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Datasheet for the decision of 20 May 2015

Case Number: T 0422/10 - 3.5.07

Application Number: 00921559.1

Publication Number: 1183689

IPC: G11B27/10, G11B27/031

Language of the proceedings: EN

Title of invention:
System for automatic playback position correction after fast forward or reverse

Applicant:
TiVo, Inc.

Headword:
Overshoot correction/TIVO

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - all requests (no)

Decisions cited:

Catchword:

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Case Number: T 0422/10 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 20 May 2015

Appellant: (Applicant)	TiVo, Inc. 2160 Gold Street P.O. Box 2160 Alviso, CA 95002-2160 (US)
Representative:	Dendorfer, Claus Dendorfer & Herrmann Patentanwälte Partnerschaft mbB Bayerstrasse 3 80335 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 16 September 2009 refusing European patent application No. 00921559.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	R. Moufang
Members:	R. de Man
	P. San-Bento Furtado

Summary of Facts and Submissions

I. The applicant (appellant) appealed against the decision of the Examining Division refusing European patent application No. 00921559.1.

II. The Examining Division decided that the subject-matter of the independent claims of a main request lacked inventive step in view of common prior-art multimedia devices such as a VCR and the common general knowledge of the skilled person in the field of multimedia devices, and that the independent claims of an auxiliary request were unclear.

III. With the notice of appeal, the appellant maintained the main request considered in the decision under appeal.

IV. In a communication accompanying a summons to oral proceedings, the Board expressed the provisional opinion that the subject-matter of claim 1 lacked inventive step. It drew attention to the following document, which the appellant had submitted to the United States Patent and Trademark Office in the proceedings for the related patent application with the publication number US 2009/136203:

D4: JP H6-245182, published 2 September 1994.

Attached to document D4 was an English translation.

V. With a letter dated 20 April 2015, the appellant submitted a clean copy of the claims of the main request together with three sets of claims according to first, second and third auxiliary requests. The letter indicated that detailed arguments regarding the merits

of the main request and the auxiliary requests would be presented within the next few days.

VI. With a letter dated 4 May 2015, the appellant submitted arguments, filed a new first auxiliary request and maintained the three auxiliary requests filed with the letter of 20 April 2015 as second, third and fourth auxiliary requests.

VII. In the course of oral proceedings held on 20 May 2015, the appellant withdrew the second, third and fourth auxiliary requests and filed a new second auxiliary request. At the end of the proceedings, the chairman pronounced the Board's decision.

VIII. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request or, in the alternative, on the basis of the claims of one of the first and second auxiliary requests.

IX. Claim 1 of the main request reads as follows:

"A process for automatically correcting the playback position within an audio or video program's material after a user terminates a fast forward or reverse progression through the program material, comprising the steps of:

receiving a first user command input;

playing the program material in fast forward mode or reverse mode in response to the first user command;

terminating the fast forward or reverse progression through the program material based on a second user command;

detecting by a media controller a current frame position in said program material where said termination occurred;

calculating a new frame position by adding a positional offset to said current frame position when reverse mode has been terminated or subtracting a positional offset from said current frame position when fast forward mode has been terminated, the positional offset being dependent upon the speed of the reverse mode or fast forward mode being terminated, to compensate for a user's reaction time when stopping the forward or reverse progression through the audio or video program; and

playing, by said media controller, the program material starting at said new frame position."

X. Claim 1 of the first auxiliary request differs from claim 1 of the main request in the insertion of the following text after the words "playing the program ... user command":

", wherein multiple speed fast forward or reverse modes are available"

XI. Claim 1 of the second auxiliary request differs from claim 1 of the main request in the insertion of the following text after the words "A process ... through the program material,":

"wherein the program material is stored on a hard disk of a system performing said process, said process"

Reasons for the Decision

1. The appeal complies with the provisions referred to in Rule 101 EPC and is therefore admissible.

2. *The invention*

The invention as claimed relates to "automatic overshoot correction". As explained in the background section of the present application, known multimedia devices commonly offer fast forward and reverse modes to enable a user to navigate through program material. If the user initiates one of these modes to aurally or visually search for a desired audio or video passage, it takes a certain amount of time for the user to recognise the passage and press a button to terminate the fast forward or reverse mode, and for the multimedia device to react to the user's command and stop the progression. The position where the program material is stopped is therefore normally not where the user had expected it to be. The invention addresses this problem by automatically correcting for this "overshoot".

3. *Main request - inventive step*

3.1 Document D4, paragraph [0001], discloses a magnetic recording and playback device that is capable of performing high-speed search playback. Paragraph [0006], last sentence, to paragraph [0008] explain that when the operator of the device uses the high-speed search playback mode to find a particular desired scene and performs a stop operation upon detection of the scene, the tape will only stop at a point past the scene.

3.2 The process of stopping the tape is discussed in paragraph [0008] with reference to points T0 to T4 on the timeline of Figure 7. The English translation of this paragraph reads as follows:

"The time of discovery of the desired scene during high-speed search playback is taken to be time T0. When the operator performs a stop operation of the magnetic recording and playback device due to this discovery of the desired scene, as shown in Figure 7 (a), the microcomputer for system control (referred to hereinafter as the system controller) receives this command at the time T1 at t1 seconds after the stop operation by the operator. Then at t2 seconds after this time T1, the tape stoppage command is output to the servo system. As shown in Figure 7 (b), at a time T2 at t3 seconds after the time T3, the servo system starts to decelerate the magnetic tape. Then at a time T4 at t4 seconds after the time T3, the magnetic tape stops."

It is clear that the penultimate sentence was intended to read "... at a time T3 at t3 seconds after the time T2, ...".

3.3 In the Board's view, time T0, i.e. "[t]he time of discovery of the desired scene during high-speed playback", refers to the time that the desired scene is seen by the operator, and time T1 refers to the time that the system controller receives the stop command. This means that the time period t1 between T0 and T1 includes the operator's reaction time.

The appellant agreed in respect of T1, but took the view that T0 referred to the time that the operator entered the stop command, so that the time period t1

did not include the operator's reaction time. The appellant based its view on the phrase "at t1 seconds after the stop operation by the operator".

3.4 The Board concedes that paragraph [0008] is not entirely clear in that the phrase relied on by the appellant appears to conflict with the definition of T0 as "[t]he time of discovery of the desired scene". However, paragraph [0013] confirms that the Board's reading is correct:

"Here, the high-speed search playback is taken to be performed at a 100-fold search speed v. Since a human generally requires about 0.3 seconds to start a certain action, t1 is taken to be 0.3 seconds. Moreover, although the times t2 and t3 depend on the microcomputer, an estimate of 1 msec is sufficient."

The Board is therefore convinced that the time period t1 includes the operator's reaction time.

3.5 Paragraph [0044] discloses that when a stop command is input, the system controller obtains the "value of the linear time counter" and causes the tape to stop. When the tape has stopped, the system controller uses this value to determine the "tape overrun amount" after receipt of the stop command until the tape has stopped. It then corrects for the "tape overrun amount" by running the magnetic tape in the reverse direction and causing it to stop at the playback position "when the stoppage command was given".

Paragraph [0044] hence discloses an embodiment in which overshoot is automatically corrected by rewinding the tape to the playback position at the time the system controller received the stop command, i.e. time T1.

3.6 Paragraph [0049], first sentence, essentially repeats this embodiment. The system controller measures the "tape movement amount" after receiving the stop command, and the magnetic tape is rewound to the playback position at the time the command was received.

Paragraph [0049], second sentence, then observes that "overrun of the magnetic tape 4 occurs after the scene of high-speed search playback is seen by the operator of the magnetic recording and playback device and the issuance of the command for stoppage or the like and until the system controller 36 receives this command".

Paragraph [0049], third sentence, continues: "In order to compensate for this tape overrun amount, it is possible for the system controller 36 to impart an offset of a fixed amount according to the search speed and to perform control such that the magnetic tape 4 rewinds to a position beyond that at the point in time at which this command was received".

In the Board's view, the second sentence refers to overshoot occurring between time T0 and time T1, and the third sentence refers to correcting also for this overshoot.

3.7 The appellant read paragraph [0049], second and third sentences, differently. This passage was not concerned with the reaction time of the operator, but with the delay between the time of issuance of the stop command and the time that the system controller received the command. The phrase "overrun of the magnetic tape 4 occurs after ... and until ..." clearly signified that the operations stated between the words "after" and "until" marked the start of the overrun period, while

the operation after the word "until" marked the end of the overrun time period. In other words, the overrun time period started when "the scene of high-speed search playback is seen by the operator of the magnetic recording and playback device and the issuance of the command for stoppage", and ended when "the system controller receives this command".

The appellant further submitted that magnetic tape devices as shown in document D4 had the general property that tape could not be stopped immediately when the operator pressed the stop button, but could only be slowly decelerated to a complete stop. Document D4 was concerned with these internal delays rather than the operator's reaction time.

3.8 It is true that document D4 is concerned with compensating for overshoot occurring during the deceleration of the tape, but this is overshoot occurring after receipt by the system controller of the stop command and is hence covered by the first sentence of paragraph [0049]. The second and third sentences refer to a period of overshoot occurring before, or until, the system controller receives the stop command. The same distinction is found in the claims of document D4, claim 1 including the feature "the magnetic tape rewinds to the playback position at the time of the command" and claim 2 including the feature "the magnetic tape rewinds past the playback position at the time of the command".

As the appellant stated, the start of this earlier period of overshoot is when "the scene of high-speed search playback is seen by the operator of the magnetic recording and playback device and the issuance of the command for stoppage".

Arguably, this phrase taken in isolation leaves some room for interpretation as regards the precise point in time to which it refers. But the Board considers that, in particular in view of the explanations given in paragraphs [0008] and [0013], the skilled person would understand it to refer to time T0, i.e. the point in time when the operator sees the "desired scene". This means that the overshoot correction discussed in paragraph [0049], second and third sentences, also compensates for the operator's reaction time.

3.9 In terms of claim 1, document D4 hence discloses a process for automatically correcting the playback position within a video program's material after a user terminates a fast forward progression through the program material. This process comprises an implicitly disclosed step of receiving a first user command input initiating playing the program material in fast forward mode. Paragraph [0049], second and third sentences, discloses receiving a second user command terminating the fast forward progression. In addition, the system controller of document D4 can be equated to the media controller of claim 1.

Document D4, paragraph [0049], second and third sentences, further discloses setting the playback position to a "new frame position" differing from the "current frame position" where the termination of the fast forward progression occurred by a positional offset that *inter alia* compensates for the user's reaction time when stopping the fast forward progression. From this position, normal playback may be resumed (see paragraph [0041]). In this context it is noted that the present application as well takes into account internal device delays including the time it

takes to react to the user's command and stop the media (see page 2, lines 6 to 15, of the description of the published application).

3.10 According to claim 1, the "new frame position" from which normal playback is resumed is determined by detecting the "current frame position", followed by a step of calculating the new frame position by adding or subtracting a suitable positional offset. At the oral proceedings, the appellant submitted that the device of document D4, after rewinding the tape, would not be able to restart playback exactly from a calculated frame position.

The Board agrees that rewinding the tape for a certain amount of time is unlikely to be so accurate that the tape can be stopped precisely at a calculated frame position. However, the present application on page 36, lines 15 to 17, states that the invention's overshoot correction can be applied to various video or audio applications and in particular to VCRs. In addition, at the oral proceedings the appellant conceded that even if the program material is in a digital format such as an MPEG video format, the skilled person would expect playback to restart not exactly from the calculated frame position, but from what is known in the art as an "intra frame" or "I-frame" near the calculated frame position.

The Board therefore considers that, in the context of the present application, the skilled person would understand the claim wording "starting at said new frame position" to cover inaccuracies that are typical of the particular audio or video playback technology used.

3.11 The appellant argued that the feature of claim 1 "the positional offset being dependent upon the speed of the reverse mode or fast forward mode being terminated" implied that multiple reverse or fast forward mode speeds were available. Document D4 contained no such disclosure.

The Board has some doubt that this feature clearly excludes application of the claimed process to multimedia devices offering only a single reverse or fast forward speed. However, since originally filed dependent claim 2 and the description of the present application on page 35, line 28, to page 36, line 1, disclose multiple reverse or fast forward speeds, and the appellant, by submitting its first auxiliary request, expressed its willingness to remove any ambiguity in this respect, the Board accepts the appellant's interpretation for the purpose of assessing inventive step.

The Board concurs with the appellant that document D4 does not disclose that the magnetic recording and playback device offers the user a choice from multiple search playback speeds.

3.12 In the Board's view, the skilled person would be aware that different search playback speeds are possible, and document D4 in fact mentions this (see e.g. paragraph [0001], "at a speed that is several tens of times or several hundreds of times the tape speed during recording"). Providing the user not with a single fast forward or reverse speed, but with a choice of multiple playback speeds, is hence an obvious design option.

The appellant countered that document D4 taught away from this feature in that paragraph [0049] disclosed

that the positional offset was "a fixed amount according to the search speed". The Board does not agree. This phrase merely teaches the skilled person trying to carry out the disclosure of document D4 that the magnitude of the overshoot correction to be applied is dependent on the search speed chosen. The skilled person wishing to implement multiple search speeds would therefore apply, for each search speed, a corresponding overshoot correction. This is the same approach as that disclosed on page 35, line 28, to page 36, line 1, of the description of the present application.

3.13 The sole distinguishing feature of claim 1 being obvious, the subject-matter of claim 1 does not involve an inventive step (Articles 52(1) and 56 EPC).

4. *First and second auxiliary requests - admission*

The first auxiliary request, filed on 4 May 2015, and the second auxiliary request, filed at the oral proceedings, were both filed after the final date for further written submissions set in the communication accompanying the summons to oral proceedings. However, since neither request raises issues which the Board cannot deal with, both are admitted into the proceedings (Article 13(1) and (3) RPBA).

5. *First auxiliary request - inventive step*

Claim 1 of the first auxiliary request explicitly specifies that multiple fast forward or reverse mode speeds are available. As this feature was already taken into account in the assessment of inventive step for claim 1 of the main request, the subject-matter of

claim 1 of the first auxiliary request likewise lacks inventive step (Articles 52(1) and 56 EPC).

6. *Second auxiliary request - inventive step*

6.1 Claim 1 of the second auxiliary request adds to claim 1 of the main request that the program material is stored on a hard disk of a system performing the claimed process. The appellant submitted that it had been the first to produce hard-disk-based digital video recorders for consumers.

6.2 At the priority date of the application, multimedia program materials in digital formats were well known in the art. Indeed, the present application makes extensive reference to MPEG video formats. Furthermore, it cannot reasonably be disputed that hard disks were well known at the priority date and known to be suitable for storing digital program materials.

6.3 The Board therefore considers that, at the date of priority, providing a digital video recorder comprising a hard disk represented an obvious further development of known multimedia devices. At the oral proceedings, the appellant, although not conceding the point, did not argue against it. In addition, it would have been obvious to provide such a video recorder with a fast forward or reverse mode including automatic overshoot correction as known from document D4. The skilled person would hence arrive at the subject-matter of claim 1 without the exercise of inventive skill.

6.4 Thus the subject-matter of claim 1 lacks inventive step (Articles 52(1) and 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

I. Aperribay R. Moufang

Decision electronically authenticated