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**Datasheet for the decision
of 2 November 2020**

Case Number: T 1421/20 - 3.4.03

Application Number: 03023968.5

Publication Number: 1414018

IPC: G09G5/36, H04N5/00, H04N5/44,
                               G06T1/20

Language of the proceedings: EN

Title of invention:
Network environment for video processing modules

Applicant:
Avago Technologies International Sales
Pte. Limited

Headword:

Relevant legal provisions:
EPC 1973 Art. 54(1), 84
RPBA 2020 Art. 12, 13

Keyword:
Novelty - (no)
Auxiliary Requests - amendment to a party's case - raising new
issues - undue burden - not admitted

Decisions cited:

Catchword:

Beschwerdekammern

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Case Number: T 1421/20 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 2 November 2020

Appellant: (Applicant)	Avago Technologies International Sales Pte. Limited 1 Yishun Avenue 7 Singapore 768923 (SG)
Representative:	Bosch Jehle Patentanwaltsgesellschaft mbH Flüggenstraße 13 80639 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 11 December 2019 refusing European patent application No. 03023968.5 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	T. Bokor
Members:	M. Papastefanou
	G. Eliasson

Summary of Facts and Submissions

I.   The appeal is against the decision of the examining
        division refusing the European patent application
        No. 03 023 968.5. In the impugned decision, the
        examining division held that the Main Request, as well
        as Auxiliary Requests 1 to 5 and 12 lacked clarity
        (Article 84 EPC 1973). Auxiliary Request 12 did not
        involve an inventive step (Article 56 EPC 1973),
        either. In addition, the examining division, exercising
        its discretion under Rule 137(3) EPC, did not admit
        Auxiliary Requests 6 to 11 into the procedure on the
        grounds that they were late filed and prima-facie did
        not overcome the objections under Article 84 EPC 1973.

II.   The appellant (applicant) requested initially in the
        grounds of appeal that the decision under appeal be set
        aside and that a patent be granted on the basis of the
        Main Request or one of Auxiliary Requests 0a, 0b, 0c,
        1a to 5a or 6 to 12. In the grounds of appeal the
        appellant also stated that Auxiliary Requests 1 to 5
        filed in preparation for the oral proceedings before
        the opposition division are replaced by Auxiliary
        Requests 1a to 5a.

        After the board issued summons to oral proceedings and
        its preliminary opinion, the appellant reinstated
        auxiliary requests 1 to 5, and filed additional
        auxiliary requests 0a', 0b', 0b'-1 and 0c'.

III.   At the end of the oral proceedings before the board,
        the requests of the appellant were that the decision
        under appeal be set aside and that a patent be granted
        on the basis of one of the requests, in the following
        order: Auxiliary Requests 0a, 0a', 0b, 0b', 0b'-1, 0c,

0c', Main Request, Auxiliary Requests 1a, 1, 2a, 2, 3a, 3, 4a, 4, 5a, 5, 6, 7, 8, 9, 10, 11 and 12 (see appellant's letter of 1 October 2020, point 5 on the first page), whereby:

- Auxiliary Requests 0a, 0b and 0c were filed with the statement of the grounds of appeal.
- Auxiliary Requests 0a', 0b', 0b'-1 and 0c' were filed with appellant's letter of 1 October 2020.
- Auxiliary Requests 1a to 5a were those mentioned in the statement of the grounds of appeal, and were subsequently filed with the appellant's letter of 1 October 2020.
- The Main Request was filed with appellant's letter of 23 September 2019 and underlies the impugned decision.
- Auxiliary Requests 1 to 5 were filed with appellant's letter of 23 September 2019 and underlie the impugned decision, and were re-filed with the appellant's letter of 1 October 2020.
- Auxiliary Requests 6 to 11 were filed with the appellant's letter of 22 October 2019 and were not admitted by the examining division (see point I above).
- Auxiliary Request 12 was filed during the oral proceedings before the examining division.

IV.   Claim 1 of **Auxiliary Request 0a'** has the following wording:

A network for processing data adapted to form at least one display pipeline therein by selecting and concatenating at least two nodes from a plurality of nodes (516A, 516B, 616A-616I) in the network together, wherein the at least one display pipeline has an independent data rate that is independent of at least one other display pipeline in the network and the

*network comprises a flow control module adapted to
enable the independent data rate of the at least one
display pipeline.*

Claim 6 of Auxiliary Request 0a' has the following
wording:

*A method of processing data using a network comprising:
forming at least one display pipeline by selecting and
concatenating at least two nodes from a plurality of
nodes (516A, 516B, 616A-616I) in the network, wherein
the at least one display pipeline has an independent
data rate that is independent of at least one other
display pipeline in the network and is enabled by a
flow control module; and processing the data using said
at least one display pipeline.*

V.   Claim 1 of the **Main Request** has the same wording as
        claim 1 of Auxiliary Request 0a' except that the term
        "*of the at least one display pipeline*" is omitted at
        the end of the claim.

        Claim 6 of the Main Request is worded as follows:

        *A method of processing data using a network comprising:
        forming at least one display pipeline by selecting and
        concatenating at least two nodes from a plurality of
        nodes (516A, 516B, 616A-616I) in the network, wherein
        the at least one display pipeline has an independent
        data rate enabled by a flow control module; and
        processing the data using said at least one display
        pipeline.*

VI.   Claim 1 of **Auxiliary Request 12** is worded as follows
        (differences with respect to claim 1 of Auxiliary
        Request 0a' are marked by the board):

A ~~network~~ <u>display</u> engine (416, 500, 600) for processing data adapted to <u>changeably</u> form at least one display pipeline therein <u>in real time depending on network requirements</u> by selecting and concatenating at least two <u>network</u> nodes from a plurality of <u>network</u> nodes (516A, 516B, 616A-616I) <u>that process video information ~~in the network~~</u> together <u>by chaining said at least two network nodes together using at least one network module (520, 620M, 620N) to switch between the at least two network nodes, thus varying or changing the at least one display pipeline</u>~~, wherein the at least one display pipeline has an independent data rate that is independent of at least one other display pipeline in the network and the network comprises a flow control module adapted to enable the independent data rate of the at least one display pipeline~~.

VII.   Claim 1 of **Auxiliary Request 0b'** has the same wording as claim 1 of Auxiliary Request 0a' with the addition of the feature "*and the data is transferred using a pull mode*" at the end of the claim.

VIII.   Claim 1 of **Auxiliary Request 0b'-1** has the same wording as claim 1 of Auxiliary Request 0a' with the addition of the feature "*and, the network further adapted to support a pull data scheme wherein the data is transferred using a pull mode so that the data is supplied from the network to an output at a rate it is requested*" at the end of the claim.

IX.   Claim 1 of **Auxiliary Request 0c'** has the following wording (differences from claim 1 of Auxiliary Request 0a' are marked by the board):

A network for processing data adapted to <u>changeably</u>

*form at least one display pipeline therein by selecting
and concatenating at least two nodes from a plurality
of nodes (516A, 516B, 616A-616I) in the network
together by chaining multiple nodes of the plurality of
nodes together in real time using at least one network
module (520, 620M, 620N) to switch which ones of the
plurality of nodes are concatenated together to change
the at least one display pipeline, wherein the at least
one display pipeline has an independent data rate that
is independent of at least one other display pipeline
in the network and the network comprises:
 a flow control module adapted to enable the
independent data rate of the at least one display
pipeline.*

X.   Claim 1 of **Auxiliary Request 0a** has the following
        wording (differences from claim 1 of Auxiliary Request
        0a' are marked by the board):

        *A network for processing data adapted to form at least
        one display pipeline therein by selecting and
        concatenating at least two nodes from a plurality of
        nodes (516A, 516B, 616A-616I) in the network together,
        wherein the at least one display pipeline has an
        independent data rate that is independent of at least
        one other display pipeline in the network and the
        network comprises a flow control module adapted to
        enable the an independent data rate of the at least one
        display pipeline.*

XI.   Claim 1 of **Auxiliary Request 0b** has the same wording
        with claim 1 of Auxiliary Request 0a with the addition
        of the feature "*and the data is transferred using a
        pull mode*" at the end of the claim.

XII.   Claim 1 of **Auxiliary Request 0c** has the following
        wording (differences from claim 1 of Auxiliary Request
        0a marked by the board):

        *A network for processing data adapted to <u>changeably</u>
        form at least one display pipeline therein by selecting
        and concatenating at least two nodes from a plurality
        of nodes (516A, 516B, 616A-616I) in the network
        together <u>by chaining multiple nodes of the plurality of</u>
        <u>nodes together in real time using at least one network</u>
        <u>module (520, 620M, 620N) to switch which ones of the</u>
        <u>plurality of nodes are concatenated together to change</u>
        <u>the at least one display pipeline,</u> wherein the network
        comprises:*
        *a flow control module adapted to enable an independent
        data rate ~~of the at least one display pipeline~~.*

XIII.   Claim 1 of **Auxiliary Request 1a** has the same wording as
        claim 1 of Auxiliary Request 0a with the addition of
        the term "dynamically" in the feature *"by <u>dynamically</u>
        selecting and concatenating at least two nodes...".*

XIV.   Claim 1 of **Auxiliary Request 2a** has the following
        wording (differences from claim 1 of Auxiliary Request
        0a are marked by the board):
        *A network for processing data adapted to <u>changeably</u>
        form at least one display pipeline therein by selecting
        and <u>chaining, coupling or</u> concatenating at least two
        nodes from a plurality of nodes (516A, 516B, 616A-616I)
        in the network together<u>, depending on the network</u>
        <u>requirements, on the fly i.e. in real time</u>, wherein the
        network comprises a flow control module adapted to
        enable an independent data rate of the at least one
        display pipeline.*

XV.   Claim 1 of **Auxiliary Request 3a** has the same wording as
         claim 1 of Auxiliary Request 0a with the addition
         (underlined by the board): "..*to form at least one
         display pipeline therein by selecting and concatenating
         at least two nodes from a plurality of nodes (516A,
         516B, 616A-616I) in the network together <u>using at least
         one network module (520, 620M, 620N)</u>...*".

XVI.   Claim 1 of **Auxiliary Request 4a** has the following
         wording (differences from claim 1 of Auxiliary Request
         0a are marked by the board):

         *A network for processing data adapted to form at least
         one display pipeline therein by <u>dynamically</u> selecting
         and concatenating at least two nodes from a plurality
         of nodes (516A, 516B, 616A-616I) in the network
         together <u>by chaining said at least two nodes together
         using at least one network module (520, 620M, 620N) to
         switch between the at least two nodes, thus varying the
         at least one display pipeline</u>, wherein the network
         comprises a flow control module adapted to enable an
         independent data rate of the at least one display
         pipeline.*

XVII.   Claim 1 of **Auxiliary Request 5a** has the same wording as
         claim 1 of Auxiliary Request 4a with the addition of
         the feature "*wherein the network further comprises a
         handshaking protocol adapted to generate the at least
         one display pipeline*" at the end of the claim.

XVIII.   Claim 1 of **Auxiliary Requests 1 to 5** corresponds to
         claim 1 of Auxiliary Requests 1a to 5a respectively,
         with the addition (in all Auxiliary Requests 1 to 5) of
         the definition that the at least one display pipeline
         "*has an independent rate that is independent from at*

least one other display pipeline in the network".

XIX.   The wording of the claims of the **Auxiliary Requests 6
         to 11** is not relevant for this decision.

XX.   Reference is made to the following document:

         D1: WO 99/13637 A2

XXI.   In its preliminary opinion, issued with the summons to
         oral proceedings, the board indicated that it did not
         agree with the examining division that claim 1 of the
         Main Request lacked clarity (see point 4.1 of the
         board's communication of 26 June 2020). The board
         considered, however, that claim 6 of the Main Request
         lacked clarity because the term "independent rate" was
         not clear (*ibid. point 4.2*). The same problem of lack
         of clarity was also present in those requests where the
         term "independent rate" of one display pipeline was
         defined without any reference to at least one other
         display pipeline, i. e. Auxiliary Requests 0a to 0c and
         1a to 5a.

XXII.   The appellant essentially argued that the skilled
         person would understand that "independent rate" meant a
         data rate that was independent from the system clock of
         the claimed network.

         Regarding the admission of some of the Auxiliary
         Requests, the appellant's main argument was that it
         could not foresee that the board wound have had a
         different opinion from the examining division on the
         issue of clarity of claim 1 of the Main Request. Hence,
         in the beginning of the appeal it had removed from the
         claims the features objected by the division (in
         Auxiliary Requests 0a to 0c and 1a to 5a) and, when the

board stated a different preliminary opinion, it
reinstated those deleted features (in Auxiliary
Requests 0a' to 0c' and 1 to 5).

As to the novelty of claim 1 of Auxiliary Request 0a',
the appellant argued that D1 disclosed neither any
display pipelines nor a flow control valve enabling
independent rates in the sense of the invention.

Reasons for the Decision

1.   The appeal is admissible.

2.   The claimed invention

2.1   The claimed invention relates to a network environment
        in an A/V (audio/video) decoding device that processes
        one or more input data streams (the network is referred
        to also as "display engine" in the application).

2.2   The network comprises a series of nodes which can be
        modules that process video information (see for example
        paragraphs [0074] to [0076] and [0092] to [0094] of the
        application as published). A number (at least two) of
        nodes are connected (concatenated) together to form a
        display pipeline (a path for the data stream through
        the network). The network can form such display
        pipelines "on the fly" (in real time) according to
        network requirements. In this way, the network can
        accept new devices (input or output) that can be
        connected and integrated ad-hoc without any need for
        further adaptation (see also paragraph [0010]).

2.3   The claims refer to an embodiment of the network in
        which a flow control module is used in order to enable
        different display pipelines to have independent data

rates (see paragraphs [0128] to [0130]).

3.   Auxiliary Request 0a'

3.1   This request was filed with the appellant's letter of
         1 October 2020, i. e. after the board had issued
         summons to oral proceedings. Exercising its discretion
         under Article 13 Rules of Procedure of the Boards of
         Appeal (RPBA 2020), the board admitted the request into
         procedure, mainly because claim 1 was essentially
         identical to claim 1 of the Main Request (see points IV
         and V above). Moreover, the amendments carried out in
         claim 6 overcame the lack of clarity objection the
         board had raised against the Main Request (see points
         IV and V above and point 4.2 of the board's
         communication of 26 June 2020).

Novelty (Article 54(1) EPC 1973)

3.2   Document D1 describes a system for real-time video
         processing that is modular and readily scalable (see
         title and abstract).

3.2.1   The video processing system (VPS) comprises several
         video processing modules (VPM), which in turn can
         comprise video processing daughterboards (VPD) (see
         Figure 1). The VPDs can perform a range of video
         processing functions such as video digitiser, image
         correlations, image warping, etc. (see page 5, lines 14
         to 21). In the terminology of the present application,
         the VPS corresponds to the claimed network or display
         engine and the VPDs/VPMs to the nodes.

3.2.2   The VPS in D1 is modular and scalable in the sense that
         an input video stream can be routed to any number of
         the existing VPDs and VPMs according to the specific

needs and circumstances (see for example page 4, lines 20 to page 5, line 13). This is achieved with the help of digital crosspoint switches. Such switches are provided in each VPM, as well as directly at the level of the VPS (secondary crosspoint switch) and actively route the video stream to specific VPMs and VPDs (see page 8, lines 11 to 38, as well as page 25, lines 18 to 32 and page 31, lines 10 to 17). In the board's view, this active routing to a selected number of VPMs and VPDs corresponds to the claimed definition of selecting and concatenating at least two nodes from a plurality of the nodes of the network.

3.2.3   The video streams are thus routed and processed through the VPS of D1 in a parallel and pipelined fashion (see for example first lines on page 8). D1 uses also the term "channels" instead of pipelines and describes that with the use of framing signals in the stream, each channel can be independent from the other channels and in particular can route independent video information with independent timings through VPS (see page 11, lines 6 to 15). The board regards this to correspond to the claimed definition of display pipelines, where one pipeline has a data rate independent from one other pipeline.

3.3   The appellant contested that D1 disclosed display pipelines in the sense of the application. The term "display pipeline" had a specific meaning in the relevant technical field and the skilled person would not consider the "channels" of D1 to be pipelines in the sense of the application.

3.3.1   Moreover, there was no flow control valve D1 that enabled the independent data rate of the pipeline (with respect to another pipeline). Although the term "flow

control valve" was not used in claim 1 of Auxiliary
Request 0a', the application used the terms "valve" and
"module" interchangeably and claim 1 defined, thus,
such a flow control valve (described also in paragraphs
[0128] to [0130] of the published application). In D1
the video stream comprised timing signals framing the
active video data by indicating areas of horizontal
(HA) and vertical (VA) active data. These two framing
signals, HA and VA, were used to control the data
transfer (rate) in the channels (see page 10, lines 16
to 26) and achieve the independent data rates (see page
11, lines 6 to 16) and this was not the same as a flow
control valve.

Claim 1 of Auxiliary Request 0a' was therefore new over
D1.

3.4   The board does not find the appellant's arguments
        persuasive. There is no definition of a display
        pipeline in the application and the board concurs with
        the appellant that the term "pipeline" has a specific,
        established meaning in the art. D1 repeatedly mentions
        that the video streams are routed through the described
        video processing system in a parallel, pipelined
        fashion (see the the title or page 8, lines 1 and 2,
        for example). The board considers, thus, that the
        skilled person would readily understand that the
        described "video routing channels" in which the video
        streams (data) were routed in a pipelined fashion
        corresponds to the display pipelines of the claims.

3.4.1   Regarding the flow control module, the board agrees
        with the appellant that there is no flow control valve
        in D1. The claims, however, use the term "flow control
        module" leaving it open what this module might be. The
        flow control valve may be seen as such a module. As

described in D1, the use of separate HA and VA framing
signals, with the implicit corresponding controller,
achieve, among others, the independent rates in the
video routing channels (see page 10, line 16 to page
11, line 15). In the board's view, they can also be
seen as a flow control module in the sense of the
claims.

3.5   Summarising, D1 discloses all the features of claim 1
        of Auxiliary Request 0a', the subject-matter of which,
        thus, is not new.

4.   Main Request and Auxiliary Request 12.

4.1   As stated previously, the wording of claim 1 of the
        Main Request corresponds almost word for word to that
        of claim 1 of Auxiliary Request 0a' (see points IV and
        V above). The subject-matter of claim 1 of the Main
        Request is, therefore, not new for the same reasons as
        claim 1 of Auxiliary Request 0a'.

4.2   Claim 1 of Auxiliary Request 12 does not comprise the
        features related to the independent data rate of the
        display pipeline and the flow control module enabling
        such an independent data rate. It includes more details
        about the selection and concatenation of the nodes in
        order to form a display pipeline in that it specifies
        that it is done changeably and in real time with the
        use of a network module acting as a switch (see point
        VI above).

        It is common grounds that D1 discloses the features
        relating to the real time selection and concatenation
        of the nodes of the network in order to form a
        changeable display pipeline with the use of a switch
        (see point 3.2.2 above).

The board concludes, thus, that the subject-matter of claim 1 of Auxiliary Request 12 is not new over D1, either.

4.3   The appellant did not present any additional arguments with respect to those requests.

5.   Not admitted requests

        The appeal was filed in February 2020, and hence the Rules of Procedure of the Boards of Appeal as in force from 1 January 2020 (RPBA 2020), and in particular Articles 12 and 13 RPBA 2020 apply (Article 25(1) RPBA 2020).

5.1   Auxiliary Requests 0a, 0b and 0c

5.1.1   These requests were filed with the statement of the grounds of appeal.

        In its preliminary opinion, the board noted that these requests were not part of the proceedings before the examining division and considered them to be amendments to the appellant's case, which are to be admitted into the proceedings according to the board's discretion (Articles 12(2) and (4) RPBA 2020). The appellant did not contest this.

5.1.2   The appellant argued that the amendments carried out in these requests were in response to the objection for lack of clarity in the impugned decision (see point 3.1 of the reasons). In fact, with the amendments carried out the main objection of the examining division had been overcome, since the feature considered to be unclear had been deleted from the claims.

5.1.3   In its preliminary opinion, the board raised an
         objection for lack of clarity in relation to the
         feature "independent (data) rate" when there was only
         one display pipeline defined in the claim (see point
         4.2 of the board's communication of 26 June 2020).

         In more detail, the board raised the initial objection
         with respect to claim 6 of the Main request (which was
         then the highest ranking request), which defined that
         the claimed method comprised the feature that *at least
         one display pipeline has an independent data rate
         enabled by a flow control module*. According to the
         board, the term "independent data rate" was not clear
         because the claim did not explain or indicate from what
         or with respect to what the data rate was independent.
         The board noted also that this feature had been
         objected to already by the the examining division (see
         point 2.1 of the division's communication of
         17 February 2017).

         Claim 6 in each of the Auxiliary Requests 0a, 0b and 0c
         comprises the same feature. In addition, a
         corresponding feature is also included in claim 1 of
         all Auxiliary Requests 0a to 0c, which present, thus,
         the same lack of clarity problem (see point 6 of the
         board's communication of 26 June 2020).

5.1.4   The appellant argued that the claimed definition meant
         that the data rate in the display pipeline was
         independent from the system clock of the network (or
         display engine). As it was explained in the application
         (see for example Figure 2), the data processing in the
         display engine ran from a "fixed clock" (see element
         214 in Figure 2). This meant that the system based the
         video and audio processing on multiples of a single
         clock (see original description page 13, lines 22 to

26, corresponding to paragraph [0059] of the published
application). Hence, the data rate of a single display
pipeline was defined by the system clock (see also
original description page 13, lines 5 and 6, which
correspond to the first lines of paragraph [0057] in
the published application). The data rate of a single
display pipeline was thus generally dependent on the
clock of the processing device comprised in the
network.

The use of the flow control module in the claimed
system enabled the data rate to be independent from
this fixed system clock, also in the case where there
was a single display pipeline (see also original
description, page 33, lines 3 to 10, corresponding to
paragraph [0128] of the published application). The
skilled person reading the claims, would therefore
understand that the independent data rate of the claims
referred to a data rate that was independent from the
system clock of the display engine/network and the
claims were clear (see also points 5 and 6 of
appellant's letter of 1 October 2020).

5.1.5 The board does not find these arguments convincing.

At first, it is established case law that a claim has
to be clear in itself in order to meet the requirement
clarity as defined in Article 84 EPC 1973.

Secondly, the board notes that in those passages of the
application which the appellant referred to there is
mention that the data processing is controlled by the
system clock. The rate of the display pipeline in the
claims, however, refers to the data transfer rate and
not to the data processing rate.

Moreover, there are several rates mentioned in the application besides the processing (fixed clock/system) rate, such as input data rate or the output data rate. There is mention of multiple output rates (see paragraphs [0053], [0058] and Figure 1 of the published application). There is mention that the data processing clock (i. e. the system clock) is not tied to the input data rate (paragraph [0060]). There is mention of adjusting the output rates (paragraph [0061] and rate managers (paragraph [0062]). In another part of the application there is mention of an output sample rate that may be different from an input sample rate (paragraph [0067]).

Summarising, the application mentions several different data rates used/present in the described network (or display engine). Hence, the board is of the opinion that the skilled person reading the claims, and seeking an explanation of which rate the term "independent data rate" refers to, would not necessarily reach the conclusion that the data rate in the claims is independent from the fixed (system) clock of the network. The term is, thus, unclear, contrary to the requirements of Article 84 EPC 1973.

5.1.6   Hence, although the amendments carried out in the Auxiliary Requests 0a, 0b and 0c may address the objections raised by the examining division in the decision under appeal, they introduce new issues that lead to new objections.

Therefore, the board, exercising its discretion under Articles 12(2) and (4) RPBA 2020, decides not to admit the Auxiliary Requests 0a, 0b and 0c into the procedure.

5.2   Auxiliary Requests 0b', 0b'-1 and 0c'

5.2.1   These requests were filed with appellant's letter of
         1 October 2020, i. e. after the board had issued
         summons to oral proceedings. They were incontestably
         late filed and constituted an amendment to the
         appellant's case.

5.2.2   The appellant argued that these requests should
         exceptionally be admitted into proceedings because it
         could not predict that board would regard clear the
         feature that the examining division had considered not
         clear (see appellant's letter of 1 January 2020, point
         II.2).

         The appellant stated that these requests (including
         Auxiliary Request 0a') were filed as a response to the
         board's preliminary opinion. The appellant explained
         that the requests 0a', 0b' and 0c' corresponded to
         requests 0a, 0b and 0c respectively, which were filed
         with the statement of the grounds of appeal. The
         amendments carried out with respect to those requests
         were simply the reinstatement of the features which
         were deleted as a response to the lack of clarity
         objection in the impugned decision. The Auxiliary
         Request 0b'-1 was filed only as a precaution in case
         the board considered the feature related to the use of
         the "pull mode" in claim 1 of Auxiliary Request 0b' to
         be unclear.

5.2.3   Arguing mainly for the admittance of Auxiliary Requests
         0b' and 0b'-1, the appellant first pointed out that the
         additional features they comprised with respect to the
         requests underlying the impugned decision (relating to
         the "pull mode" used in the data transfer through the
         pipeline) were already included in Auxiliary Request

0b, i. e. they were filed in the beginning of the appeal. These features were added as a response to an objection for lack of novelty by the division, so it was a legitimate reaction of the appellant and they should, thus be admitted in the procedure.

5.2.4   The board notes that the features related to the "pull mode" have never been included in any of the claims filed and discussed during the examination procedure. It is even questionable whether these features had been taken into consideration when the prior art search was carried out. The last objection for lack of novelty by the examining division was raised in its communication annexed to the summons to the oral proceedings (letter of 14 February 2019). The appellant (then applicant) filed twelve auxiliary requests as a response to that communication and in none of them were any features relating to the "pull mode" included.

Hence, the board considers that the appellant could and should have filed these requests during the first instance proceedings. Moreover, the board regards that it could not deal with requests comprising such features without undue burden, since it was not even certain that appropriate prior art was readily available in the file.

5.2.5   Regarding Auxiliary Request 0c', the appellant did not provide any additional arguments.

5.2.6   Summarizing, the board considers that Auxiliary Requests 0b', 0b'-1 and 0c' were filed late, constituted an amendment of the appellant's case and could not be dealt with without undue burden. Exercising its discretion under Article 13 RPBA 2020, the board decides not to admit these requests into the

proceedings.

5.3   Auxiliary Requests 1a to 5a

5.3.1   These requests were introduced and commented upon in
         the statement of the grounds of appeal but no claims
         were filed at that stage. The claims of these requests
         were filed with the appellant's letter of
         1 October 2020.

5.3.2   Since no claims were filed for these requests with the
         statement of the grounds of appeal, they did not fulfil
         the requirements of Article 12(3) RPBA 2020. The board
         has the discretion not to admit them into the
         proceedings for this reason only (Article 12(5) RPBA
         2020).

         Moreover, since these requests were not part of the
         decision under appeal, they are to be considered as
         amendments, which are to be considered at the board's
         discretion (Articles 12(2) and (4) RPBA).

5.3.3   The board notes that in claims 1 and 6 of each of the
         Auxiliary Requests 1a to 5a, the feature related to "an
         independent data rate", which has been found to be
         unclear (see points 5.1.3 to 5.1.5 above), is included.

         Hence, none of these Auxiliary Requests meets the
         requirement of clarity in the sense of
         Article 84 EPC 1973.

5.3.4   The board, therefore, exercising its discretion under
         Article 12 RPBA 2020 decides not to admit the Auxiliary
         Requests 1a to 5a into the proceedings for the same
         reasons as for Auxiliary Requests 0a to 0c.

5.4   Auxiliary Requests 1 to 5

5.4.1   These requests are part of the requests underlying the
         impugned decision. The examining division was of the
         opinion that they lacked clarity (see point 3.2 of the
         reasons). Entering the appeal, the appellant replaced
         these requests with Auxiliary Requests 1a to 5a (see
         page 1, section "I. Requests", point 2 of the statement
         of the grounds of appeal). In its letter of
         1 October 2020 the appellant referred to those requests
         anew, considering them to be still among the pending
         requests (see point "I. 1 Requests" on the first page).
         No arguments were put forward regarding those requests
         at all, neither with regards to their admittance nor
         with regards to how they might overcome the outstanding
         objections.

5.4.2   During the oral proceedings, the appellant argued
         mainly about the admittance of Auxiliary Request 5. It
         argued that it was based on Auxiliary Request 5a, with
         the addition of the feature that was objected to by the
         examining division for lack of clarity but the board
         had considered to be clear. The appellant pointed out
         that Auxiliary Request 5 was underlying the impugned
         decision and, thus, was not a new request (or an
         amendment of the appeal case). It pointed out that if
         the board would not admit it into the proceedings, it
         would be a result of inconsistent exercise of
         discretion since the board had admitted Auxiliary
         Request 0a', which was a late filed, new request, but
         not Auxiliary Request 5, which was underlying the
         impugned decision. The appellant considered such an
         exercise of discretion to be unfair and to restrict its
         right to be heard. The appellant also argued that the
         crucial feature of the handshaking protocol was part of
         the appeal given that it was present in the auxiliary

request 5a, and therefore the Board not only had the
possibility to examine it in good time, but indeed had
an obligation to examine it.

5.4.3   Although it is true that Auxiliary Requests 1 to 5 were
underlying the decision under appeal, it is also true
that they were replaced (i. e. withdrawn) in the
beginning of the appeal and were, thus, not part of the
appellant's case. The board regards, thus, their
reintroduction with the appellant's letter of
1 October 2020 as an amendment to the appellant's case,
which is to be admitted into the procedure under
Article 13 RPBA 2020.

The board notes further, that the examining division
had rejected these requests for lack of clarity and no
other opinion on them was given in the decision under
appeal with respect to the other patentability
requirements. Since the board did not agree with the
lack of clarity objections of the examining division,
these requests had to be assessed with respect to the
other patentability requirements according to the EPC.
Moreover, by replacing them in the beginning of the
appeal, the appellant did not give the board the chance
to examine them and form at least a preliminary opinion
on them.

The board also cannot accept the argument that it had
to be prepared for the examination of a claim including
the handshake protocol because this feature was found
in a claim filed in the appeal. Such an expectation on
the part of the appellant is wholly unrealistic, as it
would effectively oblige the board to be prepared for
claims potentially containing all technically possible
combination of features figuring in the different
requests which were filed with the grounds of appeal.

The board had no obligation either to examine novelty and/or inventive step of auxiliary requests 5a, once the board was convinced that the request was not clear.

5.4.4   Summarising, the board considers the reintroduction of Auxiliary Requests 1 to 5 to be an amendment to the appellant's case, which the board cannot deal with without undue burden. Exercising its discretion under Article 13 RPBA 2020, the board decides not to admit Auxiliary Requests 1 to 5 into the procedure.

5.5   Auxiliary Requests 6 to 12

5.5.1   Auxiliary Requests 6 to 11 were filed in preparation to the oral proceedings before the examining division. During the oral proceedings, the examining division regarded these requests as late filed and *prima facie* unclear and, exercising its discretion under Rule 137(3) EPC, decides not to admit them into the proceedings (see point 3.3. of the decision under appeal).

According to Article 12(6) RPBA 2020 the Board shall not admit requests wich were not admitted in the proceedings leading to the decision under appeal, unless the decision not admit them suffered from an error in the use of discretion or unless the circumstances of the appeal justify their admittance.

5.5.2   The appellant did not provide any arguments with respect to these requests in appeal. In particular, the appellant did not provide any arguments as to why the examining division might have erred in the exercise of its discretion in deciding not to admit them or why the circumstances might justify their admittance in appeal.

5.5.3   In the absence of any arguments from the appellant, the
         board does not see any reason to put the decision of
         the examining division into question. No particular
         circumstances are apparent to the board that would
         justify the admittance of these requests in appeal,
         either.

         The board decides, thus, not admit Auxiliary Requests 6
         to 11 in the proceedings (Article 12(6) RPBA 2020).

6.   Since the requests on file (Auxiliary Request 0a', Main
         Request and Auxiliary Request 12) are not allowable and
         the remaining auxiliary requests are not admitted, the
         appeal must fail.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

S. Sánchez Chiquero   T. Bokor

Decision electronically authenticated