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**Datasheet for the decision  
of 7 March 2023**

**Case Number:** T 1655/18 - 3.3.03

**Application Number:** 06122098.4

**Publication Number:** 1911814

**IPC:** C09D11/40, C09D11/101,  
C08F2/50, C09D11/322

**Language of the proceedings:** EN

**Title of invention:**

Methods for preparing curable pigment inkjet ink sets

**Patent Proprietor:**

AGFA NV

**Opponent:**

BASF SE

**Relevant legal provisions:**

RPBA Art. 12(4)  
RPBA 2020 Art. 13(2)  
EPC Art. 56

**Keyword:**

Late-filed evidence - not admitted by the opposition division  
- admitted (no)

Late-filed evidence - could have been filed in first instance  
proceedings (yes) - admitted (no)

Amendment after summons - exceptional circumstances (no) -  
taken into account (no)

Inventive step - main request (yes)

**Decisions cited:**

G 0007/93, T 2920/18, T 2988/18, T 0247/20



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Case Number: T 1655/18 - 3.3.03

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.03**  
**of 7 March 2023**

**Appellant:** BASF SE  
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**Representative:** Strijckers, Hans  
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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
26 April 2018 concerning maintenance of the  
European Patent No. 1911814 in amended form.**

**Composition of the Board:**

**Chairman** D. Semino  
**Members:** M. Barrère  
C. Brandt

## Summary of Facts and Submissions

I. The appeal of the opponent lies against the interlocutory decision of the opposition division concerning maintenance of European Patent number 1 911 814 in amended form on the basis of the claims of auxiliary request 2 filed during oral proceedings on 12 March 2018 and an adapted description.

II. The following documents were *inter alia* cited in the decision of the opposition division:

D1: brochure "Innovative Products for Digital Imaging", Ciba Speciality Chemicals, i-51/2005

D3: US 2004/0187732 A1

D6: brochure "Ciba Products for Digital Imaging", Ciba Specialty Chemicals, i-37/2004

D15: brochure "Solutions for UV Ink Jet Printing", Ciba Speciality Chemicals, i-30/2006

D24: R.H. Leach, R.J. Pierce, "The Printing Ink Manual", 5<sup>th</sup> Ed., Kluwer Academic Publishers, 1999, p. 94-105 and 682-687

D25: W. Herbst, K. Hunger, "Industrial Organic Pigments", 3<sup>rd</sup> ed., 2004, p. 397-398

D26: K. Studer, R. Königer, "Initial photoyellowing of photocrosslinked coatings", European Coatings Journal, Vol. 1-2, 2001, p. 26-58

III. In that decision the opposition division held, amongst others, that:

- Documents D15 and D26 were not admitted to the proceedings.

- Document D3 was the closest prior art for claim 1 of auxiliary request 2. The subject-matter of claim 1 differed from D3 in that the yellow pigment comprised C.I. Pigment Yellow 150. The problem to be solved was the provision of an ink set exhibiting high colour gamut and good dispersion stability of the pigmented inks. The solution to that problem was not taught in D1, D3, D6 or D25. Therefore claim 1 of auxiliary request 2 involved an inventive step over D3 as the closest prior art.

IV. The opponent (appellant) filed an appeal against said decision.

The following documents were filed by the appellant with the statement of grounds of appeal:

- D29: W. Herbst, K. Hunger, "Industrial Organic Pigments", 3<sup>rd</sup> Ed., 2004, p. 351-355 and 518-519
- D30: R.H. Leach, R.J. Pierce, "The Printing Ink Manual", 5<sup>th</sup> Ed.; Kluwer Academic Publishers, 1999, p. 86-87
- D31: experimental report dated 3 September 2018
- D32: Ribelin, Cromophtal Yellow D 1085 (old Cromophtal Yellow LA2)
- D33: data sheet "Cromophtal Yellow L1061 HD" (old Irgazin Yellow 2088)
- D34: product data sheet "Ink Jet Yellow H2G" (2013)
- D35: Ribelin, Heliogen Blue D 7110 F (old Irgalite Blue GLVO)
- D36 Ribelin, Cinquasia Magenta L 4540 (old Cinquasia Magenta RT-355-D)

V. With the rejoinder to the statement of grounds of appeal, the patent proprietor (respondent) filed four

sets of claims as main request and auxiliary requests 1 to 3. The main request corresponds to auxiliary request 2 before the opposition division.

VI. The following documents were submitted by the appellant with letter of 27 March 2020:

D37: "Solutions for Digital Printing", Product Selection Guide, BASF, 2011

D38: Cromophtal® Yellow D 1085 J, BASF Colors & Effects GmbH

D39: affidavit of Stéphane Biry dated 27 March 2020

VII. With letter dated 28 April 2020 the respondent filed auxiliary requests 1A and 2A.

VIII. Oral proceedings were held before the Board on 7 March 2023.

IX. The final requests of the parties were as follows:

(a) The appellant requested that the decision under appeal be set aside and the patent be revoked.

(b) The respondent requested that the appeal be dismissed. In the alternative remittal of the case to the opposition division for further prosecution on the basis of one of auxiliary requests 1, 1A, 2, 2A and 3 was requested whereby auxiliary requests 1 to 3 were filed with the rejoinder to the statement of grounds of appeal and auxiliary requests 1A and 2A were filed with the letter of 28 April 2020.

X. Claim 1 of auxiliary request 2 before the opposition division (main request in appeal) read as follows:

"1. A curable pigment inkjet ink set including

- a black inkjet ink;
- a yellow inkjet ink comprising C.I. Pigment Yellow 150;
- a cyan inkjet ink comprising a  $\beta$ -copper phthalocyanine pigment; and
- a magenta inkjet ink comprising a mixed crystal wherein a first quinacridone and a second quinacridone enter into the same crystal lattice, with unsubstituted quinacridone C.I. Pigment Violet 19 being present as the first quinacridone in the mixed crystal in an amount between 75 and 95 % as measured by Probe-MS; wherein the second quinacridone is C.I. Pigment Red 202, and wherein the black, yellow, cyan and magenta inkjet inks contain a pigment, a dispersant and polymerizable compounds."

The remaining claims of the main request were all limited by the features of claim 1.

The auxiliary requests are not relevant to this decision.

XI. The appellant's submissions, in so far as they are pertinent to the present decision, may be derived from the reasons for the decision below. They were essentially as follows:

(a) Admittance of late-filed submissions

Documents D15, D26 and D31 to D39 and the line of attack based on the examples of the patent should be admitted into the proceedings.

(b) Inventive step

The subject-matter of claim 1 of the main request did not involve an inventive step over D1, D3 or D15 as the closest prior art.

XII. The respondent's submissions, in so far as they are pertinent to the present decision, may be derived from the reasons for the decision below. They were essentially as follows:

(a) Admittance of late-filed submissions

Documents D15, D26 and D31 to D39 and the line of attack based on the examples of the patent should not be admitted into the proceedings.

(b) Inventive step

The subject-matter of claim 1 of the main request involved an inventive step over D1, D3 or D15 as the closest prior art.

## **Reasons for the Decision**

1. Admittance of late-filed submissions

1.1 Document D15

D15 is used by the appellant as the closest prior art in one of the attacks against the subject-matter of claim 1 of the present main request. It was filed in opposition proceedings but not admitted by the



opposition division. The appellant requests its admittance to the appeal proceedings.

- 1.1.1 According to the established case law, in particular decision G 7/93 (OJ EPO 1994, 775), point 2.6 of the reasons, boards of appeal should only overturn discretionary decisions of the first instance if it is concluded that the first instance exercised its discretion according to the wrong principles, or without taking into account the right principles or in an unreasonable way.
- 1.1.2 D15 was not admitted into the proceedings due to its late-filing and the fact that it was not *prima facie* relevant (see decision, page 7, lines 19-22).

The principle used by the opposition division is correct (see Case Law of the Boards of Appeal, 10th edition 2022, IV.C.4.5.3). It remains to assess whether it was applied in a reasonable way.

The only two arguments put forward by the opponent for the admittance of D15 during opposition proceedings were the following (see paragraph 5.5.2.1 of the minutes):

*"In view of the OP, D15, which was filed in reply to amendments, was prima facie relevant for the assessment of inventive step as it provides the information required to motivate a person skilled in the art to replace PY120 - or rather PY151 - by PY150 in order to achieve a higher color gamut."*

The first argument was that D15 was filed in reaction to amendments. However, this argument was unsubstantiated (as no link was made between the nature

of the amendments and the teaching of D15) and could not be considered as sufficient justification for filing D15.

The second argument related to the teaching of D15 in view of the colour gamut. This argument has been addressed by the opposition division in their assessment of the *prima facie* relevance. In particular the opposition division considered that there was no teaching concerning the regulation of the colour gamut of ink sets in D15 (see decision, page 7, lines 19-22).

Therefore, the application of the criterion of *prima facie* relevance is not unreasonable. Accordingly, the Board has no reason to consider that the first instance did not correctly exercise its discretion in not admitting D15 into the proceedings.

- 1.1.3 The appellant submitted further arguments to justify the admittance of D15 (see statement of grounds of appeal, paragraph IV.1 and letter of 27 March 2020, paragraph II.a). In particular the respondent explained why:

the amendments submitted by the patentee in the opposition proceedings justified the admittance of D15 and

D15 was relevant to the patentability of claim 1 of the main request.

However, the question to be answered by the Board is not whether the new arguments can justify the admittance of D15 but whether the opposition division, considering the arguments put forward by the opponent during opposition proceedings, used the right

principles and applied them in a not unreasonable manner.

1.1.4 It is further noted that the present main request is identical to auxiliary request 2 as dealt with in the contested decision. Therefore, as far as the main request is concerned, the circumstances of the appeal do not justify the admittance of D15 at appeal stage.

1.1.5 The Board therefore has no reason to reverse the decision of the opposition division with the consequence that D15 is not in the proceedings.

1.2 Document D31

Document D31 is an experimental report showing properties of Pigment Yellow 150 (PY150) in comparison to Pigment Yellow 120 (PY120) and Pigment Yellow 151 (PY151). This document is intended to provide evidence that it was obvious to consider PY150 as a replacement for PY120 (see letter of the appellant of 27 March 2020, page 19, fourth paragraph).

1.2.1 D31 was filed by the appellant with the statement of grounds of appeal. Its admission to the proceedings is subject to the discretionary power of the Board in accordance with Article 12(4) RPBA 2007 which applies in view of the transitional provisions in Article 25(2) RPBA 2020.

1.2.2 The admittance of D31 is contested by the respondent for the following reasons (see rejoinder, page 2, second to fifth paragraphs and letter of 28 April 2020, page 4, point 3.):

D31 has no relevance as an anticipating document since the date mentioned in D31 is 12 years after the filing date of the opposed patent and

D31 could have been submitted during opposition proceedings.

- 1.2.3 The appellant argued that D31 showed the absorbance spectra of different pigments in the range from 350 nm to 800 nm. These properties were intrinsic to the pigments and existed regardless of whether they were measured or not. Therefore, they could not be considered as late-filed.

In the Board's view, the appellant relied not only on the absorbance spectra of individual pigments but also on the differences between said spectra (see D31, page 2). In particular, D31 is used to show that the absorbance spectrum of PY150 would not overlap with the absorbance spectrum of a magenta pigment as defined in claim 1 and would therefore be well suited to improving the colour gamut (see D31, page 3). The Board considers that this combination and comparison of the properties of selected pigments constitute new facts, the admissibility of which may be questioned.

- 1.2.4 The Board notes that D31 is used by the appellant in the context of inventive step and specifically for the assessment of obviousness. However, D31 was not made available to the public before the filing date of the opposed patent (i.e. D31 is no prior art under Article 54(2) EPC) and it is therefore doubtful that the experimental evidence provided therein may have any relevance for the question of obviousness. Rather, the arguments based on D31 are *prima facie* an inadmissible *ex post facto* approach because they are based on

knowledge of results obtained after the filing date of the opposed patent.

In any case, it is pointed out that the question of the obviousness of the CY150 pigment was discussed early in the opposition proceedings, as can be seen from the submissions of the opponent (see letter of 17 February 2017, page 5, section c). The appellant has not provided any reason for filing D31 for the first time in the appeal proceedings, and the Board cannot see any either. Indeed, had the appellant intended to support their attacks of lack of inventive step by D31, they should have filed it during opposition proceedings.

1.2.5 Under these circumstances, the Board finds it appropriate to exercise its discretion under Article 12(4) RPBA 2007 by not admitting document D31 into the proceedings.

1.3 Documents D32 to D39

Documents D32 to D39 were filed to show a link between pigments named in the opposed patent and pigments mentioned in D15 or D31. As D15 and D31 are not admitted into the proceedings, the same fate applies to D32 to D39 (Article 12(4) RPBA 2007).

1.4 Document D26

D26 was filed in opposition proceedings but not admitted by the opposition division. The appellant requests its admittance to the appeal proceedings.

D26 was used in support of an attack of lack of inventive step against claim 1 of auxiliary request 1

(see letter of 27 March 2020, page 24, point c)). Since the Board did not have to deal with auxiliary request 1, a decision on the admittance of D26 was not necessary.

- 1.5 Line of attack based on the examples of the patent
- 1.5.1 During the oral proceedings and in the context of the assessment of inventive step, the appellant referred to the examples of the opposed patent (see table 17, examples INV-7 and COMP-6 with back-reference to table 15, dispersions CY-4 and CY-7) and argued for the first time that the yellow ink comprising PY150 could not be compared to the other yellow inks due to different pigment concentrations. Furthermore, even if an improved colour gamut were to be recognised in table 17 of the patent, it would not be credible that this effect was solved over the whole scope of claim 1 of the main request. The appellant therefore concluded that the problem to be solved should be formulated as the provision of an alternative to the ink sets of the prior art.
- 1.5.2 The respondent contended that the above line of attack was late-filed and requested that it be not admitted into the proceedings.
- 1.5.3 Article 13(2) RPBA 2020 provides that amendments to a party's case made after notification of oral proceedings are not to be taken into account unless exceptional circumstances, justified by cogent reasons, exist.

The Board concurs with the approach taken in several decisions (T 247/20, point 1.3 of the Reasons; T 2988/18, point 1.2 of the Reasons; T 2920/18, point

3.4 of the Reasons), according to which the examination under Article 13(2) RPBA 2020 is carried out in two steps. The question to be answered in the first step is whether the submission objected to is an amendment to a party's appeal case. If that question is answered in the negative, then the Board has no discretion not to take the submission into account. If, however, that question is answered in the affirmative, then the Board needs to decide whether there are exceptional circumstances, justified by cogent reasons (second step).

- 1.5.4 The first question to be answered by the Board is therefore whether the present line of attack constitutes an amendment of the appellant's case.

An amendment to a party's appeal case under Article 13 RPBA 2020 is in analogy with Article 12(4) RPBA 2020 (with reference to Article 12(2) RPBA 2020) a submission which is not directed to the requests, facts, objections, arguments and evidence relied on by the party in its statement of grounds of appeal or its reply. In other words: it goes beyond the framework established therein (see T 247/20, point 1.3 of the Reasons; see also Case Law of the Boards of Appeal, 10th edition 2022, V.A.4.2.2 m)).

- (a) As mentioned above, the appellant considers that the examples in tables 15 and 17 of the opposed patent are not suitable to show an improvement in colour gamut due to the presence of PY150. Therefore the problem to be solved over the closest prior art (such as D3) should be formulated as to provide an alternative ink set.

During the oral proceedings, the appellant acknowledged that the reference of tables 15 and 17 in the context of the colour gamut was not presented in writing during the appeal proceedings.

(b) The Board notes that the following statements were made by the appellant in their written submissions:

(i) In the statement of grounds of appeal:

*"Anspruch 1 unterscheidet sich somit dadurch von D3, dass C.I. Pigment Yellow 150 anstatt Pigment Yellow 120 verwendet wird." ... "Daher bestand die objektive Aufgabe darin, Tintenset mit vergrössertem Farbumfang bereitzustellen." (see page 16)*

Translation in English: *"Claim 1 thus differs from D3 in that C.I. Pigment Yellow 150 is used instead of Pigment Yellow 120." ... "Therefore, the objective problem to be solved was the provision of ink sets with increased colour gamut."*

(ii) In the letter of 27 March 2020:

*"In contrast, it is noted herewith that replacing Pigment Yellow 120 in D3 with Pigment Yellow 150 represents an obvious step, considering the object of providing an inkjet ink set having an improved color gamut." (see page 19, second paragraph)*

It is therefore clear from the written submissions that the appellant accepted the effect of PY150 as compared to PY120 and acknowledged that the problem



of improving the colour gamut was solved by the ink sets according to claim 1 of the main request.

Conversely, the line of attack put forward during the oral proceedings goes clearly in the opposite direction, questioning the examples in the patent and alleging that no problem was solved by the use of PY150.

(c) Consequently the present line of attack constitutes a change of the factual framework of the appeal and is therefore an amendment of the appellant's case within the meaning of Article 13(2) RPBA 2020.

1.6 The second question to be answered is whether there are exceptional circumstances, supported by cogent reasons, which justify the admittance of the present line of attack into the appeal proceedings.

The appellant offered no explanation for the submission of this line of attack during the oral proceedings, nor can the Board discern any.

1.7 In the absence of any exceptional circumstances, the current line of attack is not taken into account (Article 13(2) RPBA 2020).

**Main request (patent as maintained by the opposition division)**

2. Inventive step

The appellant is of the opinion that claim 1 of the main request lacks an inventive step over D1, D3 or D15 as the closest prior art.

The respondent holds that D3 is the closest prior art and that claim 1 involves an inventive step over said document.

## 2.1 Choice of the closest prior art

D15 is not part of the proceedings and does not need to be discussed any further (see point 1.1 of the present decision). For the Board, the question to be answered is whether each of documents D1 and D3 is a reasonable starting point to evaluate inventive step of the subject-matter of present claim 1.

According to established case law, a central consideration in selecting the closest prior art is that it must be directed to the same purpose or effect as the invention (see Case Law of the Boards of Appeal, 10th edition 2022, I.D.3.2).

In view of the fact that documents D1 and D3 pertain to curable inkjet inks (see D1, page 3, "UV curable systems" and D3, examples), it is not unreasonable to consider each of these documents as starting point to arrive at the subject-matter of claim 1. Whether D1 or D3 is the closest prior art is secondary; the central question for the Article 56 EPC requirement is whether claim 1 of the main request involves an inventive step over each of D1 and D3.

## 2.2 Starting from D1 as the closest prior art

### 2.2.1 Distinguishing features

The appellant is of the opinion that claim 1 of the main request differs from D1 in that the inkjet ink set further comprises a black inkjet ink as a first

distinguishing feature (see statement of grounds of appeal, page 13, point d). During the oral proceedings, the appellant also conceded that D1 did not disclose the use of a dispersant as a second distinguishing feature.

The respondent agrees with the two distinguishing features identified by the appellant, but also considers that D1 does not mention a CMY (Cyan/Magenta/Yellow) ink set with pigments as defined in claim 1 (as third distinguishing feature).

The Board has no reason to dispute the two first distinguishing features. However, it needs to be evaluated whether D1 discloses a CMY ink set.

D1 is a catalogue of materials (including pigments, dyes, initiators, polymers and light stabilisers) for use in different digital imaging applications such as ink jet ink printing and electrophotography (see D1, page 2). Page 3 of D1 pertains to industrial ink jet. In this context, a list of three pigments and four initiators suitable for UV curing ink jet inks is provided. It is not disputed that the said pigments correspond to the yellow, cyan and magenta pigments recited in claim 1. It is also not disputed that these pigments correspond to typical process colours as defined for instance in D24 (see page 686, first paragraph). Nevertheless, the Board holds that these pigments are not part of an inkjet ink set, let alone a CMY or CMYK (Cyan/Magenta/Yellow/Black) ink set. Contrary to the appellant's view, D1 does not require that these pigments be used together in a set. Instead they are mentioned individually as possible pigments which the skilled person could use alone or in combination with other pigments in a UV curable inkjet

ink. For example, as suggested by the respondent, the skilled person is not prevented from combining the yellow and the blue pigments to provide a UV curable green ink. Therefore, the Board considers that D1 does not clearly and unambiguously disclose a curable inkjet ink set comprising the three required pigments.

Consequently, claim 1 of the main request differs from D1 in that:

the UV curable inkjet inks are in the form of a CMYK ink set, the CMYK inks containing a dispersant.

Furthermore, although D1 discloses the required CMY pigments individually, the Board considers that they are not disclosed in combination. Thus, the combination of the said CMY pigments is a further distinguishing feature.

#### 2.2.2 Problem to be solved

According to the appellant, the problem to be solved over D1 is the provision of an alternative CMYK ink set (see statement of grounds of appeal, page 13, point d)).

The respondent considers that the problem to be solved should be formulated as to provide a radiation curable pigment inkjet ink set exhibiting improved colour gamut and dispersion stability.

As noted previously, the appellant did not fully consider the above distinguishing features. Already for that reason, their definition of the problem to be solved cannot convince.

In the present case, it makes no doubt that the addition of a dispersant should improve the dispersion stability (since this is a function of a dispersant).

Furthermore, it is shown in the opposed patent that the purposive combination of CMY pigments as defined in present claim 1 leads to an improved colour gamut (see opposed patent, tables 10, 17 and 23). As noted previously, this was not contested by the appellant in their written statements (see point 1.5.4 (b) of the present decision).

Consequently, the objective problem to be solved is seen as the provision of a ink set exhibiting an improved colour gamut and dispersion stability.

### 2.2.3 Obviousness

The appellant did not fully consider the above distinguishing features and problem to be solved (see statement of grounds of appeal, page 13, points d and e). In particular the appellant has not explained why it would be obvious to the skilled person wishing to provide an ink set with an improved colour gamut to intentionally select CMY pigments as defined in claim 1. Already for that reason, the appellant's argumentation is not convincing.

Notwithstanding the above, the cited prior art does not teach that the combination of the specific CMY pigments as recited in claim 1 leads to an improved colour gamut. While D1 discloses CMY pigments according to claim 1, this document is silent on any advantage in terms of colour gamut.

In fact, the skilled person wishing to provide a CMY ink set having an improved colour gamut, would have turned to D3 which relates to the same purpose (see paragraph [0049]). However D3 teaches away from the present invention because it suggests to use a Pigment Yellow 120 instead of a Pigment Yellow 150 according to claim 1 (see D3, claim 1 and paragraph [0049]).

2.2.4 Consequently, the subject-matter of claim 1 of the main request involves an inventive step over D1 as the closest prior art. The same conclusion applies to the remaining claims of the main request which are all limited by the features of claim 1.

2.3 Starting from D3 as the closest prior art

2.3.1 Distinguishing features

It is not disputed that that claim 1 of the main request differs from the ink formulations of D3 (see paragraph [0047]) in that the inkjet ink set comprises Pigment Yellow 150 instead of Pigment Yellow 120.

The Board does not see any reason to depart from that view.

2.3.2 Problem to be solved

During the oral proceedings, the appellant argued for the first time that the examples of the patent were not suitable to show an effect of PY150 on the colour gamut and were not sufficient to make it credible that the said effect was achieved over the whole scope of claim 1. It was therefore submitted that the problem to be solved over D3 should be formulated as the provision of an alternative ink set. However, as mentioned

previously (see point 1.5 of the reasons), this new line of attack was not admitted into the proceedings. The Board therefore reverts to the appellant's written submission that the problem to be solved is the provision of an ink set with an improved colour gamut (see statement of grounds of appeal, page 16 and letter of 27 March 2020, page 19, second paragraph).

For the respondent, the ink set according to claim 1 not only improved the colour gamut, but also the stability of the pigment dispersion.

The Board agrees with the parties that an objective problem to be solved is the provision of an ink set with an improved colour gamut. As far as dispersion stability is concerned, the Board is not convinced that an improvement over D3 has been credibly demonstrated. However, this issue is not relevant to the following conclusion on inventive step and does not need to be addressed further.

### 2.3.3 Obviousness

The appellant holds that it would be obvious in view of D1, D6, D24, D25, D29 or D30 to replace the yellow pigment PY120 by PY150.

For the evaluation of obviousness, the central question is whether the skilled person would have replaced the PY120 by PY150 in order to improve the colour gamut of the ink set of D3.

In the present case, the Board cannot see any incentive to do so in the cited prior art.

In this respect, it is pointed out that the colour gamut represents the number of different colours that can be produced by an ink set (see opposed patent, paragraph [0008]). Therefore, colour gamut is a property of an ink set and not of individual pigments. Pigments can be selected with high chroma or colour strength and used in inks that are not sufficiently matched with each other, so that gaps or substantial overlaps exist between the absorption spectra of the pigments, resulting in a poor colour gamut (see opposed patent, paragraph [0007]). It is thus necessary to match the individual CMY pigments to achieve a high colour gamut. The need to match the CMY pigments was also not disputed by the appellant (see statement of grounds of appeal, page 19, penultimate paragraph).

Hence, contrary to the appellant's view, teachings with regard to the chroma, colour strength or hue angle of pigment PY150 alone are not directly relevant for a skilled person wishing to improve the colour gamut of an inkjet ink set.

While it is not disputed that the distinguishing feature (i.e. the use of PY150 pigment in a curable inkjet ink) is disclosed in D1, D6 or D25, these documents do not contain any indication of an improvement of the colour gamut, and no other property of the single pigment PY150 can be directly inferred to lead to an improved colour gamut, in particular in combination with the pigments magenta and cyan as defined in the present claim 1. The appellant referred additionally to the handbook of "Industrial Organic pigments" which lists commercially available pigments such as PY120 (see D29, pages 351-352) and PY150 (see D25, pages 397-398). It is however not apparent that



PY150 would be advantageous over PY120 in terms of colour gamut.

The appellant also referred to D24 and D30, but these are not helpful in answering the outstanding question, as they do not mention PY150 or PY120.

Therefore, it was not obvious for the skilled person wishing to improve the colour gamut of the ink set of D3 to replace PY120 by PY150.

2.3.4 Consequently, the subject-matter of claim 1 of the main request involves an inventive step over D3 as the closest prior art. The same conclusion applies to the remaining claims of the main request which are all limited by the features of claim 1.

3. Since all of the appellant's objections to the respondent's main request fail, the appeal is to be dismissed.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed

The Registrar:

The Chairman:



D. Hampe

D. Semino

Decision electronically authenticated