



TRAINING

OPERATORS PRONEWS
VIDEO ASSISTANCE
VERSION 2.3

AUGUST 2019



TABLE OF CONTENTS

1.	INTRODUCTION.....	2
2.	XEEBRA 2.3.....	3
2.1.	Key Benefits	3
2.2.	Offside Line	6
2.3.	Other improvements	7
3.	SOFTWARE DOWNLOADS AND MANUALS	7

1. INTRODUCTION

With the growing interest in Video Assistance we've decided to update our newsletter structure, providing you with the latest updates about Video Assistance in a separate document.

Xeebra 2.3

In this newsletter we refresh the basic features of the Xeebra solution. The system gives officials and commentators quick and simple access to every angle of the action. Here, we highlight the latest features added in Xeebra 2.3.

- > Key benefits
 - > Easy operations
 - > Scalability
 - > Create/Export events
 - > Other Features
- > Offside Line
 - > AI-driven neural network
 - > Point & Zoom
 - > 3D line
 - > Second offside line
- > Other improvements
 - > Support for the new X-Client Hardware
 - > Hide/Display offside line events
 - > Freeze on out point option

2. XEEBRA 2.3



2.1. KEY BENEFITS

EASY OPERATIONS

Xeebra's operations are based around a clear, intuitive interface – making it simple to use. Operators or referees therefore need just a few minutes of familiarization before being able to use the application effectively.

Dynamic Layout



On startup, all the source cameras are automatically loaded into the Xeebra layout. This layout can be easily adapted by the operator/referee if they prefer a specific angle in a specific location on the screen.

Once the layout has been customized, he or she can select the most useful sources for review and have a more detailed look by expanding them. This action can be done multiple times, up to full screen view of the source. Choosing the angles is as easy as tapping the touchscreen and using the controller to browse backwards or forwards in the action.

If a Super Motion (3X) camera is used, more video is available during the review process, enabling the operator or referee to make the best call.



Presets of the main and secondary screen

On the main and/or secondary screen of the Xeebra Client interfaces you can set up your own presets. For example, when reviewing an action, switching between presets can give you a view of a specific set of cameras at a particular moment. This makes it quick and easy to look at the best angles at a specific moment in time.

Dual screen support with zoom functionalities

It's possible to use Xeebra on 2 screens, with each having its own customized layout and being controlled independently. This gives enhanced flexibility if 2 people are reviewing simultaneously. They are able to choose their own angles or work together on reviewing selections that ensure the best decision is made.



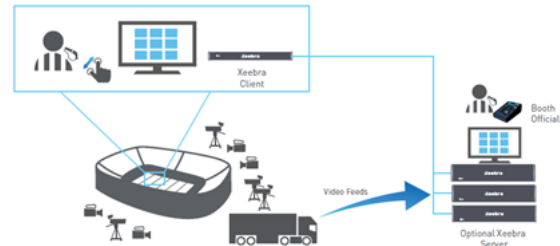
Operators or referees are able to zoom into the action for even more detail in a full screen layout, or when two sources are selected in side by side mode. From the release of Xeebra 2.2 onwards, you have the option to choose between a vertical or horizontal split screen. The zoom can be carried out directly on the touchscreen - using a pinch to zoom action – in exactly the same way as on smartphones or tablets.

SCALABILITY

The product is developed to make it scalable in different ways.

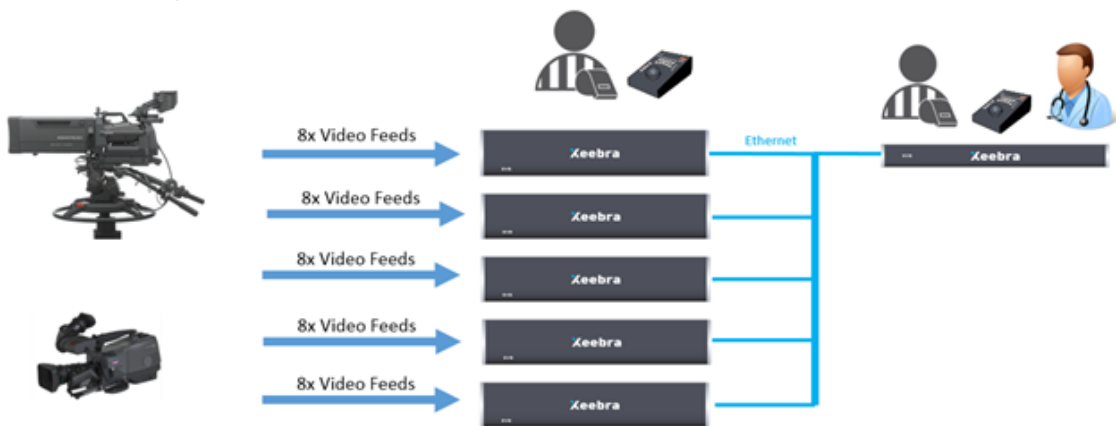
Client/Server architecture

The user interface for the operator doesn't have to run on the same machine as the sources that are being recorded. This means the Xeebra Client can be placed inside the stadium, even if the Servers are located in trucks outside the arena.



Stack to grow

To make it possible to easily add more sources to a review setup, the Xeebra solution can add up to 6 Xeebra servers and every server can have up to 8 video feeds in. Every server can handle up to 2 client interfaces. On the first screen a layout of up to 16 cameras can be made.



Support of SLSM 3x cameras

EVS provided the first system to record super slow-motion cameras on its traditional XT series servers. The Xeebra server is also able to record a 3x camera that gives the referee an even better view of the action as the video contains 3 times more frames than conventional cameras.

CREATE AND EXPORT YOUR EVENTS

During the show the operator can keep track of all the action in the Xeebra event list. It's also possible to recall these actions at any time of the game for review.

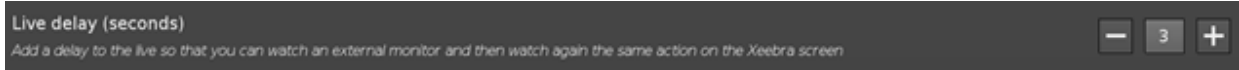
- > New Event: A mark is created at the current TC
- > Tag Live Actions: A mark is created at the Live TC.
This can be very practical if you might still be reviewing a previous action.
- > Clip: Mark an IN and OUT point to make a clip.

All events created during the show can be exported for later review of what the key moments were during the event. As the list is also linked to the video that is recorded on the Xeebra system, this can be exported to an external drive for later use in reviews or for archive purposes.

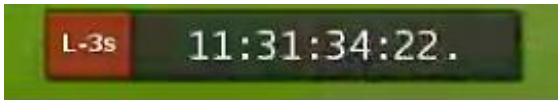
An Auto-Export Mode has been available since version 1.1, the export application will check at regular time intervals all newly created and recently modified events and will automatically add to the export queue those that meet the criteria set in a simple export rule. An auto-export rule is a text filter that can be applied to the events in the Event List. You can enter the rule in the text box that is provided in the bottom right corner of the Export application.

OTHER FEATURES

Live delay



While watching the live Program feed or another feed on an external monitor, it can sometimes be useful to add a delay to the client interface. So, when watching the Xeebra interface, a delay will be added based on the settings you have made. This delay can be set from the settings menu in the client software and is indicated in seconds.



Once this delay is set, the video will be delayed and the graphical representation in the TC field, at the top of the Xeebra Client interface, will show the delay that is used. In this example, there's a delay of 3 seconds.

Controllers



The BEPlay is used as the primary control to perform actions on the Xeebra. In certain setups an operator and a referee are using the Xeebra system at the same time. Therefore, a second controller can be added in the shape of a Shuttle Pro. If space doesn't permit, the Shuttle Pro can be used as the primary controller.



XKeys can be configured for extended operations to your specific needs.

Audio ingest and export

Since Xeebra 2.0 it's possible to ingest up to 8 embedded audio channels per input. These inputs can be configured in the server config: 2, 4 or 8 audio tracks can be selected. Currently internal routing isn't supported, meaning that what's been ingested is exported on the same channel.



2.2. OFFSIDE LINE

EVS' video refereeing system also uses machine learning technology, enabled by VIA Mind, to calibrate the field of play. This means users can accurately overlay an offside line for video assistant referee (VAR) operations in soccer. Xeebra provides everything referees need to make the right call.



The offside line is based on a neural network that automatically detects the field. If the detection fails or the operator isn't satisfied with the rendering, he or she has the option to reposition the field through dragging points using the Point & Zoom calibration.

To use the Point & Zoom method you need to be in the manual calibration mode (if required, press **R** on the keyboard to enable). You can then match one virtual anchor point of the wire frame to the real position on the field. Use **CTRL + SHIFT + Scroll** to align the wireframe to the field. If you need to align more precisely, you can

use **CTRL + Scroll**.

Since version 2.1.1 a 3D line is available, allowing the referee to more precisely ascertain if a forward player is offside or not, based on their entire body.

You can easily change the position of the virtual offside line in different ways:

- > Drag the offside line left or right using your mouse or touchscreen
- > Press the keyboard short cut keys ←-or-→.
- > Press the JOG button on your BEPlay remote and move the jog dial clockwise or counter-clockwise
- > Move the inner wheel of your ShuttlePRO device clockwise or counter-clockwise
- > Tap the on-screen Browse Bar



When positioning the offside line using your mouse or touchscreen, a zoom window will help you to perform the action more accurately.

The use of a second offside line has been made available since Xeebra 2.1.1. The second offside line allows the referee to highlight the area between the defender and the forward.

Here's how to use the second offside line:



- > Click and drag with the mouse left cursor to set the defender line.
- > Click and drag with the mouse right cursor to set the forward line.
- > An area between the 2 lines is now created:
 - If the area is red, the forward is offside
 - If the area is blue, the forward is safe

2.3. OTHER IMPROVEMENTS

Since Xeebra 2.2 we've introduced a new small form factor client workstation that is quieter and smaller than the previous 1U hardware client. The new client workstation can be placed behind the touchscreens.

Also since Xeebra 2.2 it's possible to hide or display offside line events. When reviewing past events the VAR Team can hide or display the offside line overlay easily by a keyboard shortcut - pressing the **W** button.

A Freeze on out point option has been added in Xeebra 2.2. Now you'll be able to play an event and freeze on the last frame. This feature is available with the BEPlay remote, as a keyboard shortcut **F** and in the interface.



3. SOFTWARE DOWNLOADS AND MANUALS

Please refer to the [Support Page of the EVS Website](#) and the Download area for manuals, release notes and software packages to download.

If you don't already have an EVS login, you'll be invited to create a personal EVS account, to help ensure that you're kept up to date with only the most relevant information and updates. This will also allow you to download all the information you need, completely free of charge.