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**Datasheet for the decision
of 6 July 2010**

Case Number: T 0628/07 - 3.5.05

Application Number: 02703270.5

Publication Number: 1410549

IPC: H04L 1/00

Language of the proceedings: EN

Title of invention:
Data rate negotiation method using a mean square error
technique

Applicant:
GlobalFoundries, Inc.

Headword:
Data rate negotiation method/GLOBALFOUNDRIES

Relevant legal provisions:
RPBA 15(1)(3)

Relevant legal provisions (EPC 1973):
EPC Art. 106, 107, 108, 116(1)

Keyword:
"Oral proceedings held in absence of appellant"
"Acknowledged background art as the closest prior art"
"Inventive step (no)"

Decisions cited:
J 0010/07, T 0654/92, T 0691/94, T 0087/01, T 0730/05,
T 1449/05, T 0211/06

Catchword:
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Case Number: T 0628/07 **-** 3.5.05

D E C I S I O N
of the Technical Board of Appeal 3.5.05
of 6 July 2010

Appellant: GlobalFoundries, Inc.
                                  Maple Corporate Services Limited
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                                  Grand Cayman KY1-1104   (KY)

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Decision under appeal: **Decision of the Examining Division of the**
                                  European Patent Office posted 4 December 2006
                                  refusing European application No. 02703270.5
                                  pursuant to Article 97(1) EPC 1973.

Composition of the Board:

Chair: A. Ritzka
Members: P. Corcoran
                  G. Weiss

C3041.D

Summary of Facts and Submissions

I.   This is an appeal against the decision of the examining
      division to refuse the European patent application
      No. 02 703 270.5, originally filed as international
      application PCT/US02/02536 and published as
      WO 03/010913 A1. The decision was announced in oral
      proceedings held on 20 November 2006 and written
      reasons were dispatched on 4 December 2006.

II.   The decision under appeal was based on a set of claims
      1-5 filed with a letter dated 30 August 2006, received
      by telefax at the EPO on 31 August 2006. The examining
      division found that said claims 1-5 lacked an inventive
      step in view of the prior art disclosed on pages 1 and
      2 of the application in combination with the disclosure
      of the following document:
              D2: US 5 944 843 A.

III. During the examination proceedings, the appellant
      (applicant) submitted a document entitled "Interface
      Specification for HomePNA 2.0" with a letter dated
      19 October 2006. This document purportedly related to
      the HPNA 2.0 specification referred to in the
      application (cf. published application: p.1, first
      paragraph of the section entitled "Background of the
      Invention"). However, in the decision under appeal the
      examining division decided to disregard said document
      in view of the fact that it was marked as confidential
      and could not therefore be regarded as having been
      publicly available (cf. decision: Section III. "Other
      remarks", item 2.).

IV.   Notice of appeal was submitted on 2 February 2007 and
       the appeal fee was paid on the same date. A written
       statement setting out the grounds of appeal was
       submitted on 30 March 2007.

V.   In a communication accompanying a summons to oral
       proceedings to be held on 6 July 2010 the board gave
       its preliminary opinion that the appeal was not
       allowable.

       With reference to the subject-matter disclosed in the
       section of the application entitled "Background of the
       Invention", the board stated that it assumed that this
       constituted the closest prior art even if the
       application failed to specify publication details or
       indicate a published document which disclosed the
       relevant subject-matter. Referring to the HPNA 2.0
       specification document which had been submitted with
       the letter of 19 October 2006, the board expressed
       doubts as to its public availability. The appellant was
       invited to provide publication details of said document
       or else to provide a copy of an appropriate document
       reflecting the acknowledged background art, including
       publication details thereof.

       The board further expressed its preliminary opinion
       that the subject-matter of claim 1 and likewise that of
       claim 5 did not appear to involve an inventive step
       over the prior art acknowledged by the appellant and
       the disclosure of the document D2.

VI.   In response to the board's communication, the appellant
       submitted a letter of reply dated 1 June 2010 and
       received at the EPO by telefax on 3 June 2010. No

amendments were made to the claims. In said letter of reply, the appellant did not respond to the board's observations concerning the public availability of the HPNA 2.0 specification document. The appellant's submissions essentially consisted of observations and arguments relating to the question of inventive step and the preliminary opinion expressed by the board in this respect.

VII.   The appellant has requested that the decision under appeal be set aside and that a patent be granted on the basis of claims 1-5 filed with the letter dated 30 August 2006.

The further documents on which the appeal is based, i.e. the text of the description and the drawings, are as follows:
    Description, pages:
        1, 2, 4, 5 as published;
        6 as submitted with the letter of 6 January 2005;
        3 as submitted with the letter of 27 September 2005;
    Drawings, sheets: 1/4-4/4 as originally filed.

VIII.   Claim 1 of the appellant's request reads as follows:
    "A method for communicating a physical layer mean square error to upper layer device driver software, comprising the steps of:
        (a) receiving a frame by the physical layer;
        (b) computing a mean square error for the frame by the physical layer;
        (c) sending the mean square error and the frame to a Media Access Control;

(d) inserting the mean square error into a frame
status frame associated with the frame by the
media access control; and

(e) sending the frame and the frame status frame
to the upper layer device driver software."

Claim 5 of the request is a further independent claim
directed towards a computer readable medium with
program instructions for communicating a physical layer
mean square error to upper layer device driver software
comprising steps substantially identical to steps (a)
to (e) of claim 1.

IX.   Oral proceedings were held on 6 July 2010. Nobody
        appeared on behalf of the appellant. The board's
        registrar contacted the representative's office and was
        informed that the appellant would not be represented at
        the oral proceedings as subsequently confirmed in
        writing by means of a telefax received at the EPO on
        the same day. The board decided to hold the oral
        proceedings in the absence of the appellant. After
        deliberation the chair announced the board's decision.

Reasons for the Decision

1.   *Admissibility*

1.1   The appeal complies with the provisions of Articles 106
        to 108 EPC 1973 which are applicable according to
        J 10/07, point 1 (cf. Facts and Submissions, item IV.
        above). Therefore it is admissible.

2.   *Non-attendance at oral proceedings*

2.1   The need for procedural economy requires the board to
        reach its decision as quickly as possible while giving
        the appellant a fair chance to argue its case. Oral
        proceedings provide an appellant with the opportunity
        to present its concluding comments on the outstanding
        issues with the aim of ensuring that the case is ready
        for a decision at the end of the oral proceedings
        (Article 15(3) RPBA).

2.2   According to Article 116(1) EPC 1973, oral proceedings
        shall take place either at the instance of the European
        Patent Office if it considers this to be expedient or
        at the request of any party to the proceedings. In the
        present case, the board considered the holding of oral
        proceedings to be expedient and thus issued a summons
        accompanied by a communication as foreseen by
        Article 15(1) RPBA.

2.3   The board notes that in accordance with Article 15(3)
        RPBA, it shall not be 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 on its
        written case.

2.4   The appellant could reasonably have expected that
        during the oral proceedings the board would consider
        the objections and issues raised in its communication,
        (cf. Facts and Submissions, item V. above). By not
        attending the oral proceedings, the appellant
        effectively chose not to avail of the opportunity to
        present its observations and counter-arguments orally

but instead to rely on its written case as presented in
the written statement setting out the grounds of appeal
and in the letter of reply dated 1 June 2010.

2.5   The board considers that the reasons on which its
        decision are based do not constitute a departure from
        grounds or evidence previously put forward which would
        require that the appellant be given a further
        opportunity to comment.

3.   *Closest prior art*

3.1   A home phone line network, a typical hardware-software
        interface for it and a method for rate negotiation are
        disclosed in the section of the application entitled
        "Background of the Invention" (cf. published
        application: pages 1 and 2). The technical problem set
        out in the description is formulated on the basis of
        this acknowledged background art.

3.2   According to established case law of the Boards of
        Appeal (see for example: T 0654/92, T 0691/94,
        T 0087/01, T 0730/05, T 1449/05, T 0211/06), the prior
        art cited and acknowledged in a patent application for
        the purpose of formulating the technical problem may be
        used as starting point for assessing novelty and
        inventive step (cf. in particular T 0087/01, point 5.2).

3.3   The appellant did not respond to the board's
        observations concerning the public availability of the
        HPNA 2.0 specification document submitted with the
        letter of 19 October 2006 (cf. Facts and Submissions,
        item V. above) and thus it has not been established to
        the board's satisfaction that this document was in the

public domain at the claimed priority date. However,
the inventive step argumentation submitted by the
appellant in its letter of 1 June 2010 was based on the
omission of a specification in the HPNA 2.0 standard as
to how the PHY MSE reaches the upper level driver (cf.
letter of 1 June 2010, p.1, 2nd paragraph) thereby
implicitly accepting the opinion expressed in the
board's communication that the background art
acknowledged in the application represents the closest
prior art. In view of the foregoing, the board judges
that despite the absence of a specific publicly
available document relating thereto this background art
may be taken as the closest prior art in the present
case particularly in view of the fact that the
appellant has not made any attempt to resile from it.

4.   *Novelty*

4.1   The background art acknowledged in the present
        application discloses a chip comprising a physical
        layer, a media access control and a media independent
        interface which receives and processes a signal
        containing data packets (cf. published application:
        page 1, second to last paragraph). This implies the
        preparation of frames by the media access control. The
        physical layer receives a frame with a payload encoding
        and calculates a mean square error for this frame. This
        mean square error is sent to the upper layer driver
        software (cf. application: page 2, lines 12 to 14).

4.2   Thus, a method for communicating a physical layer mean
        square error to upper layer device driver software with
        the steps of receiving a frame by the physical layer,
        computing a mean square error for the frame by the

physical layer and sending the mean square error and the frame was known from the aforementioned closest prior art.

4.3   This prior art does not specify how the physical layer mean square error reaches the upper level driver software (cf. application: page 2, lines 22 and 23). The subject-matter of claim 1 is thus novel inasmuch as it is distinguished over the closest prior art by the specification in step (c) that the mean square error and the frame are sent to the media access control and by steps (d) and (e).

5.   *Inventive step*

5.1   The objective technical problem underlying the claimed invention may thus be formulated as how to provide a method for communicating a physical layer mean square error to an upper layer driver software for rate negotiation (cf. application: page 2, lines 22 to 25).

5.2   D2 is primarily concerned with a method for using the unused bits of a data packet comprising a first code word to transmit various types of control information, such as queue status information or flow control information, being formatted in a second code word, from one node to another (cf. D2: column 4, lines 16 to 23). D2 further discloses that in an alternative approach, according to the practice of the prior art, each code word, i.e. the primary code word and the secondary code word, may be transmitted in a separate data packet (cf. D2: column 15, lines 49 to 53). The skilled person would understand that the data packet used in D2 corresponds to a data frame. D2 thus

C3041.D

effectively discloses two alternative possibilities for
sending information, in particular control information,
from one node to another, i.e. using the same frame as
the data to which the information relates (in
accordance with the invention of D2) or using a
separate frame for the information (in accordance with
the prior art practice referred to in D2).

5.3   As the preparation of frames for transmission is
        generally performed by the media access control, the
        board judges that it lies within the routine competence
        of the skilled person to send the mean square error and
        the frame to the media access control and that it does
        not require the exercise of inventive skill in the
        given context to insert the mean square error into a
        second frame (i.e. the frame status frame) associated
        with the first frame as recited in step (d) of claim 1
        and to send both frames to the upper layer device
        driver software as recited in step (e) of claim 1.

6.   *Observations re appellant's submissions*

6.1   The board makes the following observations concerning
        the appellant's submissions contained in the letter
        dated 1 June 2010 arguing that the subject-matter of
        claim 1 involves an inventive step.

6.2   The appellant's submissions emphasise two elements of
        the claimed solution which are considered to be of
        particular significance: first, the choice of the media
        access control as the module that prepares the mean
        square error to be sent to the upper layer software in
        the computer and second, use of the frame status frame

generated by the media access control as the vehicle to
carry the mean square error.

6.3   Concerning the choice of the media access control, the
        appellant states that there are also other possible
        ways to send the mean square error from the physical
        layer to upper level software, e.g. generating the
        frame status frame by the physical layer itself, but
        that media access control has been chosen "probably for
        certain technical considerations". However, these
        technical considerations are not explained beyond some
        speculative comments at the end of the paragraph
        bridging pages 1 and 2 of the letter.

        In view of the fact that the technical considerations
        motivating the choice of the media access control are
        neither disclosed nor derivable from the application as
        filed nor elucidated in a satisfactory manner in the
        appellant's submissions, the board cannot identify any
        basis for concluding that the choice of the media
        access control as the module that prepares the mean
        square error to be sent to the upper layer software
        represents more than a straightforward, obvious design
        choice in the given context.

6.4   Concerning the "frame status frame", the board notes
        that neither claim 1 nor the description specifies this
        feature beyond indicating that it is a frame associated
        with the data frame received by the physical layer. As
        the manner in which the two frames are "associated" is
        not further defined in technical terms, the board
        understands this specification merely to imply that the
        former frame (i.e. the "frame status frame") contains
        status information relating to the latter frame (i.e.

the data frame received by the physical layer). On this basis, the term "frame status frame" as used in claim 1 is not found to imply any particular characteristics of said frame which would distinguish it in technical terms from a conventional frame used for transporting data.

6.5   The appellant additionally submits that the intended goal of D2 is to use the unused capacity of a data frame of defined size and that the skilled person trying to modify the closest prior art in the light of D2 would thus attempt to insert the mean square error of a data frame into the frame itself rather than into a separate frame, i.e. the frame status frame. The appellant further argues that from a technical point of view such an attempt would be against the "mandate of HPNA" and, moreover, that in the context of HPNA it would be technically impossible to piggyback the mean square error into the data frame because there is not enough space.

The board notes that the appellant's argumentation in this regard relies on technical considerations that are neither disclosed nor clearly and unambiguously derivable from the application as filed which contains no identifiable mention of or reference to the aforementioned design constraints of the HPNA specification and their technical implications for the solution of the underlying technical problem.

In the absence of any identifiable technical teaching in relation to these matters in the application as filed, the board takes the view that if, as argued by the appellant, the design constraints of the HPNA

specification imply that it would be both undesirable and technically impossible to piggyback the mean square error into the data frame the skilled person could be expected to recognise this without the exercise of inventive skill.

Thus, in the context of a system based on the HPNA specification, the skilled person recognising the undesirability and technical impossibility of using the piggyback approach disclosed in D2 in view of the aforementioned design constraints would be led to follow the alternative approach of the prior art of D2 according to which control information is transmitted in a separate data packet (frame). In the light of the overall disclosure of D2, the use of a separate frame for transmitting control information represents a known design alternative to the piggyback approach and one which the skilled person confronted with the stated technical problem would choose without the exercise of inventive skill in the given circumstances.

6.6   The appellant's submissions contained in the letter of reply dated 1 June 2010 have thus failed to convince the board of the inventive merits of the claimed subject-matter.

7.   In view of the foregoing, the board finds that the subject-matter of claim 1 does not involve an inventive step. A corresponding objection applies *mutatis mutandis* to the subject-matter of the further independent claim 5. The appellant's request is therefore not allowable and in the absence of an allowable request the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

K. Götz   A. Ritzka

C3041.D