GUIDELINES FOR THE USE OF OFFICIATING TECHNOLOGY

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I. THE IMPLEMENTATION OF OFFICIATING TECHNOLOGY IN EHF COMPETITIONS

INTRODUCTION

Advances in technology have had a profound impact on handball including enabling referees and delegates to make better decisions according to the Rules of the Game.

The referees in a match have full authority to enforce the Rules of the Game, consequently being exposed to controversies when it comes to interpreting a given situation. The use of technological officiating aids aims to enhance the overall quality of the refereeing in handball.

By having improved decision-making by referees, the integrity of the game is protected and more qualitative content for fans is produced.

ADVANTAGES

Benefits of technology in handball officiating:

- Technology supports a team approach so there is less pressure on individuals.
- Information is shared easily and quickly and stored over time.
- Decisions and scoring are more reliable and accurate.
- Increases confidence and trust in officials.
- Promotes integrity and reliability.
- Leads to more coverage and revenue.
- Spectators get more engaged in the sport, and more informed about the rules.

Constant support for the referees, fewer protests from players, officials and spectators, and off-the-ball incidents

MAIN PRINCIPLES

- Referees must continue to make decisions based on their observations of the facts.
- The philosophy is: “Minimum interruptions - Maximum benefit”.
- The aim is: “Stop the headlines” and not “re-referee the match”.
- The decision will be changed only if the video review shows a clear error or a serious missed incident.
- The referees are the key match officials as the referees (and not the video) will always take the final decision.

WHY WAS THE TECHNOLOGY INTRODUCED IN HANDBALL OFFICIATING?

- The implementation of video replays in handball has been a demand of teams, fans, and the Media since the technology was adopted in the sport.
- Teams want correct decisions
- A single decision can change completely the result of a match.

MEANS

The technological devices assisting officiating in EHF competitions are:

- The wireless referee communication system.
- The goal line proof.
- The goal light technology.
- The electronic team timeout request system (“buzzer”).
- The substitution area control technology (micro cameras).

Other technologies used in EHF competitions:

- Ball tracking technology (iBall)
- Player and referee tracking technology
- Match video analysis system
- Digital scoresheet (video scoresheet)
- RefCam®

II. DEFINITION OF TERMS

DEFINITIONS

For these regulations, the following definitions apply:

Electronic team timeout system ("buzzer"): An electronic team timeout system is used instead of the team timeout "green" cards. A button is linked to the official scoreboard system, and, when pressed, the time is immediately stopped. The timeout is also indicated by an audio signal (buzzer).

Goal-light technology: A series of (red) LED lights installed at the rear bars of the goal which light up at the same time as the buzzer sounds for team timeouts and at the end of each half.

Goal-line technology: The means of instantly determining whether the entire ball crossed the goal line.

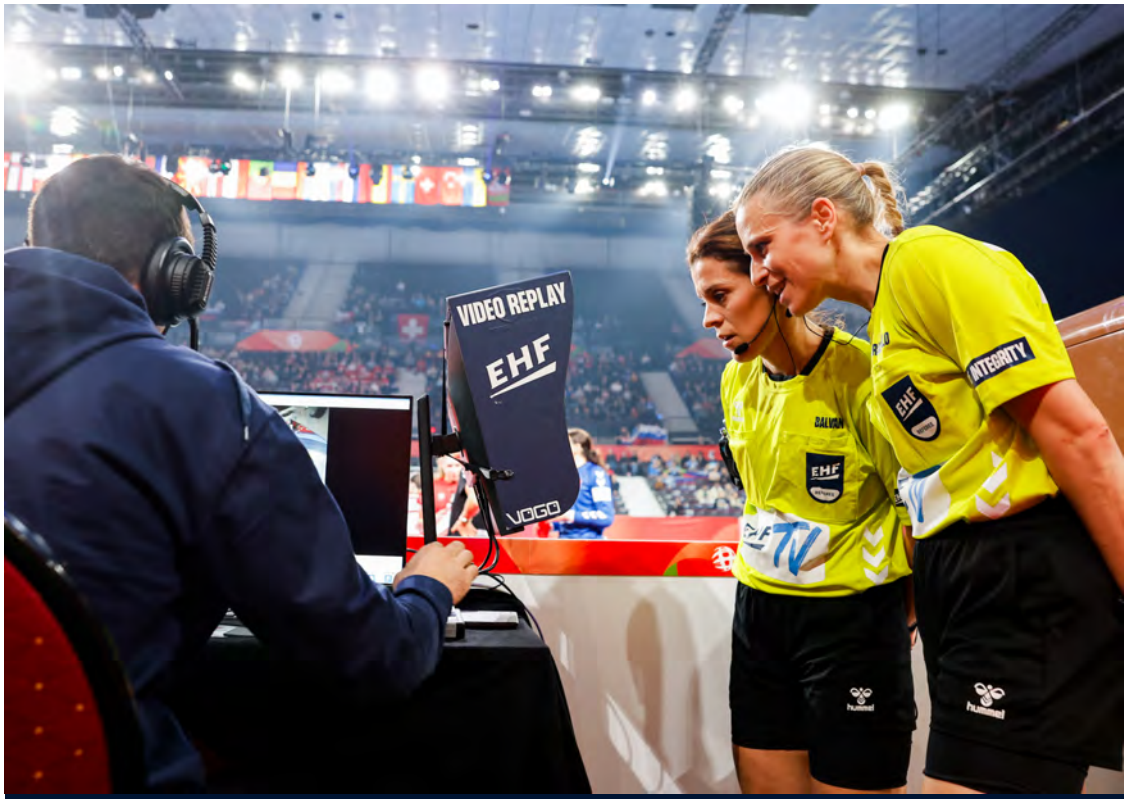
Video replay (VR): A video recording of an action (such as a play) that can be played back (as in slow motion) immediately after the action has been completed, offering the referees the possibility to watch a situation on TV before reaching a decision.

Officials: The EHF referees, delegate(s), and Table officials (scorekeeper and timekeeper).

Referee radio communication system: A wireless communication system is used by the referees to stay constantly in contact with each other and be able to communicate about all crucial decisions during a match.

Substitution area technology: A system (micro cameras) providing a detailed view of both substitution areas, offering video assistance in case of decisions that concern the substitution areas.

Table: The EHF delegate(s), the scorekeeper, and the timekeeper.



III. THE USE OF THE VIDEO REPLAY (VR)

INTRODUCTION

Video replays will only get better at deducing what the human eye cannot, and reduce the number of controversial outcomes in games. EHF uses video reviews to varying degrees, to aid officials in making the right calls.

Video replay offers the possibility to the referees to immediately watch a situation on a TV screen if they were not able to see the complete action on the court and if they wish to check again before reaching a decision. This specifically refers to key-match situations where the referees decide to consult the TV picture in addition to their view on the court.

SITUATIONS IN *W*HICH THE VIDEO REPLAY (VR) CAN BE USED

	SITUATION	DESCRIPTION
1	Goal/ No Goal	Determine whether (or not) the ball has completely crossed the goal line
2		Determine whether the time has expired before (or after) the ball has completely crossed the goal line
3	Serious and unfair actions *(without the ball)*	Situations without the ball, occuring outside the referees' line of sight
4	Disqualification *(red card)*	For the referees to accurately identify the jersey number of the guilty player
5	Conflict on court	A confrontation involving two (or more) players (and the referees have serious doubts on which player(s) should be punished)
6	Faulty substitution	That is not clearly identified from the Table
7	Simulation	If the referees have serious doubts regarding whether a player should be given a progressive punishment or if a player is attempting to mislead the referees through simulation
8	Rule 8	If the referees have serious doubts about whether a 2-minute suspension or a disqualification under Rule 8:5, 8:6, 8:9, 8:10, or 8:11 shall be given
9	Game changing situations in the last 30 seconds of the match*	If the referees have reservations about a 7-meter throw decision or a technical foul commit-ted by a player scoring a goal
10	Electronic team timeout *(buzzer)*	In the case of a technical malfunction of the elec-tronic team timeout, uncertainties by the delegate or referees as to which team had possession of the ball when the buzzer was pressed, or doubts by the delegate as to who pressed the buzzer
11	Other	In the case of a decision that may lead to a protest

***Including throws taken after the final signal**

REMARKS

1. In all circumstances, the referees must take a decision based on their observations of the facts as they relate to what they see on the court. VR is only used when the referees have serious doubts about taking the correct decision or when, for various reasons, they are unable to view the situation well on the court.

2. If the referees observe another situation during the VR review in which an incorrect decision was taken or a foul was not called, they must correct that decision based on the facts verified in the VR. This is only applicable to situations that occurred at the same time as the reviewed situation or immediately before it.

3. The main purpose of using the VR is to reach correct decisions. If the referees see that there was no violation during the VR review, they are allowed to decide play on. However, if the use of VR is provoked by a simulation/overreaction by a player or an official, it is considered as unsportsmanlike conduct and shall be punished in accordance with Rule 8:7-10.

4. The delegate(s) may only use the VR in instances involving points 6, 10, and 11, or in situations involving disqualifications that occur outside of the court. They can request that the referees use the VR in a situation involving point 3. In all other situations the delegates are allowed to advise the referees to use the VR.

5. In principle, the decision about the use of VR must be taken in direct connection with the situation that is to be reviewed. It is not possible to use the VR after the ball has changed possession twice after the situation in question or after the corresponding throw in connection with the second change of ball possession is executed.

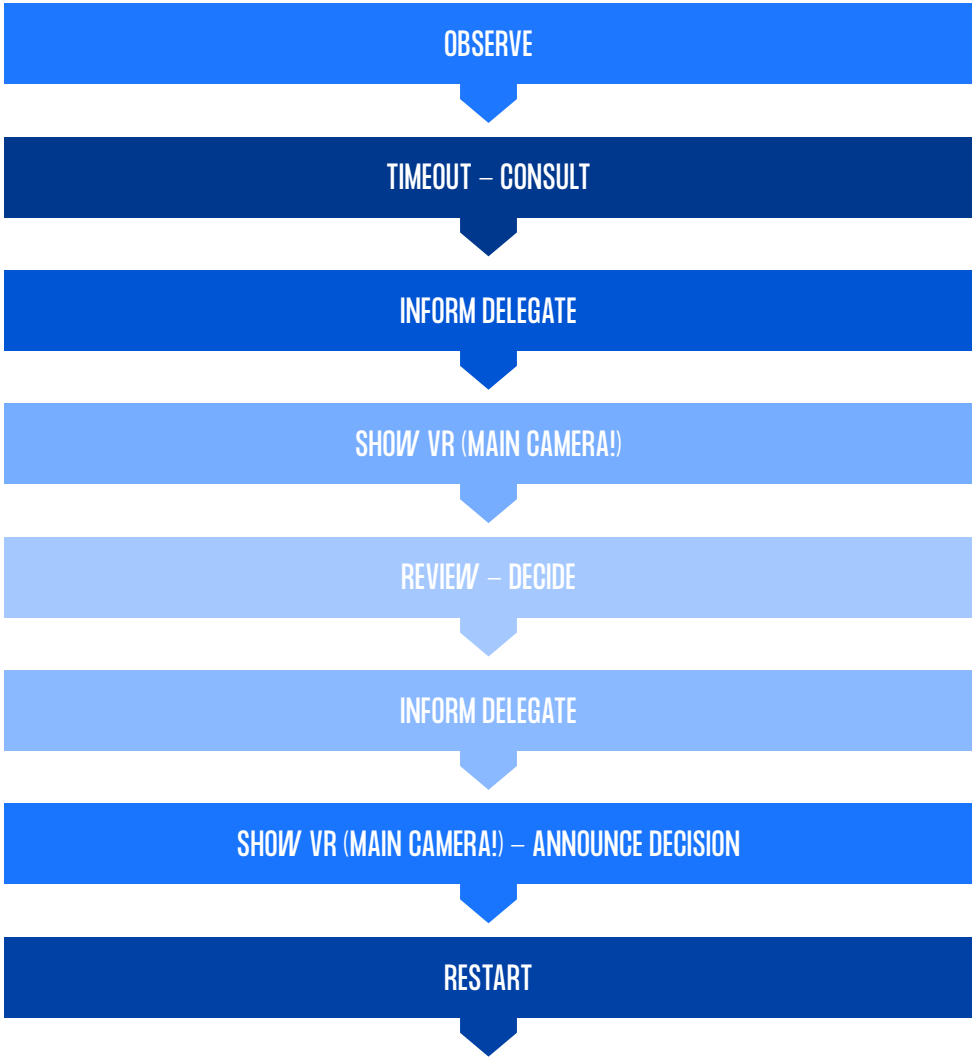
6. If a VR takes place in connection with the final signal of the first half, overtime periods or the end of the game, all players and officials must remain in the substitution area until the decision has been announced by the referees.

7. In case a VR review is requested by the delegates, one of the referees shall participate if the decision also concerns the restart of the game.

8. If applicable, the decision to use or not the VR is within the full discretion of the referees and the delegates concerned. Factual decisions made by the referees or the delegates during the review on the basis of their observation are final. Progressive punishment(s) according to rules 8:7 and 8:8 will be given to players or team officials who aggressively make the “VR” signal to a match official.

PROTOCOL TO FOLLOW

STEP	ACTION
1	Both the delegate(s) and the referees may be able to request the VR. Time-out is mandatory
2	The referees will call for a timeout and show a public signal (“VR”) as information that the situation is being analyzed with the VR
3	The referees consult with the delegate(s) and explain why the VR will be used. If the use of the VR in the given situation is not permitted under the Rules, the delegate(s) must intervene
4	While and until a decision is taken, both referees will be at the VR screen while the delegate(s) will control the players and team officials
5	After the VR review, the decision of the referees can be taken (or corrected) only if the VR provides clear and conclusive visual evidence
6	If the referees are not able to decide because the VR is not conclusive, they must decide according to their observation of the facts. The referees are permitted to seek advise from the delegate(s) if they have serious doubts
7	If the VR has been requested just before or at the end of any half of the match, including overtime, the referees shall keep both teams on the court until a decision based on the VR has been taken
8	A VR review shall be carried out as fast as possible. The duration may be extended if technical problems appear with the VR
9	After the VR review has ended, the final decision shall be clearly communicated by the referees to the responsible team officials of both teams, the Table, and the public in the arena
10	During the VR review, only the referees (or the delegate(s) may be at the VR table/screen, while no non-authorized people are allowed at the VR table/screen
11	The delegate(s) and the referees must check the VR equipment in advance sufficiently before the beginning of each match
12	The delegate(s) and the referees must follow the basic principle to have the fewest possible interruptions



TASK DISTRIBUTION FOR EACH VR SITUATION

SITUATION	WHO CALLS FOR USING THE VR	WHO TAKES THE FINAL DECISION
Goal or no goal, the decision if the ball has crossed the goal line completely	Referees	Referees
Goal or no goal, if the time has expired before or after the ball has completely crossed the goal line	Referees	Referees
Serious and unfair actions that occur outside of the referees' line of sight and without the ball	Referees, delegate(s)	Referees
If the referees show a red card (disqualification) to the wrong player	Referees	Referees
In case of confrontation involving two or more players	Referees	Referees
If a faulty substitution is not clearly identified by the Table	Delegate(s)	Delegate(s)
Team timeout buzzer (mis)use	Delegate(s)	Delegate(s)
If the referees have serious doubts about whether disqualification under Rule 8 should be imposed, they must do so	Referees	Referees
When the referees have strong doubts (or the delegate(s) call(s) them) in the last 30 seconds of the game for an action under rules 8:11a or 8:11b	Referees	Referees
In the case of actions in the last 30 seconds of the game with an empty goal (if the referees are not sure whether a 7m-throw must be granted)	Referees	Referees

IV. THE ELECTRONIC TEAM TIMEOUT SYSTEM *(BUZZER)*

INTRODUCTION – DESCRIPTION

An electronic team timeout system (which means that each team can request a team timeout directly by pressing a button on an electronic device) can be used at the EHF Competitions (instead of using the team timeout “green” cards). The button is linked to the official scoreboard system. When the button is pressed, the time is immediately stopped and the team timeout automatically begins. The timeout is also indicated by an audio signal (“buzzer”) to ensure that all parties are aware of it.

The moment of pushing the buzzer is valid for the time of the request of the Team Time-Out. The buzzer is placed at the Table, one toward the substitution area of each team.

RULES

The general rules regarding the number of team timeouts apply and a team timeout can only be requested if ball possession is not changing.

Only Team Officials have the authority to ask for a team timeout.

In the event of a mistake (or misuse) of the team timeout, the following rules will apply under the new system:

1. If a team requests a team timeout while the opposing team has possession of the ball, regardless of whether the ball was in or out of play, the following punishment and decision will apply:
a. Progressive punishment for the team official who requested the team timeout.
b. 7-meter throw for the team in possession of the ball.
c. The team that caused the faulty team timeout will be penalized with one (1) team timeout (the total number of team timeouts will be reduced by one).

2. If a team requests a team timeout while the opposing team has possession of the ball and has a clear chance of scoring, the following punishment and decision will apply:

a. A disqualification according to rule 8:10b (red and blue card) is given to the team official who requested the team timeout by pressing the button (see, however, paragraph 9).
b. 7-meter throw for the team in possession of the ball.
c. The team that caused the faulty team timeout will be penalized with one (1) team timeout (the total number of team timeouts will be reduced by one).

3. If the situations described in paragraphs 1, 2, 6 or 8 occur in the last 30 seconds of the game, the responsible team official will have the right to the option of throwing a 7m-throw or keeping possession of the ball.
If the decision is made to restart with a free throw, the game will be restarted from where the ball was at the time of the interruption.

4. If a team requests a team timeout immediately after losing ball possession and it is clear that it was not intentional, the following decision will be made:

a. The team that caused the faulty team timeout will lose one (1) team timeout (the number of total team timeouts will be reduced by one).
b. Technical decision based on the court situation at the time of the interruption.

5. If a team requests a team timeout while in possession of the ball in any of the following situations:

a. A fourth (4th) team timeout has been requested.
b. During the last five (5) minutes of the game, a second (2nd) team timeout is requested.
c. In the same half, a third (3rd) team timeout is requested.
d. In overtime, a team timeout is requested.
e. During the same attack, a second (2nd) team timeout is requested,
the following decisions will be taken:

If the ball is **in play** at the time of the interruption, the following punishment and decision will apply:

a. Progressive punishment for the team official who requested the team timeout by pressing the button.
b. The game is restarted with a free throw for the opposing team.

If the ball is **out of play** at the time of the interruption, the following punishment and decision will apply:

a. Progressive punishment for the team official who requested the team timeout (see, however, paragraph 9).
b. The game is restarted with the throw that was to be executed before the interruption.

In case of 5c and 5e, the team that caused the faulty Team Time-Out will lose one (1) Team Time-Out (the total number of Team Time-Outs will be reduced by one).

6. If a situation described in paragraph 5 occurs while the other team has possession of the ball, the decision will be made under rule 8:10b, and a 7-metre throw is awarded to the team in possession of the ball.

7. If the buzzer is activated by accident, there will be no punishment for the person that activated it. The match will be restarted with the throw that corresponds to the situation on the court at the time of the interruption. The Officials of the match must decide, after examining the circumstances (using the video replay, if available).

8. If a player intentionally presses the buzzer the following punishment and decision will apply:

a. Personal punishment for the guilty player under rule 4:6 or 8:10b, depending on the conditions on the court at the time of the interruption.
b. The match is restarted with a free throw for the opposing team if the ball was in play and the guilty team were in possession of the ball at the time of the interruption, and a 7-meter throw if the oppo-sing team were in possession of the ball at the time of the interruption.
c. The team that initiated the faulty team timeout will be docked one (1) team timeout (the total number of team timeouts will be reduced by one).

9. If the delegate(s) or the referee(s) do not recognize who has caused a faulty team timeout, the responsible team official will receive the punishment according to the above-mentioned punishments.

10. In the event of a technical malfunction of the device, a team official may request a team timeout by approaching the Table and making the request orally. The moment of pressing the buzzer is valid for the time of the request of the team timeout.

V. THE REFEREE COMMUNICATION SYSTEM

INTRODUCTION

Communication among the members of a referee pair is vital to taking the necessary and the right decisions. People expect the decision to be fast, clear, and correct. With the use of a wireless communication system, the referees are constantly in contact with each other and able to communicate about all crucial decisions during a match. The headset has become their number one communication tool in handball refereeing and over the years, the efficiency of the system has become better and better.

THE ADVANTAGES OF USING THE *W*IRELESS COMMUNICATION SYSTEM FOR THE REFEREES

- Better game control
- Better reactivity
- Optimized game management
- Better and easier to communicate with each other with controversial decisions
- Quicker decision-making
- Better teamwork
- There's always an option to get advice

TIPS FOR EFFECTIVE USE OF THE *W*IRELESS COMMUNICATION SYSTEM

A. Pre-game:

- Wear the unit during warm-up to ensure your comfortability with it while running.
- Ensure that Unit 1 is powered on so that the entire crew can test the set before the game. Unit #1 is required to be on for the system to function.
- Adjust volume to your environment to ensure audio quality.
- The communication between officials must be treated with the highest level of security. The only exception to this policy is if a delegate is planned to be part of it.
- Make agreements before the game about words you'll use (example: Which word will you use when you don't know?). Try to avoid different phrases to tell the same. Repetition of the same phrases goes better than using different words with the same meaning.

B. In-game:

- When speaking, **speak slowly** and **clearly** and **use short phrases** as much as possible.
- Don't mention **unnecessary things**.
- **Be precise**. Saying just the fact that a player fouls his opponent is not enough (example: "Holding, pivot #12 blue"). Always mention who the offender is.
- **Avoid negatives**, except for "No, no no" (example: "No foul" -> if the first word doesn't come through, it is an entirely different message).
- Repeat what you're **saying 3 (three) times** (example: "No, no, no", "foul, foul, foul").
- Only offer input **when you are 100% sure** (example: "2-minutes to #19" as opposed to "That looks 2-minutes from where I'm at").
- Referees should **let their partner know** when they are caught on a counter by saying "Help help help" when the referee is asking the partner to decide on a potential foul and "I'm here" when the referee is back in a credible position.
- **Avoid speaking** at times when your partner is focused on something else.
- Rerefees should **remove the piece** if conversing with a coach at a stoppage in play.
- Referees should always **acknowledge communication** and vice versa.
- The system **does not replace basic practices**. If there is a decision that requires an in-person conversation or in-between the referees consultation, such as a controversial goal, take the time to go over it and have the conversation

C. Potential uses (examples):

- Relay the game clock time and status (example: „Time remaining?").
- Transmitting the time remaining on the play clock (example: „10 seconds").
- Foul called, team, and number (example: „Red card, green, 73").
- When a serious foul is called, the calling official should ask „Did you see the hit on white 84?".
- To confirm the score after a game stoppage (example: „Score is now home 21 visitors 7").
- When a referee is asking his partner to talk to a player on his/her behalf (give some details, briefly) (example: „Ask red 65 to keep his hands off the opponent").
- Confirming the details before announcing a penalty (example: „What was the player's number again?").
- Transmitting the ball position (example: „Ball is out").
- Mechanics snafus, e.g.: The partner is in the wrong position or did something wrong („Jim, that was your out-of-bounds").

D. Prohibited uses:

- Profanity, anger, and opinions of the teams.
- When you would interrupt your partner's communications, e.g.:
  - Your partner is giving (or about to give) penalty announcements (unless you urgently need to correct a significant mistake).
  - Your partner is talking (or about to talk) to players or coaches.
- Ambiguous messages, e.g.:
  - Talking about a team or an action without identifying a team by its color or as offense/defense.
  - Talking about a player without identifying him by team and number.
  - Talking about a side or end of the field of play without being specific.

CLOSING COMMENT

Over the course of the last few years, technology has permeated handball, reshaping the way people think about the sport and presenting a wide array of possibilities.

Handball, as an elite, high-profile sport is turning to technology to provide tools, mechanisms, and processes which can be used by referees as an aid to confirm their "on-field" decisions.

The EHF will always ensure that technology is used to the best of its potential to improve the quality of the handball experience on and off the floor or the sand.

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