

REAL-TIME STORYBOARDING

Xerox Corporation

Initial Bidding Guidance: Low 6 Figures

This portfolio discloses techniques for real-time storyboarding. Video is an important element in many applications, such as multimedia, news broadcasting, video conferencing and education. By using traditional techniques, such as video players, one is able to view the material of interest, or fast forward and rewind to sections deemed important. However, video content is difficult to peruse or process in abbreviated fashion; for example, large amounts of multimedia or video content cannot be reviewed as efficiently as text-based content. Accordingly, most multimedia and video application systems rely on processes for interactive user input to compile the necessary representative static data that allows users to efficiently process such content. Therefore, there is a need for automatically performing a real-time dynamic-to-static conversion of the video or multimedia content.

Value Proposition: This portfolio discloses a real-time storyboarding system that performs a real-time dynamic-to-static conversion of video or multimedia content. A viewer can easily scan a document containing audio, video or animation, or printed portions of the document containing embedded audio, video or animations. Command information may be embedded during content production which specifically indicates the frames that are representative of a particular segment of the document. The disclosed system may use the embedded command information to perform a real-time dynamic-to-static conversion. The disclosed technology reduces the dependency on humans to create visual aids in order to represent meaningful segments of a video or multimedia document. The disclosed technology includes methods and system for real-time storyboarding using a graphical user interface to automatically parse a video data signal and browse within the parsed video data signal. Statistical methods based on frame and histogram differencing are used to extract key frames that are associated with each segment of the video. The key frames can then be used for fast browsing or for retrieving the actual video or multimedia segment represented by that key frame. A graphical user interface is contemplated for both automatic parsing and browsing of video sequences from the key frames. By use of the graphical user interface, the user can elect to play the remainder of the segment, or skip forward to the another key frame.

Forward Citing Companies: Facebook, Fuji Xerox, HP, IBM, Nokia, Ricoh, Samsung, Sony, Stryker

Priority Date: 03-18-1999

Representative Claim: US 6,647,535 – Claim #1

A real-time storyboarding system, comprising: a frame capture device; a command detector that detects if the input multimedia image data signal contains a command data that indicates key representative frames, the command data is embedded in a closed-caption portion of an input multimedia image data signal in addition to a closed-caption data to be displayed; a command decoder that decodes the detected command data; and an image significance determiner that determines in response to the command detector if there is at least one representative frame in the input multimedia image data signal, and that, if at least one representative frame is found, outputs the at least representative frame.

Contact:

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TECHNOLOGY

REAL-TIME
STORYBOARDING

NOVELTY

SYSTEMS AND METHODS TO GENERATE A REAL-TIME STORYBOARD ON A DISTRIBUTED NETWORK AND A GRAPHICAL USER INTERFACE TOOL FOR FAST VIDEO ANALYSIS OF VIDEO IMAGES FOR AUTOMATIC PARSING AND BROWSING

IMPORTANCE

A VALUABLE PORTFOLIO FOR COMPANIES PROVIDING GRAPHIC EDITING PROGRAMS, VIDEO REPOSITORY AND SHARING SERVICES, OR INSTRUCTIONAL CONTENT; AND FOR THE BROADCAST, AUDIOVISUAL, AND ANIMATION INDUSTRIES

NUMBER OF ASSETS

2

US PATENTS (2)

6,647,535
7,313,762