EXHIBIT B-5

U.S. PATENT No. 6,912,351 ("Km")

ANTICIPATES / RENDERS OBVIOUS U.S. PATENT NO. 8,050,321

As described in the following claim chart, claims 8-11 of U.S. Patent No. 8,050,321 (the "'321 patent") are invalid in view of U.S. Patent No. 6,912,351 ("Kim"), entitled "Method and Device for Condensed Image Recording and Reproduction". Kim was issued on June 28, 2005, based on a US application filed October 19, 1998. Kim claims priority to a foreign application filed on January 6, 1998. Kim is prior art to the '321 patent under at least 35 U.S.C. § 102(e).

To the extent Complainant alleges that Kim along or in combination with any of the references identified in Exhibit B-11 does not disclose any particular limitation of the asserted claims of the '321 patent, either expressly or inherently, it would have been obvious to a person of ordinary skill in the art as of the priority date of '321 patent to modify Kim with: (1) the knowledge of one of ordinary skill in the art to show all the limitations of the claim; (2) the teachings of the prior art references set forth.

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
8[preamble] A method for decoding a compressed video sequence, the method comprising:	Kim, as evidenced by the example citations below, discloses a method for decoding a compressed video sequence. *See, e.g.*, Kim, 1:7-12: 1. Field of the Invention The present invention relates to a Time Lapse recording and reproducing method for optical disks, and more particularly, to a device and method for recording and reproducing video data on and from an optical disk using a Time Lapse recording/reproduction process. Kim, 2:1-6 Accordingly, an object of the present invention is to provide a recording method for compressing and intermittently recording image data on a recording medium with a maximum recording capacity. Kim, 2:7-9

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	Another object of the present invention is to provide a reproduction method for reproducing compressed intermittent data from a recording medium. Kim, 2:17-27: A method and device for reproducing data recorded on a recording medium, according to the present invention includes receiving a channel selection signal; reproducing image data recorded on a recording medium based on the channel selection signal; determining whether the image data corresponds to predictive-picture (P-picture) data; and generating a full screen image signal based on the image data if the image data does not correspond to P-picture data, or generating a full screen image signal based on intra-picture (I-picture) data corresponding to the image data if the image data corresponds to P-picture data. Kim, 2:57-61: A Time Lapse recording/reproduction device according to the present invention intermittently records compressed image data on an optical disc and reproduces the recorded image data with a high operation speed. Kim, 5:29-31: In Step S30, the image data corresponding to the user's request is transmitted and decoded in the decoder 111. *Further, to the extent Complainant contends this element is not expressly or inherently disclosed by Kim, it would have been obvious in view of the disclosures in Kim, in combination with the knowledge of a person of ordinary skill in the art, or in light of one or more of any of the references identified in Exhibit B-11.*
8[a] decoding from the video sequence an indication of at least one image frame, which is the first image frame, in decoding order, of an independent sequence, wherein all motion- compensated temporal prediction references of the independent sequence refer only to image frames within said independent sequence;	Kim, as evidenced by the example citations below, discloses decoding from the video sequence an indication of at least one image frame, which is the first image frame, in decoding order, of an independent sequence, wherein all motion-compensated temporal prediction references of the independent sequence refer only to image frames within the independent sequence. *See, e.g.*,

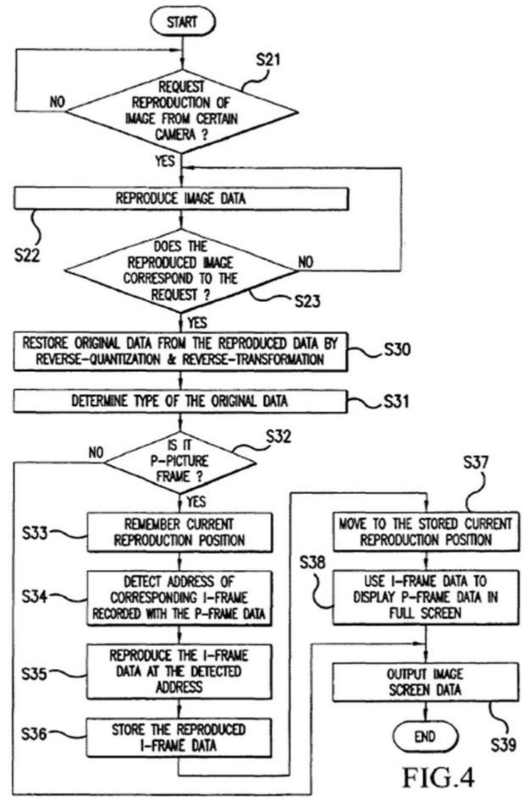
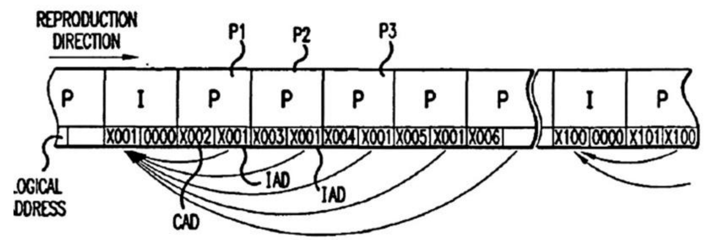
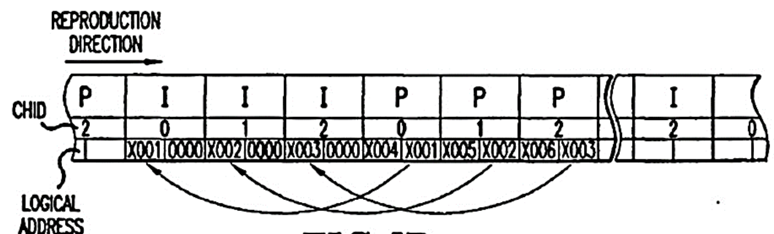
ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	Kim, Fig. 4: 

FIG.4

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	Kim, Fig. 5A  FIG.5A Kim, Fig. 6  FIG.5B Kim, 2:17-27: A method and device for reproducing data recorded on a recording medium, according to the present invention includes receiving a channel selection signal; reproducing image data recorded on a recording medium based on the channel selection signal; determining whether the image data corresponds to predictive-picture (P-picture) data; and generating a full screen image signal based on the image data if the image data does not correspond to P-picture data, or generating a full screen image signal based on intra picture (I-picture) data corresponding to the image data if the image data corresponds to P-picture data.

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	Kim, 2:48-51: FIGS. 5A and 5B illustrate examples of a logical data structure of a digital data stream compressed and recorded on the optical disk according to the present invention. Kim, 3:56-65: According to the transformation and quantization operation, image data (first image data) is compressed and generated in the form of I-picture frame data (first encoded data) by the encoder 110. The I-picture frame (intra-frame) data carries the entire image information of a frame. The generated I-picture frame data is transmitted to the MUX 130, and also stored in the frame memory 100 until it is updated by another image data according to the process described below. Kim, 4:15-27: In Step S10, if the value of the moving vector is less than the reference value (i.e., little change between two frames), the restored frame data (second image data) is output to the encoder 110 as a frame that has much less data than the I-picture frame, e.g., as a P-picture frame in MPEG. This P-picture frame is compressed by the encoder 110, which is then transmitted to the MUX 130. On the other hand, in Step S15, if the value of the generated moving vector is greater than the reference value, the restored image frame data is not generated as P-picture frame data, but is sent to the MUX 130 as encoded I-picture frame data from the encoder 110. Kim, 4:46-58: The bit stream generated and transmitted to the recording/reproducing unit 140 as described above has a logical structure as shown in, e.g., FIG. 5A. As shown therein, each P-picture frame P1, P2, P3 has a current address CAD indicating the current address of the P-picture, and an I-picture reference address IAD indicating the address of the corresponding (or previous) I-frame. If image signals are obtained from more than one camera, the bit streams generated and transmitted to the recording/reproduction unit 140 can have a logical structure as shown in, e.g., FIG. 5B. In addition to the shown in FIG. 5A, the data stream of FIG. 5B includes a camera (channel) ID code CHID indicating the identification code of each camera or a signal source. Kim, 4:59-5:7. FIG.6 shows an example of a data structure of the bit stream shown in FIGS. 5A and 5B to be recorded and reproduced on and from the optical disk medium. As shown therein, the data structure is divided to carry the physical address of the bit stream (1), the camera ID code (2), the address of the

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	corresponding I-picture frame (3), and picture data stored in the picture data area (4). In the first bit stream Bl, the I-picture data are stored in the picture data area (4) so that the address of the corresponding I-picture frame (3) is zero or absent. In the second bit stream B2, the P-picture data are stored in the picture data area (4) so that the address of the corresponding I-picture frame (3) is included in the bit stream. During reproduction, the address of the corresponding I-picture frame (3) is detected to retrieve from that address the corresponding I-picture frame data for the P-picture frame data. Kim, 5:8-6:8: FIG. 4 illustrates a flow chart depicting a reproducing method for reproducing compressed intermittent data (e.g., as shown in FIG. 6) recorded on a recording medium, such as an optical disk, according to the present invention. As shown in Steps S21 and S22 of FIG. 4, if the user requests reproduction of an image data from a particular camera or channel among the intermittent image data recorded on the optical disc 1, the controller 150 controls the recording/reproducing unit 140 to reproduce the corresponding image data from the optical disc 1. The image data reproduced from the optical disc 1 is multiplexed data, which is demultiplexed by the de-MUX 131. By demultiplexing, the camera (channel) ID code CHID is separated from the reproduced image data and output to the controller 150. Based on the camera ID code CHID, the controller 150 determines whether or not the reproduced image data corresponds to the selected camera or channel, in Step S23. This ensures that the correct image data is processed to comply with the user's request. If incorrect image data has been reproduced, the controller 150 controls the recording/reproduction unit 140 to reproduce the correct image data from the optical disc 1. In Step S30, the image data corresponding to the user's request is transmitted and decoded in the decoder 111. The decoding process of the decoder 111 involves reverse-quantization and reverse transformation to restore the original image data prior to data compression carried out during recording. Then the property (type) of the currently restored image data is determined in Step S31 by the reproducing DSP 121, and the determination result is transmitted to the controller 150. More specifically, if the currently restored image data is detected to be P-picture frame data in Step S32, the controller 150 stores the current reproduction position in Step S33. Then in Step S34, the controller 150 detects the address of the corresponding I-picture frame (e.g., data stored in the area (3) of the bit stream B2 shown in FIG. 6) from the reproduced image data output from the de-MUX 131, and reproduces based on the detected address the corresponding 45(or previous) I-picture frame data recorded on the optical disc 1 by controlling the recording/reproduction unit 140.

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	In Step S36, the reproduced corresponding I-picture frame data is processed by the reproducing DSP 121, and decoded by the decoder 111 to be stored in the frame memory 101. The controller 150, after Step S36, controls the recording/reproducing unit 140 to move the video heads to the original recording position stored in Step S33. In Step S38, in the reproducing DSP 121, the P-frame corresponding to the user's request signal is restored as a full screen image (background) using the corresponding I-picture frame data stored in the frame memory 101 and using the moving vectors obtained from the de-MUX 131. Then the full screen image data is reverse-transformed and reverse-quantized by the decoder 111, and stored in the memory 101 as the original image data corresponding to the user's request signal. The full screen image data is converted into an analog image signal by the D/A converter 91 and output as a reproduction signal in Step S39. On the other hand, in Step S32, if the detected image data is not a P-picture frame, then the detected image data is decoded by the decoder 111 as described above, and output as an analog image signal from the D/A converter 91 in Step S39. When the image data corresponding to the user's request signal is P-picture frame data, full screen image data can be obtained by retrieving corresponding or prior I-picture frame data based on the I-picture frame address recorded with the P-picture frame data. Kim, Claim 5: 5. A method for reproducing an image recorded on a recording medium, comprising: reading an image recorded on a recording medium; determining whether the image corresponds to a predictive picture frame, said predictive picture frame including added position information having an address for indicating a position of an intra picture frame; reading the intra picture frame based on the position information included with the predictive picture frame; and reproducing the predictive picture frame based on the intra picture frame. Kim, Claim 9: 9. A method of recording data using video heads on a recording medium with a camera, comprising: reproducing original image data generated by a camera; restoring original image data from the reproduced image frame data by reverse transformation; determining whether the original restored image data is intra-picture frame data or predictive picture frame data; if the restored image data frame is predictive picture frame data, storing the current reproduction position of the restored image frame data, detecting the address of the corresponding intra-picture frame data recorded with the predictive

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	picture frame data, reproducing an image frame based on the intra-picture frame data, storing the reproduced image frame data, moving the video heads to the stored current reproduction position, and using intra-picture frame data to display predictive frame data as full screen image data; if the original image frame data type is not predictive picture frame data, outputting the non-predictive picture frame data for recording. Kim, Claim 12: 12 A method for decoding predictive coded image data, comprising: determining if the image data has a predictive coding; wherein predictive coded image data includes identifying information of a reference image frame for specifying a reference image frame among previous image frames; detecting the reference image frame based on the identifying information; and decoding the image data based on the detected reference image frame. *Further, to the extent Complainant contends this element is not expressly or inherently disclosed by Kim, it would have been obvious in view of the disclosures in Kim, in combination with the knowledge of a person of ordinary skill in the art, or in light of one or more of any of the references identified in Exhibit B-11.*
8[b] starting the decoding of the video sequence from said first image frame of the independent sequence, whereby the video sequence is decoded without prediction from	Kim, as evidenced by the example citations below, discloses starting the decoding of the video sequence from the first image frame of the independent sequence, whereby the video sequence is decoded without prediction from any image frame decoded prior to the first image frame. *See, e.g.*,

<table>
<tr><th>ASSERTED CLAIMS</th><th>PRIOR ART REFERENCE:
Kim</th></tr>
<tr><td>any image frame decoded prior to said first image frame;</td><td>

Kim, Fig. 4:

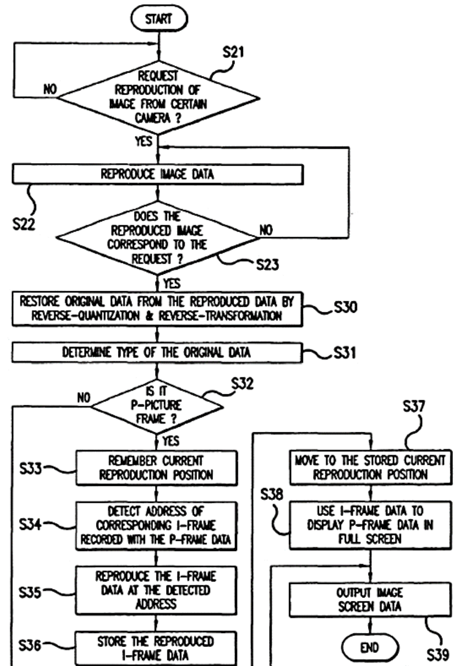


FIG.4

Kim, Fig. 5A:

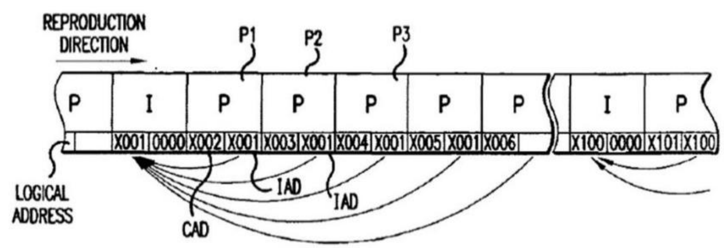


FIG.5A

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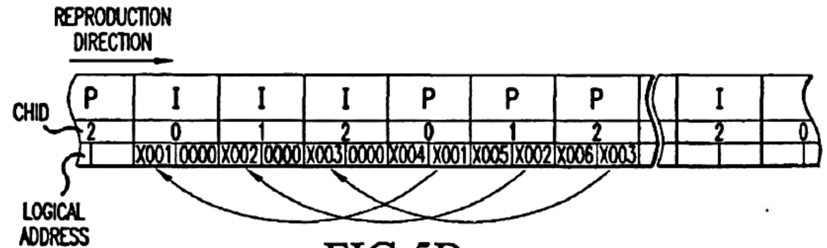
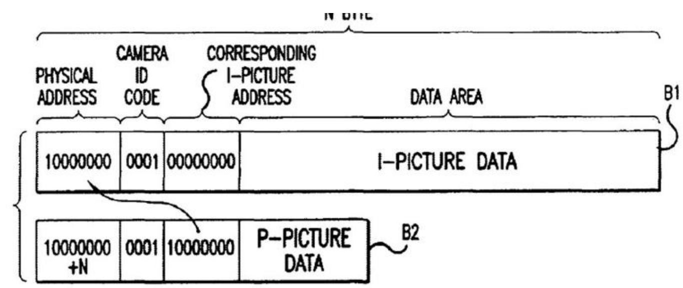
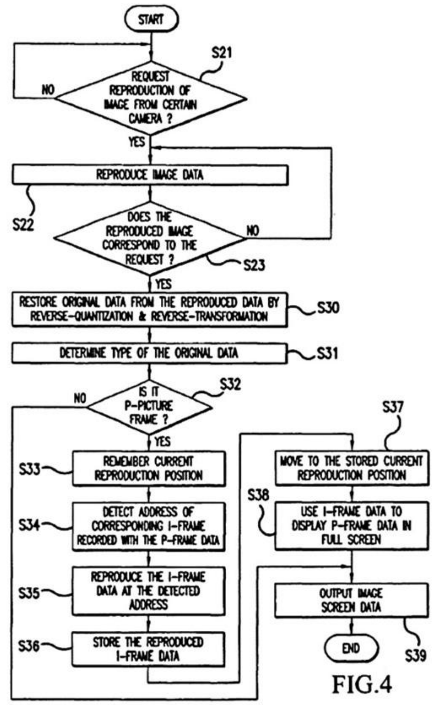
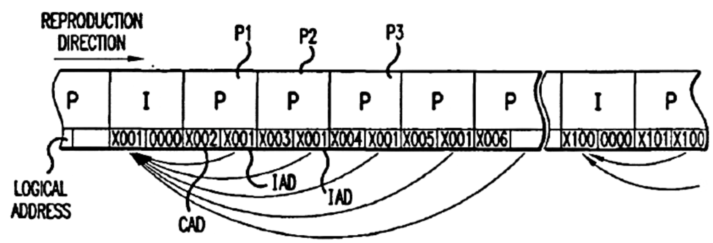
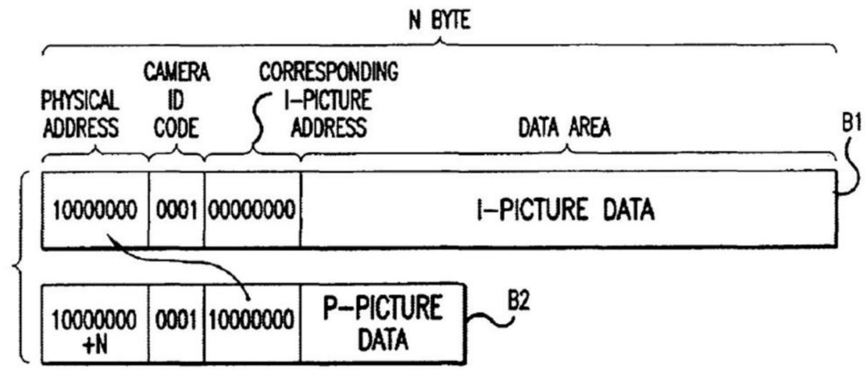
ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	Kim, Fig. 5B:  FIG.5B Kim, Fig. 6:  FIG.6 Kim, 4:46-58: The bit stream generated and transmitted to the recording/reproducing unit 140 as described above has a logical structure as shown in, e.g., FIG. 5A. As shown therein, each P-picture frame P1, P2, P3 has a current address CAD indicating the current address of the P-picture, and an I-picture reference address IAD indicating the address of the corresponding (or previous) I-frame. If image signals are obtained from more than one camera, the bit streams generated and transmitted to the recording/reproduction unit 140 can have a logical structure as shown in, e.g., FIG. 5B. In addition to the shown in FIG. 5A, the data stream of FIG. 5B includes a camera (channel) ID code CHID indicating the identification code of each camera or a signal source.

	Kim, 4:59-5:7: FIG.6 shows an example of a data structure of the bit stream shown in FIGS. 5A and 5B to be recorded and reproduced on and from the optical disk medium. As shown therein, the data structure is divided to carry the physical address of the bit stream (1), the camera ID code (2), the address of the corresponding I-picture frame (3), and picture data stored in the picture data area (4). In the first bit stream Bl, the I-picture data are stored in the picture data area (4) so that the address of the corresponding I-picture frame (3) is zero or absent. In the second bit stream B2, the P-picture data are stored in the picture data area (4) so that the address of the corresponding I-picture frame (3) is included in the bit stream. During reproduction, the address of the corresponding I-picture frame (3) is detected to retrieve from that address the corresponding I-picture frame data for the P-picture frame data. Kim, 5:8-6:8: FIG. 4 illustrates a flow chart depicting a reproducing method for reproducing compressed intermittent data (e.g.,as shown in FIG. 6) recorded on a recording medium, such as an optical disk, according to the present invention. As shown in Steps S21 and S22 of FIG. 4, if the user requests reproduction of an image data from a particular camera or channel among the intermittent image data recorded on the optical disc 1, the controller 150 controls the recording/reproducing unit 140 to reproduce the corresponding image data from the optical disc 1. The image data reproduced from the optical disc 1 is multiplexed data, which is demultiplexed by the de-MUX 131. By demultiplexing, the camera (channel) ID code CHID is separated from the reproduced image data and output to the controller 150. Based on the camera ID code CHID, the controller 150 determines whether or not the reproduced image data corresponds to the selected camera or channel, in Step S23. This ensures that the correct image data is processed to comply with the user's request. If incorrect image data has been reproduced, the controller 150 controls the recording/reproduction unit 140 to reproduce the correct image data from the optical disc 1. In Step S30, the image data corresponding to the user's request is transmitted and decoded in the decoder 111. The decoding process of the decoder 111 involves reverse-quantization and reverse transformation to restore the original image data prior to data compression carried out during recording. Then the property (type) of the currently restored image data is determined in Step S31 by the reproducing DSP 121, and the determination result is transmitted to the controller 150. More specifically, if the currently restored image data is detected to be P-picture frame data in Step S32, the controller 150 stores the current reproduction position in Step S33. Then in Step S34, the controller 150 detects the address of the corresponding I-picture frame (e.g., data stored in the area (3) of the bit stream B2 shown in FIG. 6) from the reproduced image data output from the de-MUX 131, and reproduces based

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	on the detected address the corresponding 45(or previous) I-picture frame data recorded on the optical disc 1 by controlling the recording/reproduction unit 140. In Step S36, the reproduced corresponding I-picture frame data is processed by the reproducing DSP 121, and decoded by the decoder 111 to be stored in the frame memory 101. The controller 150, after Step S36, controls the recording/reproducing unit 140 to move the video heads to the original recording position stored in Step S33. In Step S38, in the reproducing DSP 121, the P-frame corresponding to the user's request signal is restored as a full screen image (background) using the corresponding I-picture frame data stored in the frame memory 101 and using the moving vectors obtained from the de-MUX 131. Then the full screen image data is reverse-transformed and reverse-quantized by the decoder 111, and stored in the memory 101 as the original image data corresponding to the user's request signal. The full screen image data is converted into an analog image signal by the D/A converter 91 and output as a reproduction signal in Step S39. On the other hand, in Step S32, if the detected image data is not a P-picture frame, then the detected image data is decoded by the decoder 111 as described above, and output as an analog image signal from the D/A converter 91 in Step S39. When the image data corresponding to the user's request signal is P-picture frame data, full screen image data can be obtained by retrieving corresponding or prior I-picture frame data based on the I-picture frame address recorded with the P-picture frame data. Kim, Claim 5: 5. A method for reproducing an image recorded on a recording medium, comprising: reading an image recorded on a recording medium; determining whether the image corresponds to a predictive picture frame, said predictive picture frame including added position information having an address for indicating a position of an intra picture frame; reading the intra picture frame based on the position information included with the predictive picture frame; and reproducing the predictive picture frame based on the intra picture frame." Kim, Claim 5. Kim, Claim 9: 9. A method of recording data using video heads on a recording medium with a camera, comprising: reproducing original image data generated by a camera; restoring original image data from the reproduced image frame data by reverse transformation; determining whether the original restored image data is intra-picture frame data or predictive picture frame data; if the restored image data frame

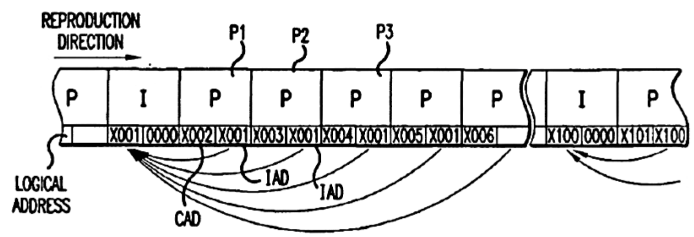
ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	is predictive picture frame data, storing the current reproduction position of the restored image frame data, detecting the address of the corresponding intra-picture frame data recorded with the predictive picture frame data, reproducing an image frame based on the intra-picture frame data, storing the reproduced image frame data, moving the video heads to the stored current reproduction position, and using intra-picture frame data to display predictive frame data as full screen image data; if the original image frame data type is not predictive picture frame data, outputting the non-predictive picture frame data for recording. Kim, Claim 12: 12 A method for decoding predictive coded image data, comprising: determining if the image data has a predictive coding; wherein predictive coded image data includes identifying information of a reference image frame for specifying a reference image frame among previous image frames; detecting the reference image frame based on the identifying information; and decoding the image data based on the detected reference image frame. *Further, to the extent Complainant contends this element is not expressly or inherently disclosed by Kim, it would have been obvious in view of the disclosures in Kim, in combination with the knowledge of a person of ordinary skill in the art, or in light of one or more of any of the references identified in Exhibit B-11.*
8[c] decoding identifier values for image frames according to a numbering scheme; and	Kim, as evidenced by the example citations below, discloses decoding identifier values for image frames according to a numbering scheme. *See, e.g.,*

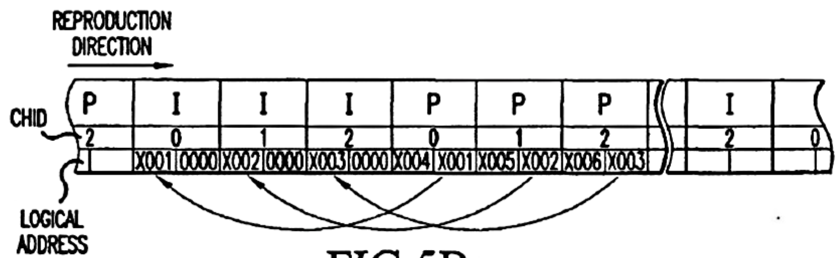
ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	Kim, Fig. 4:  FIG.4 Kim, Fig. 5A:  FIG.5A

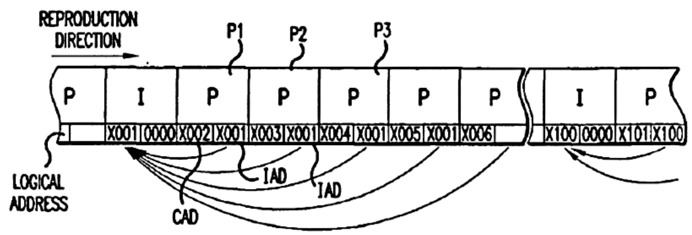
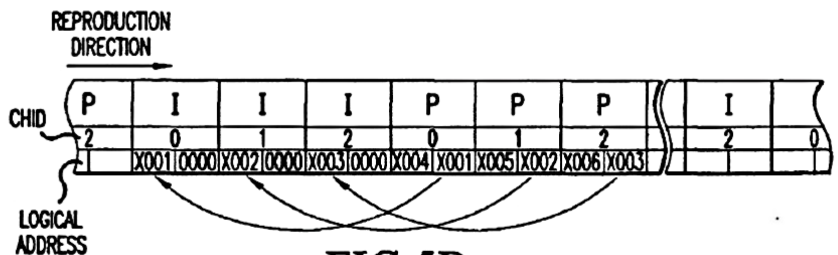
ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	Kim, Fig. 5B:  FIG.6 Kim, 4:46-58: The bit stream generated and transmitted to the recording/reproducing unit 140 as described above has a logical structure as shown in, e.g., FIG. 5A. As shown therein, each P-picture frame P1, P2, P3 has a current address CAD indicating the current address of the P-picture, and an I-picture reference address IAD indicating the address of the corresponding (or previous) I-frame. If image signals are obtained from more than one camera, the bit streams generated and transmitted to the recording/reproduction unit 140 can have a logical structure as shown in, e.g., FIG. 5B. In addition to the shown in FIG. 5A, the data stream of FIG. 5B includes a camera (channel) ID code CHID indicating the identification code of each camera or a signal source. Kim, 4:59-5:7. FIG.6 shows an example of a data structure of the bit stream shown in FIGS. 5A and 5B to be recorded and reproduced on and from the optical disk medium. As shown therein, the data structure is divided to carry the physical address of the bit stream (1), the camera ID code (2), the address of the corresponding I-picture frame (3), and picture data stored in the picture data area (4). In the first bit stream Bl, the I-picture data are stored in the picture data area (4) so that the address of the corresponding I-picture frame (3) is zero or absent. In the second bit stream B2, the P-picture data are stored in the picture data area (4) so that the address of the corresponding I-picture frame

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	(3) is included in the bit stream. During reproduction, the address of the corresponding I-picture frame (3) is detected to retrieve from that address the corresponding I-picture frame data for the P-picture frame data. Kim, 5:8-6:8: FIG. 4 illustrates a flow chart depicting a reproducing method for reproducing compressed intermittent data (e.g., as shown in FIG. 6) recorded on a recording medium, such as an optical disk, according to the present invention. As shown in Steps S21 and S22 of FIG. 4, if the user requests reproduction of an image data from a particular camera or channel among the intermittent image data recorded on the optical disc 1, the controller 150 controls the recording/reproducing unit 140 to reproduce the corresponding image data from the optical disc 1. The image data reproduced from the optical disc 1 is multiplexed data, which is demultiplexed by the de-MUX 131. By demultiplexing, the camera (channel) ID code CHID is separated from the reproduced image data and output to the controller 150. Based on the camera ID code CHID, the controller 150 determines whether or not the reproduced image data corresponds to the selected camera or channel, in Step S23. This ensures that the correct image data is processed to comply with the user's request. If incorrect image data has been reproduced, the controller 150 controls the recording/reproduction unit 140 to reproduce the correct image data from the optical disc 1. In Step S30, the image data corresponding to the user's request is transmitted and decoded in the decoder 111. The decoding process of the decoder 111 involves reverse-quantization and reverse transformation to restore the original image data prior to data compression carried out during recording. Then the property (type) of the currently restored image data is determined in Step S31 by the reproducing DSP 121, and the determination result is transmitted to the controller 150. More specifically, if the currently restored image data is detected to be P-picture frame data in Step S32, the controller 150 stores the current reproduction position in Step S33. Then in Step S34, the controller 150 detects the address of the corresponding I-picture frame (e.g., data stored in the area (3) of the bit stream B2 shown in FIG. 6) from the reproduced image data output from the de-MUX 131, and reproduces based on the detected address the corresponding 45(or previous) I-picture frame data recorded on the optical disc 1 by controlling the recording/reproduction unit 140. In Step S36, the reproduced corresponding I-picture frame data is processed by the reproducing DSP 121, and decoded by the decoder 111 to be stored in the frame memory 101. The controller 150, after Step S36, controls the recording/reproducing unit 140 to move the video heads to the original recording position stored in Step S33.

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	In Step S38, in the reproducing DSP 121, the P-frame corresponding to the user's request signal is restored as a full screen image (background) using the corresponding I-picture frame data stored in the frame memory 101 and using the moving vectors obtained from the de-MUX 131. Then the full screen image data is reverse-transformed and reverse-quantized by the decoder 111, and stored in the memory 101 as the original image data corresponding to the user's request signal. The full screen image data is converted into an analog image signal by the D/A converter 91 and output as a reproduction signal in Step S39. On the other hand, in Step S32, if the detected image data is not a P-picture frame, then the detected image data is decoded by the decoder 111 as described above, and output as an analog image signal from the D/A converter 91 in Step S39. When the image data corresponding to the user's request signal is P-picture frame data, full screen image data can be obtained by retrieving corresponding or prior I-picture frame data based on the I-picture frame address recorded with the P-picture frame data. Kim, Claim 5: 5. A method for reproducing an image recorded on a recording medium, comprising: reading an image recorded on a recording medium; determining whether the image corresponds to a predictive picture frame, said predictive picture frame including added position information having an address for indicating a position of an intra picture frame; reading the intra picture frame based on the position information included with the predictive picture frame; and reproducing the predictive picture frame based on the intra picture frame. Kim, Claim 9: 9. A method of recording data using video heads on a recording medium with a camera, comprising: reproducing original image data generated by a camera; restoring original image data from the reproduced image frame data by reverse transformation; determining whether the original restored image data is intra-picture frame data or predictive picture frame data; if the restored image data frame is predictive picture frame data, storing the current reproduction position of the restored image frame data, detecting the address of the corresponding intra-picture frame data recorded with the predictive picture frame data, reproducing an image frame based on the intra-picture frame data, storing the reproduced image frame data, moving the video heads to the stored current reproduction position, and using intra-picture frame data to display predictive frame data as full screen image data; if the original

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	image frame data type is not predictive picture frame data, outputting the non-predictive picture frame data for recording. Kim, Claim 12: 12 A method for decoding predictive coded image data, comprising: determining if the image data has a predictive coding; wherein predictive coded image data includes identifying information of a reference image frame for specifying a reference image frame among previous image frames; detecting the reference image frame based on the identifying information; and decoding the image data based on the detected reference image frame. *Further, to the extent Complainant contends this element is not expressly or inherently disclosed by Kim, it would have been obvious in view of the disclosures in Kim, in combination with the knowledge of a person of ordinary skill in the art, or in light of one or more of any of the references identified in Exhibit B-11.*
8[d] resetting the identifier value for the indicated first image frame of the independent sequence.	Kim, as evidenced by the example citations below, discloses resetting the identifier value for the indicated first image frame of the independent sequence. *See, e.g.*, Kim, Fig. 5A:  FIG.5A

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	Kim, Fig. 6:  FIG.5B Kim, 4:46-58: The bit stream generated and transmitted to the recording/reproducing unit 140 as described above has a logical structure as shown in, e.g., FIG. 5A. As shown therein, each P-picture frame P1, P2, P3 has a current address CAD indicating the current address of the P-picture, and an I-picture reference address IAD indicating the address of the corresponding (or previous) I-frame. If image signals are obtained from more than one camera, the bit streams generated and transmitted to the recording/reproduction unit 140 can have a logical structure as shown in, e.g., FIG. 5B. In addition to the shown in FIG. 5A, the data stream of FIG. 5B includes a camera (channel) ID code CHID indicating the identification code of each camera or a signal source. Kim, 4:59-5:7: FIG.6 shows an example of a data structure of the bit stream shown in FIGS. 5A and 5B to be recorded and reproduced on and from the optical disk medium. As shown therein, the data structure is divided to carry the physical address of the bit stream (1), the camera ID code (2), the address of the corresponding I-picture frame (3), and picture data stored in the picture data area (4). In the first bit stream Bl, the I-picture data are stored in the picture data area (4) so that the address of the corresponding I-picture frame (3) is zero or absent. In the second bit stream B2, the P-picture data are stored in the picture data area (4) so that the address of the corresponding I-picture frame (3) is included in the bit stream. During reproduction, the address of the corresponding I-picture frame (3) is detected to retrieve from that address the corresponding I-picture frame data for the P-picture frame data. *Further, to the extent Complainant contends this element is not expressly or inherently disclosed by Kim, it would have been obvious in view of the disclosures in Kim, in combination with the knowledge of a*

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	person of ordinary skill in the art, or in light of one or more of any of the references identified in Exhibit B-11.
9. A method according to claim 8, wherein the indication is a separate flag included in the header of a slice.	Kim, as evidenced by the example citations below, discloses that the indication is a separate flag included in the header of a slice. See, e.g., Kim, Fig. 5A:  FIG.5A Kim, Fig. 5B:  FIG.5B Kim, 4:46-58:

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	The bit stream generated and transmitted to the recording/reproducing unit 140 as described above has a logical structure as shown in, e.g., FIG. 5A. As shown therein, each P-picture frame P1, P2, P3 has a current address CAD indicating the current address of the P-picture, and an I-picture reference address IAD indicating the address of the corresponding (or previous) I-frame. If image signals are obtained from more than one camera, the bit streams generated and transmitted to the recording/reproduction unit 140 can have a logical structure as shown in, e.g., FIG. 5B. In addition to the shown in FIG. 5A, the data stream of FIG. 5B includes a camera (channel) ID code CHID indicating the identification code of each camera or a signal source. Kim, 4:59-5:7: FIG.6 shows an example of a data structure of the bit stream shown in FIGS. 5A and 5B to be recorded and reproduced on and from the optical disk medium. As shown therein, the data structure is divided to carry the physical address of the bit stream (1), the camera ID code (2), the address of the corresponding I-picture frame (3), and picture data stored in the picture data area (4). In the first bit stream Bl, the I-picture data are stored in the picture data area (4) so that the address of the corresponding I-picture frame (3) is zero or absent. In the second bit stream B2, the P-picture data are stored in the picture data area (4) so that the address of the corresponding I-picture frame (3) is included in the bit stream. During reproduction, the address of the corresponding I-picture frame (3) is detected to retrieve from that address the corresponding I-picture frame data for the P-picture frame data. *Further, to the extent Complainant contends this element is not expressly or inherently disclosed by Kim, it would have been obvious in view of the disclosures in Kim, in combination with the knowledge of a person of ordinary skill in the art, or in light of one or more of any of the references identified in Exhibit B-11.*

<table>
<tr><th>ASSERTED CLAIMS</th><th>PRIOR ART REFERENCE:
Kim</th></tr>
<tr><td>10[preamble] A video decoder comprising at least one processor and at least one memory including computer program code, the at least one memory and the computer program code configured to, with the at least one processor, cause the video decoder to decode a compressed video sequence, by causing the video decoder to at least:</td><td>

Kim, as evidenced by the example citations below, discloses a video decoder comprising at least one processor and at least one memory including computer program code, the at least one memory and the computer program code configured to, with the at least one processor, cause the video decoder to decode a compressed video sequence.

See, e.g.,

See limitation 8[preamble].

Kim, 2.

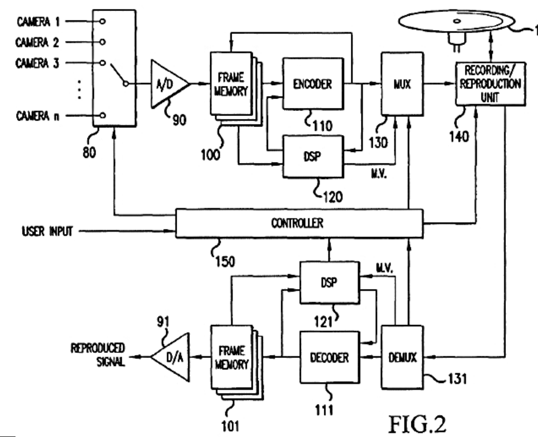


FIG.2

Kim, 2:10-27.

> Briefly described, a method and device for recording data on a recording medium, according to the present invention includes storing, in a memory, image data in frame units; comparing a stored image frame with a subsequent image frame following the stored image frame; and recording, on a recording medium, the subsequent image frame based on a result of the comparison.
>
> A method and device for reproducing data recorded on a recording medium, according to the present invention includes receiving a channel selection signal; reproducing image data recorded on a recording medium based on the channel selection signal; determining whether the image data corresponds to predictive-picture (P-picture) data; and generating a full screen image signal based on the image data if the image data does not correspond to P-picture data, or generating a full

</td></tr>
</table>

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	screen image signal based on intra-picture (I-picture) data corresponding to the image data if the image data corresponds to P-picture data. Kim, 2:62-3:32. FIG. 2 shows a block diagram of a Time Lapse recording/reproduction device according to the present invention. As shown in therein, the Time Lapse recording/reproduction device includes a switch 80 for selecting one of analog image signals inputted in frame units from a plurality of cameras; an A/D converter 90 for converting the selected image signal into digital data by sampling the image signal at a predetermined rate; a plurality of frame memories 100 and 101 for storing therein image data in frame units; an encoder 110 for generating I-picture data or P-picture data in frame units by using transformation and quantization of image data output from the frame memory 100; a recording-digital signal processor (DSP) 120 for extracting moving vectors from the image data output from the frame memory 100 and for generating P-picture data of the compressed image data; a multiplexer 130 (MUX) for multiplexing additional data into the compressed image data of the encoder 110; a record/reproduction unit 140 for recording the multiplexed data onto a recording medium, such as an optical disk 1, and for reproducing the recorded data from the optical disk 1; a demultiplexer (de-MUX) 131 for demultiplexing the reproduced data from the recording/reproducing unit 140 to generate moving vectors and compressed image data; a decoder 111 for performing a reverse-quantization and reverse-transformation of the demultiplexed image data output from the de-MUX 131; a reproducing-DSP 121 for generating original image frames based on the P-picture data output from the decoder 111 and the moving vector output from the de-MUX 131; a D/A converter 91 for converting the reproduced image data into an analog image signal; and a controller 150 for controlling the above-described components based on the commands from the user. The recording/reproduction unit 140 includes video heads for reading and/or writing information on the recording medium. Each of the frame memories 100 and 101 can include a plurality of frame memory units. In addition, other types of memories may be used, instead of the optical disc 1. Kim, 4:15-19: In Step S10, if the value of the moving vector is less than the reference value (i.e., little change between two frames), the restored frame data (second image data) is output to the encoder 110 as a frame that has much less data than the I-picture frame, e.g., as a P-picture frame in MPEG. This P-picture frame is compressed by the encoder 110, which is then transmitted to the MUX 130. Kim, 6:9-29: According to the present invention, recording and reproduction of data is optimized by compressing an image signal based on whether or not there exists a significant difference between two adjacent

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	frames. As a result, the recording medium can record thereon and reproduce therefrom a significantly greater amount of image data compared to conventional recording and reproduction devices and methods. When the recording and reproduction of a moving picture is carried out by a camera, such as a CCD, a CCTV, etc., only the desired images can be selectively reproduced with high display quality. Further, use of an optical disc permits a faster and more selective access of all image data stored thereon. Moreover, digital recording and reproduction of signals results in an improved picture quality. The invention being thus described, it will be obvious that the same may be varied in many ways. Such variations are not to be regarded as a departure from the spirit and scope of the invention, and all such modification as would be obvious to one skilled in the art are intended to be included within the scope of the following claims. Kim, Claim 6 6. Apparatus for reproducing an image recorded on a recording medium, comprising: a reading unit for reading an image recorded on a recording medium; a control unit for determining whether the image corresponds to a predictive picture frame, said predictive picture frame including position information which has been added to indicate the address of an intra picture, and controlling the reading unit for reading the intra picture frame based on said position information; and a reproducing unit for reproducing the predictive picture frame based on the intra picture frame. Kim, Claim 11: 11. A system of recording data using video heads on a recording medium with a camera, comprising: a system element that reproduces original image data generated by a camera; a system element that restores original image data from the reproduced image frame data by reverse transformation; a system element that determines whether the original restored image data is intra-picture frame data or predictive picture frame data; a system element that, if the restored image data frame is predictive picture frame data, stores the current reproduction position of the restored image frame data, detects the address of the corresponding intra-picture frame data recorded with the predictive picture frame data, reproduces an image frame based on the intra-picture frame data, stores the reproduced image frame data, moves the video heads to the stored current reproduction position, and uses intra-picture frame data to display predictive frame data as full screen image data; and a system element that, if the original image frame data type is not predictive picture frame data, outputs the non-predictive picture frame data for recording. Kim, Claim 18:

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	An apparatus for decoding predictive coded image data, comprising: an element that determines if the image data has a predictive coding; wherein predictive coded image data includes identifying information of a reference image frame for specifying a reference image frame among previous image frames; an element that detects the reference image frame based on the identifying information; and an element decodes the image data based on the detected reference image frame. Further, to the extent Complainant contends this element is not expressly or inherently disclosed by Kim, it would have been obvious in view of the disclosures in Kim, in combination with the knowledge of a person of ordinary skill in the art, or in light of one or more of any of the references identified in Exhibit B-11.
10[a] decode from the video sequence an indication of at least one image frame, which is the first image frame, in decoding order, of an independent sequence, wherein all motion-compensated temporal prediction references of the independent sequence refer only to image frames within said independent sequence;	Kim, as evidenced by the example citations below, discloses decoding from the video sequence an indication of at least one image frame, which is the first image frame, in decoding order, of an independent sequence, wherein all motion-compensated temporal prediction references of the independent sequence refer only to image frames within the independent sequence. *See, e.g.*, *See limitation 8[a].*
10[b] start the decoding of the video sequence from said first image frame of the independent sequence, whereby the video sequence is decoded without prediction from any image frame decoded prior to said first image frame; and	Kim, as evidenced by the example citations below, discloses starting the decoding of the video sequence from the first image frame of the independent sequence, whereby the video sequence is decoded without prediction from any image frame decoded prior to the first image frame. *See, e.g.*, *See limitation 8[b].*
10[c] decode identifier values for image frames according to a numbering scheme; and	Kim, as evidenced by the example citations below, discloses decoding identifier values for image frames according to a numbering scheme. *See, e.g.* *See limitation 8[c].*
10[d] reset the identifier value for the indicated first image frame of the independent sequence.	Kim, as evidenced by the example citations below, discloses resetting the identifier value for the indicated first image frame of the independent sequence. *See, e.g.*

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	See limitation 8[d].
11 [preamble] A computer program product, stored on a non-transitory computer readable medium and executable in a data processing device, for decoding a compressed video sequence, the computer program product comprising:	Kim, as evidenced by the example citations below, discloses a computer program product, stored on a non-transitory computer readable medium and executable in a data processing device, for decoding a compressed video sequence. *See, e.g.,* *See limitations 8[preamble] and 10[preamble].*
11 [a] a computer program code for decoding from the video sequence an indication of at least one image frame, which is the first image frame, in decoding order, of an independent sequence, wherein all motion- compensated temporal prediction references of the independent sequence refer only to image frames within said independent sequence;	Kim, as evidenced by the example citations below, discloses a computer program code for decoding from the video sequence an indication of at least one image frame, which is the first image frame, in decoding order, of an independent sequence, wherein all motion-compensated temporal prediction references of the independent sequence refer only to image frames within the independent sequence. *See, e.g.,* *See limitations 8[d]*
11[b] a computer program code for starting the decoding of the video sequence from said first image frame of the independent sequence, whereby the video sequence is decoded without prediction from any image frame decoded prior to said first image frame;	Kim, as evidenced by the example citations below, discloses a computer program code for starting the decoding of the video sequence from the first image frame of the independent sequence, whereby the video sequence is decoded without prediction from any image frame decoded prior to the first image frame. *See, e.g.,* *See limitations 8[b].*
11 [c] a computer program code for decoding identifier values for image frames according to a numbering scheme; and	Kim, as evidenced by the example citations below, discloses a computer program code for decoding identifier values for image frames according to a numbering scheme. *See, e.g.,* *See limitations 8[c].*
11[d] a computer program code for resetting the identifier value for the indicated first image frame of the independent sequence.	Kim, as evidenced by the example citations below, discloses a computer program code for resetting the identifier value for the indicated first image frame of the independent sequence. *See, e.g.,*

ASSERTED CLAIMS	PRIOR ART REFERENCE: Kim
	See limitations 8[d]