Internal distribution code:

(A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 6 February 2015

Case Number: T 1540/12 - 3.5.05

Application Number: 99304279.5

Publication Number: 0963083

IPC: H04L25/02

Language of the proceedings: EN

Title of invention:
Method of and apparatus for correctly transmitting signals at high speed without waveform distortion

Applicant:
FUJITSU LIMITED

Headword:
Driver circuit/FUJITSU

Relevant legal provisions:
EPC Art. 123(2), 84
RPBA Art. 15(3)

Keyword:
Added subject-matter - (yes)
Independent claim includes essential features - (no)
Oral proceedings - non-attendance of the party

Decisions cited:
G 0001/04

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern
Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 1540/12 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 6 February 2015

Appellant: (Applicant)	FUJITSU LIMITED 1-1, Kamikodanaka 4-chome, Nakahara-ku Kawasaki-shi, Kanagawa 211-8588 (JP)
Representative:	Stebbing, Timothy Charles Haseltine Lake LLP Lincoln House, 5th Floor 300 High Holborn London WC1V 7JH (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 20 February 2012 refusing European patent application No. 99304279.5 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair	A. Ritzka
Members:	K. Bengi-Akyuerek
	D. Prietzel-Funk

Summary of Facts and Submissions

I. The appeal is against the decision of the examining division, posted on 20 February 2012, to refuse European patent application No. 99304279.5 on the grounds of lack of inventive step (Article 56 EPC).

II. Notice of appeal was received on 12 April 2012. The appeal fee was paid on the same day. With the statement setting out the grounds of appeal, received on 21 June 2012, the appellant filed a new set of claims (i.e. claims 1 to 5) according to a main request. It requested that the decision of the examining division be set aside and that a patent be granted on the basis of the main request as its sole request.

III. A summons to oral proceedings scheduled for 6 February 2015 was issued on 25 November 2014. In an annex to this summons, the board gave its preliminary opinion on the appeal pursuant to Article 15(1) RPBA. In particular, it raised objections under Articles 123(2) and 84 EPC, and made some preliminary observations as to novelty and inventive step.

IV. With a letter of reply dated 2 February 2015, the appellant informed the board that it would not be attending the scheduled oral proceedings. Nor did it submit any comments on the substance of the board's communication under Article 15(1) RPBA.

V. Oral proceedings were held as scheduled on 6 February 2015 in the absence of the appellant. The board established from the file that the appellant's final request was that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request as its sole request. After due

deliberation on the basis of the main request and the written submissions, the decision of the board was announced at the end of the oral proceedings.

VI. Claim 1 of the **main request** (sole request) according to the "mark-up" copy as presented in the statement setting out the grounds of appeal (see page 1, second and third paragraphs and the section "Basis for the Amended Claims") reads as follows:

"A driver circuit for transmitting digital signals; comprising:

an output driver (1);

a front driver (4) for receiving an input signal (SS) and driving said output driver (1); and

a level adjuster (5) for adjusting the output level of said front driver (4), so that said output driver (1) outputs a digital signal having a level varied in response to an output level of said front driver (4);

characterised in that the combination of said level adjuster (5) and said front driver (4) is arranged to equalise characteristics of a transmission line (3) by compensating for attenuation in high-frequency components in signals that are provided by said output driver and transmitted through said transmission line; and

said output driver (1) is a current-voltage converter circuit whose output voltage level is varied by adjusting an output current level of said front driver (4), and said output voltage level of said current-voltage converter circuit is changed in response to a sequence of ~~past~~ digital values of at least one delayed signal of the input signal (SS) and a direct signal of the input signal (SS), to equalise characteristics of the transmission line (3)."

Reasons for the Decision

1. The appeal is admissible.

2. *Non-attendance of the appellant at oral proceedings*

2.1 The appellant decided not to attend the scheduled oral proceedings before the board (cf. point IV above). By virtue of Article 15(3) RPBA, the board is not "obliged to delay any step in the proceedings, including its decision, by reason only of the absence at the oral proceedings of any party duly summoned who may then be treated as relying only on its written case."

2.2 In the present case, the appellant did not submit any comments in response to the objections raised in the board's communication under Article 15(1) RPBA. The board reconsidered those objections to the main request, and was in a position to take a decision at the end of the oral proceedings, held in the absence of the appellant, in the exercise of its discretion conferred by Article 15(3) RPBA.

3. MAIN REQUEST

Claim 1 of this request differs from claim 1 of the main request underlying the appealed decision essentially in that it further specifies that

A) the sequence of digital values includes <u>at least one delayed signal of the input signal and a direct signal of the input signal</u> (emphasis added).

3.1 Article 123(2) EPC

In the board's judgment, claim 1 does not comply with Article 123(2) EPC, for the following reasons:

3.1.1 Added feature A) encompasses the case that at least one delayed signal of the input signal is used for adjusting the output voltage level of the output driver, whereas the application as filed unequivocally discloses that exactly three delay stages, each providing a 1-bit delay, are employed for adjusting the output signals of front driver 4 and output driver 1 (cf. page 23, lines 12-15 in conjunction with Fig. 12). The board therefore finds that feature A) amounts to an inadmissible generalisation of the original subject-matter.

3.1.2 In view of the above, claim 1 contains subject-matter which extends beyond the content of the application as filed.

3.2 Article 84 EPC

The board judges that claim 1 also fails to comply with Article 84 EPC, the reasons being as follows:

3.2.1 An independent claim should explicitly specify all of the essential features needed to define the invention (cf. G 1/04, OJ EPO 2006, 334, point 6.2). In the present case, the board considers that claim 1 is related to the "fifth embodiment of the first aspect of the present invention" (cf. page 23, line 7 to page 24, line 30 in conjunction with Fig. 12 of the application as filed). Furthermore, the technical problem with which that embodiment is concerned is to compensate for the frequency characteristics of the transmission line

used for transmitting digital signals between a sender and a receiver (cf. page 24, lines 28-30 of the application as filed).

In order to solve that problem, the application as filed essentially proposes, further to the features of present claim 1, that

B) the output current level S1 of the front driver 4 is changed in response to the input signal SS and the output control voltages Vcp and Vcn of the level adjuster 5 (cf. page 24, lines 17-27 and Fig. 12);
C) the output control voltages Vcp and Vcn of the level adjuster 5 are changed in response to a 4-bit input data made up of a direct, a 1-bit delayed, a 2-bit delayed, and a 3-bit delayed signal of the input signal SS and weight signals CS1 to CSn derived therefrom by a decoder (cf. page 23, lines 20-23 and Fig. 12);
D) test bits are transmitted to and received by the corresponding receiver to determine the actual relationship between the 4-bit input data and the weight signals CS1 to CSn in the level adjuster 5 (cf. page 23, lines 29-35).

3.2.2 Hence, the board holds that the above features B) to D) constitute essential features for achieving the desired effect and thus for defining the present invention. As a consequence, the matter for which protection is sought is not clearly defined.

3.3 In conclusion, the present main and sole request is not allowable under Articles 123(2) and 84 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

K. Götz-Wein A. Ritzka

Decision electronically authenticated