

Hamburg - Local Division

UPC_CFI_151/2024 Final Order of the Court of First Instance of the Unified Patent Court delivered on 03/06/2024

HEADNOTES

- As soon as a patent proprietor has knowledge of the alleged infringement, it must investigate it, take the necessary measures to clarify it and obtain the documents required to support its claims. A longer period (here almost three months) without significant efforts to clarify the possible patent infringement has to be considered as not treating the matter with the necessary urgency.
- 2. On the technologies used in the "Video Assistant Referee" (VAR) decision making process in a game of football.

KEYWORDS

Urgency; preliminary injunction; Art. 62(2) UPCA; Rule 209(2)(b) RoP; Rule 211(3) RoP. Degree of certainty; Art. 62 (4) UPCA; Rule 211.2 RoP

CLAIMANT

1) **Ballinno B.V.** Represented by Rien (Applicant) - De IJvelandssloot 41 - 1713BA - Obdam - NL Broekstra

DEFENDANTS

1) Union des Associations Européennes de Football (UEFA) Represented by Prof. Dr. Tilman (Defendant) - Route de Genève 46 - CH-1260 - Nyon - CH Müller-Stoy

2) **Kinexon GmbH** Represented by Prof. Dr. Tilman (Defendant) - Schellingstraße 35 - 80799 - Munich - DE Müller-Stoy

3) **Kinexon Sports & Media GmbH** Represented by Prof. Dr. Tilman (Defendant) - Schellingstraße 35 - 80799 - Munich - DE Müller-Stoy

PATENT AT ISSUE

Patent no.	Proprietor/s
EP1944067	Ballinno B.V.

DECIDING JUDGE

Full Panel

Presiding Judge Sabine Klepsch
Judge-rapporteur Dr. Stefan Schilling
Legally qualified Judge Samuel Granata

ORAL HEARING
June 3rd 2024

SHORT SUMMARY OF THE FACTS

The Claimant is a limited liability company incorporated under the laws of the Netherlands, with the sole shareholder and the only member of the board being one of the inventors named in the patent in suit. The claimant's issued capital is the amount of € 1 (see Exhibit VB20). The Claimant is the proprietor of European Patent EP 1 944 067 B1 (in following referred to as 'the Patent') entitled 'Method and system for detecting an offside situation' (Exhibit VB02), after having acquired it from the original applicant Invit B.V. on January 22nd 2024. The application of the patent itself was filed on January 10th 2007. On October 26th 2011 the European Patent Office (EPO) granted the patent. The Patent is filed in English and currently in force in the Netherlands and Germany.

No opposition proceedings against the validity of the patent have been filed until the Defendant 3) during the course of the present proceedings filed a revocation action at the Paris Central Division of the UPC on May 17th 2024 (ACT_27358/2024 UPC_CFI_230/2024).

Defendant 1) is the Union of European Football Associations (UEFA), the governing body of European football. It is situated in Nyon, Switzerland and it is the organizer of the UEFA European Football Championship. The upcoming European Football Championship will take place in the summer of 2024 in Germany, scheduled from June 14th to July 14th 2024. For the tournament, ten venues are selected in ten different cities, including Hamburg. The stadiums will be using the "Connected Ball Technology" provided by the Defendants 2) and 3). The "Connected Ball Technology" uses a sensor inside the ball to acquire real-time data about the game of football. The sensor uses ultrawideband (UWB) an an inertial measurement unit ("IMU") (Exhibit VB04). The data sensed by the sensor is processed by artificial intelligence (AI) to determine the moment the ball has been touched. The "Connected Ball Technology" is able to automatically detect events during the game, including "ball touches" (see Exhibit VB05). It contributes to the "Video Assistant Referee" (VAR) decision making process (see Exhibit VB03).

The Defendant 2) is a limited liability company incorporated under the laws of Germany, with registered seat in Munich. It is active in the field of industries and sports. Defendant 3) is a limited liability company incorporated under the laws of Germany with its registered seat on the same address as Defendant 2).

The Claimant's legal predecessor in right and title to the patent in suit, Invit B.V., provided the Defendants 2) and 3) with a warning letter alleging infringement of the patent in suit on October 17th 2023 (Exhibit BB 2). They responded on November 19th 2023 denying infringement (Exhibit BB 3). On February 26th 2024 the Defendants' 2) and 3) legal representative received a second warning letter from the Claimant threatening legal action against the Defendants. Attached thereto was the draft for an application for provisional measures to be filed with the Court (Exhibit BB 4), the draft mentioning the Defendant 1) as possible Defendant, as well. Defendant 1) itself had not been contacted by the Claimant directly. The Defendants filed a protective letter dated March 4th 2024 at the UPC.

With its present application for provisional measures, filed April 18th 2024, the Claimant requests an injunction against all three Defendants to refrain from infringing the patent in suit.

The patent in suit protects a method, system and product for accurately detecting a contact with a ball by a player in games and sports. The claimed method, system and product are designed to assist referees in detecting offside situations in a football match.

The Patent consists of 15 claims of which claims 1 and 8 are independent claims. Claim 1 describes a method for detecting a contact with a ball and claim 8 describes a system for detecting ball contact. The Claimant has based its present application for provisional measures mainly on claims 1 and 8, but also on the dependent claims 3, 7, 10 and 15.

Claim 1 reads as follows:

- 1. Method for detecting a contact with a ball by a first player in games and sports, the method comprising:
- sensing a sound signal produced by the ball (Ba);
- processing the sound signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player;
- if the processing determines that the ball is contacted by the first player, generating a detection signal;

- supplying the detection signal to a signalling system; and
- generating by the signalling system an observable signal to be observed by a referee, in response to receipt of the detection signal.

Claim 8 reads as follows:

- 8. System for detecting a contact with a ball by a first player in games and sports, the system comprising:
- a detection signal generator comprising a sound sensing means (SM), in particular a microphone, for sensing a sound signal produced by the ball (Ba), and a sound processing means (PM) coupled to the sound sensing means for processing a sound signal received from the sound sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player, the detection signal generator generating a detection signal if the sound processing means determines that the ball is contacted by the first player;
- a detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signalling system;
- an observable signal generator comprised in the signalling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee.

In addition, and to avoid repetition, reference is made to the parties' submissions and the entire contents of the file.

STATEMENT OF THE FORMS OF ORDER SOUGHT BY THE PARTIES

The Claimant with amended requests submitted May 8th 2024 requests the Court the following and conditioned that a ruling on the auxiliary requests is only asked for if the main request is deemed by the Court as not allowable:

A. To order an injunction against the Defendants, each individually and collectively, to refrain from infringing EP 1 944 067 in the territories of Germany and the Netherlands (Art. 63(1) UPCA and R. 211(1)(a) ROP), effective as of the 5th working day after service of the decision on the defendants and upon the condition that Ballinno confirms in writing that it is enforcing the order;

(Infringement)

Auxiliarily,

To order an injunction against the Defendants, each individually and collectively, to refrain from infringing EP 1 944 067 in the territories of Germany and the Netherlands (Art. 63(1) UPCA and R. 211(1)(a) ROP);

B. Alternatively, to order an injunction against the Defendants, each individually and collectively, to refrain from infringing EP 1 944 067, in particular by making, offering, placing on the market and/or using products embodying Connected Ball Technology and/or importing or storing such products for those purposes; and/or by using or offering for use Connected Ball Technology; and/or by offering, placing on the market, using, and/or importing or storing for those products observable signals generated by Connected Ball Technology; and/or by supplying and/or offering to supply to any person other than a party entitled to exploit the invention patented in EP 1 944 067 with Connected Ball Technology,

all within the territories of Germany and the Netherlands (Art. 63(1) UPCA and R. 211(1)(a) ROP), effective as of the 5th working day after service of the decision on the defendants and upon the condition that Ballinno confirms in writing that it is enforcing the order;

Auxiliarily,

Alternatively, to order an injunction against the Defendants, each individually and collectively, to refrain from infringing EP 1 944 067, in particular by making, offering, placing on the market and/or using products embodying Connected Ball Technology and/or importing or storing such products for those purposes; and/or by using or offering for use Connected Ball Technology; and/or by offering, placing on the market, using, and/or importing or storing for those products observable signals generated by Connected Ball Technology; and/or by supplying and/or offering to supply to any person other than a party entitled to exploit the invention patented in EP 1 944 067 with Connected Ball Technology, all within the territories of Germany and the Netherlands (Art. 63(1) UPCA and R. 211(1)(a) ROP)

(Direct and indirect infringement through Connected Ball Technology)

C. Alternatively, to order an injunction against the Defendants, each individually and collectively, effective as of the 5th working day after service of the decision on the defendants and upon the condition that Ballinno confirms in writing that it is enforcing the order, to have the defendants refrain in the territories of Germany and the Netherlands, from:

Auxiliarily,

Alternatively, to order an injunction against the Defendants, each individually and collectively, to have the defendants refrain in the territories of Germany and the Netherlands, from:

a. Directly infringing claim 1 of EP 1 944 067 by using in these territories, or offering without the consent of Ballinno, for use within these territories, a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal produced by the ball (Ba); processing the sound signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal.

b. Directly infringing claim 1 of EP 1 944 067 by offering, placing on the market, using, and/or importing or storing for those products observable signals generated by a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal produced by the ball (Ba); processing the sound signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system

an observable signal to be observed by a referee, in response to receipt of the detection signal

(Direct literal infringement of claim 1)

c. Directly infringing claim 3 of EP 1 944 067 by using in these territories, or offering without the consent of Ballinno, for use within these territories, a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal produced by the ball (Ba); processing the sound signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal wherein generating a detection signal comprises: compiling a content signal of the detection signal, the content signal of the detection signal comprising at least one element of the group comprising detected sound information data and a ball identification code.

d. Directly infringing claim 3 of EP 1 944 067 by offering, placing on the market, using, and/or importing or storing for those products observable signals generated by a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal produced by the ball (Ba); processing the sound signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal wherein generating a detection signal comprises: compiling a content signal of the detection signal, the content signal of the detection signal comprising at least one element of the group comprising detected sound information data and a ball identification code.

(Direct literal infringement of claim 3)

e. Directly infringing claim 7 of EP 1 944 067 by using in these territories, or offering without the consent of Ballinno, for use within these territories, a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal produced by the ball (Ba); processing the sound signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal wherein the contact with the ball by the first player is a kick of the ball.

f. Directly infringing claim 7 of EP 1 944 067 by offering, placing on the market, using, and/or importing or storing for those products observable signals generated by a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal produced by the ball (Ba); processing the sound signal in order to determine whether there is a contact with the ball by the first player, wherein the

processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal wherein the contact with the ball by the first player is a kick of the ball.

(Direct literal infringement of claim 7)

g. Directly infringing claim 8 of EP 1 944 067 by making, offering, placing on the market or using, or importing or storing for those purposes within these territories, without Ballinno's consent, a system for detecting a contact with a ball by a first player in games and sports, the system comprising: a detection signal generator comprising a sound sensing means (SM), in particular a microphone, for sensing a sound signal produced by the ball (Ba), and a sound processing means (PM) coupled to the sound sensing means for processing a sound signal received from the sound sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player, the detection signal generator generating a detection signal if the sound processing means determines that the ball is contacted by the first player; a detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signaling system; an observable signal generator comprised in the signaling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee.

(Direct literal infringement of claim 8)

h. Directly infringing claim 10 of EP 1 944 067 by making, offering, placing on the market or using, or importing or storing for those purposes within these territories, without Ballinno's consent, a system for detecting a contact with a ball by a first player in games and sports, the system comprising: a detection signal generator comprising a sound sensing means (SM), in particular a microphone, for sensing a sound signal produced by the ball (Ba), and a sound processing means (PM) coupled to the sound sensing means for processing a sound signal received from the sound sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player, the detection signal generator generating a detection signal if the sound processing means determines that the ball is contacted by the first player; a detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signaling system; an observable signal generator comprised in the signaling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee; wherein the detection signal transmission system is a wireless transmission system, in particular operating at a frequency that is suitable to transmit over a distance of at least the distance of a diagonal of a play field.

(Direct literal infringement of claim 10)

i. Directly infringing claim 15 of EP 1 944 067 by making, offering, placing on the market or using, or importing or storing for those purposes within these territories, without Ballinno's consent, a system for detecting a contact with a ball by a first player in games and sports, the system comprising: a detection signal generator comprising a sound sensing means (SM), in particular a microphone, for sensing a sound signal produced by the ball (Ba), and

a sound processing means (PM) coupled to the sound sensing means for processing a sound signal received from the sound sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player, the detection signal generator generating a detection signal if the sound processing means determines that the ball is contacted by the first player; a detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signaling system; an observable signal generator comprised in the signaling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee; wherein the contact with the ball by the first player is a kick of the ball.

(Direct literal infringement of claim 15)

j. Indirectly infringing claim 1 of EP 1 944 067 by supplying and/or offering to supply, without the consent of Ballinno, within these territories for use within these territories, a sensor capable of sensing sound and/or processing means, suitable for putting into effect a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal produced by the ball (Ba); processing the sound signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal.

(Indirect literal infringement of claim 1)

k. Indirectly infringing claim 3 of EP 1 944 067 by supplying and/or offering to supply, without the consent of Ballinno, within these territories for use within these territories, a sensor capable of sensing sound and/or processing means, suitable for putting into effect a method for detecting a contact with a ball by a first player in games and sports, the method comprising: sensing a sound signal produced by the ball (Ba); processing the sound signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal wherein generating a detection signal comprises: compiling a content signal of the detection signal, the content signal of the detection signal comprising at least one element of the group comprising detected sound information data and a ball identification code.

(Indirect literal infringement of claim 3)

I. Indirectly infringing claim 7 of EP 1 944 067 by supplying and/or offering to supply, without the consent of Ballinno, within these territories for use within these territories, a sensor capable of sensing sound and/or processing means, suitable for putting into effect a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal produced by the ball (Ba); processing the sound signal in order to determine whether there is a contact with the ball by the first player,

wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal wherein the contact with the ball by the first player is a kick of the ball.

(Indirect literal infringement of claim 7)

m. Indirectly infringing claim 8 of EP 1 944 067 by supplying and/or offering to supply, without the consent of Ballinno, within these territories for use within these territories, a sensor capable of sensing sound and/or processing means, suitable for putting into effect a system for detecting a contact with a ball by a first player in games and sports, the system comprising: a detection signal generator comprising a sound sensing means (SM), in particular a microphone, for sensing a sound signal produced by the ball (Ba), and a sound processing means (PM) coupled to the sound sensing means for processing a sound signal received from the sound sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player, the detection signal generator generating a detection signal if the sound processing means determines that the ball is contacted by the first player; a detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signaling system; an observable signal generator comprised in the signaling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee.

(Indirect literal infringement of claim 8)

n. Indirectly infringing claim 10 of EP 1 944 067 by supplying and/or offering to supply, without the consent of Ballinno, within these territories for use within these territories, a sensor capable of sensing sound and/or processing means, suitable for putting into effect a system for detecting a contact with a ball by a first player in games and sports, the system comprising: a detection signal generator comprising a sound sensing means (SM), in particular a microphone, for sensing a sound signal produced by the ball (Ba), and a sound processing means (PM) coupled to the sound sensing means for processing a sound signal received from the sound sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player, the detection signal generator generating a detection signal if the sound processing means determines that the ball is contacted by the first player; a detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signaling system; an observable signal generator comprised in the signaling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee; wherein the detection signal transmission system is a wireless transmission system, in particular operating at a frequency that is suitable to transmit over a distance of at least the distance of a diagonal of a play field.

(Indirect literal infringement of claim 10)

o. Indirectly infringing claim 15 of EP 1 944 067 by supplying and/or offering to supply, without the consent of Ballinno, within these territories for use within these territories, a sensor capable of sensing sound and/or processing means, suitable for putting into effect a system for detecting a contact with a ball by a first player in games and sports, the system

comprising: a detection signal generator comprising a sound sensing means (SM), in particular a microphone, for sensing a sound signal produced by the ball (Ba), and a sound processing means (PM) coupled to the sound sensing means for processing a sound signal received from the sound sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player, the detection signal generator generating a detection signal if the sound processing means determines that the ball is contacted by the first player; a detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signaling system; an observable signal generator comprised in the signaling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee; wherein the contact with the ball by the first player is a kick of the ball.

(Indirect literal infringement of claim 15)

D. Alternatively, to order an injunction against the Defendants, each individually and collectively, effective as of the 5th working day after service of the decision on the defendants and upon the condition that Ballinno confirms in writing that it is enforcing the order, to have the defendants refrain in the territories of Germany and the Netherlands, from:

Auxiliarily:

Alternatively, to order an injunction against the Defendants, each individually and collectively, to have the defendants refrain in the territories of Germany and the Netherlands, from:

a. Directly infringing claim 1 of EP 1 944 067 by using in these territories, or offering without the consent of Ballinno, for use within these territories, a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal and/or an acceleration signal produced by the ball (Ba); processing the sound signal and/or acceleration signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal.

b. Directly infringing claim 1 of EP 1 944 067 by offering, placing on the market, using, and/or importing or storing for those products observable signals generated by a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal and/or an acceleration signal produced by the ball (Ba); processing the sound signal and/or acceleration signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine; if the processing determines that the ball is contacted by

the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal.

(Direct equivalent infringement of claim 1)

c. Directly infringing claim 3 of EP 1 944 067 by using in these territories, or offering without the consent of Ballinno, for use within these territories, a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal and/or an acceleration signal produced by the ball (Ba); processing the sound signal and/or acceleration signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal wherein generating a detection signal comprises: compiling a content signal of the detection signal, the content signal of the detection signal comprising at least one element of the group comprising detected sound information data and a ball identification code.

d. Directly infringing claim 3 of EP 1 944 067 by offering, placing on the market, using, and/or importing or storing for those products observable signals generated by a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal and/or an acceleration signal produced by the ball (Ba); processing the sound signal and/or acceleration signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal wherein generating a detection signal comprises: compiling a content signal of the detection signal, the content signal of the detection signal comprising at least one element of the group comprising detected sound information data and a ball identification code.

(Direct equivalent infringement of claim 3)

e. Directly infringing claim 7 of EP 1 944 067 by using in these territories, or offering without the consent of Ballinno, for use within these territories, a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal and/or an acceleration signal produced by the ball (Ba); processing the sound signal and/or acceleration signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in

response to receipt of the detection signal wherein the contact with the ball by the first player is a kick of the ball.

f. Directly infringing claim 7 of EP 1 944 067 by offering, placing on the market, using, and/or importing or storing for those products observable signals generated by a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal and/or an acceleration signal produced by the ball (Ba); processing the sound signal and/or acceleration signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal wherein the contact with the ball by the first player is a kick of the ball.

(Direct equivalent infringement of claim 7)

g. Directly infringing claim 8 of EP 1 944 067 by making, offering, placing on the market or using, or importing or storing for those purposes within these territories, without Ballinno's consent, a system for detecting a contact with a ball by a first player in games and sports, the system comprising: a detection signal generator comprising a sound sensing means (SM), in particular a microphone, and/or an acceleration sensing means for sensing a sound signal and/or an acceleration signal produced by the ball (Ba), and a sound and/or acceleration processing means (PM) coupled to the sound and/or acceleration sensing means for processing a sound signal and/or an acceleration signal received from the sound sensing means and/or the acceleration sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine, the detection signal generator generating a detection signal if the sound and/or acceleration processing means determines that the ball is contacted by the first player; a detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signaling system; an observable signal generator comprised in the signaling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee.

(Direct equivalent infringement of claim 8)

h. Directly infringing claim 10 of EP 1 944 067 by making, offering, placing on the market or using, or importing or storing for those purposes within these territories, without Ballinno's consent, a system for detecting a contact with a ball by a first player in games and sports, the system comprising: a detection signal generator comprising a sound sensing means (SM), in particular a microphone, and/or an acceleration sensing means for sensing a sound signal and/or an acceleration signal produced by the ball (Ba), and a sound and/or acceleration processing means (PM) coupled to the sound and/or acceleration sensing means for processing a sound signal and/or an acceleration signal received from the sound sensing means and/or the acceleration sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal

using a Support Vector Machine, the detection signal generator generating a detection signal if the sound and/or acceleration processing means determines that the ball is contacted by the first player; a detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signaling system; an observable signal generator comprised in the signaling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee; wherein the detection signal transmission system is a wireless transmission system, in particular operating at a frequency that is suitable to transmit over a distance of at least the distance of a diagonal of a play field.

(Direct equivalent infringement of claim 10)

i. Directly infringing claim 15 of EP 1 944 067 by making, offering, placing on the market or using, or importing or storing for those purposes within these territories, without Ballinno's consent, a system for detecting a contact with a ball by a first player in games and sports, the system comprising: a detection signal generator comprising a sound sensing means (SM), in particular a microphone, and/or an acceleration sensing means for sensing a sound signal and/or an acceleration signal produced by the ball (Ba), and a sound and/or acceleration processing means (PM) coupled to the sound and/or acceleration sensing means for processing a sound signal and/or an acceleration signal received from the sound sensing means and/or the acceleration sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine, the detection signal generator generating a detection signal if the sound and/or acceleration processing means determines that the ball is contacted by the first player; a detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signaling system; an observable signal generator comprised in the signaling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee; wherein the contact with the ball by the first player is a kick of the ball.

(Direct equivalent infringement of claim 15)

j. Indirectly infringing claim 1 of EP 1 944 067 by supplying and/or offering to supply, without the consent of Ballinno, within these territories for use within these territories, a sensor capable of sensing sound and/or processing means, suitable for putting into effect a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal and/or an acceleration signal produced by the ball (Ba); processing the sound signal and/or acceleration signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal.

(Indirect equivalent infringement of claim 1)

k. Indirectly infringing claim 3 of EP 1 944 067 by supplying and/or offering to supply, without the consent of Ballinno, within these territories for use within these territories, a sensor capable of sensing sound and/or processing means, suitable for putting into effect

a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal and/or an acceleration signal produced by the ball (Ba); processing the sound signal and/or acceleration signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal wherein generating a detection signal comprises: compiling a content signal of the detection signal, the content signal of the detection signal comprising at least one element of the group comprising detected sound information data and a ball identification code.

(Indirect equivalent infringement of claim 3)

I. Indirectly infringing claim 7 of EP 1 944 067 by supplying and/or offering to supply, without the consent of Ballinno, within these territories for use within these territories, a sensor capable of sensing sound and/or processing means, suitable for putting into effect a method for detecting a contact with a ball by a first player in games and sports, the method comprising sensing a sound signal and/or an acceleration signal produced by the ball (Ba); processing the sound signal and/or acceleration signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine; if the processing determines that the ball is contacted by the first player, generating a detection signal; supplying the detection signal to a signaling system; and generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal wherein the contact with the ball by the first player is a kick of the ball.

(Individual equivalent infringement of claim 7)

m. Indirectly infringing claim 8 of EP 1 944 067 by supplying and/or offering to supply, without the consent of Ballinno, within these territories for use within these territories, a sensor capable of sensing sound and/or a sensor capable of sensing acceleration and/or processing means, suitable for putting into effect a system for detecting a contact with a ball by a first player in games and sports, the system comprising: a detection signal generator comprising a sound sensing means (SM), in particular a microphone, and/or an acceleration sensing means for sensing a sound signal and/or an acceleration signal produced by the ball (Ba), and a sound and/or acceleration processing means (PM) coupled to the sound and/or acceleration sensing means for processing a sound signal and/or an acceleration signal received from the sound sensing means and/or the acceleration sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine, the detection signal generator generating a detection signal if the sound and/or acceleration processing means determines that the ball is contacted by the first player; a detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signaling system; an observable signal generator comprised in the signaling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee.

(Indirect equivalent infringement of claim 8)

n. Indirectly infringing claim 10 of EP 1 944 067 by supplying and/or offering to supply, without the consent of Ballinno, within these territories for use within these territories, a sensor capable of sensing sound and/or a sensor capable of sensing acceleration and/or processing means, suitable for putting into effect a system for detecting a contact with a ball by a first player in games and sports, the system comprising: a detection signal generator comprising a sound sensing means (SM), in particular a microphone, and/or an acceleration sensing means for sensing a sound signal and/or an acceleration signal produced by the ball (Ba), and a sound and/or acceleration processing means (PM) coupled to the sound and/or acceleration sensing means for processing a sound signal and/or an acceleration signal received from the sound sensing means and/or the acceleration sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine, the detection signal generator generating a detection signal if the sound and/or acceleration processing means determines that the ball is contacted by the first player; a detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signaling system; an observable signal generator comprised in the signaling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee; wherein the detection signal transmission system is a wireless transmission system, in particular operating at a frequency that is suitable to transmit over a distance of at least the distance of a diagonal of a play field.

(Indirect equivalent infringement of claim 10)

o. Indirectly infringing claim 15 of EP 1 944 067 by supplying and/or offering to supply, without the consent of Ballinno, within these territories for use within these territories, a sensor capable of sensing sound and/or a sensor capable of sensing acceleration and/or processing means, suitable for putting into effect a system for detecting a contact with a ball by a first player in games and sports, the system comprising: a detection signal generator comprising a sound sensing means (SM), in particular a microphone, and/or an acceleration sensing means for sensing a sound signal and/or an acceleration signal produced by the ball (Ba), and a sound and/or acceleration processing means (PM) coupled to the sound and/or acceleration sensing means for processing a sound signal and/or an acceleration signal received from the sound sensing means and/or the acceleration sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player and/or the processing includes classifying the sensed signal using a Support Vector Machine, the detection signal generator generating a detection signal if the sound and/or acceleration processing means determines that the ball is contacted by the first player; a detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signaling system; an observable signal generator comprised in the signaling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee; wherein the contact with the ball by the first player is a kick of the ball.

(Indirect equivalent infringement of claim 15)

E. To order for the seizure of the goods suspected of infringing EP 1 944 067 so as to prevent their entry into or movement within the channels of commerce (R. 211(1)(c) RoP), effective as of the 5th working day after service of the decision on the defendants and upon the condition that Ballinno confirms in writing that it is enforcing the order;

a. Alternatively, to order for the seizure of the goods suspected of infringing EP 1 944 067 so as to prevent their entry into or movement within the channels of commerce (R. 211(1)(c) RoP), in particular for the seizure of all Connected Ball Technology products that are in the Defendant's possession, effective as of the 5th working day after service of the decision on the defendants and upon the condition that Ballinno confirms in writing that it is enforcing the order;

Auxiliarily:

To order for the seizure of the goods suspected of infringing EP 1 944 067 so as to prevent their entry into or movement within the channels of commerce (R. 211(1)(c) RoP);

- a. Alternatively, to order for the seizure of the goods suspected of infringing EP 1 944 067 so as to prevent their entry into or movement within the channels of commerce (R. 211(1)(c) RoP), in particular for the seizure of all Connected Ball Technology products that are in the Defendant's possession;
- F. To order the defendants to pay an interim award of costs (R. 211(1)(d) RoP);
- G. To order the defendants to pay the Court a penalty payment of up to € 100.000,-- for every day that one or more of the aforementioned injunctions are not complied with (Rule 354(3) RoP);

The Defendants 1), 2) and 3) jointly request:

- I. Dismiss the Application for provisional measures dated April 18th 2024;
- II. Alternatively, order the provision of a security by Applicant for the enforcement of a preliminary injunction and/or other provisional measure, the amount to be determined by the Court, whereas the security should not fall below EUR 1,000,000;
- III. In the event that the Application for provisional measures is rejected or withdrawn, order Applicant to pay the costs of the proceedings, including those incurred by Defendant in filing the Protective Letter dated March 4^{th} 2024.

POINTS AT ISSUE

The Claimant asserts that the Defendants' 2) and 3) own "Connected Ball Technology" infringes the patent in suit. For the establishment of infringement, the Claimant refers to two webpages of Kinexon (Exhibit VB04 and Exhibit VB05), and on a presentation entitled "Connected Ball Technology" by a senior product manager sports at Kinexon (the "Connected Ball Technology video"; Exhibit VB10). A (machine-generated) transcript of the "Connected Ball Technology" video is provided as Exhibit VB11. The "Connected Ball Technology" video was uploaded on the YouTube channel of the International Federation of Association Football, FIFA. In the video, the

representative of Kinexon provides a thorough demonstration of the working and mechanism of the "Connected Ball Technology".

The Claimant further relies on experiments conducted by an expert in inertial sensors, Dr. on the sensor that is equipped in the "Connected Ball Technology" I", Exhibit VB21) and additional experiments conducted by Dr. III", Exhibit VB 35). It further relies on an affidavit of Prof. (Exhibit VB25).

The Claimant states to have demonstrated that the "Connected Ball Technology" uses a sound sensing means within the meaning of the Patent, since the acceleration sensor used by the Defendants also measures sound vibration. If, however, the Court were to find that the Infringing Technology does not sense sound, then the Applicant claims that the Defendants' 2) and 3) sensor is equivalent to a sound sensing means according to the auxiliary requests (claims D).

The Claimant sees the Defendant 1) as being responsible for the technology it uses and bearing the risk of infringement allegations for that use – also if their supplier does not tell them the inner working of the technology. The Claimant argues that the Defendant 1) is not allowed to simply hide behind the supplier in this regard.

The Claimant clarified that the present Application is primarily directed at the balls that incorporate the "Connected Ball Technology" that will be used during the UEFA EURO 2024 tournament, including the elements of the "Connected Ball Technology" that are not physically located inside the ball. Insofar as any other balls and/or systems of the Defendants incorporate the "Connected Ball Technology" and thereby the patented invention, the present application is also directed at those.

The Claimant considers the patent in suit as novel and inventive. It declared that in a proceeding on the merits or formal revocation action it will submit auxiliary requests with five conditional limitations (submission May 21st, para 33 ff) – these are subject to the present conditional auxiliary requests:

- Features 1.1/8.1 are amended to make explicit that the claims are limited to a method for detecting offside in football;
- Features 1.2/8.2 are amended to make explicit that the claims are limited specifically to a football, as opposed to any ball;
- Features 1.2/8.2 are limited to sensing means arranged in the ball.
- Features 1.2a/8.2a add the requirement that an acceleration signal is also sensed;
- Features 1.4/8.4 make explicit that the detection signal is generated at the moment the ball is contacted by the first player.

The Defendants collectively argue that the Applicant's requests must be denied because no provisional measures are necessary in the present case. Defendant 1) had never been approached or contacted by Applicant or its legal predecessor, Invit B.V., in any way in relation to the subject matter of the patent. They argue the applicant's behaviour in seeking legal remedies was delaying and the alleged urgency was "self- inflicted".

They disagree with the Claimant on the construction of the claims (1 and 8 in particular). They are of the opinion that the patent in suit is not infringed, as the "Connected Ball Technology" developed by Defendant 3) determines an assumed touch of a ball by a player entirely based on kinematics and inertial movement data (acceleration and gyroscope data), and precisely not on sensing sound signals. Sound wave signals are not processed and not used for the determination of an off-site-position.

With further submissions the Defendants question the validity of the patent. The Defendant 3) filed a revocation action at the Central Division Paris against the patent in suit (UPC_CFI 230/2024, APP 27358/2024).

In addition, and to avoid repetition, reference is made to the parties' exchanged written submissions and annexes.

After the closing of the written procedure the Claimant requested to be allowed to submit two additional pieces of evidence (APP 32409/2024).

GROUNDS FOR THE ORDER

The application for an order on provisional measures is to be dismissed.

١.

As the registered proprietor of the patent at issue and as there have not been raised any concerns to the contrary, the Claimant is entitled to file a request pursuant to Art. 47(1) UPCA in conjunction with R. 8.5(a) and (c) of the Rules of Procedure (RoP).

II.

The Court grants the presentation of additional evidence by the Claimant submitted May 30th (APP 32409/2024) to be admitted according to Rule 210.2 RoP. Although the submission was performed after the closure of the written procedure this Rule allows for an order giving the parties the possibility to provide further information, documents and other evidence *before or during* the oral hearing, including evidence to enable the Court to make its decision in accordance with Rule 211. The evidence in question can be admitted as it concerns further (or full) pieces of evidence already provided by the other party. This concerns Exhibit VB39, which is an excerpt from the Encyclopedia Britannica already submitted by the Defendants, and Exhibit VB40, which is the full copy of the textbook of which only a partial chapter was submitted by the Defendants.

III.

The Defendants rightfully contest the urgency of the proceedings. Due to the circumstances of this case, the ordering of the requested provisional measures lacks urgency from a temporal perspective (R. 209.2 (b) RoP)

1.

Art. 62(2) UPCA and RoP 211(3) do not explicitly require that the preliminary injunction must be urgent. But according to Rule 209(2)(b) RoP, the Court shall consider the urgency of the action whilst exercising its discretions under Rule 209. 1 RoP. Moreover, according to Rule 211(4) RoP, the Court shall have regard to unreasonable delay in seeking provisional measures.

a)

The temporal urgency required for the ordering of provisional measures is only lacking if the infringed party has behaved in such a negligent and hesitant manner in the pursuit of its claims that, from an objective perspective, it must be concluded that the infringed party is not interested in promptly enforcing its rights, which is why it does not appear appropriate to allow it to claim provisional legal protection (cf. UPC_CFI_463/2023 (LD Düsseldorf), Order of 30 April 2024_ACT_590953/2023 - 10x Genomics/Curio Bioscience; UPC_CFI 2/2023 (LD Munich), Order of 19 September 2023, GRUR 2023, 1513, 1524 - Nachweisverfahren; UPC_CFI_452/2024 (LD Düsseldorf), Order of 9 April 2024, p. 27, GRUR-RS 2024, 7207, para. 126).

Pursuant to Rule 213.2 RoP, the court may, as part of its decision-making process, require the Applicant to submit all reasonably available evidence to ensure that it can be sufficiently certain that the Applicant is entitled to initiate proceedings under Art. 47 UPCA, that the patent in question is valid and that its right is being infringed or threatened with infringement. In urgent proceedings, the Applicant must typically respond to such an order within a short period of time, which requires appropriate preparation of the proceedings. The Applicant therefore only needs to apply to the court if they have reliable knowledge of all the facts that make legal action in the proceedings for provisional measures promising and if they can substantiate these facts. The Applicant may prepare for any possible procedural situation that may arise, based on the circumstances, in such a way that it can present the requested information and documents to the court upon such an order and successfully rebut the arguments of the Defendant's side. In principle, the Applicant cannot be instructed to carry out any necessary subsequent investigations only during ongoing proceedings and if necessary to obtain the required documents after the fact. On the other hand, the Applicant must not delay proceedings unnecessarily. As soon as it has knowledge of the alleged infringement, it must investigate it, take the necessary measures to clarify it and obtain the documents required to support its claims. In doing so, it must diligently initiate and complete the required steps at each stage. As soon as the Applicant has all the knowledge and documents that reliably enable a promising legal action, it must file the application for the ordering of provisional measures within one month (cf. UPC_CFI_463/2023 (LD Düsseldorf), Order of 30 April 2024 ACT 590953/2023 - 10x Genomics/Curio Bioscience; UPC CFI 452/2023 (LD Düsseldorf), Order of 9 April 2024, GRUR-RS 2024, 7207, para. 128).

b)

Based on these principles, the Claimant has treated the matter not with the necessary urgency.

aa) The Claimant acknowledged that its legal predecessor became aware of the fact that Kinexon offered the "Connected Ball Technology", which appeared similar to the patented technology, already in September 2023. It is undisputed that the knowledge of Invit B.V. is attributable due to the status as the legal predecessor and the identity of its shareholder, Board member and legal representatives.

This knowledge led to a warning letter sent on 19 October 2023 to Kinexon Munich in which Invit B.V. stated to be convinced that the "Kinexon Ball" falls within the scope of protection of its patent (Exhibit BB 2). Invit B.V. demanded that Kinexon ceases these infringing activities immediately. It stated that according to research the "Connected Ball Technology" determines if and when the ball has been touched. It argues that the "Connected Ball Technology" utilizes an accelerometer in the ball that is able to sense sound or sound vibration. It referred to the description of the patent and that sensing means may comprise sensors such an acceleration sensor for measuring an acceleration of the ball. Invit B.V. requested to discuss a potential license.

On November 15th 2023, Defendants 2) and 3) responded and declined to discuss a license (Exhibit BB 3). It argued that it did not infringe because the "Kinexon Ball" does not use or include any sound sensing and sound processing means. It stated that the Kinexon Technology determines a series of other physical values, instead. It argued that the ball sensor included in the Kinexon Technology was precisely designed with the aim to detect movement and acceleration (and thereby the accurate position) of the ball without sensing of or being influenced by sound waves. This would mean that no sound signal is determined and processed by the Kinexon Technology. In particular, no sound signal would be compared to a predetermined "benchmark" sound signal.

bb) Based on this correspondence it was already at this point in mid-November 2023, two months after the initial knowledge, clear for the Claimant's legal predecessor that an amicable settlement was not within reach, but that the patent proprietor would have to rely on judicial help.

Additionally, the correspondence showed that the patent proprietor was at least in mid-October 2023 aware of the fact that in the allegedly infringing embodiment the Defendants 2) and 3) use an accelerometer. This narrowed down the question whether the accelerometer used by the Defendants 2) and 3) is able to sense sound or sound vibration. The Claimant's legal predecessor was aware of the fact that the Defendants 2) and 3) disputed the sensing or their solution "being influenced by sound waves". Still, no substantial steps were undertaken on behalf of the Claimant's legal predecessor until mid-February, apart from transferring the patent in suit on to the Claimant.

cc) While assuming that the Defendant's 2) and 3) reply to the warning letter might have led to further research on behalf of the Claimant, which might be time-consuming, the patent proprietor did not show that it treated the conflict with the necessary urgency. It neither tried to clarify the exact accelerometer model used by the Defendants 2) and 3) and its configuration nor did it try to get hold of a sample of the ball, even though the ball – while not being accessible on the market – undisputedly was already used in the FIFA 2022 World Cup in Katar. Neither did the Claimant ask the Defendants for more information on the sensor or the ball nor did it try other means to get hold of a sample, including judicial means. This has to be seen as decisive as the Claimant acknowledged in the oral hearing that acceleration sensors can be quite various and can be insensitive to sound.

As a matter of fact, the Claimants submissions do not contain information on any further steps taken to investigate the facts and the technology. It concedes that its legal predecessor became aware on December 4th 2023 of an announcement by the Defendant 1) that it would be using Kinexon's "Connected Ball Technology" during the UEFA EURO 2024 from June 14th to July 14th 2024 (Exhibit VB04), and of Kinexon's confirmation that it will be supplying the "Connected Ball Technology" for the UEFA EURO 2024 tournaments (Exhibit VB06). As this announcement made it clear that an alleged infringement was imminently to be expected in the course of the next seven months, the Court cannot see any reason why the Claimant did not strengthen its efforts to clarify the possible patent infringement. On the contrary, the Claimants assertation that immediately after this discovery its legal predecessor initiated further action to address Kinexon's allegations that it did not use a sound sensing means, is not supported by facts.

First in February 2024, the Claimant discovered and analyzed the "Connected Ball Technology video" (Exhibit VB10), which it felt was sufficient to refute Kinexon's assertions; a video that undisputedly was available on Youtube since November 30th 2022. As the Claimant heavily relies on the video to argue its case it is hard to comprehend why and how the Claimant was not able to find and analyze the video earlier. Limited financial resources of a small enterprise, like the Claimant, cannot be seen as relevant when it comes to access and search on YouTube.

dd) As the patent proprietor did not take the necessary measures to clarify the alleged infringement and obtain the documents required to support its claims until mid-February 2024 the present application for provisional measures lack the necessary urgency. The Claimant is not entitled to revive the urgency by engaging an expert at a later stage (March 2024) and filing the present application for provisional measures in due time after the expert's report was rendered. In doing so, it must have diligently initiated and completed the required steps at each and any stage.

ee) Regarding the Defendant 1) the patent proprietor never approached it before initiating Court proceedings, meaning that the patent proprietor did not even try to use contacting the Defendant 1) to gain more information, which could have sped up the necessary pre-trial investigation. That the Defendant 1) was mentioned in the draft of an application for provisional measures in connection with the second warning letter, dated February 26th 2024 (Exhibit BB 4), does not qualify as a formal approach to this Defendant.

IV.

The Local Division in Hamburg is not convinced with sufficient certainty that the Defendants infringe the patent in suit. The realization of several features of the patent claim is disputed between the parties (see below under IV. 2.). On summary examination, the Court finds that the attacked embodiment does not make direct or indirect literal use of claim 1 or 8 of the patent in suit (see below under IV. 3.). An infringement by equivalent means has also not been sufficiently demonstrated (see below under IV. 4.).

1.

The invention relates to a method and system for detecting a contact with a ball by a player in games and sports, such as for detecting an offside situation during a game of football (par. [0001]). The Patent explains that the difficulty in determining offside during a game depends on the fact that the linesman or referee must focus on, on the one hand, the position of the attacker relative to the defendant that is closest to the back line of the field, and on the other hand, on the player kicking the ball and the exact moment of ball contact (par. [0003]). The position on the field where the ball is kicked is often not close to the receiver of the ball. As such, the referee needs to quickly adjust his sight from the place where the ball is kicked to the receiving attacker and defendants. The aforementioned makes it nearly impossible for the linesman to determine the position of the relevant players at the exact moment that the ball is kicked (par. [0004]).

The objective of the invention is to provide a method and system for assisting the referee and linesman in detecting a contact with the ball by a player, such as for correctly judging offside (par. [0005]). This is offered to be achieved in a method according to claim 1. When a player kicks the ball, a sound vibration is generated in the ball. This sound vibration is sensed. However, also other events may generate a sound vibration in the ball. Therefore, any sensed sound signal is processed by comparing it with a predetermined sound signal of a kick of the ball. If it is determined by the processing that a sensed sound is the sound of a kick of the ball, the detection signal is generated. Thus, the moment of determination of kicking the ball is not dependent on the subjective observation of a person, but is objectively determined by electronic means (para [0007]. Only if it is then determined that the ball is kicked, a detection signal is generated. The detection signal is converted into an observable signal for the referee or any other person observing the game.

In order to solve this offside-related problem the patent in suit protects in patent claim 1, a method for assisting the referee and linesman in detecting a contact with the ball by a player, having the following features:

- 1.1 Method for detecting a contact with a ball by a first player in games and sports, the method comprising;
- 1.2 Sensing a sound signal produced by the ball (Ba);
- 1.3 Processing the sound signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player;
- 1.4 If the processing determines that the ball is contacted by the first player, generating a detection signal;
- 1.5 Supplying the detection signal to a signaling system;
- 1.6 Generating by the signaling system an observable signal to be observed by a referee, in response to receipt of the detection signal.

The patent in suit protects in patent claim 8 a corresponding system, having the following features:

- 8.1 System for detecting a contact with a ball by a first player in games and sports, the system comprising;
- 8.2 A detection signal generator comprising a sound sensing means (SM), in particular a microphone, for sensing a sound signal produced by the ball (Ba);
- 8.3 A sound processing means (PM) coupled to the sound sensing means
 - 8.3.1 for processing a sound signal received from the sound sensing means in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player
- 8.4 The detection signal generator generating a detection signal if the sound processing means determines that the ball is contacted by the first player;
- 8.5 A detection signal transmission system (TM) for supplying the detection signal from the detection signal generator to a signaling system;
- 8.6 An observable signal generator comprised in the signaling system for generating, in response to receipt of the detection signal, an observable signal to be observed by a referee.

That the Defendants 2 and 3), after not having objected this claim construction submitted by the Claimant, at a later stage proposed a slightly different claim construction (Exhibit BB 9), can be neglected as it would not lead to a different result.

2.

Some features require interpretation, especially the disputed features 1.2 and 1.3, respectively 8.2 and 8.3.

a)

The UPC Court of Appeal has adopted the following standard for the interpretation of patent claims (UPC_CoA_335/2023, Order of 26 February 2024, App_576355/2023 - 10X Genomics and Harvard/Nanostring case): In accordance with Art. 69 of the Convention on the Grant of European Patents (EPC) and the Protocol on its Interpretation the patent claim is not only the starting point, but the decisive basis for determining the protective scope of the European patent. The interpretation of a patent claim does not depend solely on the strict, literal meaning of the wording used. Rather, the description and the drawings must always be used as explanatory aids for the interpretation of the patent claim and not only to resolve any ambiguities in the patent claim. However, this does not mean that the patent claim serves only as a guideline and that its subjectmatter may extend to what, from a consideration of the description and drawings, the patent proprietor has contemplated. The patent claim is to be interpreted from the point of view of a person skilled in the art. In applying these principles, the aim is to combine adequate protection for the patent proprietor with sufficient legal certainty for third parties. These principles for the interpretation of a patent claim apply equally to the assessment of the infringement and the validity of a European patent. This follows from the function of the patent claims, which under the EPC serve to define the scope of protection of the patent under Art. 69 EPC and thus the rights of the patent proprietor in the designated Contracting States under Art. 64 EPC, taking into account the conditions for patentability under Art. 52 to 57 EPC.

b)

Applying these principles for claim interpretation, the Local Division construes that feature 1.2 "sensing a sound signal produced by the ball (Ba)" requires the sensing of acoustic sound waves in air.

aa)

The sensed sound may be the sound produced due to a kick of the ball, including a header or a contact by a knee or any other contact of a player with the ball, i.e. any contact with a player that may lead to offside. However, the sensed sound may as well be produced due to any other occurrence that may not lead to offside, such as a sound when the ball hits the ground (para [0030]). In a broad physical sense, sounds can propagate through many media, be it gaseous, fluid or solid and can be inside the audible spectrum or outside. In that general physical sense, a "sound" can also be a vibration, as the Claimant suggests. But the patented claim does not teach to make use of this broad physical definition of sound, including vibrations. On the contrary, the wording of the patent, which is its own dictionary, and the patented claim itself differentiates between vibrations, like vibrations of the ball shell and sound signals which are produced by the ball and are therefore located outside (or inside) the ball shell.

bb)

As the patented claim refers to a sound signal that is produced by the ball a person skilled in the art attempting to understand feature 1.2 will therefore turn to the description of the patent at issue. There in para [0004] the patent explicitly differentiated itself from the document BE1015552, which discloses an electronic chip in a ball programmed to detect pressure changes and the shock resulting from the contact of a player with the ball. Even though figure 4 shows the placement of a detection system circuit (DSC) between the inner ball and the outer ball (see para [0044]), the person skilled in the art would realize that the teaching of the patent in suit is not to make use of pressure changes or shocks in the firm medium of the ball shell. In distinction from the BE1015552 the force exerted by the player to kick the ball, which causes it to deform, and/or the shape of the ball oscillating until the ball returns to its original shape and its respective vibrations, is not the solution provided by the patent in suit. The skilled person would take this differentiation as indication to make use of audio sound waves propagating through air – be it within the audible range or outside.

When para [0007] refers to the situation when a player kicks the ball, a sound vibration is generated in the ball and that this sound vibration is sensed, he takes this as a clarification that the teaching of the patent in suit is about audio sound waves produced by the ball, not about vibrations of the ball shell itself. The sound signal is produced by vibrations and deformations of the ball causing the air pressure (inside and outside the ball) to fluctuate, limiting it to audio sound waves. To that extend the German and French translations of claim 1 is unambiguous ("Erfassen eines Schallsignals, welches von dem Ball (Ba) erzeugt wird"/ La détection d'un signal sonore produit par la balle (Ba)").

A person skilled in the art would additionally take from para [0028] that the teaching of the patented claim relates to audio sound waves as it discloses that the sound is sensed by a suitable sensor, such as a microphone, as shown by step 103 in Fig. 1A. If a microphone is the typical suitable sensor, though not limited to that (see below regarding feature 8.2), a person skilled in the art would take this part of the description as additional confirmation that the feature 1.2 demands the sensing of audio sound waves. Although the drawings show non-limiting embodiments (para [0023]), the person skilled in the art would see this interpretation confirmed by figure 3, which provides a diagram with dB (A) as the relevant unit on the y-axis. Even though the sound signal produced by a player touching the ball is distinguished from other sound signals in the processing

step in accordance with features 1.3 and 8.3/8.3.1, the patent in suit does not teach to make use of body vibration signals to be used for that processing step.

cc)

Nothing else arises from para [0037] regarding the description of the system claim 8. There again it is stated that the sensing means may comprise a microphone for sensing a sound signal produced by the ball Ba, when it is kicked. It states that *additionally*, the sensing means may comprise an acceleration sensor for measuring an acceleration of the ball Ba, and that other suitable sensing means may as well be employed, in combination. This shows that comprising an acceleration sensor for measuring an acceleration of the ball is not designed to be a replacement for the sound sensing sensor but an addition, and that other suitable sensing means can (only) be applied in combination, not instead.

c)

Feature 1.3 requires a processing of the sound signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined signal, which predetermined signal is the signal of a contact with the ball by a player. The Local Division construes that feature 1.3 demands a comparison step of the sensed sound signal with a predetermined signal and that this has to be of the same sort, thus an audio sound signal, as well.

aa)

According to feature 1.3 the sensed sound signal is processed to determine whether a player has touched the ball. This processing includes comparing the sensed sound signal with a predetermined signal, whereas the predetermined signal being the signal of a player touching the ball. This requires on the one hand that the predetermined signal has to be suitable to distinguish between a contact by a player and another type of contact, such as a contact with the ground (comp. para [0030]). On the other hand, this requires the predetermined signal to be comparable to the sensed sound signal.

Contrary to the Claimant's argumentation, the patent is not completely open to the way the determination is made. Para [0007] teaches that any sensed sound signal is processed by comparing it with a predetermined sound signal of a kick of the ball. If it is determined by the processing that a sensed sound is the sound of a kick of the ball, the detection signal is generated. According to para [0030] the processing may include, additionally, spectral analysis of the sensed sound signal and also other processing techniques may be employed. Fig. 3 shows a graph of a sound signal produced by a ball when the ball is kicked. The horizontal axis represents time in milliseconds; the vertical axis represents a sound level (amplitude) on a logarithmic scale. Based on the amplitude and/or frequency content of the sound signal, e.g. using spectral analysis, it may be determined what caused the signal, in particular whether the sound signal was due to a kick against the ball (para [0043]).

For the person skilled in the art this shows that the predetermined signal as a starting point must be of the same sort of sound signals, thus being an audio sound wave signal as well. Effectively, the comparison is based on the detection of patterns based on predefined audio sound wave signals of a contract of a player with a ball. This enables that system to differentiate the audio sound wave signal from the audio sound wave of a ball hitting the ground or from background noises. As the sensed signal is a sound signal in the form of audio waves the processing step taught relates to the amplitude and/or frequency of the sound signal.

Whereas the patent suggests that the processing may include, additionally, spectral analysis of the sensed sound signal and also other processing techniques [0030], it does not disclose to make use

of support vector machine (SVM) technologies. Therefore, the written statement of Prof. that was provided by the Claimant relating to general advantages of support vector machine, is not relevant for the patented processing step. The solution of the patent in suit is to make use of sound waves produced by the ball to determine the position of the player and to compare the sound signal with predetermined ball-kicking-sound profiles. Advantages of support vector machine, which may or may not exist, are not part of the solution. They can especially not be taken as a reason to broaden the patented claim. The patent in suit does not deal with classifications of various signals, but with the comparison of one certain kind of signals, and that is sound waves. Advantages of machine-learning steps or SVMs are not within the scope of the patent, be it preferable or not.

d) Feature 8.2 contains a detection signal generator comprising a sound sensing means (SM), in particular a microphone, for sensing a sound signal produced by the ball (Ba). The Local Division construes this feature – in alinement with feature 1.2 – that it requires the sensing of audio sound waves.

Feature 8.2. suggests as a sound sensing means (in particular) a microphone, making it clear that also other devices suitable for sensing sound are within the scope of the patent. In that respect it is clear for the person skilled in the art that the suggested device does not necessarily has to be a device solely capable of sensing sound, but additionally - or even mainly - sense other features, like acceleration. But para [0037] of the granted description also makes it clear that an acceleration sensor is not a replacement means, but may be used in addition ("additionally"). This is in line with para [0028], which discloses that the sound is sensed by a suitable sensor, such as a microphone. As the wording of claim and description are clear there is no need for the Court to address the question whether or not the prosecution file and the patentee's reaction to the examination report is a proper source of interpretation of the patented claim.

e) For the interpretation of feature 8.3, including feature 8.3.1, the Court can refer to its assessment regarding feature 1.3.

3.

On the basis of said understanding, it cannot be concluded that it is more likely than not that the attacked embodiment makes literal use of the teaching of patent claim 1 and/or 8, and their dependent claims 3, 7, 10 and 15. Art. 62 (4) UPCA in conjunction with R. 211.2 RoP requires a sufficiently certain conviction of the Court that it is at least predominantly probable that the applicant is not only authorized to initiate proceedings but also that the patent is infringed or will be infringed (see UPC_CoA_335/2023 (Court of Appeals), Order of 26 February 2023, GRUR-RS 2024, 2829, para. 90 following – Nachweisverfahren). In the present case the Local Division is not convinced with the necessary sufficient degree of certainty that the "Connected Ball Technology" which will be used during the UEFA EURO 2024 infringes the patent in suit.

a)

The Local Division can leave the question open whether or not the senor in the attacked embodiment, which is unanimously by the parties categorized as an accelerometer, is capable of sensing audio sound signals as asserted by the Claimants based on both reports of Dr.

b)

Even if the Court were to assume that the sensor in the attacked "Connected Ball Technology" is able and designed to sense audio sound, the Claimant has not sufficiently demonstrated that a sound signal is *processed* according to feature 1.3. This feature requires, as stated above, a processing of the sound signal in order to determine whether there is a contact with the ball by the first player, wherein the processing includes comparing the sensed signal with a predetermined

signal. The predetermined signal must be an audio sound wave signal that has to be compared to the sensed audio sound wave signal. The Court is not convinced that the support vector machine used in the "Connected Ball Technology" processes a – presumably – sensed sound signal in accordance with feature 1.3 of the patent in suit.

aa) Although the Claimants' expert Prof. argued in his affidavit that classification using a support vector machine (SVM) – as existent in the attacked embodiment – might essentially be a form of comparison (see Exhibit VB25). He stated that the term comparison was not widely used, but rather the term "classification" and "classifier". He stated that it would therefore be understood by a person skilled in the art that a part of the system described in the patent was a classifier. This opinion was contested by the Defendants based on the affidavit of Prof. (Exhibit BP 03), who stated that the claimed signal comparison on the one hand and the SVM classification technique on the other hand were completely different techniques. The Court cannot see that the report took the wording of the patented claim and its necessary interpretation into account when making his statement. As the patent is its own dictionary general considerations are not a viable method to determine an infringement. As stated above regarding the claim construction, the solution of the patent in suit is to make use of sound waves produced by the ball to determine the position of the player and to compare the sound signal with predetermined ball-kicking-sound profiles. Advantages of support vector machine, which may or may not exist, are not part of the solution.

The Claimant alleges that it would be impossible for the infringing technology to sense sound, but not to process it, especially to filter out the sound based on its origin from the signal before it gets processed in the support vector machine. However, the Claimant did not provide the Court with any evidence that the attacked embodiment establishes a comparison of sound waves – if sensed – to determine whether there is a contact with the ball. Moreover, the report was not based on the actual functioning of the system used in the "Connected Ball Technology", but based on theoretical considerations. Thus, the report is not sufficient evidence to proof that the "Connected Ball Technology" actually *compares* any sensed sound signal with predetermined sound signals, even not as training data.

bb) In contrast, the Defendants provided evidence that any sensed acceleration data that does not meet a certain threshold is disregarded. They laid out that the threshold being, if the peak prominence (peak height above the noise signal floor) is not of at least 10 m/s2 = 1g and has a minimum peak height of 150m/s2 = 15g or the peak prominence is higher than half of the signal height (Statement of Mr. Lawitzky, Exhibit 11 para 35). The Defendants explained that this would mean that e.g. a bump at 10g peak but only with a 4g prominence would be regarded as signal floor and therefore be ignored. The Claimant was not able to contest that assertion. The Claimant did not provide evidence that in the attacked embodiment (possible) sound wave measurements are in fact relevant for the system. Rather, the Defendants have made it sufficiently credible that the method used by the Attacked Embodiment is based on a change of the ball's kinetic state (position, change of velocity and spin rate) not on a (a) comparison of (b) sound waves produced by the ball (in air as a medium). It is credible that the technique disclosed in the patent is different from the "classification" technique used by a support vector machine, as testified by Prof. (Exhibit BP 03).

The Local Division finds it convincing to assess that, if data below a certain threshold is disregarded, it is not *processed* in the understanding of feature 1.3. This is because feature 1.3 requires a comparison of the sensed sound signal with predetermined sound signal and disregarded data is not compared in that sense. The processing step according to feature 1.3 of the patent in suit does have a certain parameter and goal and that is the processing of a sound signal in order to deter-

mine whether there is a contact with the ball by the first player. That the "Connected Ball Technology", contrary to the Defendants' submissions, processes sound waves in order to come to the desired determination cannot be concluded by the Court. Additionally, the Defendants have explained that the trained SVM only comprises the (multidimensional) dividing line, but none of the training data, making it even less credible that attacked ambodiment compares any sensed signal to the training data consisting of multiple predetermined signals as claimed by the Claimant.

c)

On this background the Local Division can leave it undecided whether the "Connected Ball Technology" generates an observable signal to be observed by a referee or only provides information to a third-party's interface, making it at best being subject to an indirect infringement [quod non].

d)

With respect to the auxiliary requests based on the prospective amendments of the patented claims it cannot be concluded that it is more likely than not that the attacked embodiment infringes the patent. The Local Division sees only features 1.2a/8.2a, adding the requirement that an acceleration signal is also sensed, being relevant for the present case. It can be referred to the claim construction stated above showing that the patent differentiates between sound sensing means and acceleration sensing means, with the latter being an addition. This claim construction is not observed in the auxiliary request regarding features 1.2a/8.2a, as it lacks the decisive word "additionally". Consequently, an infringement can only be assumed, when the attacked embodiment possesses both kinds of sensors. According to the facts provided by the parties, the attacked embodiment possesses only an accelerometer, presumably being able to sense sound, but not a separate sound sensor. Nevertheless, it can not be concluded that based on this auxiliary feature the attacked embodiment processes sound signals and compares them to predetermined sound signals.

e)

Regarding claim 8 of the patent in suit the outcome cannot be any different as the relevant claims overlap and the Claimant did not sufficiently prove the processing of a sound signal in the meaning of feature 8.3.

f)

On these grounds there is no basis for an infringement of the dependent claims 3, 7, 10 or 15.

4.

The facts of the case do not convince the Court that the attacked embodiment establishes an infringement by equivalent means. The technology used in the "Connected Ball Technology" does not make use of the same technical effect. Neither can a support vector machine nor the functioning of the "Connected Ball Technology" in particular be seen as equivalent to the patented comparison of sound signals.

a)

Whereas para [0037] of the description states that "measuring acceleration of the ball" may be used additionally to "sensing a sound signal produced by the ball", it is not disclosed as an equivalent alternative to measure the acceleration of the ball instead of sensing a sound signal produced by the ball. Thus, the technical teaching in the patent in suit does not allow to consider an acceleration measurement as a replacement means for sensing sound.

b)

Additionally, the processing of acceleration data points in a support vector machine is not an equivalent task to the patented teaching of a comparison of sound signals to predetermined signals of the same sort, i.e. sound signals. For the assessment of an infringement by equivalent means it is not sufficient to reduce the question of equivalence just to the effect, being to determine whether there is a contact with the ball by the first player. Decisively is how this effect is achieved. As made credible by the Defendants the SVM in the attacked embodiment comprises even more data points than just acceleration, distancing the technology even further from the patent in suit.

6.

As the Claimant has not sufficiently proven an infringement according to any of the operational requests, the Court can leave open the questions of validity of the patent in suit and whether or not the Defendant 1) could be liable for an (indirect) infringement, after all. As a result, it is not necessary to consider the respective interests of the parties and assess the balancing of interests in the present case.

٧.

Art. 69 (1) UPCA provides that the costs of the proceedings and other costs of the successful party shall, as a rule, be borne by the unsuccessful party, provided that this does not conflict with reasons of equity. The costs of the protective letter have to be seen as other costs connected to the present case according to Art. 69 (1) UPCA.

ORDER

- 1. The Application for provisional measures dated April 18th 2024 is dismissed.
- 2. The Applicant is ordered to pay the costs of the proceedings, including those incurred by filing the Protective Letter dated March 4th 2024.
- 3. The value of the dispute is set to € 500.000.

INSTRUCTION TO THE PARTIES

According to Rules 210.3 and 118.7 Rules of Procedure the Court has at first rendered its decision without grounds immediately after the closure of the oral hearing. It hereby provides the grounds for the order in writing subsequently.

INFORMATION ON THE APPEAL

Both parties may appeal against this order within 15 days of its notification, Art. 73 (2) lit. a), Art. 62 UPCA, R. 220.1(c), 224.2(b) RoP.

INFORMATION ON THE ENFORCEMENT

A certified copy of the enforceable decision or order is issued by the Deputy Registrar at the request of the enforcing party, R. 69 RoP.

ORDER DETAILS

UPC number: UPC CFI 151/2024

Order number: 33145/2024

Related proceeding no.: Application No. 16267/2024

Application Type: Application for provisional measures

ISSUED IN HAMBURG, JUNE 3RD 2024

Sabine Maria

Digital unterschrieben von Sabine Maria Klepsch

Klepsch

Datum: 2024.06.28 08:34:16 +02'00'

Presiding Judge

Sabine Klepsch

Stefan Schilling

Digital unterschrieben von Stefan Schilling Datum: 2024.06.28 08:06:54 +02'00'

Judge-rapporteur

Dr. Stefan Schilling

Samuel Rocco Samuel Rocco M

Digitally signed by

Granata

M Granata

Date: 2024.06.28 08:20:39 +02'00'

Legally qualified Judge Samuel Granata

Carolin Carolin Bauch Bauch email = carolin.
bauch@unifiedpatentcour
Lorg C = DE
Datum: 2024.06.28 08:

For the sub-registry Carolin Bauch