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## Datasheet for the decision <br> of 18 October 2012

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Case Number:
Application Number:
Publication Number:
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B62M 25/04, B62M 25/08
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Language of the proceedings: EN
Title of invention:
Bicycle shift control device

## Patentee:

SHIMANO INC.
Opponent:
SRAM Deutschland GmbH
Headword:
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Relevant legal provisions:

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EPC Art. 123(2)
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RPBA Art. 13 (1)
Keyword:
"Requests concerning appeal of proprietor - not admitted - not prima facie allowable"
"Amendments allowed by opposition division - added subjectmatter"

Decisions cited:

Catchword:

D E C I S I ON
of the Technical Board of Appeal 3.2.06 of 18 October 2012

| Appellant I: <br> (Patent Proprietor) | SHIMANO INC. <br> 3-77 Oimatsu-cho <br> Sakai-ku, <br> Sakai City <br> Osaka 590-8577 (JP) |
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| Appellant II: <br> (Opponent) | SRAM Deutschland GmbH <br> Romstr. 1 <br> D-97424 Schweinfurt <br> (DE) |
| Representative: | ```Jordan, Volker Otto Wilhelm Weickmann & Weickmann Patentanwälte Postfach 860 820 D-81635 München (DE)``` |
| Decision under appeal: | Interlocutory decision of the Opposition Division of the European Patent Office posted 23 June 2009 concerning maintenance of European patent No. 1652769 in amended form. |

## Composition of the Board:

| Chairman: | M. Harrison |
| :--- | :--- |
| Members: | T. Rosenblatt |
|  | W. Sekretaruk |

## Summary of Facts and Submissions

I.

European patent No. 1652769 was granted in respect of European patent application No. 06001839 , which was itself a divisional application of the earlier European patent application 02251612.

In the following, all references to the application "as filed" concern the published version of the application.

The wording of the two independent claims and of dependent claims 2 and 3 of the granted patent is as follows:
"1. A method of performing a multiple shifting operation on a bicycle (10) comprising the steps of: a) electrically performing a single shifting operation; b) determining whether the shifting operation has been completed; and
C) repeating steps a) and b) until it is determined that the multiple shifting operation has been completed."
"2. The method of Claim 1, wherein step c) is performed only after it has been determined that the shifting operation has been completed."
"3. The method of Claim 1 or 2, including waiting for a predetermined standby time before performing step c)."
"8. A bicycle shift control device (40) comprising: a shift signal output unit (50) adapted to output a first and second shift signal to perform a multiple shifting operation;
shifting operation determining means; and
control means for inhibiting the output of the second shift signal until the shifting operation determining means has determined that a single shifting operation has been completed after the output of the first shift signal."
II. In its interlocutory decision, the opposition division considered that the patent in an amended form met the requirements of the EPC. The independent claims according to auxiliary request 1 (i.e. the form found allowable by the opposition division) read as follows:
"1. A method of performing a multiple shifting operation on a bicycle (10) comprising the steps of:
a) determining whether a shifting switch has been manually actuated;
b) outputting a first shift signal in response to the manual actuation of the shifting switch;
C) electrically performing an initial single shifting operation;
d) determining whether the initial shifting operation has been completed;
e) inhibiting the output of a second shift signal in response to the manual actuation of the shifting switch until it has been determined that the initial single shifting operation has been completed;
f) electrically performing a further single shifting operation in response to the second shift signal; and
g) repeating steps a)-f) until it is determined that the multiple shifting operation has been completed."
"7. A bicycle shift control shift device (40) comprising:
an upshifting switch (22a) and a downshifting switch (23a);
a shift signal output unit (50) adapted to output a first and second shift signal in response to manual actuation of one of the upshifting and downshifting switches (22a, 23a) to perform a multiple shifting operation;
shifting operation determining means; and control means for inhibiting the output of the second shift signal until the shifting operation determining means has determined that a single shifting operation has been completed after the output of the first shift signal."
III. The proprietor (appellant 1) and the opponent (appellant 2) filed appeals against this decision. In its grounds of appeal, appellant 1 requested maintenance of the patent with amended claims according the main request underlying the impugned decision.
IV. In a communication in preparation for oral proceedings, the Board informed the parties of its preliminary opinion that the amended subject-matter according to the main request and according to the auxiliary request considered allowable by the opposition division, appeared to extend beyond the content of the application as filed.
V. In preparation for oral proceedings, appellant 1 submitted with letter dated 14 September 2012 (in the context of its own appeal) an amended main request, including only the device claims as granted, together with auxiliary requests 1 to 6 , each including amended method and device claims.
VI. Oral proceedings before the Board of Appeal were held on 18 October 2012. Concerning its own appeal, appellant 1 submitted an amended main request replacing the previous main request of 14 September 2012 and modified the auxiliary requests filed therewith by deleting - in auxiliary request 1 - the device claims, and by withdrawing auxiliary requests 2 and 4 to 6 . Moreover appellant 1 submitted auxiliary request 7 . With respect to the appeal of appellant 2 and the requests underlying the impugned decision, appellant 1 withdrew auxiliary request 2.
VII. Appellant 1 requested - concerning its own appeal that the decision under appeal be set aside and the European patent be maintained on the basis of the main request, filed 18 October 2012 or on the basis of one of auxiliary requests 1 (whereby claims $7-13$ were deleted) or 3, filed 14 September 2012, or on the basis of auxiliary request 7, filed 18 October 2012 (whereby the word "single" in line 10 was deleted).

Concerning the appeal of the opponent, appellant 1 requested that this appeal be dismissed.
VIII. Appellant 2 requested that the decision under appeal be set aside and that the patent be revoked.
IX. The single independent claim of the main request of appellant 1 as submitted during the oral proceedings (18 October 2012) is worded as follows:
"1. A bicycle shift control device (40) comprising: an upshifting switch (22a) and a downshifting switch (23a);
a shift signal output unit (50) adapted to output a first and second shift signal in response to manual actuation of one of the upshifting and downshifting switches (22a, 23a) to perform a multiple shifting operation;
shifting operation determining means; and control means for inhibiting the output of the second shift signal until the shifting operation determining means has determined that a single shifting operation has been completed after the output of the first shift signal."
X. The single independent claim of auxiliary request 1 submitted on 14 September 2012 has the following wording:
"1. A method of manually manipulating a shift control member to perform a multiple shifting operation on a bicycle (10) comprising the steps of:
a) electrically performing a single shifting operation;
b) determining whether the single shifting operation has been completed;
c) repeating steps a) and b) until it is determined that the multiple shifting operation has been completed,
wherein step c) is performed only after it has been determined that the single shifting operation has been completed."

The independent claims of auxiliary request 3 have the following wording:
"1. A method of performing a multiple shifting operation on a bicycle (10) comprising the steps of:
a) determining whether an upshifting switch (22a) has been actuated in a manual shifting procedure;
b) sending a corresponding first shift signal to a rear derailleur (33) or front derailleur (27);
C) electrically performing a single shifting operation;
d) determining whether the single shifting operation has been completed;
e) inhibiting the generation of a second shift signal after the generation of the first shift signal by ensuring that the single shifting operation of step c) has been completed before allowing the output of another shift signal; and
f) repeating steps a) to e) until it is determined that the multiple shifting operation has been completed."
"7. A bicycle shift control device (40) comprising: an upshifting switch (22a) and a downshifting switch (23a);
a shift signal output unit (50) adapted to output a first signal in response to manual actuation of one of the upshifting and downshifting switches (22a, 23a) and second shift signal in response to manual actuation of one of the upshifting and downshifting switches (22a, 23a) to perform a multiple shifting operation; shifting operation determining means; and
control means for inhibiting the output of the second shift signal until the shifting operation determining means has determined that a single shifting operation has been completed after the output of the first shift signal."

The independent claims of auxiliary request 7 have the following wording:
"1. A method of performing a multiple shifting operation on a bicycle (10) comprising the steps of: a) electrically performing a single shifting operation; b) determining whether the shifting operation has been completed;
C) repeating steps a) and b) until it is determined that the multiple shifting operation has been completed, wherein step c) is performed after waiting for a predetermined standby time and only after it has been determined that the shifting operation has been completed, wherein the method includes sensing the speed of the bicycle (10), wherein the predetermined standby time is variable for each shift signal and is a function of the sensed bicycle speed."
"4. A bicycle shift control device (40) comprising: a shift signal output unit (50) adapted to output a first and second shift signal to perform a multiple shifting operation; shifting operation determining means; control means for inhibiting the output of the second shift signal until the shifting operation determining means has determined that a single shifting operation
has been completed after the output of the first shift signal;
a speed sensing unit (42) operatively coupled to the shift signal output unit (50) for sensing bicycle speed;
a revolution sensing unit (42) operatively coupled to the shift signal output unit (50) for sensing revolution of a bicycle component (14); and one or more shift position sensors."
XI. The arguments of appellant 1 concerning its own appeal may be summarised as follows:

Main request
(a) This request constituted an appropriate reaction following the discussion in the oral proceedings with respect to the main request submitted on 14 September 2012. The wording of claim 1 had already been discussed before the opposition division and could not come as a surprise to the other party. The amendments were based essentially on paragraph [0002], in particular column 1, lines 23/24, and the particular embodiment of the patent (e.g. column 7, lines 41-46). Although the wording of this claim, similar to the wording of the granted claim, covered embodiments in which a single actuation might arguably result in the output of two shifting signals, the claim did not define this explicitly nor was it limited to this.

Auxiliary request 1
(b) Claim 1 resulted from the combination of originally filed (and granted) claims 1 and 2. The skilled person derived from paragraph [0002] that the invention could be performed by manual actuation of shift control members. Further, claim 14 and paragraph [0015] confirmed the general teaching derived from paragraphs [0002, 0004 that the device of the invention also embodied such a manual operation mode commonly known from conventional devices. Claim 14 could thus not be understood as being limited to the device of claim 8. The subject-matter of claim 1 also clearly passed the novelty-test.

Auxiliary request 3
(c) Claim 1 was based on claim 1 as granted and on the following passages of the description: for feature a) basis could be found in column 7, lines 25 to 28; for features b) and e) in paragraph [0001] and [0030] and column 7, lines $34 / 35$ and 39 to 45. The steps S23 and S24 in the flowchart of Figure 8 were clearly recognisable by a skilled person as being separate and independent from the remaining steps.

Auxiliary request 7
(d) The independent claims 1 and 4 of this request were pure combinations of granted claims 1, 2, 3, 5 and 6, and of granted claims 8 to 11. Granted claim 3 was dependent on claims 1 or 2 . The
resulting combination in claim 1 could therefore not contravene Article 123(2)/(3) EPC with respect to the divisional application as filed, nor would any objection arise in view of the content of the parent application as filed which had been a matter of concern of the Board when considering amendments outside the granted claims. The amendments to the claims constituted an appropriate reaction in view of the objection concerning the extension of subject-matter beyond the content of the application as filed, which was raised by appellant 2 only in its letter of reply to the appeal of appellant 1 . Given the course of proceedings, the only way to counter the objections by amendment was to revert to the granted claims. Appellant 1 was unable to make this amendment earlier before becoming aware of the conclusions drawn by the Board in the oral proceedings, taking into account in particular that the opposition division had itself not questioned the disclosure in view of application as filed.
XII. The arguments of appellant 1 concerning the appeal of appellant 2 may be summarised as follows:

Auxiliary request 1 underlying the impugned decision
(e) The features in independent claims 1 and 7 could be found in the application as filed, notably in Figure 8. The skilled person would have understood from the flowchart in Figure 8 that as part of the method shown therein it was determined whether the upshift or downshift switch was actuated, hence


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step a) was disclosed. The inhibiting step d) was derived from original claim 1 and from the "complete" loop disclosed in Figure 8. As long as the method remained in the loop the output of a further signal was inhibited. Moreover, in its grounds of appeal, appellant 2 had objected to the expression "initial shift" only with regard to the disclosure in the sense of not being able to carry out the invention. It was only after the Board had issued its preliminary opinion that appellant 2 considered this, and the other amendments, to violate Article 123(2) EPC.


XIII. The arguments of appellant 2 regarding the appeal by appellant 1 may be summarised as follows:

## Main request

(a) Paragraph [0002] was directed only to the prior art and could therefore not serve as a disclosure of features in relation to the invention. It offered no basis for a device with which a single actuation of a switch resulted in the output of two shift signals. The description disclosed an embodiment of a control device with a number of further features which were not defined in the claims and which specifically operated in accordance with the flowcharts of Figures 7 and 8. Figure 8 represented a flowchart of a subroutine executed as part of the procedure shown in Figure 7 and showed that a number of other conditions were to be checked, none of which was defined in the claim.

Auxiliary request 1
(b) For the same reason as before, paragraph [0002] provided no basis for the amendments to the method claim. Original and granted claim 1 did not define a manual or automatic operation mode, whereas the amended method claim was limited only to a manual mode. The only disclosure of the manual operation mode was in the context of particular switches and the particular functions shown in the flowcharts.

Auxiliary request 3
(c) The flowchart in Figure 8 on which the amendments to the method claim allegedly were based related only, inter alia, to the operation of the rear derailleur, which was however not specified in the claim. It should also be noted that the parent application as filed did not disclose any such method.

Auxiliary request 7
(d) The request was not a pure combination of granted claims, because the expression "and only after" introduced a second condition to be met before the repeating step c) was performed, whereas claim 3 as granted (which the proprietor had used as its basis for amendment) used the wording "including waiting for...". This led to problems under Article 123 EPC and Article 84 EPC 1973. The description of the embodiment only disclosed a loop which had the effect that the program was "waiting" until the shift was completed. The


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criteria which could be evaluated in this loop for determining completion were for example the lapse of a certain time span or the number of revolutions of the crank arms or the wheel (see paragraphs [0019, 0024, 0028, 0029]). This "waiting" loop, and nothing else, was the only step in which it was "determined" whether the shifting operation had completed and it was tested only upon one of the disclosed criteria.


XIV. The arguments of appellant 2 in view of its own appeal may be summarised as follows:

Auxiliary request 1 underlying the impugned decision
(e) The manual actuation of the switches was only disclosed with respect to the particular embodiment disclosed in the patent, see in particular Figures 7 and 8. These Figures did not represent a basis for the generalised method of claim 1.

## Reasons for the Decision

The appeal of appellant 1
1.

In its grounds of appeal, appellant 1 requested maintenance of the patent based on the amended claims constituting its main request on file before the opposition division and found unallowable in the impugned decision. The main request and the auxiliary requests 1, 3 and 7 with which the appellant 1 finally requested that the patent be maintained before the

Board were all filed after the period for submitting the grounds of appeal had expired. These requests thus represent amendments to the case of appellant 1 which may be admitted and considered at the Board's discretion (Article $13(1)$ Rules of Procedure of the Boards of Appeal, RPBA). Since none of these requests was prima facie allowable, in the sense that it overcame the raised objections and did not introduce any further objection, the Board exercised its discretion not to admit them into the proceedings. The reasons are as follows.
2. Main request
2.1 Appellant 1 considered the main request filed during the oral proceedings as an appropriate reaction to the preceding discussions on the admissibility of the previously submitted main request. Consequently, in the appellant's view, the request should have been admitted, in particular since it was allegedly also clearly allowable.
2.2 Already in the light of the preliminary opinion of the Board stated in its communication in preparation for the oral proceedings, this argument fails. The Board had considered in item 3 thereof that the amendments to claim 7 of the main request and auxiliary request 1 underlying the impugned decision seemingly did not meet the requirement of inter alia Article 123(2) EPC (n.b. claim 7 was identical in both requests). Present device claim 1 corresponds to this claim 7, except for the term "shift" omitted in claim 1 between the terms "control device" in the preamble, which does however not change the evaluation of the relevant features.

Subject-matter which the Board had already considered to contravene a requirement of the EPC cannot reasonably be expected to be seen as clearly or prima facie allowable when again submitted in another auxiliary request.
2.3 Also the arguments presented by the appellant 1 with respect to the disclosure of this subject-matter in the application as filed did not make it immediately clear that the Board's preliminary opinion was wrong and that consequently the request would have (at least) overcome the previously raised objections against it (here: with respect to the subject-matter of claim 7 underlying the requests to overcome the impugned decision).
2.3.1 Amended claim 1 specifies that the shift signal output unit shall be adapted to output a first and second shift signal "in response to manual actuation of one of the upshifting and downshifting switches". A technically reasonable interpretation of the claimed subject-matter resulting from the inclusion of this wording is that the output unit shall be adapted to output two signals in response to a single actuation of one of the switches. This is also the meaning given to it by the opposition division (see page 8 of the impugned decision, line 6 from the bottom).
2.3.2 Appellant 1 argued that the granted claims 1 and 8 covered such embodiments, so that the amendment could not result in added subject-matter. Although granted device claim 8 is indeed broader than the device claim 1 of this main request, and therefore would arguably have encompassed such an embodiment, the specific
embodiment now claimed due to the added limitation was not disclosed.
2.3 .3

Paragraph [0002] of the application as filed, to which appellant 1 referred in particular as a basis for the feature "in response to manual actuation...", contains a summary of - notably - the prior art of shifting devices capable of shifting gears electrically or hydraulically (see column 1, lines 9/10). That such prior art devices may operate in either an automatic or a manual mode is disclosed in lines 19 to 25. Accordingly, in a manual mode, the output of shift signals may result from the manual actuation of one or more shift control members. Moreover, this passage of the description is only concerned with the prior art and does not refer to the invention disclosed in the application underlying the patent in suit and in particular there is no direct and unambiguous disclosure of a relationship between the number of actuations of the shift control member, let alone of an upshifting or downshifting switch, and the number of shift signals generated by the output unit in response thereto.
2.3.4 According to the flowchart in Figure 8, to which appellant 1 also referred, shift signals are separately generated after it has been determined that a corresponding up- or downshifting switch had been actuated. Apart from the fact that the flowchart of Figure 8 is a particular embodiment of a subroutine executed as part of a main processing routine (see Figure 7) run on the control unit of the particular embodiment of a shift control device, which device and routines comprise a number of additional device and
functional features which notably have not been defined in the claim, there is no basis in this embodiment that a single manual actuation of a shift control member, let alone an up- or downshifting switch, generates a first and a second shift signal. The further passage in the application as filed, column 7, lines 40 to 45, referred to by appellant 1, discloses the consequences of one of the switches being continuously actuated: the output of another shift command is not allowed. This does clearly not disclose that a single actuation generates two shift signals.
2.3.5 Appellant 1 could not point to any other passage of the application as filed, and the Board itself is also unable to identify any such passage, which would allow the above-mentioned feature to be directly and unambiguously be derived.
2.3.6 The arguments of appellant 1 concerning the disclosure of the subject-matter of claim 1 in the application as filed were thus found non-persuasive. The Board therefore had no reason to deviate from the preliminary opinion expressed in its communication in view of the requirement of Article $123(2)$ EPC with respect to the same subject-matter already present in the then pending requests.
2.4 The main request was thus at least not prima facie allowable and was therefore not admitted into the proceedings.
3. Auxiliary request 1
3.1 Claim 1 of this request is based on granted claim 1 of the patent in suit in which inter alia the statement "manually manipulating a shift control member" has been inserted after the expression "[a] method of". The subject-matter resulting from this amendment also cannot be directly and unambiguously derived from the application as filed.
3.2 The method according to originally filed claim 1, which is identical to claim 1 as granted is nowhere else mentioned in the application as filed. The description of the invention, and in particular of the only embodiment, does not disclose any such general method but only the processing routines illustrated in the flowcharts of Figures 7 to 9 and explained in paragraphs [0016] to [0029]. None of the originally filed or granted method claims, nor the independent device claim specifically defined a manual shifting mode.
3.2.1 Device claim 14 as originally filed is dependent on independent device claim 8 and defines that the device has (both) a manual and an automatic operating mode. The device claims do not comprise any reference to the method claims and neither of claims 14 or claim 8 defines the manual manipulation of a general shift control member, nor are they unambiguously limited to electrical shifting devices. Although the mention of the manual operation mode in claim 14 as well as in paragraph [0015] referred to by appellant 1 implies some manual actuation of some control element, such implicit disclosure is made in the specific context of
the device defined in claim 8 and disclosed in the description, and not with respect to a general method as defined in originally filed and granted claim 1.
3.2.2 As has been stated above, paragraph [0002] of the application as filed relates to conventional prior art devices and does not establish any explicit or implicit link between the prior art and the methods (and/or devices) of the invention disclosed in the application underlying the patent in suit. In particular it does not provide any link between methods of manually manipulating a shift control member in prior art devices and the method step c) defined in the claim, i.e. of electrically performing a single shifting operation. The paragraph in its introductory portion refers generally to known devices for shifting gears electrically or hydraulically. In the following it mentions devices with manual and/or automatic modes of operation and, for prior art devices which allow manual shifting, that this is based on the manual actuation of one or more shift control members. In this context there is no indication given even of whether electrically or hydraulically shifting devices are considered. The paragraph also refers to "motors" and the generation of "shift signals" but also these terms are not unambiguously indicative of electrically performing a shifting operation, since these expressions may also be understood in the context of the control of shifting gears hydraulically.
3.2.3 Appellant 1 considered that, if the novelty test were applied, no new subject-matter was present. Irrespective of whether this test should indeed be applied, it results already from the foregoing
conclusions that the subject-matter of amended claim 1 would also have to be considered novel with respect to the content of the application as filed; the specific manual shifting method resulting from the amendment is not disclosed in the application as filed.

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3.3 Since the subject-matter of claim 1 of auxiliary
request 1 contravenes the requirement of Article 123(2)
EPC, auxiliary request 1 is not prima facie allowable.
4. Auxiliary request 3
4.1 For similar reasons also the auxiliary request 3 is not prima facie allowable.
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In method claim 1 of this request, additional method steps a) and b) have been defined. Furthermore the subject-matter of granted claim 2 has been included as a final step f) and adapted to the preceding steps. The resulting method of performing a multiple shifting operation defines a loop in which essentially the sequence of steps a) determining of manual actuation of an upshifting switch, b) sending of a first shift signal, c) electrically performing a shift, d) determining whether the shifting operation completed and e) inhibiting the generation of a second shift until the first shifting has completed, are repeated (step f) until it is determined that the multiple shifting operation is completed.
4.2 As has been stated above a general shifting method according to original and granted claim 1 is not explicitly or implicitly disclosed in the description and in the Figures of the application as filed. In view
of the addition of the method steps a) and b) the appellant 1 argued that the skilled person would consider these to be disclosed as separate and independent method steps in Figure 8 and the corresponding passages of the description, so that in view of the original and granted method claim a multiple shift method with the steps a) to f) was also disclosed. Figure 8 is a flowchart of a subroutine executed as part of a main processing routine carried out in the control unit of the shift control device. In this subroutine it is indeed determined whether an upshifting switch had been actuated. If so, and on the condition that the actual gear is not already the highest gear, an upshift signal is generated and the upshift performed. A waiting loop is entered, waiting until this upshift is completed. The subroutine then continues by determining whether a downshifting switch was actuated. This is clearly in contradiction to the claimed method which sets out that after the completion of the first shift (steps b) to e)) it is again determined whether the upshifting switch has been actuated. Such a possibility of repeated upshifts, in which all the other intermediate processing steps disclosed in combination in Figures 7 and 8 are omitted, is not directly and unambiguously disclosed anywhere in the application as filed. The skilled person does not receive any indication from the description or the Figures that any of the intermediate steps in the subroutine and main processing routine carried out on a specific shift control device might be omitted so that these routines could be reduced to a general method of consecutive multiple shifts with only those steps defined in claim 1 . It is also not relevant that the original and granted method claim covered repeated or
multiple shifts since the method has been limited by the addition of specific features from the only embodiment disclosed and for which a basis for an allowable generalisation has not been provided. Albeit not required for consideration in view of the aforegoing deficiency, it is however noted for completeness that also the parent application as filed did not disclose any specific method of operation and did not have any claims to same, let alone provide any other basis for operation beyond that in the flowcharts of Figures 7 to 9.

## 5. Auxiliary request 7

5.1 Contrary to the allegation of appellant 1 , the subjectmatter of claim 1 is not a pure combination of the wording of inter alia granted claims 1, 2 and 3.

Amended claim 1 combines the features of claims 2 and 3 by the conjunction "and" which results in two independent conditions which have to be met before step c) is performed. Claim 3 when depending on claim 2, which is the option selected by the appellant 1 arising from the dependence on either claim 1 or 2 , does not unambiguously define the waiting for a predetermined standby time as an additional and independent condition to that of claim 2. Although the term "including" might not strictly exclude an interpretation that other steps might be foreseen in addition to the waiting, such a mere possibility in the claims cannot be considered as a direct and unambiguous disclosure of same. Having regard to the description and the Figures there is no doubt that the only disclosure for a step of determining the completion of the shift operation in the subroutine, which must be considered as an
embodiment of the claimed method, is identical with and not additional to the waiting step (see the loops S27, S29 in Figure 8 and S48, S51 in Figure 7; paragraphs [0019, 24, 28, 29]). In the light of the entire disclosure of the application as filed, the skilled person would thus have understood the feature of claim 3 as a further specification of the feature in claim 2 so that the amended claim introduces subjectmatter extending beyond the content of the application as filed and therefore contravenes the requirement of Article 123(2) EPC.

The request is thus at least not prima facie allowable.
5.2 Furthermore, the amendment to the claims in auxiliary request 7 constitute a complete change of the appellant-proprietor's case which occurred at the latest possible stage in the proceedings and which raises complex issues that have never been considered before in the proceedings. Whereas during the opposition proceedings and throughout the written part of the appeal proceedings the appellant 1 consistently presented requests and arguments aimed at the manual operation mode of the shift control device, it was only in the course of the oral proceedings before the Board of Appeal and after extensive discussion of a number of requests, all essentially directed to the manual operation mode, that the appellant 1 reverted to amendments based on only the granted claims. The subject-matter thereby changed from methods and devices for manual multiple shifting to a method and device for multiple shifting in general but with features for determining shift completion in a particular way. The change of subject-matter is so complex that it would
have entailed, for example, at least a new assessment of the prior art and a reformulation of the technical problem. The Board and appellant 2 could not reasonably be expected to deal with such a complex amendment to the case of appellant at that stage of the proceedings.

The Board cannot accept that the appellant 1 became aware of the difficulties arising under Article 123(2) EPC from the limitation by features taken from the description of the application as filed only during the oral proceedings. The opponent had already objected to similar amendments before the opposition division at least with respect to the main request underlying the impugned decision (see reasons II. 2 b of the impugned decision). Although not expressis verbis referring to Article 123(2) EPC, the appellant 2 also contested in the grounds of appeal the disclosure of certain features (see grounds of appeal of appellant 2, page 4, item 5, third paragraph and page 5, first paragraph). With the communication of the Board in preparation to the oral proceedings, the appellant 1 was already made aware that the Board saw serious problems with the disclosure of the subject-matter of the then pending main and auxiliary requests in inter alia the application as filed. Reverting to the granted claims could and should have been done at latest when filing any further requests for the oral proceedings.

Notwithstanding the fact that the request is anyway not prima facie allowable with regard to Article 123(2) EPC, it constitutes a complex change of subject-matter filed at the latest possible state in the proceedings. Also for this reason the Board exercised its discretion
according to Article $13(1)$ RPBA not to admit the request into the proceedings.
6. Since none of the requests of appellant 1 was admitted into the proceedings, the appeal of appellant 1 must be dismissed.

The appeal of appellant 2
7. Claim 7 of auxiliary request 1 which was considered by the opposition division to meet the requirements of the EPC is identical to claim 1 of the main request submitted by appellant 1 in its own appeal (cf. item 2 above). Claim 7 does consequently also not meet the requirement of Article 123(2) EPC. Already for this reason, the patent cannot be maintained in the form considered allowable by the opposition division.
8. Also the method claim 1 of this auxiliary request 1 does not meet the requirements of the EPC. In its communication in preparation for the oral proceedings, the Board noted inter alia under item 1.1
"By the addition of feature "a)" the claimed method is seemingly intended to be limited to an embodiment of the manual shifting operation mode depicted in Figure 8. The flow chart shown therein does not appear to disclose any general determining step corresponding to the above feature "a)", rather it apparently comprises, among a number of preceding omitted steps, two subsequent series of procedures following on from respective determinations as to whether the upshifting or downshifting switches have been actuated. It may have to be discussed whether the application (and
indeed the earlier application) as originally filed provides any further basis for the generalisation of these steps and the omission of the remaining steps disclosed in combination in Figures 7 and 8 and the description relating thereto (Articles 123(2) and 76(1) EPC."

This objection addressed the then pending main request, which had not been allowed by the opposition division, but applied also to the auxiliary request 1 (see item 4 of the Board's communication). Appellant 1 was unable to indicate any such "further basis" for the generalisation claimed. That the skilled person would allegedly have understood from Figures 8 and the corresponding passages of the description in the light of the original general method claim 1 that the specific determining steps in this Figure could have been generalised is unconvincing. Without any further indication, in the form of statements to such possible generalisations or optional features or in the form of additional embodiments, the skilled person asked to determine the disclosure of an application as filed does not have any indication leading to any such generalisation of the disclosed embodiments. Once again, the general method claim originally filed does not implicitly teach the skilled person in this sense, since the description and Figures do not disclose any general method but rather a main routine and subroutine implemented in the control unit of a specific shift control device. The Board thus finds no reason to alter its view expressed in its communication and concludes that, at least by the addition of feature a), the subject-matter of claim 1 of the request found allowable by the opposition division extends beyond the

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content of the (earlier and divisional) application as filed, contrary to Article \(123(2)\) EPC.
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9. In the appeal of appellant 2, appellant 1 cannot pursue the main request underlying the impugned decision because it would be prohibited by the principle of reformatio in peius. Since auxiliary request 2 submitted before the opposition division was withdrawn during the appeal proceedings, there is therefore no request which meets the requirements of the EPC. The patent must therefore be revoked.

## Order

## For these reasons it is decided that:

1. The decision under appal is set aside.
2. The European patent is revoked.
