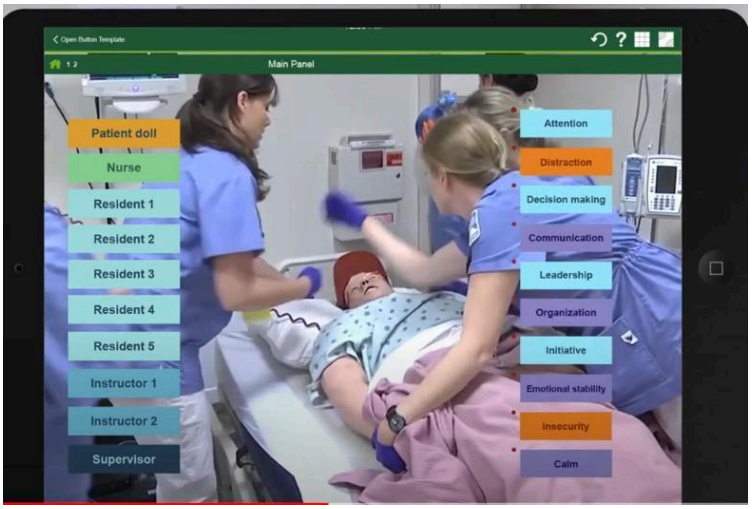


Figure 116: Template with transparent background and background player

- Enter the password you want in the box **"Password"**.
- Enter the same password in the "**Repeat password"**.

Click on **"Accept"** to confirm that both passwords match. When you

open the template again, Codimg will prompt you for the password.

If you want to change or delete the password, you must open the template with the current password and already in the tab **"Password"** write the new one, or leave the boxes empty so that it does not ask for a password.

Description

In the tab **"Description"** You can add a brief explanatory comment about the template.

This option is very useful if the creator is going to share it with other members and wants to provide them with additional information.

Top menu of the template window

There are other options available for editing aspects of the window hosting the template that are not found in the "Window" section, but that directly affect it.

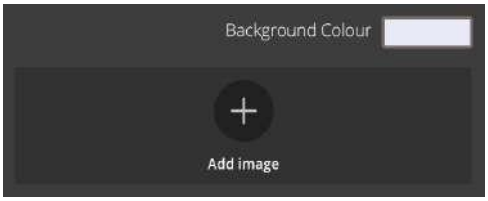


Figure 117: Changing the background color

These options are located in the top bar, above the template.

On the left, next to the logo, we can see the template's name. On the right, we find the following options:

- **Scale window and objects.** With this option, when you change the size of the template, the buttons within it also scale, so they don't lose their proportions. Otherwise, only the window would scale, and the buttons would maintain their size.

- **Window always visible.** By checking this box, the template always remains visible. - that is, as if it were the top layer - even if you click on another part of the screen or another window shares screen space. These will always be displayed below the template window.

- **Show shortcuts.** By holding down this icon, we can check which buttons have keyboard shortcuts defined. The text above the button disappears, and only the keyboard shortcuts are displayed.

- **Information.** Template name, number of buttons and their type, window dimensions (can be edited here) and their description.

- **Minimize and close the window.**

Right-click on the template*

In addition to all the tools we have observed in both the section **“Buttons”** as in the **"Window"**, when you right-click on the template background, a floating menu appears with some extra options.

- **Action, descriptor or inactive button.** You can change the button type from this menu with just one click. Only available if a button is selected.

- **Keyboard shortcut for clustered buttons**. Used to add a pushpin button so that an area where two or more clustered buttons coexist can be entered using the keyboard.

Figure 119: Grid

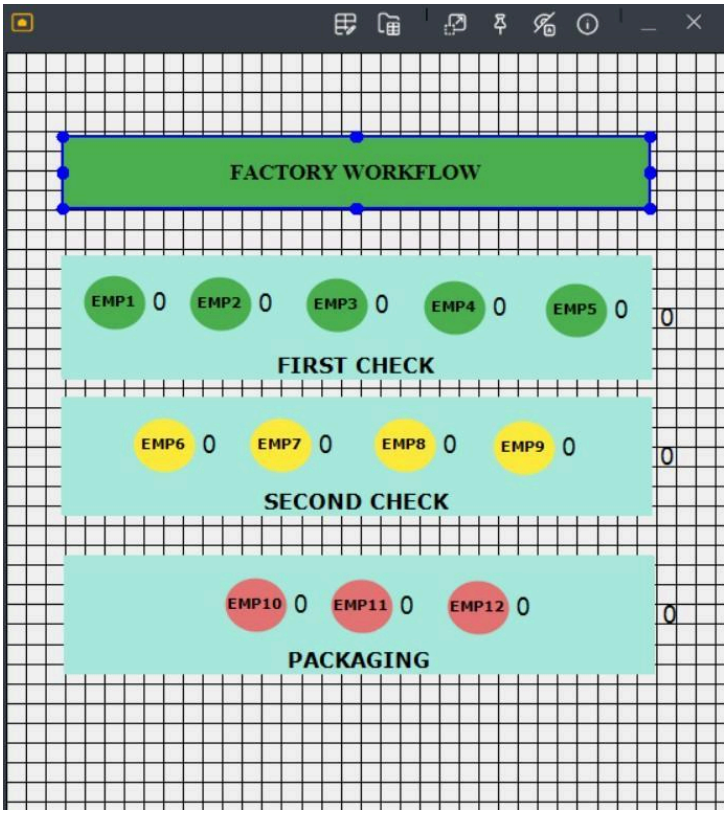


Figure 120: Adding a background image

- **Align next to the reference button.** All buttons are aligned vertically with a blue border. Only available if multiple buttons are selected.
- **Duplicate.** To create new buttons from others already created.
- **Equalize properties or equalize all.** You can match one or more of a button's properties, or you can match all buttons in the template.
- **Find txt or csv file to replace buttons with ID**. When buttons have IDs assigned, you can browse to the .txt or .csv file to replace the IDs with temporary names.
- **Delete, copy, select, or select all.** Common options when creating templates.
- **Vertical order, forward, backward, bring to front and send to back.** To work in layers.

Sequences Section

In Codimg Premium you can create templates in sequence.

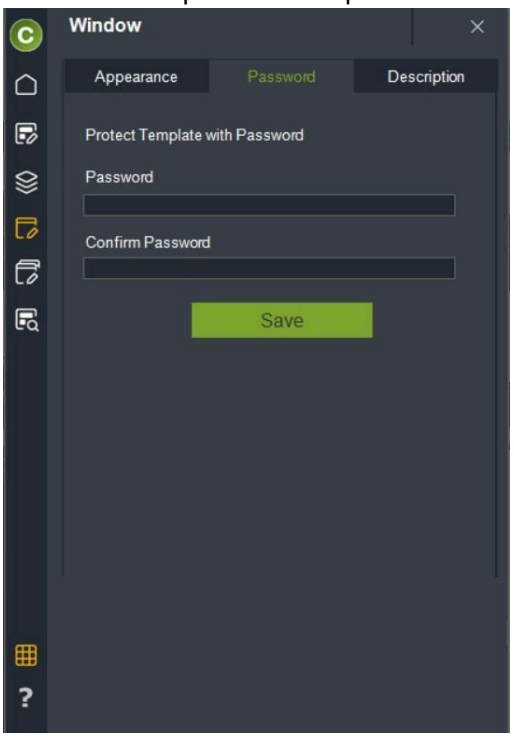


Figure 121: Password

A tool designed to help top-level analysts gain speed in the labeling process, while getting help in setting the order of their clicks and freeing up screen space for other tasks.

In short,**A sequential template divides a large template into several smaller windows, which are displayed based on clicks made.**

The window **“Sequences”** is divided into two tabs: **Appearance** and **Behavior.**

Appearance

In the tab **"Appearance"** You can create different sequences and provide them with certain functionalities.

In this section, we can perform the following actions:

Create, duplicate, and delete sequences

A sequence template is composed of two or more sequences. There is a main sequence, and from there, they are numbered consecutively, starting with number 1.

Note: You need to create more than one panel to activate these options.

The first three icons on the tab allow you to: (a) create a sequence, (b) duplicate the selected sequence, and (c) delete the selected sequence. On the right, you can see all the available sequences in a drop-down list.

Sequence name

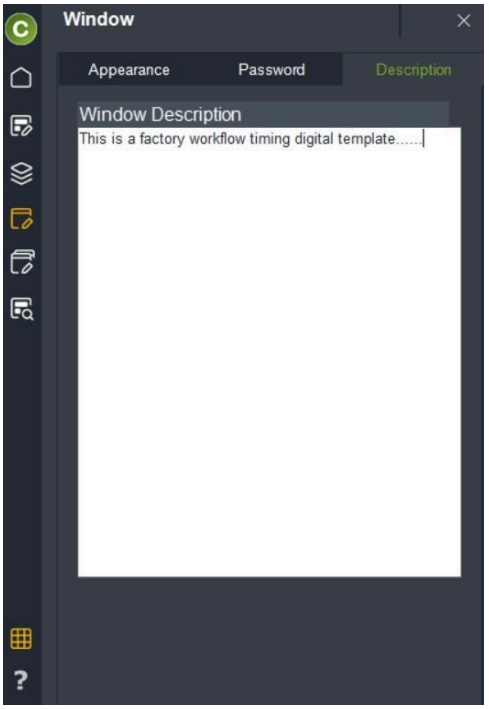


Figure 122: Description

Each sequence has a name for easier identification. This can be the default name assigned by the program, but you can also customize it.

Tolerance

This concept is defined by a number and refers to the maximum number of clicks you can make before moving to the next sequence. It will only affect sequences with the behavior (see the next section). **“Go to the next panel”**.

Buttons with behavior **“Do nothing”** will not be affected by this tool and buttons with behavior **“Go to main sequence”** will ignore this tolerance and automatically go to the main panel.

Create group with sequence name

All buttons in a sequence will become part of a group whose name will be the name of the sequence.

Sequence name is auto-added as a descriptor

Figure 123: Template window top menu

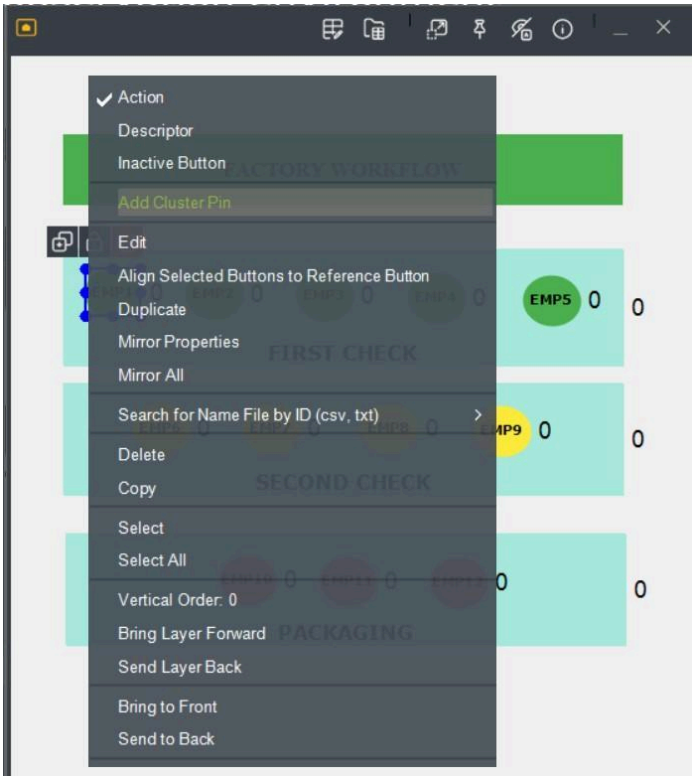


Figure 124: Right-click on the template

The sequence name is added as an automatic descriptor that is added to each action in that sequence.

Background color and image

You can add a background image or change the color of each sequence. With the option **“Rescale image”** automatically covers the entire window.

Links between sequences

As we saw earlier in this chapter, you cannot create links between buttons in different sequences.

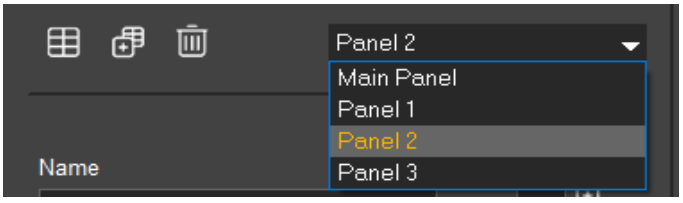


Figure 125: Create, duplicate, and delete sequences

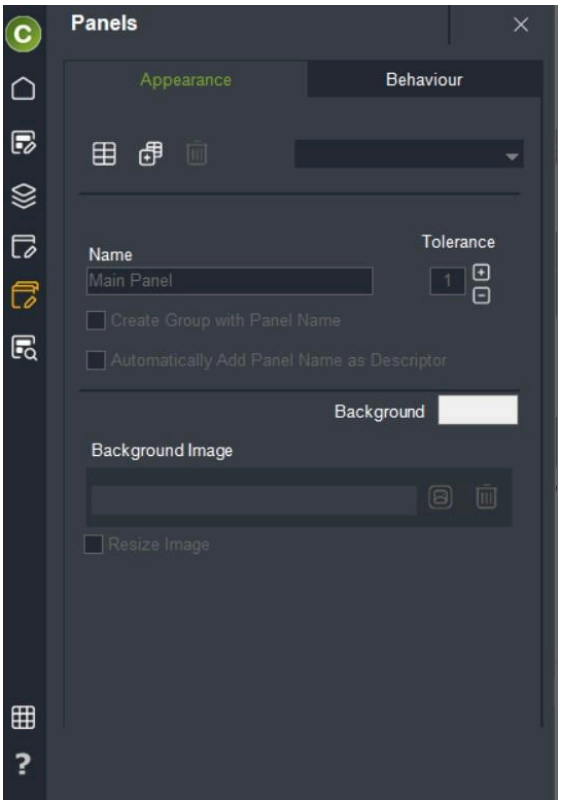


Figure 126: Sequence panel options

Behavior

In the tab **"Behavior"** You can define how the buttons in each sequence behave.

The box below shows a list of all the buttons in the selected sequence: on the left, you can see the names of the buttons in the sequence and, on the right, the action they perform when registered.

What actions exist?

- **It does nothing.** The click does not affect the sequence change.
- **To the next sequence.** Clicking this button takes you to the next sequence.
- **Go to a specific sequence.** The button takes you to the sequence you decide.

How to define which action is assigned to each button?

Right-click the sequence button and a pop-up menu will open. The last option is: **“Sequence flow”**.

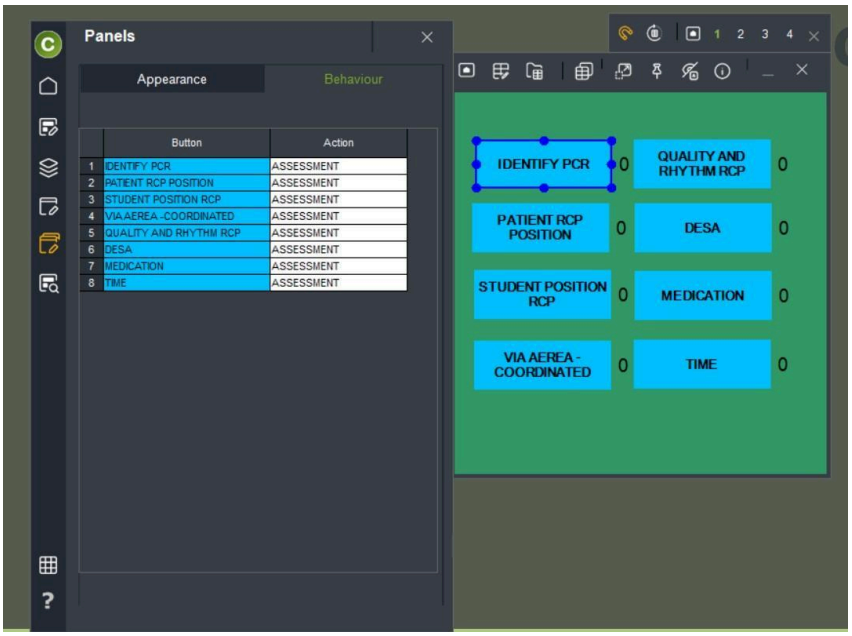


Figure 127: Actions in the sequence panels

Within this option, a submenu opens with all the available options we mentioned a few lines above: do nothing, go to the next sequence (this is the default option) and the names of the sequences created for that template.

Floating menu to manage sequences

Earlier in this manual, we talked about the toolbar that is located at the top of the window that hosts the template and that allows you to perform a series of common activities.

When working with sequences, a second menu appears above the previous one.

What actions can be performed with this menu?Let's look at the icons, from left to right.

- **Magnet.** Allows this secondary menu to always be linked to the sequence template. If the template is moved, this menu will also be moved.
- **Load sequences.** In this case, load all the sequences one by one before working with them, thus preventing them from loading for the first time when clicked. Recommended if you have many sequences and many buttons.
    - **Main sequence.** To always return to the start sequence, that is, the main one.
- **Numbers.** Each number corresponds to one of the sequences in your template. You'll need to remember which one is which if you've renamed them. With these numbers, you can force a specific sequence.

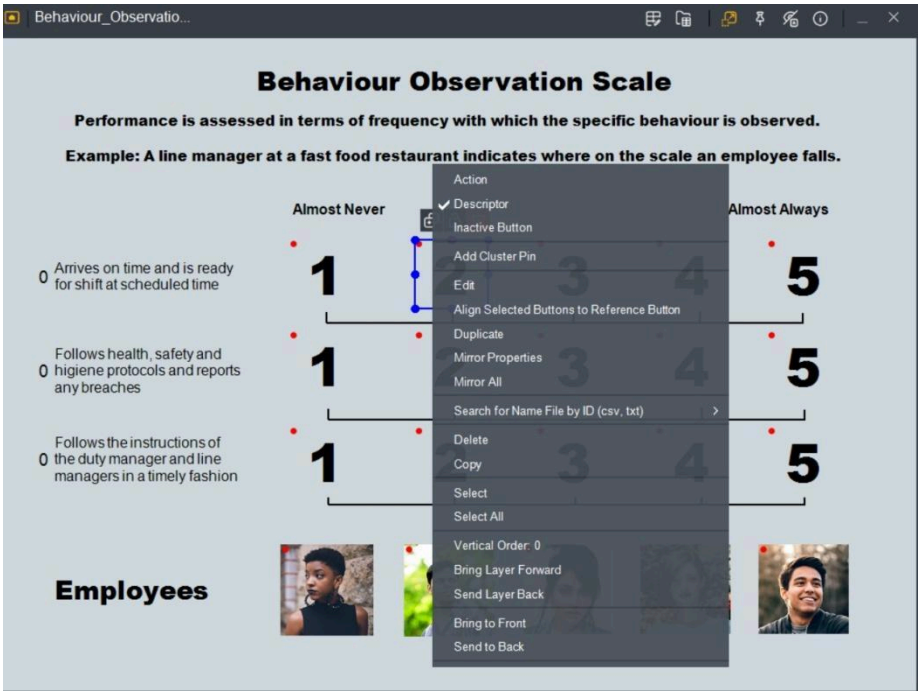


Figure 128: Define an action for each button

Figure 129: Top floating menu of the sequence panels

We've seen the five buttons on the far right, the third and fourth sections, earlier in this chapter. Let's now see what actions the first two sections allow you to perform.

In the first section, you will be able to:

- **Return to the previous panel.** Return to the previous panel of the sequence.
- **Go to the main sequence.** Return to the beginning of your template.
- **Move between sequences.** Use the arrow buttons to navigate through your template. The icon in the center reflects your current location.

In the second section, you will be able to:

- **Edit template.** To change any details of the open sequence template.
- **Open template.** In case you want to replace it.
- **Open secondary menu.** If you want the first section (explained a few lines above) to be separated from the toolbar and displayed independently.

Figure 130: Secondary floating menu with the panels that the template has

6. Timeline

As we mentioned at the beginning of this manual, the analysis process with Codimg consists of three phases: observation and data collection, analysis of the collected data, and feedback session of conclusions.

In the previous chapters, we focused on the first phase of the process, that is, both observation and data collection. We focused not only on how the data is collected, but also on how the materials for collecting it are prepared—that is, the creation of the template.

In this chapter, we will delve into the second phase: review, study and analysis of this data.

This process is carried out primarily from the Timeline, which **contains all the actions clipped during one or more observation processes** These actions, represented as clips, are displayed by actions (rows) on a timeline.
In addition, there is a list that shows these same clips chronologically.

From the timeline, **In addition, multiple tools can be accessed** for searching, filtering and processing the clips that make up the analysis.

Introduction to the Timeline

Al Timeline It can be accessed in two ways:

- **At the end of the observation.** Once the action log is complete, you can move on to the review and analysis phase of the collected information using the timeline icon.
- **From “Library”.** This option can be accessed from the program's start menu. It's a tool for organizing and viewing all the material you've worked on. We'll cover this tool in a separate section later in this manual. Select the .nac database you want to analyze and click or double-click on the database itself.

Once you have accessed this work environment, we will find two windows:

- **The timeline.** This is the horizontal window that displays all the clips from your analysis. That is, the data is represented on a timeline by vertical markers—the clips—spread across multiple lines (the actions). To the right of the timeline, a list (called a grid) displays all your clips chronologically.
- **The video player.** The window where you can view the video corresponding to the selected clipping (or analysis). It has multiple tools for more convenient and agile viewing of your analysis. We'll dedicate a section to this tool later in this manual.

Parts of a Timeline

The Timeline is a fairly comprehensive tool. A multitude of processes can be performed from it.

All of this without even mentioning each of the tools that can be accessed from this environment. But we'll discuss them in another section of this chapter.

In this section, we will explain each part of the Timeline.

We distinguish:

- In the top bar, next to the tool name, you have access to videos and analytics (if you have more than one open), the counter, and timeline size tools.
- Below it, the toolbar (configurable), access to Coding Hub and Timeline profiles.
- On the left, the grid with all the clips arranged chronologically. ■ On the right,

  the Timeline.
- At the bottom, different types of timeline displays.

Figure 131: Timeline

Top bar of the window

Next to the Codimg logo and the tool name, there are two drop-down boxes.
The one on the left allows you to select video, and the one on the right allows you to select analytics.

Figure 132: Select video (left) and select analysis (right)

Codimg Premium allows you to open as many videos and analyses as you want in a single session. Codimg Advanced only allows you to open one video and one analysis in a single session.

If you have more than one video or analysis open, the text inside the box will appear blank (and the drop-down option will be enabled) so you can switch between them.

If you only have one video or one analysis, the name of your current analysis will appear but will not be selectable.

What options exist?

- **A video and an analysis.** You work with the information from an event that you have clipped in a single file.

- **A video and several analyses.** In the event that there are multiple analyses of the same video. These may be different analysts or different analyses of the same event (collective analysis, individual analysis, set piece analysis, etc.).

- **Several videos and several analyses.** When your analysis isn't limited to a single event and you want to analyze more data at once. For example, your last five events or... several of your opponent's events.

If you want to add more analysis to a video, you must select the icon and the window will open **“Library”** to be able to incorporate new analyses into your Timeline.

We continue exploring the top bar. On the right, the current time of the currently playing video is displayed.

Further to the right, we have the last group of icons that include the following tools:

Figure 133: Icons on the right of the Timeline

- **Magnet.** Attach the player to the top left corner of the timeline. Moving one window will move the other as well. Clicking the magnet again toggles this behavior and the two windows will separate again.

- **Vertical extension of the Timeline.** The Timeline takes up the entire height of the screen.

- **Horizontal extension of the Timeline.** The Timeline takes up the full width of the screen.

- **Maximize Timeline.** The Timeline takes up the entire screen.

- **Close Timeline.** Returns to the program start menu.

Show scoreboard

It is also possible to have the event score* displayed next to the time (and also next to the video name in the video player, as we'll see later in this chapter). To do this, activate the option **“Show scoreboard”** in the Timeline Settings menu.

Figure 134: Event marker

Note: Remember, in order for the scoreboard to reflect the correct score, you must assign the “Point action” behaviour to the buttons in your template. Codimg will register each click as a point and show the clips in the timeline. For more info about this, check out the chapter about template creation.

Toolbar and Timeline profiles

On the next line of the interface are all the available tools that you can customize to your liking with the **profile manager.** On the far right is the tool for uploading analysis to Coding Hub and the tools for defining and managing Timeline profiles.

Figure 135: Timeline toolbar and profile

We'll cover these tools and Timeline profile management in more detail throughout this chapter. In addition, the program's most notable tools will have their own chapter in this manual.

Rack

To the left, there is the **'data grid'.** This section of the Timeline displays clips in chronological order. You can view clips in two ways: showing only those belonging to a single action (selected in the Timeline) or all actions together.

Next to this, in a second column, you can see the descriptors associated with each selected clip, along with the clipping time.

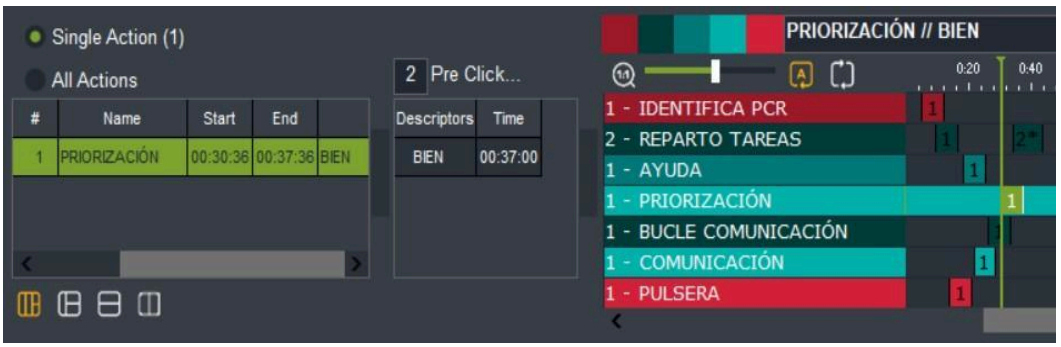


Figure 136: Descriptors associated with the clipping time

Above the descriptor column, there is an option to set a timeout (marked in seconds) when playing that descriptor.

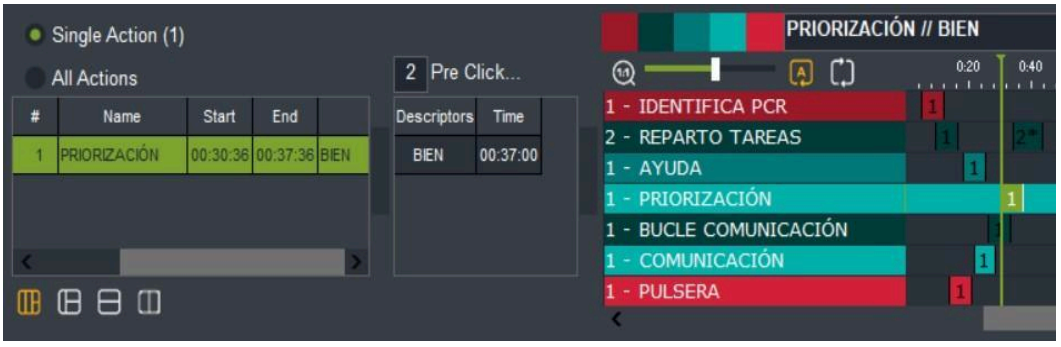


Figure 137: Backspace time to play descriptors By dragging the edges of the grid, the column width can be edited*.

Double-clicking on any of the clips in the grid will open a window in which you can edit various elements of the clip. This window is known as **“clip Editing Window”**.

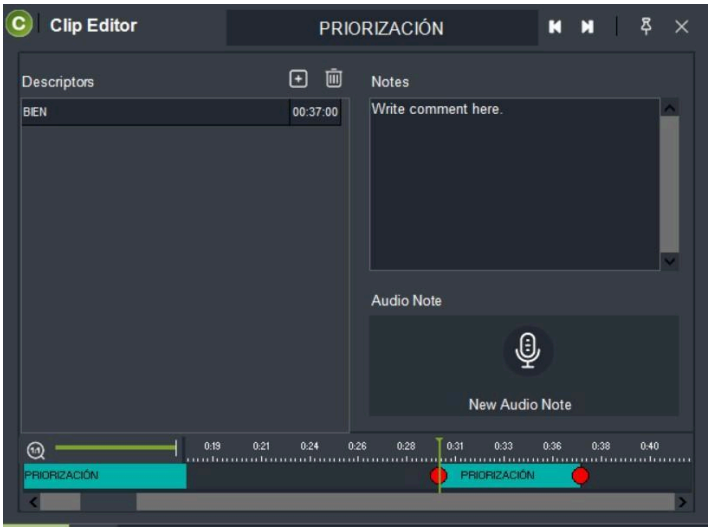


Figure 138: Audio Notes

What can you do in this window?

- **Add and remove descriptors.** With the icon, you can add descriptors to the clip. You can even create new descriptors that don't exist in the template. When you create a new descriptor, it will be added to the list. You can also delete descriptors with the icon. (and the key**"up"**).
- **Add text notes.** A text block can be added to that clip in such a way that it enriches the information.
  - **Add audio notes.** Context can be incorporated in the form of an audio file.

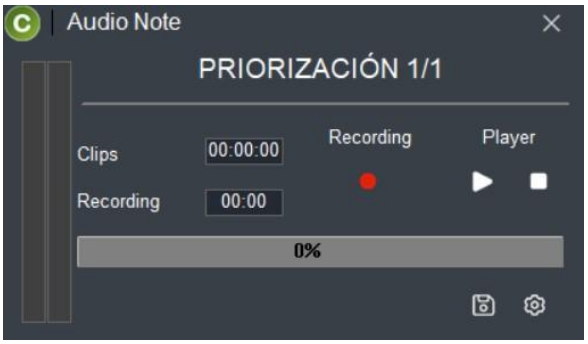


Figure 139: Audio Notes

- **Modify registry extension.** By moving the red buttons at the bottom of the window, you can change the start and end of a clip. You can also position the vertical bar and use the arrow keys.**“I”** (for the beginning) and**“The”**(for the end).
- **Move between clips of an action.** With the arrows at the top You can move back and forth between clips for the same action. This prevents you from having to close and reopen clips if you need to modify multiple clips.

Activate this icon to make this window always visible, above the other windows. The cross icon It is used to close the window.

The Timeline

On the right, you can see several different rows arranged in a timeline. This is the**Timeline.** Each row represents one action out of the total number of actions that are part of the button template.

Each line displays a series of vertical ticks, of varying widths, which represent the clips made for each of those actions under the click time. The width is the time elapsed from the start of the action to its end: the wider the line, the longer the clip.

Figure 140: Timeline clip

Top of the Timeline

The colored boxes at the top act as filters. Clicking on any of them displays a cross that hides all actions with that color button. To show them again, click the colored box again.

To your right,**the log information is displayed**Wherever you hover the cursor at that moment: the name of the action and the descriptors for that specific clip. This information can also be displayed in a pop-up window on the same clip if you hover the cursor over it for a few seconds.

Figure 141: Registry information

Note: Hidden clips will not be shown in the data matrix. This will be covered in more detail in the chapter dedicated to the data matrix.

Below the above we find the zoom and autoplay options for the clips.

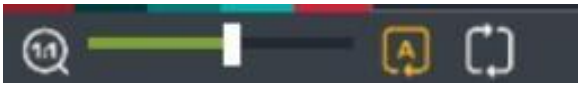


Figure 142: Zoom

Moving the **regulator** to the right or left, zooms in or out on the Timeline to enlarge or reduce the size of the clips. Clicking on , the original view is shown at a 1:1 scale.

Clicking on any clip with the cursor will start playing it in the video player.

By activating this icon, the clips are played automatically at the end of the session. previous clip.

If you activate this icon, the clip playback stops when the action is completed. You can rewind or advance to the next clip by pressing the keys.**“1”** the**“2”** respectively.

The time **marker** (vertical orange line) shows the current moment in the video player. The selected clip will be displayed prominently. As we'll see in the Timeline Profiles section later in this chapter, you can choose different formats for this part of the Timeline.

You can make some adjustments to the actions or clips:

Edit the action name and color (row)

Double-click on the box or click on the icon to modify the name or color of an action.

Modify the beginning or end of a clip

Place the cursor at the left end (beginning) or right end (end) of the clip and when the cursor becomes Click the left mouse button and drag it in one of the two directions according to your interest.

Move a clip (without changing its duration)

Place the cursor in the center of the clip and when the cursor becomes Left click the mouse and drag it in one of the two directions according to your interest.

Display forms of a Timeline

Below the grid you can select what type of view you want:

Display action grid, descriptors and timeline.

Show action grid and timeline (hide descriptors) Show timeline (and hide action grids and descriptors). Hide timeline (and show grid of actions and descriptors).

Timeline Options

There are two types of menus within the Timeline options: one by clicking on the Timeline background and another by clicking on a clip.

Click on the background of the Timeline

By clicking with **right click on the Timeline background** or about **the icon in the toolbar** (which we will discuss later in this chapter), a drop-down menu is displayed with several common tools related to the Timeline.

We observe the following options:

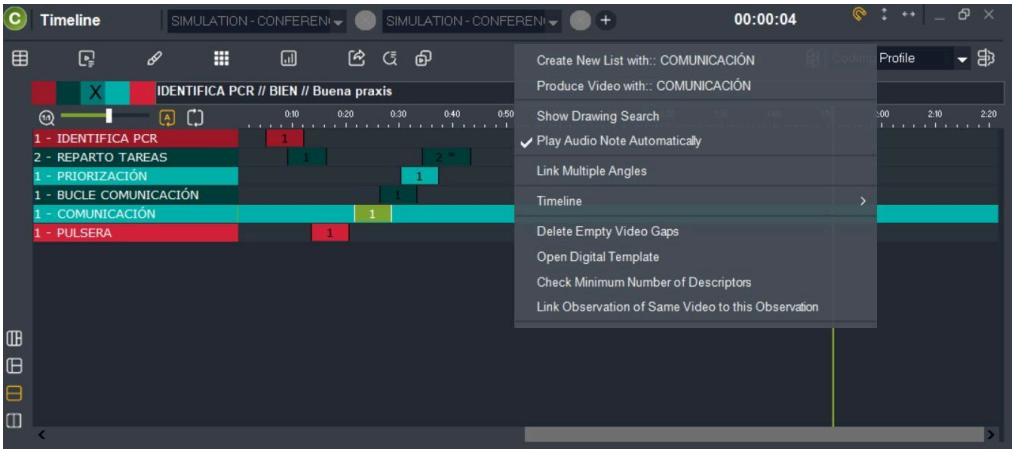


Figure 143: Timeline Options

- **Create a new list**. Add a list of all the clips of the action to the feedback session (see the chapter on feedback sessions in this manual).

- **Produce a video**. Create a video (see chapter on how to produce videos in this manual) with all the action clips.

- **Show connections between players.** If you used this tool during data collection, see the chapter on creating templates for more information on this tool.

- **Show marker.** To show or remove the marker at the top right of the Timeline (and also next to the video name in the video player, as we'll see later in this chapter).

- **Show drawing search**. If you want to search for drawings to identify your clips, a section will appear above the Timeline showing the available drawings.

Figure 144: Drawing finder

- **Play audio notes automatically.** If there are audio notes associated with a clip, they will be played automatically.

- **Link secondary angles.** This tool allows you to review or add additional perspectives to the current image. You can learn more about secondary angles in both the video viewing chapter and this chapter, in the section dedicated to the video player.

> **Note:** Multiple angles can be shown on the video player at the same time. Clips with multiple angles can be added to feedback sessions using **Ctrl + 3**. In addition, you can move between the different angles using the keyboard shorts **4** and **5**.

Timeline

This option also presents a secondary menu that is displayed when selecting **"Timeline"**, with the following options:

Sort the Timeline. Choose how to organize your timeline rows, allowing you to select both groups and actions. You can use various criteria: by color, by name, by action, or custom (by dragging to move the rows).

Show total clips in the action name. Next to the name, it shows you the total number of clips.

Context. If you had completed this screen (during observation, see the chapter dedicated to this phase), the analysis context data would be displayed.

New clip in this action. To add a new clip, place the vertical timeline at the desired time, right-click on the row of the selected action and within the drop-down menu, **"Timeline"** click on the option **"New registration in this action"** or use the keyboard shortcut **"C".** Another option is to copy clips from a different action than the original. To do this, select the clips you want by holding down the key. **"Ctrl"** and then use the combination **"Shift"** + drag to duplicate clips to the action where you want to add a copy.

New action. A new line is created at the end of the Timeline.

Delete selected action. Remove the selected row from the Timeline. This action cannot be reversed, and the clips will disappear from the analysis.

Remove all descriptors. All descriptors for the selected actions disappear. This action cannot be reversed, and the descriptors will disappear from the analysis. You can also use the keyboard shortcut "**Everything" + "D**".

Hide action / Show hidden actions. To hide and show a row in the Timeline.

Change the name/color of the action. It's the same process as double-clicking on the action name (or the icon to the far right of the name).

Duplicate selected action. Clones the action and displays it at the top of the Timeline. The action name will be **"Copy + ORIGINAL NAME"**. It will retain the same color as the original action.

Create a new action with the selected clips. A new row is created at the bottom of the Timeline with the clips you previously selected. To select multiple clips, hold down the key. **"Ctrl"** pulsed.
Another similar option is **"Create opposite clips" ("Shift" + "O")**. It consists of creating a
action with the opposite registers to those that make up an already created action.

Merge selected actions. Select two or more rows with the key **"Ctrl"** pulsed

and then this option will become available. All clips will be merged into a new line, which will be displayed at the top of the Timeline. Merged lines will remain separate.

Rename a descriptor. The descriptor is replaced by its new name throughout the analysis. In the template, it retains its original name.

Join overlapping clips. In the event that two clips share a time, they are merged into one.

> **Note:** Once overlapping clips have been joined, this cannot be undone. For example, if you join clips 1, 2 and 3 and then delete clips 2 and 3, clip 1 will remain but will be the same length as the total of the 3 clips.

B **Remove empty video sections.** To reduce the amount of space left over from your videos and focus on what's important, you can reduce the size of your Timeline. Select the segments you want to delete (in seconds). Both the analysis and the video will be saved with the same name.

Open an existing button template. In case you want to add or continue collecting data from a video.

Check minimum number of descriptors. Clicking this option checks that the actions meet the minimum descriptor requirement set in the button template. We discuss this option in the template creation chapter.

Join databases of the same video: This option groups two or more analyses into one. This is very useful if two or more people on an analysis team perform different analyses on the same video.

Create a new list. Add a list of all the clips of the action to the feedback session (see the chapter on feedback sessions in this manual).

Produce a video. Create a video (see chapter on how to produce videos in this manual) with all the clips of the action

Link secondary angles. This tool allows you to review or add additional perspectives to the current image. You can learn more about secondary angles in both the video viewing chapter and this chapter, in the section dedicated to the video player.

> **Note:** Multiple angles can be shown on the video player at the same time. Clips with multiple angles can be added to feedback sessions using **Ctrl + 3**. In addition, you can move between the different angles using the keyboard shorts **4** and **5**.

Timeline: This option also presents a secondary menu that is displayed when selected.**"Timeline"**, with the following options:

Sort the Timeline. Choose how to organize your timeline rows, allowing you to select both groups and actions. You can use various criteria: by color, by name, by action, or custom (by dragging to move the rows).

Show total clips in the action name. Next to the name, it shows you the total number of clips.

New clip in this action. To add a new clip, place the vertical timeline at the desired instant. It can also be created using the key**"C".** Another option is**Copy clips**from any other action than the original. To do this, select the clips you want by holding down the key and then use the combination

New action. A new line is created at the end of the Timeline.

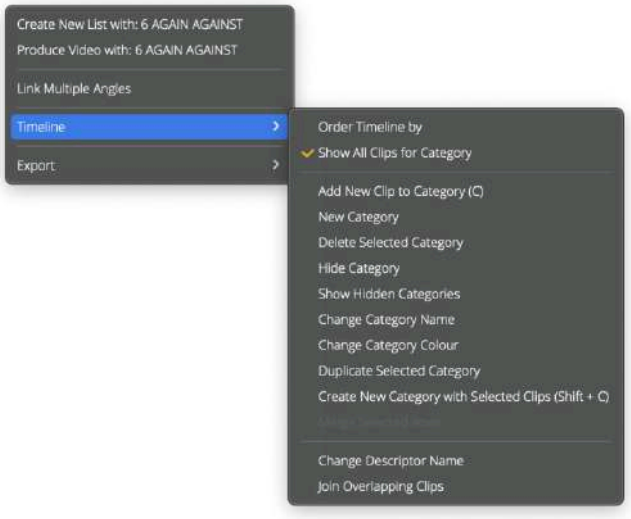


Figure 145: Timeline submenu options

- **Delete selected action.** Remove the selected row from the Timeline. This action

cannot be reversed, and the clips will disappear from the analysis. You can also delete the selected row using the shortcut. **“Command + Del”**.

Hide action / Show hidden actions. To hide and show a row in the Timeline.

Change the name/color of the action. It's the same process as double-clicking on the action name (or the icon to the far right of the name).

Duplicate selected action. Clones the action and displays it at the bottom of the Timeline. The action name will be **“Copy + ORIGINAL NAME”**. It will retain the same color as the original action.

Create a new action with the selected clips. A new row is created at the bottom of the Timeline with the clips you previously selected. You can also create it using the shortcut **“Shift + C”**.

Merge selected actions. Select two or more rows with the key **“Command”** pressed, and then this option will become available. All clips will be merged into a new line, which will be displayed at the top of the Timeline. Merged lines will remain separate.

Rename a descriptor. The descriptor is replaced by its new name throughout the analysis. In the template, it retains its original name.

Join overlapping clips. In the event that two clips share a time, they are merged into one.

> **Note:** Once overlapping clips have been joined, this cannot be undone. For example, if you join clips 1, 2 and 3 and then delete clips 2 and 3, clip 1 will remain but will be the same length as the total of the 3 clips.

Export: This option is not available on Windows in this menu.

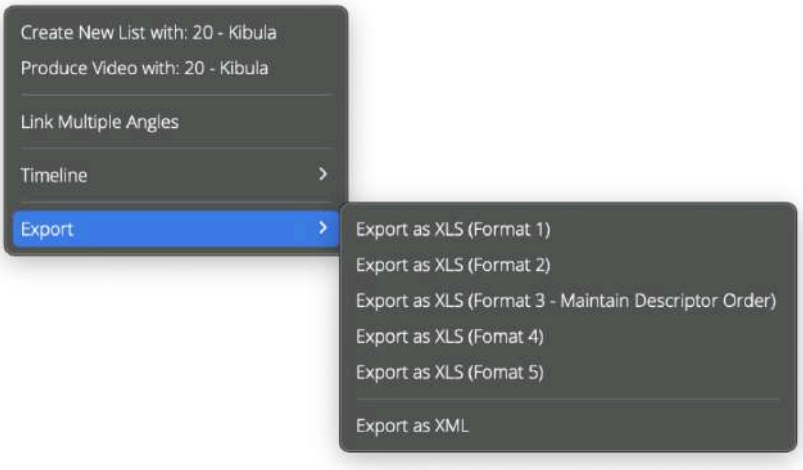


Figure 146: Export to XLS

- **Format 1:** It displays the actions and, among them, the associated descriptors. It also displays the start and end time of the clipping, the click time, and the total duration of the clipping.
- **Format 2:** It displays the same information as the previous one, but the descriptors appear in the same row as the action. This is a replica of how the data appears in the play-by-play window.

- **Format 3:** Similar to Format 2, in that the descriptors appear in the same row as the action, but are distributed in different columns as they appear in the matrix.

- **Formats 4 and 5:** Simplified versions of the previous three. They don't contain descriptors and are more focused on the timing of the video. They differ in that version 4 has text notes and version 5 doesn't.

It can also be exported in XML format (for other timeline-based video analysis programs).

Click on a clip

These are not the only options that can be configured in the Timeline. In addition to clicking on the Timeline background, a second menu is displayed when clicking **with the right mouse button on one or more clips** (holding down the "Ctrl" key) and these additional options are displayed.

- **Add to feedback session.** To incorporate selected clips into a feedback session.

- **Produce clips (make a video).** Export a video in .mp4 format with the selected clips.

- **Eliminate**. Remove the clips from the Timeline permanently.

- **Edit registry properties**. Opens the registry editing window, which we saw earlier in this chapter.

Timeline Profile

When you open the timeline for the first time, a series of basic tools are displayed by default, as you can see in the attached image.

Figure 147: Timeline Profiles

In Codimg Premium, you can see all the software's available tools, as it's our top-of-the-line version. In the other versions, some tools won't be available. If you want to know which ones, we recommend taking a look at thecomparison of our site web (www.Codimg.com).

With the tool **“Timeline Profiles”**, you can customize different toolbars for different profiles, deciding which icons are displayed in this bar, which are hidden, and how to order them, depending on the needs of each profile.

You can also decide what visual appearance the Timeline has (from several options) for each of those profiles.

Customize the toolbar

By default, there will always be one profile. That is, each license has a standard distribution. We'll explain how to edit it in the following lines, and the same process applies to creating other profiles.

Click this icon to **create a new profile**. Then type the name in the window that appears and click on **“Create profile”** To view the profiles you've created, open the drop-down box on the right.

With this icon you can modify the name of the profile that is open.

With this icon you can delete profiles.

Below are two tabs:

- Toolbar
- Timeline style

In the tab **“Toolbar”** All available timeline tools are displayed.

- Only those products corresponding to the Codimg product purchased by the user

will be displayed as eligible. The rest will appear dark gray and cannot be selected.

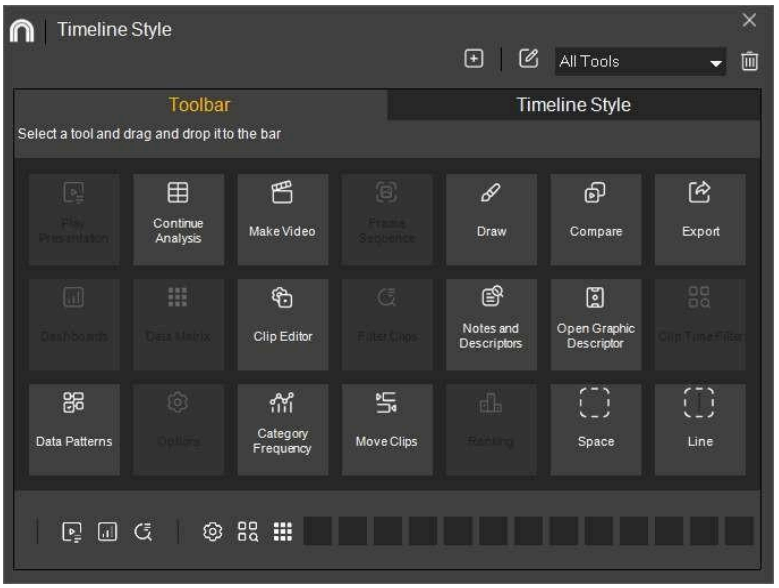


Figure 148: Toolbar

In addition to all the available tools, you have the option to add two types of separators between tools:

- **The space**
- **The vertical line**

You can use them as many times as you like, but keep in mind that they take up one space and the number of spaces is limited.

Figure 150: Adding tools to the toolbar

To add a tool to the toolbar, you can do so by double-clicking or dragging the tool icon to the bottom bar.

For **eliminate** a toolbar, hover over the icon and click the cross displayed in the upper right corner.

Figure 151: Removing a tool from the toolbar

For **change position**, select the tool you want to move and drag it with the cursor to the desired space, which will be outlined in yellow. When you release the cursor, the other tools already in the row from that space will move to the right to make room for the space.

Tools are placed in the first empty slot starting from the left. That is, you can't place an icon anywhere on the toolbar if there are empty spaces in between.

Timeline styles

The other Timeline customization option is the so-called **“Timeline style”**.

There are six types of styles. They differ in small details, but over time we've identified

that each user has their own preferences.

Additionally, you can also decide the size of the Timeline from four available options, numbered 1 to 4 (1 being the smallest and 4 being the largest).

The Timeline style will be linked to the profile. This means you can have different Timeline styles for different profiles.

Tools of the Timeline

In this section, we'll cover all the tools available on the Timeline.

Some of them are so extensive and have so many options (data matrix, data dashboards, or feedback sessions) that we'll cover them briefly. We'll dedicate a separate chapter of this manual to each one.

We will cover the rest in depth in this section.

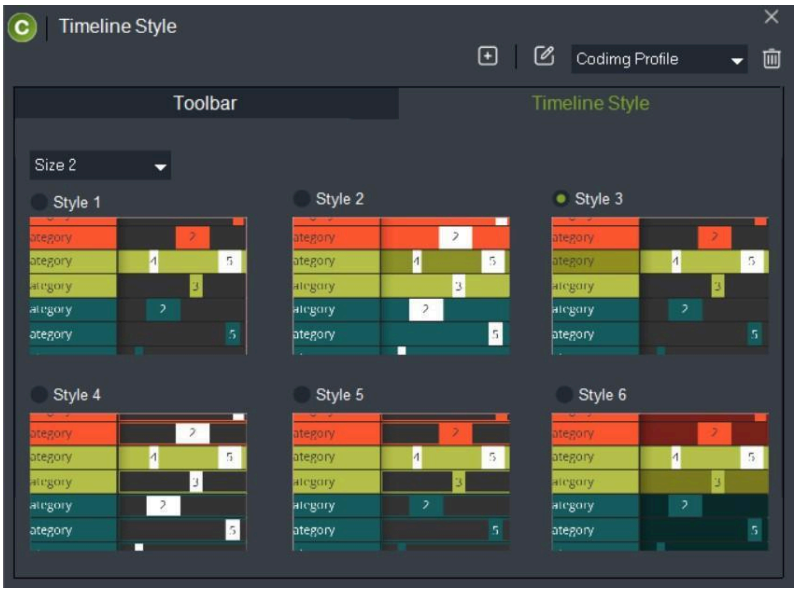


Figure 152: Timeline Style

Feedback sessions / Feedback

With this tool, you can create a summary of the most notable actions from an analysis (without deleting them). You can also create lists of clips to generate a feedback session.

This feedback session can be shown from within the program itself—for example, using a projector or secondary screen—or a video can be exported with these actions.

This is a tool with multiple functions, so we'll dedicate an entire chapter to it. We also discuss the final phase of the analysis process (feedback session of conclusions).

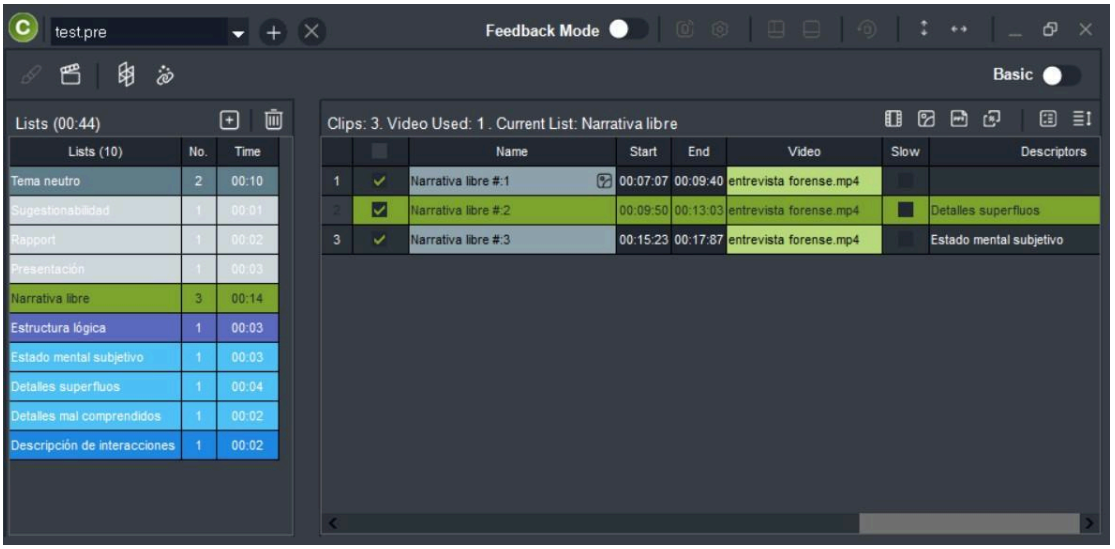


Figure 153: feedback sessions

Button template

This tool allows you to return to the observation and clipping environment. It's used to add clicks to an analysis. It's similar to reanalyzing a video if you missed something.

Once you have finished collecting data, you can return to the Timeline with the icon .

Produce video

Create an MP4 video with the actions you've selected in your Timeline. This is a relatively quick way to generate a video with specific moves.

Once the clips have been selected, there are a few more decisions to be made before completing the export.

Basic configuration

- **Video resolution.** You can choose from the different available options in the drop-down menu.
- **Bitrate, quality and FPS.** There is the option to select the bitrate and FPS (frames per second).

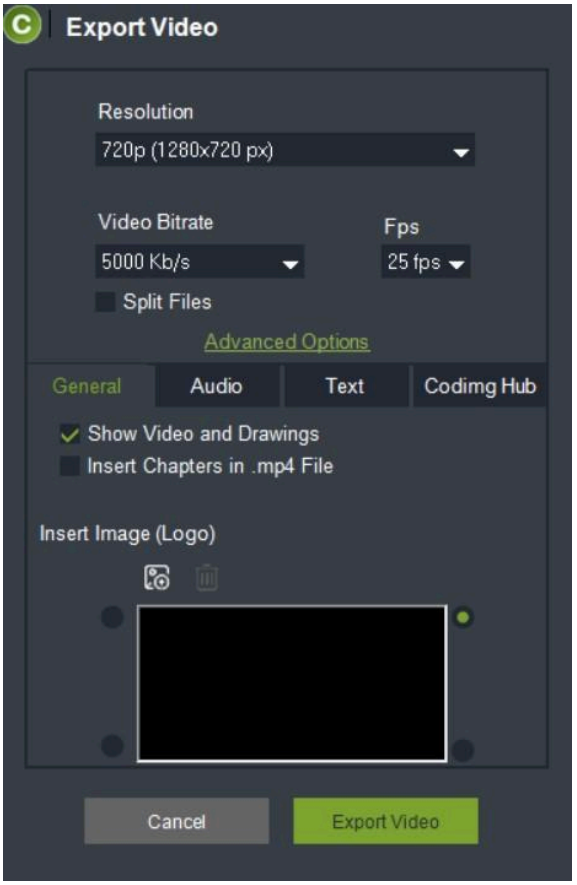


Figure 154: Export video

Advanced Options

- **General.** In this tab, you can choose whether to display the video with the drawings and whether to add chapter markers to your exported video. You can also choose whether to insert a watermark. You can choose which of the four corners of the image to insert the watermark (logo, emblem, etc.). This watermark has no size restrictions.

- **Audio.** In this tab, you configure the video's audio. You can include the video's original audio or incorporate an external audio file.
  You can add audio notes you've clipped. In this case, you can choose to mute clippings with audio notes and use the original audio for clippings without notes.

- **Texts.** In this tab, you can decide which text will be superimposed on the video: actions, descriptors, or text notes. You can also choose where they will be placed.

- **Codimg Hub.** There's an additional tab that allows you to upload the produced video to Codimg Hub. It also allows you to export the XML file and open Codimg Hub.

Telestration (with KlipDraw)

The default drawing tool in Codimg's Timeline is KlipDraw Basic. Consult this tool's manual if you want to learn more about how to use it.

Although it's quite intuitive, you may want to explore how each of the tools works. In short, when you're done drawing, you'll need to click on **"Accept"** to add it to the registry.

The drawing is added to a frame. This frame may be part of two or more clips. In this case, Codimg will ask you to choose which one to save it to, as shown in the attached image.

Compare clips

With this tool you can compare up to 8 clips in your database.

To compare multiple clips, select them by holding down the key. **“Ctrl”** and then click on .

For **synchronize the start time** from the videos select one of the videos and click on until the desired time, then click on the next video and repeat the process. The active video will display a red rectangle in the upper left corner for identification.

Expand the panel to full screen with to facilitate image review.

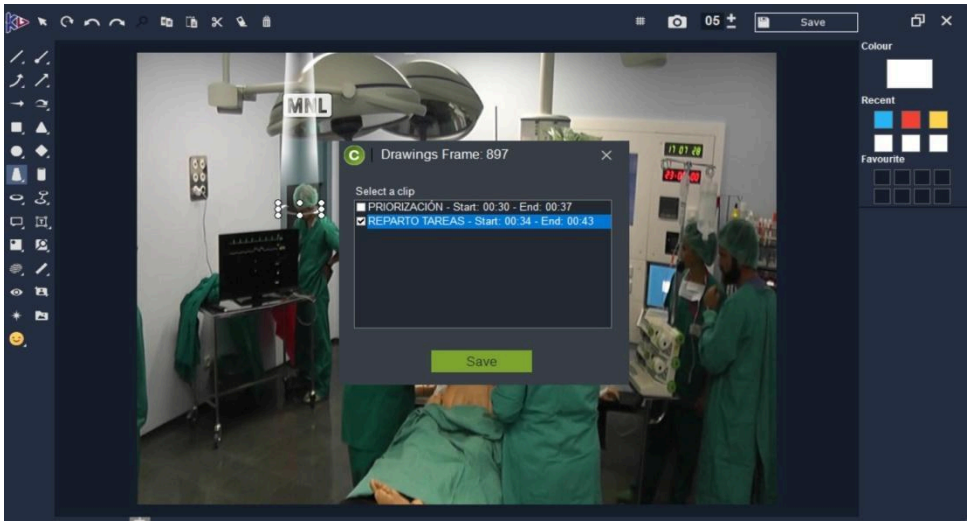


Figure 155: KlipDraw

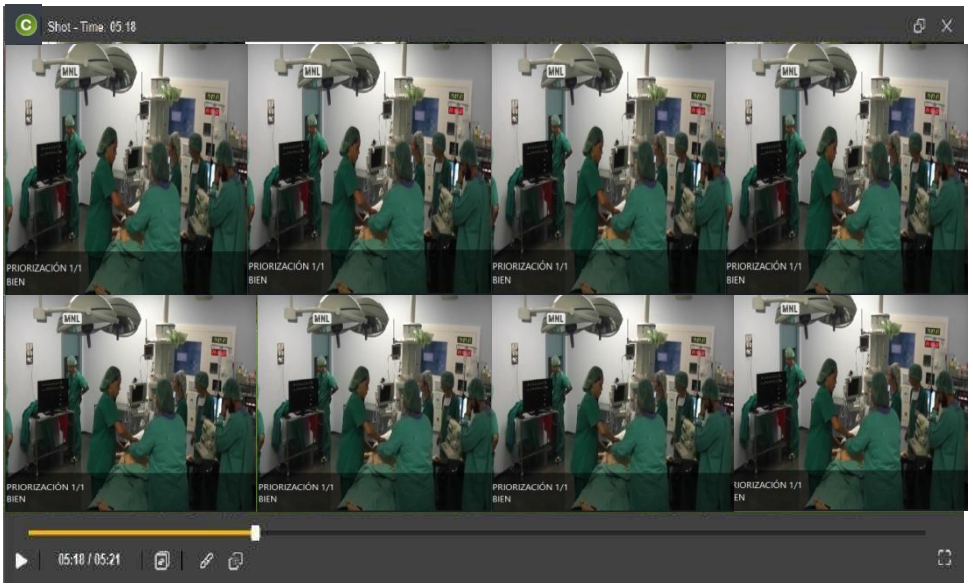


Figure 156: Compare clips

To play all clips at once click on . The red rectangle will also no longer be visible. To play the clippings, click on .

You can draw on the video by clicking on .

To overlap videos click on This option is only possible with two videos.

When you activate this option, the produce video icon is displayed., where you can generate a video showing the overlapping actions. The final video will not contain text or drawings.

Finally, you can compare an action from the timeline with an external video. To do this, select the action and click**.** The comparison window will open with the selected action and the button will be displayed next to it **“Select video”.**

Click it to select and open the external video you want to compare. Clicking on a different action in the timeline will compare it with the newly selected action. The external video will never change.

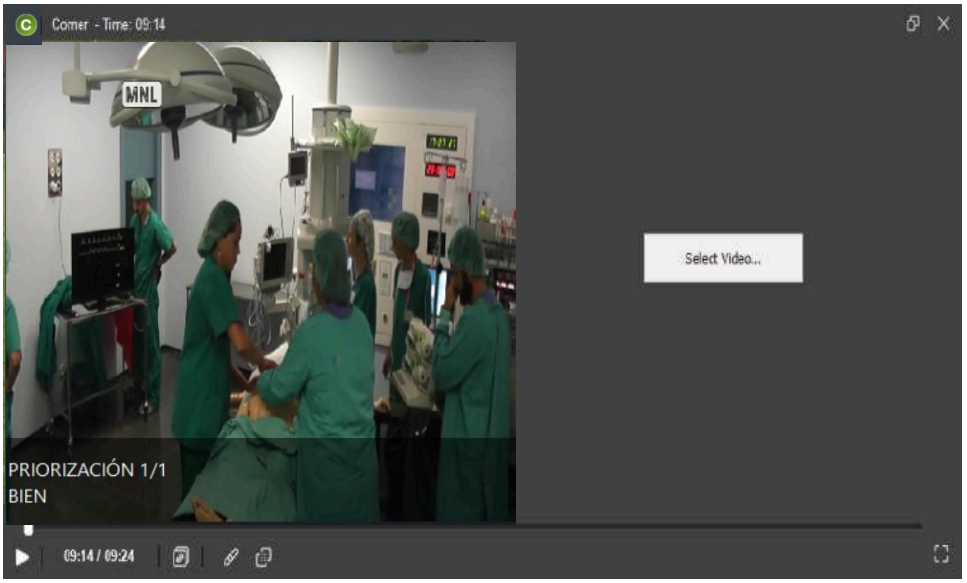


Figure 157: Select video

Export

With this timeline tool You can export a database in different formats:

- **As a .pdf or .xls* file.** in which the clips are shown in chronological order, or the percentage of each action is shown.
- **As an .xml file.** To use the analysis in timeline-based video analysis programs. Selecting this option opens a window where you can select which actions to export, as well as **add XY* values to the export**. When finished, click on **”Export to XML”** at the bottom right.

There are four output XML formats: standard, Codimg XML, forcing a 25 frames per second video and with total values (so that the total result of clips by actions is shown).

- **As XLS file.** There are up to six export formats for Excel. If you'd like to know the differences, we'll cover them in the section. **“Timeline Options”**, previously in this chapter.
- **As a .csv* file.** With the option **”Export .csv - System Clock”** you can export a file **.csv** which displays the time reference of the clips, allowing the clipped data to be linked with data generated by GPS devices.

Note: the time corresponds to the time on the computer when the action is clicked. For a more reliable time, conduct a live observation.

As a .txt* file. It is sorted by columns and tabs with a format similar to the attached image.

Figure 158: Export as an XML file

Dashboards

Dashboards allow you to transform the clicks from your data collection into visual statistics, through labels that reflect the numerical data from your observations, percentages, and graphs.

In other words, it involves transforming your analysis into data intelligence, graphically represented in dashboards with the information you need. These charts are also dynamic, so clicking on them will reveal the corresponding actions.

Data dashboards are a tool, like feedback sessions, that deserve a separate chapter because they offer numerous options and functionalities.

Data matrix

The Codimg data matrix is a tool that allows you to view all the clips from your data collection in a single view, in the form of a table where the rows represent the actions and the columns represent their descriptors.

Each cell displays the number of times that action-descriptor combination has occurred. Clicking on the number will take you to the specific clips that meet that condition.

As with feedback sessions and data dashboards, data matrices deserve a separate chapter, as they offer a wide range of features and different matrix types.

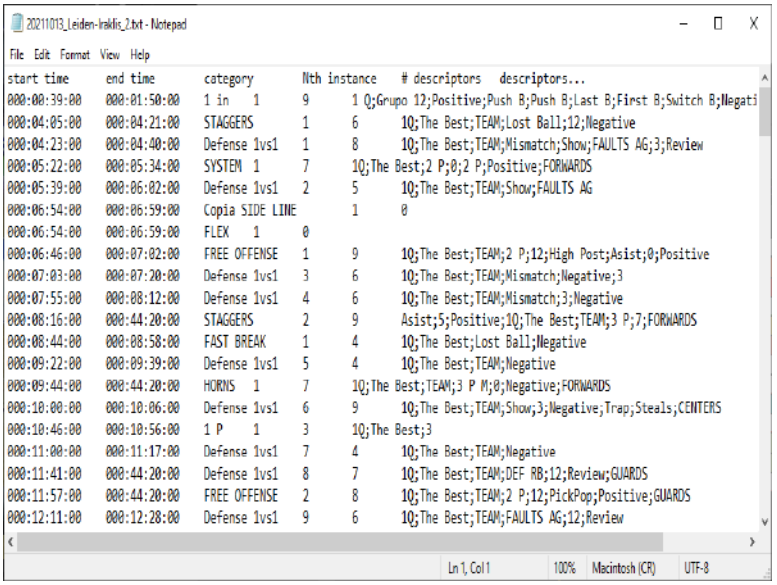


Figure 159: Text file

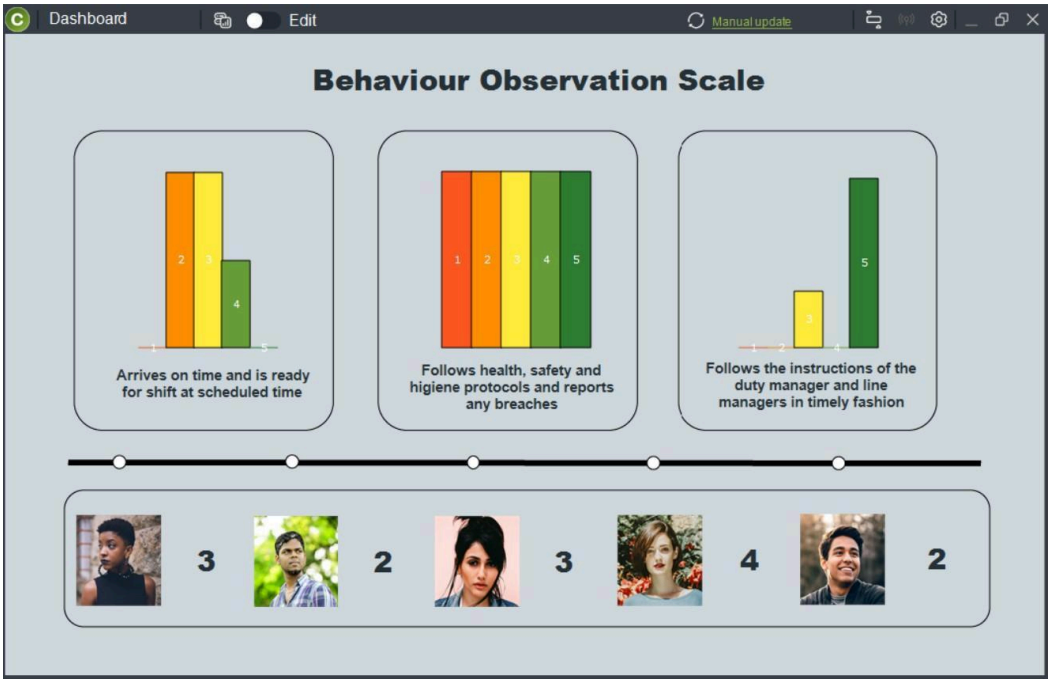


Figure 160: dashboards

Registry Editor

We already mentioned this tool when we talked about the grid earlier in this chapter. We recommend you go back to this section if you want to learn a little more about what it's used for and how it works.

In a nutshell, the clip editing window allows you to edit certain aspects of a clip: removing or adding descriptors, increasing or decreasing the clip size, or adding audio notes, among other things.

In this case, the icon allows you to access this tool in a different way, with direct access from the toolbar. In fact, if no clip is selected, the program will prompt you to select it before opening this window.

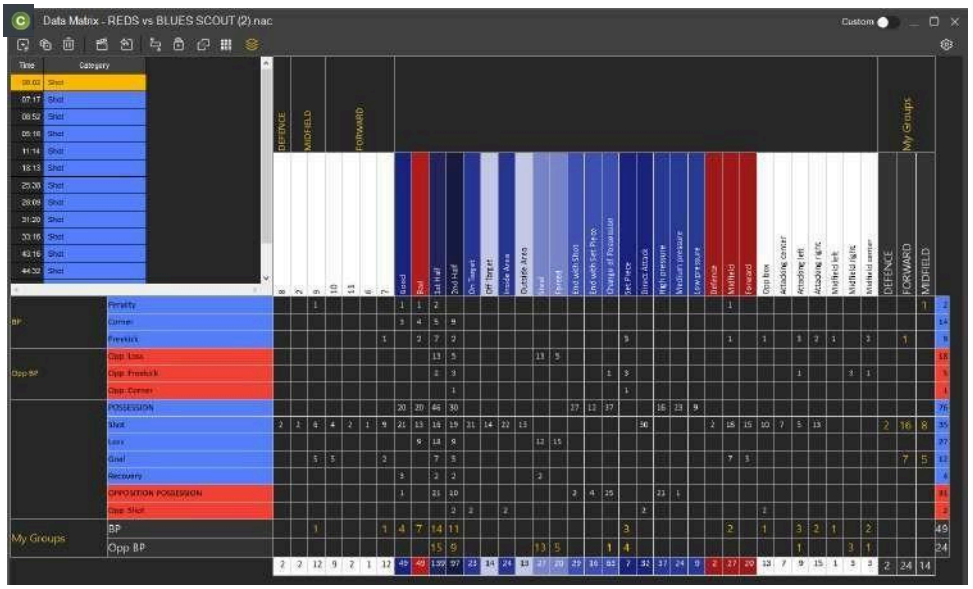


Figure 161: Data matrix

Figure 162: Select clip to continue

Clip search

The log finder is a powerful tool that allows you to access, through simple filters, the actions you're looking for in one or more analyses.

In Codimg Premium, you can search across as many analyses as you need. In Codimg Pro, you can search across a maximum of three analyses.

The first step is to select the analyses you want to search. In the top bar of the window, you have icons to add, remove, or delete all analyses.

In the folder structure on the left, find the analyses you want to add to the search and click the button **“Add analysis”**.

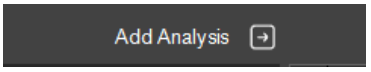


Figure 163: Add analysis

On the left, you have the buttons to add (from the explorer or from Finder) with the +/- buttons, and also to delete all analyses and clear the list with the following icon.

Figure 164: Add, remove, or clear the scan list

When selecting multiple analyses, the list would look like the following image (the green number indicates whether the analysis has a linked video or not).

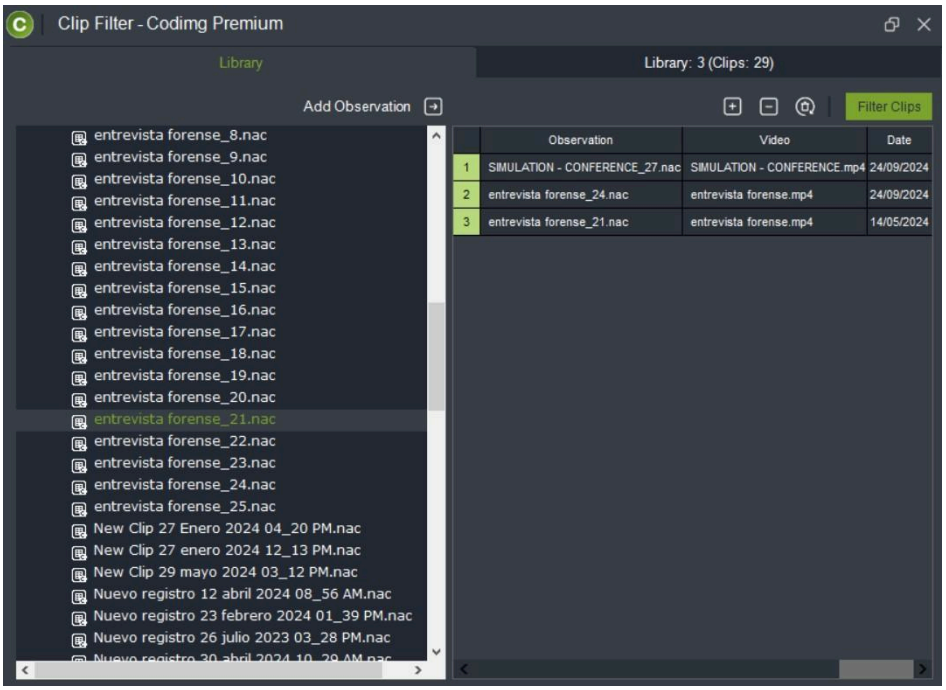


Figure 165: Select analysis where you want to search for clips

Once you have defined the analysis list, click on**"Look for"**The log search window will open directly with the selected analyses.

In the next view, you'll see the search options. It consists of three columns at the top and one at the bottom.

- In the first column, decide the type of content you want to search from: actions, descriptors, or text notes.
- Once you decide on the first criterion, the associated descriptors or actions will be listed in the second column.
- From here on, filters will be added **"AND"** / **"NO"** to narrow your search. You can add as many criteria as you like.

The results of these filters will be displayed at the bottom of the screen, where the following information will be shown:

Clip

Start and end time

Associated video

Analysis to which it belongs

Associated descriptors

With these clips that the filter gives us, we can perform three different actions:

Delete the selected clips (they are removed from the analysis and therefore disappear forever)

Send to a feedback session. Here you have the following options: send only selected clips, open an existing feedback session, create a new one, add to a selected list, create a new list, or add to a specific list.

Create a video with the selected clips. Produce the clips in an MP4 file. If you'd like to learn more about the options for creating your videos, check out the section. **“Produce videos”** within this section.

Search for time in the timeline

This tool is a different search engine because the search criteria is the time elapsed between two specific actions. In other words, you don't search by clicks, but rather by the time elapsed between those clicks.

To use this tool, the first step is to select an action within which the search will be performed.

The program will return in the list below all the descriptors that have been clicked on that action during the analysis opened in the timeline.

From here, you will need to select two descriptors.

Once selected, you will need to choose the time criteria: **“less than X seconds”**, **“between X and Y seconds”** and **“More than Y seconds’0’**. Using the slider, choose how many you want to activate: one, two, or all three.

Next, select the time criterion (in seconds) and assign the name for that criterion.

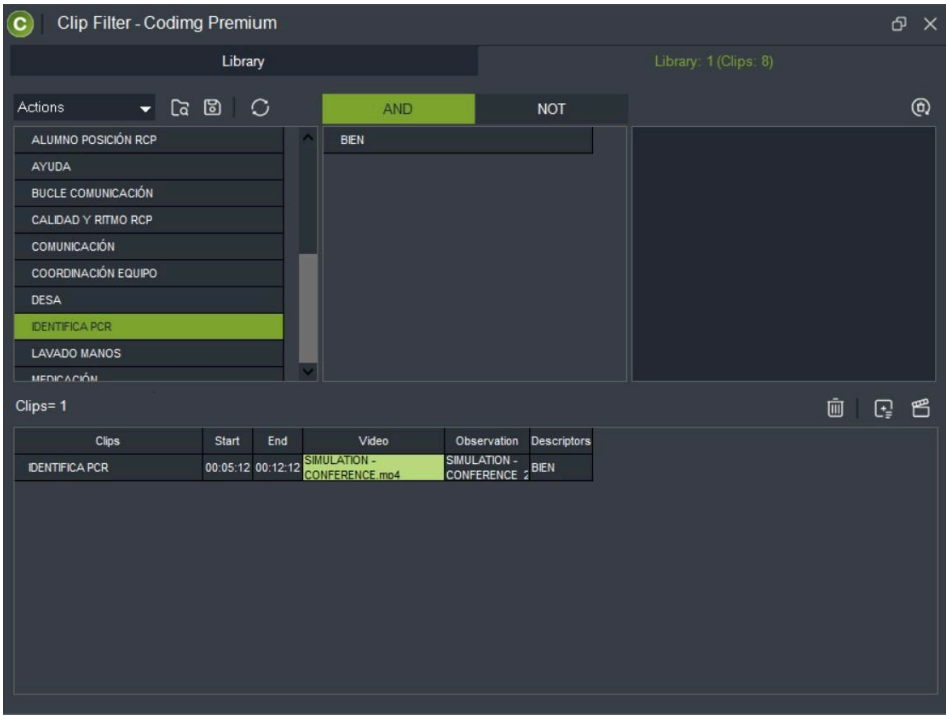


Figure 166: Search filter by time

Once the search by time is selected and saved, the system will create new actions in the timeline with the **action name + the name assigned to the search,** as can be seen in the image below.

There are two new actions at the bottom that display clips that meet those assigned conditions in the time search.

In addition to the timeline, new rows and columns will be added to the data matrix, as you can see below (although we will talk more about this tool in its corresponding chapter).

Figure 167: Actions applied to the search by time in the Timeline

Figure 168: Actions applied in the time search in the data matrix

Additionally, with this tool, you can save different search criteria as tags. This means that when you open other analyses, you won't have to re-establish the search criteria. Instead, you can load the already saved tags, and the program will automatically perform the search to add the corresponding descriptors.

Move clips

With this tool, you can quickly and easily modify the timing of your clippings. This is useful in cases where the video is poorly synchronized, causing the clippings to display incorrect actions.

To open the tool click on the icon of the timeline:

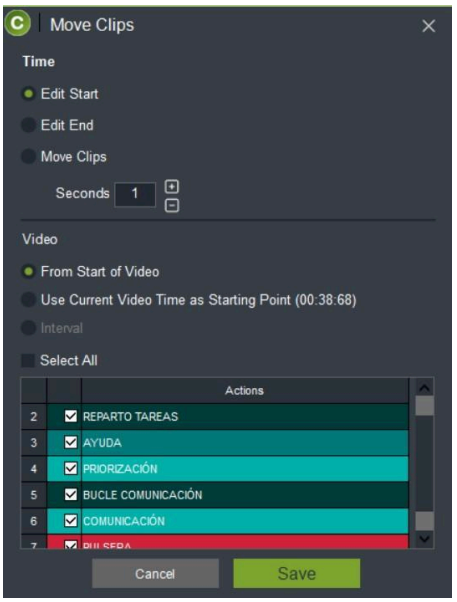


Figure 169: Moving clips

First, select in the list at the bottom the actions to move.

Then select in **"Time"** choose the option you want to modify:

- If you want to modify the **Start of a clip.**
- If you want to modify the **End of a clip.**
- If you like **Move a clip** in full in time.

The next step is to select the amount of time (seconds) in positive order to shift right and in negative order to shift left. That is, -10 shifts the clips back ten seconds, and 10 shifts them forward.

Finally, in the section ”**Video"**, select the part where the change will be applied.

- **From the beginning of the video** That is, from the first second of the video. All changes will be applied from that moment on.
- **From a specific moment.** That is, it locates a specific moment in the video and will shift all elements from that moment. For example, to synchronize the second half clippings but not the first half.
- **During a specific time interval.** It will only modify clips within that time period. For this option to be active, select the interval from the timeline by clicking and dragging the cursor over it.

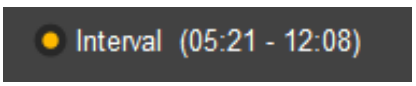


Figure 170: Selecting a clip from the Timeline

Once all the settings have been decided, the action can be completed.

In addition to all of the above, there is a tool called the ‘anchor clip’.

With this tool, you can use a single clip as a reference to synchronize the rest of the clips within an analysis.

To do this, select the clip you will use as a reference while holding down the key. **"All"** The reference clip will appear in red in the Timeline. Repeat the action if you want to

deselect it.

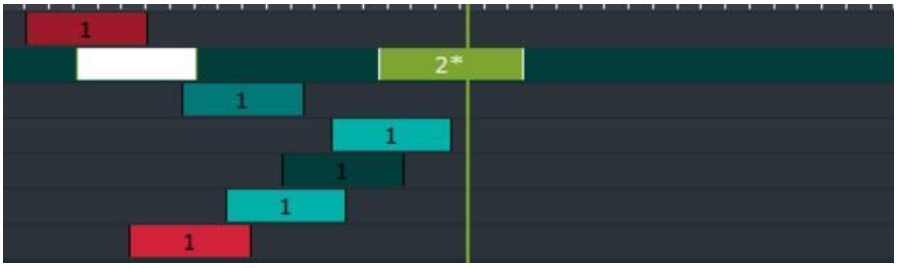


Figure 171: In red the reference clip to synchronize your analysis

Now, by moving the marker on the timeline, both in the player and in the Timeline itself, go to the moment in the video that corresponds to the moment when the reference clip should start and press **“Ctrl” + “A”** to synchronize your analysis.

Note: If any clips fall outside the video total, they will not be deleted but they will not show the corresponding action.

6.5.17. Spaces and lines

In addition to all the tools we've seen throughout this section, you can also select spaces and dividing lines in the timeline profile.

Figure 172: Spaces and lines

Basically, these are graphic elements you can add to your toolbar to better organize your timeline. That is, if you need a blank space between two icons or a line dividing sections, you can select them here.

These two icons conclude the explanation of each of the tools that make up the timeline and can be selected for the top bar.

To conclude this chapter, we will move on to explain the options available in the last element of this environment: the video player.

The video player

The video player is a fundamental tool in Codimg, as a video analysis software, it is a cross-cutting element throughout the entire program. Its presence in the timeline is especially important, and for this reason, we will explain all its features in this section.

Although many of the tools are common to any player, there are a number of exclusive features to make reviewing much easier.

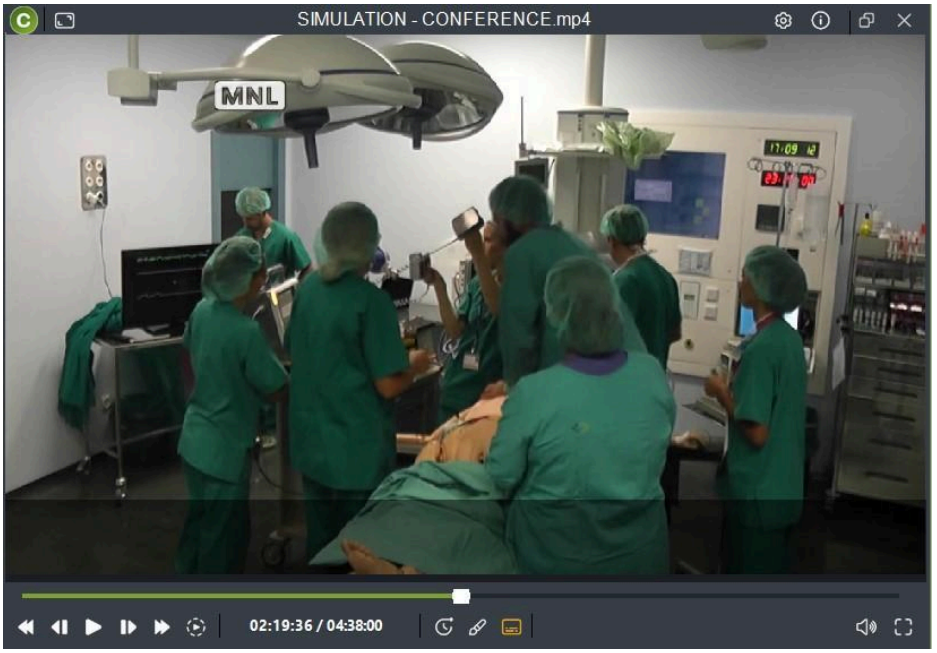


Figure 173: Player times

Bottom bar

At the bottom of the player, we find a toolbar. This bar is divided into several groups of tools. Let's explore them separately in each section.

On the left, we find six icons that control the video player.
Let's see what they work for, from left to right.

Figure 174: Player controls

- **Rewind.** Clicking this button once will rewind the video at 1x speed. Clicking the button again will increase the rewind speed. The maximum speed is 3x. The same action can be performed with the B key.
- **Frame backward.** Each click moves playback back one frame. The same action can be performed with the N key.
- **Play** / **Pause.** Starts and stops playback.
- **Frame forward.** Each click advances playback by one frame. The same action can be performed with the M key.
- **Fast forward.** Clicking this button once will fast-forward the video at 1x faster speed. Click it again to increase the speed. The maximum is 5x. **Slow motion.** Play the video at a speed slower than 1x. Select this tool and then choose the playback speed. You can select the speed using the bar at the bottom.

To the right of the playback controls, we can find two timers: the current video time and the total video time.

You can access it at any time with the different controls we have in the previous section, with the horizontal bar or with the tool ”**refresh"**, which is the icon on the right.

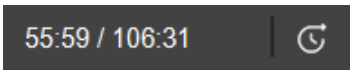


Figure 175: Player times

On the right side of the player, there are other tools that complement all the previous material.

- **Drawing on the image with KlipDraw Basic**. You can also open the drawing tool with the D key.
- **Overlaying log information on the screen. In**The action name, clip number, and associated descriptors will be displayed at the bottom of the player.
- **Add/remove audio from video.**
- **Full screen.** Using the ESC button, you can return to the previous resolution.

Figure 176: Other tools in the bottom bar of the player

Top bar

In the top bar of the player, you'll find more information about the video. Next to the Codimg logo, on the left, you'll find:

Proportional scale of the image. The video will be displayed at various sizes proportional to its original size.

Figure 177: Player resolution

Video name and bookmark. If you have activated the option **”Show marker”** in the tool **“Timeline Options”**, the event score will be displayed next to the video file name.

Player options. To configure different options of the video player.

Figure 178: Player Options

Show/hide the bottom bar of the player.

Maintain playback speed (if other than 1x) after pausing the video

Link secondary angles Video

controls with the keyboard

Configure text overlay on video

Video controls with the keyboard. You can assign certain keys predefined video "skips" (that is, using those keys to advance and rewind a number of seconds of your choice).

Simply type the number (in seconds) for each of the three possible controls, and from then on, every time you click on one of the combinations, the video player will skip forward and back that amount of time.

Figure 179: Keyboard shortcut options

- **Link secondary videos.** If you have more than one video of the same analysis

from other perspectives, you can add them to your analysis to complete the available information. In Codimg Premium and Codimg, you can link up to four videos. In Codimg, you can add up to two videos.

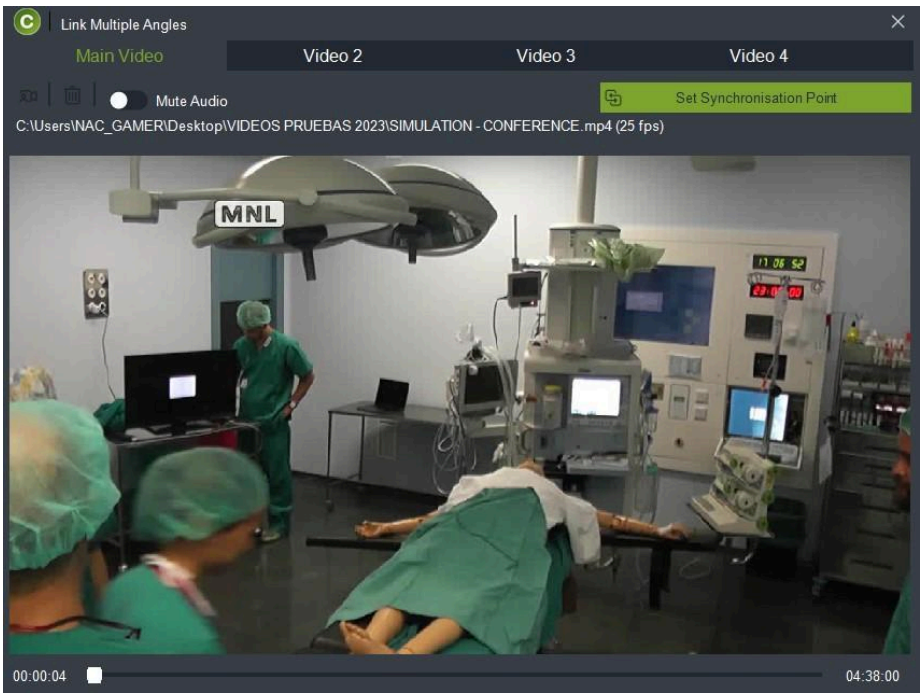


Figure 180: Synchronizing multiple angles

You just have to select them in each of the tabs **”Video 2”**, **”Video 3”** and **”Video 4”**.
Once you have selected your secondary videos - as they may not all start at the same time - you must choose a starting point **"synchronization"**.

You can also remove a secondary video or remove its audio, if necessary.

If secondary videos are added, new icons will appear in the bottom toolbar to manage the new angles. Each icon, numbered 1 through 4, allows you to select each of the selected angles (if there is a maximum of four), and the fifth icon allows you to view all four in a tiled view in the same player.

Text overlay in the player. In this option, you can configure how overlay text should be displayed in the player:

- **What to show**: action, descriptors, text notes.
- **Where to show it**: up, down, or hide text after X seconds.
- **How to show it**: size, color, transparency and background color.

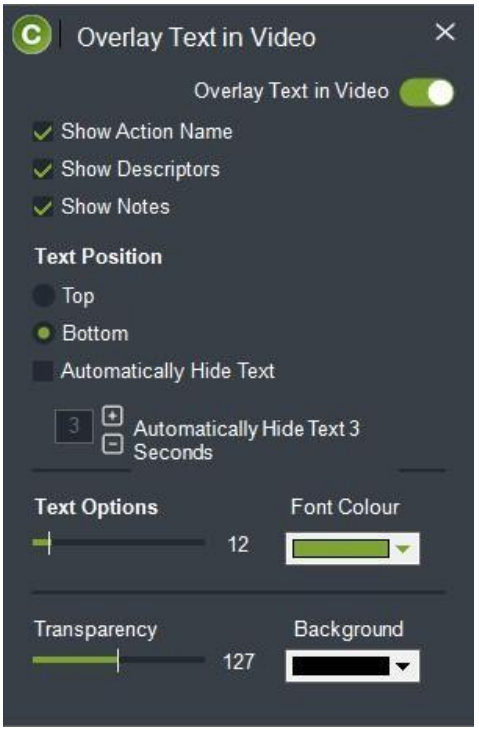


Figure 181: Text over video

- **Maximize, minimize, and close the window.** The last two icons on the top bar are used to maximize and minimize the player, and the last one is used to close it permanently.

Closing the player closes the task you're currently working on and returns you to the program's main menu.

More configuration options

Right-clicking anywhere in the player will open a floating window with most of the options we've already seen in both the top and bottom bars.

Figure 182: Player Options

The only configuration option in this secondary menu exclusive to this menu that we have not seen in either of the other two bars is **“Open folder + video name.”**

Clicking this option will open Windows Explorer with the folder where the video opened in the player is located.

7. **Data matrix**

In the chapter dedicated to the Timeline we talked about the data matrix, as it is one of the tools that can be used in this environment.

However, due to its importance and the enormous amount of tools, variants and functionalities that can be found within the data matrix, we believe that it deserves a separate chapter.

What is the data matrix?

The data matrix is a timeline tool that is represented by a window, in the form of a table, with multiple cells and figures within each cell. On the far left, in the first column, you can see listed all the actions of an analysis and in the vertical part, in columns, the descriptors of your analysis.

The number in each cell represents the number of times a action and a descriptor have been clicked during the observation.

When you click on that number, a list of records that meet that **‘action’ + ‘descriptor’** condition is displayed in the top left corner of the window.

The best way to understand a matrix is to look at it. In the attached image, you can see a fairly complete matrix, with the actions in the rows and the descriptors in the columns.

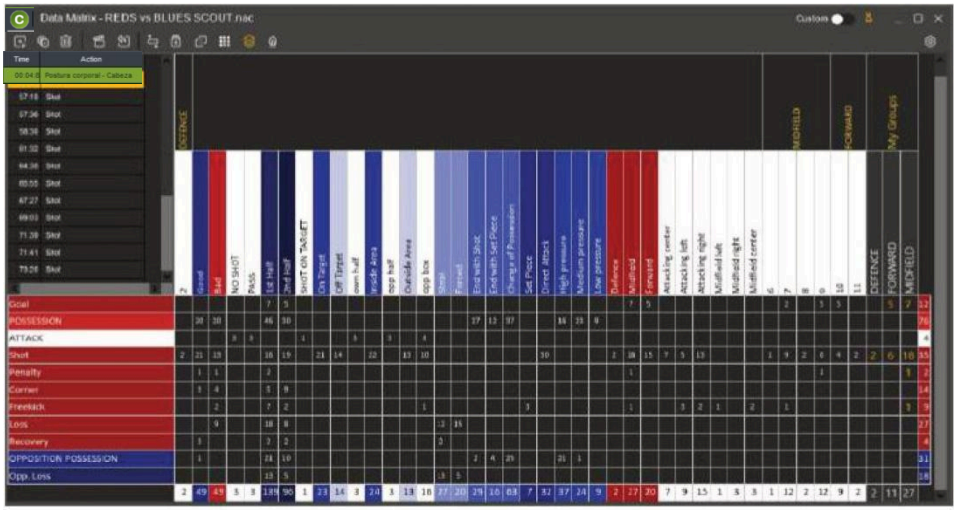


Figure 183:data matrix

The data matrix is therefore a powerful tool for filtering and organising your data that will prove essential in your work. It can also be used as a search engine to help you find the desired actions in just a few clicks.

Within the data matrix, there are different variants and tools that we will go through in this chapter: the full matrix, custom matrix, multiple matrix, dynamic matrix and sub-matrix.

To access the data matrix, click on the icon on your timeline. You can also access the matrix, from the same icon, in the 'library' section. More information on 'library' can be found in the chapter on this environment.

You will be shown up to four options:

- **Open complete data matrix.** All records, actions and descriptors, with their groups and other data you have worked on to show in the matrix. In addition, if you have several open

- **Submatrix.** This is to create a matrix from a cell in the matrix, showing the relationship between different descriptors of a action. We will talk more about this functionality later in this chapter.

- **Custom matrix.** You can create or open a custom matrix, that is, instead of showing you all the data, it will only reflect the data that the user chooses, so that the matrix is much more relevant to the analyst. We will also discuss this tool later in this chapter.

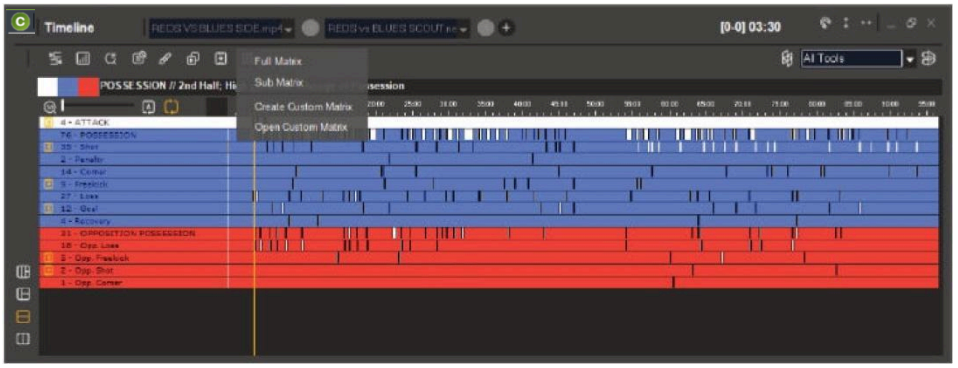


Figure184: data matrix

Matrix Tools

Once you have opened the matrix, you will see the complete list of actions and descriptors of your analysis in one view, as explained above.

In case you have created groups, these would be displayed on another level within the columns, with the descriptors grouped together.

Let us now explore what tools the data matrix offers:

Adding clips to a feedback session

In order to enable this option, you must have a clip selected. That is, click on one of the cells in your matrix.

A panel will open with the following options:

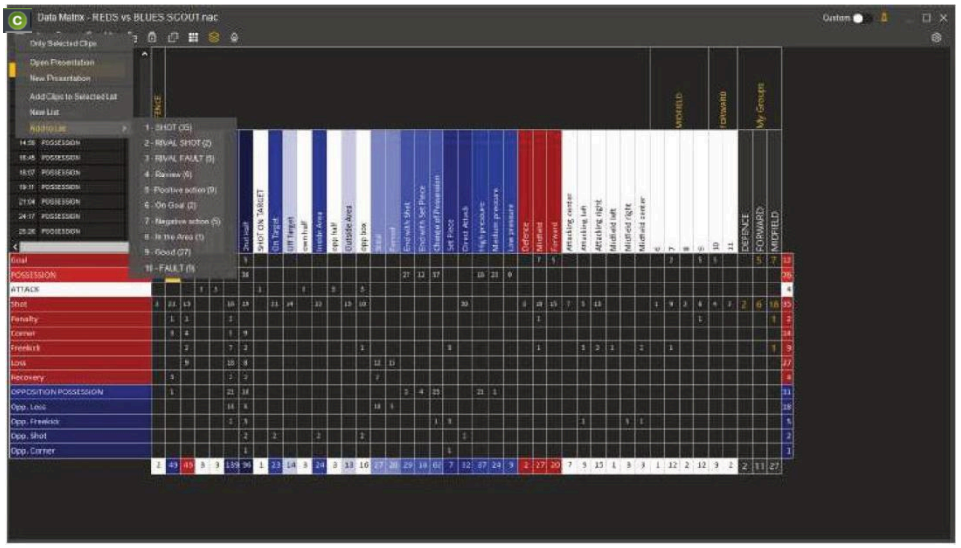


Figure 185: Add clips from a matrix to a feedback session

What clips to send?

- **Only selected clips.** By default, when you perform an action, all the clips in the cell are sent to the feedback session. In case you want to send only a selection, you must previously select them and validate this.

Which feedback session should I send them to?

- **Open existing feedback session.** If you want to add the matrix clips to an already created layout, click on this option. Choose the layout.
- **New feedback session.** In case you want to open an empty feedback session, from scratch.

In which part of the feedback session do you place clips?

With a feedback session open, the 'Lists' options are activated:

- Add clips to the selected list.
- Create new list.
- Add to list. When the cursor is hovered over, all the lists contained in that open feedback session are displayed.

Press the '3' key and the clips marked in the matrix will be added to the active list of the feedback session (a list is not created automatically as in the 'New feedback session file' option).

Edit clip properties

With the icon you can open the clip editor window of the selected clip to edit it. Another option is to double-click on the name of that clip when it is displayed in the upper left part of the matrix.

Delete selected record

With this icon, the selected clips are deleted. This means that they are also removed from

the timeline and will therefore disappear from your analysis. This action cannot be reversed.

Produce video with the selected clips

With the icon you can export (produce) a video with the selected records in the data matrix. The video production environment will open.

For more information, you can access the section dedicated to this tool in the Timeline chapter.

Export data matrix

The icon allows you to export the data matrix. You can export the matrix as an image (in jpg format) or as an Excel file (.xls).

> ***NOTE:** If you have ticked the option box "Show empty values", the Excel file will show all actions and descriptors of your analysis, even if it has no records. In those fields, the figure O will be displayed.

If this box is not ticked, actions or descriptors that have not been ticked in an analysis will not appear in the export.

Dynamic Matrix

The dynamic matrix allows you to narrow down the matrix results to a specific time period in the video. Very useful if you want to see what happened in an analysis during a specific time.

When you select this tool, a line is displayed between the toolbar and the matrix. Move the arrows with the mouse to delimit the time span you want to display.

The programme will recalculate the actions that happened in this time interval and reflect them in the matrix.

Create new action with selected clips

With the icon you can create a new action in your analysis from the results of a matrix.

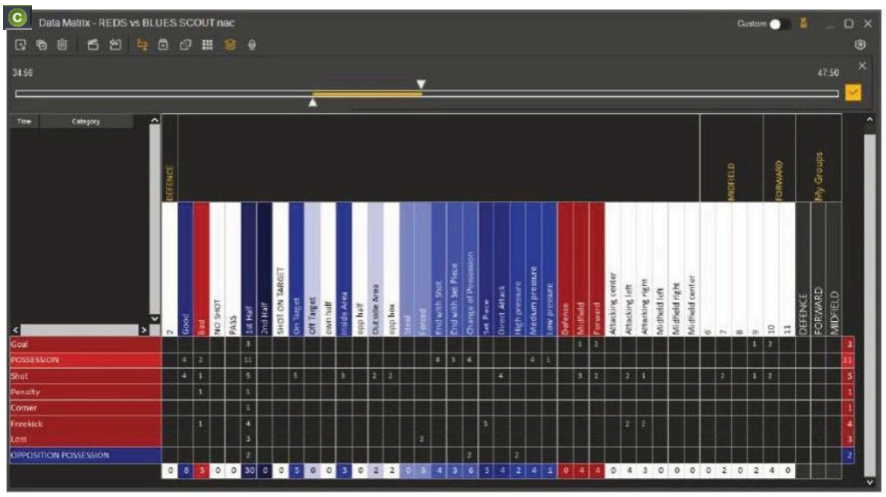


Figure 186 : data matrix

Filtering by descriptors in the matrix

This tool allows you to create new descriptors by combining other descriptors. With the Alt key pressed, select the descriptors (columns) you want to include in the new descriptor.

The programme shows you the results at the bottom. You assign a name and decide whether you want it to be displayed even if there are no results (i.e. value O). You validate the action and the new filtering is created as a new column in the matrix.

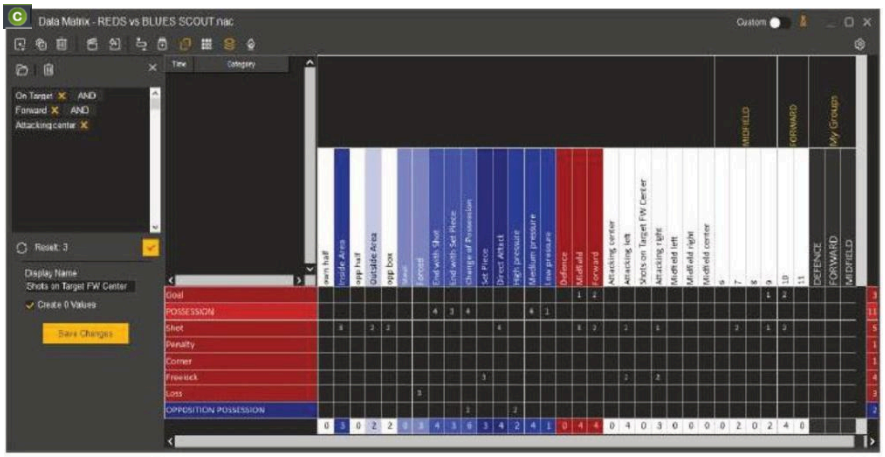


Figure 187: Filter by descriptors

Submatrix

A submatrix is a matrix of another matrix that allows you to see the relationship between two actions on the basis of a action.

Simply put, it is a matrix of a single action and it is up to the user to decide how the descriptors are distributed in rows and columns.

The first step is to select the action and choose which descriptors to display (and on which axis), as you can see in the attached image. Drag the descriptors to each of the axes (Y are the columns and X represents the rows).

A new matrix is composed at the user's will.

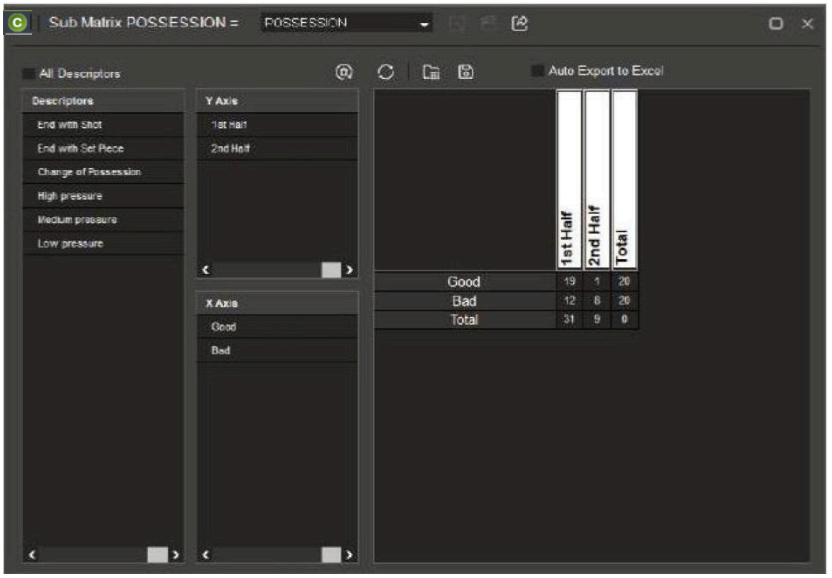


Figure188: Submatrix

What configuration options are available in the sub-matrix?

- The validation option 'All descriptors' allows you to display all the descriptors of your analysis. In case it is not selected, it will only show those of the action for which the sub-matrix is created.

- The icon allows you to reset and recreate the sub-matrix.

- The icon is used to reload the submatrix data.

- Codimg allows you to save submatrix structures. With the two icons , you can open saved searches or save the current ones. The structures are saved by default in the folder 'CODIMG DATA / SUBMATRIX' with the format .subm.

- The option 'Auto export to Excel' causes the current submatrix to be automatically exported to this format.

- There is also the possibility to save as an image or to export to Excel only once with the icon .

Groups in the matrix

By clicking on the icon , you can toggle the view to show or not show the groups.

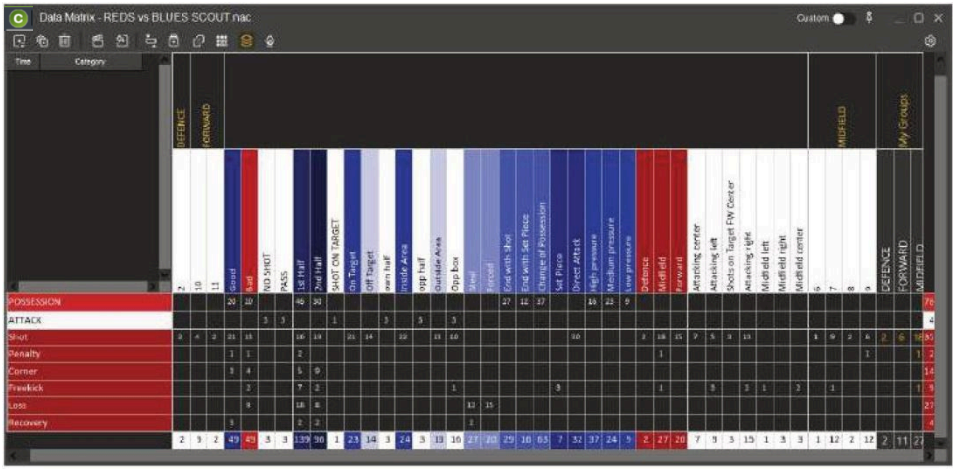


Figure189: Groups in the matrix

Matrix heat map

By clicking on the icon  the cells showing results become coloured to visually reflect the number of times they have been logged. The warmer the colour, the more times it has been tagged. The scale varies from blue (fewer times) to red (more times).

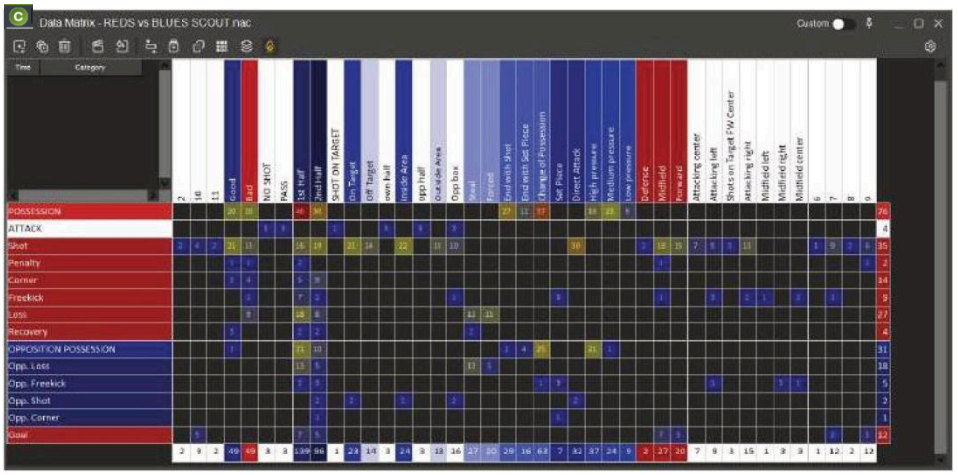


Figure 190: Heat map in the matrix

Matrix display options

The icon  can be used to configure some aspects of the display of both the selected records and the matrix itself. These are the available options:

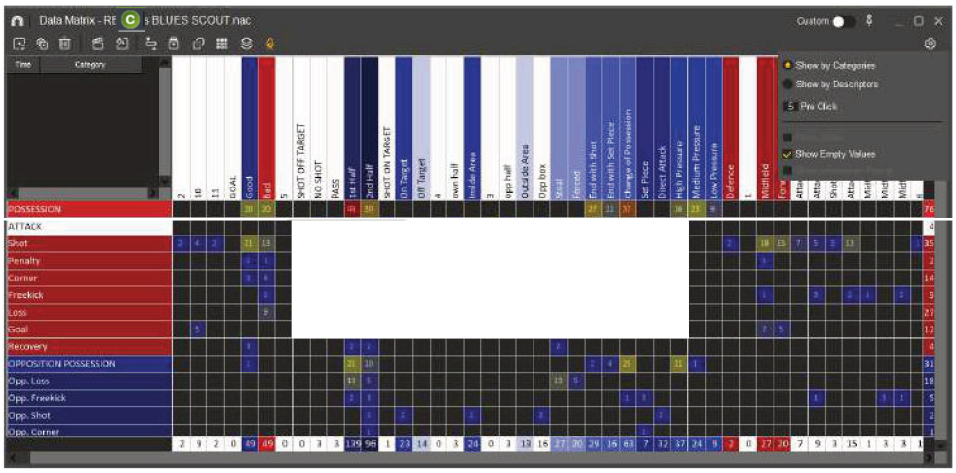


Figure191: Display options in matrix

- **Show by actions or descriptors.** This option allows you to vary the way in which the selected records are displayed in the top left corner. In the case of selecting 'Show by actions', only the name of the selected action is displayed. In the case of selecting 'Show by descriptors', the action + descriptor is displayed.
- **PRE time.** Decide how many seconds before the selected record is shown in the video player.
- **Show totals.** In the last column and in the last row, shows the sum of all actions and descriptors.
- **Show empty values.** Displays all combinations of actions and descriptors in the analysis, even if they have no records. This is important when exporting to Excel.
- **The information pops up when the cursor is hovered over it.** A floating window shows the information of the cell you hover the mouse over.

Options of the window

At the top right of the window, there are a number of icons.

Figure192: Options of the window

From left to right:

- **Create custom matrix.** We will discuss this variant of the matrix in the corresponding section of this chapter.
- **Fix window.** No other window overlaps the matrix.
- **Minimise.** Hides the matrix, although it is still open.
- **Full screen.** The matrix occupies the entire screen.
- **Close matrix.**

Secondary buttons within the matrix

In addition to all the options available in the different menus and icons of the data matrix, by right-clicking on a row (action), a column (descriptor) or a record, we can also execute certain tasks.

Right-click on a action

By right-clicking on any action in the matrix, you can:

- Delete from a group
- Add to a group
- Create a sub-matrix from that action
- Create a custom matrix

Right-click on a descriptor

By right-clicking on any descriptor in the matrix, you can:

- Delete descriptor
- Convert it to a action
- Rename it
- Delete from a group
- Add to group
- Set order of columns in the template
- Create a custom matrix

Right-click on the selected record

By right-clicking on a selected record, you can "Select all".

Multiple matrix

A multiple matrix is a matrix that displays results of several analyses in the same window. With several analyses open in the timeline, the following window will appear when opening the matrix.

On the left hand side, the user selects the databases he/she wants to work with. If he chooses only one, a simple data matrix will open, like the one we have seen in previous sections.

If more than one analysis is selected, a matrix will open showing the actions and descriptors of all the selected analyses. If there are overlapping actions and descriptors in several analyses, the number inside the cell will show the cumulative of the different analyses.

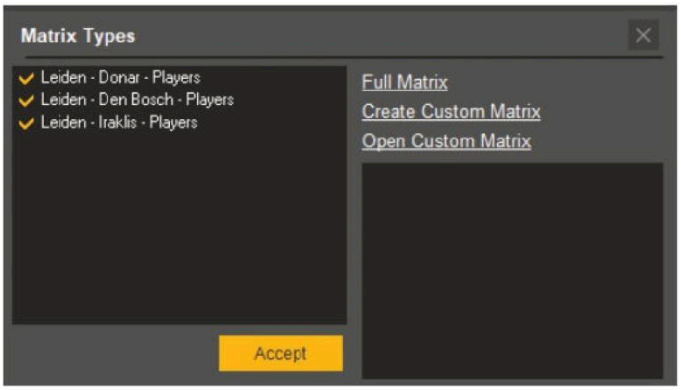
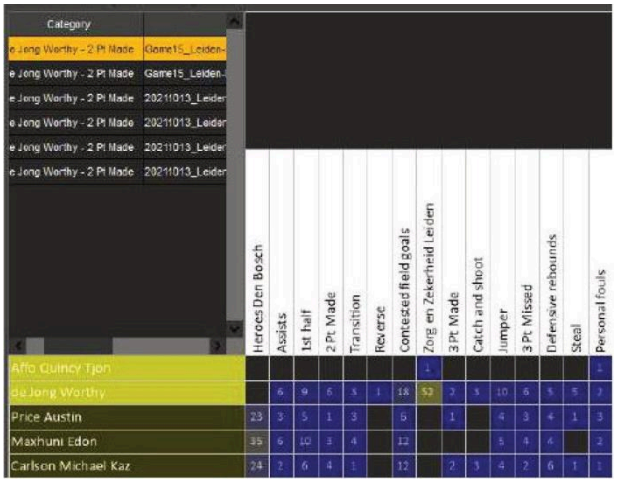


Figure193: multiple matrix

When clicking on a cell with accumulated, a second column will be displayed in the upper left corner showing the analysis to which it belongs, as shown in the attached image.



With multiple matrices, almost all tools in the top bar can be used, except 'Delete records' and 'Create new action with selected records'.

Custom matrix

A custom matrix is a data matrix that shows only the results that the user wants to display. That is, the user decides in advance which actions and descriptors will compose the display.

It can be opened in two different ways.

From the timeline

The first one, from the timeline. When opening the matrix, you must select the option "Open custom matrix" (or select it from the list below).

All custom matrices are stored by default in the CODIMG DATA / Custom Matrix folder with the extension .ncm.

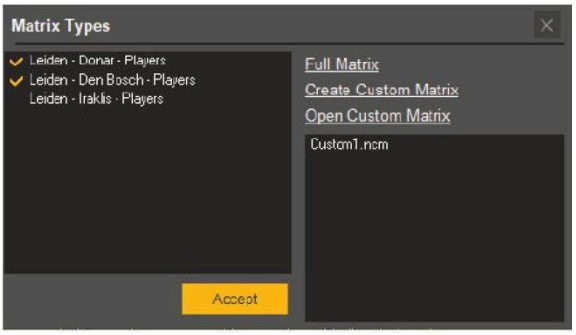


Figure195: Open custom matrix

In case you do not have a customised matrix or you want to create a new one, you must select the option 'Create customised matrix'. When you click on it, a window opens in which you have three columns (two, if you do not have groups) where you select the information you want to be displayed in the resulting matrix.

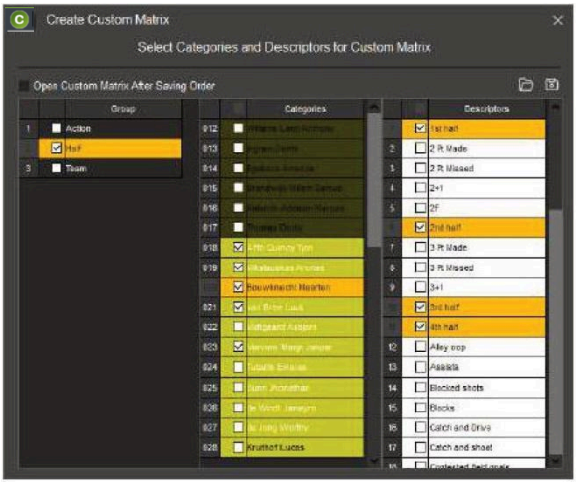


Figure196: Create custom matrix

By dragging the rows you can arrange the way the matrix is displayed. Finally, you can open a previously saved matrix or save this custom matrix structure.

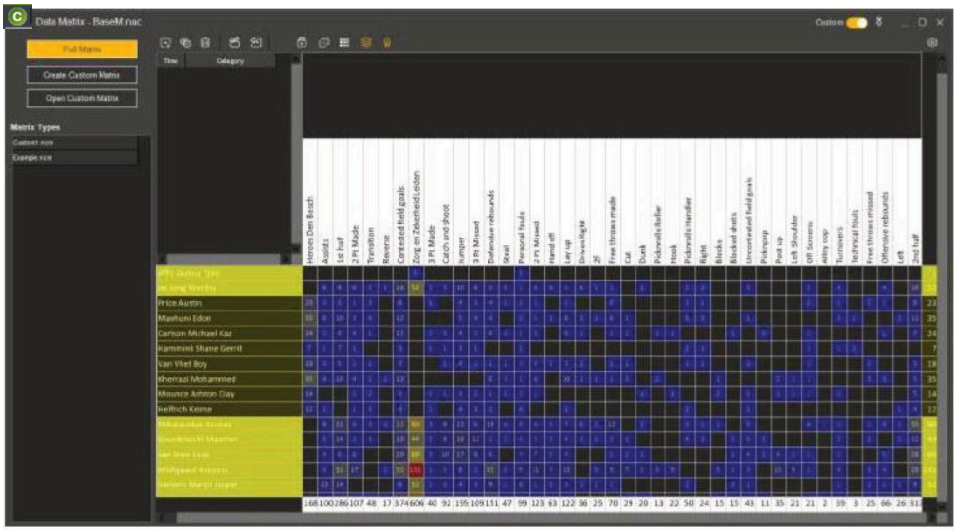
From the matrix

The second option to open the data matrix is from the matrix environment itself. You open a complete matrix and then select the 'Custom matrix' option in the slider.

On the left, a new window will appear to choose the options for this custom matrix. Although visually different from the previous heading, the options are the same.

In the two options at the top, you can choose to open a previously created custom matrix (or select it from the list below) or create a new one.

In the latter case, the same configuration window will open as in the previous section. To return to the matrix view, move the slider to the left again.



Fimouth 197: Custom matrix

Matrixes in other environments

As mentioned earlier in this chapter, the data matrix is a key tool in understanding Codimg. In many cases, in fact, it is a transversal element of the whole programme, so we can see how other tools can take advantage of its usefulness.

In Codimg you can create matrices in two other environments:

Matrix in a feedback session

As the name suggests, you can create a matrix with information exclusively from a feedback session. The process is quite simple. In the feedback session, simply click on the matrix icon and it will show you the relevant results.

We will talk more about this functionality in the feedback session chapter.

Insert a matrix into a dashboard

In Codimg, you can add a data matrix to a dashboard. To do so, when designing the dashboard, click on the secondary mouse button and, in the pop-up menu, select "New item / Data matrix".

The data matrix will be embedded in the dashboard. You will be able to resize it to fit the size of the window.

We will talk more about this functionality in the dashboard chapter.

8. Dashboards

What is a dashboard? It's a tool that allows you to convert your clicks into visual statistics, represented on a dashboard using labels and graphs.

Furthermore, one of the great advantages that this tool provides over other data visualization tools is that by clicking on the elements that make up the panel you can play the videos associated with the clips.

The dashboard is associated with one or more analyses and can be opened during or after clipping, providing you with information while being fed with data from observations.

Open the dashboards environment

You can open the dashboards tool from different places within the program. Let's look at what they are and the specifics of each one, as not all are the same:

- **From template creation.** You can access this tool in the template creation environment. In fact, when you click on the corresponding icon, the program will ask you to create a template.*dashboard* new one or open an existing one. You can find more information in the chapter on creating templates.

- **From the library section.** To do this, you must select an analysis from the list and then the icon will be enabled to open the environment.*dashboards*You can find more information in the chapter on **“library”**.

- **From the observation environment.** While collecting data in the play-by-play window, you can access the corresponding icon in the top toolbar. You can find more information in the chapter on observation and clipping.

- **From the Timeline.** You can access the environment of *dashboards* via the corresponding icon in the Timeline toolbar. You can find more information in the chapter on this environment.

- **From the feedback session.** In this case, it is slightly different from the rest, since it opens a *dashboard* only with the clips in the list or lists currently open in the feedback session. You can find more information in the chapter on feedback sessions.

Dashboard: main screen

When accessing the environment of *dashboards*, we find a main screen, headed by some icons in the top bar and divided into two sections.

On this screen, you can create new panels and open previously saved ones. Let's explore the options available on this home screen of the tool.

In the top menu we find two icons: the icon allows you to create new panels from scratch, while the icon allows you to open a *dashboard* already created previously.

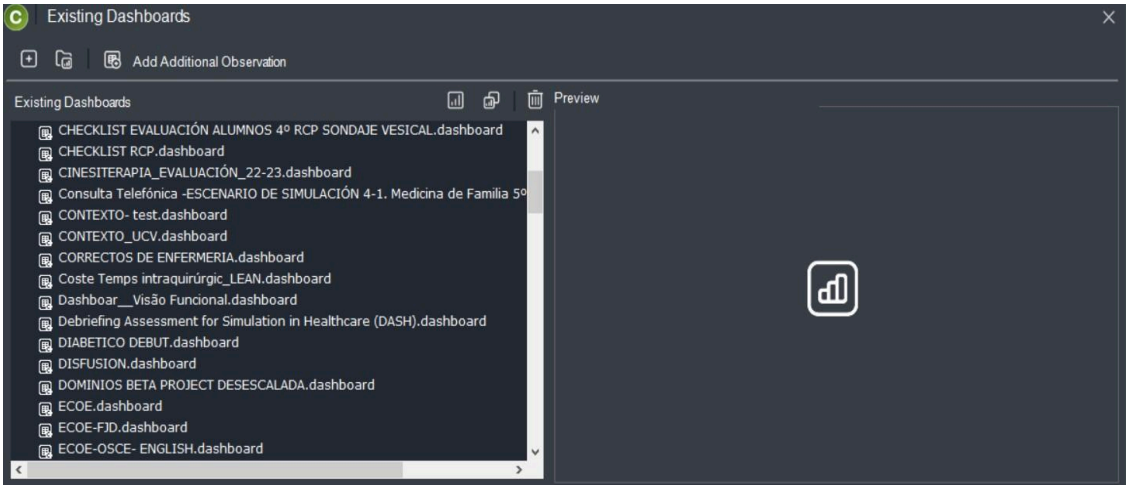


Figure198: Open a dashboard

In the two lower windows we find, on the one hand, the folder structure of the folder **CODIMG DATA** / **Dashboard** (You can change the default folder to host the panels as explained in another chapter of this manual).

In the structure window, there are three icons that allow you to perform certain actions with the *dashboard* selected (if none are selected, this action cannot be performed). From left to right:

Figure199: Action icons■

Open selected dashboard.

- Make a copy of the selected dashboard.
- Delete the selected dashboard.

In the window on the left you can see a preview of the *dashboard* selected in the right window with random values.

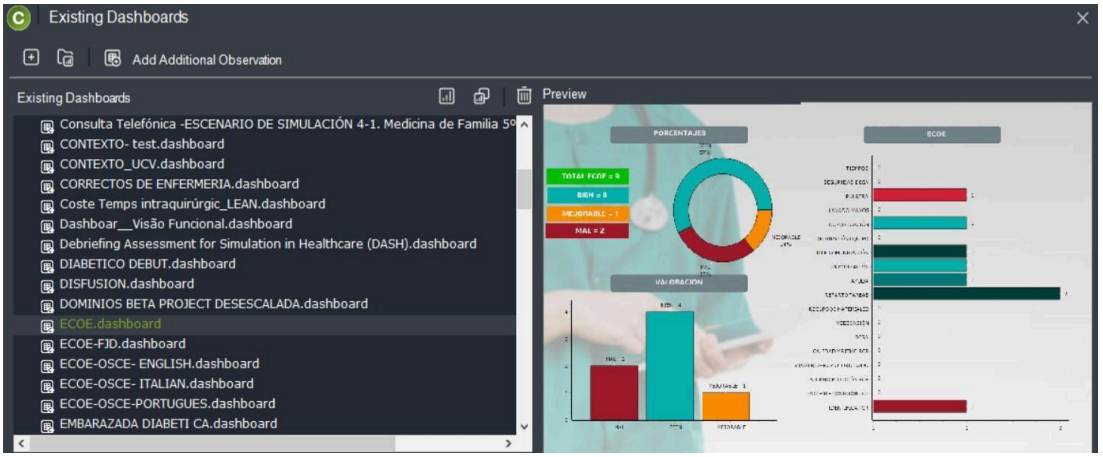


Figure 200: Dashboard preview window

Create a new *dashboard*

If this is the first time you access this environment, the first step will be to create a new

dashboard.
The first step is to assign a name and location to your new dashboard.

> **Note:** Some of the dashboard tools can be opened from different places. Because of this, it is possible that there is some degree of repetition in this chapter.

The menu for creating your new dashboard will then open. You have quick access to it when creating your first element (see attached image).

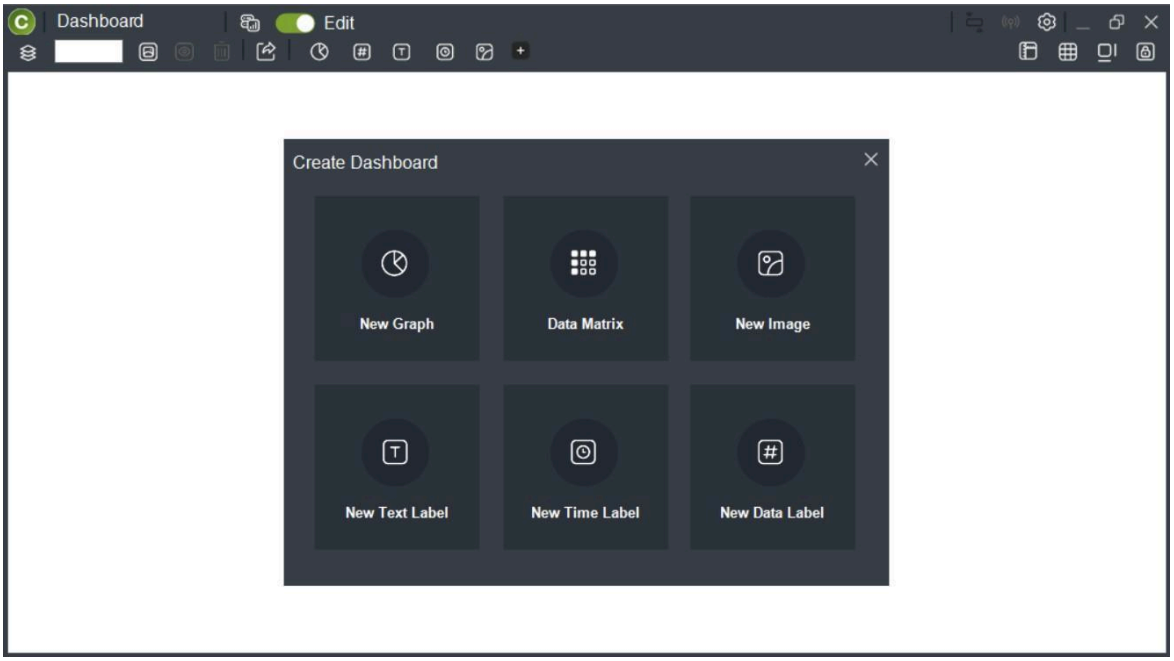


Figure 201: Creating a dashboard We

distinguish several tool areas within this screen:

Dashboard data and edit button

Next to the Codimg logo and the name of the environment (we find two tools:

- **Dashboard data.** Hovering over the icon we can see the name and the analysis that feeds the panel.
  By clicking on the icon, a window opens where we can add more panels and analyses to the canvas. This tool works similarly to the timeline when adding new videos and analyses.

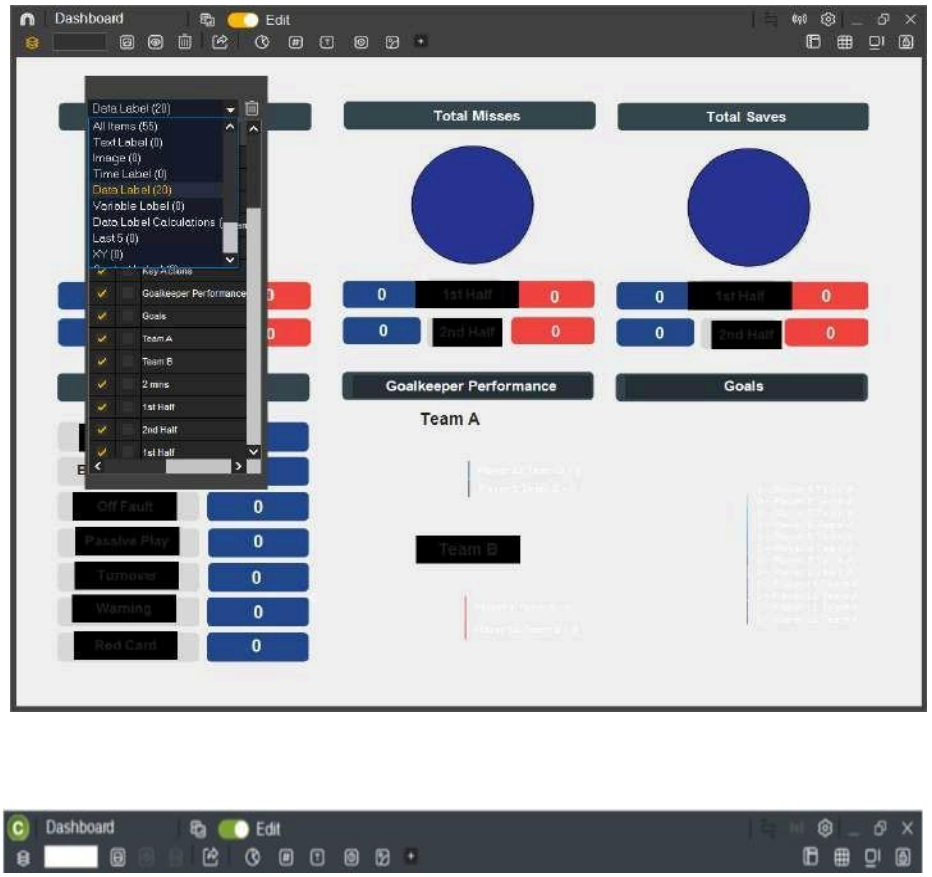
- **Edit dashboard.** This slider button Edit must be enabled to be able to edit any element of the *dashboard.* If it is not active, it will be impossible to edit it.

Editing the canvas and adding elements to the panel

Below the previous menu, we find different tools to configure both the canvas and the elements within it. To see this bar, the button must be activated.**"Edit"**.

Figure 202: Tools for configuring the canvas

Note: When you create labels and graphs, each one should be given a distinct name in order to identify them correctly.



Background of the canvas. The following four icons allow you to work with the panel background:

- Change the background color
- Add a background image
- Show/Hide Background
- Remove background
-

- **Export panel as image.** The following icon allows you to export a screenshot of the dashboard in .jpg format.

- **Add items to the panel.** The last six icons in this bar are shortcuts to add different elements to the canvas:
  - Add chart

- Add data label
- Add text label
- Add time stamp
- Add image
- Add other elements: time search tag, last 5 actions, graphic descriptor, variable tag, data array or context tag.

Start broadcasting the panel

In the upper right corner, we find two more lines of tools. The first icon It's used to start streaming the live dashboard to other devices. We'll explain more about this option in the Live Analysis chapter.

Options

To the right of the live icon, we find the icon of Options.

In this menu, in list form, we can perform many of the tasks we've seen previously, along with new ones.

Note: This window is key for editing dashboards. You can also access these options by right clicking on any part of the dashboard.

What actions can you perform from the Options menu?

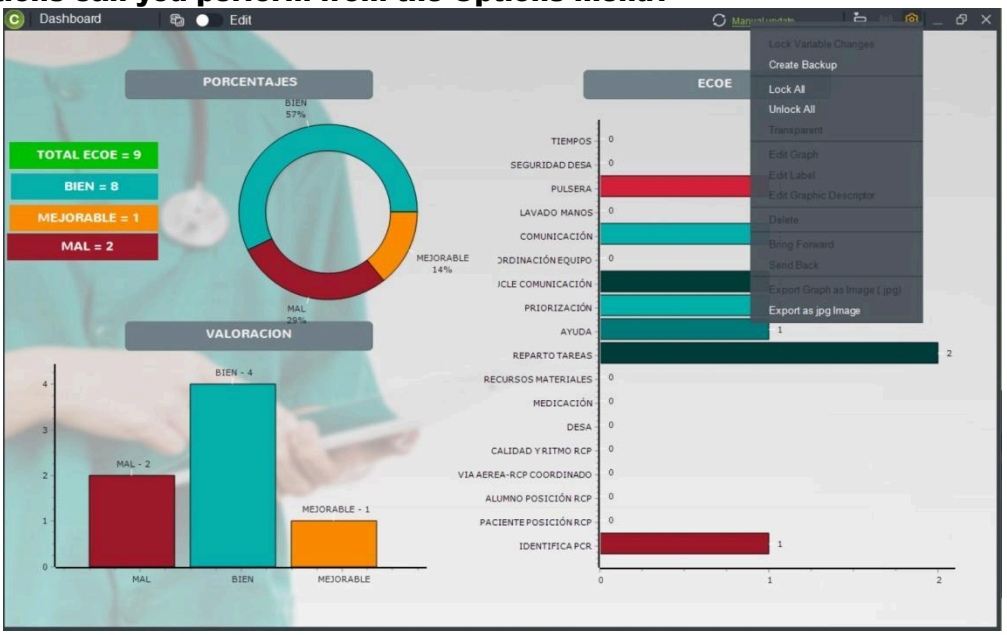


Figure 204: Options menu

- **New item**. Add a new item to the dashboard: a chart, data label, text label, time label, image, time search label, last 5 actions, variable label, or data matrix.
- **Context tag.** If you've entered context data into your analysis during the observation phase, you can add it using this option. All available fields will be listed, even if they are blank.
- **Block variable change.** This option is only available when selecting variable labels. We'll discuss them in the next section of this chapter.

- **Create backup.** To preserve the changes made to the dashboard up to that point.
- **Start/stop panel broadcast.** To perform the same action described in the previous section, use the following option to stop the broadcast.
- **Lock/Unlock all.** Prevents the elements already integrated into the panel from being modified.
- **Transparent.** Removes the background from a label or graphic.
- **Edit chart/label/chart descriptor.** To modify these elements in the panel, these options will only be active if you select the element with the right mouse button (not from the top bar).
- **Copy** / **Paste** / **Delete.**
- **Bring forward and send back.** To display an element above another (if it has been hidden), you must play with the panel layers and these two order options.
- **Export chart as image.** Save the current graphic as a .jpg file. These options will only be active if you select the item with the right mouse button (not from the top bar).
- **Export as .jpg image.** Screenshot of the panel saved as an image file.

Window

The last three icons  from the top bar allow you to perform common actions that involve the entire window that hosts the*dashboard:*

- Minimize
- Full screen
- Close

In the bottom bar, we find four other icons  which also make our work easier when working with windows. From left to right:

- **Show rules and guides.** Two elements that allow you to precisely position elements in the window.
- **Show grid.** A virtual grid is created, composed of vertical and horizontal lines (whose width you can define) to adjust the elements of the panel.
- **Scroll bars.** Show and hide the toolbars*scroll* vertical y horizontal.
- **Lock size.** You will not be able to modify the current size of the window.

Canvas

The canvas is the main part of this window and is the space where all the elements that will be part of the are created.*dashboard.*

The first time you open a new panel, a quick access floating window will appear where you can select from several elements to start editing (see attached image).

This window will only appear the first time you create a new panel from scratch, even if you don't create any items and close the window.

Likewise, to work with a canvas, you can right-click on an element or empty space. The Options menu mentioned in the previous section will appear.

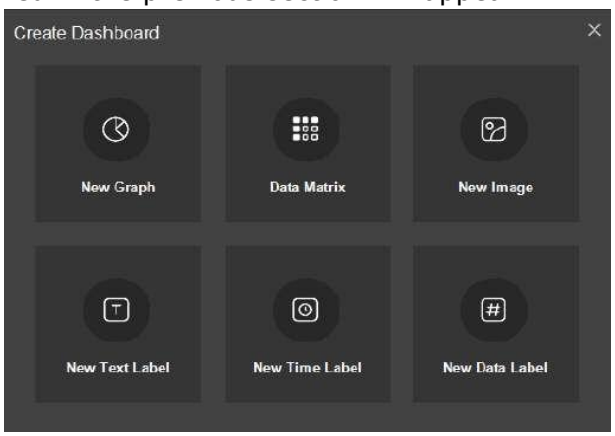


Figure 205: Adding elements to a dashboard

Creating elements in a dashboard

Throughout this section, we will discover the different types of elements that can be created within a*dashboard*Each of them has its own particularities, as we will observe in the following sections.

Graph

Charts are visual refeedback sessions of your data. There are different types of charts: horizontal and vertical bars, pies and half-pies, doughnuts, and lines.

Not all charts are created equal. Some have chart-specific options that allow you to visually display your clicks.

The attached image shows the chart creation window whenever you create a chart from scratch. Below, we explain, step by step, how to create one.

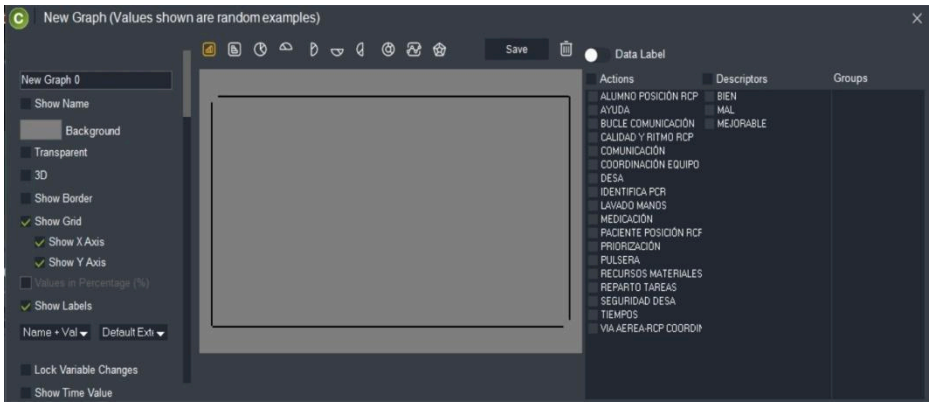


Figure 206: Create a chart

Step 1. Select the data

The first step is to select the data that will feed the chart. On the right, there are three columns: Actions, Descriptors, and Groups.

Choose which data to display in the chart in these columns. Depending on the chart type, you can select different combinations:

- One or more Actions (bars, pies and lines)
- An Action with one or more descriptors (bars and pies)

One or more descriptors (bars, pies, and lines)

- Multiple Actions with multiple descriptors (bars)

Groups allow you to select multiple Actions or descriptors at once, so that when you select or deselect them, they are marked or unmarked from the selection.

Step 2. Select the chart type

Now it's time to select the type of graph that will represent this data.

It's important that the chart type you select allows the selected data to be displayed. Otherwise, selecting it will automatically deselect the data.

Once you have selected the data and graph type, a preview of the potential result of your creation will be displayed in the central window (shown with random data and in bold).

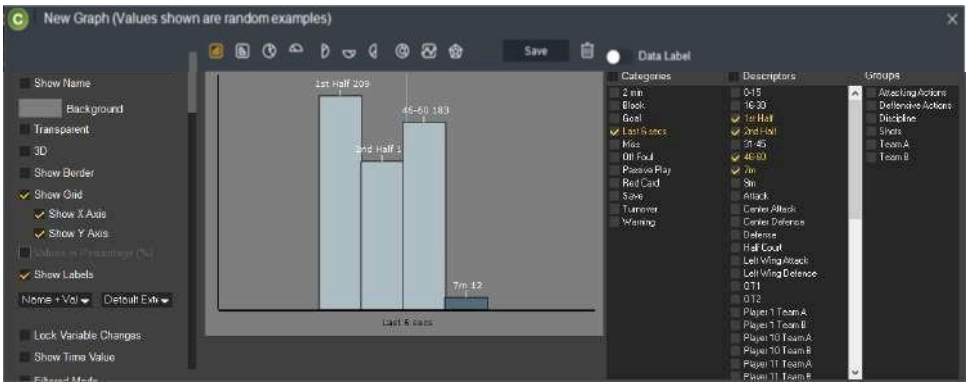


Figure 207: Selecting the chart type

Codimg assigns colors by default for each of the data reflected in the graph.

If you want to change it, double-click on any element of the chart and select the new color from the color palette.

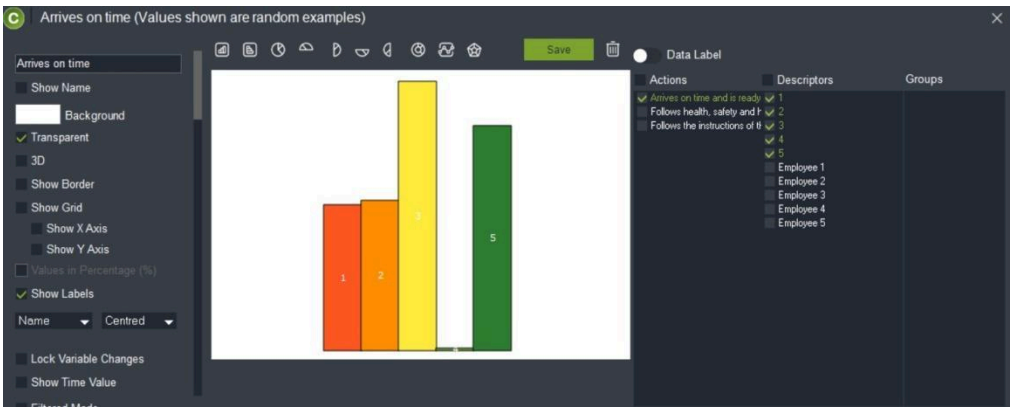


Figure 208: Double-click on the graphic element to change the color

Step 3. Edit chart properties

It's time to finish your chart. To do so, go to the right column of the window, where you'll find various options (not all are available for all chart types).

Although not essential, this may be a good time to give it an identifying name. It's a great way to identify it later in your inventory.

What options does this column offer?

- **Visible name.** In case you want the chart title to be displayed in the panel.
- **Background color.** If you want to change the default gray color displayed when creating a chart, select the new color from the color palette. You can also make the background disappear, regardless of its color, using the checkbox.**"Transparent"**.
- **Chart color** You can assign a single solid color to the entire chart or apply two random colors, one for each section.
- **3D.** Gives a three-dimensional effect to all graphics. Pies and rings simulate a change in perspective with this effect.
- **Show border.** Displays a black box around the chart space.
- **Show X and Y axes.** For bar and line charts. Displays the chart's vertical and horizontal references.
- **Values in percentage (%).** For pie charts. Displays the result as a percentage, not an absolute value.
- **Show labels.** There are two types of labels: value (the number representing the graph) and name (action, descriptor, or combination). With this option enabled, these labels are displayed. With the checkbox disabled, no labels are displayed.
  In the two drop-down boxes below **“Show labels”** You must choose which label(s) are displayed, their order, and their position within the graph (the preview shows you how they will look in the final output). In the case of rings and lines, you cannot choose their position.
- **Block variable change.** If the panel contains a variable label, this label will remain unchanged even if a change occurs.
- **Values by time.** It does not show absolute data, but rather the sum of all clips. Not available in line graphs.
- **Filtered mode.** For bar charts, instead of displaying each descriptor separately in separate bars, display a single result that meets each of the selected descriptors.
- **Group bars.** For bar charts, the results for each descriptor are displayed stacked on top of each other in a single bar.
- **Relative value to a group.** For pie charts, this shows the specific result of an action or descriptor compared to the rest of the group members. This data can be displayed in either absolute or percentage terms.

Once you have defined all the options for your chart, you must click on the button **"Apply "**If you're in Edit mode, the chart will display random data. To accurately reflect the data currently in use, you must close Edit mode.

If there is no data that meets these conditions, the chart will be displayed empty (in the case of bars and lines) and full (in the case of pies and half pies).

Without leaving chart creation mode, you can delete the current chart by clicking the trash can icon.

Step 4. Edit a created chart

Once you've created a graphic, you can edit it at any time. You can also change its location and size within the canvas easily and intuitively.

To edit any element of a chart, you must always be in Edit mode. Now, you can edit it in

two ways:

- Select the graph with the mouse and click on the icon (in the upper right corner of the chart) to open the editing window.
- Right click and choose the option **“Edit chart”**.

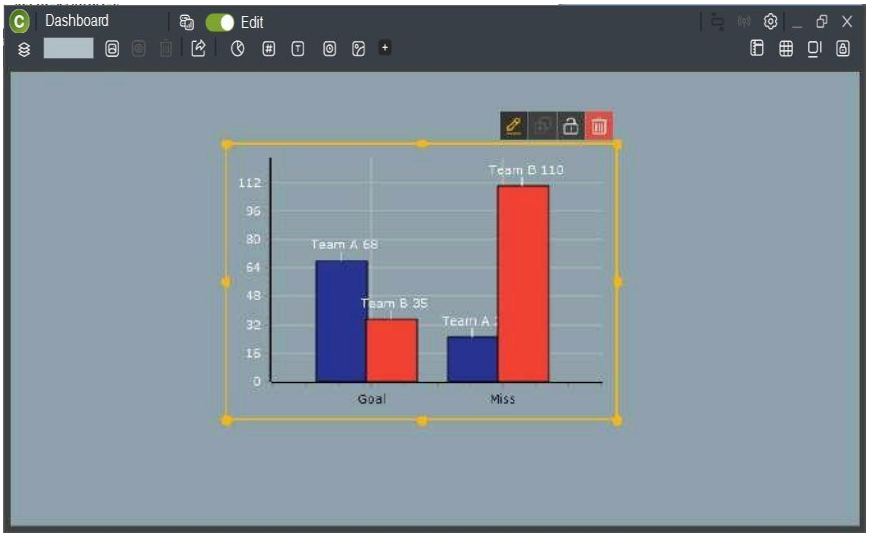


Figure 209: Editing a created chart

Likewise, to move a graphic, also with Edit mode active, you can select it and drag it to the desired position. You can modify the graphic's dimensions by dragging any of the nodes around the image to the desired size.

You can also duplicate a chart with either the icon as with the key combination Ctrl+C (copy) and Ctrl+V (paste).

Finally, you can lock a dashboard so that it cannot be edited or moved around with the icon and delete it with the icon .

Data labels

Along with charts, data labels are one of the most common elements you can find in data dashboards. Their purpose is to show the number of clicks you made during your analysis on the data you select.

If you double-click on the dashboard background (the canvas), a data label is created by default.

The attached image shows the data label creation window. Below, we explain step by step how to create one.

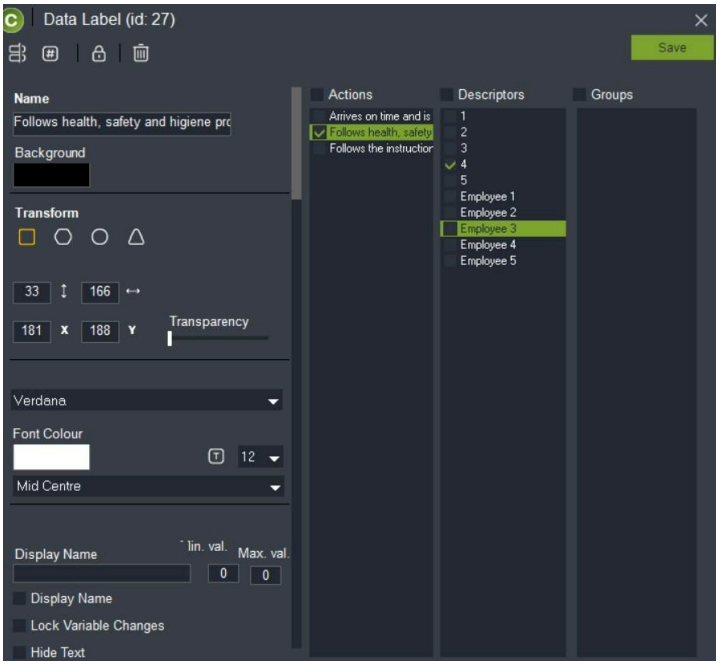


Figure 210: Creating a data label

Step 1. Select the data

Once again, the first step is to select the data the label will reflect. As with the graphs, the data is distributed across two columns, Actions and Descriptors, and a third column showing the groups.

In the case of labels, you can modify the first column with the icon in the top bar of the window which, instead of showing you the Actions, will list the rows clipped in your timeline.

Note: If you want to create a label for every line of the timeline, you can select the Auto Create All option at the top of the column.

What are the possible combinations for the labels and what are their results?You can select:

- **An Action or a descriptor.** It will show the number of times that Action or that descriptor has been clicked, independently.
- **An Action and a descriptor.** It will show the number of clips for that Action with that descriptor.
- **Various Actions.** It will show the sum of all the clips added together from all those Actions.
- **One Action with multiple descriptors.** It will show the number of clips for that Action in which all the selected descriptors appear.
- **Two or more descriptors.** It will show all Actions that contain all the selected descriptors.
- **Several Actions and a descriptor.** It will show the summary of the clips of all the Actions in which that descriptor appears.
- **Multiple Actions and multiple descriptors.** It will show the summary of the clips of all the Actions in which all the selected descriptors appear.

In the image we show below, you can see all the possible combinations of the previous examples, we will take advantage of this sports model, being **“Goal”** and **“Miss”** the Actions and **“1st Half”**, **“Team A”**, **“Player 2”** and **"OT1"** the descriptors.

Figure 211: Tags with multiple Actions and descriptors

In addition to Actions and Descriptors, the column displaying groups allows you to select multiple Actions or Descriptors at once, so that when you select and/or deselect them, they are also added to or removed from the previous selection.

Step 2. Apply calculations (if applicable)

Labels can be subjected to common mathematical operations (add, subtract, multiply, or divide) to generate values different from those provided by the data.

Labels can be created with two types of operands: with a fixed numeric value (i.e., an exact number) or from another label (the value varies depending on the number of clicks made).

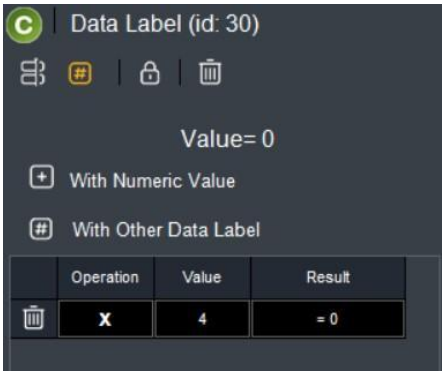


Figure 212: Labels with calculations

To apply calculations to a label, select the icon in the top bar of the window The following window will then open.

As we have said, there are two types of calculations.

The first of them is **with exact numerical value** That is, you can ask the program to add, subtract, multiply, or divide by an exact number you select and display the result of that operation on the label.

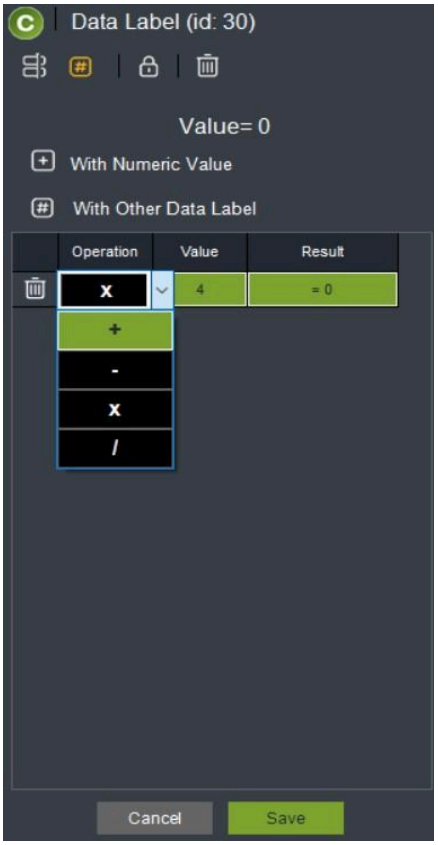


Figure 213: Label with exact numerical value

The second option is to apply the option **“With another data label”** where, instead of an exact value, the result of another selected tag is used.

Figure 214: Label with another data label

Once the label is selected, the selected operation will be shown in the calculation list and, instead of a number, the data ID will be shown (in the attached images, ID: 12 corresponds to **“Shots 1st Half”**).

Every time the data **“Shot”** change, the mathematical operation will change and therefore the result.

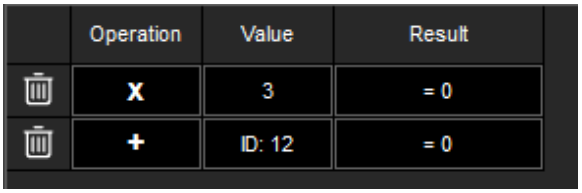


Figure 215: Change in data, change in results

Step 3. Edit label properties

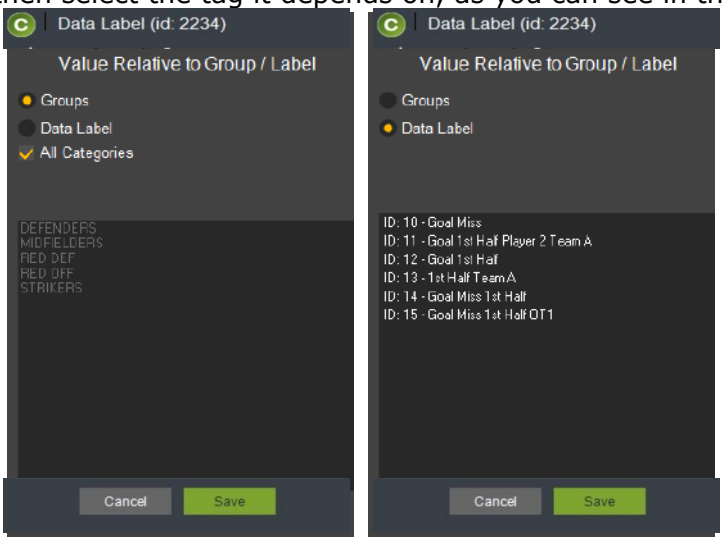
The recommended first step is to assign a name to the tag you're creating. Otherwise, the default name will contain the name of the Action and the selected descriptor(s).

What options does this column offer?

- **Background color.** If you want to change the default black color displayed when creating a chart, select the new color from the color palette.
- **Label shape.** You can change the default rectangle to a hexagon, ellipse, or triangle.
- **Size and position.** Four boxes allow you to modify both the size of the label and its exact position within the panel.
- **Transparency.** A slider button allows you to adjust the percentage of transparency of the label background relative to the background.
- **Text format.** Edit the font type, its color, and its position relative to the box containing the label. In the icon You can find more fonts and 'extra' formatting for the text.
- **Display name.** It works like the display name for the buttons in the template. The actual name is one, but the one displayed is this one.
- **Max.** This is the maximum number the label can reach. You can still click it, but the label will only display this maximum.
- **Block variable change.** If the panel contains a variable label, this label will remain unchanged even if a change occurs.
- **Hide text.** Only the tag value is displayed.
- **Values by time.** Displays the time of all clips in total instead of the numeric value.
- **Value relative to a group/label.** A label can display a value based on another value (a group, all groups, or another label) and not based on the entire analysis.

A group-related label will display the selected data based on the total of the selected groups: all or a specific one.

Also, a label can display a value based on the total of another label. Select the option **"Data label"** and then select the tag it depends on, as you can see in the image below.



(a) Value relative to a group (b) Value relative to another label

Figure 216: Labels with relative value

The result will be something similar to the image shown in the attached image. **“Shots 1st Half”** shows how many shots (13) were during the first half (4): in percentage it is 30.77% and in **“absolute values”** (see next point), a total of 4/13.

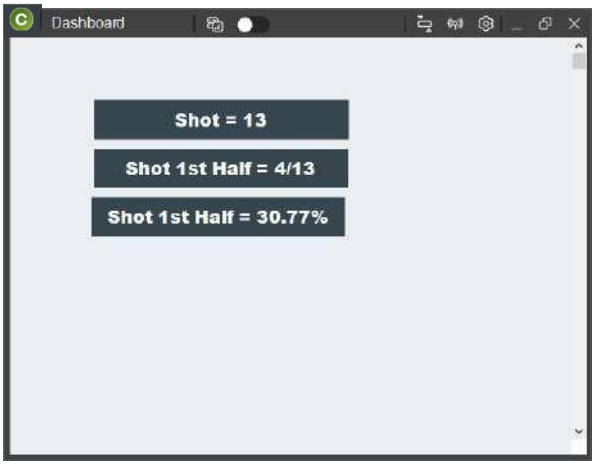
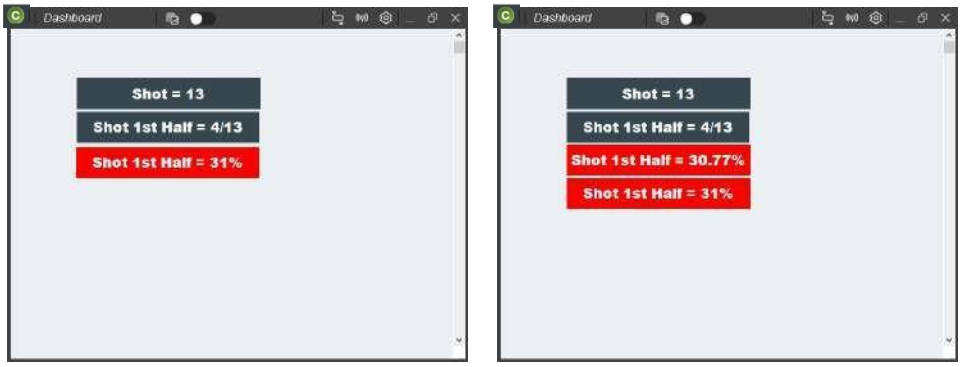


Figure 217: Labels with relative values

- **Absolute value.** If enabled, it displays the value of relative labels and calculations in absolute numbers, not percentages. The image below shows how it displays an absolute value (4/13), and below, how the same label appears with a percentage.

- **It acts as a sum.** Adds the Actions with their descriptors and displays the result.

- **Show decimals.** For calculations between buttons, selecting this option will display the corresponding decimal places. In the image below, we see one label displayed with decimal places (30.77%) and another without decimal places (31%), rounded.



(a) Label with absolute value (b) Label with decimals

Figure 218: Labels with absolute value and decimals

- **Alerts** An alert is a visual notification when the label reaches a certain value. You can configure up to three different alerts and assign each one a custom color. If you check the box **"Change background color"**, when that value is reached, the background will flash with the color assigned to the alert.

In addition to all the above options, you can lock and delete a label in the top menu of the window with the icons .

Step 4. Edit an already created label

Once you've created a label, you can edit it at any time. You can also change its location and size within the canvas easily and intuitively.

To perform these actions, you must always be in Edit mode. There are two ways to edit a chart:

- Select the graph with the mouse and click on the icon (above the label) to open the editing window.
- Right click and choose the option **"Edit label"**

Text and time labels

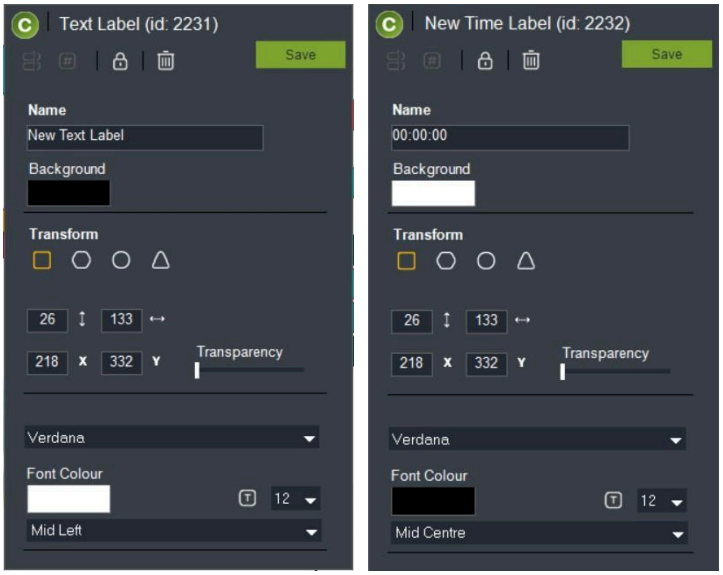
Text and time labels are two elements that can enrich a dashboard by providing contextual information.

- Text labels allow you to create independent text sequences (not associated with any chart or data label). That is, they display text.

  First, you must assign a name, which will be the text that will be displayed on the resulting label. In this case, it's not only recommended but mandatory, as this is its purpose. Next, you'll select the label's format: fonts, colors, fonts, position, and text placement.

- Time stamps display a timer, expressed in minutes and seconds (00:00), indicating the current time of the video being played in the analysis. Their configuration is exactly the same as text stamps, except for the name, which cannot be edited.

These two types of labels are edited in the same way as data labels (see previous point).



(a) Text label (b) Time label

Figure 219: Text and time labels

In addition to all the above options, you can lock and delete a label in the top menu of the window with the icons  .

Images

Another basic element that can be incorporated into a dashboard is images. These are another graphic element that can provide context. This image is different from the background image, as it can be scaled and placed anywhere on the canvas.

It can be added using the various methods explained at the beginning of this section. Once added, its size can be edited by selecting the number of pixels in the boxes below the image.

In the case of having **variable labels** (we will talk about them later in this chapter), you can link an image to one of them: just select the corresponding Action or descriptor in the columns on the right.

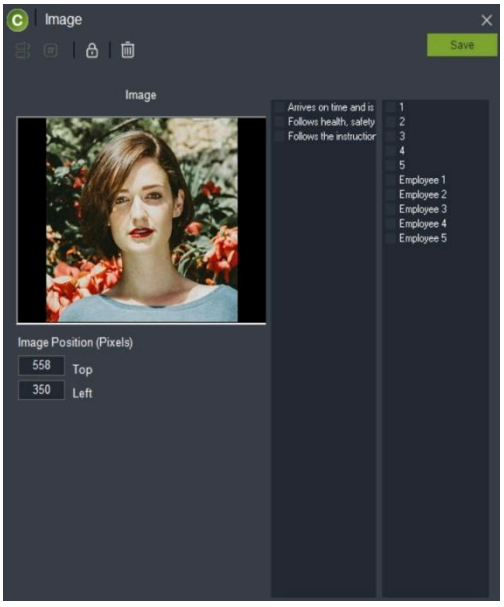


Figure 220: Label with image

Images in Codimg can be in .jpg or .png format, the result of which can be seen in the attached image. When uploading an image in .png format, the background will remain transparent.

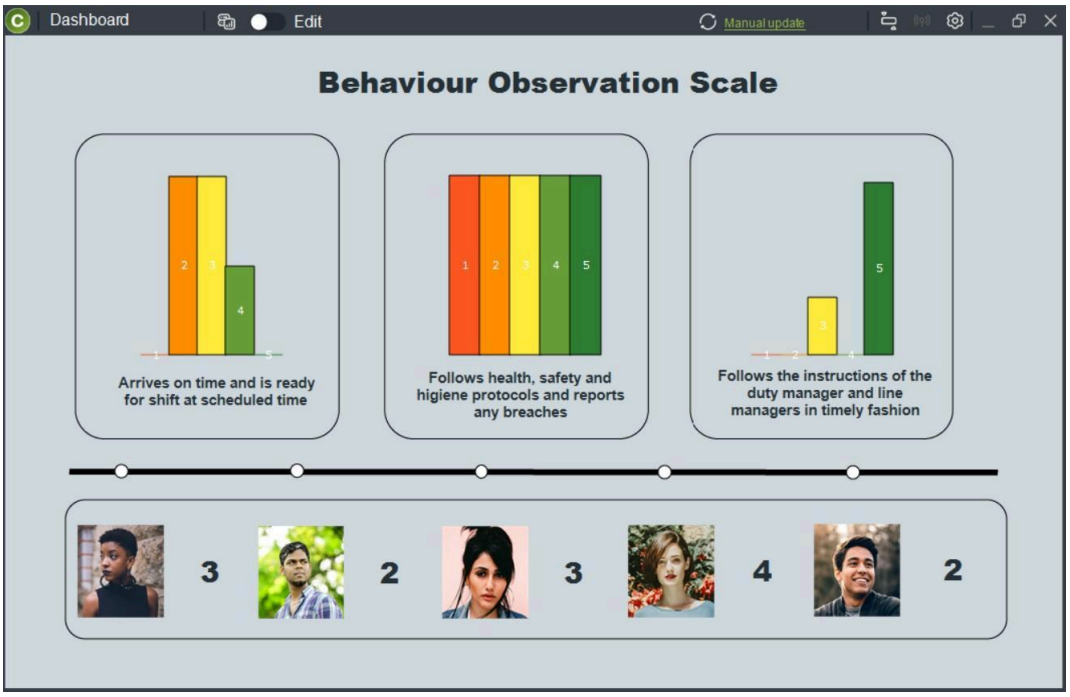


Figure 221: People tags in .png format

As with other dashboard elements, images can also be locked and deleted using icons. from the top menu of the window.

Time search tag

In the previous sections, we've explored all the basic elements you can create in a dashboard (labels, charts, and images), which you can access from the dashboard's main toolbar.

In addition to the above icons, there is one last icon through which you can access a series of 'extra' elements that we will discuss in the following sections.

The first of them is the **“timeline time finder”**. It's a tag that allows you to display the results of searches saved with this tool on your dashboard. If you'd like to learn more about it, we recommend reading the section on **“Timeline search”** in the chapter on the Timeline.

This label isn't very different from the text and data labels. The big difference is the data it's fed with. At the bottom, you'll need to select the **“search by time in the timeline”** that you want to display on the label (files with the .descal extension).

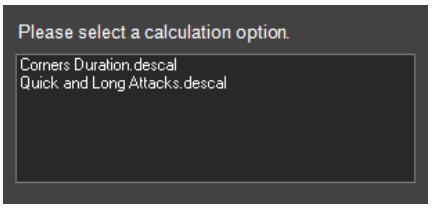


Figure 222: Time search tags

As you can see, the label only displays one value. If you have more than one criterion in a search, only the first one will be displayed.

To finish with this type of elements, as with other dashboard elements, this label can also be locked and removed with the icons from the top menu of the window.

Data matrix

One of the elements you can include in your dashboard is a matrix. In this manual, we have a chapter dedicated to this tool if you'd like to learn what it is and how it works.

You can add a (custom) matrix to a dashboard. Clicking on any of the matrix cells will display the corresponding actions.

Once the matrix editing window is open, the first step is to select the data that will be included in the matrix.

In the box on the left, you can see the custom matrices you have saved in your program and choose one, although you can also create one from scratch using the columns on the right.

You can also edit the matrix background color and text color.

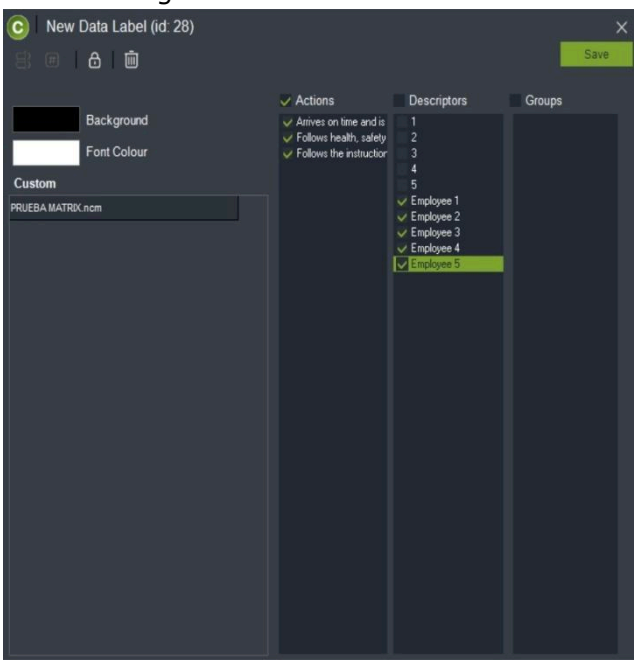


Figure 223: Add data matrix to the dashboard

Once you've defined all the parameters, just save and the matrix will be inserted into the dashboard. You can edit its size and position just like you can with the rest of the elements.

Data matrices are typically large elements, so they likely won't fit entirely on your dashboard. In this case, two side and horizontal scroll bars are displayed to navigate through the entire matrix, as you can see in the attached image.

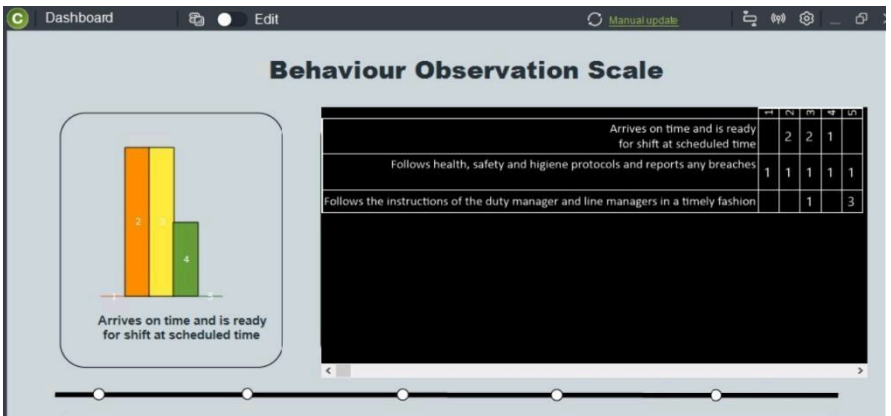


Figure 224: Data matrix on the dashboard

8.5. Open a created dashboard

Throughout the previous section, we have seen all the elements that can be created in a dashboard in mode **“editing”** Once finished, this mode closes and the dashboard will reflect the changes made.

It's important to understand that a dashboard isn't a fixed entity, and can be modified and updated as many times as necessary, adding, modifying, and removing elements as you wish.

You can also resize and resize it to take advantage of more space, even using the side scroll bars, which allow you to have more space than the screen.

Once you close Edit mode, the menu in the top bar of the dashboard will change. One of the two rows of icons—the editing row—will disappear, and new icons will appear at the top.

Figure 225: Update the dashboard

There are two ways to update a dashboard (i.e., display newly clipped data):

- **Manual.** The user can 'force' the data to be updated by clicking the button in the top bar.
- **Automatic.** The dashboard refreshes regularly at customizable time intervals. You must select the number of seconds every to refresh from the menu.

9. feedback sessions

This tool allows you to create summaries of your analyses and organize them into lists. With these lists, you can create a Feedback feedback session to share or show to colleagues from your computer, or create a standalone video with them.

Before looking at each of the feedback session options, it is important to explain **how to organize a feedback session.**

We distinguish several levels:

> **The feedback session.** It's what gives the environment its name. It's the structure that encompasses everything. In other words, it's the largest storage unit. Example: a feedback session of a match, a soccer player, an entire season...
>
> **The lists.** This is the second highest-ranking unit. A Feedback feedback session is divided into lists, which are like its chapters or headings. A Feedback feedback session must have at least one list, but you can create as many as you like. For example: for a simulation, we create a list for best practices and another for things to review; for a course, each of the simulations...
>
> **The clips.** Lists are made up of clips. A clip is a video fragment, of a specific length, that typically reflects an important aspect of our analysis that we want to share. You can add as many clips as you like to each list.
>
> **Other elements** In addition to the three previous elements, which are essential for understanding feedback session, other accessory elements can be found to perfect the feedback session: covers, images, slides, or transitions.

We'll discuss all of these levels and how they interact with each other to enable you to deliver effective feedback session Analysis throughout this article.

Open feedback session

Now that we know the elements that make up a feedback session, it is time to start working with them: you can **Create a Feedback feedback session from Scratch** the **Open an existing feedback session** that has been shared with us.

Create new feedback session

To open a feedback session, you must click on the icon in the Timeline toolbar. Then, select the option "**New feedback session**". Choose a name for the feedback session to be

generated and click on **"Accept"**.

Note: All new feedback sessions are saved by default in the **Pres** folder in **Documents / CODIMG DATA**. For more info on how to configure default folders, go to the corresponding chapter.

A window like the one below will open, where you can add as many lists as you need.

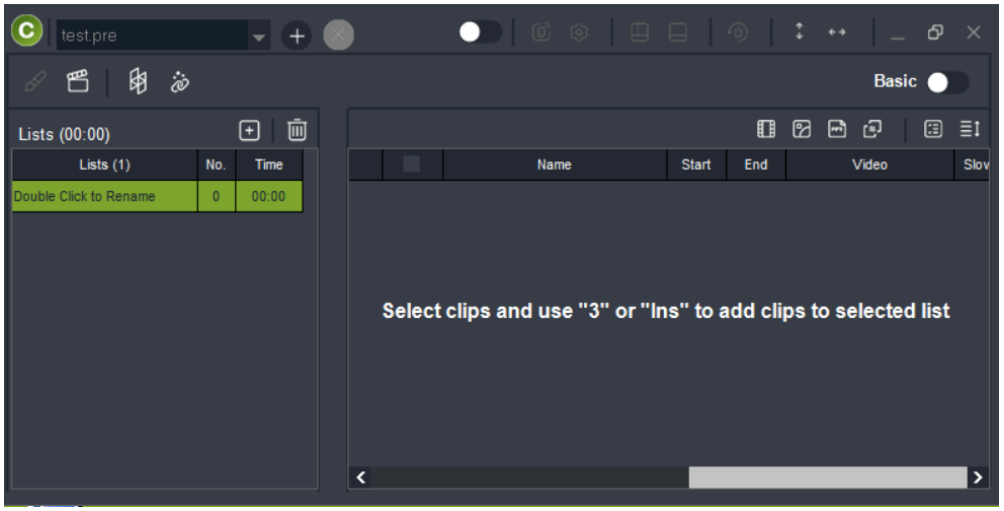


Figure 226: Create new feedback session

Throughout this chapter, we'll show you all the options available to configure your feedback session.

Load auto-lists

If the analysis contains clips created with template buttons that have the autolist property (see the chapter on template creation to learn more about this feature), Codimg will then offer you the option of incorporating them into your new feedback session, as shown in the attached images.

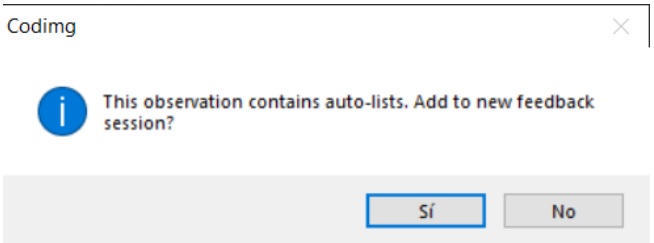


Figure 227: Adding autolists to a Feedback - New feedback session

Open feedback session

Let's now open an existing feedback session. In the same icon, you must select the option **"Open feedback session".** The same window (Explorer or Finder) will open, where you must select the feedback session you are going to work with.

Once selected, the feedback session will open with the same data it had the last time someone worked with it (you or a feedback session that was passed to you), through lists and clips.

In the attached image, we see a feedback session with three lists and some clips in each of them.

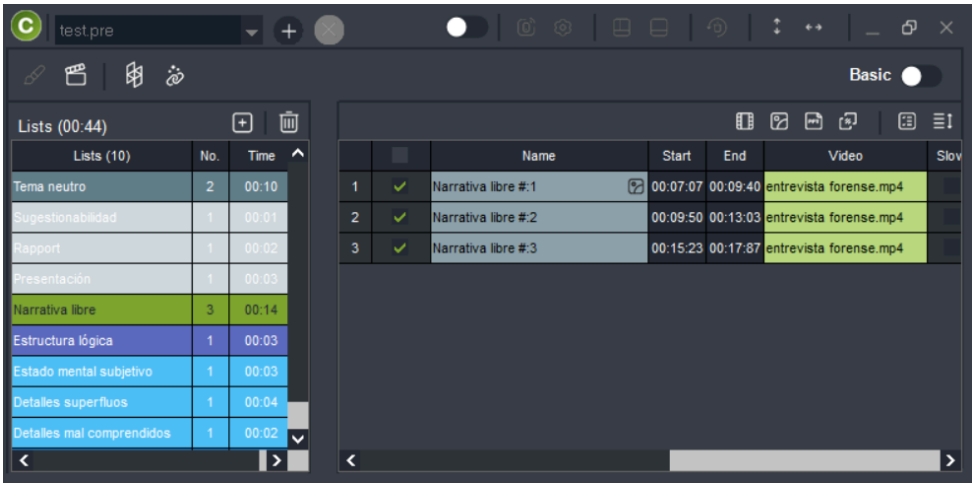


Figure 228: Open feedback session

More options when opening feedback sessions

By selecting the icon, in addition to the options to create a new feedback session or open an existing one, a window offers us some extra tools.

Let's see what each of them consists of:

Feedback sessions from web server Allows you to open feedback sessions from a live analysis. In the chapter dedicated to**"Live Analysis"**We tell you more about this option.

Add Timeline content to the feedback session (separate lists). All Timeline entries are added to the feedback session in separate lists. That is, each line of your Timeline will become a list within the feedback session.

Add Timeline content to the feedback session (a single list). All Timeline clips are added to the feedback session in a single list.

Load auto-lists. If you decided not to add clips from auto-lists when you opened the feedback session, you can do so now thanks to this option. To learn more about this feature, check out the chapter on creating buttons.

Create and open auto-feedback sessions. If you have saved auto-feedback sessions, you can create or open them using these two options. To learn more about this feature, check out the chapter on creating buttons.

Delete history. Below this option, the last five feedback sessions you've opened will appear for easier access. If you want to reset this list, click this option.

Tools in feedback session

The feedback session is organized through a main window. There are various types of tools and features distributed throughout the environment.

For a better understanding and organization of the possibilities, let's divide it into zones to explain them.

Adding Analysis to a feedback session

In the upper corner of the window, next to the program icon, we find a group of tools consisting of a drop-down box and two icons. They allow us to **add or remove new analyses** to a feedback session.

You can add additional analyses to open new feedback sessions without changing windows and switch between them by selecting them from the drop-down menu, as you can see in the attached image.

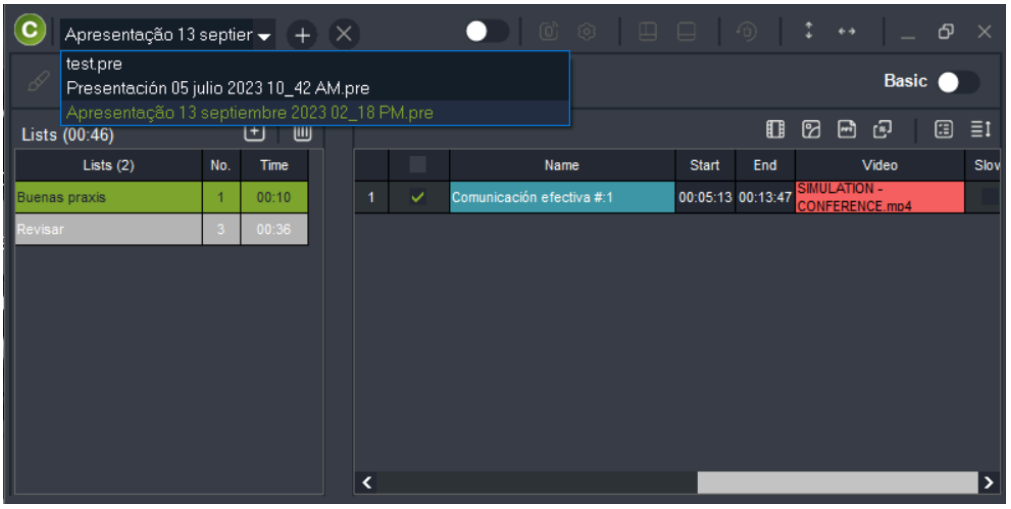


Figure 229: Adding analysis to the feedback session

To add other analyses to the dropdown and create new feedback sessions, you must click on the icon . Select the .pre file in Explorer. The icon allows you to remove analysis from the list.

Feedback Window Size - feedback session

In the upper right corner, we have five icons.

These icons will allow you to configure some aspects related to the window size:

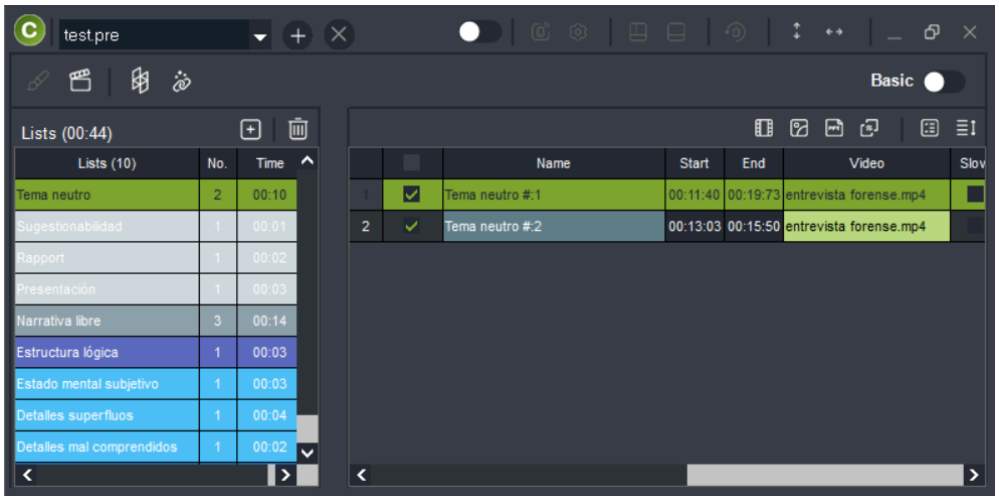


Figure 230: Window Options

Maximize feedback session by the height of the screen. The feedback session is displayed vertically to fill the entire height of your screen.

Maximize Feedback - Display across the width of the screen. The feedback session unfolds horizontally to fill the entire width of your screen.

Minimize screen The screen is minimized and hidden.

Full screen The feedback session takes up the entire screen.

Close window. Close the feedback session. You'll need to reopen it to work with it again.

> **Note:** If you cannot view one of the windows, a good trick is to group the windows on the main screen your are working on.

Basic Mode

The feedback session toolbar can be displayed in two ways: a palette called **"Basic"**(reduced version) and a palette called **"Advanced"** (expanded version).

To switch between the two modes, you can use the slider button on the far right of the toolbar. You can repeat this process as many times as you like.

Basic mode consists of four tools:

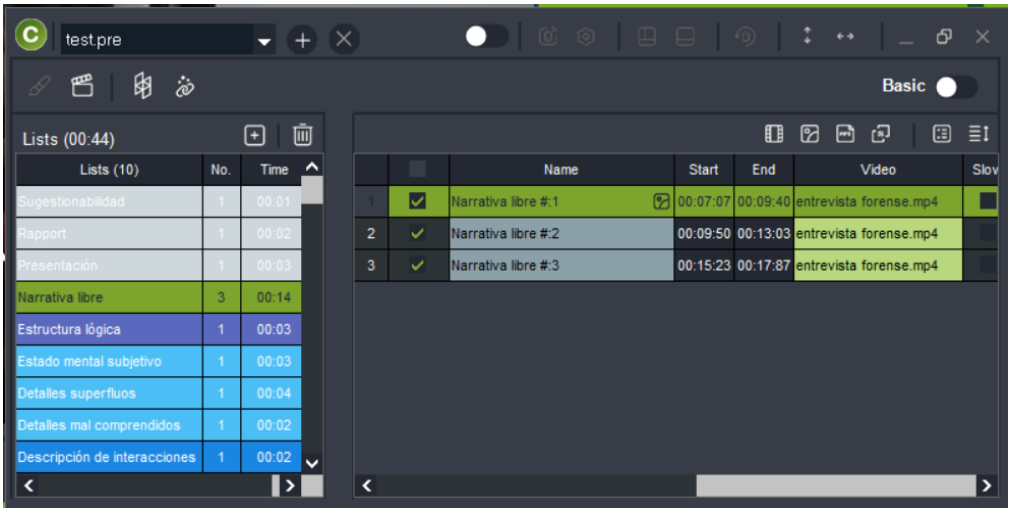


Figure 231: Basic mode

Quick Drawings in feedback session

This tool is only available in feedback session Mode (which we'll explain later in this chapter). It allows you to create a series of basic drawings (arrows and shapes) using primary colors, to be created and displayed only during feedback session.

We will explain this tool in more detail when we talk about Feedback Mode - feedback session.

Produce video

With this tool, you can create a standalone video with specific lists or clips from your feedback session. To open the video production window, select the icon. and then select what content and how you want to produce it.

These are the available options:

Produce selected list. That is, it only produces the files in the list you have selected at that time.

Produce selected list as separate files. Each clip in the current list is produced as a separate file.

Produce selected list as a single file. All clips in the selected list will be exported in a single file, one after the other.

Output all lists as separate files A separate file is created for each list.

Produce all lists as a single file. The entire feedback session will be exported as a single file.

Once you've selected the desired option, the screen for configuring the details of the exported video will open.

You will be able to configure the following basic options:

Video resolution. You can select from four available options. By default, 720p (1280x720px) appears. You can choose the option**"Maintain original resolution"**.

Bitrate (stream/bit rate). You can select from several available By default, 5000Kb/second appears.

FPS (frames per second). You can choose from four available options. The default setting is 25 fps.

Split files. Separate each clip into a separate file.

In addition to the above, when producing a video, you have a series of advanced options, divided into four tabs.

General

- Show the drawings made
- Insert chapters for .mp4 files.

Add watermark (select the image and the corner where it will appear).**Audio**

- Use original audio from the video.
- Add external audio file.
- Add audio notes. Mute clippings without notes or keep the original sound.

Texts

- Display the name of the Action
- Show text notes
- Show descriptors
- Text location (top or bottom).

Codimg Hub.

- Submit video to Codimg Hub
- Export XML and open Coding Hub

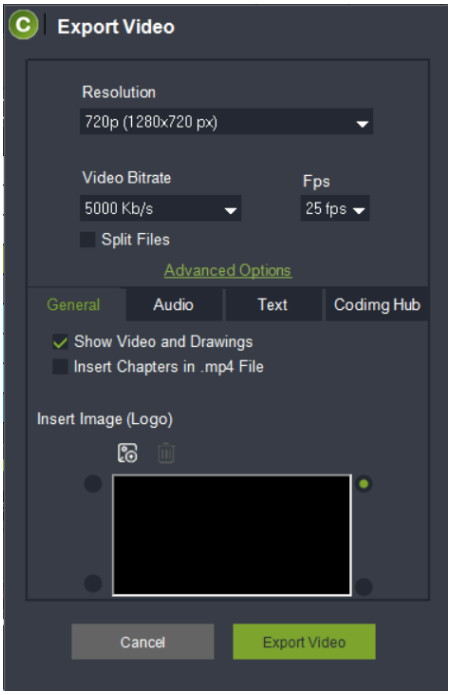


Figure 232: Export video

Codimg Hub

The icon Used to send your feedback session data to Codimg Hub. You have four

options: Upload feedback session (complete) to Codimg Hub.

Upload selected lists to Coding Hub. Upload

all open feedback sessions.

Upload all open feedback session autolists.

For more information about Codimg Hub and how to manage content uploaded from Codimg, we recommend you check out the manual for this platform.

Advanced Mode

Let's now look at what Advanced mode is and what tools it incorporates into feedback session.

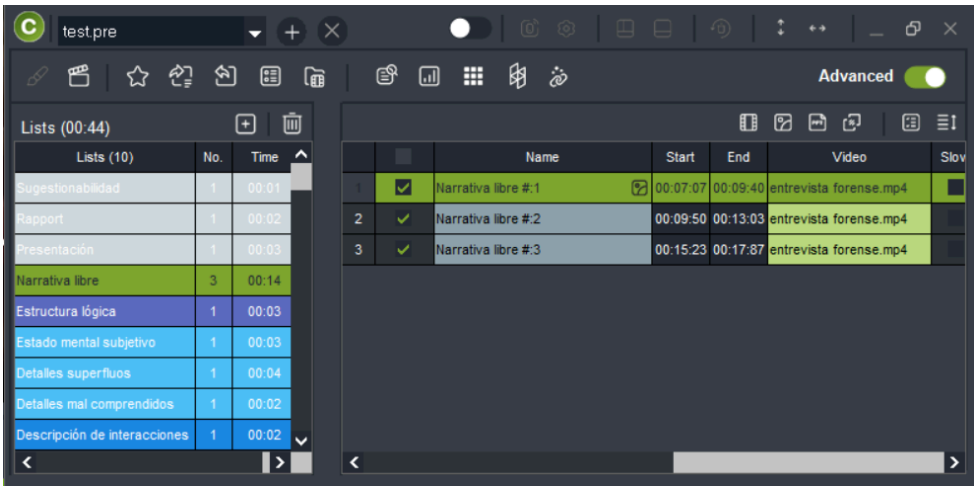


Figure 233: Advanced Mode

Feedback - Favorite feedback session

The icon allows you to mark the open feedback session as a favorite. This means that every time you open the timeline, the feedback session will automatically open, regardless of which analysis you're currently opening.

Import feedback session

The icon allows you to import a .pre file (a feedback session) or import a Feedback.

Select the .pre file in Explorer.

Export feedback session

The icon allows you to export your current feedback session as a .pre file. You can also export the Feedback -.

Feedback Script - feedback session

The icon allows you to create a feedback session script in .pdf format, so you can have a printed paper file to track the organization of your feedback session.

The first step is to select the data the script will include: whether you want to show notes and descriptors, only notes, or only descriptors, and whether you want to show drawings.

Finally, click on the icon at the bottom right of the window to confirm your selection.

Below is an excerpt from a script for your viewing pleasure.

Figure 234: Feedback Script - feedback session

In the script header, there are a series of icons. What does each one represent?

Feedback Name - feedback session.

Name of the list.

Total number of registrations. Total

duration of the feedback session.

Next to each clip in the script you can find the following icons:

Registration number. It also displays the color of the box. Next to it, in bold, is the clip name.

Duration of registration.

Minute of the video at which the clipping

begins. The clipping is in slow motion.

The clipping has an audio note. The

clipping is a .mp4 chapter.

Notes contained in the log.

clip descriptors(if none, it is shown in blank).

By default, the first image of each clip will be the one displayed in the script. The first five drawings of each clip will also be displayed.

To use a drawing as a display image in your script, double-click the clip from the feedback session, right-click on the drawing you want to use, and select **"Use image as thumbnail for report"** If you use a drawing as a thumbnail, it will not be displayed in the drawings section of the report.

At the top of the window, you have the following options for working with the document. Of particular note are the print and export options (PDF and XLS) so you can share the

script, for example, with players or the technical team so they can also follow up on the feedback session.

Consolidate feedback session

The icon Allows you to consolidate a list or the entire Feedback feedback session. What does it mean to consolidate a Feedback feedback session? With this tool, you can generate a video with only the length of the clippings, eliminating the remaining videos that aren't part of any of them, and export it along with a Feedback feedback session.

Likewise, you will not need to use the original analysis video to share the feedback session.

To consolidate a Feedback feedback session, click the icon and select the desired option: consolidate a list or the entire Feedback feedback session. Once selected, choose a folder to save both the Feedback feedback session and the video.

By importing that feedback session into another Codimg program you will be able to edit the clips normally since they will be linked to the generated video.

Note: You cannot increase the length of clips, but you can reduce them.

Filter by notes or descriptors

The icon It allows you to filter and search your clips based on notes or descriptors. When clicked, the filter criteria should appear:

Filter by notes or by descriptor name.

Show only clips with audio notes, show notes, or sort by name.

Figure 235: Filter by notes or descriptors

Once you have chosen your selection, start writing the text string and the program will display the available results, as you can see in the attached image. Figure 12: Filter by notes or descriptors

Feedback Dashboard - feedback session

The icon Allows you to open a dashboard based on the clips contained in a list in feedback sessions. To do this, select the desired list and click the icon. You can also open the dashboard while displaying the feedback session.

In terms of usability, it works like any other matrix, but it only displays results from the Feedback feedback session and not the entire analysis. If you'd like to learn more about this tool, visit the corresponding chapter in this manual.

Feedback Matrix - feedback session

The icon allows you to create a matrix with the content of the feedback session.

In terms of usability, it works like any other matrix, but it only displays results from the Feedback feedback session and not the entire analysis. If you'd like to learn more about this tool, visit the corresponding chapter in this manual.

Lists

The lower part of the feedback session window is divided into two sections. On the left, we find a list of the lists that make up the feedback session, and on the right, the clips contained in each one.

In this section, we'll focus on the left side of the window, which refers to lists and everything you can do with them.

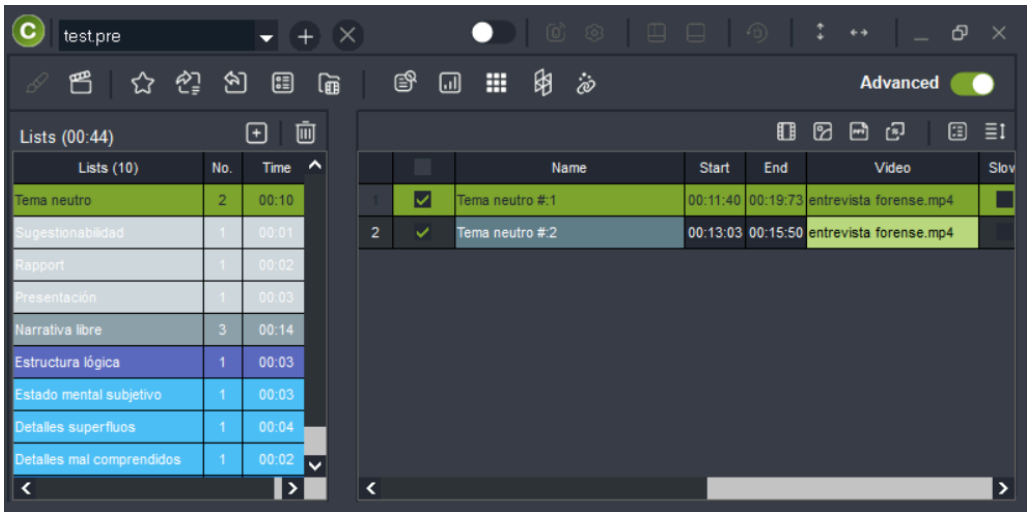


Figure 236: Lists in the feedback session

View total duration of clips

At the top of the window, you can see the total duration of the clips contained in the different lists in your feedback session.

Create and delete lists

Next to the duration of the lists, there are two icons to create and delete lists from the feedback session window. You can also create a new list with the Shift+n command and delete it with the Delete key.

Reorder lists

By clicking on the list headers, you can sort the lists: Alphabetically

By number of clips

By total length of the list.

With each click on the header you can change the ascending/descending order.

Rename a list

Double-clicking on a list name will allow you to edit it.

Select multiple lists

Using the Ctrl and Shift keys you can select multiple lists.

More options with lists

Right-clicking anywhere in the list window will open a menu where you can perform some additional options.

Create new list

Hide unselected lists / Expand (Show) lists. You can hide all unselected lists so that only one of them is displayed. To display them again, simply expand them.

Rename a list

Change the color of a list. This action can also be performed with the key**"C"**.

Duplicate list. Also with the shortcut key. You can also perform this action with the key**"D"**The selected list will be duplicated.

Merge selected lists. Create a new list with the clips from the selected lists. The name of the new list will be the name of the list placed first.

Copy / Paste. To work with lists and clips.

Delete list(s).

Save the list structure as a favorite. Allows the user to save a list structure (empty, just the skeleton of the lists) that can be used in future feedback sessions.

Load/delete favorite list structure. If there are list structures, you can load or delete them using these two options.

Load favorite list structures into new feedback sessions. When creating new feedback sessions, the saved structure will also be loaded.

Delete empty lists. Delete lists that have no clips.

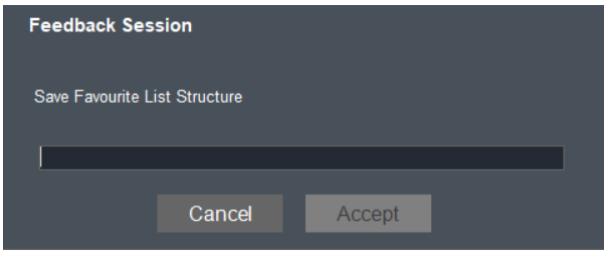


Figure 237: Save the list structure as a favorite

Export current list as .pre. To share one or more lists with another user.

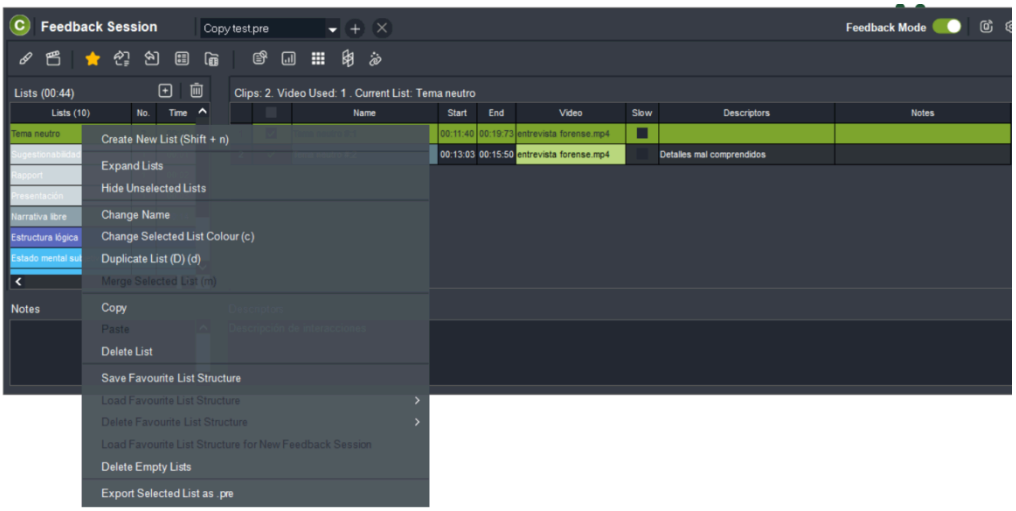


Figure 238: Export current list as .pre

Clips

On the right side of the feedback session window, we find the clips from the selected list along with additional information about them in different columns.

clip number within the list

Visible/invisible checkbox (for Feedback Mode -

feedback session) clip name

Start and end times

Associated video

Show or not

Whether it has

audio or not

Descriptors Text

notes

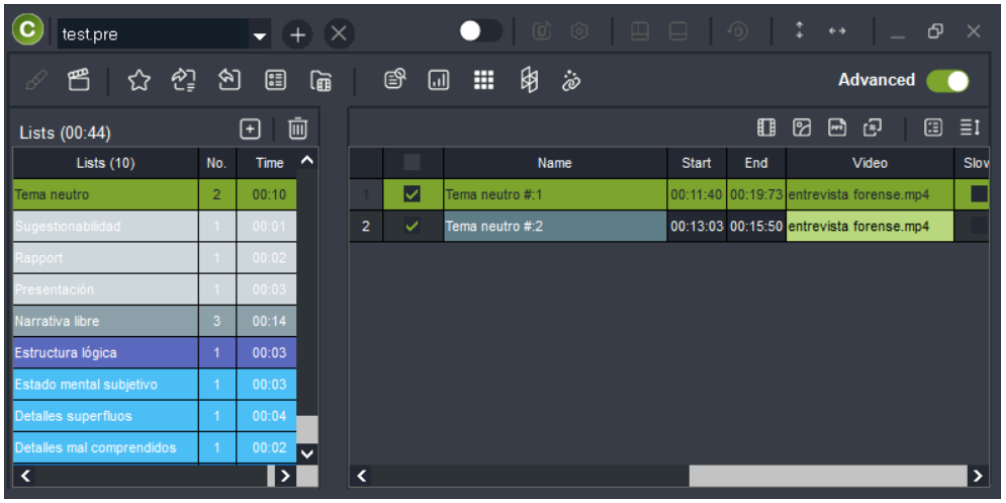


Figure 239: Export current list as .pre

General list information

The clip section is headed by a text indicating the number of clips in the current list, the number of videos used in the current list, and the title of the list.

Figure 240: List overview

Add clips

A list is made up of clips that come from different places in the program (that is, clips can be sent to a feedback session from multiple program windows).

In the following lines, we'll explain how to work with clips from the timeline. For other environments, see each of the tools.

From the timeline, select the clip you want to add and press the keys **"3"** the **"Insert"**
The clip will be added to the end of the selected list.

With the key **"Ctrl"** In Windows you can make a multiple selection of clips and send them to the feedback session, also by right-clicking **"3"** the **"Insert"**.

You can also send all clips for a specific Action. To do this, click on the Action name in the timeline, and all clips will be automatically selected. Press the [Send] key again. **"3"** to be added to the feedback session.

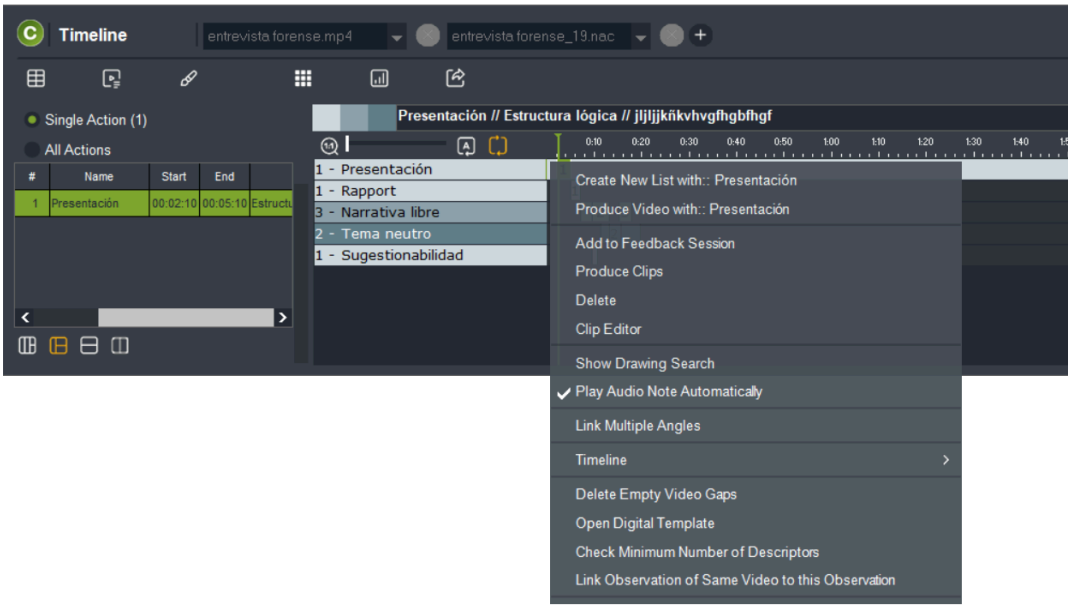


Figure 241: Create new list with (name)

Another way to do this is to right-click on the row for that Action and then choose the option **"Create new list with (name)"**.

The clips that go to the feedback session can be selected both in the grid and in the timeline.

With the right mouse button, on the selected clips and **"Send to feedback session"**.

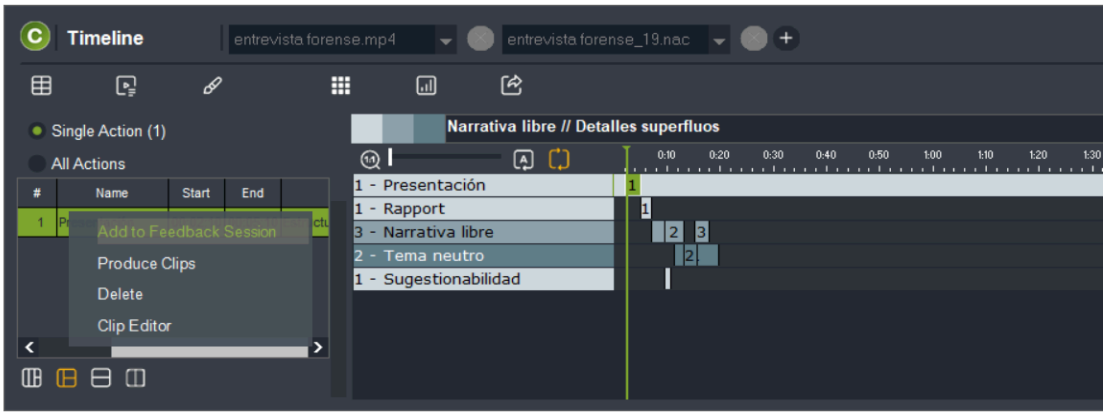


Figure 242: Send to feedback session

Add clips from multiple analyses

Additionally, you can create a Feedback feedback session with clips from multiple analyses from the timeline. To do this, you must open all the analyses in the timeline (see the chapter on the timeline for details on how to do this).

Next, select one or the other analysis as appropriate and select the clips that will go to the Feedback feedback session using any of the systems explained in the previous

section.

Add a clip with multiple angles

When you have a video with multiple angles, you have several options when submitting it to a feedback session.

With the key **"3"** It's sent as it's displayed on the timeline. That is, either with one of the angles or in tiled view. It depends on which view you have selected at the bottom of the player.

Figure 243: Player with two angles

It may also happen that you want to send the mosaic view to the feedback session even though one of the angles is being displayed in the timeline player.

Or you may need the same action to be sent to the feedback session as multiple clips, i.e. one clip for each angle and another for the tiled view.

You can choose one or the other option in the Settings menu of the main menu. We'll explain how to change it in the chapter dedicated to this part of the program.

For now, we will tell you that to select one of these options (the one you have chosen in your configuration) you must do so with the key combination **"Ctrl"** + **"3"**.

Delete clips

You can delete clips from a feedback session using the Delete button or the secondary floating menu that we will see below.

Edit clip properties (in feedback session)

By double-clicking any of the feedback session clips, you can edit that clip's properties. This is similar to what you'll find in other environments, such as the timeline (see the corresponding chapter on this tool), but much more extensive and with more options.

It is important to note that changes made in the feedback session will not be reflected in the timeline.

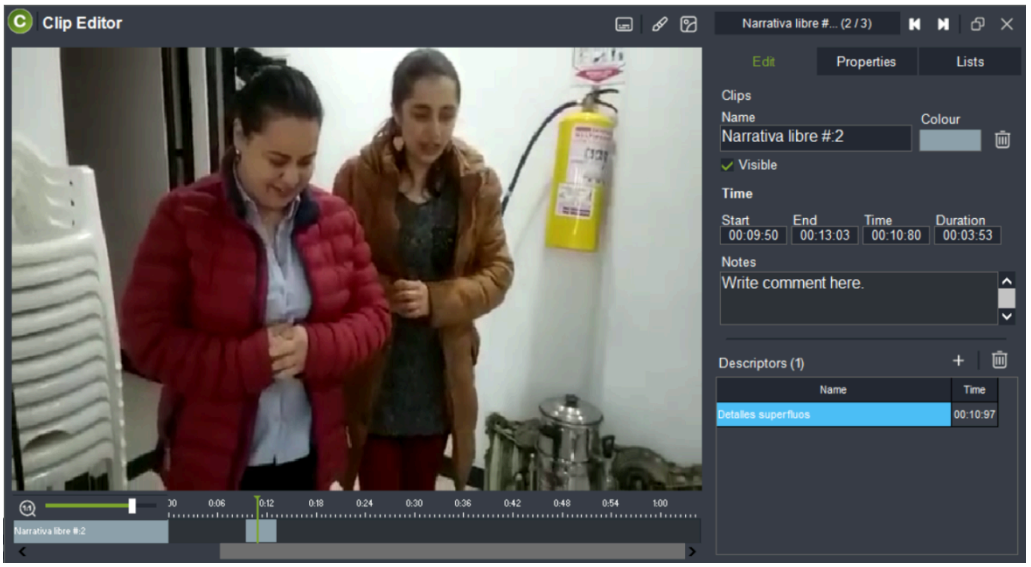


Figure 244: Editing properties in a clip

The clip editing window in a feedback session is quite comprehensive and allows you to perform countless actions that will impact the selected clip.

At the top we find the following tools:

Figure 245: Editing properties in a clip

Display clip information about the printed clip. In this case, you can add details of the clip such as the Action, clip number, its descriptors and text notes to a band (lower or upper).

Draw. Open the KlipDraw drawing tool, where you can create your drawings, animations, or tracking images. If you have KlipDraw Animate or Motion installed, this is where you can use it. This is the main difference between it and drawing in the Timeline.

Add image. If you want to add an external image to the clip, you can do so here. The image can be in .jpg, .jpeg, .bmp, or .png format.

Move between clips of an Action. With the arrows at the top You can move back and forth between clips in the same Action. This prevents you from having to close and reopen clips if you need to modify multiple clips.

Maximize and close. Two common controls for putting the window in full screen or closing it. Changes are saved automatically.

To the right of the player, we find a column divided into three tabs: Edit, Properties, and Lists.

Let's find out what the options are in the tab **"editing"**.

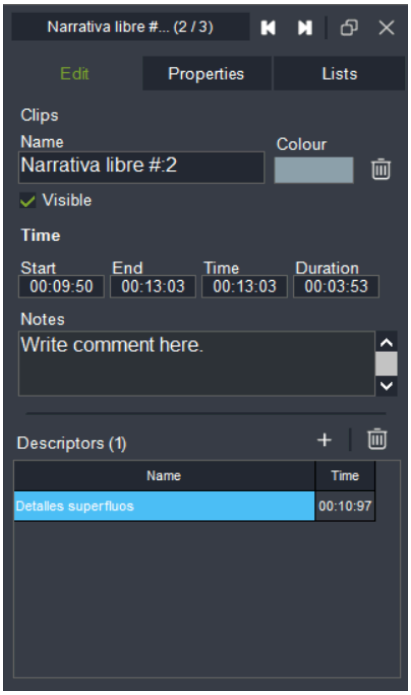


Figure 246: Edit tab in the properties of a clip

Name / Color / Trash can. You can edit both, and even delete them with the trash can icon.

Visible. If you want to hide the feedback session clip, you can also do so in the feedback session view, using the checkbox in the second column.

Registration times. Start time, end time (including PRE and POST), click time, and clipping duration.

Text notes. They can be edited, added or removed in this box.

Descriptors. Displays the descriptors associated with the clip. You can delete, add, or even create new descriptors. You can also decide whether the change affects only this list or the same clip throughout the feedback session.

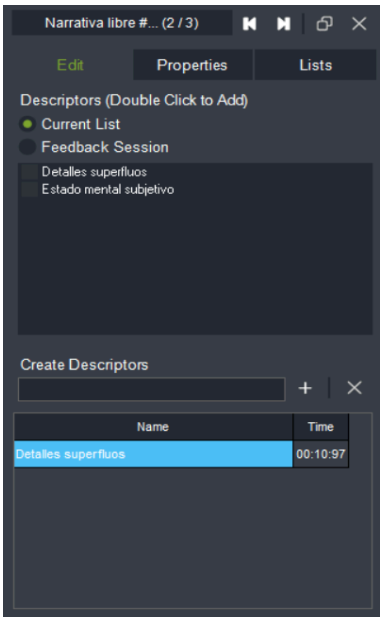


Figure 247: Add, delete or create new descriptors

Remember that all these changes only affect the feedback session clip, but have no impact on other environments such as the timeline or data matrix.

Let's find out what the options are in the tab **"Properties"**.

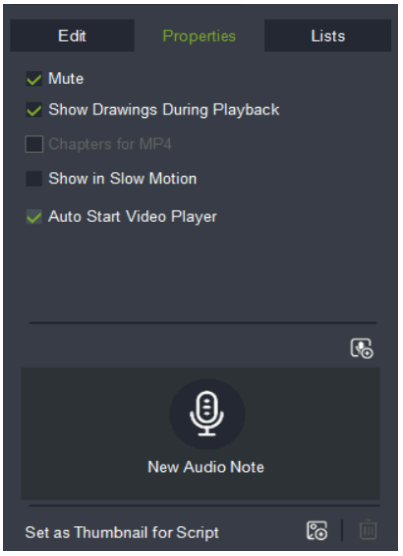


Figure 248: clip Properties Tab

Silence.

Show videos during playback.

Show .mp4 chapters (Windows only).

Show in slow motion.

Video player on load.

Add audio notes. Context can be added in the form of an audio file. The process is very simple and intuitive. It's important to emphasize that the audio cannot be longer than the clipping.

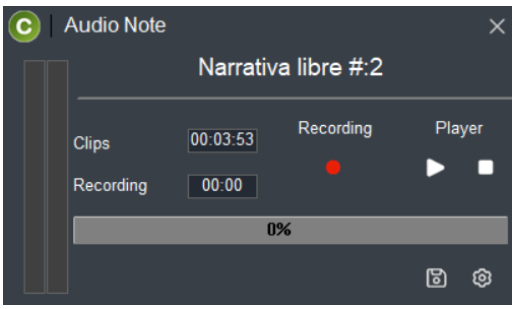


Figure 249: Audio notes

Add frame for the script. In this option you can add a frame if it is going to the feedback session script.

Now, let's go to the third tab: **"Lists"**.

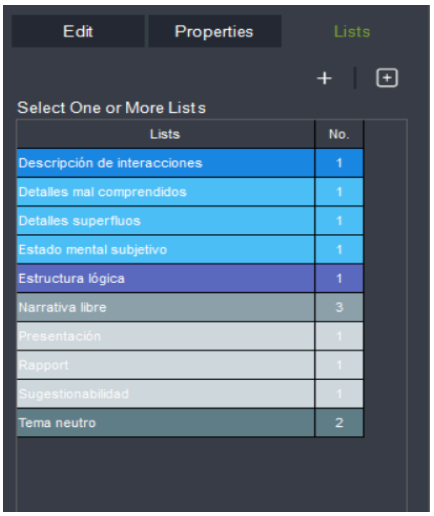


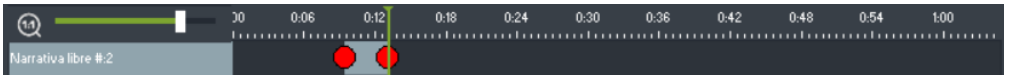
Figure 250: Lists tab

Add clip to a list. First select the list(s) and then select the icon . The clip is added to all of those lists.

Create a new list. Select the icon and a new list will be created. Choose a new name and return to the previous step.

The feedback session clip editing window ends with the bar at the bottom of the player.

Figure 251: clip editing window



Modify registry extension. By moving the red buttons at the bottom of the window, you can change the start and end of a clip. You can also position the vertical bar and use the arrow keys.**"I"** (for the beginning) and**"The"**(to the end). On the left, there's a zoom to make your job easier.

More options with clips

Right-click on any clip or the background of the feedback session window, and a pop-up menu will open with a series of functions that affect the clips.

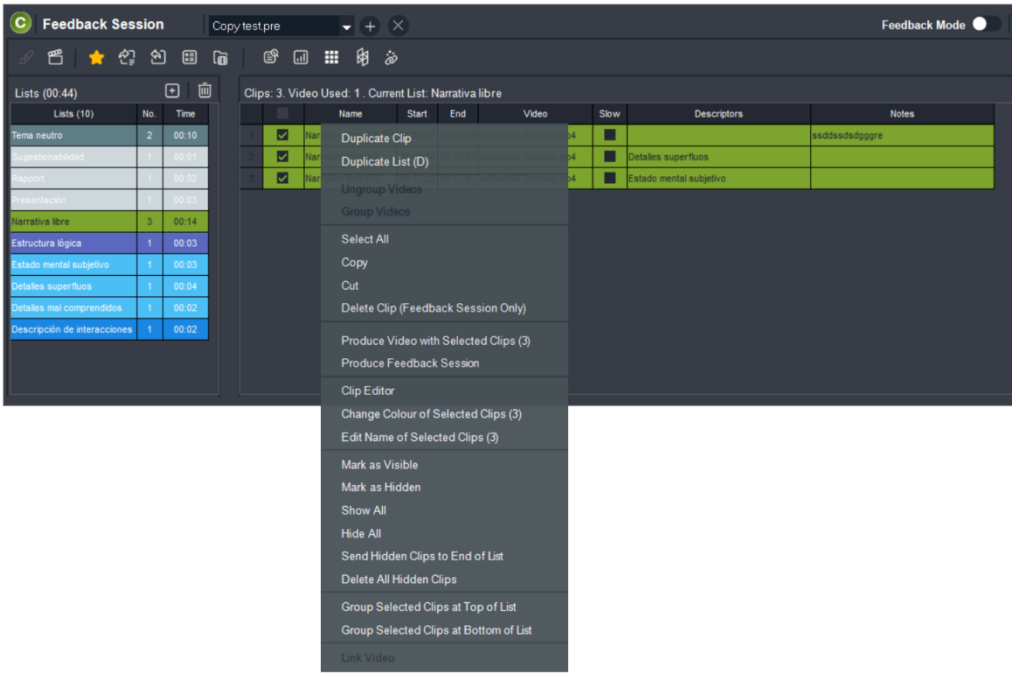


Figure 252: More clip options

Duplicate clip or lists. You can also use the key**"D"** to duplicate a list.

Ungroup/Group videos If a clip has multiple angles, these can be separated into different clips, one for each angle, or they can all be joined into a single clip.

Select All / Copy / Cut / Delete. Before deleting the clip, a message will warn you that these clips are only deleted in the feedback sessions window.

Produce a video with the selected clips. Create a separate video file with the clippings you currently have selected. The video production window, which we saw earlier in this chapter, will open.

Produce feedback session. Create a video of your feedback session. The video production window, which we saw earlier in this chapter, will open.

Editing clips. In the previous point we referred to this window.

Change the name/color of the selected clips. The change is made in bulk if there are multiple clips. This action can also be performed using key 3, while the feedback session is open.

Visible / Hidden / Show All / Hide All. To show or hide one or more clips.

Send hidden clips to the end of the list.

Delete hidden clips.

Group clips at the top or bottom of the list. Link video.

Other elements in feedback session

At the top of the log window, a series of icons appear that allow you to add additional elements to your feedback session.

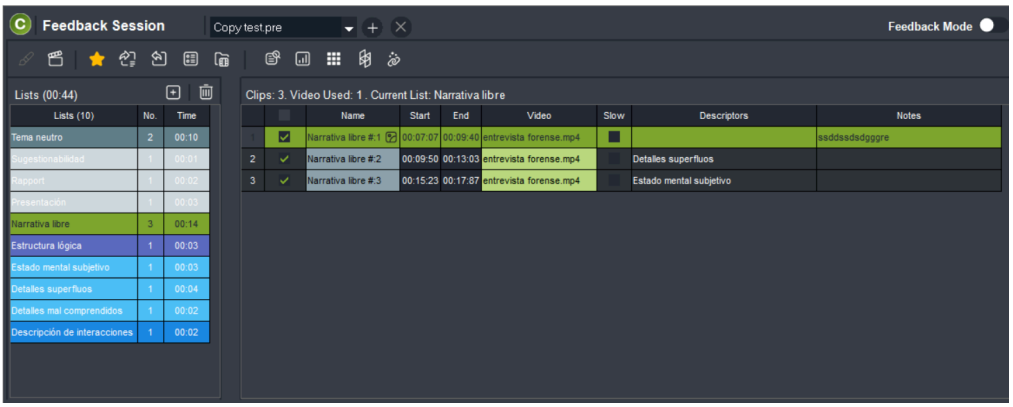


Figure 253: Other elements of the feedback session

Add external video

With the icon  You can add external videos to your feedback session. For example, you can add a clip of another play or action in the appropriate format. Codimg supports the following:
.mov, .mod, .m2v, .mts, .m2ts, .m4v, .m2t, .ts and .sync (the latter being the synchronized angles format).

Simply select it in the Explorer and it will be added to the end of your open list.

Add image

With the icon  You can add an external image to your log list. This is very useful for creating covers with external design programs or adding drills or images of exercises you've practiced throughout the week.

This will be located after the currently selected clip, although you can reorder it by dragging it to the desired location.

To do this, click on the icon, find the image you want to import and click on **"Open"**. It is differentiated from other clips by the file name (normally it includes the extension, although it can be edited as in the attached example) and because in the column **"Videos"** It does not show the video but the text **"Image"**.

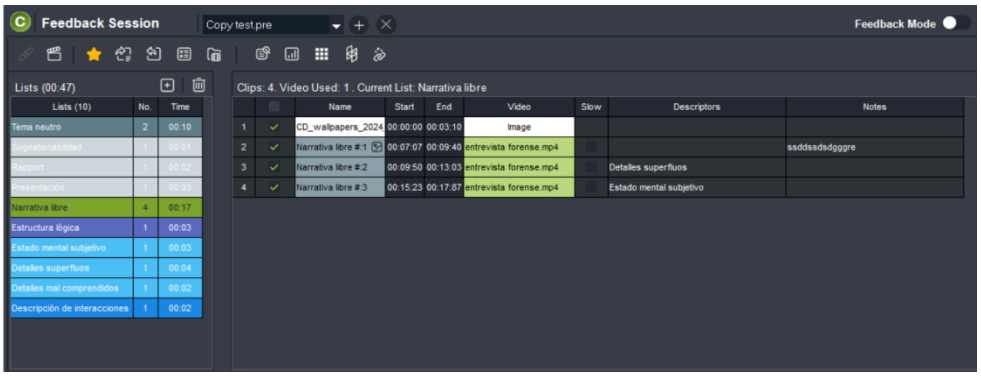


Figure 254: Add image

Add transitions

With the icon You can add a transition between two elements in your Feedback feedback session. Open the tool and select the transition type from the available options, shown in the attached image.

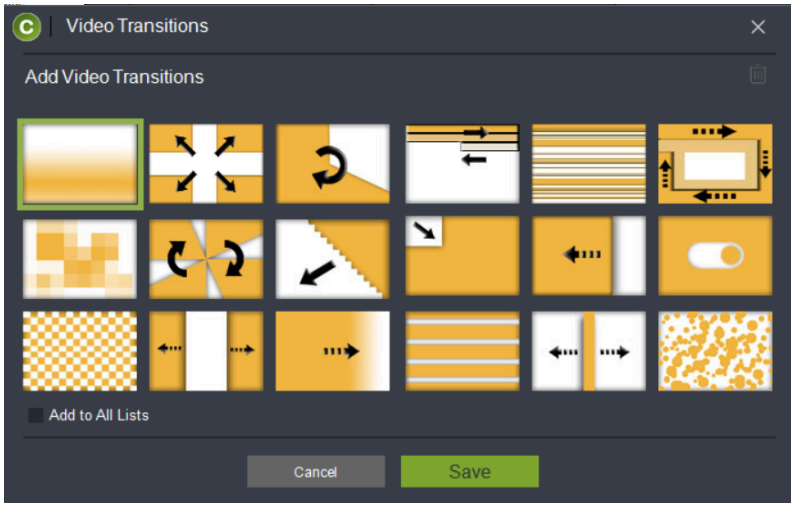


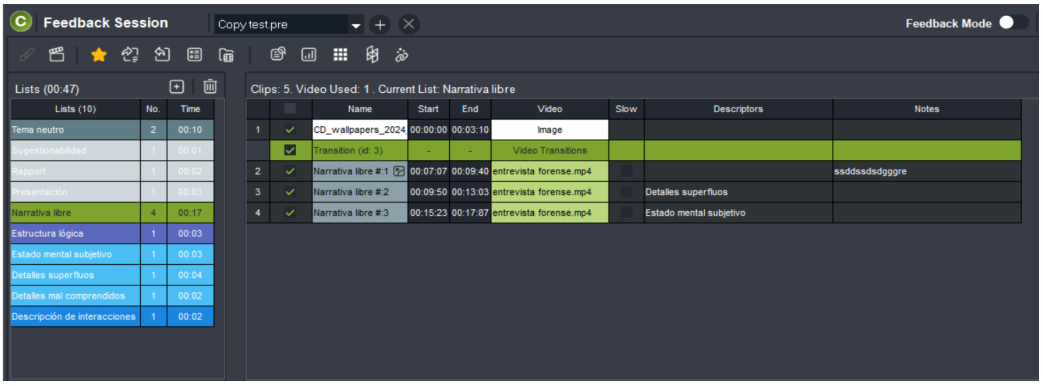
Figure 255: Adding transitions

By clicking on the box at the bottom **"Insert into entire list"**, the transition will be inserted between each of the clips in the list.

Transitions are displayed in the feedback session with a name and identifier. The background of the clip will fade from yellow to white, and the column **"Videos"** the text will be displayed **"Video Transition"**.

> **Note:** Transitions can only be viewed in exported videos, not in the feedback sessions environment.

Figure 256: Adding a transition



Show/Hide Columns

With the icon  You can show or hide columns in the feedback session. Information hidden here does not mean it will be removed from the feedback session or when exporting data.

You can show or hide the following information:

Start and end time

Playback speed Show video

Audio notes

Add drawings to a clip

Show Angles and Favorite

Angle Notes and

Descriptors and Notes

Start, end and duration of the clipping

Sort clips

With the icon , you can choose the **feedback order** of the clips, as well as the sorting criteria, ascending or descending.

By name.

By time.

By color.

By video name

By descriptors

By notes

Show a feedback session (feedback session Mode)

So far, all the tools we've seen are designed to prepare clips before submitting them. Once you've finished the editing process ,**It is time to carry out the feedback session itself.**

It is what is known as **Feedback Mode** and you get there by sliding the button on the top bar next to the text **"Feedback Mode"** to the right.

Figure 257: Displaying a feedback session

What changes occur in the window once you activate Feedback Mode?
Let's see:

New icons are activated in the top bar, which we will talk about later in this section.

A quick access drop-down menu appears in the toolbar showing the lists containing the feedback session

All open windows disappear, revealing only the player and the feedback session window. This is very useful if you're presenting on a projector or secondary display, allowing you to send the player to one and the window to the other.

At the bottom, two new boxes appear, where you can see the notes and descriptors for the selected clip.

In other words, you're ready to present your work to teammates or players. Let's see what actions you can perform in Edit Mode.

The video player

The video player doesn't differ much from other players we've seen in other chapters of this Manual, although it is true that this version is much smaller.

The first time you load a list, a progress bar will appear indicating the loading of clips in Feedback Mode - feedback session.

Figure 258: Video player progress bar

When the loading is complete, the progress bar displays a new quick draw icon, which we'll see below.

Figure 259: Video Player

At the top, we see the icon on the left  with which you can rescale the image proportionally to various default sizes.

The icon  It allows you to make a series of basic drawings (arrows and shapes) with primary colors to be made and displayed only during the feedback session.

Its objective is to eliminate the need to make elaborate drawings with KlipDraw and to be able to transmit information more quickly and dynamically during the feedback session.

Five colors available: black, white, red, green, and blue.

Three tools: straight line, circle, and freehand.

Delete drawings when playing the video.

Undo

Delete quick drawing.


Figure 260: Drawing tool

Without leaving the top menu of the player, on the right we find the icons  full screen and close window.

At the bottom, you have two basic tools for the player: play/pause and full screen

Note: When you close the video player, the feedback session returns to editing mode automatically.

Feedback Window (in feedback mode)

As we indicated at the beginning of this section, this window is slightly different from the one we worked with in Edit Mode.

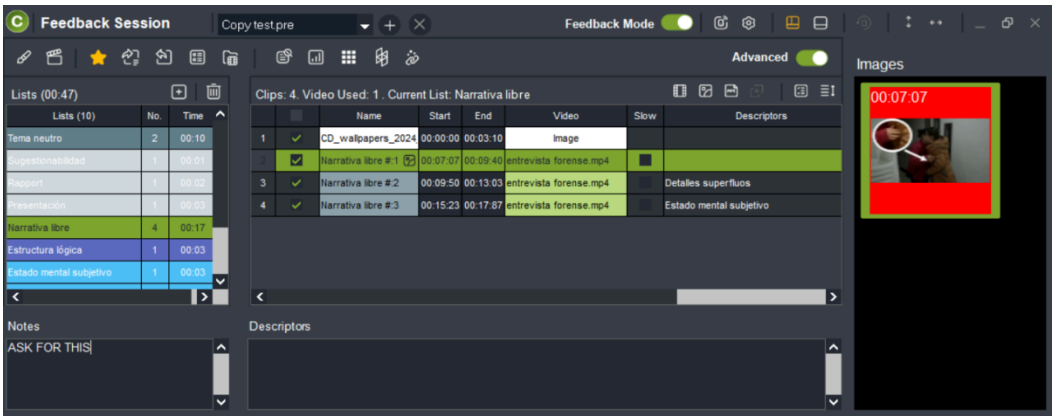


Figure 261: Feedback Window - feedback session in Feedback Mode - feedback session

The main new feature is the top bar, where new icons appear.

Notes and descriptors

To finish with the feedback session window in Edit Mode, at the bottom two boxes are displayed where you can review notes and descriptors associated with the clip being presented.

With this information on one screen and the video playing on another, the presenter can have more information to share with the people they are showing it to.

This information can be edited by double-clicking on it. In the case of descriptors, it can only be deleted. To add more descriptors, return to the clip editing window in Edit Mode.

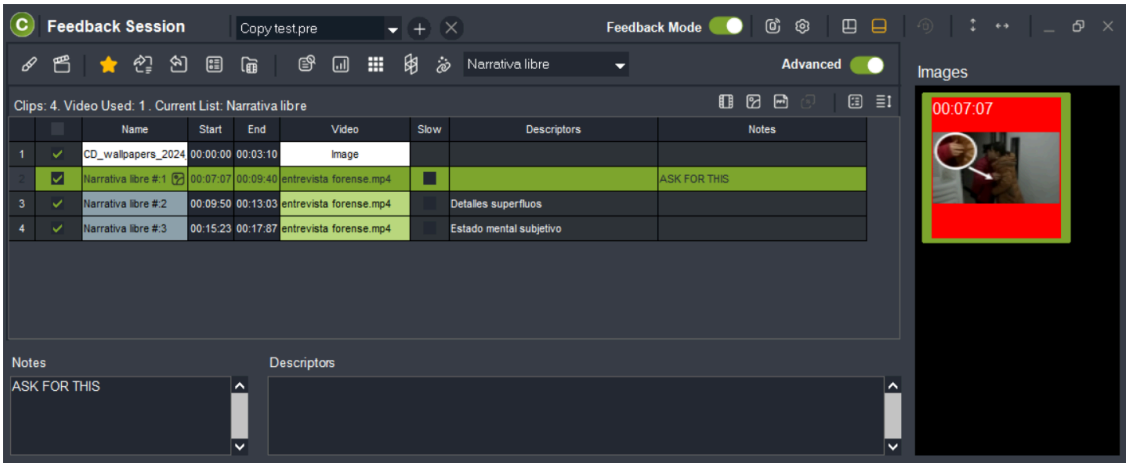


Figure 262: Notes and descriptors for clips

10. library

The tool **“library”** allows you to access a window that displays a folder tree from which you can access all your analyses. It's a quick and convenient way to have all your work stored and just a few clicks away.

All analyses must be stored within the same root folder, either individually or organized into subfolders. By default, this folder is **“Databases Codimg”**, although this folder can be changed in the Configuration options.

In the Program Configuration chapter, you can find out how to define another folder to host your analyses.

Note: We recommend maintaining this storage system so that you do not misplace work, although it can be personalized to your liking.

Open “library”.

There are two ways to open the window **“library”** The first is from the program's start menu, as long as you have Quick Access selected among the options.

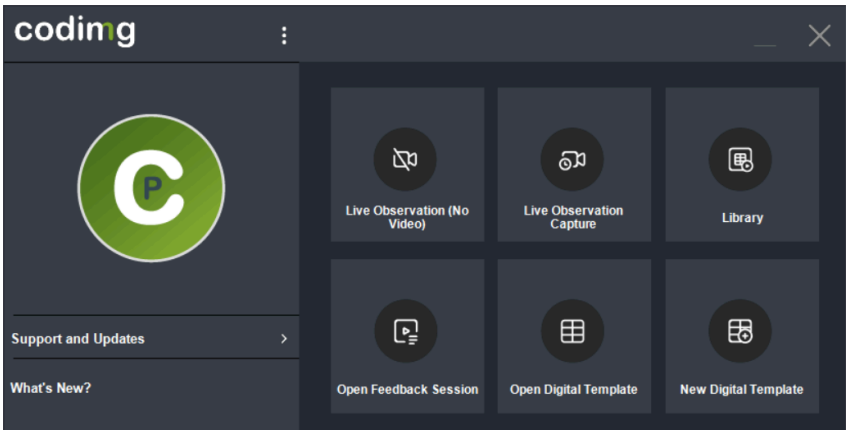


Figure 263: Start menu

The other option to access **“library”** It is also through the start menu, but through the top menu, following the path: File > library.

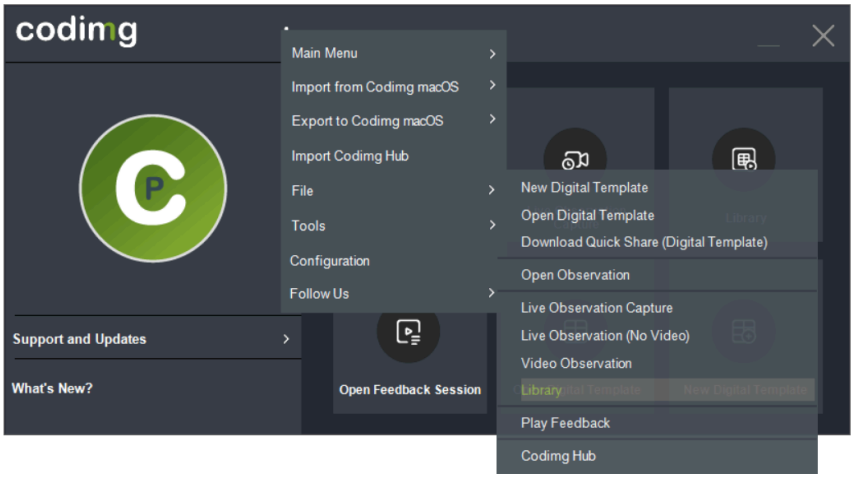


Figure 264: library from the top menu

In both cases, the window opens **“library”** (see attached image). This window consists of a top toolbar with several buttons and two main areas.

On the right, the folder structure is shown from the root folder (in this case, the default folder, **“Databases Codimg”**) and on the right, the list of analyses contained in the currently selected folder.

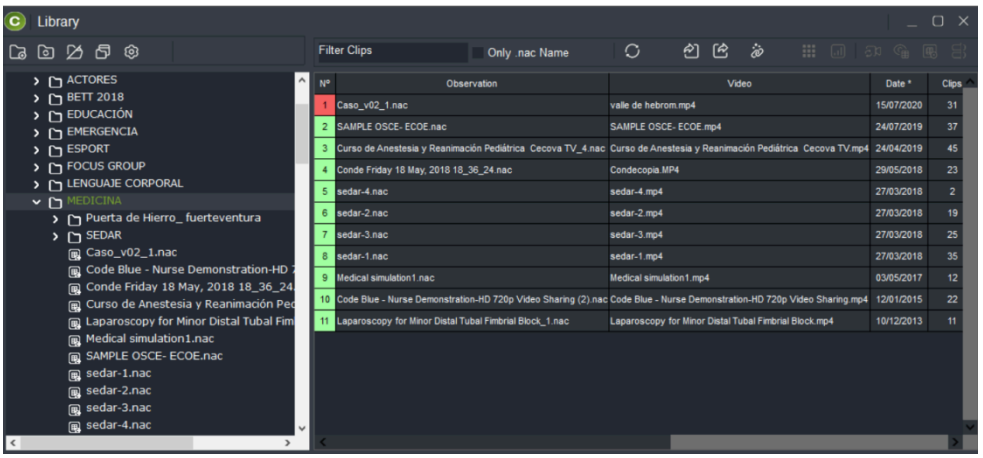


Figure 265: Folder structure

In the next section, we'll tell you what tools and options are available within this window.

Tools within “library”.

Folders

At the top left of the window **“library”** We find a series of tools that allow us to organize the folder tree.

What does each of the icons consist of?


Figure 266: library Tools

- **Create new (sub)folder.** Create a folder within the structure. It will be created within the selected folder.
- **Update.** In case you have made changes to the structure that have not yet been reflected.
- **Expand/collapse structure.** With one click, all folders and their contents are displayed. Another click, and the entire structure within the root folder is compressed.
- **Open Explorer / Finder.** Direct access to the folder structure from the operating system itself.
- **File location.** Open the Settings window to select the default folder to save each file type to.

Search

To the right of the Folder icons, there's a search filter. It allows you to locate your files, as long as they're located within the root folder.

Simply type in your search criteria and the program will list the results, as you can see in the attached image.

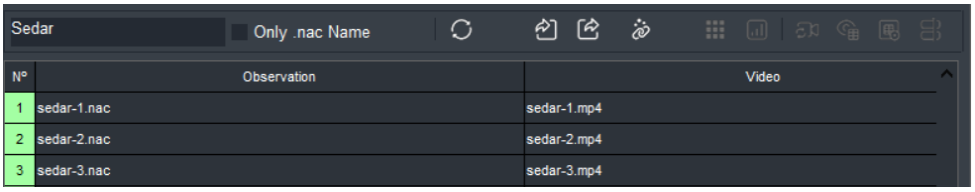


Figure 267: Analysis search engine

The icon allows you to refresh the search cache, in case any changes have been made to the folder structure.

Import and export

We continue along the toolbar to the right. The next three icons we find allow us to import and export analyses.

The icon allows you to import analysis from a Codimg license.

In addition to the .nac_to_import format, you can export your analysis to other formats:

- **To Excel in formats 1 to 5.** If you'd like to learn more about how data is organized in each export, we recommend reading the corresponding section in the Timeline chapter.
- **As an XML file.** Export your analysis to this format so you can use the data in other timeline-based video analysis software.

Folder structure

Below the toolbar, we find two windows. The first, on the left, shows the folder structure, that is, how the folder is organized. **“Databases Codimg”** and the analyses (.nac) contained in each of these folders.

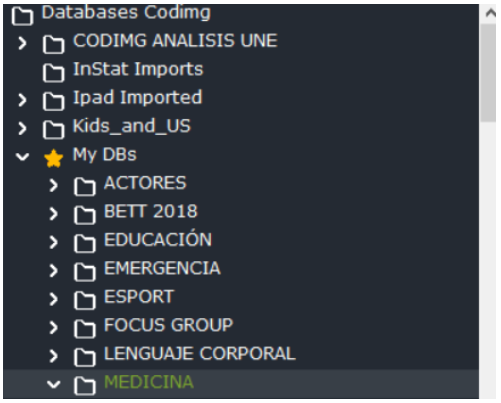


Figure 268: Folder structure

Selecting a folder not only displays all the analyses within it, but also activates two icons: mark the folder as favorite (which means all new analyses will be added to this folder

from now on) or remove it from the structure.

You can only have one folder marked as a favorite. When you choose a new favorite folder, two folders may coexist. You must refresh to update this information.

At the bottom of the screen, you'll see which folder is currently favorited. Clicking on that path will open the corresponding folder.

Analysis detail

To the right of the folder structure is the window that displays the analysis of the selected folder and its details.

In other words, with the nerve center of **“library”**.

What information does this window display?

- **Number of Observations.** If it's red, it means the scan can't find the linked video (because it's moved to a different folder or doesn't exist). If it's green, the video is correctly linked.
- **Video.** Name of the main video file linked to that analysis.
- **Date**. Date the analysis was created.
- **clips.** Total number of clips contained in the analysis.
- **Route (linked videos).** Location where the video should be located. If it's not located there, the first box will appear in red.

Clicking on any column header (except the first one) will sort the clips by that criterion (alphabetical order, date, or number of clips), ascending or descending.

The first column, on the other hand, will always keep the numbers in descending order.

Nº	Observation	Video	Date *	Clips
1	Caso_v02_1.nac	valle de hebrom.mp4	15/07/2020	31
2	SAMPLE OSCE- ECOE.nac	SAMPLE OSCE- ECOE.mp4	24/07/2019	37
3	Curso de Anestesia y Reanimación Pediátrica Cecova TV_4.nac	Curso de Anestesia y Reanimación Pediátrica Cecova TV.mp4	24/04/2019	45
4	Conde Friday 18 May, 2018 18_36_24.nac	Condecopia.MP4	29/05/2018	23
5	sedar-4.nac	sedar-4.mp4	27/03/2018	2
6	sedar-2.nac	sedar-2.mp4	27/03/2018	19
7	sedar-3.nac	sedar-3.mp4	27/03/2018	25
8	sedar-1.nac	sedar-1.mp4	27/03/2018	35

Figure 269: Sort clips (alphabetical, by date or number of clips) To open an analysis

(in the timeline), simply double-click on it.

If the video cannot be found, you will need to locate it. You will need to click on the link **“Search for video”** and select the exact route. Once located, the first column will turn green.

Figure 270: Link video to a clip

It can also be seen in the legend **“No Video / Offline”**, which means that this analysis doesn't yet have any video linked. This is typical in cases of observation without a video source, where a clipped match isn't available when the data is collected.

More tools in “library”

To finish off this environment, we return to the top toolbar. In this case, to the five icons on the far right.


Figure 271: Tools bar at the top right

Data matrix. Access the custom data matrix for this analysis. Learn more about this feature in the data matrix chapter.

Dashboard. Opens the dashboard environment.

Preview. Opens a quick view of the analysis, including a list of clips and a thumbnail of the video.

Continue with registration. To continue with the observation or data collection process.

Go to the timeline. It is the same operation as double-clicking on the analysis name.

11. Other tools

Codimg is organized through a workflow divided into three main phases: observation or data collection, observation and work with that data, and finally, feedback session.

In previous chapters, we've focused in detail on all of these phases, including specific chapters for specific tools, such as data matrices or dashboards.

However, the program has additional tools that, while not part of the workflow, contribute to specific aspects. We'll devote this chapter to exploring some of these tools.

Import .PRE from Coding Hub

If you have a Coding Hub account, you have an option to import feedback sessions created on the online platform to open them in your offline license.

When you export the feedback session from Hub, a file is generated **“.pre_to_import”**. This is the file you should open in your Codimg desktop license. You should go to the option **“Import Coding Hub”** in the main menu and in Windows Explorer select the file for.

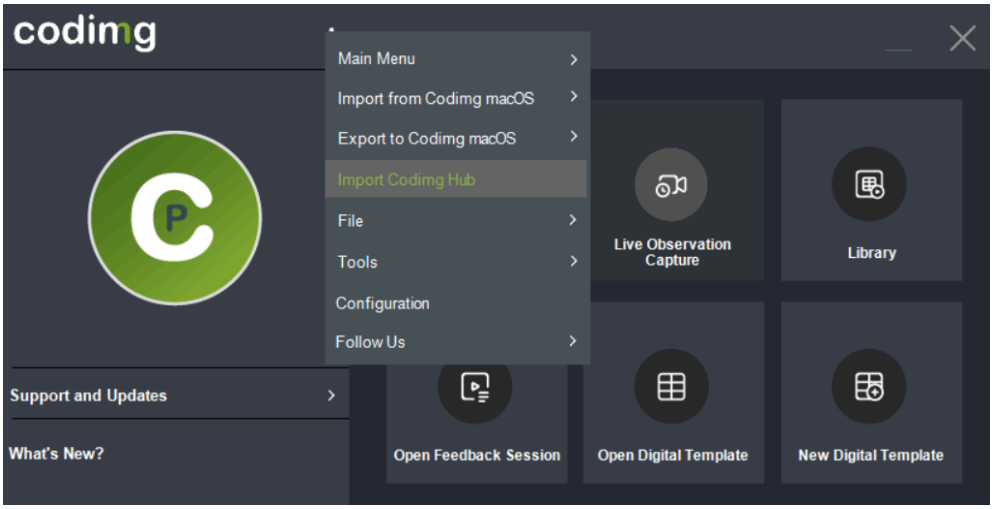


Figure 272: Import from Coding Hub

Import from Coding Coding View

Codimg Codimg View is an app that lets you capture data and clip video from your iPad or iPhone and sync it to your desktop license.

In the section **“Tools > Import > Import from Coding View”** You can import your observation (in .tgnac format) made with this app and open it in your Codimg desktop license.

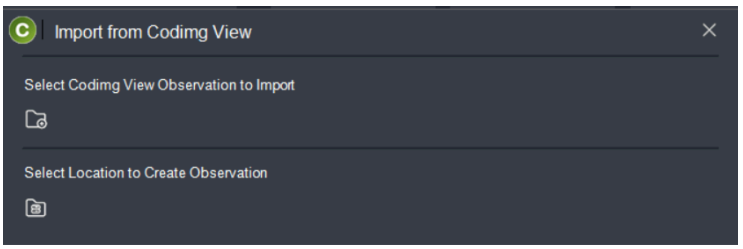


Figure 273: Importing from Coding View on Windows

The next step is to synchronize observation and video (to link the start of an event, which most of the time does not coincide with the start of the video).

You must select an exact time for the start of the periods and **"Synchronize"**. Once finished, you can **“Go to timeline”**.

Figure 274: Synchronize observation with video

If you want to change video or observation, you can do it in the icons  .

If there's a gap in the video or you need to jump to a specific moment in the video, you can do so using the icons in the top bar, to the right of the video path.

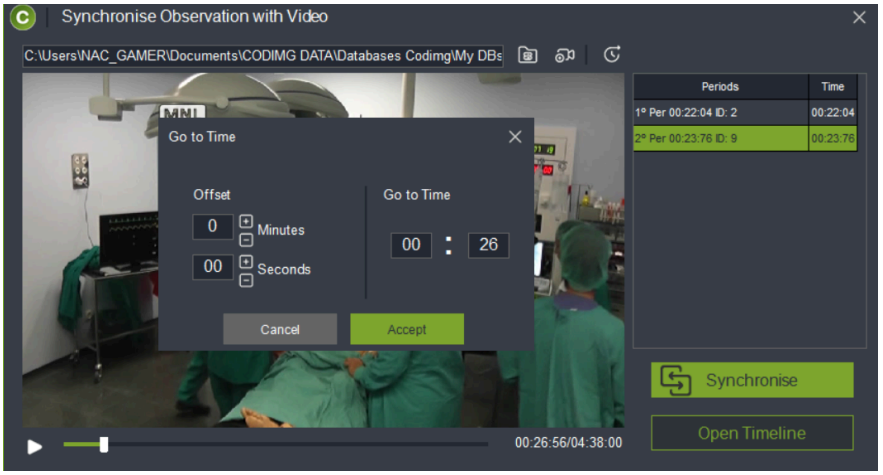


Figure 275: Skip settings in the video player

Import XML files

XML files are very useful in sports video observation, as they allow you to easily share data in a format compatible with other observation programs, even those with a different format or even operating system.

In other chapters of this Manual we have explored the option of exporting your observation made with Codimg to XML format, but it is also possible to do the reverse process, that is, import files in this format from other programs and use them in Codimg.

In the main menu of the program select the route **“Tools > Import > Import XML Files”.**

In Windows, the following screen will open directly, where you will have to select these three aspects:

- The source XML file
- The name for the .nac observation on your system
- The video to link to your observation

Figure 276: Import XML

Click Import and choose the path where you'll save the import. A .nac file will be created. This file is the same format in which your observations are saved.

The last step in this process is to select the video that will be linked to that observation. By clicking on **“Open timeline”** we will be able to see the observation in our Timeline.

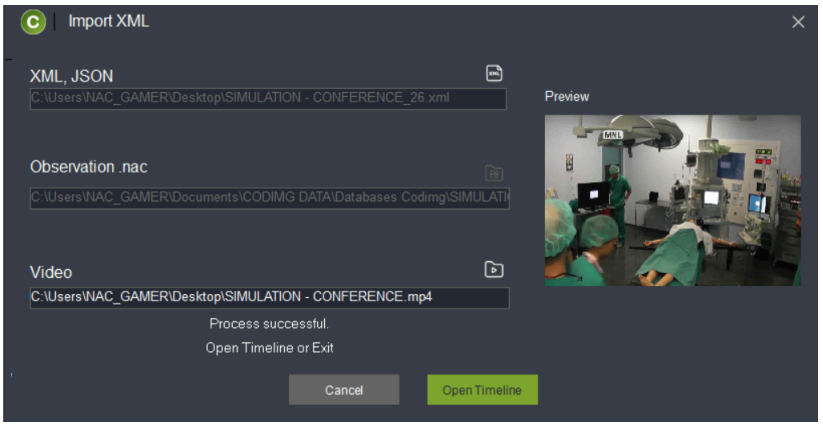


Figure 277: Selecting the video to link to the observation

You can also import multiple XML files and merge them into a single .nac file. Save all observations to the same computer and repeat the process, except now, instead of selecting a single file, perform a multiple selection using the key. **“Control”.**

Import .csv files

You can also import data into Codimg in .csv format. Select the path from the program's main menu. **“Tools > Import > CSV Files”**.

First, select the file you want to import.

Once loaded, the file's contents will be displayed in the window. You must select the exact delimiter for the data to display correctly (commas, semicolons, or tabs).

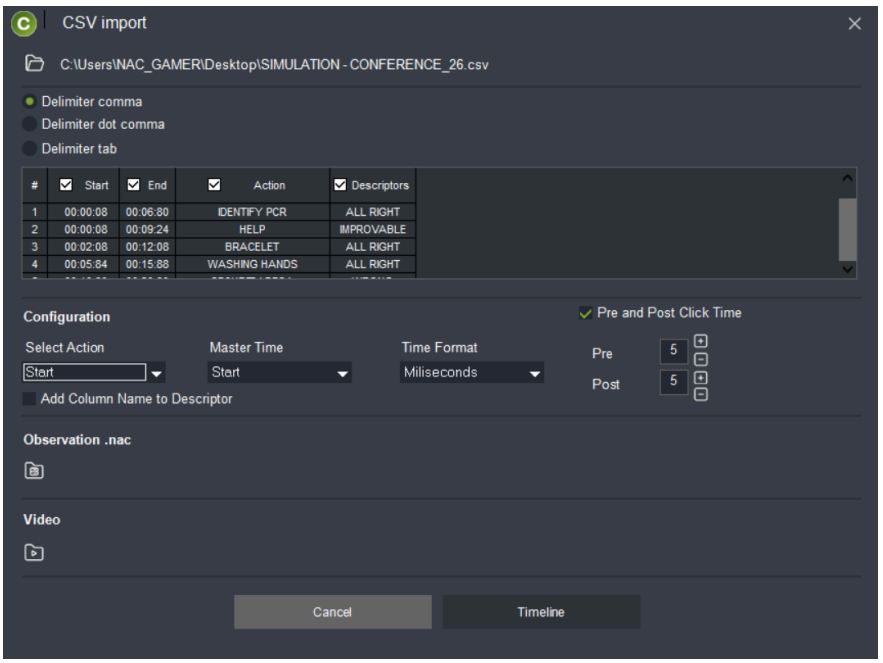


Figure 278: Importing .csv files

Next, you'll need to select which of the imported columns will be the action. In the example above, the column **“action”** It will be the action and the rest of the columns,

descriptors.

Likewise, choose the reference time for the clip. In this case, we'll choose the same time as the action so that the import is successful.

The final step is to assign the time format. It must match the time of the clip with which the original CSV was clipped.

In addition to all of the above, you can define a default PRE and POST time for all your actions.

Once you've finished configuring the CSV file, you'll need to select the location and name of the resulting .nac file. Finally, associate the video with that observation.

By clicking on **“Timeline”** you will be able to see the result of your import.

Import video and data from Coding View over WiFi

If you have a mobile device with Codimg View installed and a computer with a Codimg license connected to the same Wi-Fi, you can transfer both the video and the view from one to the other using this tool.

In the main menu of the program select the route **“Tools > Import > Import Wi-Fi from iPad”**.

Next:

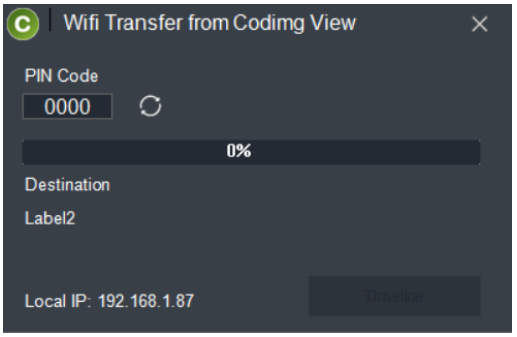


Figure 279: Importing video and data from Coding View using WiFi

Synchronize a watch with a video

If you have a watch whose clippings don't match the video time and you need to resynchronize it, this tool allows you to do so.

In the main menu of the program select the route **“Tools > Synchronize Database with a Video”**.

First, select the video and then select the video you want to sync. Choose the reference point and click on **"Synchronize"**.

Figure 280: Synchronizing database with a video

Compare videos

With Codimg you can compare two videos head-to-head, in a mosaic view.

In the main menu of the program select the route **“Tools > Compare Videos”**. Then select both files.

You can view these videos separately. Select each one independently. A red square in the upper left corner of the image will indicate that that video is selected.

When you start playback, the selected video will be displayed while the other will remain paused.

Additionally, this tool allows you to:

- **Synchronize.** With the icon You can link the two videos so they play at the same time. This is very useful if you want to sync them. Choose a specific time that both share.
- **Draw.** Click on the icon to open KlipDraw Basic.
- **Overlay.** With the icon the two videos will be superimposed on top of each other.

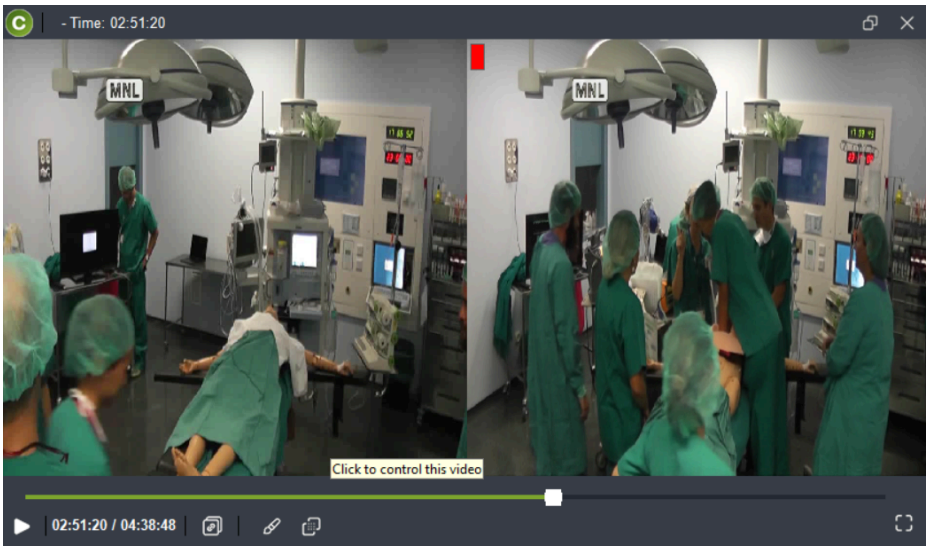


Figure 281: Compare videos

Video player

Codimg has its own external video player to view a file.

In the main menu of the program select the route **“Tools > Video Player”**. Next, select the video you want to play.

You have the same video controls as any other player within Codimg.

Re-index video

If a video capture is experiencing playback issues or a video cannot be played correctly in a non-Codimg player, re-indexing may be a possible solution.

This option is useful for the Codimg Support team, so for practical purposes it is not relevant to the user.

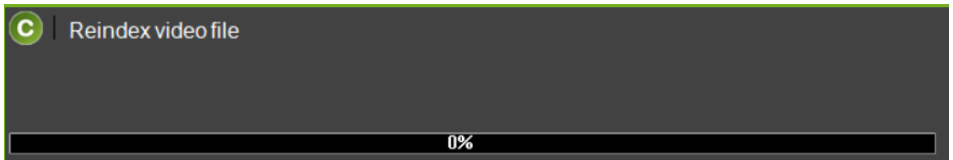


Figure 282: Process bar for re-indexing video

Join two or more videos from the same source

Codimg allows you to join two or more video files from the same source. This is very useful for joining multiple periods of an event clipped in different files.

In the main menu of the program select the route **“Tools > Quickly join videos from the same source”**. Next, select the different files you want to join using the icons in the top menu.

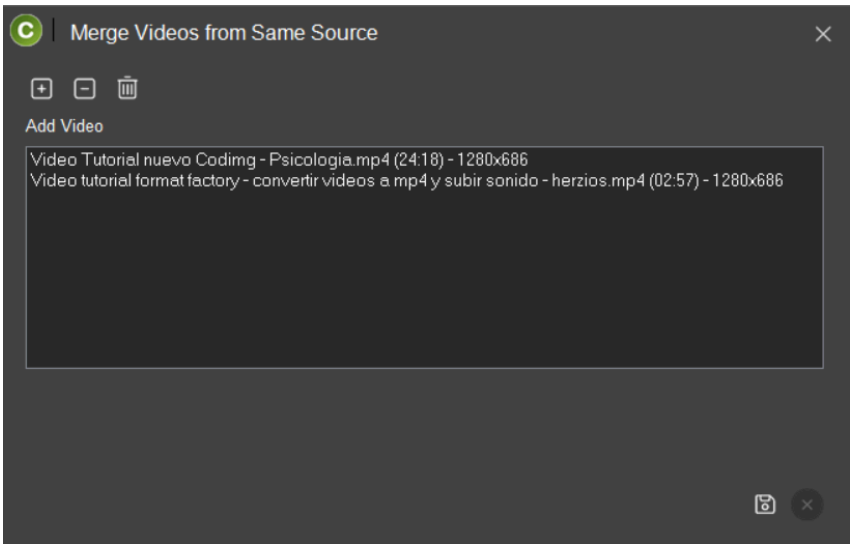


Figure 283: Join two or more videos from the same source

Once selected, you must click on the icon to give the merged file a name and location. The merging process will complete in a few seconds.

Merge videos and observations from the same source

Same tool as the previous one but in this case, it not only joins the videos, but also the observations (.nac) between them.

In the main menu of the program select the route **“Tools > Quickly merge videos from the same source and their observations (.nac)”**. Next, select the different files you want to join, both videos and observations.

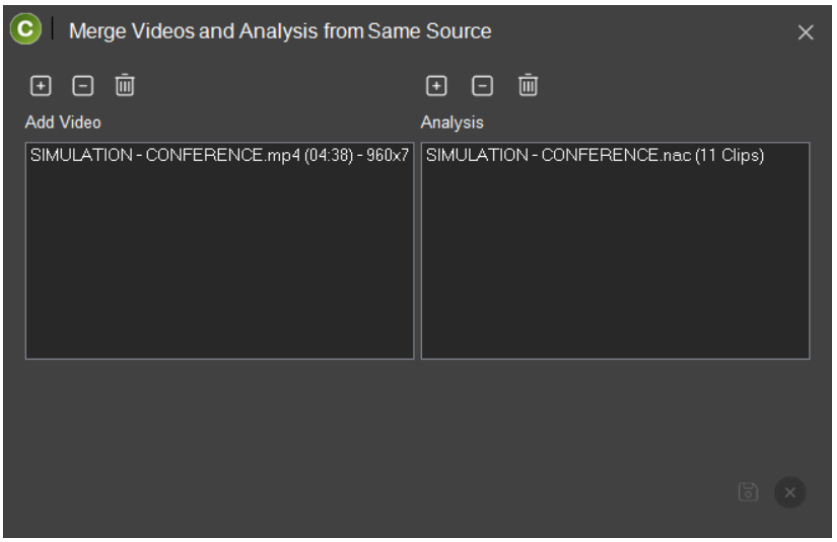


Figure 284: Merging videos and observations from the same source

At the top, you have several icons to add, remove, or delete videos and watch this option.

Once selected, you must click on the icon to give the merged file a name and location. The merging process will complete in a few seconds.

Note: You must place the videos and analyses in the order they are to be joined.

12. Configuration

In this chapter, we'll explain all the configuration options offered by Codimg. These options comprise various program parameters that will allow the user to have a more personalized experience with the product.

It consists of nine sections that you can reach via route **"Tools > Settings".**

General

This first section covers general aspects of basic program configuration, both in its basic day-to-day use and in the management of computer resources.

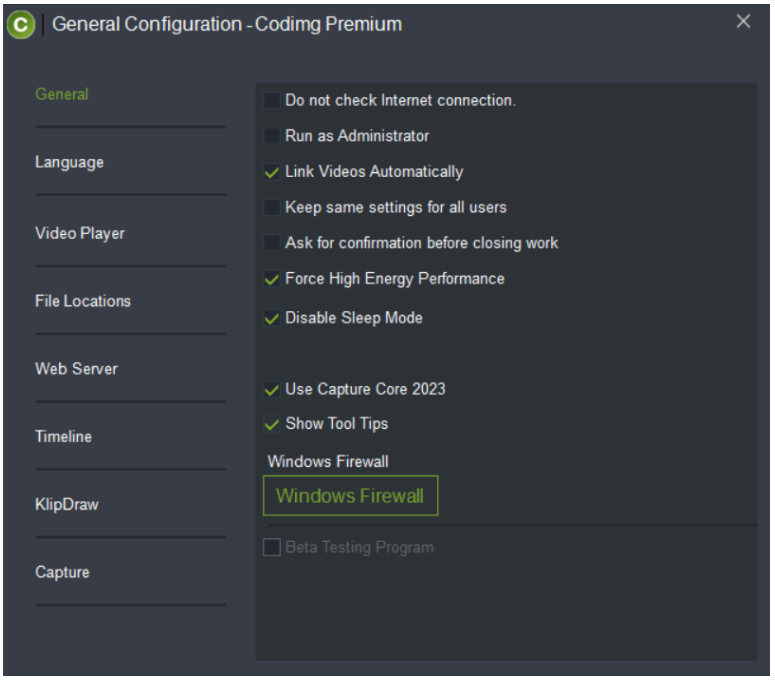


Figure 285: General Settings

Do not check the Internet connection. If this box is checked, the program will not check for an internet connection and, therefore, will not be able to check for automatic updates, download the manual, or access video help.

Run as administrator. With this box checked, the user will be able to run their license as an administrator, which means they will have full rights to perform any action with the program.

Auto-link videos. Allows you to automatically search and link videos with their analytics.

Keep the same settings for all users. If multiple users access the same license through different sessions, they will have different program configurations or the same ones depending on whether this box is checked or not.

Ask for confirmation when closing a workspace. Before closing the main environment windows, a floating warning window will appear to confirm the action.

Force maximum energy performance. While using Codimg, the program will force the machine to be at high performance so that its processes don't slow down because the computer is saving battery.

Avoid sleeping equipment. The computer will not go into sleep or hibernation mode.

Use capture module 2023. This tab should always be active. It's a configuration option intended for the Support team for potential testing or incidents.

Show Tool Tips / Do not show tool tips. Tool tips are descriptive text that appears when you hover over an icon or feature. If you don't want these tips to appear, uncheck this box.

Change font. Allows you to change the font of the program.

Firewall de Windows. Open Windows Defender Firewall. Option for the support team in case of technical assistance.

Language

Displays the program interface in the language selected from among the available options: German, Greek, English, Spanish, French, Hungarian, Italian, Japanese, Korean, Dutch, Portuguese, Turkish, and Chinese.

Figure 286: Language

The program must be restarted for the language change to take effect.

Video player

The tab **"Video Player"** provides you with various operations for using the tool's resources as well as its general configuration. You can also configure controls to manage the video.

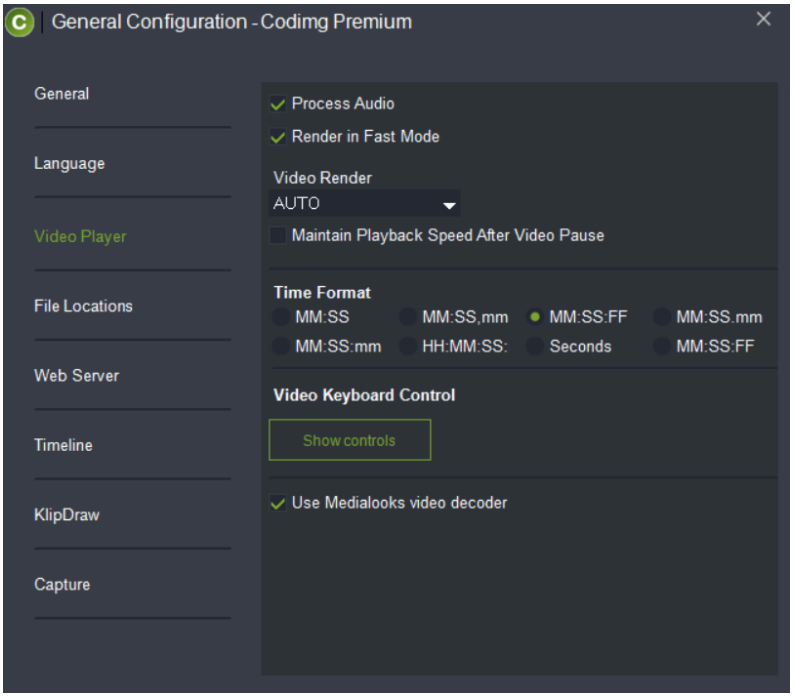


Figure 287: Video player

Process audio. To listen to the original audio of the video.

Video Render. In some videos (especially those in .mts format), the video may freeze and not play correctly. In these cases, it could be a rendering issue. Change the different options and test to see if it resolves the issue. There are four modes available: AUTO, RENDER 7, RENDER 9, and RENDER EVR.

Maintain playback speed after pausing video (Windows only)). If you use a speed other than x1, it will be maintained after any pause.

Time format. Decide how you want the video time to be displayed from the six available options.

Video controls with the keyboard. You can assign to certain keys**"jumps"**predefined video (i.e., using these keys to advance and rewind a number of seconds of your choice). Learn more about this option in the section dedicated to the video player in the chapter on the Timeline.

Use Medialooks video decoder. This is a Configuration option intended for the Support team for potential testing or incidents.

Storage directories

This section tells the program where to save each type of content: analysis, feedback sessions, button templates, and videos.

Codimg has a default structure (the active slider indicates this) for storing each of these types of content. Although we always recommend that all our users maintain this structure, you are free to change it at any time.

If you want to modify this information, you must change the state of the slider button and select the new path for the folders.

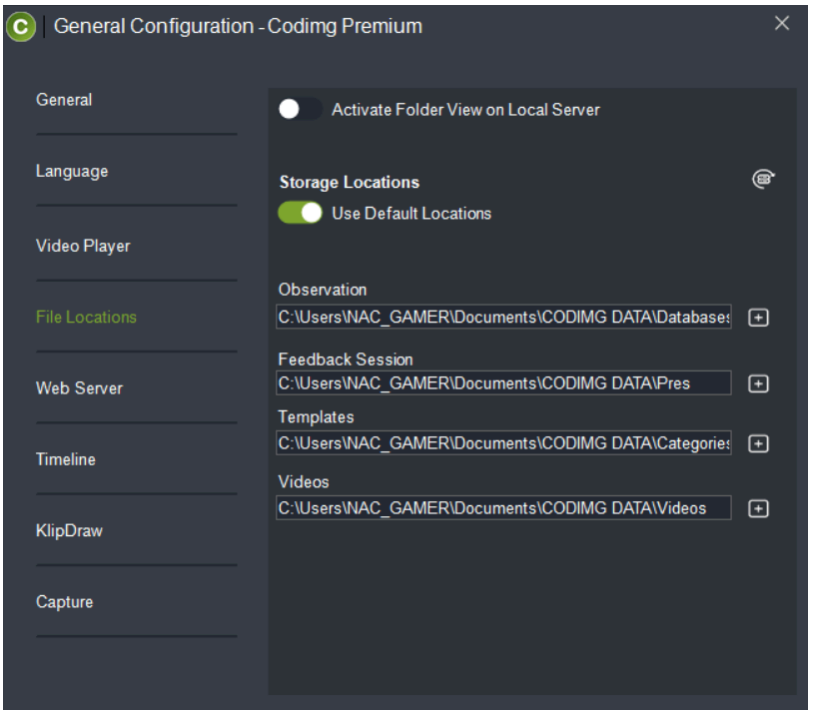


Figure 288: Storage Directory

If you have folders on a local server, you can activate the view using the slider at the top. If these folders are on a server, you must select the IP address as well as the main paths for the four content types.

Web Server

In this option, you can configure various settings related to live data transmission between devices. That is, sending information over a network from your computer to other devices.

The first part of the section allows you to configure aspects such as the port, additional start and end times, or the bitrate.

Next, you can decide whether to add a logo for connected devices. Here, you can select the file (.jpg, .jpeg, .png, or .bmp format) you want to add.

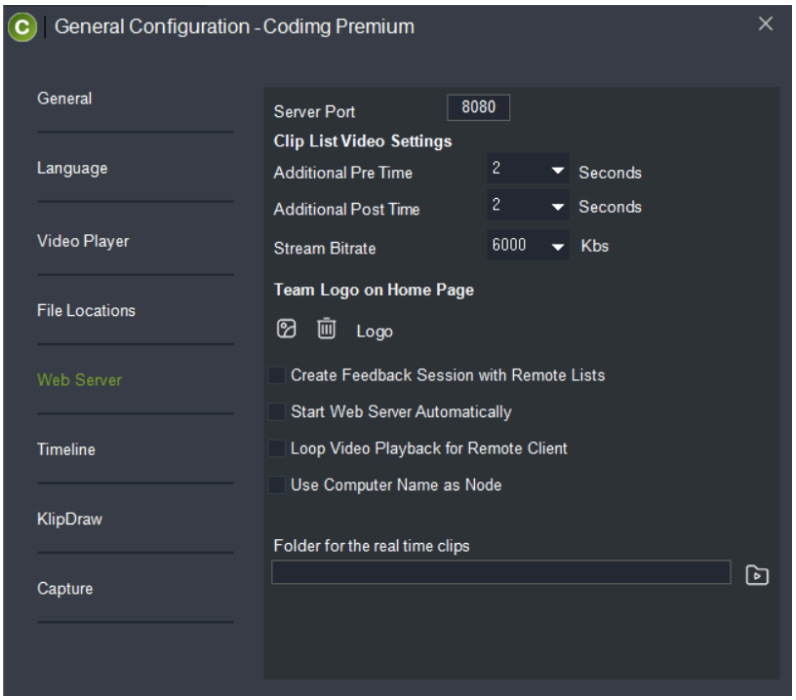


Figure 289: Web Server

Additionally, you have these options available:

Create feedback session with remote lists. At the end of a live Web Server session, a feedback session is created on the source computer. Each device will generate a list within that feedback session, including the clips you've marked as "favorites."

Start Web Server automatically. As soon as you start observer mode on your computer, the web server will connect automatically.

Videos on the client play in a loop. The data-receiving device will be able to view the clippings repeatedly. That is, when the clipping ends, it begins playback again.

Use computer name as node. Instead of using the IP address, use the name assigned to the device.

Folder for videos produced live. Select a folder to quickly save all the clips you've produced. We discussed this option in the Observation chapter.

Timeline

As the section name suggests, this chapter covers various aspects of working with the Timeline.

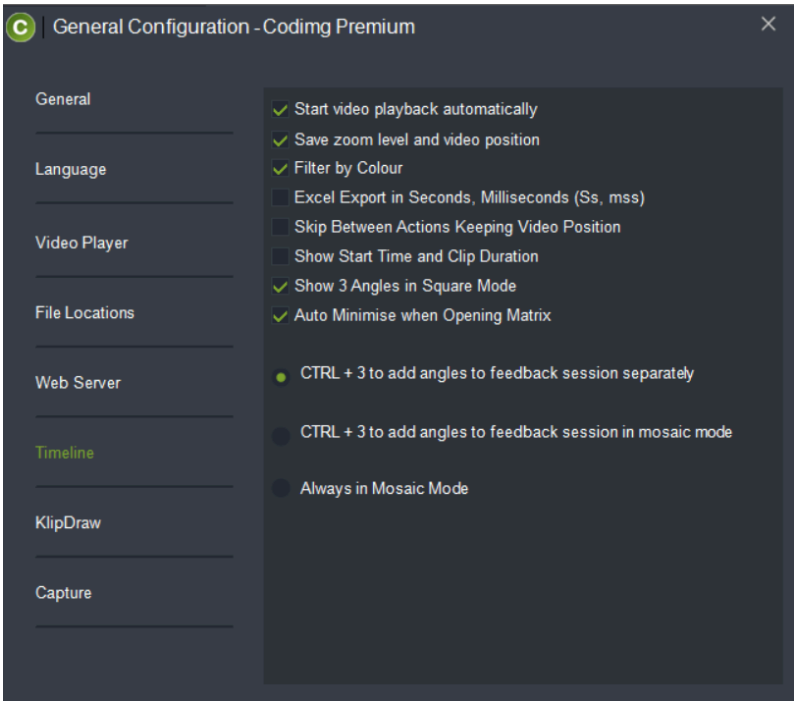


Figure 290: Timeline

Play video automatically when selecting a clip. When a clip is clicked, it will automatically play if this box is checked.

Save the last zoom level and position of the video. If the box is checked, the settings are retained after the video is played again.

Filtered by colors. To filter actions in the timeline by their colors. Otherwise, remove this option from the top toolbar.

Export to Excel in seconds and milliseconds. For sports with a very high level of precision, this option allows the export of data with that level of detail.

Jumping between actions maintains the video's position. If this box is unchecked, when you jump from one action to another in the Timeline, the first (chronological) clip in the action will start playing. If you want the video to continue playing at the current time, you must select this option.

Show Coding Hub icon. Displays the Coding Hub icon in places within the program where it is or is not present.

Display start time and duration of clipping. In the grid, replace the end time with the duration of the clip.

Display 3 angles in mosaic mode. When three angles are available in an analysis, they are displayed in a tiled format (two above and one below, with the fourth cell empty).

Automatically minimize the timeline when opening the matrix. The timeline is minimized as soon as the matrix is opened to avoid cluttering the screen with multiple open windows.

CTRL+3 adds clips with multiple angles to the feedback session / Always in tile mode. For analyses that include multiple angles, choose which type of action this key command generates: whether to send the tiled timeline clip to the feedback session or each angle as a separate clip.

KlipDraw

Codimg's default drawing tool is KlipDraw Basic. However, KlipDraw has two more advanced drawing tools: Animate, which allows for dynamic animations and drawings, and Motion, which allows for tracking in addition to animations.

KlipDraw Animate y Motion They can also be integrated into Codimg and use its tools to edit feedback sessions. To do so, you must have a paid license and activate it in this window.

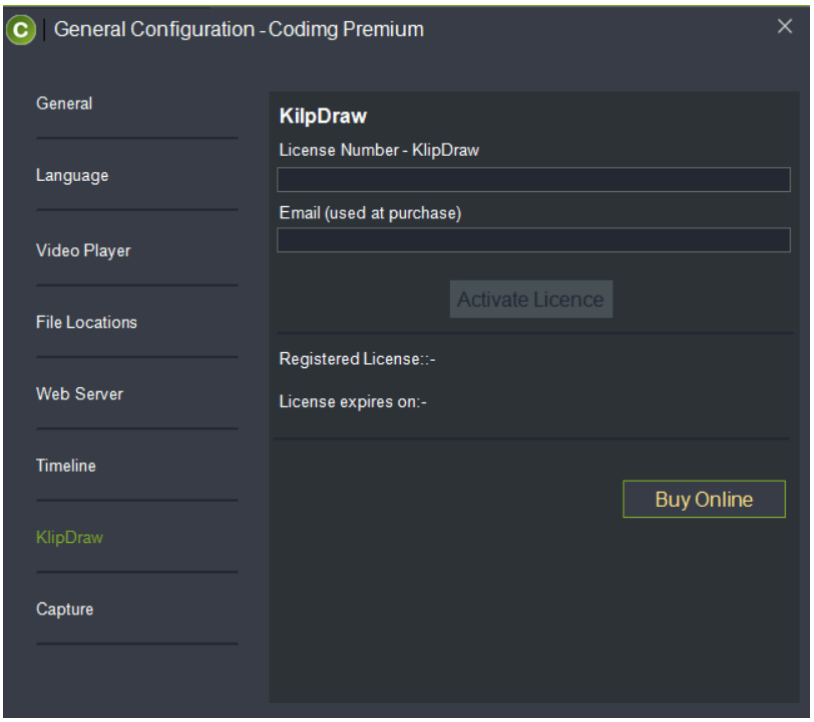


Figura 291: KlipDraw

Remember that they are two payment tools and you can purchase them on their website(www.klipdraw.com) as in the button you will find at the bottom of this section.

Capture

This section of the Settings menu refers to video capture on your computer.

First, you need to decide which folder the captured videos will be saved in. By default, this is the same folder where the rest of the videos are saved in Codimg, that is, the folder**"Videos"** inside Documents/CODIMG DATA.

Next, you must select the resolution of the captured video from the four available options. The higher the resolution, the better the video quality, but also the larger the video size.

The last two options include how often to send dashboards to Codimg Hub live (see Codimg Hub Manual for more information on this option). On Windows In addition, you have the option of generating a live XML file in the same folder where the video is saved.

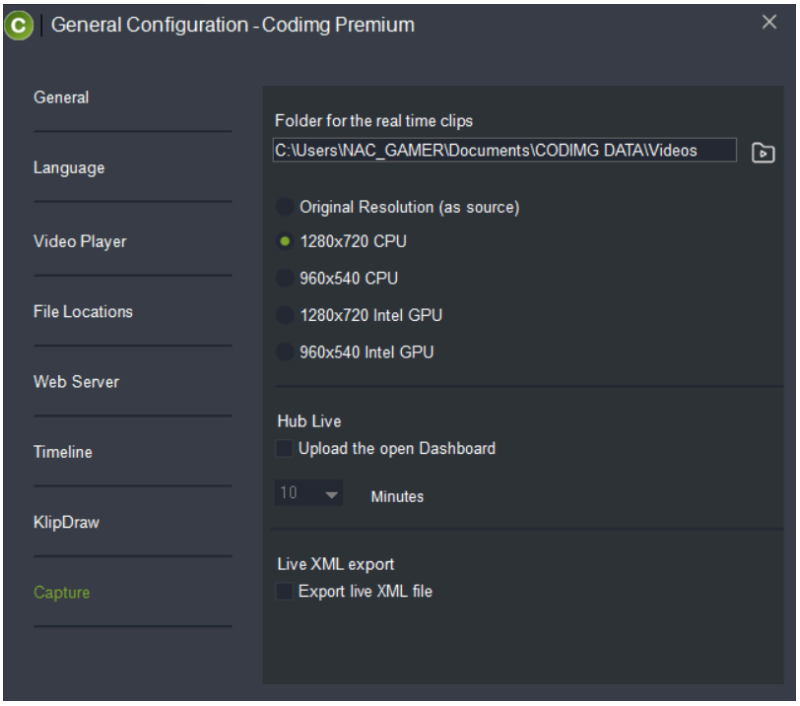


Figure 292: Capture

13. Help

At Codimg, we want to make access to the programs as easy as possible for our users. For this reason, we provide various resources to help you navigate the program's stimulating experience.

In this chapter, we will explain some of the tools available to users to continue progressing in the use of the program.

Support and resources

In this section within the start window we find some interesting options to continue taking steps in your learning of the program.

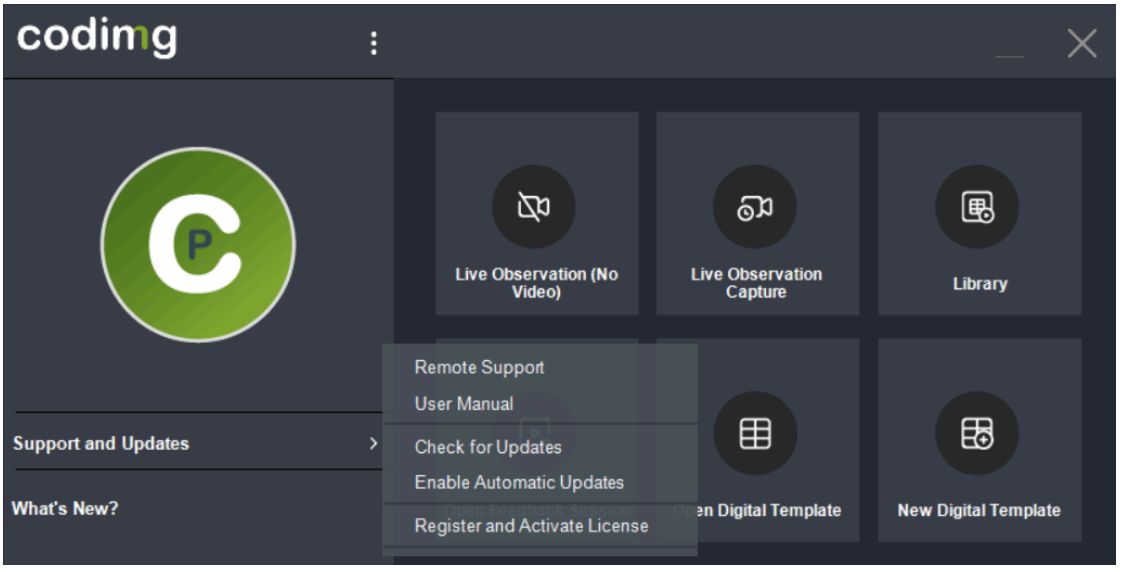


Figure 293: Support and updates

Remote support

If you need technical assistance due to an incident, you must contact our Support team through the Contact form found on our website.(www.Codimg.com).

Figure 294: Support and updates

Once you're in contact with our colleagues, you may need remote support. To do this, you must download the TeamViewer® tool on your computer.

When you run it, it will provide you with an ID that you must provide to our colleagues. With this code, the Support team will be able to remotely access your computer live to resolve your issue.

User Manual

Access this Product Manual directly from your license. You can download it to your computer or keep it handy from within the program itself. Throughout its chapters, it will answer all your questions about its use.

Codimg Hub Manual

In this document, we've referred several times to the Coding Hub online platform and its user manual. You can access this document from this section of the program whenever you want, or even download it to your computer in PDF format.

Video tutorials / Video Help

Codimg has an official YouTube channel where it features dozens of video tutorials that will help you visually understand how many of the processes explained in this Manual work.

Figure 295: YouTube channel: CodimgVA

Updates

At Codimg, we regularly update our programs, improving existing tools and adding new ones to make our programs better.

Therefore, it is recommended that you always update to the latest version.

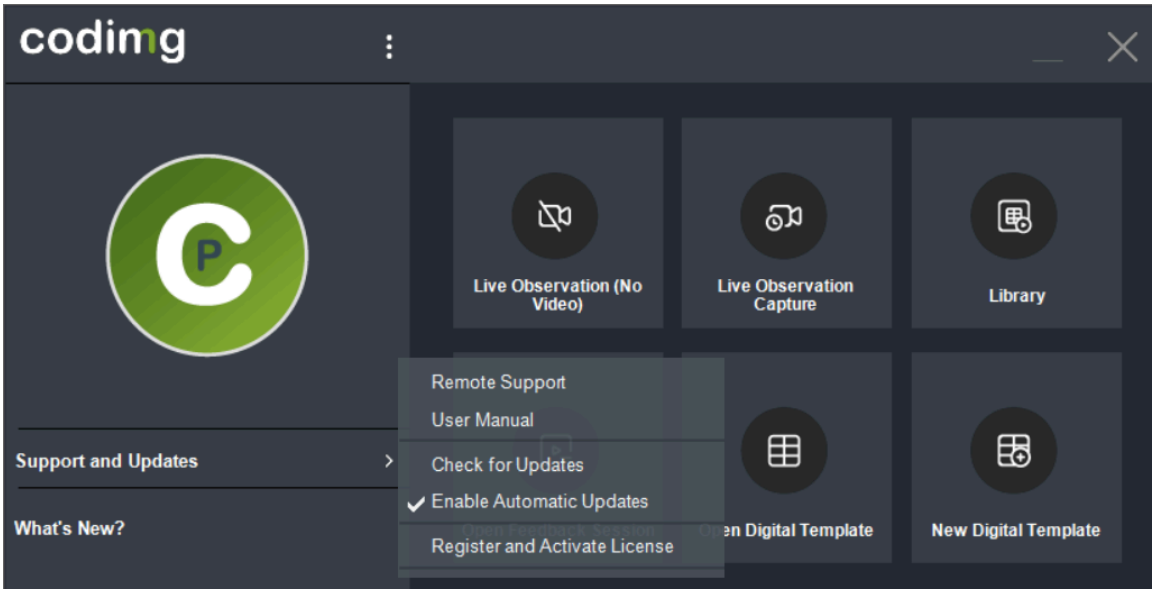


Figure 296: Automatic Updates

If you want your program to always be updated to the latest version we have published, you must activate the option **"Check for updates automatically"** Every time you run the program, your license will check for new updates.

If this option is unchecked, the search for updates is the user's responsibility and is a process that is performed manually by clicking on the option **"Check for updates"**.

***Use:** For this process to be carried out correctly, you must have an Internet connection and the option**"Do not check your internet connection"**in the Settings menu unchecked.

Codimg Version

If you are not sure which version of the program you are currently using and if you need to update, click on **"Support & License > Codimg Version"** A box will open showing your current version and the last update date.

License registration and activation

You can use Codimg without a license for 30 days. After that period, you must activate a license to continue using the program.

To carry out this process, you must go to **"Support & Licensing > License Registration & Activation"**
in the program start window.

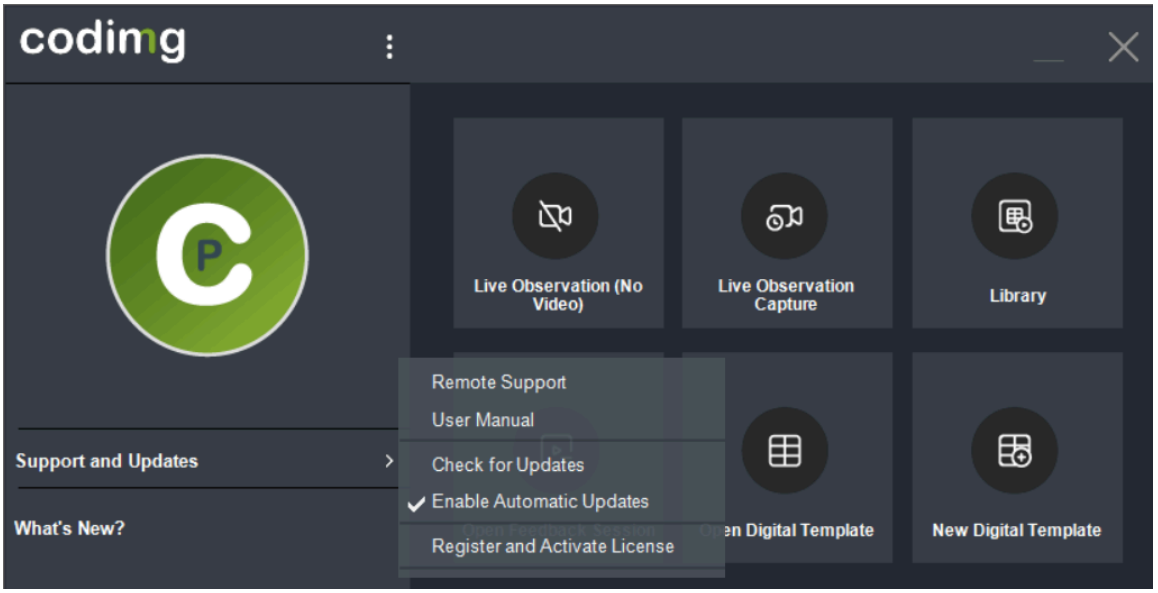


Figure 297: Register and Activate Licenses

Once here, you simply have to copy the license number and the corresponding email and click on **"Activate license"** The activation process takes just a few seconds.

If you want to use Codimg on another computer, you must first deactivate this license. You can do this by repeating the same process we explained in the previous paragraph and clicking on **"Deactivate license"**.

You can repeat this process as many times as you like. However, you'll need an internet connection to do so. A license can't be active on two computers at the same time, so you should always deactivate it before attempting to activate it on another computer.

What's new in Codimg

If you want to stay up to date with all the new features we're adding to the program, click on **"What's new?"** within the program's launch window. This will open a link to our website, where we offer a list of the latest public updates and related content.

codimg

Objective Video Feedback

www.codimg.com | info@codimg.com