Title:

Differentiation between refusal of access and price abuse

Machine translation

Chains of standards:

PatG § 10 para. 1, § 139 para. 1 sentence 1, sentence 3, para. 2, § 140a para. 1, para. 3, § 140b para. 1, para. 3

EPC Art. 64 para. 1, para. 3, Art. 69 para. 1

TFEU Art. 102

ZPO § 142, § 148

Guiding principles:

- 1. A patent user seeking a license must, in principle, be informed of the essential factors for the calculation of the license fee to be paid. For this purpose, the license fee offered to him must generally be explained to him on the basis of the essential factors for the price. If a lump-sum license fee is agreed for past and future use, a lower standard may apply in accordance with the purpose of the lump-sum payment. The more license agreements are concluded, the more likely it is that the explanation of the factors can be limited to a comparison of the specific fee offered with the agreed license fees in license agreements that have already been concluded. However, disclosed license agreements with third parties together with further explanatory information provided by the patent proprietor, for example in an electronic data room, generally provide a patent user willing to take a license with sufficient insight into the licensing practice of the patent proprietor.
- 2. If the license seeker alleges that the patent proprietor is licensing at different prices, the license seeker must generally provide concrete evidence, based on examples from the patent proprietor's licensing practice, that he is being discriminated against, against whom and to what extent. This does not require a detailed approach. Rather, the decisive factor is whether the license fees previously agreed with third parties and the license conditions offered to the license seeker are part of an overall structure that is in line with the protective purposes of antitrust law and serves to establish, guarantee and secure the internal market, and whether the blanket license offered does not discriminate against the license seeker in terms of market access.
- 3. Even in the event of a possible variance in the patent proprietor's previous pricing, which does not, however, constitute such a significant difference in treatment that it cannot be resolved by negotiation between two partners willing to license, a reasonable party interested in the successful and fair conclusion of the negotiations would see this circumstance as an opportunity and attempt to (nevertheless) conclude a reasonable, appropriate and fair contract. This applies in particular with regard to individual refinements in the figures that only become apparent when the flat fee is calculated.
- 4. A high license demand does not generally make the plaintiff's offer arbitrary. In principle, further penal aspects must be added in order to assess the conduct of the patent proprietor as unacceptable or to classify it as not serious with the consequence that no reaction of the patent user is objectively required. Apart from this, it is the task of the negotiations between the parties to find a solution to the price issue and to level out any unreasonably high asking price of the patent proprietor to an objectively reasonable, fair and appropriate level. This means that, as a rule, a reaction by the patent user seeking a license to the patent proprietor's offer is required in order to clarify the factors for the correct price determination in individual cases through negotiations. (5) In cases in which the antitrust compulsory license objection is asserted against claims for patent infringement, the patent litigation chamber must examine whether, in particular, the claim for injunctive relief under patent law is precluded by an antitrust claim of the patent user to refrain from abusing the dominant market position. The distinction between denial of access and price abuse is crucial here. The patent infringement proceedings in which the "FRAND objection" is asserted are generally not aimed at determining the correct price under antitrust law. Due to the duration of the determination of the correct price under antitrust law, during which the patent user can in fact freely use the invention, the objection of price abuse can only be admitted in infringement proceedings in

very exceptional cases. This does not unreasonably restrict the legal position of the patent user. In particular, he has the fundamental option of having the correct price under antitrust law determined in separate antitrust proceedings or submitting a counteroffer in accordance with Section 315 BGB.

Keyword:

Compensation for damages

Appeal instance:

OLG Munich of -- - 6 U 2204/23 Kart

References:

GRUR-RR 2023, 467 GRUR-RS 2023, 24247 LSK 2023, 24247

Tenor

- I. The defendants are sentenced,
- 1. to refrain from doing so upon notification of a fine of up to € 250,000 for each case of infringement, alternatively imprisonment for up to 6 months or imprisonment for up to 6 months, in the event of a repeat offense imprisonment for up to 2 years, whereby the imprisonment is to be enforced on the respective Chief Executive Officer of Defendant 1) or the respective Managing Director of Defendant 2),
- a) to offer, place on the market and/or use mobile terminal equipment with a device for estimating the tonality of a sound signal in the Federal Republic of Germany and/or to import or possess such equipment for the aforementioned purposes,

wherein the devices each comprise:

- a calculator for calculating a current residual spectrum of the sound signal by subtracting a spectrum lower limit from a spectrum of the sound signal in a current frame;
- a detector for detecting peaks in the current residual spectrum;
- a calculator for calculating a correlation map between the current residual spectrum and a previous residual spectrum for each detected peak; and
- a calculator for calculating a long-term correlation map based on the calculated correlation map, wherein the long-term correlation map indicates a tonality in the sound signal;

(Claim 19 in the version of the nullity judgment of December 6, 2021, direct patent infringement)

b) mobile devices,

which are suitable for carrying out a method for estimating the tonality of a sound signal,

to offer and/or supply to third parties in the Federal Republic of Germany who are not authorized to use the teaching of EP 2 162 880,

wherein the method comprises:

- Calculating a current residual spectrum of the sound signal by subtracting a spectrum lower limit from a spectrum of the sound signal in a current frame;
- Detection of peaks in the current residual spectrum;

- Calculate a correlation map between the current residual spectrum and a previous residual spectrum for each detected peak; and
- Calculate a long-term correlation map based on the calculated correlation map, where the long-term correlation map indicates a tonality in the sound signal;

(Claim 1 in the version of the nullity judgment of December 6, 202l, contributory patent infringement).

- 2. to provide the plaintiff with information on the extent to which they (the defendants) have committed the acts referred to in paragraph 1 since September 27, 2019, stating
- a) the names and addresses of manufacturers, suppliers and other previous owners,
- b) the names and addresses of the professional customers and of the points of sale for which the products were intended.
- c) the quantity of products delivered, received or ordered and the prices paid for the products concerned,
- whereby copies of the corresponding purchase receipts (invoices, alternatively delivery bills) must be submitted as proof of the information, whereby details requiring confidentiality outside the data subject to disclosure may be blacked out;
- 3. to provide the plaintiff with an account of the extent to which they (the defendants) have committed the acts referred to in section I.1 since September 27, 2019, stating:
- a) the individual deliveries, broken down by delivery quantities, times, prices and type designations as well as the names and addresses of the customers,
- b) the individual offers, broken down by offer quantities, times, prices and type designations as well as the names and addresses of the recipients of the offers,
- c) the advertising operated, broken down by advertising media, their circulation, distribution period and distribution area and, in the case of Internet advertising, the Internet addresses, the placement periods and the access figures,
- d) the prime costs broken down by the individual cost factors and the profit generated,
- whereby the defendants reserve the right, at their option, to disclose the names and addresses of the non-commercial purchasers and the offerees instead of the plaintiff to a sworn auditor domiciled in the Federal Republic of Germany to be designated by the plaintiff and bound to secrecy towards it, provided that the defendants bear his costs and authorize and oblige him to inform the plaintiff upon specific request whether a particular delivery or a particular purchaser or offeree is included in the list;
- 4. to recall the products referred to above under 1. a) that have been in the possession of commercial customers since September 27, 2019.
- II. the defendant 2) is ordered to surrender the products referred to under I.1. a) in its direct or indirect possession or ownership to a bailiff to be appointed by the plaintiff for the purpose of destruction at its the defendant 2)'s expense.
- III. it is determined that the defendants are jointly and severally liable to compensate the plaintiff for all damages that she has suffered and will suffer as a result of the acts described in section I.1. committed since September 27, 2019.
- IV. The defendants are jointly and severally liable to pay the costs of the proceedings.
- V. The judgment is provisionally enforceable against provision of security as follows: Items I.1., I.4. and II. uniformly in the amount of € 750,000.00, items I.2. and I.3. uniformly in the amount of € 50,000.00, item IV. in the amount of 110% of the amount to be enforced in each case.

Facts of the case

The plaintiff is the proprietor of European patent 2 162 880 B1 (Annex WKS1, hereinafter: patent-in-suit) and is suing the defendant for direct patent infringement of claim 19 and indirect patent infringement of claim 1 of the patent-in-suit.

2

The patent in suit was filed on 20.06.2008. The application was published on 17.03.2010. The publication and announcement of the reference to the grant took place on 24.12.2014. The patent in suit was granted with effect for the Federal Republic of Germany.

3

The Federal Patent Court upheld the patent in suit in proceedings 4 Ni 10/21 between the present plaintiff as revocation defendant and a third party as revocation plaintiff by judgment of December 6, 2021 with limited effect for the territory of the Federal Republic of Germany (Annex WKS 4). The plaintiff has filed an appeal against the judgment WKS4. The plaintiff asserts the aforementioned claims in the version restricted by the patent court.

4

In the version upheld with restrictions by the Federal Patent Court, claim 1 of the patent in suit in the relevant English version reads as follows (restrictions underlined):

A method for estimating a tonality of a sound signal, the method comprising:

calculating a current residual spectrum of the sound signal by subtracting a spectral floor from a spectrum of the sound signal in a current frame;

detecting peaks in the current residual spectrum;

calculating a correlation map between the current residual spectrum and a previous residual spectrum for each detected peak; and calculating a long-term correlation map based on the calculated correlation map, the long-term correlation map being indicative of a tonality on the sound signal.

5

Claim 19 of the patent-in-suit reads as follows in the relevant English language of the proceedings in the version upheld with restrictions by the Federal Patent Court (restrictions underlined):

A device for estimating a tonality of a sound signal, the device comprising:

a calculator for calculating a current residual spectrum of the sound signal by subtracting a spectral floor from a spectrum of the sound signal in a current frame;

a detector for detecting peaks in the current residual spectrum;

a calculator for calculating a correlation map between the current residual spectrum and a previous residual spectrum for each detected peak; and a calculator for calculating a long-term correlation map based on the calculated correlation map, the long-term correlation map being indicative of a tonality in the sound signal.

6

Defendant 1) distributes the mobile telephones it manufactures in the Federal Republic of Germany, inter alia via the German-language website Defendant 2) supports Defendant 1) in its domestic distribution activities.

7

These cell phones implement an encoder for the Codec for Enhanced Voice Services ("EVS coder"). Mobile devices that implement an EVS coder must implement the procedure of the ETSI specification Universal Mobile Telecommunications System (UMTS); LTE; Codec for Enhanced Voice Services (EVS); Detailed algorithmic description (GPP TS 26.445) ("EVS standard" for short). The LTE standard has referred to the EVS standard since Release 12. Since then, the specifications of the EVS standard have remained unchanged with regard to the functionality at issue in the subsequent releases (13, 14 and 15). The network operators Vodafone, O₂ and Telekom enable voice coding using EVS in Germany for Wi-Fi calling (mobile telephony via a WLAN network) and for Voice over LTE/VoLTE.

Specifications for the EVS codec in the 4G LTE Advanced Pro standard are defined in 3GPP TS 26. 445 Version 14. 2. 0 Release 14. The relevant passages of section 5.1.11.2.5 ("Tonal stability") of the EVS standard include normative binding specifications and are contained in excerpts in Annex WKS7. They are reproduced in extract form in the reasons for the decision.

9

The plaintiff believes that the attacked embodiments infringe the patent in suit directly in claim 1 and indirectly in claim 19. The defendant's FRAND objection is unsuccessful, so that the requested injunctive relief should be granted.

10

Finally, the plaintiff essentially submits the claims as tenorized (minutes of the hearing of 20.01.2023, p. 540 of the file), in addition to "in particular" claims to be understood as auxiliary claims relating to subclaims 2, 5, 20 and 21 in the version of the nullity judgment of 06.12.2021. The auxiliary claims are not reproduced here.

11

The defendant requests,

- 1. dismissal of the action,
- 2. in the alternative, the stay of the proceedings until a decision of the Federal Patent Court on the nullity action filed by the defendant 2) against the patent in suit on August 19, 2022, and until a decision of the Federal Court in the appeal proceedings against the judgment of the Patent Court in case 4 Ni 10/21 (WKS4);
- 3. in the further alternative, to allow the defendants to avert enforcement by providing security (bank or savings bank guarantee) or deposit without regard to any security provided by the plaintiff in accordance with Section 712 (1) ZPO.

12

The plaintiff objects to a suspension of proceedings.

13

The defendants are essentially of the opinion that the challenged embodiments do not infringe the patent in suit. In any event, the proceedings should be stayed with regard to the action for annulment brought by the defendant 2) on 19.08.2022 (Annex VP 2). The defendants would be entitled to the FRAND objection against the plaintiff.

14

To supplement the facts of the case, reference is also made to the minutes of the oral proceedings of 19.01.2023 (p. 536/538 of the file) and 20.01.2023 (p. 539/541 of the file) as well as to the exchanged written submissions of the parties including annexes.

Reasons for the decision

15

The admissible action is well-founded.

A.

16

The action is admissible.

17

I. The Regional Court Munich I has jurisdiction (Section 143 PatG, Art. 7 No. 2 EuGVVO, Section 32 ZPO in conjunction with Section 38 No. 1 BayGZVJu).

II The required interest in a declaratory judgment is given, Section 256 (1) ZPO. The plaintiff's claim for damages against the defendants cannot yet be quantified before the information is provided.

В.

19

The patent infringement action is well-founded with regard to the challenged embodiments (II. and III.).

20

I. The patent in suit relates to sound activity detection, background noise estimation and sound signal classification, where sound in this context is understood as a useful signal. The invention also relates to a corresponding apparatus for sound activity detection, background noise estimation and sound signal classification, [0001].

21

It deals in particular with the efficient coding of sound signals. Regarding the conversion of an analog sound signal into a digital signal, [0004] explains that an encoder ("sound encoder") converts a sound signal (speech or audio) into a digital bit stream. The bit stream can be transmitted via a communication channel or sampled [i.e. converted into a discrete-time signal, "sampled"] and quantized [i.e. converted into a discrete-value signal, "quantized"], usually with 16 bits per sample. The task of the encoder is to represent samples with a smaller number of bits while maintaining a subjectively good sound quality. The decoder processes the transmitted or stored bit stream and converts it back into an [analog] sound signal, [0004].

22

The patent in suit explains in [0002], inter alia, that the patented sound signal classification device is used to differentiate between different classes of speech signals and music to enable more efficient encoding of sound signals. Tonality estimation is used to improve the performance of sound activity detection in music signals, and to better distinguish between unvoiced sounds and music. For example, tonality estimation can be used in a super-wideband codec to determine the coding model to encode the signal above 7 kHz, [0002].

23

The coding technique CELP (Code-Excited Linear Prediction) is one of the best known techniques for achieving a good compromise between subjective quality and bit rate, [0005]. The patent application describes the CELP technique in more detail in [0005].

24

Source-controlled variable bit rate (VBR) voice coding significantly increases the system capacity. Depending on the type of input signal (voiced, unvoiced, transition, background noise), the codec uses a signal classification module and the corresponding optimized encoder model for each speech frame. Furthermore, different bit rates can be used for each class. The voice activity detection (VAD), discontinuous transmission (DTX) and comfort noise generation (CNG) techniques used in VBR significantly reduce the average bit rate [0006].

25

2. The patent application criticizes the VAD algorithm known in the prior art, which works well with speech signals, that it can cause problems if music sections of the sound signal are inadvertently classified as unvoiced signals or as stable background noise, [0006].

26

3. Against this background, the patent-in-suit describes in [0006] it as advantageous to extend the VAD algorithm so that it can better distinguish music signals from other signals. The patent in suit describes this extension as a sound activity detection algorithm (SAD), whereby sound includes both speech and music or any other useful signal. It further describes a method for tonality detection that can be used to improve the performance of the SAD algorithm with respect to music signals.

The objective task of improving the VAD algorithm can be derived from this subjective task.

28

4. this problem is to be solved, for example, by the subject-matter of independent claim 1 and of the adjacent claim 19.

29

In agreement with the Patent Court, the Board structured claim 1 as follows:

- "1.1 A method of estimating the tonality of a sound signal, the method comprising:
- 1.2 Calculate a current residual spectrum of the sound signal;
- 2.2.3 by subtracting a spectral background from a spectrum of the sound signal in a current frame;
- 1.3 Recognizing peaks in the current residual spectrum;
- 1.4 Calculate a correlation map between the current residual spectrum and a previous residual spectrum for each detected peak; and
- 1.5 Calculate a long-term correlation map based on the calculated correlation map, where the long-term correlation map indicates a tonality in the sound signal."

30

In agreement with the Patent Court, the Board organizes claim 19 as follows:

- "19.1 Apparatus for estimating the tonality of a sound signal, the apparatus comprising:
- 19.2 A device for estimating the tonality of a sound signal, the device comprising:
- 19.3 a calculator for calculating a current residual spectrum of the sound signal;
- 20.2.3 by subtracting a spectral background from a spectrum of the sound signal in a current frame;
- 19.4 a detector for detecting peaks in the current residual spectrum;
- 19.5 a calculator for calculating a correlation map between the current residual spectrum and a previous residual spectrum for each detected peak; and
- 19.6 a calculator for calculating a long-term correlation map based on the calculated correlation map, wherein the long-term correlation map indicates a tonality in the sound signal.

31

5. Figure 3 of the patent in suit shows the principle of calculating the lower limit of the spectrum and the residual spectrum by means of an example embodiment (reproduced with colorations and annotations by the patent court, WKS4 p. 18):

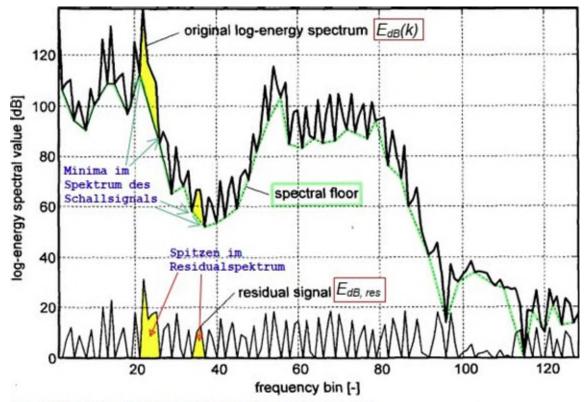


Fig. 3 mit Kolorierung und Kommentierung durch den Senat

The original energy spectrum, its lower spectrum limit and the residual spectrum are shown. According to the claim, the residual spectrum is calculated from the energy spectrum (feature 1.2) by subtracting a spectrum lower limit from the spectrum of the sound signal (feature 2.2.3). In the current residual spectrum, peaks are detected according to feature 1.3, for which correlation maps are calculated according to feature 1.4. Based on the calculated correlation map, a long-term correlation map is calculated according to feature 1.5, which indicates a tonality in the sound signal.

33

The calculation of a correlation map for a current frame is shown in Figure 4 (reproduced with annotations and colorizations by the patent court, WKS4 p. 20):

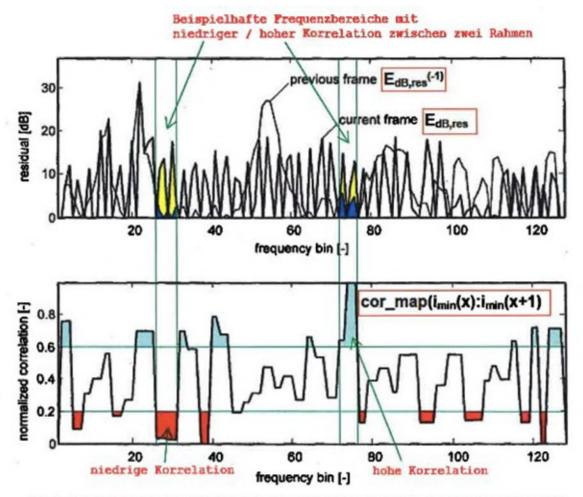


Fig. 4, mit Kolorierung und Kommentierung durch den Senat: Residualspektren zweier aufeinanderfolgender Rahmen und zugehörige Korrelationskarte

The following figure of the patent in suit (Figure 5) is an example of a functional block diagram of a signal classification algorithm, [0014]. The figure shows the embedding of the method for estimating tonality in the process of signal classification when distinguishing between unvoiced speech and music (with comments by the patent court, WKS4, p. 14):

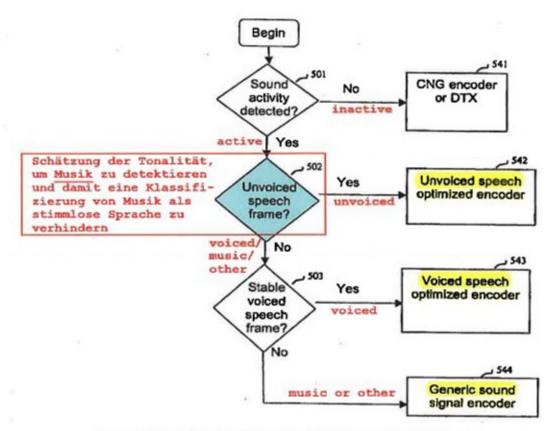


Fig. 5, mit Kommentierung und Kolorierung durch den Senat

6. The following features require further explanation.

36

a) "Tonality" within the meaning of features 1.1, 1.5 and 19.1, 19.5 is understood by the skilled person (according to the definition of the Patent Court, which the Board agrees with the parties) to mean a person with a university degree (master's or diploma) in electrical engineering, communications engineering or information technology and with several years of professional experience in the field of audio coding, taking into account speech and music in sound signals as an expression of the duration of individual tones (likewise Patent Court, WKS4, p. 20). The skilled person recognizes the term "tonality" as a synonym of the term "tonal stability", even when considering several consecutive frames.

37

The skilled person is led to this understanding by the entirety of the disclosure of the patent specification (under aa)). The wording of sub-claim 13 does not contradict this understanding (under bb)), nor does the general technical understanding of the term (under cc)). The embodiments explained in the description speak in favor of this understanding and are both in accordance with the claim (under dd)).

38

aa) After reading the patent in suit, a person skilled in the art will attribute to the term "tonality" within the meaning of features 1.1, 1.5, 19.1, 19.5 the above-mentioned understanding.

39

(1) The starting point for a correct understanding of the scope of protection of a patent are the claims of the patent, Art. 69 (1) EPC. Patent claims require interpretation in order to determine the scope of protection. In principle, patent specifications form their own lexicon (see on the latter BGH GRUR 1999, 909, 912 - Spannschraube; e.g. BGH GRUR 2015, 972, 974, para. 22 with further references - Kreuzgestänge). The decisive factor is how the person skilled in the art understands a term in the context of the asserted claims after reading the patent specification.

40

(2) The skilled person recognizes that, according to the teaching of the patent-in-suit, "tonality" is to be used to better distinguish between speech and music and, based on this, to achieve better coding. Therefore, she understands that the subject matter of tonality is the duration or stability of individual tones. The skilled

person thus recognizes "tonality" as a synonym of the term "tonal stability", contrary to the opinion of the defendant.

41

(a) It is led to this understanding by the overall disclosure of the specification of the patent in suit.

42

[0002] explains that tonality estimation is used to improve the performance of sound activity detection with respect to music signals and to better distinguish between unvoiced sounds and music. Descriptive paragraph [0006] aE also refers to this. Tonality estimation can be used, for example, in a super-wideband codec. [0085] explains that a "tonality estimator" can be used to calculate the parameter of "tonal stability" (one of the parameters used in music discovery). This shows that the patent-in-suit uses the terms tonality and tonal stability interchangeably. The heading before [0149] et seq. also uses the term "tonality". In [0149] it is explained that it is about sound signals with a tonal structure and that the aim is to recognize frames with a strong tonal content within a certain frequency range. For this purpose, the [previously described in paragraphs [0097] ff.] analysis of tonal stability with deviations is used. This reference in [0149] to the estimation of tonal stability, as shown in [0097 ff], also demonstrates the relationship between "tonality" and "tonal stability". The decisive difference between [0097] ff. on the one hand and [0149] ff. on the other is not the juxtaposition of the terms "tonal stability" and "tonality" as a pair of opposites. Rather, the relevant difference is that the description in [0149] ff. explains tonality estimation in super wideband content, as [0149] makes clear, as does [0159], for example. Even if in [0150] ff. describe differences between the methods of the two embodiments, it is clear that the method steps of the second embodiment correspond in principle to those of the first example (also LG Mannheim, WKS8, p. 21). Likewise, the reference in [0157] with regard to the decision on tonality to the previously described decision, which is based on a limit value, makes the equality of the terms clear. Obviously, [0157] refers to [0110] et seq. ff.

43

(b) To the extent that the defendants argue (for example by reference to the phrase "tonal structure" in [0149]) that the term "tonality" refers (only) to a system of hierarchical pitch relationships related to a fundamental, such as "major-minor tonality", and that the estimation of a corresponding tonality refers only to a frame, the patent-in-suit does not teach such an understanding.

44

While the term used by the defendants is a musicological concept of tonality, the skilled person recognizes that tonality in the sense of the patent in suit is directed to the recognition of patterns in the sound signal and is decisive in the encoding and decoding of sound signals. Tonality as understood in musicology does not deal with this. Tonality, as defined at https://de.wikipedia.org/wiki/Tonalität_(music), also has no relation to frames. It is irrelevant whether the person skilled in the art has knowledge in the field of music (to duplicate p. 2/3). When reading the patent specification, the person skilled in the art will recognize that it deals with the sound recognition and processing of music signals, so that the musicological aspect is not relevant for understanding the teaching according to the invention.

45

Nor do the defendants show that the patent in suit teaches how to analyze the tones present in a frequency in their relationship to each other, so that tonality as a pitch relationship within a frame is not relevant in this respect (see Duplik p. 10; also Patent Court, WKS4, p. 25).

46

(c) The skilled person recognizes that from the fact that the patent in suit uses the two terms "tonal stability" (on the one hand) and "tonality" (on the other hand), it does not necessarily follow that different meanings are to be attributed to the two terms.

It is recognized by the highest courts that the use of the same terms in a patent specification means in case of doubt that these terms should have the same literal meaning (BGH GRUR 2017, 152, 154, para. 17 - Zungenbett). However, this does not mean that a person skilled in the art will necessarily always use the same terms when explaining the same facts. Similarly, when reading a patent specification, a person skilled in the art will not assume that different terms necessarily have different meanings (in this direction, BGH GRUR 2016, 169, 170, para. 16 et seq. - Luftkappensystem). Rather, the person skilled in the art will, after reading the entire patent specification, attribute to each term the meaning that it has from the patent specification as a whole, as explained above.

48

Accordingly, a person skilled in the art will recognize from reading the specification of the patent in suit for the above-mentioned reasons that the terms "tonality" and "tonal stability" do not have different meanings (to Duplik p. 4).

49

aa) The wording of sub-claim 13, which addresses "tonal stability", whereas the patent in suit in claims 1, 6, 11, 14, 15, 16, 19, 22, 23, 25, 26 and 27 refers to the "tonality" of a sound signal, does not lead to a different understanding.

50

Determining the meaning of a sub-claim can contribute to the correct interpretation of the main claim. Sub-claims further elaborate the solution protected in the main claim and can therefore indirectly provide insights into its technical teaching. In principle, sub-claims do not restrict the subject matter of the main claim, but only indicate possibilities for shaping it (BGH (GRUR 2016, 1031, 1033, para. 15 with further references - Wärmetauscher).

51

It does not follow from the fact that tonal stability is (only) addressed in sub-claim 13 that tonal stability must be something other than tonality. Subclaim 13 refers back to subclaim 11. The latter addresses a method for classifying a sound signal with the aim of optimizing the coding of the sound signal by means of the classification of the sound signal. The method comprises, among other things, classifying the sound signal as an inactive sound signal or as an active sound signal according to the detected sound activity in the sound signal. This classification in turn comprises an estimation of the tonality of the sound signal in order to prevent music signals from being classified as unvoiced speech signals. According to a claim, the tonality estimation is performed according to any one of claims 1 to 5. Sub-claim 13 further addresses classifying the active sound signal as a voiceless speech signal. According to this sub-claim, the classifying comprises calculating a decision rule based on at least one of a plurality of parameters including a tonal stability.

52

Accordingly, "tonality" and "tonal stability" are not necessarily to be understood as opposing terms. Rather, the subclaims describe different facts: on the one hand, the classification of the active speech signal (inter alia) on the basis of the estimation of the tonality of the sound signal, and on the other hand, the classification of the active speech signal (inter alia) on the basis of the calculation of a decision rule, which may be based, inter alia, on tonal stability. Subclaim 13, in contrast to subclaim 11, is thus particularly concerned with the calculation of a decision rule based on various parameters. Claim 11 thus addresses a partial aspect, claim 13 addresses further criteria for classifying a signal as a voiceless speech signal (likewise Patent Court, WKS4, p. 23/24). Therefore, sub-claim 13 has its own meaning, even if the terms tonal stability and tonality are understood as synonyms (on duplicate p. 6).

53

aa) General technical knowledge does not contradict this understanding of the term "tonality" either.

54

With reference to WKS10, the applicant explained that at the priority date, the skilled person referred to "tonality" (at least also) to the character of an audio signal. This is consistent with the problem definition of the patent in suit in [0006] ("tonality detection") and the introductory explanation in [0002]. It is irrelevant whether the skilled person to whom the patent-in-suit is directed is also familiar with the term "tonality" in a

musicological context. In any case, after reading the patent in suit, they will recognize that the musicological aspect of the term is not addressed by the patent in suit.

55

aa) The understanding explained is in line with the principles set out in [0097] et seq. on the one hand and [0149]

56

et seq. on the other hand. Against the above-mentioned background, the skilled person understands that both embodiments of the patent in suit address the "tonality" according to the claim.

57

If several embodiments are presented in the description as being in accordance with the invention, the terms used in the patent claim are, in case of doubt, to be understood in such a way that all embodiments can be used to complete them (BGH GRUR 2015, 972, 974, para. 23 - Kreuzgestänge). A situation in which the specific wording of the claim rules out an understanding that would cover all embodiments is reserved for rare exceptional cases (see BGH GRUR 2015, 159 Zugriffsrechte; BGH GRUR 2015, 868 Polymerschaum I; BGH GRUR 2015, 875 Rotorelemente; BGH GRUR 2015, 972 Kreuzgestänge).

58

With regard to tonal stability, [0097] in particular explains that tonal stability adopts the tonal nature of music signals. A typical music signal comprises tones that are stable over several consecutive frames. The tonal nature is thus equated with stability over several (successive) frames. [0097] further explains that tonal stability is recognized by a correlation between the spectral peaks in the current frame and those in a previous frame, as addressed by feature 1.5 of claim 1. [0097] thus takes up a core idea of the invention according to the patent and explains it further in the following paragraphs.

59

The claim wording (by referring to "tonality") provides no indication that claim 1 should be limited to the second embodiment addressed in [0149] et seq. Rather, the skilled person understands from the above that tonality and "tonal stability" denote the same situation. Since [0149] et seq. refer to [0097] et seq. it is not necessary to assume a logical contradiction between "tonality" and "tonal stability" (likewise in the result Patent Court, WKS4, p. 24/25). (For the claimability of embodiment 1 with regard to feature 1.3, 19.3, see below).

60

Nor does the grant history give rise to any other understanding. From the fact that the priority specification initially only explicitly explained tonal stability and that [0149] to [0159] were therefore not contained in the priority specification, it follows, contrary to the defendant's view, that the patent specification attaches the same meaning to the terms "tonal stability" and "tonality". In any event, it does not follow from this that the aspect of tonality, as explained in [0149] et seq. is an additional aspect (to duplicate p. 8).

61

b) According to feature 1.2, a current residual spectrum of the sound signal is calculated, according to feature 2.2.3, by subtracting a spectrum lower limit from the spectrum of the sound signal in a current frame. Feature 19.2 accordingly addresses a calculator for calculating a current residual spectrum of the sound signal by (feature 20.2.3) subtracting a spectrum lower limit from the spectrum of the sound signal in a current frame.

62

According to [0097], the spectrum of the sound signal is the average log-energy spectrum as defined in equation (4), i.e. EdB(k). The spectrum lower limit is described in [0101] as a piecewise linear function that runs through local minima. The lower spectrum limit is subtracted using equation (32), [0103]. This process is shown in Figure 3 above (with coloring and comments by the patent court).

The residual spectrum is a spectrum that is obtained from the spectrum of the sound signal. By mapping the residual spectrum, the local peak structure of the spectrum of the sound signal can be better recognized. This serves to improve the assessment of temporal stability. The size and shape of the locally dominant signal components of the original sound signal spectrum need not be exactly reflected in the residual spectrum (also Patent Court, WKS4, p. 16).

64

c) Feature 1.3 addresses the detection of peaks in the current residual spectrum, feature 19.3 correspondingly addresses a detector for detecting peaks in the current residual spectrum. A correlation map is calculated according to feature 1.4 for the peaks detected in the residual spectrum (according to feature 1.3).

65

aa) [0104] aE explains that "peaks" are understood as a "piece" between two minima in the residual spectrum. The minima themselves are not part of the peaks (likewise Patent Court, WKS4, p. 18).

66

aa) According to claim 1/claim 19, the decisive factor is the detection of peaks "in the current residual spectrum". The detected peaks must therefore be "present" in the current residual spectrum, without the claim addressing how the peaks are detected, i.e. by analyzing which spectrum the step of detection takes place. Neither according to the wording nor according to the literal sense is this recognition limited to an analysis of the residual spectrum:

67

(1) [0099] ff. explains that minima are found in the sound signal spectrum (step 2 of the estimation of tonal stability) in order to form the spectrum lower limit, [0101] (step 2 of the estimation of tonal stability). The description here does not explicitly explain the detection of peaks in the residual spectrum. It is therefore unclear to the skilled person whether peaks in the residual spectrum must be detected on the basis of the residual spectrum or whether they may be detected on the basis of the signal spectrum. The determination of peaks on the basis of the residual spectrum (EdB, res) in [0156] does not limit the claim (p. 12 of the response).

68

(2) Insofar as the defendants argue that the calculation according to the first embodiment example is not covered by the claim due to the determination of the peaks on the basis of the energy spectrum, this argument does not hold water. As explained above, patent claims are generally to be interpreted in such a way that all embodiments are covered by the claims. The same applies here. The claim does not address by which analysis of which spectrum the peaks must be determined. Claims 1 and 19 must therefore be interpreted as meaning that embodiment 1 is covered (see duplicate p. 12).

69

An understanding according to which only the second embodiment example is to be in accordance with the claim in this respect also does not result from the judgment of the Federal Patent Court (on duplicate p. 18). It is true that the patent court refers to the second embodiment example on p. 34 in line 7. However, at the beginning of its explanations on the question of inadmissible extension, it also refers to the description passages corresponding to [0099] and [0103] of the patent in suit in the original disclosure, i.e. embodiment example 1.

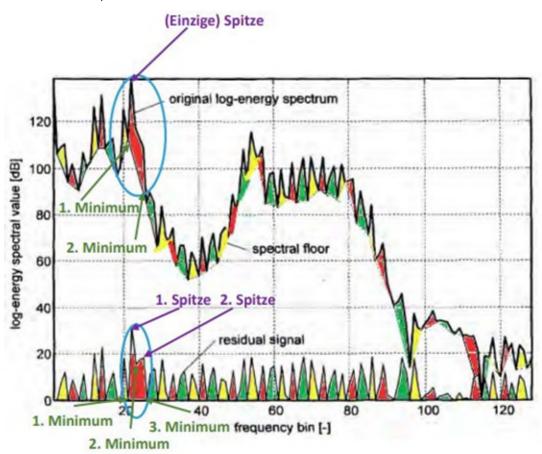
70

(3) The argument that the peaks in the energy and residual spectrum would differ, so that the calculations from the first design example should not be used, is equally unsuccessful for the defendants (on duplicate p. 13).

The skilled person recognizes that the formula (33) in [0105] in the left part with imin covers minima in the sound signal spectrum (EdB), i.e. local minima, as also addressed in formula (30). In [0104], on the other hand, minima in the residual spectrum (EdB,res) are addressed, i.e. absolute minima (also LG Mannheim WKS8, p. 22).

72

Figure 3 above shows that locally dominant signal components in the spectrum of the sound signal correspond to large values in the residual spectrum. These are recognized as peaks in the residual spectrum and addressed in feature 1.3. The defendant's representation of Figure 3 (duplicate p. 14) is not correct in this respect:



73

Contrary to the opinion of the defendant, the residual spectrum from frequency bin 20 does not contain two peaks, but only one peak with two elevations. This is because the point designated by the defendant as the 2nd minimum in the residual spectrum is not an absolute minimum, but only a local minimum.

74

The skilled person recognizes that the peaks as "parts" in the energy spectrum and in the residual spectrum in the example in Figure 3 correspond to each other. This is because the residual spectrum is formed in such a way that the lower limit of the spectrum is subtracted from the spectrum of the sound signal. Put simply, the spectrum of the sound signal is flattened to a line, in Figure 3 to dB 0. As a result, the peaks in the energy spectrum and the peaks in the residual spectrum, defined as parts between the minima as explained above, are congruent in the example in Figure 3 (also LG Mannheim, WKS8, p. 22 ff.).

75

(4) The question of whether the recognition of the tip refers only to recognizing whether a tip is present or whether the shape of the tip is the object of recognition is not relevant here.

76

c) Feature 1.4 provides for calculating a correlation map between the current residual spectrum and a previous residual spectrum for each detected peak, feature 19.4 a corresponding calculator. Feature 1.5 then addresses the calculation of a long-term correlation map based on the correlation map calculated

[according to feature 1.4], the long-term correlation map indicating a tonality in the sound signal. Feature 19.5 again provides for a corresponding calculator.

77

The correlation map according to feature 1.4 considers whether there is also a peak in a residual spectrum of a previous frame at the position where there is a peak in the current frame. This process is shown as an example in the first illustration in Figure 4. The actual calculation is based on equation (33), [0105].

78

c) In contrast to the correlation map addressed in feature 1.4/19.4, feature 1.5/19.5 addresses a correlation map which takes into account more than two [consecutive] residual spectra. The aim is to be able to better determine the duration of the tones (also Patent Court, WKS4, p. 20).

79

[0107] describes the (recursive) calculation of the long-term correlation map using formula (34). According to the considerations of the Federal Patent Court, the person skilled in the art reads into the equation that the long-term correlation map is updated with each newly calculated residual spectrum or each newly calculated correlation map. Therefore, according to the explanation of the patent court, the skilled person reads that a running index for the frame number is to be added to the equation in each case (Patent Court WKS4, pp. 20, 21). With this explanation, the Federal Patent Court focuses on the continuous procedure of tonality estimation, which is not completed with a single estimation process, as [0113] emphasizes. According to the claim, however, the one-off calculation of a long-term correlation map is sufficient. [0107] explains this process for a current frame; accordingly, the formula shown there refers to the one-time calculation (without running index).

80

In feature 19.5, the subfeature "to calculate a long-term correlation map based on the calculated correlation map (...)" is merely a statement of purpose.

81

II The defendant directly infringes the patent in suit in the asserted version of claim 19 with the attacked embodiment in accordance with the literal meaning, Section 9 sentence 2 no. 1 PatG. The embodiment has all the features of the patent in suit.

82

1 The realization of characteristics 19.2 and 19.4 is rightly not in dispute between the parties. Characteristics 19.1, 19.3 and 19.5 are also fulfilled.

83

a) The design of the challenged devices is undisputed between the parties to the extent that they are compatible with the EVS standard and use the EVS standard coding.

84

b) There is a violation of feature 19.1 because the EVS standard estimates tonality within the meaning of feature 19.1. Cell phones that are compatible with the EVS standard are therefore a device for estimating the tonality of a sound signal within the meaning of feature 19.1.

85

The fact that the EVS standard makes a corresponding tonality estimate follows from section 5.1.11.2.5 of the standard:

86

Here it is determined for individual segments (frames) of the sound signal whether they have a strong or a weak tonal character, 5.1.11.2.5, p. 59, penultimate paragraph.

The fact that the EVS standard does not estimate tonality on the basis of a single frame, but on the basis of several consecutive frames, is irrelevant to the question of infringement with the interpretation explained above (see response p. 15/16).

88

c) Feature 19.3 is also realized. It follows from section 5.1.11.2.5, p. 58, first paragraph under Fig. 9 that peaks are detected in the current residual spectrum:

89

Figure 9 of the standard corresponds to Figure 3 of the patent in suit:

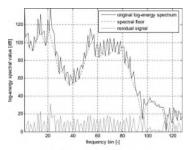


Figure 9 : Spectral floor in the tonal stability

90

According to this, peaks are used to create the correlation map (feature 19.4). A standard functioning device must therefore have a detector for detecting peaks in the current residual spectrum.

91

The fact that the standard uses the original energy spectrum EdB, and not the residual spectrum, for the detection of peaks, p. 57 of the standard, is irrelevant for the question of infringement according to the present interpretation (p. 15/16 of the statement of defense).

92

d) Feature 19.5 is also realized. This follows from section 5.1.11.2.5, p. 59 of the EVS standard:

93

The correlation map Mcor calculated for the current frame is then used to update the long-term value ??cor. Equation (134) shown above corresponds to equation (34) of the patent-in-suit. Thus, the EVS standard requires a calculator to calculate the long-term value ??cor in the devices compatible with the EVS standard. Devices that are compatible with the EVS standard must have a corresponding calculator, consequently also the challenged embodiments.

94

Insofar as the defendants argue that - contrary to the patent in suit - no updating takes place in the EVS standard, this does not lead out of the infringement according to the interpretation explained above. This is because feature 19.5 only requires the calculation of a long-term correlation map in a current frame.

95

III. The challenged infringing forms make indirect use of claim 1 in accordance with the literal meaning. The attacked infringing objects infringe claim 1 of the patent in suit because there is an indirect patent infringement pursuant to Section 10 (1) PatG.

96

1. The requirements for contributory patent infringement are fulfilled pursuant to Section 10 (1) PatG. The element of jeopardy pursuant to Section 10 PatG is objectively and subjectively realized.

97

a) The challenged infringing forms (EVS-capable mobile telephones) are means because they are objects which do not yet themselves realize the teaching of patent claim 1 (literally or equivalently), but are suitable for direct use of the invention (literally or equivalently).

98

b) These means relate to an essential element of the invention. The devices can perform the method claimed in claim 1. Since the features contained in claim 1 are substantially realized by the accused infringing forms, they thus substantially contribute to the performance result according to the invention.

99

c) The attacked infringing forms (EVS-capable mobile telephones) are objectively suitable for direct patent use. If a challenged infringing form is used as intended by a third party, the conditions for applying the method according to claim 1 are established. The attacked means are suitable for the use of the invention. According to the objective nature of the attacked infringing forms and their integration into the EVS standard, this is the case because a direct literal use of the protected teaching with all its features by the users is possible. This use by users has already taken place. In this respect, reference is made to the explanation of the infringement under II. The statements made there apply accordingly to the realization of method claim 1.

100

2. The offer or delivery in Germany for the use of the invention in Germany has been made.

101

3. The subjective facts are given.

102

The subjective determination of the user for direct patent infringing use is obvious. The challenged infringing forms provide for the patent infringing functionality (EVS compatibility). It is evident, but at least to be assumed, that it is carried out accordingly by the user of the devices. The objective suitability and the intended use of the customers are obvious to the defendants.

103

IV. The defendants have undisputed passive legitimacy.

104

V. The plaintiff is therefore entitled to the claims asserted as tenor.

105

1. the claim for injunctive relief follows from Art. 64 (1) EPC, Sec. 139 (1) PatG. The risk of repetition is indicated by the unlawful acts of use.

106

a) A prohibition for the worse is justified with regard to item I.1.b) of the operative part. The challenged infringing forms are used in a technically and commercially reasonable manner in a patent-infringing manner. The defendant has not questioned this.

107

b) The injunctive relief is not disproportionate.

108

(1) Pursuant to Section 139 (1) sentence 3 PatG, the claim for injunctive relief is excluded if, due to the particular circumstances of the individual case and the requirements of good faith, the claim would lead to disproportionate hardship for the infringer or third parties that is not justified by the exclusive right.

109

The objection of disproportionality under Section 139 (1) sentence 3 PatG is limited to special exceptional cases. This takes account of the fact that the injunctive relief is the logical consequence of the exclusive right. The grant of the patent gives rise to absolute rights to the patented invention which, in addition to their attribution content, have an exclusion content, so that the owner of the right can in principle exclude anyone from using the patented teaching. In particular, they permit the exclusion of third parties from using the patented teaching - within the framework of the other statutory provisions, especially those of patent and antitrust law. In order to enforce his exclusive right, the patent proprietor is generally dependent on injunctive relief.

110

In the explanatory memorandum to the 2nd PatModG, the legislator made it clear that a restriction of the injunctive relief can only be considered in special exceptional cases. Injunctive relief is the regular sanction under patent law in the event of patent infringement. The burden of presentation and proof of disproportionality lies with the defendant. A restriction of the injunctive relief can only be considered in exceptional cases (BT-Drs. 19/25821, p. 53).

111

If the patent infringer presents special circumstances that may cause unjustified hardship in the individual case, it may exceptionally be relevant in the context of an overall assessment of all circumstances of the individual case and a careful weighing of all circumstances, taking into account the requirement of good faith and the generally overriding interests of the infringed party in the enforcement of its injunctive relief, whether the infringed party itself manufactures products or components that are in competition with the infringing product or whether the primary objective of the patent proprietor is to monetize its rights (BT-Drs. 19/25821, S. 53). In addition, the economic effects of the injunction, the complexity of products, subjective aspects on both sides and third-party interests may have to be taken into account. For example, a lack of willingness to license can be seen to be to the detriment of the obligated party (BT-Drs. 19/25821, p. 54).

112

(2) Applying these standards, the objection of disproportionality raised by the defendant does not apply. Taking into account all the circumstances of the legal dispute between the parties and their relevant interests, the defendant has not demonstrated that the claim for injunctive relief is disproportionate.

113

The fact that the plaintiff acquired its EVS portfolio for the purpose of monetization (statement of defence p. 20) does not in itself justify a disproportionate claim for injunctive relief. According to the previous legal situation (see Werner in: Busse/Keukenschrijver, PatG, 9th ed. 2020, Section 139 para. 92 with further references), with which the explanatory memorandum to the law agrees (see above), the fact alone that a patent exploiter asserts a claim for injunctive relief is not in itself suitable to classify it as disproportionate (established case law of the Chamber, see LG Munich I GRUR-RS 2022, 34498 - "keepawake-message").

114

The fact that the technical function underlying the patent in suit only addresses a partial aspect of the EVS standard and that the challenged embodiments are highly complex products does not in itself justify disproportionality either.

115

In any case, disproportionality cannot be considered when asserting standard-essential patents. This is because the user of an SEP is generally entitled to the conclusion of a license agreement on FRAND terms. The fact that the license agreement has not yet been concluded is - as will be shown below under C. - the fault of the defendant.

116

As explained above, the unwillingness to license may have to be taken into account when balancing interests. A different result does not follow from the defendant's argument that the disproportionality objection has no scope of application in addition to the FRAND objection. The fact that the defendant's group of companies received an offer from the plaintiff - which was not unacceptable, see below - and did not accept it because it was unwilling to license (see C. below) is not capable of restricting the plaintiff's rights due to the complexity of the infringing product. This is because the defendant's group of companies

had and has the possibility to legitimize its patent infringing actions. However, it has (so far) not made use of this possibility. It is then a logical consequence that the plaintiff must enforce its patent rights against a patent infringer unwilling to grant a license and is dependent on court proceedings to do so. In the context of the required overall assessment, this does not justify a disproportionate claim for injunctive relief.

117

This result is in line with the prevailing opinion in legal literature: If the patent proprietor complies with its FRAND obligations, Section 139 (1) sentence 3 PatG does not provide the patent infringer with an additional defense in the absence of further circumstances justifying disproportionality (see Ohly, GRUR 2021, 1229, 1236).

118

In an overall consideration of the aspects raised by the defendant, disproportionality is also out of the question.

119

2. the claim for information and rendering of accounts follows from Art. 64 (1) EPC, Sec. 140b (1), (3) PatG, Secs. 242, 259 BGB. These are auxiliary claims to the plaintiff's claims for compensation and damages on the merits.

120

Due to the unauthorized use of the subject-matter of the invention, the right to information on the origin and the distribution channel of the attacked embodiment arises directly from Sec. 140b (1) PatG in conjunction with Art. 64 (1) EPC, the scope of the duty to provide information from Sec. 140b (3) PatG in conjunction with Art. 64 (1) EPC.

121

The further duty to provide information and the obligation to render accounts follow from §§ 242, 259 BGB in conjunction with Art. 64 para. 1 EPC, so that the plaintiff is able to quantify the claim for damages to which it is entitled.

122

Moreover, the plaintiff is dependent on the information provided by the defendants, which it does not have at its disposal through no fault of its own. The defendants are not unreasonably burdened by the information requested from them. The auditor's reservation is to be granted as requested. Due to the accessoriness to the claim for damages, which presupposes fault, the (requested) waiting period of one month from the grant of the patent must be taken into account.

123

3. Since the defendants committed the infringing acts at least negligently, they are liable to pay damages on the merits, Sec. 139 (2) PatG in conjunction with Art. 64 (1) EPC.

124

Applying the due care required in trade, it could and should have been recognized in the defendant's business operations no later than one month after publication of the grant of the patent in suit that it would be infringed by the sale of the attacked embodiments.

125

A certain probability of damage occurring is sufficient to establish liability for damages due to the damage that has already occurred as a result of the use of the patent.

126

The defendants are jointly and severally liable pursuant to Section 840 (1) BGB.

127

4. The claims against the defendants for destruction of the infringing forms and their recall arise to the extent of the operative part from Sec. 140a (1) and (3) PatG in conjunction with Art. 64 (1) EPC. The claim for recall also exists against an obliged party domiciled abroad (BGH GRUR 2017, 785, 787, para. 33 - Abdichtsystem). Therefore, the claim also exists here against the defendant. The claim for destruction also exists: Although the registered office of defendant 1) is located abroad, it undisputedly supplies infringing goods to Germany and therefore has (indirect) possession in Germany in any case.

128

The claim is also not disproportionate, Section 140a (4) PatG. The objection of disproportionality pursuant to Sec. 140a (4) PatG is also limited to narrow exceptions (for the destruction claim, see Rinken, in: BeckOK PatR, PatG Sec. 140a para. 28, for the recall claim, see Rinken, in: BeckOK PatR, PatG Sec. 140a para. 46). Here, what was said under V.1.b) applies accordingly.

C.

129

The antitrust compulsory license objection raised by the defendants (so-called FRAND objection) does not preclude the enforceability of the plaintiff's claims for injunctive relief, destruction, recall and removal. It does not apply due to the lack of willingness to license on the part of the defendant's group of companies.

130

It can be assumed in favor of the defendant that the plaintiff has a dominant position on the relevant market, so that it is the norm addressee of Art. 102 TFEU. The plaintiff has sufficiently complied with the duties and obligations arising from this special position. In particular, the defendant's group of companies has been made aware of the infringement. Contrary to the defendant's assumption, however, there is no abuse of the dominant market position. This is because, according to the circumstances of the specific individual case, the defendant's group of companies was not (sufficiently) willing to license.

131

I. A patent proprietor who has undertaken vis-à-vis a standardization organization to grant licenses to a standard-essential patent (SEP) on FRAND terms (i.e. fair, reasonable and non-discriminatory terms) may abuse its dominant market position conferred by the standard-essential patent by bringing an infringement action if and to the extent that this is likely to prevent products corresponding to the standard from entering the market or remaining available on the market (cf. ECJ GRUR 2015, 764 - Huawei Technologies/ZTE; BGH GRUR 2020, 961 para. 68 - FRAND-Einwand I). In this respect, applications for injunctive relief, recall and removal of products or destruction can generally be considered abusive (see BGH GRUR 2020, 961 para. 68 - FRAND-Einwand I with further references).

132

The European Court of Justice has ruled on the FRAND licence that the proprietor of a standard-essential patent standardized by a standardization organization, who has irrevocably undertaken vis-à-vis that organization to grant a licence on FRAND terms to any third party, does not abuse his dominant position by bringing an action for infringement of his patent or for recall of the products for the manufacture of which that patent was used, by bringing a patent infringement action for an injunction against the infringement of his patent or for the recall of the products for the manufacture of which that patent has been used, if, firstly, he has informed the alleged infringer of the patent infringement of which he is accused before bringing the action and has identified and specified the patent in question, and secondly, after the alleged infringer has expressed his intention to conclude a license agreement on FRAND terms, he has submitted a specific written license offer to the infringer on these terms and, in particular, has indicated the license fee and the way in which it is to be calculated, and the infringer continues to use the patent in question, while continuing to use the patent in question, does not respond to that offer with diligence, in accordance with accepted commercial practice in the field concerned and in good faith, which is to be determined on the basis of objective factors and implies, inter alia, that no delaying tactics are being pursued (cf. ECJ loc. cit.) Furthermore, the Court of Justice of the European Union has ruled that the proprietor of a standardessential patent with a FRAND declaration is in principle not prohibited from bringing an infringement action against the infringer of its patent for an accounting of past acts of use in relation to the patent or for damages for those acts (ECJ loc. cit.).

The assertion of claims for injunctive relief, recall and removal as well as destruction by the patent proprietor by way of action may constitute an abuse if the infringer has not (yet) declared his legally binding willingness to conclude a license agreement on certain reasonable terms, but the patent proprietor is to be blamed for not having made sufficient efforts to meet the special responsibility associated with the dominant market position and to enable an infringer who is in principle willing to license to conclude a license agreement (BGH loc. cit. - FRAND objection I). The abuse of market power follows from the refusal of a requested access to the invention per se or from unreasonable conditions for a requested access from which the patent proprietor is not prepared to relinquish even at the end of negotiations, i.e. the refusal to offer the licensee seeking to conclude a contract on FRAND terms as a result of a negotiation process those fair, reasonable and non-discriminatory terms which the licensee can claim and on which he, for his part, is prepared to conclude a contract with the patent proprietor (cf. Federal Court of Justice GRUR 2021, 585 para. 59 - FRAND-Einwand II). An offer that does not comply with FRAND conditions as such does not yet constitute an abuse of the patentee's dominant position: An abuse only lies in refusing or making it impossible for the infringer to negotiate and conclude a FRAND license agreement that is in line with the interests articulated in the negotiation process and instead enforcing the patent or one of the patents to be licensed by means of legal action (BGH loc. cit. para. 78 - FRAND-Einwand II).

134

The person who wants to use the patent or has already used it and has brought patent-compliant products onto the market, although he does not have a license, must be prepared to take a license to this patent on reasonable and non-discriminatory terms (BGH loc. cit. para. 70 - FRAND objection I). Even the patentee with market power cannot force anyone to take a license; although the potential licensee can demand the conclusion of a license agreement, the patentee is dependent on enforcing claims for patent infringement against anyone who wants to use the patented teaching but does not want to conclude a license agreement (see BGH loc. cit. para. 82 - FRAND-Einwand I). The infringer must therefore clearly and unambiguously declare its willingness to conclude a license agreement with the patentee on reasonable and non-discriminatory terms and must also subsequently participate in the license agreement negotiations in a targeted manner, because "a willing licensee must be one willing to take a FRAND license on whatever terms are in fact FRAND" (BGH loc. cit. para. 83 - FRAND objection I). Under which circumstances the patent infringer is unwilling to take a license is a question of the individual case (BGH loc. cit. para. 78 - FRAND objection II).

135

An abusive refusal by the dominant patentee necessarily presupposes a continuing request by the infringer to conclude a contract on FRAND terms and its willingness to cooperate in the conclusion of such a contract, without which a "refusal" by the patentee would be in vain (BGH loc. cit. para. 66 - FRAND-Einwand II). The willingness to license is indispensable because an appropriate result that balances the opposing interests of both parties can usually only be achieved as the result of a negotiation process in which these interests are articulated and discussed in order to achieve a fair and appropriate balance of interests desired by both parties. The requirements for the conduct of the patent proprietor and the conduct of the user of the invention are mutually dependent. The yardstick for the examination is what a reasonable party interested in the successful conclusion of the negotiations and in the interests of both parties would do to promote this goal at a certain stage of the negotiations (BGH loc. cit. para. 59 - FRAND-Einwand II). An objective willingness to conclude a FRAND license agreement is regularly demonstrated by the active promotion of the negotiations based on the common goal of a successful conclusion. The negotiation steps of parties interested in concluding a contract build on each other. An obligation to promote therefore always exists if and insofar as the next negotiation step can be expected according to business practice and the principles of good faith (BGH loc. cit. para. 68 - FRAND objection II).

If one party initially fails to cooperate as required in the conclusion of a license agreement on FRAND terms, this is generally to its detriment. Depending on the circumstances, it may be required to compensate for any omissions as far as possible. This corresponds to the usual practice of persons interested in concluding a contract, who, in the event of a delayed reaction to a corresponding offer to negotiate, must normally expect that the other party is no longer interested in concluding a contract (BGH loc. cit. para. 60 - FRAND objection II).

137

In particular, the patent infringer must not delay the negotiations (ECJ loc. cit. para. 66, 71). This is because, unlike in the case of contract negotiations which a company willing to license seeks before the commencement of use, the infringer's interest may also - solely or at least primarily - be directed towards delaying the patentee until the expiry of the term of protection of the patent in suit, if possible, because he is then no longer threatened with an injunction (BGH loc. cit. para. 82 - FRAND objection I). A delaying tactic typically consists of not simply rejecting a license agreement on FRAND terms, but ostensibly striving for it, but procrastinating the finding of an appropriate solution in detail or at least postponing it as long as possible (BGH loc. cit. para. 67 - FRAND objection II). The assessment to be made on the basis of objective aspects as to whether a delaying tactic is being pursued should also take into account the infringer's further conduct in response to a notice of infringement or an offer by the patentee (Federal Court of Justice loc. cit. para. 77 - FRAND Objection II).

138

If the patent infringer is unwilling to license, the Federal Court of Justice has ruled that it can be left open whether the patent proprietor's offer (in terms of content) complies with FRAND conditions (BGH loc. cit. para. 82, 101). The license seeker is completely released from the obligation to respond and therefore also from the obligation to state all objections at the same time only in the event that an offer is contrary to FRAND to such an extent that it appears to be unacceptable from an objective point of view, is therefore not meant seriously and, according to the objective horizon of the recipient, constitutes a refusal to conclude a license agreement on FRAND terms (see BGH loc. cit. para. 71 - FRAND objection II).

139

According to the case law of the Regional Court of Munich I, the defendant patent user generally bears the burden of presentation and proof for the justification of its compulsory license objection under antitrust law in accordance with the usual standards of civil procedure. The FRAND objection is an objection of the defendant and he must generally present and, if necessary, prove the circumstances favorable to him. This applies both to the fact that the conduct (offer) of the patent proprietor is absolutely unacceptable and to the patent user's complaint that the contractual terms offered to him discriminate against him compared to other licensees of the patent proprietor. In order to demonstrate this complaint, the patent user must at least provide plausible evidence of this. Depending on the individual case, this may lead to the licensor having to provide more detailed information on this as part of its secondary burden of proof (LG Munich I, judgment of February 17, 2023, 21 O 4140/21 - "subordinate multi-tree subdivision information", intended for publication). If a patent user claims that the license offered to him is not FRAND because it is worse than the contractual terms of the competition, he must be willing to conclude the license agreement at least on these (allegedly more advantageous) terms in order to be considered willing to license and must objectively express this willingness through his conduct (LG Munich I loc. cit.). When negotiating a FRAND license agreement, both parties are required to contribute in a manner appropriate to the situation and in good faith to finding a reasonable, fair and appropriate balance. This includes, in particular, negotiating in a prompt, conducive and constructive manner and articulating one's interests in order to achieve concrete progress in negotiating the terms of the license agreement. The willingness of the patent proprietor suing for infringement to license generally includes offering the patent user a license agreement on such fair, reasonable and non-discriminatory terms as the patent user can claim during the course of the negotiations and after the patent user's substantive response. As a rule, this willingness to license does not exist if the patent proprietor insists on discriminatory or arbitrary conditions and is not prepared to abandon these even at the end of the negotiations (LG Munich I loc. cit.).

If the patent user negotiates the license terms only hesitantly, it generally expresses its unwillingness to license (delaying tactics). If a patent user constantly requests further information from the patent proprietor without the information provided to him resulting in progress in the negotiation, this behavior can demonstrate the patent user's unwillingness to license. In principle, a patent user can request as much information and may - within the limits of procedural law - dispute as much as he wishes with ignorance. However, after several years of negotiation and after repeating this behavior several times, this is no longer conducive or constructive (LG Munich I loc. cit.).

141

II. According to these standards, the defendant's group of companies is not sufficiently willing to license, taking into account all circumstances of the individual case and the relevant overall conduct of the parties. Contrary to the defendant's assumption, the plaintiff's conduct, in particular its last offer, is not unacceptable (under 1.). The defendants, on the other hand, are unwilling to license (under 2.).

142

(1) The plaintiff's conduct and in particular its last offer of are not unacceptable. The plaintiff has made sufficient efforts to meet the special responsibility associated with the dominant market position in order to enable an infringer willing to license to conclude a license agreement.

143

The Chamber considers this last offer by the plaintiff to be sufficiently serious and aimed at the conclusion of negotiations with the defendant's group of companies in line with its interests. Contrary to the defendant's assumption, it does not constitute a refusal to conclude a license agreement with the defendant's group of companies on FRAND terms. Until the end of the oral hearing, the plaintiff did not insist on discriminatory (see a) or arbitrary (see b) conditions. Likewise, during the negotiations, it was prepared to respond to the defendant's justified demands and to adapt its conduct accordingly. The Chamber's statements essentially follow the line of argumentation of the defendant.

144

a) In particular, the defendant's main objection to the plaintiff's conduct does not hold water. This objection is essentially aimed at the accusation of discrimination. However, the defendants have not sufficiently substantiated such an allegation. Since the defendants received sufficient insight into the plaintiff's licensing practice from the plaintiff, they were in principle in a position to do so. Nevertheless, they have not demonstrated discrimination.

145

The defendants claim that the plaintiff did not (sufficiently) prove that the license terms offered did not discriminate against the defendants. It had merely made individual contracts available to the defendants in the electronic data room. However, contracts were missing. These included in particular the contract with . The plaintiff had only posted this with blacked-out passages and, despite the defendant's request, had not proven that the license payment agreed therein had actually been fulfilled. The plaintiff did not disclose the contract until approximately six months after it was concluded. In doing so, it delayed the negotiation process and made the defendant's legal defense more difficult.

146

Contrary to the defendant's assumption, in the present case it is not up to the plaintiff to prove the defendant's non-discrimination, but it is the defendant's task in the first step to demonstrate the discrimination it complains of (see above LG Munich I, judgment of 17 February 2023, 21 O 4140/21 - "subordinate multi-tree subdivision information", intended for publication). If the license seeker claims that the patent proprietor licenses at different prices as an allegation of discrimination, the license seeker must generally provide concrete evidence, based on examples from the patent proprietor's licensing practice, that it is being discriminated against, against whom and why.

In detail:

148

aa) The plaintiff has granted the defendants sufficient insight into its licensing practice and thus created transparency to the extent initially required.

149

For this purpose, the plaintiff has made license agreements with a total of company groups available to the defendants in an electronic data room. These are the following license agreements with the following lump sums:

...

150

These existing contracts, together with the other information provided by the plaintiff in the electronic data room, provide sufficient insight into its licensing practice. From this knowledge, the defendants could and should at least have derived indications as to why the plaintiff licenses at different prices if they claim discrimination or insufficiently substantiated non-discrimination. In particular, the defendants would have had to make a specific allegation of discrimination in order to sufficiently substantiate their complaint.

151

A patent user seeking a license must generally be informed of the essential factors for determining the license fee to be paid. For this purpose, the license fee offered to him must generally be explained to him on the basis of the essential factors for the price. If a lump-sum license fee is agreed for past and future use, a lower standard may apply in accordance with the purpose of the lump-sum payment. The more license agreements are concluded, the more likely it is that the explanation of the factors can be limited to a comparison of the specific fee offered with the agreed license fees in license agreements that have already been concluded. However, disclosed license agreements with third parties together with further explanatory information provided by the patent proprietor, for example in an electronic data room, generally provide a patent user willing to take a license with sufficient insight into the licensing practice of the patent proprietor.

152

bb) The plaintiff also disclosed the contract to the defendants. Contrary to the defendant's complaint, the specific circumstances of the disclosure do not result in any unacceptable behavior on the part of the plaintiff (under (1)). The comparison of the contract with the last offer submitted to the defendant's group of companies also does not show any discrimination to the detriment of the defendant (under (2) and (3)).

153

(1) Before the defendants gained access to the content of the contract text, the plaintiff communicated the essential content of the contract to the defendants in close connection with the conclusion of the contract. Insofar as the defendants claim that the contract was not fully disclosed to them until approximately six months after conclusion and shortly before the oral hearing in these proceedings, this does not constitute discrimination or any other aspect under which the plaintiff's conduct appears to be unacceptable.

154

(2) The fact that the differences asserted by the defendants in the plaintiff's contract with and with other licensees in the assumed development of future sales figures (forecast of the experts vs. content of the parties' agreement) as well as in other assumptions, e.g. for the "EVS voice share" or the "EVS shipment", may exist in relation to the offer made to them does not lead to discrimination in comparison with the defendants in view of the content of the license agreements, which contains a lump-sum license fee for the past and future.

(a) Even if differences could arise between individual contracts when calculating the flat fee in terms of the "effective license fee", which, however, is neither part of the existing license agreements nor of the offer, these price differences do not constitute discrimination because the price determination cannot be considered in such detail. Rather, the decisive factor is whether the license fees previously agreed with third parties and the license conditions offered to the defendants are part of an overall structure that is in line with the protective purposes of antitrust law and serves to establish, guarantee and secure an internal market, and whether the flat-rate license offered does not discriminate against the defendant license seeker in terms of market access. Discrimination could exist, for example, if a competitor of the defendant comparable to the defendant would have received more favorable conditions to a not insignificant extent, i.e. would have to pay a not insignificantly lower flat fee with comparable assumptions of the respective price-determining factors. If a patent user asserts that the license offered to him is not FRAND because it is worse than the contractual conditions of the competition, he must be willing to conclude the license agreement at least on these (allegedly more advantageous) conditions in order to be considered willing to license and must objectively express this willingness through his conduct (LG Munich I loc. cit.).

156

Even in the event of a possible variance in the patent proprietor's previous pricing, which does not, however, constitute such a significant difference in treatment that it cannot be resolved by negotiation between two partners willing to license, a reasonable party interested in the successful and fair conclusion of the negotiations would see this circumstance as an opportunity and attempt to (nevertheless) conclude a reasonable, appropriate and fair contract. This applies in particular with regard to individual refinements in the figures that only become apparent when the flat fee is calculated.

157

(b) Therefore, the defendants' objection does not apply if they derive a non-uniformity of the plaintiff's entire license system from existing differences between the individual mathematical factors of the respective contracts. In this respect, the comparison of the present case with the contract is instructive: although the defendants had emphasized their comparability with the previous case, they did not claim that the agreed flat-rate license fee of discriminated against them. This is because this amount is in the same order of magnitude as that which the plaintiff last offered to the defendants' group of companies. Discrimination that distorts competition can therefore be ruled out.

158

Likewise, the defendants have not stated that they are prepared to adapt the terms of the contract to the specific circumstances of the defendants' group of companies. A reasonable party interested in the successful and fair conclusion of the negotiations would see this variance in pricing cited by the defendants as an opportunity and attempt to (nevertheless) reach a reasonable, appropriate and fair conclusion of the contract. Instead, the defendants insisted on information from which their non-discrimination would result, which is in any case not sufficient for the required demonstration of the alleged discrimination.

159

The other contradictions, inconsistencies and deviations that the defendants cite in the comparison of their offer also do not exceed a certain level of detail. It is not a question of the contract as a whole, but of individual finesses in the figures which, in the absence of a significant effect on the total amount of the agreed flat-rate license, cannot justify such a significant unequal treatment of the defendants that they cannot be resolved by negotiation between two partners willing to license. In any case, they are neither sufficiently demonstrated nor apparent to the Chamber.

160

(3) If the defendants state that the contract with , this does not result in discrimination against the defendants. In any case, at the end of the negotiations, the plaintiff is prepared to abandon discriminatory conditions (assumed in favor of the defendant).

161

cc) With regard to the group of companies, the plaintiff indisputably made parts of the contract available to the defendants in the electronic data room in redacted form. The plaintiff has explained the redacted content and shown the basis for calculating the license fee agreed therein. In any event, there is no indication of discrimination against the defendants from these statements by the plaintiff and in particular the license fee.

162

In addition to this information, the plaintiff did not need to post the redacted part of the contract text in the data room in the specific individual case. The specific content of the overall contract may be of interest to the defendants. However, the disclosure of this overall contract is not relevant to the merits of the objection.

163

In any case, it is not clear from the defendants' submission that the conditions granted are at all relevant from the point of view of the alleged discrimination. Even if the contract were submitted to the defendants in full, it is still not shown and also not apparent how this could result in discrimination against the defendants, because the defendants themselves do not state that they are comparable and also do not claim that their products and services correspond on the market to those of . However, the presentation of a concrete unequal treatment with another person is a prerequisite for discrimination. However, this is lacking. In this respect, it does not help the defendants if they assert in the oral hearing, with reference to a case law of the Higher Regional Court of Karlsruhe, that a comparable licensee is any company that sells smartphones. This does not result in any concrete unequal treatment.

164

For lack of further relevance, it is also irrelevant for the Chamber whether the license fee was actually paid to the plaintiff in the amount agreed, which the defendants have denied with ignorance. In any case, the defendants do not provide any evidence to justifiably doubt this.

165

Therefore, the question of whether the confidentiality obligations cited by the plaintiff and denied by the defendants stand in the way of the disclosure of the contract can be left open, as it were, and regardless of whether the allegation made by the defendant that the plaintiff has presented contradictory information on the US procedure for the implementation of in this process would have the consequence claimed by the defendants that the plaintiff must create transparency and also disclose the contract.

166

dd) Insofar as there may be other license agreements relating to the patent at issue that date from a time before the plaintiff acquired the patents, this does not result in any discrimination either, because it is neither apparent nor demonstrated why this could result in unjustified unequal treatment by the plaintiff compared to the defendants.

167

ee) Moreover, there is no discrimination against this company if it has been conceded.

168

Firstly, the plaintiff offered the defendants a license agreement which the defendants' group of companies did not accept (for other reasons). Secondly, there is an objective reason for differentiating between and the defendant's group of companies, .

169

b) Contrary to the defendant's complaint, the license fee offered by the plaintiff to the defendant's group of companies is not arbitrary.

aa) There may be a violation of the prohibition of arbitrariness if the patent proprietor is unable to explain its pricing in a sufficiently plausible manner. However, it should be noted that an offer that does not comply with FRAND conditions does not in itself constitute an abuse of the patent proprietor's dominant market position. Rather, an abuse only lies in refusing or making it impossible for the patent infringer to negotiate and conclude a FRAND license agreement that is appropriate in view of the interests articulated in the negotiation process and instead enforcing the patent or one of the patents to be licensed by means of legal action (see BGH loc. cit. para. 78 - FRAND-Einwand II).

171

The requirements to be met by the explanation depend primarily on the specific circumstances of the individual case. The patent seeker seeking a license must be informed of the essential factors for determining the license fee. For this purpose, the license fee offered to him must generally be explained to him on the basis of the essential factors for the price. The more license agreements have been concluded, the more likely it is that the explanation of the factors can be limited to a comparison of the specific fee offered with the agreed license fees in license agreements that have already been concluded. The explanation serves to protect the patent user willing to license. The latter should receive an insight and overview of the amount and calculation of the license fee demanded in order to be able to negotiate his license with the patent proprietor in a sufficiently informed manner on the basis of the information obtained. An exception to the duty to explain may exist if the patent user is already sufficiently informed about the patent proprietor's licensing practice (whether from public sources or from his own experience).

172

aa) Inferring from the amount of the license fee demanded that it is unreasonable and from its unreasonableness that it is arbitrary is only possible in those cases in which the antitrust compulsory license objection (so-called FRAND objection) is raised as a defense against a patent infringement, i.e. in passive proceedings, in exceptional cases (which must be very well justified) if in individual cases such high license demands are made that they appear unreasonable and are therefore arbitrary.

173

A high license demand alone does not generally make the plaintiff's offer arbitrary. In principle, further penal aspects must be added in order to assess the conduct of the patent proprietor as unacceptable or to classify it as not serious, with the consequence that the patent user does not objectively need to react to it. Apart from this, it is the task of the negotiations between the parties to find a solution to the price issue and to level out any unreasonably high asking price of the patent proprietor to an objectively reasonable, fair and appropriate level. This means that, as a rule, a reaction by the patent user seeking a license to the patent proprietor's offer is required in order to clarify the factors for the correct price determination through negotiations in individual cases. If the parties negotiate seriously, swiftly and constructively, the Chamber's experience shows that they can usually clarify their different ideas about the price by mutual agreement. If the parties are unable to do so, they can seek support from a third party (e.g. through arbitration, conciliation or arbitration proceedings or mediation). If the parties still cannot find a solution in this way, legal action remains. In principle, the patent user can either actively demand the license from the patent proprietor in court or, in patent infringement proceedings initiated by the patent proprietor, use the compulsory license objection under antitrust law as a legal defence (e.g. via Section 242 BGB dolo agit, see BGH GRUR 2009, 694 para. 24 - Orange-Book-Standard) against the patent infringement, so that the patent litigation chamber has to examine whether (in particular) the claim for injunctive relief under patent law is opposed by an antitrust claim of the patent user for injunctive relief against the abuse of the dominant market position (in particular from the point of view of refusal of access) (BGH loc. cit., FRAND-Einwand II, para. 54).

174

As a rule, this does not depend on actual access to the patented technology, which regularly exists. Therefore, the denial of access is about legal access to the use of industrial property rights (see Bechtold/Bosch, GWB, 10th edition 2021, Section 19 para. 67). This access is usually achieved by concluding a license agreement (without wishing to settle the "access to all" vs. "license to all" debate). If the patent user is denied the conclusion of the requested license agreement, if the patent proprietor demands an unreasonably high fee for the license or imposes other unreasonable conditions, this may

constitute a refusal of access (see BGH loc. cit. para. 59 - FRAND-Einwand II; Bechtold/Bosch, GWB, 10th edition 2021, Sec. 19 para. 68).

175

Under antitrust law, the cases of refusal of access can overlap with those of abuse of price or conditions and, due to the uniform standard of reasonableness (in particular the application of the comparative market concept), cannot be clearly distinguished. Thus, there may be prices whose claim concerns both the case group of refusal of access and that of price abuse.

176

However, in cases in which the antitrust compulsory license objection is asserted against claims for patent infringement, the Chamber is convinced that the distinction between refusal of access and price abuse is decisive.

177

As a rule, knowledge of the antitrust price is required to assess price abuse. As a rule, the parties and the court in patent infringement proceedings do not have this knowledge. In most cases, there is often only knowledge of the conditions under which the patent user's competitors have gained market access. The infringement proceedings in which the "FRAND objection" is asserted are also not aimed at determining the correct price under antitrust law. Due to the procedural situation in which both sides try to hold each other responsible for the fact that the license agreement has not yet been concluded, it is not the contractual conditions that correspond to FRAND that are determined, but the conditions that are not FRAND (on the whole Meier-Beck, FS Säcker, 2021, p. 275, 289/290).

178

The court is therefore only able to determine the antitrust-compliant price - assuming sufficient facts are presented - by means of a time-consuming and cost-intensive expert opinion. Meanwhile, the patent proprietor is (de facto) prevented from enforcing his patent and the infringer can actually continue to use the patent undisturbed. In this respect, the infringer obtains a de facto free license, at least temporarily (on the idea of free license in a different context Meier-Beck, FS Säcker, 2021, pp. 275, 285). This shows that in a review of price abuse, there is an imbalance to the detriment of the patent proprietor, who, in view of the limited lifespan of current cutting-edge technology and the limited term of patents in general, urgently needs a quick decision on patent infringement. Therefore, the aspect of price abuse can only be held against the claim for injunctive relief under patent law if the assertion of the price abuse does not constitute an abuse of rights in the constellation of the specific individual case.

179

The fact that the infringer cannot invoke the rights to which it is entitled under Art. 101, 102 TFEU without restriction is emphasized in the supreme court case law of the European Court of Justice and the Federal Court of Justice: not only the patent proprietor, but also the patent user has obligations (ECJ GRUR 2015, 764, 767, para. 63 et seq. - Huawei/ZTE; BGH loc. cit. para. 56 et seq. - FRAND-Einwand II). He can also behave dishonestly (see BGH loc. cit. para. 61 - FRAND-Einwand II). A decisive aspect here is that the infringer must not pursue delaying tactics (see below). However, if the patent user asserts a price abuse in such a way that the examination of the merits of the price abuse objection - after possibly several years of unsuccessful negotiations - would lead to a (further procedural) delay, this objection must generally be denied to him in the infringement proceedings.

180

Again, the above consideration applies here: A party that is genuinely interested in the conclusion of the license agreement will raise objections regarding the price at an early stage. As also explained above, a high (initial) asking price on the part of the patent proprietor also leads to an obligation to negotiate. The correct price, like the other contractual terms, can only be determined through negotiations between the parties. If a party willing to license recognizes that the patent proprietor is not willing to substantially deviate from a price that is too high (from the infringer's point of view), it will generally not behave unlawfully and possibly punishably and simply use the patent, but will in principle actively pursue the determination of the correct price in court, in particular even before the infringement action is filed. Therefore, as explained above, the objection of price abuse in infringement proceedings should only be considered in blatant cases.

This does not entail a substantial restriction of the patent user's rights. In many cases, the parties and the infringement court are aware of the terms of settlement agreements and compare the offers exchanged between the parties with the terms contained therein. In any case, these prices do not generally lead to a refusal of access. For example, if they are largely established and accepted by the market, they appear to be in line with competition and not restrictive of access despite not knowing the price in line with the cartel.

182

In addition, the patent user seeking a license who has not reached an agreement with the patent proprietor on the price of the license can react in such a way that, as a first step, he can conclude the license agreement with comparable conditions to his competitors and thus obtain the desired (legal) access to the market. Subsequently, if he (still) considers the agreed price to be abusive, he is at liberty (with the support of the antitrust authorities) to bring about clarification of the appropriate price for the license under antitrust law before an antitrust litigation chamber specializing in such disputes (see Meier-Beck, loc. cit., pp. 275, 291). Another possibility could in principle also be an offer pursuant to Section 315 BGB (see OLG Karlsruhe GRUR-RS 2021, 9325; Meier-Beck, loc. cit., p. 275, 290/291; Osterrieth, Patentrecht, 6th edition 2021, para. 920; Bukow in: Haedicke/Timmann, Handbuch des Patentrechts, 2nd edition 2020, Sec. 13 para. 384; in individual cases critical LG Mannheim GRUR-RS 2021, 6244).

183

Even if an appropriate balance is sought between the position of the patent proprietor under patent law on the one hand and the position of the patent user in competition granted by antitrust law on the other by way of "practical concordance", this appears to be given by the aforementioned possibilities of the patent user. Through the channels described above, the patent user can defend itself appropriately in the infringement action and is given the opportunity to have the correct price under antitrust law determined elsewhere. At the same time, the patent proprietor is given the opportunity to ensure that the infringement proceedings are conducted within a reasonable timeframe.

184

aa) According to these standards, the license fee offered by the plaintiff to the defendants is not arbitrary. The plaintiff has sufficiently explained the factors for the prices and provided the defendants with the necessary information. The overviews posted in the electronic data room are in principle sufficient to enable the defendants to negotiate the appropriate license fees with the plaintiff in full knowledge of the conditions of third parties.

185

(1) Insofar as the defendants argue that the figures used as a basis in particular were arbitrarily chosen by the plaintiff and had nothing to do with the actual circumstances, this does not constitute arbitrariness. Even if the Chamber here assumed in favor of the defendants that this is the case, the defendants are at liberty to request the plaintiff by way of negotiation to offer it comparable conditions in order to gain access to the market by concluding a license agreement. Instead, the defendants insisted on their offers (see above regarding the accusation of discrimination) and criticized the arbitrary determination of sales figures and other values as well as the inconsistent explanation.

186

(2) If the defendants argue that the plaintiff refused to offer the defendants a license, this does not result in any arbitrariness. On the one hand, the plaintiff unsuccessfully offered a license to the defendants' group of companies (see above). Secondly, the defendant's group of companies has no right to demand that the plaintiff concludes the license agreement submitted by them as a counter-offer with the specific conditions.

187

On the one hand, the plaintiff has unsuccessfully offered the defendants a license (see above). Secondly, all of the plaintiff's license agreements have a total term corresponding to that of its most recent patents. In this respect, a justifiable reason is required to deviate from this practice. The defendants have not yet sufficiently demonstrated such a reason. However, there is no demonstration of a concrete legitimate interest on the part of the defendants as to why the plaintiff should deviate from the previously established licensing model, which according to the plaintiff's submission covers approximately 70% of the market. However, the defendants do not present a legitimate interest based on this.

٠.

188

(3) If the defendants argue that the contract with , this does not result in arbitrariness on the part of the plaintiff, in accordance with the reasons stated above with regard to the allegation of discrimination.

189

c) Ultimately, the fact that the plaintiff did not submit the license agreement to the defendants until the end of the proceedings does not result in any unacceptable conduct because the defendants were not left in the dark about the content of the contract concluded, but were informed of it immediately after the contract was concluded (see section 3 below). The suggestion made by the defendants to suspend the proceedings and to allow negotiations between the parties without pressure in view of the disclosure of the contract does not apply in view of this. This is because there is no indication that this would change the defendants' previous reluctant negotiating behavior.

190

d) Nor does it follow from the defendants' further complaints that the plaintiff's license offer was absolutely unacceptable and that the defendants were released from any obligation to respond (in particular from the obligation to state all objections at the same time).

191

2. The defendant's unwillingness to license is reflected in its reluctance to negotiate the license terms.

192

The defendant's group of companies did not conduct the negotiations for the conclusion of the allegedly intended license agreement in a targeted manner. It was neither sufficiently determined nor sufficiently constructive in the negotiations for the conclusion of the allegedly intended license agreement. Rather, the overall conduct of the defendant's group of companies shows its lack of interest in reaching the conclusion of the license agreement with the plaintiff quickly. The Chamber is convinced that the defendant's group of companies is pursuing the goal of enforcing its own (financial) license conditions against the plaintiff. It is also using delaying tactics for this purpose. It is prepared to use the patent in suit without authorization and without payment for as long as possible as a means of exerting pressure.

193

a) The defendant's initial unwillingness to license arises objectively essentially from the hesitant and insufficiently supportive conduct of the defendant's group of companies during the negotiations with the plaintiff, as described below. In particular, the defendant's group of companies did not declare its willingness to license in the first year of the negotiations. After the video conference and the plaintiff's offer, it also allowed too much time to pass and thus did not react sufficiently quickly and constructively to the plaintiff's license offer.

194

After the plaintiff notified the defendant's group of companies of the infringement of, inter alia, the patent in suit on , the defendant's group of companies confirmed receipt of the infringement notice on and informed the defendant of the contact person in its company on . On , the plaintiff then sent the defendant's group of companies a draft non-disclosure agreement (NDA). The parties signed such an agreement on

195

At the plaintiff's request, a video conference was held with the defendant's group of companies on , during which the plaintiff submitted and explained a license offer to the defendant's group of companies in the amount of . Following this conference, the plaintiff sent the defendants the presentation explaining the license offer, samples of license agreements, a list of its standard-essential patents and IPEC reports on 14 US patents and 14 European patents. The defendants' group of companies confirmed receipt of these documents on .

196

More than six months later, namely on , the defendant's group of companies requested legal status search reports on four of the 14 European patents in the plaintiff's portfolio and stated that its analysis of the portfolio was still ongoing.

197

After the NDA expired on , the plaintiff brought an action against the defendants before the 7th Civil Chamber of Munich Regional Court I and filed an application for an anti-suit injunction against the defendants' group of companies, which was issued on and served on the defendants' group of companies on .

198

b) The Chamber is convinced that the cooperation in the negotiation process undertaken by the defendant's group of companies after service of the action in the main proceedings is not sufficient to prove its willingness to license.

199

The conduct of the parties described below, which reflects the essential circumstances (in particular the defendant's pleadings of 19.08.2022 - FRAND statement of defense, 19.12.2022 - FRAND duplicate and 13.01.2023 - FRAND quadruplicate as well as the plaintiff's pleadings of 19.10.2022 - FRAND reply and 09.01.2023 - FRAND triplicate) makes it clear that the initially hesitant attitude of the defendant's group of companies continued even after the action was brought in the main proceedings. The defendant's group of companies did not sufficiently promote the negotiations, although it could have done so, and likewise did not behave sufficiently constructively, but hesitantly. In particular, the defendant's group of companies constantly demanded further information and clarification from the plaintiff without the information provided in response being reflected in sufficiently tangible progress in the negotiations.

200

aa) After the plaintiff offered on to the defendant's group of companies to disclose license agreements that the plaintiff had concluded with other companies subject to a corresponding NDA, the defendant's group of companies requested on to send such a draft, which the plaintiff sent to the defendant's group of companies on and which the latter sent back with amendments on , so that the further NDA was concluded between the parties on .

201

On , the plaintiff asked the defendant's group of companies to name persons who should have access to the electronic data room in which the plaintiff posts the license agreements. On , the defendant's group of companies named these persons to the plaintiff and asked on to discuss the terms of the plaintiff's offer and to post the plaintiff's complete license agreement with Apple in the data room, which the plaintiff agreed to do on and the parties held a video conference on .

The defendant's group of companies complained that the documents in the electronic data room can only be read online. Furthermore, the defendant's group of companies complained that two license agreements of the plaintiff's legal predecessor are missing and that the plaintiff's complete license agreement is still not available in the data room.

203

On , the plaintiff informed the defendant's group of companies that the data room was provided for in the NDA. Likewise, during the negotiations on the NDA, the defendant's group of companies never objected to the fact that the documents could only be read online. In addition, the plaintiff asserted that all of the third-party license agreements concluded (at that time) were available in the electronic data room without any redacted passages and that all relevant information on the plaintiff's license agreement with the defendant's group of companies was also disclosed there. Furthermore, the plaintiff added that disclosure of the license agreement was not possible due to confidentiality requirements. Finally, the plaintiff again explained its license offer, which has been available for over a year and to which the defendants have not yet responded in terms of content, and sent an IPEC analysis of eleven Chinese patents.

204

On , the defendant's group of companies submitted a counteroffer to the plaintiff with a lump-sum payment of . The defendant's group of companies explained its counteroffer. In addition, the defendant's group of companies criticized the fact that the license agreement with was still not fully disclosed.

205

On , the plaintiff rejected the counteroffer and submitted a new offer. In order to accommodate the defendant's request, the plaintiff submitted a further license offer to the defendant in a video conference and by email dated , which provided for a payment of . For this, the plaintiff used figures for sales and forecasts and asked the defendant's group of companies to correct them if they were incorrect.

206

On , the group of companies again explained its offer to the defendant in a video conference and offered to continue the video conference on 2 . In addition, the group of companies informed the defendant of its license offer. On , the group of companies of the increased.

207

In May 2022, the defendant's group of companies sent e-mails criticizing the plaintiff's figures regarding the calculation of license fees for existing license agreements and asked for an explanation as to why the license agreement states that they should pay while the calculation table states that they should pay, and asked for feedback on the counteroffer and for a meeting.

208

Thereupon, the plaintiff rejected the last counteroffer of the defendant's group of companies by e-mail dated and submitted a new offer in the amount of . In addition, the plaintiff made a further license offer in the context of a video conference on . The defendant's group of companies responded to the plaintiff's offer in a video conference dated and increased its counteroffer to .

209

The plaintiff informed the defendant's group of companies that it had concluded a license agreement with another smartphone manufacturer. It also explained the key points of the license agreement to the defendant's group of companies (term, subject matter of the license, amount of the lump-sum license payment and calculation of the license fee).

210

In emails and video conferences, the parties then discussed the expected sales figures of the defendant's group of companies as well as the economic comparability of the defendant's group of companies on the basis of a presentation by the plaintiff.

211

On , the plaintiff gave a presentation on the current market situation during a video conference and, in view of the license agreement concluded with and the settlement reached between the defendant's group of companies and this group, submitted a license agreement offer to the defendant's group of companies and sent it by e-mail.

212

By e-mail dated , the plaintiff reminded the defendant's group of companies of the offer dated , to which the defendants responded on and the parties agreed on a video conference. In this conference, the defendants' representatives stated, among other things, that .

213

bb) The defendant's group of companies thus participated too late in the license negotiations and did not do enough to promote the conclusion of a license agreement. In particular, it did not behave in such a way that sufficiently concrete progress was made.

214

A license seeker striving for the successful conclusion of a license agreement would - unlike the defendant's group of companies - have made efforts through ongoing negotiations and supportive and constructive cooperation to ensure that the desired license agreement was concluded. In particular, the defendants only submitted their counter-offers late in the negotiation process and were in any case not prepared to significantly increase them in the end, although it is clear from the plaintiff's statements (most recently in the triplicate of January 9, 2022) that the defendants' group of companies only offered a fraction of the payments agreed there compared to the other license agreements concluded by the plaintiff. The last counter-offer also shows their unwillingness to license, because despite the basic comparability with only slightly more than the amount paid and the defendants have not explained which assumptions they have used as a basis for their own figures up to the year. From the point of view of the Chamber, it would rather have been expected that the defendants would submit a license offer that was in line with the necessary adjustments, but approximately in the order of magnitude in which their competitor reached an agreement with the plaintiff.

215

3. this established unwillingness of the defendant to license is not altered by its objection that the offer of the defendant's group of companies is the only written license offer that meets the FRAND criteria, so that they cannot be regarded as unwilling to license.

216

a) The defendant's group of companies is basically based on the fact that its offer is FRAND because the plaintiff demands an amount of last for the total term until.

217

b) This objection does not apply because the defendants cannot claim a license agreement on such terms from the plaintiff.

218

A prerequisite for the defendant's objection is that the plaintiff's offer can be calculated down from to and that a corresponding contract on these terms would be available at all, which is already not the case in the absence of a legitimate interest of the defendant's group of companies vis-à-vis the plaintiff (see above). Furthermore, the plaintiff's license offer is designed in such a way that only sales up to are included in the pricing, with which sales up to are compensated at the same time. An arithmetic distribution of the to to to is therefore ruled out.

219

III. The defendant's other objections and complaints do not substantiate the objection of compulsory licensing under antitrust law either, taking into account all the specific circumstances of the individual case.

In particular, the judgment of the UK High Court of 16.03.2023 in Interdigital v. Lenovo (Annex VP-Kart35), submitted in the written submission of 28.03.2023, does not lead to a different result, at least in the absence of transferability of the factual circumstances to this case.

221

IV. The defendant's admissible application for the production of documents must be rejected. It is unfounded.

222

1. After the Chamber has determined that the defendant is unwilling to license, it exercises the discretion granted to it under Section 142 ZPO to the effect that the requested document production is not required. Further information requiring confidentiality need not be disclosed to a negotiating partner unwilling to license and the corresponding documents need not be submitted if they are not relevant to the proceedings.

223

This is the case here. The specific circumstances of the individual case are not relevant to the proceedings. This is because the submission is not relevant to the decision. The defendants are not willing to license. There are no indications that the requested submission of the documents could change this and that they would abandon their delaying and unsupportive behavior.

224

2 Contrary to the defendant's assumption, the claim is not justified simply because the defendants have only made the documents available online for viewing in the electronic data room, although it is not possible to print, save or otherwise secure the documents. This is because the defendants also have the opportunity to familiarize themselves with the content of the documents and take note of them. It is true that this makes it more difficult for them to make these documents the subject of the proceedings and it must be admitted that the plaintiff exercises control over the data room. However, the defendant's interest in information is thus sufficiently satisfied in the individual case. For example, the defendant can easily "secure" the content of the documents by photographing the screen. Furthermore, it was not (rightly) objected in the course of the proceedings that it could not defend itself accordingly. The fact that the content of such data rooms cannot be regarded as electronic file content may be true, but - probably contrary to Kühnen, Handbuch der Patentverletzung, 15th edition 2023, Chapter E para. 598 - does not change the lack of an obligation to produce. The decisive factor is the need for information of the person concerned.

225

3. by submitting the contract, the plaintiff has also partially fulfilled the request.

D.

226

A stay pursuant to Section 148 ZPO with regard to the action for annulment filed by the defendant on August 19, 2022 (Annex VP2) is not required.

227

I. The initiation of opposition proceedings or the filing of an action for revocation do not in themselves constitute grounds for staying the proceedings. Otherwise, the attack on the patent in suit would have an inhibiting effect on patent protection which, according to the law, is alien to it (BGH GRUR 1987, 284 - Transportfahrzeug). In the required balancing of interests, the patent proprietor's interest in enforcing the patent granted to him generally takes precedence (see Cepl in: Cepl/Voß, Prozesskommentar Gewerblicher Rechtsschutz und Urheberrecht, 3rd edition 2022, Section 148 ZPO para. 106 with further references). This is because the patent only offers a limited term of protection. For the duration of the suspension, the property right is also practically revoked with regard to the application for injunctive relief, which represents an essential part of the property right. Therefore, a suspension can only be considered if destruction is to be expected with overwhelming probability (Cepl in: Cepl/Voß, loc. cit., Section 148 ZPO para. 107 with further references).

A first-instance decision by the body appointed to decide on the legal status (usually composed of persons skilled in the art) must generally be accepted, provided the decision is not obviously erroneous (Voß, in: BeckOK, PatR, PatG § 139 Vor §§ 139-142b (infringement proceedings) para. 186 with further references). The party disadvantaged by the decision must explain to what extent the decision is wrong (diagnosis) and why the body appointed to decide will decide differently in the second instance (prognosis).

229

II. According to these standards, the proceedings should not be stayed either with regard to the appeal proceedings against the judgment of the Patent Court of December 6, 2021 (WKS4) or with regard to the nullity action VP2.

230

Whether a stay is granted is at the discretion of the court, Section 148 ZPO. When reviewing the exercise of its discretion, the court shall take into account whether there is an overwhelming probability that the patent in suit will be destroyed.

231

In the opinion of the Chamber, the subject matter of the patent in suit in the version asserted here and upheld by the Patent Court with restrictions is legally valid. The invalidity arguments asserted by the defendant in the context of its request for a stay are not valid. In particular, the subject matter of the patent in suit is new and inventive.

232

1. There are no doubts as to the novelty of the claims maintained in a limited form in relation to the publication NK1 (Michael Jerome Hawley, Structure out of Sound, 1993, hereinafter "Hawley").

233

The Hawley publication deals, among other things, with the recognition of music from audio signals using a music detector. The music detector makes use of the fact that music - unlike speech - contains tones that remain constant over a certain period of time.

234

According to the findings of the patent court in the first-instance nullity judgment WKS4, Hawley does not disclose feature 2.2.3. Hawley does calculate a current residual spectrum of the sound signal from the samples of a sound signal of a current frame (feature 1.2). However, this calculation does not take place by subtracting the lower spectrum limit from the spectrum of the sound signal (see Patent Court, WKS4, p. 35/36).

235

Insofar as the defendant side refers to the grounds of appeal in the case 4 Ni 10/21 against the judgment WKS4 in its statement of 18.01.2023 and adopts the submission of the appellant there as its own, the defendant side (with the appellant, VP3 para. 176-200) merely substitutes its own opinion for that of the patent court.

236

(2) The subject-matter of the patent in suit is equally inventive.

237

The subject matter of the patent in suit is not suggested by a combination of the printed documents NK1 ("Hawley") with NK2 ("Matsubara"), NK3 ("Klapuri") or NK4 ("Hosoya").

238

a) In order for the subject matter of an invention to be considered obvious, it is necessary, according to supreme court case law, on the one hand, that the skilled person, with the knowledge and skills acquired through training and professional experience, was able to develop the inventive solution to the technical problem from what was already available. Secondly, the skilled person must have had reason to pursue the path of the invention. This usually requires additional impulses, suggestions, hints or other occasions that go beyond the recognizability of the technical problem (see BGH GRUR 2018, 716, 718, para. 25 with further references - Kinderbett).

A person skilled in the art may have a reason to search for a quality improvement on the basis of a citation if it is clear from the prior art document that a solution is disclosed there which represents a compromise between the lowest possible computing power and the highest possible quality (see BGH GRUR 2020, 1074, para. 40 with further references - Signal transmission system).

240

According to the case law of the Federal Court of Justice, the use of a certain means can be obvious even without a corresponding suggestion if this means, as a general means to be considered for a large number of applications, is by its nature part of the general specialist knowledge of the specialist addressed, the use of the functionality in question is objectively appropriate in the context to be assessed and no special circumstances can be identified which make its use appear impossible, difficult or otherwise impractical from a technical point of view (cf. BGH GRUR 2020, 1074, para. 49 with further references - Signal transmission system). The use of a certain means presupposes that there was a reason for an improvement at all, i.e. a reason for a combination of certain prior art publications (addressed in the aforementioned decision in para. 39 et seq.; on the statement of 19.01.2023, p. 6 et seq.).

241

b) NK1 does not offer the specialist any reason to achieve the calculation method addressed in feature 2.2.3 by combining it with the Matsubara print.

242

As the patent court correctly explained, Nk1 offers a self-contained, well-functioning solution for calculating the current residual spectrum of the sound signal, which differs from the calculation according to feature 2.2.3 of the patent in suit. Therefore, this document does not give the skilled person any reason to consider straightening the sound signal spectrum by subtracting a spectral background (Patent Court WKS4, p. 38). This finding of the patent court is independent of the prior art cited alongside Hawley on combination, because it is simply based on the fact that NK1 does not provide any reason for combining (any) other typeface to achieve feature 2.2.3 of claim 1 of the patent in suit.

243

The defendant's argument that the skilled person would generally seek to find improvements and, due to advances in available computer power, would seek an improved method of estimating a tonality and thereby an alternative method of generating the two-dimensional spectral image, so that he would arrive at the printed documents NK2, NK3 or NK4 which disclosed feature 2.2.3, does not invalidate the reasoning of the Patent Court which sees in the NK1 a closed, functioning system (see Reply p. 31).

244

The fact that NK1 is a dissertation does not justify a different assessment. The Board can assume as correct that a person skilled in the art does not generally assume that algorithms in a dissertation are mature or technically perfect. However, the patent court was aware of the fact that NK1 is a dissertation (see duplicate p. 20). Contrary to the assessment of the defendant (duplicate p. 20), the skilled person does not understand the considerations in NK1 as a starting point for improvements because of its p. 23, penultimate paragraph. Hawley does not refer to the analysis presented here as a useful point of departure, but to music as such ("Music is a particularly well-codified and highly structured form of sound, so it provides a useful point of departure."). Even if Hawley, as the defendant believes, discloses the general teaching of generating and using the "two-dimensional spectral image" and cites the "findPeaks" algorithm only as an exemplary possibility for this (statement of defense p. 31, duplicate p. 21/22, VP2 p. 18), this does not show any concrete reason to develop a better method for the music detector.

245

It is true that Hawley addresses "false hits" and a possible adjustment of the filter in section 5.1. Section 5.2 also contains an invitation to further investigate individual aspects. This information describes possible changes, but does not provide any concrete reason for the skilled person to take Hawley's approach in a particular direction. The patent court described the solution of the findPeaks algorithm disclosed in NK1 as a well-functioning solution despite the error rate mentioned, so that this circumstance does not give the person skilled in the art any reason to look for an improvement. The defendant again substitutes its own assessment that the skilled person would have been prompted to make an improvement by the error rate alone (statement of 18.01.2023, p. 12) for the assessment of the patent court. Insofar as a possible adaptation in the case of technical enhancements is addressed at the end of section 5.2, it concerns speech

synthesis. The skilled person has no reason to conclude from this that music recognition could also be adapted due to technical innovations (on p. 2/5 of the statement of 19.01.2023 and the discussion at the hearing).

246

The fact that the teaching disclosed in NK1 can be specified with more computing power also does not provide a specific reason. As explained above, a compromise between the lowest possible computing power and the highest possible quality disclosed in the prior art can be a reason for the skilled person to look for improvements. However, the defendant has not shown that NK1 addresses such a trade-off or that it contemplates an adaptation with improved computing power. Rather, Hawley shows that the algorithm runs faster than "real time" (see p. 84, "The music filter with conservative settings shown here runs about 8% faster than realtime on a Motorola 68040 computer; with settings appropriate for skimming hours of sound, like movie soundtracks, it runs about 5x faster than realtime.", on the discussion at the hearing). Due to technical innovations, new algorithms can always be developed. However, Hawley does not indicate that, due to the technical circumstances, compromises had to be made at the expense of quality when the publication was written, which would specifically prompt the expert to seek improvements.

247

Nor does it follow from a possible spectral offset Δf of the local maxima with respect to the true frequency f of the sound, or a shift of a frequency drift of a sound, that a person skilled in the art automatically has reason to improve the system disclosed in NK1. The defendant side highlights possible malfunctions, whereas the patent court, which is composed of persons skilled in the art, characterized Hawley's system as functioning well (to pleading of 18.01.2023, p. 9/11).

248

From the fact that in 2006 the method of spectral subtraction was part of the general technical knowledge, as the defendant believes (statement of 18.01.2023, p. 11), it does not follow from the above explanations that the skilled person had reason to apply the spectral subtraction to the invention disclosed in the NK1.

249

The question of whether the skilled person had reason to refer in particular to the publications NK2, NK3 and NK4, which do not deal with music detectors, is therefore irrelevant (see reply p. 44 et seq.).

E.

250

I. The costs result from the ratio of winning to losing. The plaintiff prevails in full.

251

II The decision on provisional enforceability is based on Section 709 sentence 1 and sentence 2 ZPO. § Section 712 ZPO is not applicable because the defendant has not demonstrated any disadvantage from the enforcement that goes beyond the usual disadvantages of enforcement and that cannot be compensated.

252

The determination of partial amounts in dispute corresponds to common practice of the infringement chambers at the Regional Court Munich I. The Chamber estimates the corresponding partial amounts in dispute according to the plaintiff's interest as stated in the operative part.