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June 6, 2000

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Mr. Brian G. Utley
President
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One Boca Place
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Boca Raton, Florida 33431

Re: PCT International Patent Application
Title: System and Method for Video Playback Over a Network
Inventor(s): Bernstein et al.
Our Ref.: 57103/117

Dear Brian:

Enclosed please find the first draft of the above-referenced patent application (last page marked 001.793381.1), which has been prepared in accordance with the previously filed U.S. provisional patent applications (MLG Docket Nos. 5865-4 and 5865-4.1). As you know, a careful and critical review of this draft application by you and the inventors is imperative to ensure that the you are all satisfied with the content of the application and the proposed claim scope.

I note that Jeff Friedstein is named as a co-inventor on this application pursuant to Eliot Bernstein's instructions. Accordingly, Jeff must review a draft of the application before filing.

I also note that the deadline for filing this application in order to claim priority to all related provisional applications is Wednesday, June 7, 2000. Therefore, we must receive your comments as soon as possible.

Please have the inventor(s) thoroughly read the application draft, including the specification, claims, and drawings, to ensure that it provides a complete and accurate description of the invention. The attached "Inventor Information Sheet" provides a brief explanation of the parts of a utility patent application, the duty of disclosure, and inventorship. I would also like you to personally read and comment on this draft.

ESTABLISHED 184

A MEMBER OF GLOBALEX WITH MEMBER OFFICES IN BERLIN, BRUSSELS, DRESDEN, FRANKFURT, LONDON, SINGAPORE, STOCKHOLM AND STUTTGART

Mr. Brian G. Utley
June 6, 2000
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This PCT application incorporates all of the subject matter of U.S. Provisional Patent Application No. 60/137,921, filed June 7, 1999 (MLG Docket No. 5865-4) and U.S. Provisional Patent Application No. 60/141,440, filed June 29, 1999 (MLG Docket No. 5865-4.1).

You and the inventors should feel free to supplement, correct, or modify any part of the application. In particular, please review the subject matter disclosed in the two above-referenced provisional patent applications. After your review, if you or the inventors feel that any subject matter from these three provisional patent applications should be reflected in the draft PCT application, but is not, please notify me immediately.

The drawings attached to the application are informal sketches that will suffice for purposes of filing. Formal drawings will be prepared at a later date, as they are required for publication of the PCT application.

During the review, please keep in mind that independent claims 1, 12, 19, 24, 31, and 38 are the broadest statements of the invention, and the remaining dependent claims add limitations to further define different embodiments of the invention. Please note that it is the inventors' legal obligations to "read and understand" the contents of the application - including the claims. Each inventor will have to sign a declaration attesting that they did so.

Please have the inventors mark the appropriate changes on this copy of the application, make a copy of the changes, and return the hand-corrected copy to me via facsimile. A revised application incorporating the changes will then be submitted to you for your approval. We will handle execution of the formal papers at a later date.

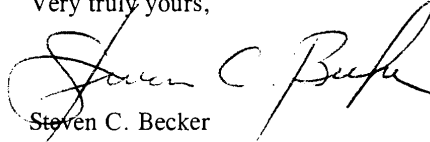
Pursuant to your instructions, to preserve foreign filing options, I plan to designate all of the countries for filing under the PCT (see attached list of PCT Contracting States). Note, however, that not all foreign countries are members of the PCT (e.g., Taiwan), so to maintain the benefit of priority to the U.S. applications, we would have to file foreign national applications immediately in those non-PCT countries. This would require up-front translation costs and sufficient time for our foreign associates to prepare and file the applications before June 7, 2000. It is my understanding that you DO NOT want us to file in any countries other than those that are members of the PCT. Please let me know IMMEDIATELY if this understanding is not correct.

FOLEY & LARDNER

Mr. Brian G. Utley
June 6, 2000
Page 3

If you or the inventors have any questions, please do not hesitate to contact me.
I look forward to receiving at least your preliminary comments on the application by
tomorrow.

Very truly yours,

A handwritten signature in black ink, appearing to read "Steven C. Becker". The signature is fluid and cursive, with the first name "Steven" being the most prominent.

Steven C. Becker

Enclosure(s)
cc: Douglas A. Boehm

001.795106.1

INVENTOR INFORMATION SHEET

Sections of a Utility Patent Application

- Background of the Invention

The Background of the Invention describes the technology that existed before your invention, i.e., the "prior art". This section typically discusses how the need for your invention arose, describes how others attempted to satisfy that need prior to the time of your invention, and points out the deficiencies of the prior art in meeting that need. If you are aware of any other prior art that should be mentioned in this background section, please supplement this section and forward any literature that you might have to me.

- Summary of the Invention

The Summary of the Invention section is merely a brief paragraph of the basic claims, along with a statement of the objectives and advantages of the present invention.

- Brief Description of the Drawings

The Brief Description of the Drawings is merely a listing of the figures, and should be self-explanatory.

- Detailed Description of the Preferred Embodiments

The Detailed Description of the Preferred Embodiments section should provide a full, clear, and concise description of your invention so that any person skilled in the art could make or use the invention. Furthermore, the application must describe the "best mode" contemplated by the inventor(s) for carrying out the invention. In order to obtain a valid patent, no important details about the preferred embodiment of the invention can be withheld as a trade secret.

- Claims

The claims are the most important part of the patent application. They precisely define the invention and determine the scope of legal protection granted by the patent. The claims must particularly point out and distinctly claim the invention. The claimed subject matter must be distinguishable over that which the prior art suggests to those skilled in this field. Accordingly, the claims should be scrutinized with a view toward protecting your precise

invention and those concepts which could be considered an outgrowth of it, yet not encompassing knowledge from the prior art or obvious extensions thereof. In other words, the scope of the claims must be broad enough to provide that patent protection to which you are entitled, yet narrow enough to be distinguishable over the prior art. The terminology of the claims must be adequately supported by the description contained in the specification. Please keep in mind that all dependent claims, which are identifiable by the phrase "according to claim x" or "of claim x", are interpreted as containing all of the limitations of the other claims which are referred to by that dependent claim. Thus, the independent claims are the broadest statement of your invention, and the dependent claims provide additional limitations to narrow the scope of your invention. Although the inventive concepts of each set of independent claims are interrelated, please keep in mind that they must be critically distinguished from each other. Each set of claims must stand on its own merit.

- Abstract of the Disclosure

The Abstract of the Disclosure section is a very brief description of what the application generally discloses.

- Drawings

The Drawings section should be self-explanatory.

Duty of Disclosure

All individuals associated with the filing or prosecution of a patent application are under a duty of candor and good faith to the U.S. Patent and Trademark Office. This duty specifically includes a duty to disclose any information known to be material to the patentability of any claim of the application. Material information could include patents, brochures and other publications (including those authored by a competitor, inventor, or co-worker), published industry standards, as well as information on possible prior uses of the invention, prior sales or offers to sell the invention, prior knowledge of the invention by others, prior invention by another, inventorship conflicts, and the like. This duty of disclosure is an important requirement of the law, and continues throughout the entire prosecution of the patent application until the application issues as a patent. Pursuant to this duty of disclosure, we will file an Information Disclosure Statement with the U.S. application listing the patent documents found in any prior art searches, as well as any technical articles mentioned in the disclosure materials. Accordingly, if any additional information relevant to your invention should come to your attention at any time before issuance of the patent, please immediately let us know so we can either include it in the Information Disclosure Statement or submit a Supplemental Information Disclosure Statement.

Inventorship

The proper inventors would be those people who contributed to the subject matter of the invention as defined in the claims of the application. There may be joint

inventors even though they did not physically work together or at the same time, did not make the same type or amount of contribution, or did not make a contribution to the subject matter of every claim in the patent. It is our understanding that the above-identified persons are to be named as co-inventors of this application. If this is not accurate, please call us to discuss the conception and development of each of the different embodiments of the invention, so that we will be able to confirm your determination of proper inventorship before filing the application.

Foley & Lardner

PCT CONTRACTING STATES AND TWO-LETTER CODES

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PCT INTERNATIONAL PATENT APPLICATION
for
SYSTEM AND METHOD FOR VIDEO PLAYBACK
OVER A NETWORK

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TITLE OF THE INVENTION

SYSTEM AND METHOD FOR VIDEO PLAYBACK OVER A NETWORK

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of U.S. Provisional Application No. 60/137,921, filed June 7, 1999, and U.S. Provisional Application No. 60/141,440, filed June 29, 1999.

5 FIELD OF THE INVENTION

The present invention relates generally to a system and method for playing a video program over a network. The present invention also relates to a system and method for controlling a video device over a network.

10 BACKGROUND OF THE INVENTION

The widespread and ever-growing use of communication networks, such as the Internet and other computer-to-computer communication networks, for the dissemination of information, has fueled the need to provide for the transmission of video data over these networks. Currently, the transmission of video data over networks has been less than optimal, given current bandwidth and technology constraints. These constraints have impeded the ability to offer enhanced resolution and/or full motion video data over these networks.

20 The Internet marketplace is demanding enhanced resolution and high definition streaming video and precise representations of video images, objects, and events. Streaming video is a technique by which video is played in real time as it is downloaded over the Internet, as opposed to storing it in a local file

first. Video player software, operable on a user computer, decompresses and plays the data as it is transferred to the user computer over the Internet. Streaming video avoids the delay entailed in downloading an entire file and then playing it with a plug-in application. Streaming video requires a communications connection and a computer powerful enough to execute the decompression algorithm in real time.

One application for such technology is in the transmission of full screen video programs upon demand. Conventional computer network video transmission techniques for streaming video involve playing video over the network under conditions which have been dictated by and, thus, limited by the bandwidth and other technological constraints of the network, the transmission medium and equipment, as well as the computers operating in conjunction therewith. Given these constraints, video data has traditionally been compressed to varying extents in order to facilitate its transmission over a limited-bandwidth network. This compression has resulted in video having less than optimal quality characterized by grainy, blurry, and severely distorted video. Further, the ability to increase the screen size to a full screen viewing of the video information has also typically been accompanied by severe distortion and reduced resolution.

As a result, there is a need for an improved system and method for video playback over a network. There is further a need for a system and method for video playback that does not require a download at the user computer before viewing. Further still, there is a need for a system and method for controlling playback of a video via the Internet.

BRIEF SUMMARY OF THE INVENTION

According to one exemplary embodiment, a system and method for video playback over a network includes a video playback device configured to transmit a video signal from a non-volatile storage medium and a computer coupled to the video playback device configured to receive the video signal and to transmit the video signal over a network.

According to another exemplary embodiment, a method of video playback over a network includes receiving an operation command; retrieving a video signal from a non-volatile storage medium in response to the operation command; capturing the video signal; and providing the captured video signal over a network to a user computer.

According to yet another exemplary embodiment, a system for video playback over the Internet includes means for storing a video signal; means for receiving an operation command; means for transmitting the video signal in response to the operation command; means for capturing the transmitted video signal; and means for sending the captured video signal over the Internet.

According to another exemplary embodiment, a system for controlling a video device over a network includes a network computer configured to receive an operation command from a remote user over a network, and a video device coupled to the network server configured to receive the operation command from the network server and to perform a video operation based on the operation command.

According to yet another exemplary embodiment, a system for controlling a video device over a network includes a network computer configured to generate a user interface; a user

computer configured to access the user interface via a network; and a video device coupled to the network computer configured to receive an operation command from the user computer via the user interface and to perform a video operation based on the operation
5 command.

According to still another exemplary embodiment, a system for controlling a video device over the Internet includes means for receiving a user command from a remote computer over the Internet, and means for performing a video operation based on
10 the user command.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will become more fully understood from the following detailed description, taken in conjunction with the accompanying drawings, wherein like reference numerals refer to like
15 parts, in which:

FIG. 1 is a block diagram of a system for video playback over a network according to an exemplary embodiment; and

FIG. 2 is a flowchart of a method of video playback over a network according to the exemplary embodiment of FIG. 1.

20 DETAILED DESCRIPTION OF THE EXEMPLARY EMBODIMENTS

The exemplary embodiments illustrated in FIGS. 1 and 2 provide a system and method for real-time playback of full-screen video data over a communication network. Compression and other manipulation of the video data is optional, since such manipulation
25 typically results in decreased resolution and definition. Furthermore, saving compressed files of video data is not required to provide enhanced playback of video data to users over the network. While

the exemplary embodiments are explained with reference to video signals, it is understood that a video signal may include corresponding audio signals therein. Alternatively, the corresponding audio signals may be processed through a different method.

5 FIG. 1 illustrates a system 10 according to an exemplary embodiment. System 10 includes a video playback device 12, a storage medium 13, a capture device 14, a video recording device 15, and a central processing computer 16. Video playback device 12 is coupled through capture device 14 to
10 computer 16. Computer 16 is coupled via a network 20 to a user computer 22. Computer 16, as described herein, performs various data processing functions as well as transmits video data to user computer 22. The video data may be transmitted on demand from a remote user at user computer 22, or upon initiation by or under the
15 control of central processing computer 16.

In this exemplary embodiment, computer 16 is a local network server and user computer 22 is a network client. Computer 16 can be any suitable computer or network of computers, such as, a mainframe computer, a network server computer, a personal
20 computer, etc. User computer 22 can be any suitable computer or communication device such as a personal computer, a personal digital assistant, a hand-held computer, a palm top computer, a video telephone, etc. Computers 16 and 22 include any necessary hardware and software, including interfacing hardware and software
25 for interfacing with other devices, for performing any of the method steps described herein. Computer 16 includes video playback software 18 (e.g., scripts and any associated video playing software, playback software, video conferencing software, etc.) For example, video playback software 18 may include Microsoft

Netmeeting 3.01, manufactured by Microsoft Corp., Redmond, Washington. Computers 16 and 22 are configured to communicate via network 20 (e.g., the Internet, a computer-to-computer network, an internet, an intranet, a local area network (LAN), a wide area network (WAN), etc.) utilizing suitable network interface devices. According to one exemplary embodiment, a high-speed cable connection is utilized on each end of network 20. Alternative network connections include a telephone modem (e.g., at 28 kilobits per second (kbps) or 56 kbps), an ISDN line, a T1 line, etc.

System 10 further includes a video recording device 15. Video recording device 15 can be a video camera, a Beta video recorder, an 8mm film camera/recorder, a 32mm film camera/recorder, a Beta SP recorder, a VHS (Vertical Helix Scan) recording device, or any other suitable video recording device. One suitable video recording device is a Sony DCR VX-1000 digital video camera, having 3CCD technology, manufactured by Sony Electronics, Inc., Park Ridge, N.J. Video recording device 30 is configured to record an event and store the recorded event on non-volatile storage medium 35. The term "non-volatile storage medium", as used in this application, means a storage medium whose contents are preserved after storing or recording without the use of a power source. Examples of non-volatile storage devices include magnetic disks, magnetic tape, or other forms of magnetic media, compact disk (CD-ROM), digital versatile disk (DVD), or other optical media, Electrically-Erasable Programmable Read-Only Memory (EEPROM), paper tape, punched cards, etc. In contrast, examples of volatile storage devices include static RAM and dynamic RAM (however, while RAM is normally volatile, it can be made into non-volatile storage by having a power source, such as a battery or

rechargeable battery, permanently connected), charge-coupled devices (CCDs), and an acoustic delay line.

Video playback device 12 is configured to play or transmit a video signal from non-volatile storage medium 13 to computer 16 via capture device 14. Video playback device 12 can be a digital camera, an analog camera, a tape deck, a VCR (Video Cassette Recorder), a VHS system, a Beta system, a compact disk player, a video disk player, a digital versatile disk (DVD) player, or any other suitable device for transmitting a video signal from a storage medium. For example, an analog camera has two modes: "camera" and "VCR". When used as a playback device, VCR mode is selected on the camera. Capture device 14 is any interface circuit configured to provide a digital or analog video signal to computer 16. For example, capture device 14 may include a Dazzle LAV-1000S capture device manufactured by Dazzle, Inc. of Fremont, California. Capture device 14 may be internal to computer 16 or video playback device 12 or external to both. The video signal provided to capture device 14 and the captured video signal output by capture device 14 may be in any video format or streaming video format, including television standards, such as, NTSC (National Television Standards Committee), PAL (Phase Alternative Line), SECAM (Séquentiel Couleur Avec Mémoire), digital formats, such as, AVI, MOV, MPEG, a digital format compatible with the IEEE 1394 standard, or other formats.

According to one alternative embodiment, video playback device 12 and computer 16 may be combined as one system, obviating the need for capture device 14. Further, video playback device 12 and video recording device 15 may be the same device (e.g., a VCR).

FIG. 2 illustrates a method 30 of video playback according to an exemplary embodiment. At step 32, an event is recorded by utilizing video recording device 15. At step 34, a video signal is stored on storage medium 13. Typically, recording and storing are performed substantially simultaneously, e.g., in a camcorder. At step 36, the recorded video signal on storage medium 13 is transferred to video playback device 12. For example, if the video signal has been recorded with a video camera and stored on a compact disk, video playback device 12 can be any suitable compact disk player. At step 38, video playback device 12 is initialized via computer 16. Computer 16 initializes video playback device 12 via any suitable program software or a suitable script. In this exemplary embodiment, a software driver for capture device 14 is operable on computer 16. Furthermore, video conference software utilized on computer 16 may also be used to select capture card 14 as a source of video data.

At step 40, computer 16 links to user computer 22. This link may result from an initiation by a remote user via user computer 22, or from an initiation by computer 16. The connection or link between computer 16 and user computer 22 can be accomplished by utilizing any suitable video playback software or video conferencing software operable on each of computers 14 and 22.

At step 42, computer 16 is configured to transmit an operation command to video playback device 12 to command device 12 to perform a video operation corresponding to the operation command. Operation commands may include a play command that causes device 12 to begin transmitting the video signal from storage medium 13, a stop command that causes device 12 to cease

transmitting the video signal from storage medium 13, and other similar commands, such as rewind, fast forward, etc. The operation command may be transmitted through capture device 14 to video playback device 12, or may be transmitted along a separate
5 transmission line or cable.

In response to the operation command, video playback device 12 is configured to perform the video operation. For example, in response to receiving a play command, device 12 begins retrieving the video signal from storage medium 13. The video
10 signal may be played locally and/or transmitted to capture device 14. Capture device 14 digitizes the video signal, if the video signal is an analog signal, and provides the digital video signal to video playback software 18. In this exemplary embodiment, video playback
15 software 18 is video conferencing software, such as, Microsoft Netmeeting 3.01. Video playback software 18 may perform one or more processing steps on the video signal, such as, compression, conversion, encoding, or some other type of data manipulation, based on parameters selected by an operator. For example, an
20 operator selects a full screen mode (e.g., 640 x 480 pixels), a Dazzle video conference driver, and the highest available image quality. User computer 22 may also run video conferencing software, such as Microsoft Netmeeting 3.01, with the same or similar parameters to those of video playback software 18. Capture device 14 may
25 further be configured for full screen mode capture via a driver, the video conferencing software, or otherwise.

Video playback software then transmits the video signal across the network 20 (e.g., the Internet) to a user computer 22 in step 44. Finally, user computer 22 operates a software program in step 46 that enables viewing of the video signal (e.g., a video player,

such as, RealPlayer, manufactured by RealNetworks, Inc., Seattle, Washington, Microsoft Netmeeting, etc.).

As a further feature, the operation command may be received via network 20 from user computer 22. According to this
5 exemplary feature, computer 16 is configured to generate a user interface (e.g., a web page, a Microsoft Windows screen accessed via remote desktop sharing software, such as, Microsoft Netmeeting, Norton PCAnywhere, etc.) accessible by user computer 22 via network 20. One example of a suitable program operable on
10 computer 16 is Adobe Premier 5.1, manufactured by Adobe Systems Inc., San Jose, California. A user selects "File/Capture/Movie" from user computer 22 using Microsoft Netmeeting, which presents a viewable interface having a plurality of operation commands. A user views the operation command options (e.g., play, stop, rewind, fast-
15 forward, etc.) on the user interface and selects one or more operation command options using a mouse, keyboard, or other input device. Thus, user computer 22 provides the operation command via a script or other software command to video playback device 12 via video playback software 18.

20 User computer 22 may further provide an operation command to video recording device 15 or to a simple video camera to command device 15 to perform a video operation (e.g., record, move camera up, move camera down, move camera left, move camera right, zoom camera in, zoom camera out, etc.). Thus, the
25 video camera may be mounted on a motorized camera mounting, the mounting being controllable via the operation command. In this embodiment, in response to a play command or camera command, a video signal is provided in real time (i.e., live) directly from video recording device 15 through capture device 14, through video

5 playback software 18, over network 20 to user computer 22. This feature is particularly advantageous when used with a Sony digital video camera having 3CCD technology due to the increased zooming capability allowed relative to other cameras, particularly standard video conferencing cameras.

10 In this manner, the exemplary embodiment provides for the transmission of real-time and enhanced resolution video data over network 20. Little or no data compression or other data manipulation is required, thereby maintaining enhanced resolution in the delivered video data. The enhanced resolution video data can be made available at user computer 22 and/or at the computer 16. In another exemplary embodiment, either or both of steps 38 and 40 (i.e., initialization steps) are eliminated.

15 In an alternative embodiment, the processing steps described herein for video recording device 15, central processing computer 16, and video playback device 12 can be combined into and performed by one or more integrated devices with the operation of the integrated device being programmed for operation as described herein.

20 In another alternative embodiment, the video data description herein can be combined with three-dimensional video data so as to provide enhanced resolution three-dimensional video data in a network environment.

25 According to one application of the principles herein, a plurality of playback devices may be used, each to play back one of a plurality of videos from a cassette tape or DVD to a user accessing the system via the Internet. The videos may be home videos, movies, training sessions, seminars, etc.

According to another application of the principles herein, a video camera may be positioned in a house or other building and coupled through a computer to the Internet. A user may access the video camera remotely (e.g., from work) to monitor the house, control the camera by moving the camera left and right, zoom the camera, etc.

EXAMPLE

A first personal computer (PC) was coupled to a Dazzle LAV-1000S capture device. The Dazzle device was then coupled to a Sony TRV900 digital camera having 3CCD technology. A pre-recorded video tape was placed in the camera. The first PC was loaded with Amigo software, manufactured by Dazzle, Inc. and also Microsoft NetMeeting 3.01 software. The Amigo software was used to initialize the Dazzle device to receive a video signal from the digital camera. The NetMeeting software was used to allow access to the first PC from the Internet.

A second PC at a location remote to that of the first PC was loaded with Microsoft NetMeeting 3.01. The second PC gained access to the first PC via the Internet using the NetMeeting software. From the second PC, a user viewed the Amigo software user interface and selected a "play" command from the user interface. The Amigo software sent the play command through the Dazzle device to the digital camera. The digital camera received the play command and, in response, began transmitting a video signal from the pre-recorded video tape through the Dazzle device to a

display window in the Amigo software, which was viewed over the Internet at the second PC.

Next, a user at the second PC selected a "record"
5 command from the user interface of the Amigo software. The Amigo software sent the record command through the Dazzle device to the digital camera. The digital camera received the record command and, in response, began transmitting a video signal representing the live, real-time video being viewed by the digital
10 camera. This video signal was transmitted through the Dazzle device to a display window in the Amigo software, which was viewed over the Internet at the second PC. The video signal was also recorded to a tape in the digital camera.

15 Subsequently, the Internet connection was replaced by a local area network connection and a modem-to-modem connection, and similar results were obtained.

While the embodiments and application of the invention
20 illustrated in the FIGS. and described above are presently preferred, it should be understood that these embodiments are offered by way of example only. For example, alternative methods are contemplated for initializing video playback device 12 to operate with computer 16, and alternative methods are contemplated for linking computer
25 16 with user computer 22. Accordingly, the present invention is not limited to a particular embodiment, but extends to various modifications that nevertheless fall within the scope of the appended claims.

WHAT IS CLAIMED IS:

- 1 1. A system for video playback over a network,
2 comprising:
3 a video playback device configured to transmit a video
4 signal from a non-volatile storage medium; and
5 a computer coupled to the video playback device
6 configured to receive the video signal and to transmit the video
7 signal over a network.

- 1 2. The system of claim 1, further comprising a capture
2 device coupled between the video playback device and the
3 computer, the capture device configured to receive the video signal
4 and to generate a digital video signal based on the video signal.

- 1 3. The system of claim 2, wherein the computer utilizes
2 video conferencing software to receive the digital video signal, to
3 perform at least one processing step thereon, and to provide the
4 digital video signal over the network.

- 1 4. The system of claim 3, wherein the processing step
2 includes configuring the digital video signal for full screen display on
3 a user computer.

- 1 5. The system of claim 4, wherein the capture device is
2 configured to capture the video signal at a full screen size.

- 1 6. The system of claim 1, wherein the network includes
2 the Internet.

1 7. The system of claim 1, wherein the video playback
2 device is one of a video cassette recorder, a video cassette player, a
3 digital versatile disk player, and a video camera.

1 8. The system of claim 1, wherein the computer is
2 configured to transmit an operation command to the video playback
3 device.

1 9. The system of claim 8, wherein the computer is
2 configured to receive the operation command from the network.

1 10. The system of claim 9, wherein the operation command
2 is a play command.

1 11. The system of claim 1, wherein the non-volatile storage
2 medium is one of a magnetic tape and a read-only memory.

1 12. A method of video playback over a network,
2 comprising:
3 receiving an operation command;
4 retrieving a video signal from a non-volatile storage
5 medium in response to the operation command;
6 capturing the video signal; and
7 providing the captured video signal over a network to a
8 user computer.

1 13. The method of claim 12, wherein the operation
2 command is generated by a local computer.

1 14. The method of claim 13, wherein the operation
2 command is received from the user computer.

1 15. The method of claim 14, wherein the operation
2 command is a play command.

1 16. The method of claim 12, wherein the non-volatile
2 storage medium is one of a magnetic tape and a read-only memory.

1 17. The method of claim 12, further comprising digitizing
2 the video signal to generate the captured video signal.

1 18. The method of claim 12, wherein the network includes
2 the Internet.

1 19. A system for video playback over the Internet,
2 comprising:
3 means for storing a video signal;
4 means for receiving an operation command;
5 means for transmitting the video signal in response to
6 the operation command;
7 means for capturing the transmitted video signal; and
8 means for sending the captured video signal over the
9 Internet.

1 20. The system of claim 19, further comprising means for
2 generating the operation command.

1 21. The system of claim 20, wherein the operation
2 command is a play command.

1 22. The system of claim 19, wherein the means for storing
2 includes a magnetic tape or a read-only memory.

1 23. The system of claim 19, further comprising means for
2 digitizing the video signal to generate the captured video signal.

3 24. A system for controlling a video device over a network,
4 comprising:
5 a network computer configured to receive an operation
6 command from a remote user over a network;
7 a video device coupled to the network server configured
8 to receive the operation command from the network server and to
9 perform a video operation based on the operation command.

1 25. The system of claim 24, wherein the network is the
2 Internet.

1 26. The system of claim 25, wherein the video device is a
2 video playback device, wherein the operation command is a play
3 command, and wherein the video operation is a play operation.

1 27. The system of claim 26, wherein the video playback
2 device is configured to retrieve a video signal from a non-volatile
3 storage medium in response to the play command.

4 28. The system of claim 27, wherein the network computer
5 is configured to receive the video signal and to provide the video
6 signal over the Internet to the remote user.

1 29. The system of claim 24, wherein the video device is a
2 video camera, wherein the operation command is a video camera
3 control command.

1 30. The system of claim 29, wherein the video camera
2 control command is one of a video record command, a video camera
3 move command, and a video camera zoom command.

1 31. A system for controlling a video device over a network,
2 comprising:
3 a network computer configured to generate a user
4 interface;
5 a user computer configured to access the user interface
6 via a network; and
7 a video device coupled to the network computer
8 configured to receive an operation command from the user computer
9 via the user interface and to perform a video operation based on the
10 operation command.

1 32. The system of claim 31, wherein the network is the
2 Internet.

1 33. The system of claim 31, wherein the video device is a
2 video playback device, wherein the operation command is a play
3 command, and wherein the video operation is a play operation.

1 34. The system of claim 33, wherein the video playback
2 device is configured to transmit a video signal from the non-volatile
3 storage medium in response to the play command.

4 35. The system of claim 34, wherein the network computer
5 is configured to play the video signal across the network to the user
6 computer.

1 36. The system of claim 31, wherein the video device is a
2 video camera, wherein the operation command is a video camera
3 control command.

- 1 37. The system of claim 36, wherein the operation
- 2 command is one of a record command, a video camera move
- 3 command, and a zoom command.

1 38. A system for controlling a video device over the
2 Internet, comprising:
3 means for receiving a user command from a remote
4 computer over the Internet; and
5 means for performing a video operation based on the
6 user command.

1 39. The system of claim 38, wherein the means for
2 performing includes a video playback device, wherein the user
3 command is a play command, and wherein the video operation is a
4 play operation.

1 40. The system of claim 39, further comprising:
2 means for storing a video signal; and
3 means for playing the video signal from the means for
4 storing in response to the play command.

1 41. The system of claim 40, further comprising:
2 means for receiving the video signal and providing the
3 video signal over the Internet to the remote computer.

4 42. The system of claim 38, wherein the means for
5 performing includes a video camera, wherein the user command is a
6 video camera control command.

1 43. The system of claim 42, wherein the video camera
2 control command is one of a video record command, a video camera
3 move command, and a video camera zoom command.

ABSTRACT OF THE DISCLOSURE

A system and method for video playback over a network includes a video playback device configured to transmit a video signal from a non-volatile storage medium and a computer
5 coupled to the video playback device configured to receive the video signal and to transmit the video signal over a network.

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