

Düsseldorf Higher Regional Court (2nd Civil Senate), judgment dated May 12, 2022 - I-2 U 13/21**Title:**

Requirements for the willingness to license in FRAND cases

Law applied:**Machine translation**

TFEU Art. 102

EPC Art. 64, Art. 69

Patent Law Sec. 9 p. 2 No. 1, Sec. 139 (1) and (2), Sec. 140a (3), Sec. 140b (1) and (3)

Decision Keyword:

Signal Synthesis II

Summary:

- 1. A distinction must be made between the infringer's basic (general) willingness to take a FRAND license and its will to comply with specific license terms that have been found to be FRAND. At the level of the license request, only the general willingness to become a licensee is to be verified. In contrast, the concrete willingness to license is only at issue once the patent owner's license offer has been identified as FRAND.**
- 2. The request for licensing can therefore be made in a general and informal manner and consequently also by implication. However, the conduct in question must nevertheless clearly indicate to the opponent the general intention to take a license. A merely verbally expressed request for the granting of a license is therefore not sufficient if the remaining behavior of the declaring party, when viewed objectively, unmistakably bears witness to the fact that the request for a FRAND license is mere lip service, which is quite obviously not supported by a serious intention to take a license, but rather serves the sole purpose of stalling the patent owner, delaying his legal prosecution and thus being able to continue the actions using the patent undisturbed.**
- 3. A lack of general willingness to license can also be inferred if the infringer categorically insists that it does not intend to enter into a certain, obviously appropriate licensing model (e.g., a pool license) and instead relentlessly demands a bilateral individual license, although it cannot show any justifying reasons for doing so.**
- 4. If the patent owner nevertheless makes a license offer in such a situation, this offer in contrast to a mere lack of concrete willingness to license - is not to be examined as to whether it complies with FRAND conditions.**

Keywords:

SEP, willingness to license, FRAND, bilateral license, pool license, refusal to license

ECLI:

ECLI:DE:OLGD:2022:0512.I.2U13.21.0A

Legal force:

Unknown

Tenor:

I. The appeal against the judgment of the 4b. Civil Chamber of the Düsseldorf District Court is dismissed with the proviso,

that items 1 and 2 of the District Court's operative part are now replaced by the following:

"1. The defendants are ordered to refrain from offering or supplying smartphones and tablets for the implementation of a process for synthesizing a first and second audio output signal from an input signal for use in the Federal Republic of Germany, if the process includes the following steps, by avoiding a fine of up to €250,000.00 - or, in the event of repeated violations, up to a total of two years - to be determined by the court for each case of violation:

- filtering the input signal to produce a filtered signal,
- obtaining a correlation parameter indicative of a desired correlation between the first and second output signals,
- obtaining a level parameter indicative of a desired level difference between the first and second output signals,
- transforming the input signal and the filtered signal by a matrix process to the first and second output signals, wherein the matrix process is dependent on the correlation parameter and the level parameter, and wherein the matrix process comprises a usual rotation about a predetermined angle of the first and second output signals in a space encompassed by the input signal and the filtered input signal, and when the predetermined angle is dependent on the level parameter.

2. The defendants are ordered, upon avoidance of a fine of up to € 250,000 to be determined by the court for each case of infringement, or, as a substitute, administrative detention, or administrative detention of up to six months, in the case of repeated infringements up to a total of two years, whereby the administrative detention is to be enforced on the respective managing director, to refrain from offering, putting into circulation, using or importing or possessing for the aforementioned purposes arrangements for synthesizing a first and a second audio output signal from an input signal in the Federal Republic of Germany, if the arrangements include the following

- Filter means for filtering the input signal to produce a filtered signal,
- Means for obtaining a correlation parameter indicative of a desired correlation between the first and second output signals,
- Means for obtaining a level parameter indicative of a desired level difference between the first and second output signals,
- Means for transforming the input signal and the filtered signal by a matrix process to the first and second output signals, wherein the matrix process is dependent on the correlation parameter and the level parameter, and wherein the matrix process comprises a usual

rotation about a predetermined angle of the first and second output signals in a space encompassed by the input signal and the filtered input signal, and when the predetermined angle is dependent on the level parameter."

that numbers 3. to 6. of the District Court's operative part now refer back to this version of the operative part,

that in No. 6 a. E. of the judgment at first instance, the words "and to remove them definitively by the defendant to 2) taking these products back or arranging for their destruction at the respective owner's" are omitted, and that items 3 to 7 of the District Court operative part remain otherwise unchanged.

II. Order the defendants to pay the costs of the appeal proceedings.

III. This judgment and the judgment of the District Court are provisionally enforceable.

The defendants may avert execution against security in the amount of €1,000,000 unless the plaintiff provides security in the same amount prior to execution.

IV. The appeal is not admitted.

V. The amount in dispute for the appeal proceedings is set at €1,000,000.

Reasons:

I.

1The plaintiff takes the defendants to court for infringement of the German part of the European patent EP 1 B1 (hereinafter: patent in suit) for injunction, provision of information and rendering of accounts, determination of the liability for damages on the merits as well as - related to a direct patent infringement - only defendant 2) for recall.

2The patent in suit was filed in English procedural language on April 22, 2003. The patent application was published on January 26, 2005, and the notice of grant of the patent in suit was published on February 14, 2007. The German part of the patent in suit (DE 603 XX ... T2) is in force. In response to a nullity action filed by the first defendant in a writ of summons dated July 10, 2020 (Exhibit B 13), the Federal Patent Court declared the patent in suit partially invalid in a judgment dated April 28, 2022, with the plaintiff most recently asserting the patent in suit to the extent maintained by the Federal Patent Court.

3The patent in suit bears the designation "Signal Synthesizing". Its claim 1 is formulated in the version maintained by the Federal Patent Court as follows, the features added compared to the granted version being marked by underlining:

"A method of synthesizing a first and a second audio output signal (L, R) from an input signal (x), the method comprising:

filtering the input signal (x) to generate a filtered signal;

obtaining a correlation parameter (r) indicative of a desired correlation between the first and second output signals (L, R);

obtaining a level parameter (c) indicative of a desired level difference between the first and second output signals (L, R); and transforming the input signal (x) and the filtered signal by a matrixing operation into the first and second output signals (L, R), where the matrixing

operation depends on the correlation parameter (r) and the level parameter (c) and wherein the matrixing operation comprises a common rotation by a predetermined angle of the first and second output signals in a space spanned by the input signal and the filtered input signal; and where the predetermined angle depends on the level parameter."

4And in German translation, whereby the Senate has taken as a basis the unobjected translation of subclaim 2 from the plaintiff's writ of April 21, 2022:

" Verfahren zum Synthetisieren eines ersten und eines zweiten Ausgangssignals (L, R) von einem Eingangssignal (X), wobei das Verfahren die nachfolgenden Verfahrensschritte umfasst:

- as Filtern des Eingangssignals (X) zum Erzeugen eines gefilterten Signals,
- das Erhalten eines Korrelationsparameters (τ), der indikativ ist für eine gewünschte Korrelation zwischen dem ersten und dem zweiten Ausgangssignal (L, R),
- das Erhalten eines Pegelparameters (c), der indikativ ist für eine gewünschte Pegeldifferenz zwischen dem ersten und dem zweiten Ausgangssignal (L, R),
- das Transformieren des Eingangssignals (X) und des gefilterten Signals durch einen Matrixvorgang zu dem ersten und zweiten Ausgangssignal (L, R), wobei der Matrixvorgang von dem Korrelationsparameter (τ) und dem Pegelparameter (c) abhängig ist,
- wobei der Matrixvorgang eine gemeinsame Rotation um einen vorbestimmten Winkel des ersten und zweiten Ausgangssignals in einem Raum [umfasst], der von dem Eingangssignal und dem gefilterten Eingangssignal aufgespannt wird; und wenn der vorbestimmte Winkel von dem Pegelparameter abhängig ist.

5Patent claim 6 (= patent claim 7 in the original numbering), which is also the subject matter of the dispute, is worded as follows in the version maintained by the Federal Patent Court:

"An arrangement for synthesizing a first and a second audio output signal (L, R) from an input signal (x), the arrangement comprising:

filter means (201) for filtering the input signal (x) to generate a filtered signal;

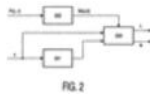
means (202) for obtaining a correlation parameter (r) indicative of a desired correlation between the first and second output signals (L, R);

means (202) for obtaining a level parameter (c) indicative of a desired level difference between the first and second output signals (L, R);

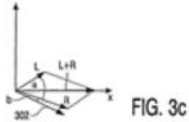
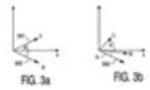
means for transforming (203) the input signal (x) and the filtered signal by a matrixing operation into the first and second output signals (L, R), where the matrixing operation depends on the correlation parameter (r) and the level parameter (c) and wherein the matrixing operation comprises a common rotation by a predetermined angle of the first and second output signals in a space spanned by the input signal and the filtered input signal; and where the predetermined angle depends on the level parameter."

6With regard to the German translation, reference is made to claim 1, which is essentially identical in content except for the claim category.

7Figures 2 to 3c of the patent application, reproduced in reduced form below, explain the invention on the basis of a preferred embodiment, as shown in the patent application description. Figure 2 shows a decorrelator:



8 Figures 3a to 3c illustrate signal generation according to one embodiment of the invention.



9 The plaintiff is an electronics company which holds, inter alia, patents in the field of audio and video compression essential to the MPEG-4 Advanced Audio Coding ('AAC') standard ('the AAC standard' or 'the standard'). It made a statement to the International Organization for Standardization (hereinafter: "ISO") and the International Electrotechnical Commission (hereinafter: "IEC"), which adopted the standard, that it is willing to grant licenses to its AAC-related patents on fair, reasonable and non-discriminatory terms (hereinafter: FRAND or FRAND terms = "fair, reasonable and non-discriminatory"). The patent in suit here is also covered by the declaration.

10 The AAC standard follows a modular concept, which provides for the extension of the basic concepts by so-called tools. Certain configurations or tools are combined into profiles in the AAC standard. The AAC standard comprises three profiles: the general AAC profile, the "High Efficiency AAC Profile" (HE AAC) and the "High Efficiency AAC v2 Profile" (HE AAC v2). The parametric stereo coding relevant in this legal dispute is the subject of HE AAC v2. For the details of the "Parametric Stereo Tools" standardized in the standard, reference is made to Section 8.6.4 of Subpart 8 of the applicable standard, excerpts from which have been submitted to the file as Exhibit K 3g.

11 The AAC standard represents a compatibility requirement for G.'s "A." system insofar as its implementation is necessary to obtain certification for so-called "G. Mobile Services" (GMS). This in turn is required in order to use "G. applications", in particular [...].

12 The patent in suit is part of a licensing program established by V. ("V."), a subsidiary of the plaintiff's group, for patents deemed essential to the implementation of the AAC standard. The pool comprises more than 3,600 patents. When entering into licensing agreements with third parties, V. acts as the administrator of the AAC licensing program (hereinafter also referred to as the AAC Pool) and as the non-exclusive representative of the patent owners whose patents are stored in the AAC Pool. In addition to licensing via the AAC Pool, the individual Pool patent owners, which include, in addition to the plaintiff, inter alia [...] (cf. regarding the Pool members as a whole the list with the heading "AAC Licensors" submitted with Exhibit K1b), may also grant licenses to their patents via bilateral agreements.

13 The AAC pool has more than 800 licensees, including [...] (an overview of all licensees is available as Exhibit K1b, there the list with the heading "AAC Licensees", before).

The licensing of the AAC pool patents is carried out by means of a standard license agreement in which the license fees are regulated as follows according to the publication on the website of V. (cf. screenshot Exhibit K 1b, there headed "AAC License Fees"):

14In addition, it is also possible in principle to enter into a bilateral agreement with the plaintiff to license its AAC-relevant patents. Other patent owners also grant licenses on the basis of bilateral agreements. For example, such an agreement exists between D. and [...], the company responsible for the TV division within the defendant's group.

15The second defendant is a subsidiary of T1, which in turn is a subsidiary of T2 [...]. The defendant 2) operates the German-language website of the brand A. [...], through which smartphones and tablets are advertised for German customers, including the smartphone [...] or the tablet [...]. The website links to online retailers where customers can purchase the devices directly.

16Furthermore, the defendant 2) supplies smartphones of the B. brand to the Federal Republic of Germany, including the smartphone with the designation [...]. Finally, the defendant 2) is also responsible for the website [...], on which smartphones of the brand C. are advertised, which T2 supplies to the Federal Republic of Germany. The website names retailers from which the devices can be ordered. Likewise, once a customer has selected a device, the "Buy Now" button indicates where it can be purchased. Further links take the customer directly to the pages of the relevant retailers.

17The first defendant is a subsidiary of the second defendant.) It operates the German Facebook presence of the A. [...] brand, on which the [...] smartphone or [...] tablet are also displayed. There is also a link to the website of the A. brand of the defendant to 2). The first defendant is a company that is limited to local marketing support measures for the brands of the T. Group and is otherwise not involved in the distribution of smartphones and tablets of the A. brand in the Federal Republic of Germany. The aforementioned T2 will be referred to below - albeit somewhat abbreviated in relation to the defendants re 1) and re 2) - as the "parent company".

18In July 2005, the parent company responsible for licensing issues in the "Smartphone" area had already acquired an AAC pool license in the form of the standard license agreement in force at that time. However, this agreement was terminated prematurely by V. in a letter dated March 2, 2007 (Exhibit K-Kart 7).

19Whether and to what extent further discussions took place between T. and the plaintiff is disputed between the parties. It is undisputed that, at any rate, there was no contact between the plaintiff or V. and the defendants personally with regard to taking a license until 2020.

20After filing suit, the Parent Company contacted the Plaintiff by letter dated March 25, 2020 (Exhibit K-Kart 12), stating that T. was willing to take a license from the Plaintiff on FRAND terms. This letter was followed by two further letters dated May 26, 2020 and July 9, 2020, in which the parent company again requested the submission of a bilateral offer.

21The plaintiff replied by letter dated July 14, 2020 (Exhibit B 21; German translation: Exhibit B 21a). In this letter, it expressed doubts about T's willingness to license and referred to

licensing via the AAC pool. The plaintiff further stated that it saw no reason to make a bilateral offer to T. and to submit copies of already concluded license agreements in this context.

22By letter dated August 17, 2020 (Exhibit B 22; German translation: Exhibit B 22a), T. announced that it would approach V. with regard to the pool license, but otherwise maintained that a bilateral contract offer was desired by the plaintiff. In this context, T. also expressed concerns with regard to non-discriminatory conduct by the plaintiff due to the granting of bilateral licenses to its portfolio. For the further content, reference is made to the letter dated August 17, 2020. By letter of the same date, T. contacted V. and requested additional information. V. responded by letter dated August 26, 2020 (Exhibit K-Kart 11).

23In a letter dated October 5, 2020 (Exhibit B 23; German translation: Exhibit B 23a), the plaintiff stated that it considered the possibility of taking up a pool license to be a sufficient offer within the meaning of the FRAND conditions. In a letter dated November 3, 2020 (Exhibit B 24; German translation: Exhibit B 24a), to which reference is made for its further content, T. again stated that it was prepared to accept a license, but continued to request a bilateral offer from the plaintiff.

24Last, the defendants requested the bilateral contract offer by e-mail dated March 15, 2021 (Exhibit B 27), which the plaintiff in turn rejected by e-mail dated March 18, 2021 (Exhibit B 28).

25In an e-mail dated April 1, 2021, the parent company submitted a counter-offer to the plaintiff as Exhibit B 29, to which reference is made for its content. The plaintiff rejected the acceptance in the first-instance oral proceedings of April 9, 2021 (see minutes of the meeting of April 9, 2021, p. 2, last paragraph, p. 413 GA). Thereupon, the defendants did not provide security.

26The plaintiff opposes the offer and distribution by the defendants of all cell phones and tablets that make use of the "HE AAC v2" profile of the AAC standard (hereinafter: challenged embodiments), including the [...] or [...] smartphones and the [...] tablet.

27The plaintiff considers the offering and distribution of the challenged embodiments in the Federal Republic of Germany to be an infringement of the patent in suit in accordance with its wording. In its opinion, a decoder that has implemented the profile "HE AAC v2" and in particular the "Parametric Stereo Tool" of the AAC standard and is compatible with the standard is necessarily suitable for the application of the method protected by claim 1. Moreover, such a decoder realizes the technical teaching protected by patent claim 7 as granted. The challenged embodiments are such decoders. In addition, the plaintiff had also proven an infringement of the patent in suit by the challenged embodiments by means of tests carried out by it on a smartphone of the defendants purchased by it. The defendants are passively entitled and cannot rely on the objection of exhaustion. Moreover, the plaintiff is also entitled to the asserted claims with regard to the standard essentiality of the patent in suit. The defendant's objection to a compulsory license under antitrust law is not valid. The patent in suit does not confer a dominant position. Moreover, the defendants were not willing to license.

28The defendants, who have asked for the action to be dismissed or, in the alternative, for a stay, have already denied infringement of the patent in suit at first instance and, moreover, have taken the view that the patent in suit will not prove to be legally valid in the invalidity proceedings. Furthermore, the defendants do not have passive legitimacy. Furthermore, the defendants could successfully rely on the exhaustion defense. Moreover, both the recall and the destruction of the challenged embodiments are disproportionate. Finally, the antitrust objection to compulsory licensing, which had already been raised in the first instance, applies in favor of the defendants. The patent in suit conveys a dominant position on the market for smartphones and tablets. Without the use of the invention, no marketable product could be put on the market. The defendants and their parent company were ready for licensing. In contrast, the plaintiff had not fulfilled its obligations. In particular, it had not made the defendants an offer for a bilateral license.

29In its judgment of May 11, 2021, the Düsseldorf District Court affirmed infringement of the patent in suit as granted and held as follows:

1. The defendants are ordered to refrain from offering or supplying smartphones and tablets for the implementation of a process for synthesizing a first and second audio output signal from an input signal for use in the Federal Republic of Germany, if the process includes the following steps, by avoiding an orderly fine of up to EUR 250,000 - or, in the event of repeated infringements, up to a total of two years, with the orderly imprisonment to be enforced on their respective managing directors - to be determined by the court for each case of infringement:

- filtering the input signal to produce a filtered signal,
- obtaining a correlation parameter indicative of a desired correlation between the first and second output signals,
- obtaining a level parameter indicative of a desired level difference between the first and second output signals,
- transforming the input signal and the filtered signal by a matrix process to the first and second output signals, the matrix process being dependent on the correlation parameter and the level parameter.

2. The defendants are ordered, upon notification of a fine of up to 250.000 EUR, or imprisonment for up to six months, in the case of repeated infringements up to a total of two years, with the imprisonment to be enforced on their respective managing directors, from offering, placing on the market, using or importing or possessing arrangements for synthesizing a first and a second audio output signal from an input signal in the Federal Republic of Germany for the aforementioned purposes, if the arrangements include the following:

- Filter means for filtering the input signal to produce a filtered signal,
- Means for obtaining a correlation parameter indicative of a desired correlation between the first and second output signals,

- Means for obtaining a level parameter indicative of a desired level difference between the first and second output signals,
- Means for transforming the input signal and the filtered signal by a matrix operation to the first and second output signals, the matrix operation being dependent on the correlation parameter and the level parameter.

3. The defendants are ordered to provide the plaintiff with a separate list - with regard to statements a) and b) by submitting invoices, or alternatively delivery bills, or alternatively copies of receipts, whereby data to which the information and accounting owed does not relate and with regard to which the defendants have a justified interest in secrecy may be covered or blacked out, may be covered or blacked out, to provide information on the extent to which they have offered or supplied means pursuant to Item 1 for use in the Federal Republic of Germany since October 30, 2009, stating a) the quantity of products received or ordered, as well as the names and addresses of the manufacturers, suppliers and other previous owners,

b) of the individual deliveries, broken down by delivery quantities, times and prices, the respective type designations and the names and addresses of the customers,

c) of the individual offers, broken down by offer quantities, times and prices, the respective type designations and the names and addresses of the recipients of the offers,

d) of the advertising carried out, broken down by advertising medium, its circulation volume, distribution period and distribution area, and in the case of Internet advertising, the domain, access figures and placement periods,

e) the prime costs broken down according to the individual cost factors and the profit achieved,

whereby the Defendants reserve the right to disclose the names and addresses of the non-commercial customers and offerees instead of the Plaintiff to a certified public accountant domiciled in the Federal Republic of Germany to be designated by the Plaintiff and bound to secrecy vis-à-vis the Plaintiff, provided that the Defendants bear the costs thereof and authorize and obligate him to inform the Plaintiff upon specific request whether a specific customer or offeree is included in the list.

4. The defendants are ordered to provide the plaintiff with a separate list - with regard to statements a) and b), with the submission of invoices, alternatively delivery bills, and alternatively copies of receipts, whereby data to which the owed information and accounting does not relate and with regard to which the defendants have a justified interest in secrecy, may be covered or blacked out - of the extent to which they have, since October 30, 2009, offered, used, imported or possessed orders pursuant to section 2. have been offered, placed on the market, used or imported or possessed for the aforementioned purposes in the Federal Republic of Germany, stating the following

a) the quantity of products received or ordered, as well as the names and addresses of manufacturers, suppliers and other previous owners,

b) of the individual deliveries, broken down by delivery quantities, times and prices, the respective type designations and the names and addresses of the customers,

c) of the individual offers, broken down by offer quantities, times and prices, the respective type designations and the names and addresses of the recipients of the offers,

d) of the advertising carried out, broken down by advertising medium, its circulation volume, distribution period and distribution area, and in the case of Internet advertising, the domain, access figures and placement periods,

e) of the prime costs broken down by the individual cost factors and the profit generated,

The defendants reserve the right to disclose the names and addresses of the non-commercial purchasers and offerees instead of the plaintiff to a certified public accountant domiciled in the Federal Republic of Germany, to be designated by the plaintiff and bound to secrecy vis-à-vis the plaintiff, provided that the defendants bear the costs thereof and authorize and obligate him to inform the plaintiff upon specific request whether a particular purchaser or offeree is included in the list.

5. It is hereby determined that the defendants are jointly and severally obligated to compensate the plaintiff for all damages that she has suffered and will continue to suffer as a result of the acts described in items 1. and 2. above since October 30, 2009.

6. The defendant to 2) is ordered to recall from the distribution channels the products referred to under 2., which are in the possession of third parties and which have been placed on the market since April 9, 2017, by seriously requesting those third parties who have been granted possession of the products by the defendant or with its consent, with reference to the fact that the Chamber has found an infringement of the patent in suit DE 603 XX ...5 (German part of EP 1 B1), that the defendant be seriously requested to return the products to the defendant and that the third parties be promised a refund of the purchase price already paid, if any, and the assumption of the costs of the return in the event of the return of the products, and that the defendant 2) be permanently removed by taking these products back or arranging for their destruction at the respective owner.

307. the remainder of the complaint is dismissed.

31In its reasons, the District Court essentially stated:

32The correlation parameter addressed in the claims in suit is a value for the similarity or dissimilarity of the two output signals (L, R), whereby the output signals can be indicated by vectors and the degree of correlation by the angle α corresponding to $\rho = \cos(\alpha)$. As far as the patent description specifies this parameter in more detail, this is done either solely with regard to features that are only mentioned in the subclaims or with regard to certain embodiments. Therefore, these are limitations which are not relevant for the teaching according to the invention in its general form expressed in claim 1. This is especially true with regard to paragraph [0044] referred to by the defendants, which does not limit the protected technical teaching of the claim in suit to a correlation parameter in the form of the maximum value of the cross-correlation function. The maximum value of the cross-correlation function was not reflected in the claim in suit. Against this background, any correlation parameter was sufficient, regardless of the correlation function on the basis of which it was obtained. The only decisive factor was that the correlation was indicative of the desired correlation. Nothing else follows from the required function-oriented interpretation. It is true that the teaching of the patent in

suit is directed to solving the problem of the lower quality of the generated signals at large level differences prevailing in the prior art. However, the teaching of the invention is not limited to the cross-correlation function. Moreover, it does not require the best possible solution in the form of the maximum of the cross-correlation function. The quality of the generated signals can be improved with other values of the cross correlation function even with large level differences, especially since this may be preferable in favor of other acoustic parameters.

33 According to the invention, the input signal and the filtered signal are transformed by a matrix process to the first and second output signals (L, R), the matrix process being dependent on the correlation parameter (r) and the level parameter (c). The latter describes the measure of the volume difference between the two output signals. The term "matrix process" refers to a process which transforms an input signal with several channels into an output signal with several channels, whereby the components of the multi-channel output signal are linear combinations of the components of the multi-channel input signal. The transformation referred to overcomes the prior art problem of quality degradation in the presence of large level differences.

34 Based on this, the offer and sale of the challenged smartphones and tablets by the defendants constituted indirect patent infringement within the meaning of Section 10 (1) Patent Act. The challenged embodiments are suitable for applying the method protected by patent claim 1 as granted. The teaching of this claim is essential for the standard (here: "Parametric Stereo Tool"), so that a standard-compliant implementation of a decoder necessarily entails the suitability for the application of the patented method. The challenged embodiments meet the requirements of the standard. In addition, the suitability for application of the method according to the patent in suit also resulted from the tests carried out by the plaintiff.

35 Implementation of the "Parametric Stereo Tool" of the standard in a decoder necessarily leads to the decoder being suitable for application of the patent-protected method because the standard presupposes the realization of all features of the patent claim in suit. This is only disputed with regard to the correlation parameter which, according to the invention, determines the similarity or dissimilarity of the signals L and R output. This is also provided for in the standard with the so-called "IIC parameter", which is described in more detail in section 8.6.4.1. The ICC parameter specifies the similarity or dissimilarity of the left and right band-limited signals and thus corresponds to the correlation parameter of the teaching according to the invention.

36 The challenged embodiments supported the standard, here the "Parametric Stereo Tool" of the "HE AAC v2" profile of the AAC audio standard. They used the mobile operating system "A.", which - for example in the version 7.0 also used in the challenged embodiments - required the support of the "HE AAC v2" profile. Without the implementation of the standard, the necessary compatibility with the requirements for the operating system "A." would be lacking, so that a certification by G. would not be possible. The defendants had not significantly countered this. The plaintiff had also demonstrated the implementation of the standard in the challenged embodiments through the tests it had conducted, which it had submitted as Exhibits K 3i (print) and K 3j (digital). The objections raised by the defendant against this were not upheld.

37 If the challenged embodiments are means suitable for the application of the patented process, they also regularly relate to an essential element of the invention. In the case in dispute, the application of the patented process necessarily requires a means for the application of the process, which thus regularly realizes the inventive concept.

38 The defendants offer the challenged embodiments within the meaning of Section 10 (1) Patent Act. This is undisputed with regard to the internet presence of the second defendant. The 1st defendant offers the challenged embodiments via its Facebook presence. Since the promotion of sales by third parties is also sufficient for offering, it is not decisive whether the 1st defendant itself has sales intentions and whether the challenged embodiments can be obtained via the 1st defendant. The group affiliation of the two defendants and the function of the first defendant to take local marketing support measures for the brands of the T. Group alone do not allow any other conclusion than that the first defendant, with the presentation of models of the challenged embodiments in its Facebook presence, creates a demand for these that can be satisfied by the second defendant or its sales partners.

39 In addition, the defendants also committed the offense under Sec. 10 (1) Patent Act in the variant of "supplying". The 2nd defendant delivered the challenged embodiments to the Federal Republic of Germany for use in Germany. Even if the first defendant did not personally perform any acts of delivery, it nevertheless participated in the delivery acts of the second defendant and was liable for them.

40 It is also obvious to the defendants that the challenged embodiments are suitable and intended by the customers to be used for the implementation of the patented method. The application of the method according to the patent inevitably results when the user of the challenged embodiments plays back audio data that are encoded according to the AAC standard in accordance with the profile "HE AAC v2". Since the challenged embodiments are also known to play audio data, the application of the method according to the patent is certainly to be expected. For the user, the file format of the downloaded and streamed audio data is generally uninteresting as long as the files are played back correctly.

41In addition, the defendants also made use of the technical teaching of claim 7 as granted in accordance with its wording (Sec. 9 S. 2 No. 1 Patent Act).

42 The patent in suit is also effective with regard to the fact that the company G. is a licensee of the V. pool and that the operating system A., which requires compatibility of the challenged embodiments with the AAC standard, originates from G.. Exhaustion had not occurred as a result. According to the plaintiff's undisputed submission, G. is a licensee of the V. pool, but is only entitled to offer and market certain of its own products, such as cell phones, streaming devices or smart speakers. The operating system "A." or parts thereof were not part of the license agreement and G. did not pay any license fees for it.

43 The use of the invention by the defendants gives rise to claims by the plaintiff for injunctive relief, disclosure and invoicing, recall (only the second defendant) and damages. With regard to the latter, however, the statute of limitations has not yet expired. Defendant 1) is a pure marketing company that is not involved in the distribution of the challenged designs

in the Federal Republic of Germany. Nor could the plaintiff demand that the defendants destroy the challenged embodiments. In this respect, the necessary possession or ownership of patent-infringing products at the time of the conclusion of negotiations is lacking.

44The enforcement of the claims for injunction, recall, and destruction was not prevented by the compulsory license defense under antitrust law.

45The patent in suit gives the plaintiff a dominant position on the relevant market for "smartphones" or "tablets". The patent in suit is an essential patent for the implementation of the AAC standard. Despite technical alternatives, no competitive product could be provided on the smartphone or tablet market without this standard. The standard ensures compatibility with applications that are important from the perspective of the end user in connection with the "A." operating system. The implementation of the AAC standard is specified by G. as the operator of the market-leading "A." operating system, without an alternative operating system being available or capable of being developed. The manufacturer of smartphones cannot be instructed to develop its own operating system or to switch to an operating system other than "A.". The "A." operating system was dominant on the smartphone market alongside "i.". Together, they account for a market share of almost 100%. With other operating systems, at best a niche market could be developed.

46 No abuse of this dominant position by the plaintiff could be established. While the plaintiff could not be accused of infringing the ECJ case law applicable in the present case, the defendants had not shown any willingness to license by the end of the oral proceedings.

47In the overall view, the defendant's behavior was initially characterized by simply ignoring attempts to enter into contractual negotiations. There was no reaction at all until after the complaint in this case had been filed, and there was also a lack of constructive cooperation in the subsequent period aimed at bringing about a license agreement. Against this background, special efforts were required on the part of the user to promote the conclusion of a license agreement and thus to express that - which must be conceded to a user in principle - a willingness to license had now arisen. The defendant did not meet these requirements. Even at the time the negotiations were concluded, T. was still unwilling to license.

48The defendants or their parent company failed to sufficiently address the content of the pool license agreement offered to the parent company in April 2017. In a letter addressed to V. dated August 17, 2020, T. had stated that a license via the AAC pool would also continue to be examined, without the license via the pool having been noticeably advanced. The defendants' submissions at trial also fail to address the content of the pool license agreement. The defendants had for the first time objected to the FRAND compliance of the license agreement offered to the parent company eight days before the first-instance oral proceedings, claiming that it discriminated against them in a manner contrary to the facts compared with other licensees. A user who begins to discuss the content of FRAND conformity immediately before the oral proceedings thus documents his unwillingness to license.

49 Insofar as T. had requested a bilateral contract offer from the plaintiff in various letters, neither the defendants nor their parent company had shown a sufficiently concrete interest in a bilateral license. A user actually willing to take out a license could be expected to have weighed up both alternatives to a certain extent after a period of more than three years since becoming aware of a pool license and the possibility of concluding a bilateral agreement, and to provide information on the basis of specific group relationships as to why taking out a bilateral license was preferable. Against the background that the "GMS" certification required the AAC standard, it had to be assumed that the parent company was basically dependent on the entire AAC infrastructure. After all, it had already taken a pool license in 2005. Why the parent company nevertheless opted for the model of bilateral licensing with regard to the entire standard relevant here was not sufficiently explained. In this context, the defendants could not initially refer to their previous business practice. So far, no bilateral agreements had been concluded with other owners of AAC-relevant patents, although acts of use by T. had been pending since the termination of the existing pool license agreement with the parent company and thus since 2007. Neither the parent company nor the defendants had named such pool licensors with whom they were at least in serious licensing negotiations. This was also the case after the defendants had justified their interest in a bilateral licensing practice for the first time in the first-instance quadruplicate by stating that they were interested in "using their own portfolio in the context of cross-licensing". Moreover, the defendants could not justify their interest in a bilateral license solely on the grounds that the plaintiff had already concluded such agreements with other licensees. The defendants' parent company's conclusion, linked to this objection, that any license offer for Philipp's AAC patents could only be FRAND-compliant if made on a bilateral basis, shows that a substantive discussion of the royalty systems of pool and portfolio licensing actually does not take place. A "regularity" such that the existence of one license model leads to FRAND infringement of the other does not exist. Rather, it is also conceivable that two licensing systems coexist which both prove to be FRAND-compliant.

50 In the required overall assessment, the counteroffer of April 1, 2021 (Exhibit B 29) submitted by the parent company eight days before the hearing in the first instance cannot be interpreted as an expression of a willingness to license that now exists. The terms and conditions of the counteroffer were based on the license agreement that the plaintiff had concluded with the parent company at the end of 2020 for the plaintiff's 3G/LTE SEP portfolio. They provide for the exemption of acts of use prior to the effective date of the conclusion of the agreement, without the parent company (or the defendants in the context of the present proceedings) having disclosed the order of magnitude of the sales volumes achieved in the past. Nor did the parent company provide any reasons for the full exemption provided for in the counteroffer. Moreover, the lump-sum license amount was based on IDC figures that were not valid.

51 The Chamber's high requirements regarding the parent company's willingness to license were not excessive because the plaintiff had not shown itself willing to conclude a license agreement on FRAND terms. From the point of view of abuse, the plaintiff could not be

accused of not having complied with the parent company's requests to submit a bilateral license offer. With the pool license agreement, the parent company had in any case received a contractual offer which had been accepted in this form by other market participants. In any case, this opened up the possibility of gaining access to the technology which conveyed a dominant position on the market. The fact that the plaintiff had announced to the parent company in a letter dated December 12, 2016, that it was in principle possible to conclude a bilateral agreement did not indicate other-wise. This communication did not have a legally binding effect. Rather, the plaintiff had referred to its existing license agreement practice. In response to a question at the first-instance hearing, it described this practice in such a way that it grants bilateral licenses to licensees who already have bilateral contractual relationships with other licensors or for whom a pool license would prove inappropriate for other reasons. The parent company had not disclosed any such interest.

52 Finally, there is no reason to suspend the proceedings, neither in consideration of the order of reference of the 4c. Civil Chamber (decision of November 26, 2020, file no.: 4c O 17/19), which is also concerned with patent infringement proceedings, nor against the background of the ongoing proceedings on the status quo.

53 The defendants filed a notice of appeal against this judgment, which was served on their counsel on the day of its pronouncement, in a lawyer's writ dated May 25, 2021, in which they continue to pursue their unsuccessful claim for dismissal of the action before the District Court and, in the alternative, for a stay of proceedings.

54 They repeat and supplement their first-instance submission and assert in particular:

55 The Chamber based its decision on an incorrect interpretation of the term "correlation parameter". The concept of a "correlation parameter" or a parameter which is "indicative of a desired correlation between two signals" is, as a mathematical expression, fundamentally abstract. In order to grasp its meaning, the term requires a more detailed explanation, which the patent in suit provides to the skilled person in paragraph [0044]. This not only describes an example of an embodiment, but also substantiates the protected technical teaching. Based on this, it was clear to the skilled person that he should form the correlation parameter via the maximum value of the cross-correlation function in order to apply the teaching according to the patent in suit for solving the task existing in the prior art. Therefore, the skilled person would determine the correlation parameter using the value of the cross-correlation function at the position of the maximum deflection. If the Chamber came to the conclusion that the skilled person understood a correlation parameter to include parameters formed in a different way, it would in any case have had to take evidence as to whether such correlation parameters were available at all and whether they were regarded by the skilled person as suitable for solving the problem existing in the prior art.

56 Moreover, the judgment of the court of first instance is based on an inconsistent interpretation of the terms "input signal" and "filtered signal". The core of the matrix process is the generation of two output signals by transforming an input signal and a filtered signal. Further requirements for these signals were not found in claim 1. Accordingly, the Chamber should have clearly defined which requirements it placed on the two signals and, if applicable, whether it considered only certain signals to be a suitable "input signal" or "filtered signal".

However, such a definition is not to be found in the infringement part of the first-instance judgment, with the Chamber apparently assuming that any type of signal constitutes a suitable input signal. In its discussion of the law, however, the Chamber took the opposite view, requiring that the input signal not be filtered. Such an interpretation is contradictory and thus erroneous.

57 Based on this, the Chamber wrongly found that all features of the claims at issue had been realized by the challenged embodiments. Apart from the fact that the plaintiff had not sufficiently presented its case with respect to the tablet PCs sold by the defendants, the board's findings on the realization of the features were also erroneous in other respects. The coherence parameter contained in the standard does not constitute a reference parameter within the meaning of the patent in suit. If the correlation parameter had to be formed by the maximum value of the cross-correlation function, this could not be found in the AAC standard. The plaintiff had claimed in the first instance that the "Inter Channel Coherence (ICC) Parameter" under No. 8.6.4.1. of the standard document submitted by it (Exhibit K 3g) represented the correlation parameter. However, this parameter does not show any maximum value formation of the cross-correlation function. Furthermore, on the basis of the Chamber's explanations of the body of law, there was also no transformation of an (unfiltered) input signal. The "Parametric Stereo Tool" does not create the output channels L and R in the AAC standard by transforming an unfiltered input signal, but from a combination of multiple filtered signals.

58 The plaintiff could also not prove the feature realization by means of the (alleged) product tests carried out by it. On the one hand, the product tests were only intended to establish standard conformity, not patent conformity. Secondly, the plaintiff carries out the tests merely by feeding an input signal via the USB input into a smartphone allegedly purchased by it from the defendant. Subsequently, it taps the alleged output signal at the headphone output. By means of such an erroneous end-to-end measurement, the plaintiff analyzes a signal that has already undergone multiple digital-to-analog conversions by the time it reaches the headphone output. With the help of these tests, the plaintiff could therefore in no way prove that an unfiltered input signal had been processed in the context of the alleged application of the "Parametric Stereo Tool" of the AAC standard.

59 According to the opinion of the Federal Patent Court in the parallel nullity proceedings, the patent in suit could only be legally valid - if at all - if subclaim 2 was included in the registered version. The judgment of the first instance did not contain any findings in this respect, and the plaintiff had not submitted any conclusive arguments on this point. Subclaim 2, which in the maintained version has become part of main claim 1, supplements the matrix process by a mathematical operation which causes a rotation of the audio signals which can be represented as vectors. Such a rotation of the audio signals leads to a change of the generated audio signals, so that the quality of the generated audio signals - depending on the direction of rotation - is improved or worsened. As far as the predetermined angle is furthermore supposed to be dependent on the level parameter, this is only an addition of another calculation parameter to the calculation formula. The plaintiff has not conclusively shown the claimed realization of subclaim 2 either by reference to the AAC standard or by its alleged product tests. The standard

does not describe a common rotation of the output signals by a predetermined angle depending on the level parameter. The matrix equation referred to by the plaintiff in this context is not found in the standard. How, when and by whom the angle is to be predetermined according to the standard, in any case in the manner according to the patent, is not submitted by the plaintiff. Furthermore, the defendants deny that the alleged rotation of the output signals by the angle β according to the matrix equation established by the plaintiff itself leads to any improvement of the output signals. The plaintiff had not submitted anything in this regard. This is also incorrect because a rotation "in the wrong direction", even if it is carried out according to the matrix equation of the plaintiff, worsens the output signals. The product tests carried out by the plaintiff were unsuitable for proving the realization of a characteristic, if only because they pursued the goal of proving the alleged standard conformity of the products. The plaintiff had not conclusively argued that the (alleged) teaching of subclaim 2 had been fully incorporated into the standard.

60In the alternative, the defendants pursued the FRAND objection in the second instance. In this context, the Chamber not only wrongly denied the defendants' willingness to license. Rather, it also disregarded the plaintiff's lack of willingness to license. In the statement of claim, the plaintiff had still referred to a bilateral license offer allegedly submitted by it before the court. Nevertheless, it did not submit a bilateral license offer to the defendants after being requested to do so, although it is undisputed that it pursues a bilateral licensing practice. At the same time, the plaintiff also failed to provide reasons why the defendants should be prevented from accessing the plaintiff's AAC-SEP portfolio by means of a bilateral agreement. The plaintiff's offer to license V's entire pool does not meet FRAND criteria, even at the outset. It unjustifiably discriminates against the defendants compared to the plaintiff's bilateral licensees. The license agreements disclosed by V. also show that the pool license offer unjustifiably discriminates against the defendants compared to other licensees in V.'s AAC-SEP pool. For this reason, too, the pool license offer does not meet FRAND criteria.

61Defendants have proactively requested Plaintiff to make a bilateral license offer to Plaintiff's AAC SEP portfolio by numerous letters since at least early 2020. Despite no response, Defendants would have proactively attempted to enter into a bilateral license agreement with Plaintiff time and again. Even after Plaintiff expressly denied Defendants the requested bilateral license agreement offer in subsequent letters, Defendants continued to pursue bilateral license efforts by reapproaching Plaintiff. The defendants had therefore demonstrated their continued willingness to license and had repeatedly renewed the invitation to conclude a license.

62It is undisputed that the plaintiff continues to pursue its bilateral licensing practice, and the defendants have also demonstrated their concrete interest in concluding a bilateral licensing agreement. The judgment at first instance recognizes that the defendants' group had concluded a bilateral license agreement on the AAC SEP portfolio of the licensor D. for the TV sector and was in bilateral negotiations with D. on by far the largest AAC SEP portfolio for the smartphone sector. Thus, the Respondent Side would already have bilateral licenses

to almost half of all AAC SEPs. In addition, the Chamber recognizes that the Plaintiff entered into a bilateral license agreement with the Plaintiff itself in November 2020 for its 3G/LTS SEP portfolio. However, the plaintiff did not address the defendant's factual reasons for entering into a bilateral license agreement.

63With regard to V.'s offer of a pool license agreement, the defendants had already argued in the first instance that this discriminated against the defendants compared to other comparable licensees. The defendants were not able to make further submissions at the time due to confidentiality obligations between V. and the defendants' parent company in the context of a tripartite confidentiality agreement concluded with D. The defendants therefore argued in the first instance that the pool license agreement offer discriminated against the defendants compared to other comparable licensees. The defendants had therefore requested in the first instance that the files of the parallel proceedings be included, from which the defendants' dispute with the pool license agreement offered by V. was evident. The fact that the defendants had dealt with V.'s pool license agreement and the settlement license agreements submitted in this regard was known to the plaintiff through its legal representatives.

64Apart from this, the defendants had confirmed their willingness to license by making their own (super-mandatory) license offer. After all of the plaintiff's requests for the submission of a bilateral license offer, including the setting of a deadline, had not led to the desired result, the defendants had submitted a bilateral license agreement offer (Exhibit B 29) on April 1, 2021, by means of super-mandatory efforts, despite an existing lack of information on the part of the plaintiff, which complied with FRAND principles. Such a license offer, which the plaintiff only had to accept, was at least a suitable basis for negotiations and clearly proved the defendant's willingness to license. The underlying draft license agreement originally came from the plaintiff. The plaintiff had accepted the terms of the agreement as FRAND when the agreement was concluded at that time. The figures used by the defendant were valid. The method of calculating the FRAND license fee was also customary in the industry. In particular, IDC figures are regularly used in the calculation of license fees for blanket licenses. The fact that the blanket license agreement offered by the defendant was intended to compensate for past acts of use was in line with FRAND criteria. The draft license agreement submitted by the plaintiff for its 3G/LTE SEP portfolio also contained a corresponding provision. It was also generally accepted that no detailed information was provided on the scope of such acts of use when blanket license agreements were concluded. The alleged settlement license agreements disclosed by V. also did not contain any detailed accounting for the past prior to the conclusion of the license agreement. Instead, past acts of use were compensated there by a more or less symbolic lump-sum payment.

65To date, the plaintiff has not submitted a bilateral license offer to the defendants willing to license, which it would have been obliged to do under FRAND aspects. Against the background of the factual reasons for a bilateral license presented by the defendants, it was incumbent upon the plaintiff to submit a bilateral license offer to the defendants. By refusing to do so, the plaintiff violated the FRAND obligations arising from its dominant position. The reference to V's AAC-SEP pool license does not constitute a FRAND offer by the plaintiff. This offer discriminates the defendants against other licensees in an unlawful manner. The plaintiff had granted the defendant representatives access to a data room after signing and executing a non-disclosure agreement on April 19, 2021. A review of the license agreements to be found there had

shown that the license fee provisions of the standard license agreement had been waived in numerous license agreements due to special agreements and side letters, and in some cases massively changed. The special agreements resulted in significantly more favorable per-unit license fees than V.'s publicly available license fee table had provided. The defendants were not offered these royalties by V., and therefore the defendants were discriminated against with respect to various licensees. By way of example, the defendants have singled out the license agreements with the smartphone manufacturers [...]. Reference is made to the relevant statements in the grounds of appeal (there p. 48 et seq., p. 679 et seq. GA). V. had therefore by no means concluded identical standard license agreements with all licensees.

66 Finally, the patent in suit would not prove to be legally valid in the invalidity proceedings, which is why the proceedings should be suspended in any case.

67 The defendants request,

that the judgment of the Düsseldorf District Court dated May 11, 2021, file no.: 4b O 83/19 be set aside in its entirety and the complaint dismissed;

alternatively:

to stay the legal dispute until the invalidity proceedings pending against the patent in suit have been finally resolved;

further in the alternative:

set aside the judgment of the Düsseldorf District Court of May 11, 2021, file no.: 4b O 83/19, to the extent of items 1., 2. and 6. and dismiss the complaint in this respect as currently unfounded.

68 The plaintiff withdrew the complaint on the claim for removal from the channels of distribution and, against the background of the partial destruction of the patent in suit in the meantime, lastly requested that

I. Amend the judgment of the Düsseldorf District Court dated May 11, 2021, file no. 4b O 83/19 to the effect that the operative part under No. 1 and No. 2 is worded as follows:

1. The defendants are ordered to refrain from offering or supplying smartphones and tablets for the implementation of a process for synthesizing a first and second audio output signal from an input signal for use in the Federal Republic of Germany, if the process includes the following steps, by avoiding a fine of up to € 250,000.00 - or, in the event of repeated infringements, up to a total of two years - to be determined by the court for each case of infringement, with the custody order to be enforced on the respective managing director:

- filtering the input signal to produce a filtered signal,
- obtaining a correlation parameter indicative of a desired correlation between the first and second output signals,
- obtaining a level parameter indicative of a desired level difference between the first and second output signals,
- transforming the input signal and the filtered signal by a matrix process to the first and second output signals, wherein the matrix process is dependent on the correlation parameter and the level parameter, and wherein the matrix process comprises a usual rotation about

a predetermined angle of the first and second output signals in a space encompassed by the input signal and the filtered input signal, and when the predetermined angle is dependent on the level parameter.

2. The defendants are ordered to avoid a fine of up to € 250,000.00 - in lieu of imprisonment - or imprisonment for up to six months, in the case of repeated infringements up to a total of two years, whereby the imprisonment is to be enforced on the respective managing director, to refrain from offering, putting into circulation, using or importing or possessing for the aforementioned purposes arrangements for synthesizing a first and a second audio output signal from an input signal in the Federal Republic of Germany if the arrangements include the following:

- Filter means for filtering the input signal to produce a filtered signal,
- Means for obtaining a correlation parameter indicative of a desired correlation between the first and second output signals,
- Means for obtaining a level parameter indicative of a desired level difference between the first and second output signals,
- Means for transforming the input signal and the filtered signal by a matrix operation to the first and second output signals, wherein the matrix operation is dependent on the correlation parameter and the level parameter, and wherein the matrix operation comprises a usual rotation about a predetermined angle of the first and second output signals in a space encompassed by the input signal and the filtered input signal, and when the predetermined angle is dependent on the level parameter.

69The plaintiff defends the judgment under appeal and counters the defendant's submissions by repeating and supplementing its submissions at first instance.

70The Chamber was right in not limiting the correlation parameter to the maximum value of the cross-correlation function. The passage in question in paragraph [0044], which describes only one example of an embodiment, does not refer to the teaching of the patent in suit, but to the determination of the correlation parameter in the encoder on the basis of its input signals. The technical teaching of the patent in suit, on the other hand, concerns the decoder, the correlation parameter being (merely) indicative of the desired correlation between its output signals. Thus, the decoder should generate the output signals in such a way that the correlation between them determined according to this relationship corresponds to the correlation parameter. The way in which the correlation parameter was generated in the encoder was not decisive for this. The only decisive factor was that it was used by the decoder in a suitable manner to generate the output signals. In this respect, the description of the patent in suit explains that the output signals can be represented by vectors and that the correlation p between the output signals results from the angle α between these vectors according to the relation $p = \cos(\alpha)$. In order to achieve this correlation between the output signals, these could be generated in particular on the basis of the matrix process shown in paragraph [0034] of the patent description by determining the angle given there from the correlation parameter p in accordance with the relationship $\alpha = \cos(p)$. According to the AAC standard, the ICC parameter is used just in this way. In the AAC standard, a matrix process

is provided for generating the output signals, which corresponds to the matrix process described in the patent in suit and with which output signals are generated between which there is an angle resulting from the cosine of the ICC value. Already in this respect the ICC parameter of the AAC standard is a correlation parameter in the sense of the patent in suit. It indicates the (desired) correlation that the decoder sets between the input signals.

71Contrary to the defendant's view, claim 1 does not exclude filtering of the input signal before transformation. Nor can anything to the contrary be inferred from the judgment of the court of first instance. Against this background, the District Court correctly assumed that the input signal of the defendant's devices compliant with the AAC standard is transferred to the frequency domain or the subband domain by an analysis filter device before it is transformed together with the filtered (decorrelated) signal.

72The Chamber was correct to reject the defendant's FRAND objection.

73The defendants have already not shown that the plaintiff is given a dominant position by patents essential for the AAC standard. According to surveys, 30% of consumers are willing to purchase a smartphone even without the "A." operating system. Moreover, the use of the AAC standard was indisputably not necessary for the use of the "A." operating system, but only for access to the app store of G. There were, however, also other app stores via which users downloaded applications for cell phones and tablets. Therefore, the defendants would have to show that there is market dominance despite alternative app stores, for example because these other app stores would not satisfy the expectations of the end users. The defendants have not submitted anything in this regard. It was true that "A." as an operating system was the most widely used operating system for cell phones alongside "i.". This was due to the fact that G. made its software available free of charge. The District Court thus derived the plaintiff's allegedly dominant position from G.'s dominant position on the software market. However, the plaintiff's alleged dominant position was not a consequence of standard setting, but a reflex of G.'s business policy. Moreover, as Apple in particular had demonstrated, it was perfectly possible to successfully market cell phones with other operating systems.

74Furthermore, the patent owner is not obliged to submit several FRAND license offers to the infringer. A violation of the obligations under antitrust law is already ruled out if there is a single license offer that is free of exploitation and discrimination. It was therefore sufficient in principle if the patent owner submitted either a pool or a bilateral license offer. Something else would apply, at most, if the patent owner discriminated by submitting a bilateral offer or only a pool license offer to the license seeker. The patent owner must therefore select the type of offer in a non-exploitative and non-discriminatory manner. The plaintiff met these requirements in every respect.

75The plaintiff's decision to make a pool license offer to the defendants does not constitute an abuse of exploitation. First, the defendants did not have any licenses to the remaining patents included in V.'s AAC pool. The license agreement between D. and T., which expired in September 2021, covered only televisions and did not include any of the challenged embodiments. Secondly, the defendants had not entered into licensing negotiations with any

other licensor of V.'s AAC pool - apart from cursory contacts with D.. Since the defendants also infringed the patents of the other licensors of V's AAC pool, they could not seriously oppose an obligation to license the entire pool. From the fact that T. had concluded a bilateral license agreement with the plaintiff for another technology (UMTS/LTE), no abuse of exploitation could be inferred with regard to the pool license now offered.

76The offer of a pool license also does not discriminate against the defendants. From a discrimination point of view, the plaintiff was not obliged to take T's licensing practice into account. It may only not place T. in a worse position than other licensees. The plaintiff grants bilateral licenses only in special cases where a pool license would not be appropriate due to license agreements of the licensee with other licensors of the pool or where complex license agreements have been concluded which include a number of other technologies in addition to AAC. In the case of T., such an exceptional situation did not exist.

77The Chamber had correctly denied that the defendant or T. was willing to license. In the past, T. had concluded a pool license agreement with V., which had had to be terminated due to T.'s breach of contract. The defendants had given away a license they had freely negotiated by grossly infringing their contractual obligations and by thwarting an audit by V. Subsequently, the defendants had ignored the licensing efforts of both V. and the plaintiff for years. Even their infringement notices and license offers remained unanswered for years. It was only after the lawsuit was filed that T. contacted the plaintiff. The defendants had submitted their counter-offer only one week before the hearing at first instance and thus not "within a short period of time" as required by the ECJ.

78The defendants could not plead that they had dealt with the plaintiff's offer of a license agreement because they had objected to it in the parallel proceedings with D. as allegedly discriminatory. The plaintiff was not a party to the parallel proceedings. Apart from that, the defendants had not reacted at all to the infringement notice and the license offer of the plaintiff for more than three years. It was only after the filing of the lawsuit that the defendants had formulated an interest in a bilateral license without addressing the plaintiff's license offer. Only in the course of the proceedings had T. in the parallel proceedings complained of alleged discrimination against other licensees exclusively in the writs to the court and not in the course of contractual negotiations between the parties. Such behavior was not constructive and purposeful participation in the conclusion of the license agreement. To date, the defendants have not dealt with the plaintiff's license offer in a factual and constructive manner.

79This is FRAND. Insofar as the defendants complain for the first time in the appeal instance of alleged discrimination against three licensees of V., this submission is late and must therefore be rejected pursuant to Section 531 (2) Code of Civil Procedure (ZPO). The comparatively late disclosure of the license agreements in the present proceedings was solely attributable to the defendants and was their responsibility. The defendants' accusation of discrimination is also not justified. In particular, Samsung does not pay less contract fees than V. demands from the defendants. In addition, the lump sum royalties paid by Samsung would not be less than what Samsung would have to pay per unit if the royalties provided for in the

standard agreement were applied. In any event, any unequal treatment, which the plaintiff explained in detail in its response to the appeal (there p. 30 et seq, p. 741 et seq. GA), is objectively justified.

80The defendants' counteroffer is not reasonable from any point of view and, moreover, would lead to discrimination against the plaintiff's other licensees. Defendants propose a license covering all acts of use of plaintiff's AAC patents from 2007 to 2025 by cell phones, tablets, and arguably televisions. For these acts of use, the defendants offered to pay a royalty of x U.S. dollars. Each of the calculation steps leading to this license fee is afflicted with massive errors and inaccuracies - named in detail by the plaintiff - which lead to the license fee being so far below an appropriate remuneration that the offer does not even serve as a basis for negotiation. With regard to the details, reference is made to p. 23 et seq. of the response to the appeal (p. 734 et seq. GA).

81Finally, there was no reason to suspend the hearing.

82The defendants countered this argument.

83They object in particular that the plaintiff has not made any offer of a license agreement to the defendants so far, but only referred to the fact that V. has an offer for a comprehensive license to the patent pool ready. If V.'s AAC pool license is considered to be the plaintiff's offer, it does not meet FRAND criteria because it puts the defendants at an unreasonable disadvantage compared to other comparable licensees. The plaintiff was obliged to submit a bilateral license offer. It is up to the plaintiff to show why the defendants do not have a "special case" justifying a bilateral license. Accordingly, the defendants do not deny with knowledge that the plaintiff is entitled to refuse them a bilateral license. Moreover, they - the defendants - have shown in detail that V.'s AAC pool license offer discriminates against them compared to three competitors. The plaintiff had not been able to dispel the objections raised by the defendants in this context. Furthermore, the plaintiff did not dispute the defendants' argument that V. had concluded countless side letters, amendments, addendums, settlement agreements, etc. with numerous other licensees, which invalidated the alleged "standard pool license agreement". Moreover, numerous competitors of the defendants, such as the Chinese mobile phone manufacturers H. and Z., were not licensees of V.; in any case, no contracts with the aforementioned companies had been disclosed to the defendants. In a sense, this represented the greatest possible discrimination as a free license.

84For the rest of the facts and dispute, reference is made to the content of the parties' mutual writs and the Exhibits submitted by them, as well as to the facts of the case and the reasons for the contested decision.

II.

85The defendants' appeal is admissible, but is unsuccessful on the merits. The District Court rightly considered the offering and distribution of the challenged embodiments in the Federal Republic of Germany to be a literal use of the patent in suit and ordered the defendants to cease and desist, to provide information and to pay an invoice due to direct and indirect patent infringement and - with regard to the direct infringement - to recall the product (only the second defendant) and deter-mined the defendants' obligation to pay damages. The plaintiff is entitled to corresponding claims also taking into account the interim limitation of

the scope of protection under Art. 64(1) EPC in conjunction with Art. 139(1) and (2) EPC. §§ Sections 139 (1) and (2), 140a (3), 140b (1) and (3) Pa-tent Act in conjunction with Sections 242, 259 BGB. §§ Sections 242, 259 German Civil Code (BGB).

86Insofar as the Chamber denied a recall claim against the first defendant as well as claims for destruction against both defendants, this remained unchallenged in the appeal proceedings, which is why the partial dismissal of the action based on this remains valid.

871There are no objections to the fact that the plaintiff now bases its requests solely on an infringement of the patent in suit as maintained to a limited extent.

88Such an adjustment of the requests to a limited maintenance of the claim that has occurred in the meantime in the proceedings on the existence of rights does not constitute an amendment of the claim within the meaning of Section 263 of the Code of Civil Procedure (ZPO), but rather - if one wants to see in it an amendment of the request at all and not only a concretization of the request - at most a limitation of the request for relief pursuant to Section 264 No. 2 of the Code of Civil Procedure (ZPO) (settled case law, cf. Düsseldorf Higher Regional Court, Judg. v. March 18, 2021, file no.: I-2 U 18/19, GRUR-RS 2021, 6714, margin no. 38 - Hubsäule; file no.: I-2 U 13/20, GRUR-RS 2021, 8206, margin no. 41 - Halterahmen II; judgement no. Jan. 27, 2022, file no.: I-2 U 45/19 - Rührgefäß, GRUR-RS 2022, 2110; Voß in: BeckOK Patentrecht, 23rd edition, as of 15.01.2022, Vor §§ 139 et seq. margin no. 47; Zigann/Werner in: Ceph/Voß, Prozesskommentar zum Gewerblichen Rechtsschutz, 2nd ed., Sec. 253 Code of Civil Procedure (ZPO) margin no. 105), which is also admissible in appeal proceedings without further ado because Sec. 533 Code of Civil Procedure (ZPO) does not apply (see Federal Supreme Court (BGH), NJW 2004, 2152; Federal Supreme Court (BGH), WM 2010, 1142). This follows from the fact that the cause of action remains identical if features of the claim are added, in that the plaintiff continues to base its claim on the same facts of life and the same property right. It continues to pursue the objective of the action to have the offer and sale of the challenged embodiments prohibited due to infringement of the same patent (Düsseldorf Higher Regional Court, judgment v. Sept. 30, 2021, file no.: I-2 U 15/20, GRUR-RS 2021, 30324 - Schiebedach; judgment of. Jan. 27, 2022, file no.: I-2 U 45/19 - Rührgefäß, GRUR-RS 2022, 2110).

89Even if the limitation of the statement of claim - as the defendants asserted at the hearing on May 12, 2022 - were to be seen as an amendment of the claim, the result would not be different. If the plaintiff is successful in the first instance with its main request following the granted version of the claim and only the defendant appeals, the auxiliary request "in particular" submitted for decision in the first instance falls for decision in the appeal proceedings without further ado and namely without a cross-appeal by the plaintiff, if the appellate court comes to the conclusion that the main request is not justified due to the partial destruction of the patent in suit in the meantime (Federal Supreme Court (BGH), GRUR 2021, 1519 - Uli-Stein-Cartoon).

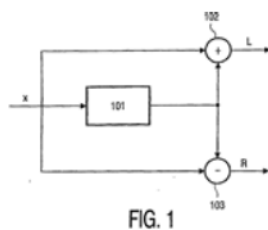
902. The patent in suit relates to the synthesis of a first and a second output signal from an input signal.

91 As the skilled person can see from the introductory remarks in the patent application, only a single audio channel is transmitted in parametric audio coders. In order to obtain a stereo signal with spatial characteristics on the receiver side, it is necessary to transmit (quantify) parameters representing the information required for such a spatial sound (paragraph [0002]). One such parameter significant for the coding of a stereo signal with

a left and a right channel is the interchannel cross-correlation between the L and the R channel. It is therefore one of the signal parameters in many systems analyzed by an encoder. The determined cross correlation is transmitted together with a mono signal from the encoder to a corresponding decoder (par. [0004]). There, two output signals are reconstructed with the desired cross-correlation (par. [0004] f.).

92The article "Efficient representation of special audio using perceptual parametrization" (Faller and Baumgarte, "IEEE Workshop on applications of signal processing to audio and acoustics", October 21, 2001) describes a representation of spatial audio which has a monoaural sum signal, the interaural level difference and the interaural time difference in each critical band. To synthesize the binaural signal, the level and time differences are applied to the spectral coefficients of the monoaural system (para. [0003]).

93In the prior art, various methods for decorrelating signals are known, including a so-called "Lauridsen decorrelator". Its mode of operation is illustrated in Figure 1 of the patent in suit together with the associated description:



94Hereby, the signal $H \cdot x$ delayed by an all-pass filter (101) is added to or subtracted from the input signal x , resulting in the left (101) and right (103) channels. However, such a circuit has the disadvantage that the perceived quality deteriorates when there are large amplitude differences between the L and R signals (par. [0006] f.).

95With the background described, the patent in suit is based on the task of enabling simple generation of the stereo channels from a parametrically coded audio signal, which in particular takes into account the cross-correlation between stereo signals and also functions with larger differences between the signals.

96To solve this problem, claim 1, as upheld by the Federal Patent Court, provides for a combination of the following features:

A method of synthesizing first and second audio output signals (L, R) from an input signal (x), the method comprising the steps of:

- 1.1. filtering the input signal (x) to produce a filtered signal;
- 1.2. obtaining a correlation parameter (r) indicative of a desired correlation between the first and second output signals (L, R);
- 1.3. obtaining a level parameter (c) indicative of a desired level difference between the first and second output signals (L, R);
- 1.4. transforming the input signal (x) and the filtered signal by a matrix process to the first and second output signals (L, R).

1.4.1 The matrix process depends on the correlation parameter (r) and the level parameter (c).

1.4.2 The matrix process includes a joint rotation by a predetermined angle of the first and second output signals in a space spanned by the input signal and the filtered input signal.

1.4.2.1 The predetermined angle depends on the level parameter.

97The Senate - following the Federal Patent Court in its preliminary ruling - has taken into account in the above feature analysis that the registered German translation of the claims is partly incorrect. Unlike the translation, the authoritative English version speaks of "audio output signals". Therefore, in feature 1. the term "output signals" was replaced by the wording "audio output signals". In addition, the Senate replaced the unfortunate translation "receive" for the English wording "to obtain" with "obtain" (in the sense of "receive") - as is also the case with patent claim 6 reproduced below.

98The device protected by patent claim 6 as maintained by the Federal Patent Court is characterized by the following features:

991. an arrangement for synthesizing a first and a second audio output signal (L, R) from an input signal (X), said arrangement comprising:

1.1. filter means (201) for filtering the input signal (x) to produce a filtered signal;

1.2. means (202) for obtaining a correlation parameter (r) indicative of a desired correlation between the first and second output signals (L, R);

1.3. means (202) for obtaining a level parameter (c) indicative of a desired level difference between the first and second output signals (L, R);

1.4. means (203) for transforming the input signal (X) and the filtered signal by a matrix process to the first and second output signals (L, R), the matrix process being dependent on the correlation parameter (r) and the level parameter (c).

1.4.2 The matrix process includes a joint rotation by a predetermined angle of the first and second output signals in a space spanned by the input signal and the filtered input signal.

1.4.2.1 The predetermined angle depends on the level parameter.

100The features added in each case in comparison with the version granted are marked by underlining, whereby the Senate has taken as a basis the unobjected translation of the plaintiff from the writ of April 21, 2022.

101Since the features of claims 1 and 6 correspond except for the different claim category, the following explanations focus on the process claim. The relevant explanations apply analogously in the same way to device claim 6.

1023 The District Court rightly considered all features of the granted claims 1 and 7 (now 6) of the patent in suit to be realized in the challenged embodiments. With regard to features 1.1. and 1.3. this is also not in dispute between the parties at second instance, so that further comments on this are unnecessary. Contrary to the defendant's opinion, the challenged embodiments also make use of features 1.2. and 1.4. according to their wording. Furthermore,

the features added due to the partial destruction of the patent in suit in the meantime are also realized.

103a) Feature 1.2. requires obtaining a correlation parameter (r) indicative of a desired correlation between the first and second output signals (L, R).

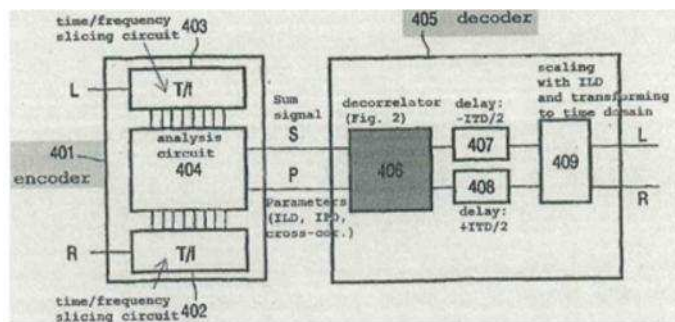
104aa) From this, the skilled person, a graduate engineer of electrical engineering, communications engineering or information technology with a university diploma or master's degree with several years of professional experience in the field of digital signal processing and knowledge in audio coding (so also BPatG, Exhibit K 6, p. 6, second paragraph), takes two specifications: The information addressed must - first - be a correlation parameter and this must - second - be indicative of a desired correlation of two output signals. Further requirements for the technical design of the correlation parameter are not imposed by the wording of claims 1 and 6 (Art. 69 EPC), which are decisive for the scope of protection.

105 Insofar as the defendants nevertheless want to understand the correlation parameter as the maximum value of the cross-correlation function, such a requirement is not reflected in the claims at issue.

106 In this respect, the wording of the individual terms is not to be adhered to, but the overall technical context which the content of the patent specification conveys to the person skilled in the art is to be taken into account. It is not the linguistic or logical-scientific determination of the terms used that is decisive, but the understanding of the unbiased person skilled in the art (Federal Supreme Court (BGH) GRUR 1999, 909, 911 - Spanschraube). Within the scope of the interpretation, the meaning of the claim in its entirety and the contribution which the individual features make to the performance result of the invention are to be determined (BGHZ 194, 107 = GRUR 2012, 1124, margin no. 27 - Polymerschaum). The patent specification is to be read in a meaningful context and, in case of doubt, a patent claim is to be understood in such a way that no contradictions arise with the description and the drawings. Only if and to the extent that the teaching of the claim cannot be reconciled with the description and the drawings and an irresolvable contradiction remains, the elements of the description or the drawings which have not been reflected in the claim may not be used to determine the subject-matter of the patent (Federal Supreme Court (BGH) 189, 330 = GRUR 2011, 701, margin no. 24 - Okklusionsvorrichtung; Federal Supreme Court (BGH), GRUR 2015, 972, margin no. 22 - Kreuzgestänge; GRUR 2021, 1167, margin no. 21 - Ultraschallwandler).

107 However, a restrictive understanding of the scope of protection is not justified even taking these principles into account. Paragraph [0044] of the patent specification (= paragraph [0045] of the German translation) used by the defendants for the reasons of their deviating opinion is part of the explanation of an example of an embodiment. Such an example explains a possible embodiment of the invention without limiting the scope of protection thereto (settled case law, cf. by way of example: Düsseldorf Higher Regional Court, decision of. 13.08.2020, file no.: I-2 U 25/19, GRUR-RS 2020, 21040 - Schnellspannvorrichtung; file no.: I-2 U 1/21, GRUR-RS 2021, 39600 - Rasierapparat).

108 For illustrative purposes, the following inset shows Figure 4 of the patent in suit as annotated by the Federal Patent Court (Exhibit K 6, p. 3):



109 According to the description of the patent in suit, the figure shows a system for spatial audio coding with an encoder (401) and a corresponding decoder (405). The encoder first divides the stereo signals (L, R) into time segments and determines the signal spectrum for each of these signal segments by means of a fast Fourier transformation (FFT) (paras. [0038] - [0040] = paras. [0043] f. of the German translation). Then, in an analysis circuit (404) of the encoder (301), a parameter set P is calculated which comprises three parameters:

- the interaural level difference ILD (interaural level difference), which indicates for each time/frequency group how large the ratio of the powers of the signal components L and R is,
- the interaural time or phase difference ITD/IPD (interaural time or phase difference), which indicates for each time/frequency group by which time or phase the signals have to be shifted against each other, so that the associated cross correlation function reaches a maximum, and
- a value describing the similarity of the waveform of both signal components L and R for each time/frequency group, using the maximum value of the cross-correlation function for this purpose.

(cf. paras. [0041] - [0044] = para. [0045] of the translation; BPatG, Exhibit K 6a, p. 3 f.)

110 In addition, a sum signal S is formed in the analysis part (404) of the encoder (401) from the individual time/frequency groups of the signal parts L and R and transmitted to a decoder (405) together with the parameter set P (par. [0046] = par. [0047] of the translation).

111 Contrary to the defendant's view, para. [0044] does not constitute a foreign body containing a general definition of the correlation parameter. Rather, it fits seamlessly into the description of the embodiment. That this is so is already clear from paragraph [0040] of the patent-in-suit description (= paragraph [0044]) of the translation). Thereafter, the statements refer to "one embodiment" of the invention. This contains an analysis circuit (404) which calculates a parameter value using the parameters mentioned in detail above. Figure 4 together with the associated description (paras. [0038] - [0046] = paras. [0043] - [0047]) therefore explains one possibility for determining the correlation parameter. However, this has not been reflected in either claim 1 or claim 6. According to the invention, it is therefore only sufficient, but also necessary, that the correlation parameter obtained by the decoding device is indicative of a desired correlation between the first and second output signals (L, R). It must therefore indicate a measure of the desired correlation between the first and second output signals. For the rest, its embodiment is at the discretion of the person skilled in the art, regardless of what other embodiments are mentioned in the patent-in-suit description.

Disclosure and scope of protection are not the same thing. A device can therefore fall within the scope of protection of the patent in suit even without mentioning it. And features drafted functionally can also be realized literally by such measures which were still completely unknown on the priority date of the patent in suit and the discovery of which required an inventive step (Senate, GRUR-RR 2020, 137 - Bakterienkultivierung, confirmed by Federal Supreme Court (BGH), Urt. v. Feb. 22, 2022, file no.: X ZR 103/19, GRUR-RS 2022, 9229). In his understanding gained on the basis of these considerations, the skilled person sees himself already confirmed by the fact that there is no reference in the claims to the respective time difference ITD at which the maximum of the correlation function results (so also BPatG, Exhibit K 6, p. 10).

112The defendant's objection that no other parameter was available to the skilled person in the prior art for solving the problem, which is why he would use the maximum value of the cross-correlation function as a patent-compliant correlation parameter, was countered by the plaintiff by pointing out that correlation parameters could be considered which were determined by means of the cross-correlation function, neglecting the time shift. The maximum value of the cross-correlation function is the value which this function assumes with the time shift ITD. If this is not taken into account, the correlation parameter can also be determined from a value of the cross-correlation function which results from a different time shift of the signals. In particular, the correlation parameter could be determined on the basis of the value of the cross-correlation function in the case of unshifted signals, i.e. in the case of a time shift of zero between the signals (appellate defense, p. 7, sheet 718 GA). The defendants have not been able to counter this. The plaintiff's submission in this respect is therefore undisputed (Section 138 (3) Code of Civil Procedure (ZPO)) and proves that the skilled person had technical possibilities at the priority date to implement the teaching according to the patent beyond the described embodiment example.

113Unlike the defendants, the Senate is also unable to identify any discrepancy between the plaintiff's understanding of the scope of protection in the infringement proceedings and its statements in the invalidity proceedings. The passage quoted by the defendants in this context (Writ of 23.12.2021, Exhibit BK 4, p. 4) refers to the understanding of Figure 4 together with the associated description. There, according to the (correct) understanding of the plaintiff, the correlation parameter is described as the maximum value of the cross-correlation function within the scope of an example (which does not limit the scope of protection). The plaintiff's statement in the invalidity proceedings, however, does not show that it necessarily always wants to understand the correlation parameter in such a sense within the meaning of the patent in suit, irrespective of the embodiment example.

114bb) The defendants do not dispute that the ICC parameter ("inter-channel coherence") described in the AAC standard in section 8.6.4.1. in connection with the "Parametric Stereo Tool", which indicates the (dis)similarity of the left and right band-limiting signals, is a correlation parameter in accordance with the patent in suit on the basis of such an understanding, so that no further explanation is required in this respect. The (dis)similarity of the two signals corresponds to their correlation, so that the ICC parameter is indicative of a desired correlation between the first and second output signals.

115Nor is it in dispute between the parties that the challenged embodiments support the mobile operating system "A.", which - for example in the version 7.0 also used in the challenged embodiments - requires support of the "HE AAC v2" profile according to the compatibility specifications available as Exhibit K 3h. Even if it cannot necessarily be concluded from this that the operating system supports the AAC standard and its "HE AAC v2" profile due to the possibility of modifying the operating system existing for the respective manufacturer in the case of "A.", the defendants have not substantially disputed that the challenged embodiments are compatible with the standard in the second instance either (§ 138 Para. 3 ZPO).

116The extent to which the disputing party must substantiate its submission depends on the substance of the submission of its opponent who is obliged to present its case: Whether and to what extent the party who is not obliged to present its case must substantiate its factual submission can only be determined from the interplay of submission and counter-submission (BeckOK Code of Civil Procedure (ZPO)/Bacher, 43rd edition, status: 01.12.2021, § 286 margin no. 18). In this context, it is first of all incumbent on the party burdened with the burden of proof to concretize and detail its submission (Federal Supreme Court (BGH), NJW 1999, 1404). The more detailed its submission, the higher the substantiation requirements under Section 138 (2) Code of Civil Procedure (ZPO) (established case law, see Federal Supreme Court (BGH), NJW-RR 2020, 1320; Federal Supreme Court (BGH), NJW-RR 2018, 1089; Federal Supreme Court (BGH), NJW-RR 2015, 468; Federal Supreme Court (BGH), NJW-RR 2011, 1509, each with further w.. N.; Düsseldorf Higher Regional Court, GRUR-RR 2021, 421, 426 - Montagegrube). Accordingly, substantiated arguments cannot be denied in general (Federal Supreme Court (BGH), NZG 2020, 1149; BGH, NZG 2018, 497; Federal Supreme Court (BGH), NJW 2010, 1357). If, for example, the complaining party has sufficiently substantiated its claim by submitting documents, the defendant must dispute this claim in an equally qualified manner (Düsseldorf Higher Regional Court, judgment of December 9, 2021, file no.: I-2 U 1/21, GRUR-RS 2021, 39600 margin no. - Rasierer).

117Having said this, the plaintiff did not merely assert in a general manner the standard compatibility of the challenged embodiments, as it saw it, but supported its argument by submitting the relevant investigation reports (Exhibits K 3i and K 3j). Against this background, it is not sufficient for a substantial denial that the defendants describe the plaintiff's submission as insufficient and criticize the investigation reports submitted by the plaintiff. Rather, it would have been up to them to also arrange for corresponding investigations and - insofar as applicable - to counter the investigation reports submitted by the plaintiff on this basis. Since the operating system "A." version 7.0 used in the challenged embodiments requires support of the "HE AAC v2" profile of the AAC Audi.tandard according to the compatibility specifications, it would have been up to them to state specifically whether and, if so, to what extent they have made use of the possibility of modifying the operating system. However, the defendants did not comply with this requirement in the second instance either. The general reference that there is a lack of evidence from the plaintiff as to the extent to which the challenged tablet PCs use the "A." operating system and the "HE AAC v2" profile of the AAC standard is obviously not sufficient for this (cf. grounds of appeal, margin no. 63, p. 646 GA). This applies all the more since such an objection to the submission as unsubstantiated is already not a dispute. With their statements, the defendants neither expressly nor impliedly deny the plaintiff's assertion that the challenged tablet PCs use the "A." system and the "HE AAC v2" profile.

118b) Insofar as the defendants for the first time in the appeal dispute the realization of feature 1.4. on the grounds that the input signal is (also) filtered by default - which is undisputed - such pre-filtering does not lead outside the scope of protection of the patent in suit.

119The method forming the subject matter of claim 1 is concluded by transforming the input signal (x) and the filtered signal by a matrix process to the first and second output signals (L, R), the matrix process being dependent on the correlation parameter (r) and the level parameter (c). Thus, feature 1.4. follows feature 1.2. according to which the input signal (x) is filtered to generate a filtered signal. The skilled person searches in vain in claim 1 (as well as in claim 6) for specifications on the more detailed technical design of the input signal. Neither there nor in the patent description in suit is there any indication that the input signal forming the object of the transformation within the meaning of feature 1.4. must be unfiltered. This also seems to be recognized by the defendants, who do not refer to the patent specification, but only to passages of the first instance judgment for the reasons of their deviating opinion. However, the Chamber also does not make the demand for an unfiltered input signal at any point. In particular, this cannot be inferred from the passage of the discussion of the legal status cited by the defendants. Rather, the Chamber does not consider citation B 5 (WO `656) to be detrimental to novelty because the input signal is initially only split into a high-frequency and a low-frequency component and at most the high-frequency component is subjected to a matrix operation. Therefore, a correlation parameter is not applied to the input signal, but at most to the part of the signal that forms the high-frequency band (LGU, p. 85 bottom - p. 86 top). The fact that the input signal may not be filtered before the transformation according to feature 1.4. cannot be inferred from these statements of the Chamber. Therefore, it does not lead out of the scope of protection of the patent in suit that the input signal within the standard parametric stereo decoder passes through an analysis filter before further processing.

120c) Furthermore, the features added within the scope of the intermediate limitation of the patent in suit and going back to subclaim 2 as granted are also realized.

121aa) These concretize the matrix operation in more detail in that it comprises a usual rotation about a predetermined angle of the first and second output signals in a space spanned by the input signal and the filtered input signal, the predetermined angle being dependent on the level parameter. This allows control of the relative levels of the output signals without affecting the cross-correlation between the output signals (par. [0011]). In order to set the rotation angle as optimally as possible, it is determined in particular as a function of the level parameter.

122bb) Having said this, the plaintiff has already described the standard transformation process in detail in the statement of claim (pp. 49 et seq., GA).

123 After that, the standard explains the calculation of the left and right output signal from the monaural signal and its decorrelated version in section 8.6.4.6.2 "Mixing". Thereby the R_a -method shown among others uses the matrix equation from paragraph [0034] of the patent in suit with only slightly changed scaling coefficients.

According to the standard, the stereo subband signals, i.e., the stereo signals in each subband k , would be determined using the following equation (standard, para. 8.6.4.2., emphasis by the plaintiff):

124The quantities $l_k(n)$ and $r_k(n)$ denoted here the spectral coefficients of the left and right stereo channel in the k -th partial frequency band and in the n -th slot. The quantities $H_{ik}(k, n)$ are matrix components which control the superposition of the monoaural signal $s(k, n)$ and its decorrelated version $d(k, n)$ for the generation of the stereo channels. This already shows that the standard provides for a characteristic transformation of the input signal (s) and the filtered signal (d) by a matrix process to the first and second output signal (L, R). The input quantity of the linear combination described by the term matrix operation is the coded signal s and its decorrelated version d . The output quantity is the left and right stereo signals.

125Furthermore, stereo parameters are not only given for each slot n , but only for slots at certain positions n_e . For these slots the matrix components $H_{ij}(k, n_e)$ are given by parameters $h_{ij}(b)$, which are calculated from the stereo parameters for this slot. The matrix components H_{ij} for the slots between the slots with parameter assignment would be determined by an interpolation (standard, para.8.6.4.6.4.).

126In order to calculate the parameters $h_{ij}(b)$, the quantity $c(b)$ is first determined using the equation

$$c(b) = 10^{\frac{11d(b)}{20}}$$

from the IID parameter. From this, two scaling factors $c_1(b)$ and $c_2(b)$ would then be determined, which thus depended on the IID parameter:

$$c_1(b) = \frac{\sqrt{2}}{\sqrt{1+c^2(b)}}$$

$$c_2(b) = \frac{\sqrt{2}c(b)}{\sqrt{1+c^2(b)}}$$

127Then calculate the coefficients $h_{ij}(b)$ as standard using the scaling factors and two angular quantities $\alpha(b)$ and $\beta(b)$, where the angle $\alpha(b)$ is determined from the ICC parameter $\rho(b)$

$$\alpha(b) = \frac{1}{2} \arccos(\rho(b))$$

$$\beta(b) = \alpha(b) \frac{c_1(b) - c_2(b)}{\sqrt{2}}$$

$$h_{11}(b) = \cos(\alpha(b) + \beta(b)) c_2(b)$$

$$h_{12}(b) = \cos(\beta(b) - \alpha(b)) c_1(b)$$

$$h_{21}(b) = \sin(\alpha(b) + \beta(b)) c_2(b)$$

$$h_{22}(b) = \sin(\beta(b) - \alpha(b)) c_1(b)$$

128If we substitute the equations for the coefficients $h_{ij}(b)$ and the scaling factors into the above equations for the left and right stereo signal and write the resulting equation as resulting equation as a matrix equation, one obtains for the slot n_e :

129Taking into account the different definitions of the angle α by the factor $1/2$, this equation corresponds to the previously given equation of the patent in suit with slightly changed scaling factors. This matrix process is - mediated via the quantities c , α and β - also dependent on the correlation parameter (ICC) and the level parameter (IDD).

130Based on these considerations, the plaintiff inserted the following equation (see p. 53 GA) in its statement of claim with regard to subclaim 2:

131The standard also provides for a common rotation of the two stereo channels by an angle β .

132cc) After the plaintiff has presented in detail why, in its view, the standard provides for the rotation now required, it would be up to the defendants to take a position on the plaintiff's individual assertions and to show at which point the plaintiff's statements are incorrect in its view. However, their statements do not even begin to satisfy this requirement. In this context, it is not sufficient to point out that the matrix equation shown above is not found in the standard. The plaintiff does not claim a disclosure of exactly this equation either. Rather, it has derived the aforementioned equation step by step from the specifications of the standard, without the defendants having specifically countered this. The plaintiff's arguments in this regard are therefore not in dispute (Section 138 (3) Code of Civil Procedure (ZPO)).

133To the extent that the defendants instead deny that the alleged rotation of the output signals by the angle β according to the matrix equation established by the plaintiff leads to any improvement of the output signals, this denial comes to nothing. If a challenged embodiment makes use of all features according to the literal meaning, it is irrelevant whether

the effects according to the invention are achieved at all or in effects occur at all or completely or whether the user has realized the use at all (BGH (Federal Supreme Court (BGH), GRUR 1991, 436, 441 f. - Befestigungsvorrichtung II; BeckOK PatR/Loth, 23rd edition, Jan. 15, 2022, PatG § 14 margin no. 442; Haedicke/Timmann, Handbuch des Patentrechts, 2nd ed., § 3 margin no. 128; Schulte/Rinken, Patentgesetz mit EPÜ, 10th ed., § 14 margin no. 90).

1344. Against this background, the District Court correctly considered the offer and distribution of the challenged embodiments in the Federal Republic of Germany to be a direct infringement (claim 7 (now 6), Sec. 9 (2) No. 1 Patent Act) and a contributory infringement (claim 1, Sec. 10 para. 1 Patent Act) of the patent in suit and, on this basis, ordered the defendants to cease and desist, to provide information and to pay an invoice and - with regard to the direct infringement - to recall (only the second defendant) and determined the defendants' liability for damages. The plaintiff is entitled to corresponding claims under Art. 64(1) EPC in conjunction with Art. §§ Secs. 139 (1) and (2), 140a (3), 140b (1) and (3) Patent Act in conjunction with Secs. §§ Sections 242, 259 German Civil Code (BGB). The interim limitation of the patent in suit does not change the existence of a patent infringement and consequently the existence of the aforementioned claims, also insofar as they require fault.

135 Since the defendants did not return to the issue of passive legitimation in the appeal proceedings, reference can be made in this respect to the correct statements in the judgment at first instance, which the Senate agrees with. The same applies with regard to the exhaustion objection raised at first instance, the objection of the disproportionate nature of the recall, and the statute of limitations defense. Finally, the defendants have not raised any objections with regard to contributory patent infringement in the appeal proceedings either, so that no further comments are required in this respect either. To the extent that the Chamber dismissed the complaint with respect to the claim for destruction asserted at first instance and with respect to the recall claim also asserted against the first defendant, the plaintiff did not appeal against this. The judgment of the District Court has therefore become res judicata.

1365 The plaintiff is not restricted in enforcing its rights in court because the patent in suit is a standard essential property right for which a FRAND declaration has been made (Article 102 TFEU).

137a) The District Court was correct in its reasons for finding that the plaintiff was in a dominant position.

138aa) Dominant position within the meaning of Article 102 TFEU means the position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors and customers (ECJ, NJW 1978, 2439, 2440 - United Brands v. Commission; EuZW 2012, 741, margin no. 38 = WRP 2012, 680 - Tomra; BGHZ 170, 299 = GRUR 2007, 520 margin no. 19 - National Geographic II; NZKart 2017, 242 = WRP 2017, 563, margin no. 25 - VBL-Gegenwert II, GRUR 2020, 961, margin no. 55 - FRAND-Einwand).

139As the Chamber has already correctly pointed out, the dominant position of a patent owner does not result solely from the fact that he can exclude any third party from using the technical teaching of his patent by virtue of the exclusive right granted to him. The exclusive rights to which the owner of an intellectual property right is entitled cannot alone provide the reasons for a dominant position (ECJ, EuZW 1995, 339, margin no. 46 - Magill TV Guide;

BGHZ 160, 67, 74 = GRUR 2004, 966 - Standard-Spundfass; GRUR 2020, 961, margin no. 56 - FRAND-Einwand). A dominant position generally results from the concurrence of several factors, each of which need not be decisive in itself (ECJ, NJW 1978, 2439, 2440 - United Brands v. Commission). In this context, the determination of the relevant market is of essential importance (ECJ, GRUR Int 1999, 262 = WRP 1999, 167, margin no. 32 - Oscar Bronner/Mediaprint; BGHZ 160, 67, 73 = GRUR 2004, 966 - Standard-Spundfass). The determination of a relevant supply market basically follows the demand market concept. According to this concept, the relevant product or service market comprises all products or services which, due to their features, are particularly suitable for the satisfaction of a constant demand and which are interchangeable with other products or services only to a limited extent (cf. ECJ, GRURInt. 1999, 262, margin no. 33 = WRP 1999, 167 - Oscar Bronner/Mediaprint; BGHZ 160, 67, 73 et seq. = GRUR 2004, 966 - Standard-Spundfass). If a standardized design of a product - which from the point of view of the market opponent cannot be substituted by another product - protected by industrial property rights is specified by an industrial standard or by another set of rules (de facto standard) which is observed by the demanders like a standard, the granting of rights which enable potential suppliers of this product to bring it onto the market in the first place normally constitutes a separate market which is upstream of the product market (BGHZ 160, 67, 74 = GRUR 2004, 966 - Standard Spundfass; cf. ECJ, GRUR 2004, 524, margin no. 44 = WRP 2004, 717 - IMS Health; GRUR 2020, 961, margin no. 57 - FRAND-Einwand).

140The assumption of such an independent license market thus first requires the finding that the patent is a standard-essential patent, i.e. that the use of the patent-protected teaching is indispensable for the implementation of a standard (standardized by a standardization organization or enforced on the market) (BGHZ 160, 67, 74 = GRUR 2004, 966 - Standard-Spundfass), so that it is generally not technically possible to circumvent it without losing important functions for the product market (cf. ECJ, GRUR 2015, 764, margin no. 49 = WRP 2015, 2783 - Huawei/ZTE; European Commission decision of April 29, 2014 - C [2014] 2892 margin no. 52 - Motorola). Furthermore, a prerequisite for an independent license market is that the technical teaching corresponding to the patent and the standard is not substitutable by another technical design of the product (see ECJ, GRUR 2004, 524 margin no. 28 - IMS Health; BGHZ 160, 67, 74 = GRUR 2004, 966 - Standard bung barrel; GRUR 2020, 961, 966, margin no. 58 - FRAND objection).

141The burden of proof for the prerequisites of market dominance lies with the license seeker. The licensee must present concrete facts on the basis of which it can be established that the relevant product and geographic market is dominated. As potential end users, the members of the Senate can determine the relevant market perception themselves without the need to resort to (court-initiated) market investigations (Düsseldorf Higher Regional Court, GRUR 2017, 1219, 1222 - Mobiles Kommunikationssystem).

142bb) On the basis of these principles, there are no reasonable doubts that the plaintiff has a dominant position due to its capacity as owner of the patent in suit.

143(1) Even if the "A." operating system is free software, which can be freely used and modified by the device manufacturers, the use of the use of the AAC standard and in particular the "HE AAC v2 profile" is a prerequisite for the GSM certification of G.

These require smartphones or tablets to pre-install the "G.-Mobile-Services ("GMS") application package, which contains the central applications of G. [...].The fact that an "A." smartphone which does not support these services is not marketable not only corresponds to the Senate members' own perception, but is also substantiated by the article submitted by the defendants as Exhibit B 18. According to this article, 70% of the approximately 1,000 users surveyed (as of 03.04.2020) stated that they would refrain from purchasing the new H. smartphone [...] if G. applications were not installed on it. Insofar as the plaintiff draws the conclusion with reference to this article that another 30% of those surveyed would make a purchase decision even without G. apps, the Senate does not share this conclusion. In this context, it should not be lost sight of the fact that the market is currently dominated by "A." to approx. 74.6% and "i." to 24.8%, the latter not being licensed by X.. According to general life experience - the members of the Senate are part of the target market - it is not only questionable that a significant proportion of interested parties within the "A." market would actually opt for a smartphone without the support of G. Services, but the plaintiff has also not provided any further details.

144(2) The District Court has already correctly stated that, in view of the market penetration of "A." and "i.", a manufacturer of smartphones does not have to allow itself to be referred to the development of its own operating system, which has not yet been established, for lack of prospects of success. The same applies with regard to the lack of fulfillment of the traffic expectation by other app stores. The Senate refers to the statements made in this regard to avoid repetition. There is no evidence that, contrary to life experience, the expectations of potential users can be satisfied without using the "G. Services" and solely through the use of alternative app stores that have so far enjoyed a niche existence.

145(3) Contrary to the plaintiff's view, its dominant position is also not the sole consequence of G.'s business policy. It is not G. that helps the AAC standard to become so widespread. Rather, it is so widespread that G. has made it a prerequisite for "GMS" certification and thus for the use of its services in order to ensure compatibility. That this is the case is made clear by a look at "i.". The AAC standard is also implemented there.

146b) The Senate is unable to establish any abuse of this dominant position on the part of the plaintiff.

147aa) The applicability of the principles developed by the European Court of Justice in the decision Huawei v. ZTE (GRUR 2015, 764 = WRP 2015, 2783) to the present case is no longer explicitly questioned by the defendants at second instance, so that no additional comments are required in this regard against the background of the correct considerations in the judgment at first instance. The criteria developed by the European Court of Justice in this decision on the question of when a dominant owner of a standard-essential patent, who has undertaken to a standardization organization to grant a license to any third party on FRAND terms, abuses his dominant position when he brings a patent infringement action for injunction, recall or destruction, apply to the present case.

148bb) A dominant patent owner who - like the plaintiff - has committed himself to a standardization organization to grant licenses on FRAND terms cannot only abuse his market

power by refusing to conclude a corresponding license agreement with an infringer who is willing to license and by filing a complaint against him for injunction, recall and removal of products from the distribution channels or for destruction of patent-infringing products. Rather, an abuse may also be present if the patent owner is to be blamed for not having made sufficient efforts to meet the special responsibility associated with the dominant market position and to make it possible for an infringer who is in principle willing to license to conclude a license agreement on reasonable terms (Federal Supreme Court (BGH), GRUR 2020, 961, 968, margin no. 74 = WRP 2020, 1194 - FRAND-Einwand; GRUR 2021, 585, 590, margin no. 53 - FRAND-Einwand II).

149In both cases, the complaint is abusive because (and only because) the infringer willing to license has a claim that the patent owner contractually permits him to use the protected technical teaching on FRAND terms. An abuse of the dominant position of a patent owner does not result from contractual conditions offered by the patent owner before or at the beginning of negotiations as such, which, if contractually agreed, could unfairly hinder or discriminate against the licensee. Rather, the abuse of market power follows - not unlike in cases of refusal to supply or refusal of access to an infrastructure facility of the market dominator - only from the refusal of a requested access to the invention per se or from unreasonable conditions for a requested access from which the patent owner is not prepared to deviate even at the end of negotiations (cf. BGHZ 152, 84, 94 = GRUR 2003, 169 - Fährhafen Puttgarden I), i.e. the refusal to offer the license seeker seeking the conclusion of a license agreement on FRAND terms, as a result of a negotiation process, those fair, reasonable and non-discriminatory contractual terms which the latter can claim and on which he, for his part, is willing to conclude with the patent owner (Federal Supreme Court (BGH), GRUR 2021, 585, 589 f. - FRAND-Einwand II).

150cc) It follows from the obligation to refrain from such an abuse and the special responsibility of the dominant patent owner that he must first point out the infringement of the patent in suit to the patent infringer if the latter is (possibly) not aware of making unlawful use of the teaching of the standard-essential patent by implementing a technical solution required by the standard (ECJ, GRUR 2015, 764, margin no. 60-62 = WRP 2015, 1080 - Huawei/ZTE; Federal Supreme Court (BGH), GRUR 2020, 961, margin no. 73 f. = WRP 2020, 1194 - FRAND-Einwand; GRUR 2021, 585, 591, margin no. 55 - FRAND-Einwand II). That the plaintiff's letter of August 12, 2016 (Exhibit K 1c) is such an infringement notice has already been established by the Chamber. The correct considerations have remained unchallenged in the appeal proceedings, so that in this respect, in order to avoid repetitions, reference can be made in full to the relevant statements in the judgment at first instance.

151c) The Senate cannot recognize any serious willingness on the part of the defendant to conclude a license agreement on FRAND terms. Therefore, there is still a lack of a sufficient license request by the defendant that would have justified further conduct obligations on the part of the plaintiff.

152aa) The request for licensing can indeed be made in a general and informal manner and consequently also implicitly. However, the conduct in question must nevertheless

clearly indicate to the opponent the general intention to take a license (Düsseldorf Higher Regional Court Higher Regional Court, GRUR 2017, 1219 – Mobiles Kommunikationssystem). Irrespective of the question as to which exact requirements are to be placed on the willingness of the infringer to take out a license, a merely verbally expressed request for the granting of a license is not sufficient in any case if the rest of the declarant's conduct, when viewed objectively, unequivocally testifies to the fact, that the request for a FRAND license is mere lip service, which is obviously not supported by a serious intention to take a license, but serves the sole purpose of stalling the patent owner, delaying his legal action and thus being able to continue the actions using the patent undisturbed. It is true that even an infringer acting in this way may change his mind, so that a license request articulated by him later may be taken seriously. However, in view of the stalling history, it is necessary that his new request for a license is accompanied by circumstances that clearly show his inner turning away from the previous attitude of refusal. The formulation of a separate license offer can be sufficient in this sense; however, it is not sufficient if - as in this case - the content of the offer is un-FRAND to such an extent that it clearly does not open a new chapter in the licensing efforts, but - on the contrary - continues the previous stalling and delaying tactics (Düsseldorf Higher Regional Court, GRUR 2021, 1498, 1499 - Signalsynthese).

153bb) As early as July 2005, the defendant's parent company, which is responsible for licensing issues in the "smartphone" sector, acquired an AAC pool license in the form of the standard license agreement valid at that time, whereby this agreement was terminated by V. in 2007 (cf. LG judgment, p. 12, middle). Irrespective of whether and to what extent discussions then took place between T. and the plaintiff, almost 10 years passed between the termination of the original license agreement and the letter of December 12, 2016 (Exhibit K 1c) classified by the District Court as sufficient evidence of infringement, without the defendants or their parent company having clearly signaled their willingness to take up the license again or having clearly indicated to the plaintiff or V. that they would refrain from using the AAC standard in the future despite having taken up the license in the past.

154cc) T. did not comment on the infringement notice of the plaintiff and the willingness expressed in this context to conclude a bilateral license agreement (letter of December 12, 2016, Exhibit K-1c). Nor did T. reply to the offer to conclude a standard license agreement sent by V. in a letter dated April 13, 2017 (Exhibit K-Kart 10). Such silence in response to the attempts made by the plaintiff or V. to find an out-of-court solution allows only one conclusion, namely that the defendants are in fact not interested in taking a license and lack the willingness to license.

155dd) The letters sent to the plaintiff only three years after the infringement notice and after the infringement action was filed (see Exhibits K-Kart 12, B 22/22a, B 24/24a and B 27) are not capable of eliminating this impression. They are not an expression of the defendant's purified understanding of the necessity and willingness to take a license, but continue the defendant's previous attitude of refusal and delaying strategy.

156(1) Although the letters addressed to the plaintiff contain a blanket statement of willingness to license and request the sending of a bilateral license offer, in the overall context

they present themselves as a continuation of the attempt to obstruction of the enforcement of the patent in suit. After all, the plaintiff had already offered the conclusion of a bilateral license agreement as well as the sending of a draft thereof more than three years earlier, without the defendants or their parent company having responded. Similarly, T. did not comment on the standard license agreement sent by V. in a letter dated April 13, 2017 (Exhibit K-Kart 10) in the run-up to the infringement proceedings. Accordingly, T. initially did not express its rejection of a pool license, nor did it provide more detailed reasons for its sudden desire for an individual license. The expectation expressed by the Chamber on page 68 of the judgment at first instance that a user actually willing to take out a license would already have weighed both alternatives against each other to a certain extent after a period of more than three years since becoming aware of the offer of a pool license and the possibility of concluding a bilateral agreement and, on the basis of specific group relationships, would have provided information as to why he considers taking out a bilateral license to be preferable and appropriate, is therefore not objectionable and is shared by the Senate. This applies all the more if the infringer or its parent company responsible for licensing issues - as in this case - had already taken a pool license once without questioning the pool license model per se.

157(2) The defendants did not even begin to succeed in presenting comprehensible reasons for their request for a bilateral license, expressed for the first time years after the plaintiff had sent the pool license agreement offer. Their insistence on a bilateral license agreement offer therefore does not prove to be a serious declaration of willingness to conclude a license agreement, but rather a further attempt to prevent the enforcement of the plaintiff's rights.

158(a) The defendants cannot justify their insistence on a bilateral license agreement offer merely by pointing out that the plaintiff is - undisputedly - willing to conclude bilateral license agreements with third parties.

159(aa) In principle, the patent owner is not obliged to offer the license seeker a bilateral license in addition to a pool license. It regularly serves the well-understood interest of possible license seekers that they are offered a license to use the entire standard or essential parts thereof from a single source under uniform conditions, because they are thus relieved of the necessity of having to apply to each individual patent owner for a license to the latter's IP rights (Kühnen, GRUR 2019, 665). If it is a matter of a license seeker who not only uses the property rights of the plaintiff, but also the patents of the other pool members, there is nothing to be recalled against a compulsion to take a license in the stock of the entire pool (Düsseldorf District Court, judgment of 09.11.2018, file no.: 4a O 15/17, GRUR-RS 2018, 33825, margin no. 223 - Decoding device; Kühnen, Handbuch der Patentverletzung, 14th ed., section E, margin no. 519).

160(bb) Likewise, it is not objectionable per se that the SEP Holder chooses a license model with a coexistence of pool and bilateral licenses. The prohibition of discrimination merely prohibits and prevents unequal treatment which is not objectively justified. Identical licensing situations may not be treated unequally (Düsseldorf Higher Regional Court, Urt. v. March 22, 2019, file no.: I-2 U 31/16, GRUR-RS 2019, 6087 - Improving Handovers; GRUR 2021, 1498, 1501 - Signalsynthese). Such unequal treatment does not exist even if both licensing models

coexist if access to both models is granted on a non-discriminatory basis on the basis of objective criteria (Düsseldorf Higher Regional Court, GRUR 2021, 1498, 1501 - Signalsynthese).

161(cc) Based on this, there are no indications of discrimination in the present case.

162The plaintiff explained its licensing practice by stating that it only grants bilateral licenses in special cases in which the pool license would not be appropriate due to license agreements between the licensee and other licensors in the pool or in which complex license agreements have been concluded that include a number of other technologies in addition to AAC (Response to Appeal, p. 17, middle, p. 728 GA). In addition, bilateral licensing could be considered if a pool license proved to be inappropriate for other reasons (judgment LG, p. 78 center).

163Such a licensing practice, which is based on objective criteria, focuses on the pool license and accepts bilateral agreements only in justified exceptional cases for the protection of the licensee, is not objectionable in itself. That the plaintiff would have granted a bilateral license to third parties who - like the defendants - are not licensed under any single AAC-relevant patent and, in particular, have not been licensed by any other participant in the AAC license pool so far and who also do not have any AAC-relevant patents of their own, is not apparent. Therefore, there can be no question of discrimination against the defendants. This applies a fortiori after the plaintiff or V. even offered T. a bilateral license with the infringement notice, without T. having responded to this offer within a reasonable period of consideration.

164(b) Against this background, the defendants cannot derive a general bilateral licensing claim solely from the plaintiff's fundamental willingness to grant bilateral licenses in justified individual cases. Rather, it would be up to them to specify reasons that make a pool license appear inappropriate in their case and thus - based on the licensing model practiced by the plaintiff - open the door to the conclusion of bilateral licensing agreements in the first place. However, the defendants have not done justice to this. Their mere denial with ignorance (cf. appellant's reply, 24, margin no. 122, p. 790 GA) does not help them because of their burden of presentation and proof.

165(aa) The reasons stated in the letter of November 3, 2020 (Exhibits B 24, B 24a) are also evidently not sufficient for this. There it states, inter alia (in German translation):

„Erstens ist es T.s grundsätzliche Geschäftspraxis, Lizenzen auf bilateraler Ebene zu nehmen. T. engagiert sich in bilateralen Verhältnissen mit anderen VIA Mitgliedern. Der Verweis auf eine Poollizenz zwingt T. dazu, Lizenzen zu nehmen und möglicherweise doppelt zu bezahlen, welche T. bereits auf bilateraler Grundlage gewährt wurden.

Zweitens, eine bilaterale Lizenz zwischen P. und T. würde vollständig die angeblich unerlaubte Benutzung von Philips' Patenten abdecken und die Interessen beider Parteien vollständig befriedigen.

Drittens und wichtigstens, ist die Tatsache, dass P. bilaterale Lizenzen an seinen AAC Patenten auf der Webseite <https://www.ip.philips.com/licensing> bewirbt und behauptet, bilaterale Lizenzen Wettbewerbern angeboten zu haben.“

166Neither individually nor in their entirety are these points capable of providing reasons for the defendant's serious interest in a bilateral license. After the defendants refer in the third

point only to the granting of bilateral licenses to third parties by the plaintiff, reference can be made in this respect to the above statements. For the rest:

167(aaa) Insofar as the defendants rely on the fact that "a bilateral license between P. and T. would fully cover the alleged unauthorized use of P. patents and fully satisfy the interests of both parties", this is no more than a platitude. The defendants do not give any reasons why a bilateral license would be in the interests of both parties.

168(bbb) Likewise, the defendants have not succeeded in specifying in more detail the "fundamental business practice" referred to, which is characterized by licenses on a bilateral level. To date, they have not been able to name a single corresponding bilateral license agreement in the AAC area. Instead, the defendants deny with ignorance that the plaintiff's other bilateral licensees have concluded license agreements with all other AAC SEP holders (Statement of Appeal, p. 37, margin no. 209, GA p. 668; Statement of Appeal, p. 24, margin no. 123, GA p. 790). Such a denial is unhelpful. It is the defendants who invoke a corresponding business practice as reasons for their interest in a bilateral license. Therefore, it is up to them to explain such a practice in detail. If they fail to do so and instead resort to an obviously unpromising denial, they once again express their lack of will to obtain a license. This applies all the more since the license negotiations with D. - the existence of which is assumed in favor of the defendant - have not been concluded to date and thus 1¹ /₂ years after the above-mentioned letter was sent. Moreover, it is undisputed that there has not even been any contact between D. and T. since June 2021 (cf. response to appeal, p. 14 below, file, p. 725 GA). In contrast, the contract between T2 and D. referred to by the defendants, which already expired in the summer of 2021, relates to the "television" sector and thus not only to a different market. Rather, it was also concluded by the company responsible for the TV division of the plaintiff and thus not by the plaintiff. Conclusions regarding the licensing practice of the plaintiff in the area of "Smartphones and Tablets" cannot be drawn from this for either of the parties. Both parties are free to adapt their licensing practice to the requirements of the respective market. Against this background, the defendant's further reference to ongoing bilateral licensing negotiations between the parties regarding the plaintiff's 3G/LTE SEP portfolio does not lead anywhere. These also relate to a different market and are therefore irrelevant to the present case.

169(cc) Insofar as the defendants explained their licensing practice in more detail for the first time a few days before the oral proceedings at first instance to the effect that they were striving to use their patent portfolio within the scope of cross-licenses (writ of April 1, 2021, p. 395 GA), they must ask themselves why there are no indications of this in the letter of November 3, 2020 discussed above (Exhibits B 24/B 24a). Apart from that, the plaintiff, according to its information, has no interest in a bilateral cross-license due to the lack of own products and in the absence of own AAC-relevant patents of T. (cf. writ of July 2, 2021, p. 10, p. 589 GA). There is therefore no basis for cross-licensing from the outset.

170(c) The fact that the defendants are not concerned with an appropriate reconciliation of the conflicting interests in the form of a license agreement on FRAND terms, but solely with delaying the enforcement of rights by the plaintiff , is once again demonstrated by their

further statements in the appeal proceedings: Although the defendants have had an offer to conclude a pool license agreement submitted by V. for several years, they now retreat to the position that there is no offer of a license agreement by the plaintiff. So far, only a third party, V., has submitted an offer for a comprehensive license to the AAC SEP pool. The plaintiff now wants to sell the AAC pool license as "its" offer, although it itself has not made any move in the direction of the defendant (Appeal Reply, p. 23 f., margin no. 117 f., Bl. 790 GA). It is precisely the nature of the pool to manage the property rights contributed to the standard and to grant anyone interested in the standard-essential technology permission to use it on FRAND terms. The granting of a pool license is therefore inherently the responsibility of the pool and not of the individual patent owner. By refusing to recognize this trivial fact and denying the plaintiff the opportunity to refer to the conclusion of a pool license agreement with the pool, the defendants once again make clear their lack of willingness to license, and their unwillingness to do so at any time.

171(3) The fact that the defendants did not even ask the plaintiff to submit a bilateral license agreement again one month before the oral proceedings at first instance (Exhibit B 27) and then submitted a license agreement offer themselves for the first time a few days before the hearing (Exhibit B 29) does not allow the conclusion that the defendants are - in contrast to what has been the case so far - seriously willing to license. On the contrary, this offer also shows that the defendant is not interested in concluding a license agreement, but only in delaying the infringement proceedings.

172(a) There is already no apparent objective reason why the defendants presented their offer so late in gross violation of their duty to promote the process, which is why neither the plaintiff nor the District Court had sufficient opportunity to deal with the content of the offer in the first instance in the required manner. It is obvious that such an offer could not have been accepted by the plaintiff without a closer examination. Viewed in the light of the facts, the defendant's offer is therefore nothing more than a continuation of its tactics of stalling and delaying, which it has practiced for years.

173(b) Apart from that, the content of the contract offer was also not acceptable to the plaintiff.

174(aa) Item 3.1. of the license agreement offer - which, contrary to the orders of the Chamber (p. 81 GA) and the Senate (p. 548 GA), was not submitted in German translation - provides for the payment of a lump sum of \$ x until June 30, 2021.

175(1) This amount is based on calculations whose starting point is alleged sales figures from 2020. In doing so, the defendants do not use their real sales figures as a basis, which would have been easily possible for them. Instead, they make use of the data of an economic service provider [hereinafter: I.], which, from the perspective of a reasonable licensor, can only be acceptable at all if the data in question are objectively reliable. However, the plaintiff has disputed the defendants' sweeping assertion in this context that it is customary in the industry to have recourse to such external data. Accordingly, it would have been up to the defendants to substantiate their submission in this regard and to provide more detail on the customary practice in the industry as claimed by the plaintiff. Otherwise, there is no basis for the expert evidence offered by the plaintiff. The defendants did not comply with this. The

mere reference to the plaintiff's submission, which, unlike the defendants, uses the I. figures only in connection with the discussion of third-party royalty payments [...], is recognizably insufficient for this purpose.

176 Moreover, the figures (relating only to the Corona year 2020, which is exceptional in many respects) are not comprehensible. The calculations are based on x smartphones sold. In contrast, no account is taken of the AAC-capable tablets, which are also the subject of dispute and which, according to the figures presented by the plaintiff, were also sold to a considerable extent [...]. Also not taken into account are so-called "feature phones". Insofar as the defendants want to disregard these on the grounds that they are "simple, traditional cell phones" for which AAC coding is of no significance (Statement of grounds of appeal, p. 44, margin no. 247, p. 675), the plaintiff [...] has named two cell phones which are "feature phones" and which make use of the AAC standard (Statement of grounds of appeal, p. 25, p. 736 GA; Set of Exhibits K-Kart 15). These are therefore also subject to remuneration, but are not taken into account in the defendant's calculations.

177(2) In a second step, the defendants multiply the figure of around x determined by them - and, as explained, based on incorrect assumptions - by five, which, in their view, is intended to cover the contract term of 5 years. Thus, the contract offer does not contain any compensation for past acts of use, although according to the I. sales figures submitted, T. sold more than x in the years 2016 to 2020 alone. Cell phones sold. At the same time, the defendant's contract offer also provides for an indemnification - thus free of charge - for the past. It is obvious that such a license agreement offer, in which the defendants receive an exemption for the past as a "reward" for their continued infringing acts over years and their refusal to license for years, is not acceptable to the plaintiff. Nor can the defendants counter this objection by pointing out that the actual sales are below the I. figures, which compensates for the sales from the past. If the defendants wish to assert such a claim, it would be up to them not only to provide more details on the individual sales figures in the past, but also to explain at the same time why this actually provides adequate compensation for the infringements of the past. The naming of witnesses is unhelpful in this context. The examination of witnesses in the blue is inadmissible (Federal Supreme Court (BGH), NJW 2012, 2427, 2431; NJW-RR 2019. 380; NJW 2020, 1740, 1741; BeckOK Code of Civil Procedure (ZPO) / Bacher, 44th edition, as of 01.03.2022, § 284 margin no. 40).

178(3) Moreover, the defendants also calculate the royalty per unit incorrectly. The fee table of V. shows a depression; the license fees for the first [...] products subject to licensing are significantly higher [...] than the license fees charged for the products subject to licensing between [...] [...]. Here, this table refers to sales per year, which is why the depression is set to zero each year. For x relevant product sales, as taken as a basis by the defendants, royalties in the amount of x \$ accrue per year according to the royalty table. The license fee per unit is therefore x \$, resulting in a total license fee of x \$ calculated over five years. Assuming that the plaintiff holds x% of the patents in the AAC pool - as assumed by the defendants - the plaintiff would be entitled to x. \$ and thus a far greater amount than the offered x \$. Even if the defendant's license offer does not provide for an annual, but rather a one-time license fee payment, there is no discernible reason to deviate from the calculation

model established by V. to the plaintiff's detriment solely due to the change in payment methods.

179(4) With all these deficiencies, the defendant's contractual offer does not constitute a suitable basis for negotiating a license agreement. Rather, it impressively demonstrates the defendant's continuing unwillingness to enter into serious licensing negotiations with the plaintiff. This applies all the more since - undisputedly - bilateral licenses are usually considerably more expensive than pool licenses due to the increased effort involved.

180d) Since there is thus already a lack of a licensing request by the defendant expressing a serious intention to take a license, the plaintiff is not obliged to submit a license agreement offer. The question widely discussed by the parties in the second instance as to whether the standard license agreement sent by V. is FRAND therefore does not require a decision.

181aa) If the patent owner - such as the plaintiff in this case - has made an (at least essentially complete) contractual offer to the infringer despite the infringer's unwillingness to license, the fact that the patent owner's offer (e.g. with regard to the amount and calculation of the royalties) treats the infringer worse than other licensees without objective justification does not constitute an abuse of the dominant position according to Federal Supreme Court (BGH) case law (BGH, GRUR 2021, 585, margin no. 108 et seq. - FRAND-Einwand II).

182In the case in dispute, it can be left open whether this point of view - in particular under factual constellations such as those on which the cited decision was based - is to be agreed with or whether it is not more correct to distinguish between the infringer's fundamental (general) willingness to take a FRAND license and his willingness to accept concrete license conditions that have proven to be FRAND (concrete willingness to license) (Kühnen, Handbuch der Patentverletzung, 14th ed, Section E, margin no. 420), whereby at the stage of the license request only his general will to become a licensee is significant and to be verified in court, whereas his concrete willingness to license is only at issue when the patent owner's license offer - which is to be undertaken for this reason - has been identified as FRAND. The consequence of this consideration is that if the infringer lacks the general willingness to take a license because his request for a license is an obviously not seriously meant lip service, a license offer of the patent owner which is nevertheless made (e.g. due to excessive procedural caution or other reasons) is no longer to be examined with regard to its FRAND compliance. If the infringer has already sufficiently documented that he does not want to and will not take a license at all, it obviously does not make sense to confront him with concrete license conditions which were found to be fair and non-discriminatory during the judicial review of the submitted license offer and which are in any case not capable of making any difference. Rather, the necessary conclusions are to be drawn immediately from the infringer's refusal to accept any license by ordering the defendant to cease and desist. The situation is fundamentally different if the infringer merely lacks the concrete willingness to license. In this case, it makes sense and is therefore advisable to verify the patent owner's license offer as to whether it is fair and non-discriminatory and to confront the infringer with the said license conditions. If the license offer is un-FRAND, the patent owner - rightly - loses out because he has not fulfilled his obligation to license FRAND and therefore the lack of concrete willingness to license on the

part of the license seeker may not be the decisive factor. If, on the other hand, the license offer turns out to be FRAND, the infringer will lose out if (and because) he does not agree to the license conditions that were not disclosed to him and that are in compliance with antitrust law.

183In the case at hand, the defendants - as explained - lack the fundamental (general) willingness to license, so that it is not necessary to examine whether the terms of the standard license agreement are FRAND. A lack of general willingness to license can also be inferred if the infringer - as in the present case the defendants - categorically insists that it does not intend to enter into a certain, obviously appropriate licensing model (e.g. a pool license) and instead adamantly demands a bilateral individual license, although it cannot show any justifying reasons for this.

184bb) Apart from this, the defendants once again express their lack of interest in concluding a license agreement by their arguments regarding the pool license agreement.

185(1) A bona fide user of a standard-essential patent with a serious interest in licensing this property right can be expected to deal with the content of a contractual offer which has been available to him for years promptly after it has been communicated and to provide information as to the reasons why the offer is not FRAND in his view. The defendants have not complied with this. Neither before the court nor at the beginning of the infringement proceedings did they question the FRAND compliance of the standard license agreement offered by V. and instead retreated - albeit belatedly - to the fact that they were entitled to a bilateral license. From the defendant's point of view, therefore, there was apparently no reason to deal in detail with the pool license agreement conveyed by Via-Licensing. For the first time with the quadruplicate and thus immediately before the first-instance oral proceedings, the defendants complained that the AAC-SEP pool license offered by V. did not provide the defendants with fair and reasonable access to the plaintiff's AAC-SEP portfolio because it discriminated against the defendants compared to other licensees (see writ dated April 1, 2021, p. 10, sheet 394 GA). Even on this occasion, the defendants did not specify their accusation in more detail, but referred in general terms to their submissions in the parallel proceedings in the first instance. However, the plaintiff was not involved in these. It goes without saying that, against this background, the defendants could not merely make a general reference to these proceedings in support of their accusation and, moreover, request that the files be consulted. Insofar as the defendants refer in this context to a confidentiality agreement with V. and D., which initially prevented them from making a more detailed presentation, it would have been up to them to work towards making it possible for them to make such a presentation in the present proceedings at an early stage. The reference to the fact that they asked the plaintiff to conclude an NDA in November 2020, and thus one year after the action was filed, is recognizably not sufficient for this purpose. This applies all the more as the corresponding request, as submitted by the defendants themselves, primarily served to persuade the plaintiff to conclude a bilateral license (cf. writ of April 1, 2021, p. 13, p. 397 GA), to which the defendants - as explained - have no claim.

186(2) To the extent that the defendants are now addressing the standard pool license agreement in more detail for the first time in the second instance, this is not a serious signal to the plaintiff that they are now ready to license and are asking for licensing, but merely

another attempt to delay the trial and a conviction. Not only that the defendants at the same time continue to insist on a bilateral license and - as explained without any factual reason. Their submissions also do not even begin to indicate that they would be willing to license on terms such as those granted to Samsung, Xiaomi or Lenovo. All other licensees addressed by the defendants were all prepared to conclude a pool license agreement on the basis of the standard pool license agreement, which was only modified in individual points. However, the defendants categorically and groundlessly reject such a pool licensing from the outset.

1876. There is no reason to stay the proceedings (Section 148 Code of Civil Procedure (ZPO)) after the Federal Patent Court has found the patent in suit in the version now in dispute to be legally valid. Thus, the justified interest of the plaintiff in swiftly enforcing its rights to prohibit the patent in suit against the defendants prevails.

188a) If the patent in suit is - as here - challenged by a nullity action, the infringement court, if it affirms an infringement of the patent in suit, shall in principle only convict for patent infringement if it does not consider a nullity declaration to be (predominantly) probable; otherwise, it shall stay the hearing of the legal dispute pursuant to Section 148 of the Code of Civil Procedure (ZPO) until a decision has been made on the nullity action in the first instance at any rate (Federal Supreme Court (BGH), GRUR 2014, 1237, margin no. 4 - Kurznachrichten). This is because a - provisionally enforceable - obligation of the defendant to cease and desist, to provide information, to render accounts and to destroy products in compliance with the patent is regularly not justifiable if it can be expected with sufficient probability that this order will be deprived of its basis by the declaration of invalidity of the patent in suit. The claim to the safeguarding of justice, which follows from the principle of the rule of law (Art. 20 (3) GG) in conjunction with the fundamental rights and is thus constitutionally guaranteed, requires that the infringement defendant be provided with effective legal protection if he wishes to defend himself against the attack from the patent in suit with a counterattack against the legal existence of this patent. This requires not only an effective possibility to conduct this attack itself by a complaint for a declaration of nullity or by filing an opposition, but also an appropriate consideration of the fact that this attack may also be a - and possibly the only - means of defense against the claim arising from the patent. Due to the statutory provision that for the claims under Sec. 139 et seq. Patent Act, the attack against the patent in suit cannot, unlike in other legal systems, be conducted as a plea in infringement proceedings or by filing a counterclaim for nullity. However, this must not lead to a situation where this attack is denied any effect on the infringement proceedings. The suspension of the infringement dispute is rather required in principle, but also only if it is to be expected with sufficient probability that the patent in suit will not withstand the opposition raised or the nullity action filed (Federal Supreme Court (BGH), GRUR 2014, 1237, margin no. 4 - Kurznachrichten; established case law of the Senate, cf. judgment v. 25.10.2018, file no.: I-2 U 30/16, margin no. 213).

189 If the patent in suit has already been confirmed in opposition or nullity proceedings, the infringement court must generally accept the decision on the maintenance of the patent in suit made by the competent technical instance (DPMA, EPO, BPatG) after technically competent

examination. There is only reason to doubt the parallel decision on the stock of rights and to refrain from a conviction for the time being if the infringement court considers the argumentation of the opposition or nullity instance to be unreasonable or if the attack on the stock of rights is now based on (e.g. new) promising aspects which have not yet been taken into account and decided by the bodies dealing with the matter so far (settled case law), cf. Düsseldorf Higher Regional Court, file no. of 06.12.2012, ref.: I - 2 U 46/12, BeckRS 2013, 13744; judgment of. 17.10.2019, file no.: I-2 U 11/18, BeckRS 2019, 31342; Urt. v. Sept. 30, 2021, file no.: I-2 U 15/20, GRUR-RS 2021, 30324, margin no. 91 - Schiebedach; judgment no. Jan. 27, 2022, file no.: I-2 U 45/19, GRUR-RS 2022, 2110, margin no. 67 - Rührgefäß, Kühnen, Handbuch der Patentverletzung, 14th ed., Sec. E, margin no. 869).

190b) On this basis, the requirements for a suspension of the infringement dispute are not met.

191In its judgment of April 28, 2022, the Federal Patent Court declared the patent in suit only partially invalid in response to the nullity action filed by the first defendant in a writ of summons of July 10, 2020, and dismissed the nullity action in all other respects. The plaintiff has taken this limited maintenance of the patent in suit into account in its version of the application. It is not yet possible to foresee whether the 1st defendant will appeal against this judgment. For this reason alone, a stay is out of the question.

192The fact that the reasons for the judgment rendered in the invalidity proceedings are still lacking does not justify a different decision. The parties to parallel infringement proceedings do not have to be given the opportunity - beyond what the regular course of proceedings offers - to comment on the still outstanding reasons for the decision on the existence of the law (which at the time of pronouncement is only known in terms of the result). Whether a case of evident incorrectness exists cannot be foreseen as a rule without knowledge of the exact reasoning. However, the general postponement of the decision in the infringement proceedings would amount to a general suspicion of the legal authorities and the reliability of their technical assessment, which is inappropriate. For the decision on the request for a stay, it must rather be sufficient that the competent technical instance has decided in a certain - positive or negative - way on the patent in suit (Düsseldorf Higher Regional Court, judgement of. 30.09.2021, file no.: I-2 U 52/20, GRUR-RS 2021, 32045, margin no. 97-99 - Entfernbarer Schutzgruppe; judgment of 02.12.2021, file no.: I-15 U 43/20, GRUR-RS 2021, 37601, margin no. 81 - Schiebedach II).

III.

193The decision on costs follows from Sections 97 (1) and 269 (3) of the Code of Civil Procedure (ZPO), the withdrawn part of the complaint being so minor that it does not justify charging the plaintiff with costs.

194The orders for provisional enforceability are derived from Sections 708 No. 10, 711, 108 Code of Civil Procedure (ZPO).

195There was no reason to grant leave to appeal because the requirements set out in Section 543 Code of Civil Procedure (ZPO) are evidently not met. This is a purely individual case decision without fundamental importance, which does not have to be referred to the Federal

Supreme Court in the interest of further development of the law or securing uniform case law (Section 543 (2) of the Code of Civil Procedure (ZPO)).

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