Deckblatt Übersetzung

Daten der Übersetzung:

Court/Gericht:	Bundesgerichtshof
Date of Decision / Datum der Entscheidung:	2014-05-27
Docket Number / Aktenzeichen:	X ZR 2/13
Name of Decision / Name der Entscheidung:	Analog-Digital-Wandler

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Arbeitskreis Patentgerichtswesen in Deutschland e.V.

FEDERAL COURT OF JUSTICE

IN THE NAME OF THE PEOPLE

JUDGMENT

X ZR 2/13

Pronounced on:
27 May 2014
Wermes
Judicial Secretary as
Clerk of the court
registry

in the patent nullity proceedings

Analog-Digital-Wandler/
Analog to digital converter

Patent Act Sec. 117; Code of Civil Procedure Sec. 531(2) sentence 1 No. 1

If the Patent Court only addresses individual means of attack of the plaintiff in the reference issued under Sec. 83(1) Patent Act, the defendant usually has no reason to file, as a precautionary measure, further auxiliary requests in addition to auxiliary requests which take into account the reference issued, with regard to means of attack which the Patent Court did not address in its reference or which it did not consider to be promising.

Federal Court of Justice, judgment of 27 May 2014 - X ZR 2/13 –
Federal Patent Court

The X. Civil Senate of the Federal Court of Justice, following the oral hearing on 27 May 2014, attended by the judges Gröning, Dr. Grabinski, Dr. Bacher and Hoffmann as well as the judge Schuster

ruled that:

On appeal by the defendant, the judgment of the 5th Senate (Nullity Senate) of the Federal Patent Court, pronounced on 2 October 2012, is set aside to the extent that European patent 1 300 951 was also declared null with respect to the following version of patent claim 1, to which the remaining patent claims refer back:

"Delta-sigma analog/digital converter whose analog front end consists of an input resistor (1), a feedback resistor (2), an integrator capacitor (3) containing a D-flip-flop (4) on a semiconductor chip, characterized in that a first buffer (5) (7) located upstream of the D-input of the D flip-flop (4) and/or a second buffer (6) (8) located downstream of the output of the D flip-flop (4) <u>in the feedback path</u> is supplied, in terms of operating voltage, separately ~~from digital circuit parts located on the semiconductor chip~~, <u>by the semiconductor chip containing the digital circuit parts</u>, so that decoupling between semiconductor chip and analog front end occurs. "

The further appeal is dismissed.

To the extent of the cancellation, the matter is referred back to the Patent Court for a new hearing and decision, including on the costs of the appeal proceedings.

By operation of law

Facts of the case:

1 The defendant is the proprietor of European patent 1 300 951 (patent in suit), which was granted with effect for the Federal Republic of Germany, was filed on 29 September 2002, claiming priority from 2October 2001, and relates to a delta-sigma analog-to-digital converter. Patent claim 1, to which five further claims are referred back, reads:

> A delta-sigma analog-to-digital converter whose analog front end consists of an input resistor (1), a feedback resistor (2) [and] an integrator capacitor (3) containing a D flip-flop (4) on a semiconductor chip, characterized in, that a first buffer (5) (7) located before the D-input of the D-flip-flop (4) and/or a second buffer (6) (8) located after the output of the D-flip-flop (4) is supplied with an operating voltage separate from digital circuit parts located on the semiconductor chip, so that a decoupling between semiconductor chip and analog front end occurs.

2 The plaintiff has argued that the subject matter of the patent in suit goes beyond the content of the originally filed documents and is not patentable. In addition, the invention was not disclosed clearly enough for a skilled person to carry it out. The defendant defended the patent in suit as granted and, in the alternative, as amended.

3 The Patent Court declared the patent in suit null on the grounds of inadmissible extension. This is opposed by the appeal, in which the defendant defends the patent in suit with one main and two auxiliary requests only in an amended version. The plaintiff opposes the appeal.

Grounds of the decision:

4 The admissible appeal leads to the partial reversal of the contested judgment and to the remittal of the case to the Patent Court.

5 I. The patent in suit concerns a delta-sigma analog-to-digital converter.

6 1. The patent in suit states that analog-to-digital converters, with which the input signal is converted into a digital output signal by means of integrators, comparators and digital filters, were known in the state of the art. In very simple converters of this type, the supply voltage is used as the reference voltage. Therefore, the resolution of the converter is directly dependent on the quality of the supply voltage. Thus, without further measures, only a resolution of about seven bits is possible. For common audio codecs, however, a resolution of at least thirteen bits is required.

7 Against this background, the patent in suit concerns the technical problem of providing a converter which, with a simple design, enables a resolution of at least thirteen bits.

8 2. In order to solve this problem, the patent in suit, in the version of claim 1 defended by the main request, proposes a transducer, the features of which can be structured as follows (changes compared to the granted version are highlighted by underlining, the addition "in the feedback path", which was inadvertently inserted not only in feature 2 a but also in feature 1 b in the pronounced version of the operative part of the judgment, has been removed again at this point):

1. It is a delta-sigma analog-to-digital converter,

   a) whose analog front end consists of an input resistor (1), a feedback resistor (2) and an integrator capacitor (3), and

   b) which contains a D-flip-flop (4) on a semiconductor chip.

2. To ensure that decoupling occurs between the

semiconductor chip and the analog front end, the circuit is implemented as follows:

a) a first (5, 7) or second (6, 8) buffer is located before the D input and/or after the output of the D flip-flop (4) in the feedback channel,

b) which is supplied separately in terms of operating voltage from digital circuit parts on the semiconductor chip.

9 II. The Patent Court substantiated its decision essentially as follows:

10 The subject matter of the granted version of patent claim 1 goes beyond the content of the originally filed documents. There, the flip-flop was disclosed as a component of the analog front end. According to the patent in suit, however, it is a component of the semiconductor chip. This is an inadmissible deviation. It is irrelevant for the operation of the flip-flop whether it is assigned to the analog front end or to the semiconductor chip. However, there were considerable differences in the design and technological implementation. The integration into the semiconductor chip envisaged in the granted version would result in the flip-flop also being decoupled from the analog front end. According to the original teaching, however, the flip-flop is decoupled from the semiconductor chip.

11 A further inadmissible change is that originally only an operating voltage separation between the buffers and the semiconductor chip is disclosed, whereas the granted version is directed to a separation of digital circuit parts on the semiconductor chip, which presupposes an analog-digital semiconductor chip.

12 In the version defended by the first-instance auxiliary request, patent claim 1 is indeed consistent with the content of the originally filed documents with regard to both features. However, this version was inadmissible because it was directed to the protection of an aliud compared to the granted version.

13 III. This assessment does not withstand review on appeal in all respects.

14 1. The Patent Court correctly concluded that the subject matter of the

granted version of patent claim 1 goes beyond the content of the original documents.

15 a) Contrary to the opinion of the Patent Court, this does not already result from the fact that the D-flip-flop forms a component of the semiconductor chip according to the specification in feature 1 b. The Patent Court was right to conclude that the subject matter of the granted version of claim 1 goes beyond the content of the original documents. This design is already disclosed in the originally filed documents as belonging to the invention.

16 aa) In the description of the originally filed documents - the contents of which correspond to those of the published version of the application - it is not expressly addressed at which position of the circuit the D-flip-flop is arranged. However, it is stated that the delta-sigma converters known in the state of the art, the improvement of which is the subject of the patent in suit, require only two resistors and an integrator capacitor in the analog front end; beyond that, only a purely digital integrated circuit is required (application para. 4).

17 In contrast, there are no indications in the description that the D-flip-flop in a converter according to the invention is to be arranged outside the chip with the integrated circuit. In all three embodiments shown in Figures 1 to 3 of the application, the flip-flop is arranged on the chip. The input and output buffers are designated as the only component that can optionally be arranged inside or outside the chip (paras. 11 and 12). Corresponding embodiments are shown in Figures 2 (chip-internal buffers) and 3 (chip-external buffers).

18 bb) Against this background, the application as a whole is to be understood to the effect that the embodiments shown in Figures 2 and 3, which are expressly designated as embodiments (para. 9), have been disclosed in the application as belonging to the invention. In view of this, the wording of claim 1 contained in the application, according to which the flip-flop is to belong to the analog front end, is not of decisive importance.

19 It can be left open whether this wording, notwithstanding the examples of embodiments shown in Figures 2 and 3, implies that embodiments in which the

flip-flop is arranged outside the chip are also to be included in the invention. Even if this were to be affirmed, this would not lead to a limitation of the disclosure content of the application. The disclosure content of an application is not limited to the subject matter of the claims formulated therein. Rather, what is decisive is what can be inferred from the entirety of the original documents as belonging to the invention applied for (see only Federal Court of Justice, judgment of 8 July 2010 - Xa ZR 124/07, GRUR 2010, 910 marginal no. 46 - Fälschungssicheres Dokument; judgment of 22 December 2009 - X ZR 28/06, GRUR 2010, 513 marginal no. 29 - Hubgliedertor II). In any case, this also includes embodiments in which the flip-flop is arranged on the semiconductor chip.

20 cc) In view of this, the technical differences discussed by the Patent Court, which are associated with an arrangement inside or outside the chip, are of no significance.

21 These differences are not dealt with in the application. In particular, there is no indication in the application that the flip-flop is intended to be decoupled from the semiconductor chip as a component of the analog front end. In all embodiments, the buffers, whose separate voltage supply is intended to effect the desired decoupling, are rather arranged between the flip-flop and the components of the circuit arranged outside the chip.

22 The technical aspects pointed out by the Patent Court can therefore give no indication of what is included in the disclosure content of the application. In view of this, it can be left open whether a decoupling of the flip-flop from the semiconductor chip would be technically possible and useful at all.

23 b) However, the Patent Court rightly came to the conclusion that the subject matter of the granted version of patent claim 1 therefore goes beyond the content of the original documents because the operating voltage isolation according to feature 2 b has to be provided between the buffers and digital circuit parts on the semiconductor chip, whereas the isolation according to claim 1 of the application is provided between the buffers and the semiconductor chip.

24 The reformulation carried out in this respect leads to the fact that not only

such embodiments belong to the subject matter of patent claim 1 in which all circuit parts of the semiconductor chip are separated from the buffers in terms of operating voltage, but also such embodiments in which only digital circuit parts are separated in the manner mentioned. In contrast, only embodiments of the first mentioned type are disclosed in the application as belonging to the invention. Thus, the subject matter of the granted version of patent claim 1 goes beyond the content of the originally filed documents. The same applies to the version defended by the first auxiliary request, which in this respect does not differ from the granted version.

25 2. The subject matter of the version of patent claim 1 defended by the second auxiliary request, however, does not go beyond the content of the originally filed documents.

26 a) After the second auxiliary request, in feature 2 b the words "separate from the digital circuit parts on the semiconductor chip" are replaced by "separate from the semiconductor chip containing the digital circuit parts". This corresponds to the wording of the application and leads to the fact that only such embodiments belong to the subject matter of patent claim 1 in which all circuit parts of the semiconductor chip are separated from the buffers in terms of operating voltage.

27 b) The defense of the patent in suit in this version does not lead to an extension of the scope of protection.

28 The change made in feature 2 b has the consequence that of two possible designs - separation of all circuit parts on the chip and separation of digital circuit parts only - only the first mentioned falls within the scope of protection of patent claim 1. Thus, the scope of protection is not extended, but limited.

29 Whether, as the Patent Court thought, a different assessment would result if the subject matter of patent claim 1 also went beyond the content of the application with respect to feature 1 b does not need to be decided. As already explained under 1 a above, there is no inadmissible extension with respect to feature 1 b.

30 c) The second auxiliary request is also not inadmissible because it -

like the other requests last filed in the appeal instance - additionally provides in feature 2 a that the buffer located behind the output of the D flip-flop (4) is arranged in the feedback channel.

31 This amendment made in response to a reference issued by the Senate is not subject to rejection under Sec. 117 Patent Act and Sec. 531(2) Code of Civil Procedure. The defendant had no reason to file a corresponding auxiliary request already at first instance or in the statement of grounds of appeal.

32 It is true that the plaintiff already argued in the statement of claim that the subject matter of patent claim 1 goes beyond the content of the documents originally filed because it is not mandatory that the second buffer must be in the feedback path. However, the Patent Court did not take up this objection. In its reference issued pursuant to Sec. 83 Patent Act and in the contested decision, it considered the patent in suit to be inadmissibly extended only on two other grounds. Against this background, the defendant had no reason to file further auxiliary requests as a precautionary measure in addition to its auxiliary requests, which took into account the opinion of the Patent Court.

33 According to the case law of the Senate, a nullity plaintiff is in principle not obliged to base the attack against the patentability of the patent in suit on all conceivable aspects, in particular to substantiate with a multitude of different lines of argumentation why the subject matter of the invention is anticipated or suggested by the state of the art. This would hinder a meaningful concentration of the first instance proceedings. The indication given by the Patent Court under Sec. 83(1) Patent Act serves, among other things, to enable a proper focusing of the argumentation (Federal Court of Justice, judgment of 28 August 2012 - X ZR 99/11, BGHZ 194, 290 = GRUR 2012, 1236 marginal no. 38 - Fahrzeugwechselstromgenerator; judgment of 28 May 2013 - X ZR 21/12, GRUR 2013, 912 marginal no. 71 - Walzstraße).

34 These principles apply accordingly to the nullity defendant's defense. The defendant is also not automatically obliged to counter all means of attack put forward by the plaintiff with a large number of auxiliary claims. In individual cases, individual means of attack may obviously carry so much weight that a limited defense with main or auxiliary requests seems absolutely essential. If,

however, the Patent Court only addresses individual means of attack of the plaintiff in the reference issued under Sec. 83(1) Patent Act, the defendant usually has no reason to file, as a precautionary measure, further auxiliary requests in addition to auxiliary requests which take into account the reference issued, with regard to means of attack which the Patent Court did not address in its reference or which it did not consider to be promising.

35 In the case in dispute, the defendant only had reason to amend the patent claim at issue here when the Senate pointed out to it that the absence of the words "in the feedback path" could lead to an inadmissible extension. The defendant reacted promptly to this advice.

36 d) Contrary to the plaintiff's view, the defended claim version lacks neither the required clarity nor an executable disclosure.

37 As already explained above under 1 a, the subject matter of the patent in suit is not unclear because the flip-flop is described as an analog component on the one hand, but can be arranged on the semiconductor chip on the other hand. This is admittedly a linguistic imprecision. However, for the reasons given above, it is sufficiently clear from the patent specification between which components the decoupling according to the invention must take place.

38 e) The subject matter of patent claim 1 in the version defended by the second auxiliary request does not go beyond the content of the original application, as the plaintiff does not fail to recognize.

39 The plaintiff raises the objection of inadmissible extension also against this version. However, it bases this objection only on the amendments in feature 1(b), which it considers inadmissible. This argument does not hold water for the reasons explained under 1 a above.

40 Pursuant to Sec. 119(2) and (3) Patent Act, the contested decision is to be set aside insofar as the version of claim 1 defended by auxiliary request 2 is concerned, and the case is to be referred back to the Patent Court for a new hearing and decision. A decision on the merits by the Senate pursuant to Sec. 119(5) Patent Act does not appear expedient because the case is not ready for decision in this respect and the Patent Court - logically from its legal point of view - did not make any findings on the other two grounds for nullity asserted by the plaintiff.

Gröning Grabinski Bacher

Hoffmann Schuster

Previous instance:
Federal Patent Court, judgment of 2 October 2012 – 5 Ni 41/10 (EP) –