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**Datasheet for the decision  
of 14 November 2008**

**Case Number:** T 0803/06 - 3.4.03

**Application Number:** 01118274.8

**Publication Number:** 1176580

**IPC:** G09G 3/32

**Language of the proceedings:** EN

**Title of invention:**

Driving circuit for organic electroluminescence device

**Applicant:**

LG ELECTRONICS INC.

**Opponent:**

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**Headword:**

-

**Relevant legal provisions:**

EPC Art. 123(2)

**Relevant legal provisions (EPC 1973):**

EPC Art. 56, 84

**Keyword:**

"Inventive step (no) - main and second auxiliary request"  
"Late filed requests not admitted - first, third and fourth  
auxiliary request"

**Decisions cited:**

-

**Catchword:**

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Case Number: T 0803/06 - 3.4.03

**D E C I S I O N**  
of the Technical Board of Appeal 3.4.03  
of 14 November 2008

**Appellant:** LG ELECTRONICS INC.  
20, Yoido-Dong, Youngdungpo-gu  
Seoul (KR)

**Representative:** Schorr, Frank Jürgen  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 20 December 2005  
refusing European application No. 01118274.8  
pursuant to Article 97(1) EPC.

**Composition of the Board:**

**Chairman:** E. Wolff  
**Members:** R. Q. Bekkering  
T. Bokor

## Summary of Facts and Submissions

- I. This is an appeal against the refusal of application 01 118 274 for *inter alia* lack of novelty, Article 54(1), (2) EPC 1973, over
- D1: A. Sempel, R. Los, "Current Driver System IC for Segmented Polymer Light Emitting Display", Society of Information Display Symposium, Long Beach, California, USA, 16-18 May 2000, SID 00 Digest, pages 139-141
- II. At oral proceedings before the board the appellant applicant requested that the decision under appeal be set aside and that a patent be granted on the basis of:
- claims 1 to 6 filed as main request with the grounds of appeal, or alternatively,
- on the basis of the first auxiliary request filed during the oral proceedings,
- or the second auxiliary request filed with the letter dated 7 October 2008,
- or the third or fourth auxiliary request filed during the oral proceedings.
- III. Claim 1 of the main request reads as follows:
- "A driving circuit for an organic electroluminescence (EL) device comprising:
- a DC-DC converter (110) provided inside one chip, for converting an external voltage ( $V_i$ ) input to a desired DC voltage output ( $V_o$ );
- an interface unit (50) provided inside the chip, for interface with parts outside the chip;

a memory (60) provided inside the chip, for storing display information transmitted through the interface unit (50);

a data processor (30) provided inside the chip, for providing a display data to a display panel (80) of the electroluminescence (EL) display device using the display information stored in the memory (60) and the controlled DC voltage output from the DC-DC converter (110);

a scan processor (40) provided inside the chip, for outputting scan data to the display panel (80) using the display information and the controlled DC voltage output from the DC-DC converter (110); and

a timing control unit (70) provided inside the chip, for providing a first timing control signal to the interface unit (50), the memory (60), the data processor (30), and the scan processor (40);

**characterised in that**

the timing control unit (70) is further adapted to provide a second timing control signal to the DC-DC converter (110) to control display brightness of the electroluminescence (EL) device; and

the DC-DC converter (110) controls a voltage level of the desired DC voltage output according to said second timing control signal".

- IV. Claim 1 of the first auxiliary request consists of the pre-characterising portion of claim 1 of the main request and the following characterising portion:

**"characterised in that**

the timing control unit (70) is further adapted to provide a second timing control signal to the DC-DC converter (110); and

the DC-DC converter (110) controls a voltage level of the desired DC voltage output according to said second timing control signal, the DC voltage output being used to control display brightness of the electroluminescence (EL) device;

wherein the DC-DC converter (110) includes

- a mode control unit (111);
- an impedance generating unit (112);
- a resistor (R1); and
- a voltage control unit (113) having a feedback terminal (FB);

wherein the mode control unit (111) receives the second timing control signal from the timing control unit (70), generates a voltage control signal in response to the second timing control signal and outputs said voltage control signal to the impedance generating unit (112); the impedance generating unit (112) receives the voltage control signal from the mode control unit (111) and controls an impedance value depending on the voltage control signal;

the resistor (R1) is provided between the feedback terminal (FB) of the voltage control unit (113) and an output terminal (Vout) of the DC-DC converter (110);

and

the voltage control unit (113) receives through the feedback terminal (FB) a voltage value which is determined by the controlled impedance value and outputs the desired DC voltage output (Vo) according to the voltage value".

V. Claim 1 of the second auxiliary request reads as follows:

*"A driving circuit for an organic electroluminescence (EL) device comprising:*

*a DC-DC converter (110) provided inside one chip, for converting an external voltage input ( $V_i$ ) to a desired DC voltage output ( $V_o$ );*

*an interface unit (50) provided inside the chip, for interface with parts outside the chip;*

*a memory (60) provided inside the chip, for storing display information transmitted through the interface unit (50);*

*a data processor (30) provided inside the chip, for providing a display data to a display panel (80) of the electroluminescence (EL) display device using both the display information stored in the memory (60) and the desired DC voltage output from the DC-DC converter (110);*

*a scan processor (40) provided inside the chip, for outputting scan data to the display panel (80) using both the display information and the desired DC voltage output from the DC-DC converter (110); and*

*a timing control unit (70) provided inside the chip, for providing a first timing control signal to the interface unit (50), the memory (60), the data processor (30), and the scan processor (40);*

**characterised in that**

*the timing control unit (70) is further adapted to provide a second timing control signal to the DC-DC converter (110);*

*the DC-DC converter (110) controls a voltage level of the desired DC voltage output according to said second timing control signal; and*

*the data processor (30) and the scan processor (40) are configured to output the display data and the scan data that a character and a video having a brightness corresponding to the controlled DC voltage output from the DC-DC converter (110) can be displayed on the display panel (80)".*

VI. Claim 1 of the third auxiliary request reads as follows:

*"A driving circuit for an organic electroluminescence (EL) device comprising:*  
*a DC-DC converter (110) provided inside one chip, for controlling an external voltage input depending on a timing control signal and providing a controlled DC voltage;*  
*an interface unit (50) provided inside the chip, for interface with parts outside the chip;*  
*a memory (60) provided inside the chip, for storing display information transmitted through the interface unit (50);*  
*a data processor (30) provided inside the chip, for providing a display data to a display panel (80) of the EL display device using the display information stored in the memory (60) and the controlled DC voltage output from the DC-DC converter (110);*  
*a scan processor (40) provided inside the chip, for outputting scan data to the display panel (80) using the display information and the controlled DC voltage output from the DC-DC converter (110); and*  
*a timing control unit (70) provided inside the chip, for providing the timing control signal to the DC-DC converter (110), the interface unit (50), the memory (60), the data processor (30), and the scan processor (40), **characterised in that***

*the DC-DC converter (110) includes:  
a mode control unit (111) outputting a voltage control signal in response to the timing signal from the timing control unit (70);  
an impedance generating unit (112) outputting an impedance value changed depending on the voltage control signal output from the mode control unit (111);  
a resistor (R1) connected with an output terminal of the DC-DC converter (110) in parallel and with an output terminal of the impedance generating unit (112) in series; and  
a voltage control unit (113) receiving a feedback value of the controlled DC voltage distributed by the impedance value output from the impedance generating unit (112) and a value of the resistor (R1), and then outputting a DC voltage controlled according to the feedback voltage".*

VII. Claim 1 of the fourth auxiliary request reads as follows:

*"A driving circuit for an organic electroluminescence (EL) device comprising:  
a DC-DC converter (110) provided inside one chip, for converting an external DC voltage input to a desired DC voltage, wherein the DC-DC converter is providing a controlled DC voltage depending on a timing control signal;  
an interface unit (50) provided inside the chip, for interface with parts outside the chip;  
a memory (60) provided inside the chip, for storing display information transmitted through the interface unit (50);*



a data processor (30) provided inside the chip, for providing a display data to a display panel (80) of the electroluminescence display device using the display information stored in the memory (60) and the controlled DC voltage output from the DC-DC converter (110);

a scan processor (40) provided inside the chip, for outputting scan data to the display panel (80) using the display information stored in the memory (60) and the controlled DC voltage output from the DC-DC converter (110); and

a timing control unit (70) provided inside the chip, for providing a timing control signal to the DC-DC converter, the interface unit (50), the memory (60), the data processor (30), and the scan processor (40);

**characterised in that**

the DC-DC converter (110) includes a mode control unit (111), an impedance generating unit (112), a resistor (R1) and a voltage control unit (113) having a feedback terminal (FB);

wherein the mode control unit (111) receives a timing control signal from the timing control unit (70), generates a voltage control signal in response to the timing control signal and outputs said voltage control signal to the impedance generating unit (112); wherein the impedance generating unit (112) receives the voltage control signal from the mode control unit (111) and changes its impedance value properly depending on the voltage control signal, the impedance generating unit (112) being provided between the mode control unit (111) and the feedback terminal (FB) of the voltage control unit (113);

wherein the resistor (R1) is provided between the feedback terminal (FB) of the voltage control unit

*(113) and an output terminal of the DC-DC converter (110) the resistor thus being connected with the output terminal of the DC-DC converter in parallel and with the output terminal of the impedance generating unit (112) in series; and wherein the voltage control unit (113) receives a feedback value at the feedback terminal (FB), the feedback value consisting of the controlled DC voltage output at the output terminal of the DC-DC converter (110) that is voltage distributed by the resistor (R1) and the impedance value of the impedance generating unit (112), and outputs a DC voltage controlled according to the feedback value and thus depending on both the impedance value and the DC voltage output".*

VIII. Reference is also made to the following prior art document:

D4: EP 0 738 997 A.

IX. The appellant applicant argued as follows:

Claim 1 of the main request was based on claim 1 as originally filed, on paragraphs [50], [51], [56] and [57] of the description as originally filed and on figure 2, and thus complied with Article 123(2) EPC.

Moreover, the subject-matter of claim 1 of the main request was new and involved an inventive step. According to claim 1, the timing control unit provided a varying second timing control signal to the DC-DC converter which controlled the brightness of the display. In document D1, on the other hand, no such control of the brightness was provided as no varying

timing control signal was provided to the DC-DC converter. Moreover, as the display in D1 was current driven, the display brightness was set by the DC current level and not by the voltage level of the DC-DC converter output, as was the case in the application.

In claim 1 of the first auxiliary request in substance the additional features of claim 5 as originally filed were included, providing further details of the DC-DC converter, not suggested in D1.

Claim 1 of the second auxiliary request more closely followed the wording of paragraphs [56] and [57] of the description as originally filed. The same arguments regarding novelty and inventive step provided for the main request applied.

Claims 1 of the third and fourth auxiliary request both included further details of the DC-DC converter in substance derivable from original claim 5.

As to the first, third and fourth auxiliary requests, all filed at the oral proceedings, the appellant applicant argued that they should be admitted into the proceedings as they were based on matter already discussed or on features of a dependent claim and did not introduce any additional complications.

## **Reasons for the Decision**

1. The appeal is admissible.

2. *Main request*

2.1 Amendments

According to figure 2 of the application, the timing control unit (70) provides a first timing signal to the data processor (30) and scan processor (40), and provides a second timing signal to the DC-DC converter (110) (see also paragraph [50] of the description as originally filed). Moreover, the features of the characterising portion of claim 1 are derivable from paragraphs [50], [51], [56] and [57] of the original description.

The board is, thus, satisfied that the requirements of Article 123(2) EPC are met

2.2 *Novelty*

2.2.1 Document D1 discloses, using the terminology of claim 1, a driving circuit for an organic electroluminescence device ("*Organic Light Emitting Diode (OLED)*", page 139, left-hand column, second paragraph) comprising:

a DC-DC converter provided inside one chip, for converting an external voltage input to a desired DC voltage output ("*on-chip DC/DC converter*", page 140, left-hand column, second paragraph; figure 4);  
an interface unit provided inside the chip, for interface with parts outside the chip ("*interface bus*", page 140, left-hand column, second and third paragraphs; figure 4);  
a memory provided inside the chip, for storing display information transmitted through the interface unit

("on-chip memory" and "R/W registers", page 140, left-hand column, second and third paragraphs; figure 4); a data processor provided inside the chip, for providing a display data to a display panel of the electroluminescence display device using the display information stored in the memory and the controlled DC voltage output from the DC-DC converter ("logic", page 140, left-hand column, third paragraph; figure 4); a scan processor provided inside the chip, for outputting scan data to the display panel using the display information and the controlled DC voltage output from the DC-DC converter ("logic", page 140, left-hand column, third paragraph; figure 4); and a timing control unit provided inside the chip, for providing a first timing control signal to the interface unit, the memory, the data processor, and the scan processor ("*integrated oscillator*", page 140, left-hand column, third paragraph; figure 4).

In fact, it is uncontested by the appellant applicant that the features of the pre-characterising part of claim 1 are known from document D1.

In particular, in document D1, in order to avoid variations in light output, ie brightness, of the display, current drive instead of voltage drive of the display is proposed. Furthermore, many segments are to be driven on the display. According to D1 "*The segments are addressed by time multiplexing realized by sequential selection of the cathodes*". Moreover, "*For constant average display brightness, the peak brightness during the segment addressing time has to be corrected by the multiplexing ratio. Apart from this correction, a wide range of polymer efficiencies has to*

*be taken into account as well as the sizes of the segments driven and the use of optical filters. Furthermore, the overall display brightness must be easily controllable depending on the application"* (page 139, right-hand column, fifth paragraph). In particular, *"The chip contains 50 segment current sources and 16 common switches. Depending on the chosen multiplex ratio, up to 800 segments can be addressed. The current values are stored in the on-chip memory, programmable via a fast-mode I2C interface bus. The required output currents are set both by DC level and by Pulse Width Modulation and are adapted according to the multiplex ratio set"* (page 140, left-hand column, second paragraph). The on-chip DC/DC converter provides the power for the output stages.

Thus, in D1 the display brightness, which corresponds to the output current of the output stages of the current sources, is set by *inter alia* the DC level, ie the output voltage of the DC-DC converter.

2.2.2 The appellant applicant argued that the "DC level" referred to in D1 would be a current level rather than a voltage level, as D1 used current drive.

However, in the board's view it would be clear to a skilled person that D1 refers to a DC voltage level. The current drawn by the chip as a whole depends on the individual currents drawn by the output stages, and thus on the display data, and is therefore not at some set level. Moreover, the output current is set by pulse width modulation and does not require a set current level. On the other hand, as is known to the skilled person, the DC voltage level supplied by the DC-DC

converter to the chip will determine the (maximum) output currents. A higher DC voltage level will allow the output stages to deliver higher currents, as, may be required in some applications (see page 140, table 1).

- 2.2.3 However, in document D1 there is no explicit mention of a timing control signal being provided to the DC-DC converter.

The subject-matter of claim 1 of the main request is thus new with respect to document D1. It is also new over the remaining available, more remote prior art.

### 2.3 *Inventive step*

- 2.3.1 The difference between the subject-matter of claim 1 and document D1 is, thus, as defined in the characterising part of claim 1:

*"the timing control unit (70) is further adapted to provide a second timing control signal to the DC-DC converter (110) to control display brightness of the electroluminescence (EL) device; and the DC-DC converter (110) controls a voltage level of the desired DC voltage output according to said second timing control signal".*

The objective technical problem to be solved relative to D1 is to provide a suitable technical implementation of the DC-DC converter.

- 2.3.2 The DC-DC converter of D1 requires an external diode, capacitor and inductor (page 140, second paragraph), as

is typically the case in switched-mode converters (like the converter of the application). Accordingly, it would be obvious to a skilled person working in the field of electronic circuits to use a per se well known switched-mode DC-DC converter, with an external diode, capacitor and inductor, in the circuit of D1.

The DC voltage output of a switched-mode DC-DC converter is a function of the timing signal provided to the converter (see eg document D4, figure 5 and corresponding description). Accordingly, it would be obvious to the skilled person to provide a timing control signal to the DC-DC converter to control the output DC level.

Moreover, as the DC-DC converter in D1 is provided on the chip, and the chip is equipped with an integrated oscillator which generates the clock signals for the timing of the IC (D1, page 140, left-hand column, third paragraph), it would be obvious to have the timing control signal for the DC-DC converter provided by this same oscillator. The provision of a separate oscillator for the DC-DC converter would unnecessarily increase the size, the complexity and the cost of the chip, as would be readily realised by the skilled person.

- 2.3.3 The appellant argued that according to claim 1, the timing control unit provided a varying second timing control signal to the DC-DC converter, by which the brightness of the display was controlled. In document D1, on the other hand, no varying timing control signal was provided to the DC-DC converter.



In the board's view, however, neither claim 1 nor the description or figures of the application specify that a varying timing control signal is provided to the DC-DC converter. According to the description, "*The timing control signals output from the timing control unit 70 are provided to all components of the one-chip driving circuit. That is, the timing control signals are used as control signals required to provide the display data and the scan data to the display panel 80 and to allow, the DC-DC converter 110 to convert the external DC voltage to a desired DC voltage*" (description, paragraph [37]). There is no suggestion that these timing control signals, including the one provided to the mode control unit (see figure 2), are anything other than mere clock signals. There is no indication in the application that any brightness control information is fed into these timing control signals. Disclosed is essentially that the controlled DC voltage output from the DC-DC converter corresponds to the timing control signal (description, paragraphs [44] to [47], [50] to [53]) and that the display has a brightness corresponding to the controlled DC voltage output from the DC-DC converter (description, paragraph [57]) . This is equally the case when a conventional switched mode DC-DC converter is used in the device of D1, as then the DC voltage output of the DC-DC converter depends on the (presence and characteristics of the) clock signal provided by the oscillator, and thus "corresponds" to or is "controlled" by the clock signal. The display brightness in turn would correspond to the controlled DC voltage output from the DC-DC converter, as discussed above.

- 2.3.4 Accordingly, the subject-matter of claim 1 of the main request would be obvious to the person skilled in the art and, therefore, does not involve an inventive step (Article 56 EPC 1973)

Hence, the main request is refused.

3. *First auxiliary request*

- 3.1 The first auxiliary request was filed at the oral proceedings and, thus, at a very late stage of the appeal proceedings.

- 3.2 The Rules of Procedure of the Boards of Appeal (RPBA) stipulate that the statement of grounds of appeal shall contain a party's complete case and that any amendment to a party's case after it has filed its grounds of appeal may be admitted and considered at the board's discretion (cf Articles 12 and 13 RPBA of the current version; Articles 10a and 10b RPBA of the preceding version).

It is noted that the appellant's argument that the less strict provisions of the RPBA, valid at the date the appeal was filed, should be applied, cannot be accepted. The current version of the RPBA entered into force without transitional provisions. Furthermore, it is noted that at any rate the relevant provisions of both versions are essentially identical.

It follows that a party should ensure that at the time the statement of the grounds of appeal is filed, ranked fall-back positions, if any are deemed appropriate, are defined in the form of auxiliary requests.

- 3.3 In the present case, in the board's view, there is no justification for filing the first auxiliary request at such a late stage. In fact, similarly amended claims had been filed as an auxiliary request in the course of the examination procedure (see decision under appeal, fourth auxiliary request), but were not pursued in the appeal proceedings.

It is established jurisprudence of the boards of appeal that amended claims filed at a late stage of the proceedings should not be admitted into the proceedings, if they are not *prima facie* allowable.

- 3.4 Claim 1 of the first auxiliary request fails as the board does it not consider to be *prima facie* allowable.

In particular, the last feature of the claim reads:

*"the voltage control unit (113) receives through the feedback terminal (FB) a voltage value which is determined by the controlled impedance value and outputs the desired DC voltage output (Vo) according to the voltage value".*

According to originally filed claim 5, the DC-DC converter (110) includes *"a voltage control unit (113) receiving a feedback value of the controlled DC voltage distributed by the impedance value output from the impedance generating unit (112) and a value of the resistor (R1), and then outputting a DC voltage controlled according to the feedback voltage".*

The originally filed description discloses that "*the voltage control unit 113 inputs an output voltage  $V_o$ , distributed in an appropriate proportion according to the changed impedance output from the impedance generating unit 112 and the resistor  $R_1$  connected with the impedance generating unit 112 in series, through a feedback terminal  $FB$ . The voltage control unit 113 outputs the controlled DC voltage  $V_o$  using the input voltage  $V_i$  and the feedback voltage*" (paragraph [46]).

The output voltage and the resistor, thus, clearly play a key role in establishing the voltage (value) at the feedback terminal.

Claim 1 of the first auxiliary request, which does not include these latter features, thus, represents a substantial broadening of the above disclosure, for which, on a *prima facie* assessment by the board, no basis is to be found in the application as originally filed (Article 123(2) EPC).

Consequently, the first auxiliary request is not *prima facie* allowable and hence is not admitted.

4. *Second auxiliary request*

Claim 1 of the second auxiliary request differs from that of the main request, apart from minor differences in the wording of the pre-characterising portion, in that the characterising portion now reads:

*"the timing control unit (70) is further adapted to provide a second timing control signal to the DC-DC converter (110);*

*the DC-DC converter (110) controls a voltage level of the desired DC voltage output according to said second timing control signal; and the data processor (30) and the scan processor (40) are configured to output the display data and the scan data that a character and a video having a brightness corresponding to the controlled DC voltage output from the DC-DC converter (110) can be displayed on the display panel (80)".*

In document D1, the circuitry (logic) of the chip, ie the data and scan processors, is configured to output the display data and the scan data to the display so that data, ie characters and video, can be displayed on the display. Moreover, the conclusion reached in respect of the main request, that the brightness will correspond to the controlled DC voltage output from the DC-DC converter, applies equally.

The remaining features of the characterising portion of claim 1 are considered to be obvious to the skilled person for the reasons given above with respect to the main request.

Accordingly, also the subject-matter of claim 1 of the second auxiliary request would be obvious to the person skilled in the art and, therefore, does not involve an inventive step (Article 56 EPC 1973)

Hence, the second auxiliary request is refused.

5. *Third and fourth auxiliary requests*

5.1 Also the third and fourth auxiliary requests were filed at the oral proceedings and, thus, at a very late stage of the proceedings. The same considerations regarding late-filed claim requests elaborated above with respect to the first auxiliary request apply.

5.2 *Third auxiliary request*

The last feature of claim 1 of the third auxiliary request reads as follows:

*"an impedance generating unit (112) outputting an impedance value changed depending on the voltage control signal output from the mode control unit (111); a resistor (R1) connected with an output terminal of the DC-DC converter (110) in parallel and with an output terminal of the impedance generating unit (112) in series; and a voltage control unit (113) receiving a feedback value of the controlled DC voltage distributed by the impedance value output from the impedance generating unit (112) and a value of the resistor (R1), and then outputting a DC voltage controlled according to the feedback voltage".*

It is unclear what is meant by *"an impedance generating unit (112) outputting an impedance value"* and by *"a feedback value of the controlled DC voltage distributed by the impedance value output from the impedance generating unit (112) and a value of the resistor (R1)"*, as specified in claim 1.

Furthermore, it is unclear what is meant by the feature of claim 1 "a resistor (R1) connected with an output terminal of the DC-DC converter (110) in parallel and with an output terminal of the impedance generating unit (112) in series".

In the board's opinion, on a *prima facie* assessment, the claim, therefore, does not meet the requirement of Article 84 EPC 1973 as to clarity.

In fact these objections were already raised by the examining division (see communication dated 5 June 2003, point 6.2). The board finds no reasons to disagree with these objections.

Claim 1 of the third auxiliary request, in the board's opinion, is thus not *prima facie* allowable.

Consequently, the third auxiliary request is not admitted.

### 5.3 *Fourth auxiliary request*

The last feature of claim 1 of the fourth auxiliary request reads:

"wherein the voltage control unit (113) receives a feedback value at the feedback terminal (FB), the feedback value consisting of the controlled DC voltage output at the output terminal of the DC-DC converter (110) that is voltage distributed by the resistor (R1) and the impedance value of the impedance generating unit (112), and outputs a DC voltage controlled according to the feedback value and thus depending on both the impedance value and the DC voltage output".

According to originally filed claim 5, the DC-DC converter (110) includes "a voltage control unit (113) receiving a feedback value of the controlled DC voltage distributed by the **impedance value output** from the impedance generating unit (112) and a **value of the resistor** (R1), and then outputting a DC voltage controlled according to the feedback voltage" (emphasis added by the board).

The originally filed description (paragraph [46]) discloses that "The voltage control unit 113 inputs an output voltage  $V_o$ , distributed in an appropriate proportion according to the changed **impedance output** from the impedance generating unit 112 and the **resistor**  $R_i$  connected with the impedance generating unit 112 in series, through a feedback terminal FB" (emphasis added by the board).

There is *prima facie* no basis in the application as originally filed for the voltage being "distributed by the **resistor** (R1) and the **impedance value** of the impedance generating unit (112)" (Article 123(2) EPC).

Again, these objections had already been raised by the examining division (see decision under appeal, reasons 5.1) and the board sees no reasons to disagree with those objections.

Therefore, claim 1 of the fourth auxiliary request is also not *prima facie* allowable.

Consequently, the fourth auxiliary request is not admitted either.



**Order**

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

The appeal is dismissed.

Registrar

Chair

S. Sánchez Chiquero

E. Wolff