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**Datasheet for the decision  
of 4 September 2014**

**Case Number:** T 0368/10 - 3.5.04

**Application Number:** 00968883.9

**Publication Number:** 1222811

**IPC:** H04N1/60

**Language of the proceedings:** EN

**Title of invention:**

METHOD AND SYSTEM FOR MATCHING PRINTING INK COLORS

**Patent Proprietor:**

Flint Ink Corporation

**Opponent:**

Sun Chemical Corporation

**Headword:**

**Relevant legal provisions:**

EPC 1973 Art. 100(c), 123(2)

**Keyword:**

Grounds for opposition - added subject-matter (yes)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
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Case Number: T 0368/10 - 3.5.04

**D E C I S I O N**  
**of Technical Board of Appeal 3.5.04**  
**of 4 September 2014**

**Appellant:** Flint Ink Corporation  
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**Respondent:** Sun Chemical Corporation  
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**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 22 December  
2009 revoking European patent No. 1222811  
pursuant to Article 101(3)(b) EPC.**

**Composition of the Board:**

**Chairman** F. Edlinger  
**Members:** M. Paci  
B. Müller

## Summary of Facts and Submissions

- I. This is an appeal by the patent proprietor against the decision of the opposition division revoking European patent No. 1 222 811.
- II. Opposition had been filed against the patent as a whole, based on Article 100(a) EPC (novelty and inventive step) and Article 100(c) EPC (added subject-matter).
- III. In the decision under appeal the opposition division held that claims 1 and 6 of the patent as granted (main request), claim 5 of auxiliary requests AR2 and AR3 as well as claim 1 of auxiliary request AR5 then on file did not comply with the requirements of Article 100(c) EPC and/or Article 123(2) EPC.
- IV. With the statement of grounds of appeal the appellant (patent proprietor) filed amended claims according to auxiliary requests 1 to 9, replacing all the claims of the previous auxiliary requests.
- V. In an official communication under Article 15(1) RPBA (Rules of Procedure of the Boards of Appeal of the EPO, OJ EPO 2007, 536) annexed to the summons to oral proceedings, the board informed the parties that they should be prepared to discuss *inter alia* the following issues:
  - the compliance of the claims of the granted patent with the requirements of Article 100(c) EPC 1973;
  - the admissibility of auxiliary requests 1 to 9 in view of Article 12(4) RPBA;
  - the compliance of the claimed subject-matter (of the auxiliary requests) with the requirements of the

EPC, in particular those of Article 123(2) EPC and Article 84 EPC 1973.

- VI. In a letter dated 23 May 2014, the appellant withdrew its request for oral proceedings and informed the board that it would neither attend nor be represented at the oral proceedings.
- VII. Oral proceedings were held on 4 September 2014. The appellant was not represented. The board's decision was announced at the end of the oral proceedings.
- VIII. The appellant's final requests are that the decision under appeal be set aside and the patent maintained unamended (main request) or in amended form in accordance with one of the auxiliary requests 1 to 9 filed with the statement of grounds of appeal.
- IX. The respondent's (opponent's) final request is that the appeal be dismissed.
- X. Claim 6 according to the appellant's **main request** (patent as granted) reads as follows:

"A method for making an ink with a print color matching a desired print color, comprising steps of:

receiving with a first computer color information for the desired print color from a second computer;

accessing with the first computer a database for predicting print color for ink formulations;

accessing with the first computer a color matching program to extrapolate, based on information from the database, a new ink formulation having a print color matching the desired print color; and

transmitting to said second computer display data to display on a monitor a synthesized print color of

the desired print color and a print color of the new ink formulation."

- XI. Claim 5 according to the appellant's **auxiliary request 1** reads as follows (in this and the other eight auxiliary requests set out below, the amendments compared to claim 6 of the patent as granted are shown in **bold** for added text and as ~~struck-through~~ for deleted text; for the sake of concision, identical text portions are replaced by "[...]"):

"A method for making an ink with a print color matching a desired print color, comprising steps of:

receiving [...];  
accessing [...];  
accessing [...]; and

transmitting to ~~the said~~ second computer display data to display on a monitor a synthesized print color of the desired print color and a print color of the new ink formulation."

- XII. Claim 5 according to the appellant's **auxiliary request 2** reads as follows:

"A method for making an ink with a print color matching a desired print color, comprising steps of:

receiving [...];  
accessing [...];  
accessing [...]; and

transmitting to ~~the said~~ second computer display data to display on a monitor a synthesized print color **combination** of the desired print color and a print color of the new ink formulation, **thereby enabling comparison between the desired print color and the print color of the new ink formulation on the monitor.**"

XIII. Claim 5 according to the appellant's **auxiliary request 3** reads as follows:

"A method for making an ink with a print color matching a desired print color, comprising steps of:

receiving [...];

accessing with the first computer a database for predicting print color for ink formulations, **wherein the database includes color information for the colors as they would appear under different light sources;**

accessing [...]; and

transmitting to ~~the said~~ second computer display data to display on a monitor a synthesized print color **combination** of the desired print color and a print color of the new ink formulation, **thereby enabling comparison between the desired print color and the print color of the new ink formulation on the monitor, wherein said monitor is calibrated to accurately display colors."**

XIV. Claim 5 according to the appellant's **auxiliary request 4** reads as follows:

"A method for making an ink with a print color matching a desired print color, comprising steps of:

receiving [...];

accessing with the first computer a database for predicting print color for ink formulations, **wherein the database includes color information for the colors as they would appear under different light sources;**

accessing with the first computer a color matching program to extrapolate, based on information from the database, a new ink formulation having a print color matching the desired print color, **wherein the color match is made by matching the predicted color and the**

**desired color of the ink for all of the different light sources;** and

transmitting to **the said** second computer display data to display on a monitor a synthesized print color **combination** of the desired print color and a print color of the new ink formulation, **thereby enabling comparison between the desired print color and the print color of the new ink formulation on the monitor,** wherein said monitor is calibrated to accurately display colors."

XV. Claim 5 according to the appellant's **auxiliary request 5** reads as follows:

"A method for making an ink with a print color matching a desired print color, comprising steps of:

receiving [...];

accessing with the first computer a database for predicting print color for ink formulations, **wherein the database includes color information for the colors as they would appear under different light sources;**

accessing [...];

**electronically calculating in the first computer how the predicted color and the desired color would appear under selected different lighting;** and

transmitting to **the said** second computer display data to display, **for each of said selected lighting conditions,** on a monitor a synthesized print color **combination** of the desired print color and a print color of the new ink formulation, **thereby enabling comparison between the desired print color and the print color of the new ink formulation on the monitor,** wherein said monitor is calibrated to accurately display colors."

XVI. Claim 5 according to the appellant's **auxiliary request 6** reads as follows:

"A method for making an ink with a print color matching a desired print color, comprising steps of:

receiving [...];

accessing with the first computer a database of **color data for predicting print color for ink formulations prepared using an ink base color set** for predicting print color for ink formulations, **wherein said ink base color set includes base colors for inks having a property selected from the group consisting of chemical resistance, lightfastness, radiation curable, heat resistance, foil stampability, UV-coatable, laser imprintable and combinations of these;**

accessing with the first computer a color matching program to extrapolate, based on information from the database, **and based on data for a desired ink, said data including at least one desired ink property,** a new ink formulation having a print color matching the desired print color, **whereby only base colors for inks designated for said at least one desired ink property are used in said color matching;** and

transmitting to ~~the said~~ second computer display data to display on a monitor a synthesized print color **combination** of the desired print color and a print color of the new ink formulation, **thereby enabling comparison between the desired print color and the print color of the new ink formulation on the monitor.**"

XVII. Claim 5 according to the appellant's **auxiliary request 7** reads as follows:

"A method for making an ink with a print color matching a desired print color, comprising steps of:

receiving [...];



accessing [...];  
accessing [...]; and  
transmitting to ~~the said~~ second computer display data to display on a monitor a synthesized print color **combination** of the desired print color and a print color of the new ink formulation, **thereby enabling comparison between the desired print color and the print color of the new ink formulation on the monitor;**  
receiving further data input from said second computer; and  
accessing the color matching program to generate a second new ink formulation having a desired modified print color based on said further data input."

XVIII. Claim 5 according to the appellant's **auxiliary request 8** reads as follows:

"A method for making an ink with a print color matching a desired print color, comprising steps of:  
receiving [...];  
accessing [...];  
accessing [...]; and  
transmitting to ~~the said~~ second computer display data to display on a monitor a synthesized print color **combination** of the desired print color and a print color of the new ink formulation, **thereby enabling comparison between the desired print color and the print color of the new ink formulation on the monitor;**  
providing the ink formulation from the first computer to a third computer in communication with the first computer; and  
manufacturing an ink according to the ink formulation received by the third computer."

XIX. Claim 5 according to the appellant's **auxiliary request 9** reads as follows:

"A method for making an ink with a print color matching a desired print color, comprising steps of:

receiving [...];

accessing [...];

accessing with the first computer a color matching program to extrapolate, based on information from the database, a new ink formulation having a print color matching the desired print color, **wherein said color matching selects as an ink formulation having a desired color the lowest cost formulation that has a color match within a specified color tolerance;** and

transmitting to ~~the said~~ second computer display data to display on a monitor a synthesized print color **combination** of the desired print color and a print color of the new ink formulation, **thereby enabling comparison between the desired print color and the print color of the new ink formulation on the monitor.**"

XX. In the decision under appeal the opposition division's finding of added subject-matter in claim 6 of the patent as granted and in claim 5 of auxiliary request 2 then on file was essentially based on the following considerations:

The expressions "to display on a monitor a synthesized print color of the desired print color and a print color of the new ink formulation" (claim 6 of the patent as granted) and "to display on a monitor a synthesized print color combination of the desired print color and a print color of the new ink formulation" (claim 5 of auxiliary request 2), were not present in the application as filed. They introduced subject-matter extending beyond the content of the

application as filed, because the word "synthesized" implies a combination or mixture of at least two colours, with the word "combination" in auxiliary request 2 only reinforcing this interpretation. The application as filed (see figure 3 and pages 18 and 19) only disclosed in this context displaying the two print colours side by side on the monitor. The above two expressions, however, covered other technically sensible interpretations which were not disclosed in the application as filed, such as the one submitted by the opponent that it would make perfect technical sense to introduce such a further synthesized colour as an intermediate step until a desired print colour is achieved.

XXI. The appellant essentially argued as follows regarding the issues relevant to the present decision:

*Admissibility of auxiliary requests 1 to 9*

Auxiliary requests 1 to 9 were filed with the statement of grounds of appeal as a reaction to the reasons for the appealed decision. The claims of these auxiliary requests were amended by adding features which further distinguished the claimed invention from the prior art cited in the decision. It was a well-established practice that a patent proprietor could deal with the grounds for the decision by filing claims which deprived the contested decision of its basis and by submitting reasons for the patentability of these claims.

*Added subject-matter - Main request (claim 6) and auxiliary request 1 (claim 5)*

Regarding the expression "synthesized print color" in claim 6 of the main request (patent as granted) and in claim 5 of auxiliary request 1, the common understanding of the verb "to synthesize" was "to combine". The only technically sensible understanding of the transmitting step in the claim was that the display data was used to generate a synthesized (ie combined) illustration of both the desired print colour and the print colour of the new ink formulation, as separate colours enabling a comparison. Such a synthesized print colour illustration was clearly disclosed in the application as filed, for instance on page 18, lines 12 to 18.

The alternative interpretation suggested by the Opposition Division that "synthesized" solely referred to the print color of the desired colour did not make any sense in the context. The invention, as clearly defined in claim 6 of the main request (patent as granted) and in claim 5 of auxiliary request 1, aimed at providing an ink with a print colour matching a desired print colour, comprising the steps of receiving a desired print colour, and then using various steps to provide an ink formulation with a colour matching the desired colour. Finally, the two colours, ie the original desired colour and the predicted colour, were made available for comparison on a display. In this context, it did not make any technical sense to manipulate the desired colour. On the contrary, the desired colour naturally had to be maintained as it was, otherwise a meaningful comparison would not be possible.

*Added subject-matter and clarity - Auxiliary requests 2 to 9 (claim 5)*

Claim 5 according to each of auxiliary requests 2 to 9 has been further amended to clarify that the "synthesized print color" was a "synthesized print color combination", thereby "enabling comparison between the desired print color and the print color of the new ink formulation on the monitor". Such a synthesized print colour combination was clearly disclosed in the application as filed, for instance on page 18, lines 12 to 24.

XXII. The respondent's arguments regarding the issues relevant to the present decision can be summarised as follows:

*Admissibility of auxiliary requests 1 to 9*

In its written reply to the statement of grounds of appeal (letter dated 27 October 2010), the respondent argued that the appellant's auxiliary requests 1 to 9 filed with the statement of grounds of appeal should not be admitted into the proceedings. After discussion with the board at the oral proceedings on 4 September 2014, the respondent dropped its objection to admitting these auxiliary requests.

*Added subject-matter - Main request (claim 6) and auxiliary request 1 (claim 5)*

Claim 6 of the main request (patent as granted) and claim 5 of auxiliary request 1 extended beyond the content of the application as filed because of the expression "synthesized print color". Following the general principle that a patent document formed its own

lexicon, the respondent referred to page 15, lines 12 to 16, of the application as filed in order to determine the true meaning of "synthesized". From this paragraph, the meaning of "synthesized" in the sense of the whole patent was quite clear: the purpose of a "synthesis" was to arrange an ink base colour set in such a way that a reflectance curve was produced that would provide a predicted color match to the desired colour. No displaying of such a synthesized print color was mentioned in this embodiment.

*Added subject-matter and clarity - Auxiliary requests 2 to 9 (claim 5)*

The expression "combination" had been incorporated in the last method step of claim 5 of each of auxiliary requests 2 to 9. However, displaying a "synthesized print color combination" on a monitor was nowhere disclosed in the originally filed application and it was further not clear (contrary to Article 84 EPC 1973) what was actually meant by a synthesized combination of a color. The embodiment referred to by the appellant and allegedly forming a basis for this amendment was absolutely silent in regard to any synthesized combination.

Further, the expression "thereby enabling comparison between the desired print color and the print color of the new ink formulation on the monitor" added at the end of claim 5 was not disclosed in the originally filed application in the general terms as presently claimed: for example, a customer compared two colours under different light conditions and under the particular circumstances as disclosed in connection with the whole embodiment discussed on pages 14 to 23 of the application. Furthermore, it was not clear what

kind of particular "enablement" was provided, since any transmission of two data sets generally enabled a user to somehow compare these data sets on a monitor. Hence, the added feature was not a true limitation of the claim and thus rendered the claim unclear, contrary to Article 84 EPC 1973.

In conclusion, claim 5 according to auxiliary requests 2 to 9 did not meet the requirements of Article 123(2) EPC and Article 84 EPC 1973.

### **Reasons for the Decision**

1. The appeal is admissible.

*Main request - added subject-matter (Article 100(c) EPC 1973)*

2. The method of claim 6 of the main request (patent as granted) comprises a step of "transmitting to said second computer display data to display on a monitor a synthesized print color of the desired print color and a print color of the new ink formulation".
3. As a preliminary observation, the board notes that the parties do not dispute that the expression "synthesized print color" was not used in the application as filed.
4. It is also undisputed that the word "synthesized" was used only once in the application as filed, on page 15, line 13, of the description. The two relevant sentences on page 15 of the description read as follows:

"The database contains a sufficient number of color information points so that the computer can extrapolate, if necessary, the color information

that would result from the different combinations of the ink base color set. In other words, the computer calculates a synthesized spectral curve or other color information for the ink formulation based on the color information for the different concentrations of each ink base color."

The board concurs with the respondent that in this passage of the description the word "synthesized" refers to the combining (in the sense of mixing) of several ink base colours in order to obtain a new ink formulation having the spectral reflectance curve closely matching that of the desired colour.

More generally, the board considers that in the technical field of the application as filed, ie that of printing ink manufacturing processes (see page 1, lines 4 and 5), the expression "a synthesized printing color" would be expected to mean a printing colour obtained by mixing ink base colours.

5. As to the wording of claim 6, the board considers that the phrase "a synthesized print color of the desired print color and a print color of the new ink formulation" makes it grammatically clear that the adjective "synthesized" refers only to the desired print colour, **not** also to the new ink formulation.
6. In view of the above, the board concurs with the opposition division and the respondent that "a synthesized print color of the desired print color", based on its grammatical construction, its context in claim 6, the meaning of the term "synthesized" in the description of the application as filed and the usual meaning of "synthesized printing color" in the technical field of the patent, has to be interpreted as



meaning **a print colour of the desired colour obtained by combining (ie mixing) ink base colours.**

However, there is no disclosure in the application as filed of a print colour of the **desired** colour which is obtained by combining (ie mixing) ink base colours and transmitting display data thereof to the second computer. This has not been disputed by the appellant.

7. The appellant, instead, argued that the skilled person would have disregarded this interpretation because it made no technical sense and that, in view of page 18, lines 12 to 18, and figure 3 of the application as filed, the skilled person would have understood the word "synthesized" in claim 6 to mean that the display data comprised both the print colour of the desired print colour and the print colour of the new ink formulation so that they could be displayed together on the monitor, e.g. side by side, for visual comparison (as shown in figure 3 of the application as filed).
8. The board concurs with the appellant and the opposition division that a particular embodiment of such subject-matter is indeed disclosed in the application as filed on page 18, lines 12 to 24, according to which a display (or display data) can be transmitted showing how the desired colour and selected ink colour (of the new ink formulation) will compare under different lighting conditions. However, this is not what is claimed. Even if it were accepted that this embodiment supported a synthesized presentation for comparison purposes of both the desired print colour and the print colour of the new formulation, it still does not directly and unambiguously disclose a synthesized print colour in the meaning set out in point 6 *supra*.

9. The appellant has argued that it makes no technical sense to manipulate the desired colour because the desired colour must be maintained as it is, otherwise a meaningful comparison with the new ink formulation would not be possible.
  
10. The board is not convinced by this argumentation because there are several reasons why the skilled person might want to adapt the print colour of the desired print colour to be displayed on a monitor. One reason is that the desired print colour may need to be adapted for display on a monitor. Another reason is that both the desired colour and the new ink formulation may be changed in the same way, for instance in order to take into account the effect of external parameters such as a different lighting or a different substrate. As long as both print colours are changed in the same way, a meaningful visual comparison remains possible.
  
11. Conclusion on the main request

For the above reasons, the board considers that the ground for opposition under Article 100(c) EPC 1973 prejudices the maintenance of the patent as granted (appellant's main request).

*Admissibility of auxiliary requests 1 to 9*

12. Pursuant to Article 12(4) RPBA, the board has the power to hold inadmissible facts, evidence or requests which could have been presented or were not admitted in the first-instance proceedings.
  
13. In the present case, the appellant filed with the statement of grounds of appeal nine sets of amended

claims according to auxiliary requests 1 to 9, replacing the claims of the previous auxiliary requests.

The respondent initially objected to the admissibility of these auxiliary requests but, subsequently, after discussion with the board at the oral proceedings, dropped this objection (see point XXII *supra*).

The decisive issue being the same for all of the auxiliary requests and none of them appearing to be allowable, the board exercised its discretion in admitting all the auxiliary requests into the proceedings.

*Auxiliary request 1 - added subject-matter (Article 100(c) EPC 1973 and Article 123(2) EPC)*

14. Since claim 5 of auxiliary request 1 differs from claim 6 of the main request only by the replacement of "said second computer" by "the second computer", the above reasoning also applies (see points 2 to 11).

Hence maintenance of the patent in amended form according to auxiliary request 1 is not possible as the requirements of Article 123(2) EPC are not met.

*Auxiliary request 2 - added subject-matter (Article 100(c) EPC 1973 and Article 123(2) EPC)*

15. Claim 5 according to auxiliary request 2 differs from claim 5 of auxiliary request 1 by the following amendments (added text shown in **bold**):

"transmitting to the second computer display data to display on a monitor a synthesized print color

**combination of the desired print color and a print color of the new ink formulation, thereby enabling comparison between the desired print color and the print color of the new ink formulation on the monitor."**

16. The appellant essentially argued that the above combination of colours for comparison was clearly disclosed on page 18, lines 12 to 24.
17. The board concurs with the opposition division that the addition of the word "combination" only emphasizes the expression "synthesized", implying a combination or mixture of ink base colours (see point 5.2 of the Reasons for the decision).

As to the additional text "thereby enabling comparison between the desired print color and the print color of the new ink formulation on the monitor", this does not change the correct interpretation of the expression "synthesized print color combination" because, for the reasons given under point 10 *supra*, a meaningful visual comparison of the desired colour and the new ink formulation remains possible even for a synthesized print colour (or combination).

18. For the above reasons, the board concludes that maintenance of the patent in amended form according to auxiliary request 2 is not possible as the requirements of Article 123(2) EPC are not met.

*Auxiliary requests 3 to 9 - added subject-matter  
(Article 100(c) EPC 1973 and Article 123(2) EPC)*

19. Claim 5 according to each of auxiliary requests 3, 4 and 6 to 9 comprises a transmitting step with the exact

same wording as that of claim 5 according to auxiliary request 2.

The transmitting step of claim 5 of auxiliary request 5 differs from that of claim 5 of auxiliary request 2 in that the expression "**, for each of said selected conditions,**" is added after "display data to display". This additional feature, however, does not change the interpretation, for the reasons set out under point 10 *supra*.

Since the other differences in the remainder of claim 5 according to auxiliary requests 3 to 9 have no effect on the interpretation of the transmitting step, the above reasoning regarding claim 5 of auxiliary request 2 applies also to these requests.

20. For the above reasons, the board concludes that maintenance of the patent in amended form according to auxiliary requests 3 to 9 is not possible as the requirements of Article 123(2) EPC are not met.

*Other procedural matters*

21. During the appeal proceedings, the appellant requested that documents E14, E15 and E16 be admitted into the proceedings and the respondent requested that document E17 be admitted into the proceedings.

Since these four documents are only relevant for novelty and inventive step (Article 100(a) EPC 1973 and Articles 54 and 56 EPC 1973), but not for the issue of added subject-matter (Article 100(c) EPC 1973 and Article 123(2) EPC) on which the present decision is based, the board need not consider their admissibility.

*Conclusion*

22. Since none of the appellant's requests is allowable,  
the appeal must be dismissed.

**Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:



K. Boelicke

F. Edlinger

Decision electronically authenticated