VIDEO BLURRING IN A SECURE ENVIRONMENT

BACKGROUND

[0001] The introduction of video services into inmate housing and common area locations for the purposes of video visitation and/or video calling has introduced an unanticipated issue related to what details are conveyed through the video to whoever is viewing it at the other end. Inmate housing environments simply were not designed with the expectation that those outside the facility would have a camera inside the housing units. As such, back ground details could include showers, bathrooms, interiors of cells, or just the general population going about their day. Additionally, other inmates who know they are on camera often act up and cause disruptions which can escalate and become safety issues.

[0002] In prior systems, the camera component of the video visitation/call system reveals more than is intended and much more than is desired. A means of not showing what is happening behind inmates participating in video visitations/calls is needed in order to safe guard the privacy and promote the safe use of video services provided within inmate housing areas.

[0003] Given the infancy of the use of video services within the correctional institution setting, previous methods of resolving the issue resorted to placing the video terminals outside of the general inmate population. This is undesirable as it negates one of the prime advantages of video visitations; namely, to provide visitations without having the security and administrative issues associated with moving inmates from housing locations to visitation locations.

[0004] One alternative solution is to design the housing units in such a way that the video terminals face an innocent area. This is impractical since most correctional institutions were constructed decades before and reconstruction would be too costly. Also, such floor plan designs will tend to rely on designing “nooks” to house the video services but such “nooks” are difficult for correctional officers to monitor and thus provide locations for violent and/or illicit activities to take place.

[0005] One previous technology uses facial recognition to “lock in” on the facial features of the inmate and blur everything but those features. This approach suffers as the inmate moves around and has the disadvantage of blurring much of the face and or torso of the inmate thus leading to an unsatisfactory visitation experience.

SUMMARY

[0006] Methods and systems for video blurring in a secure environment are described. In one embodiment, the method includes receiving video at a video visitation device in a secure environment, adjusting a depth of field parameter for the video, such that an image of a first object at a first distance from the video visitation device is in focus and an image of a second object at a second distance from the video visitation device is blurred, and providing the video to a viewing device located outside of the secure environment.

[0007] In on embodiment, adjusting the depth of field parameter may include adjusting an f-stop setting of a camera associated with the video visitation device. Adjusting the f-stop setting may further include adjusting a focal length of a lens coupled to the video visitation device. In an embodiment, adjusting the f-stop setting includes adjusting an aperture setting of the camera associated with the video visitation device.

[0008] In another embodiment, adjusting the depth of field parameter includes digitally processing the video received from the video visitation device in a video processing device to blur one or more objects at the second distance from the video visitation device.

[0009] In one embodiment, adjusting the depth of field parameter is remotely controllable by a third party. Additionally, the method may include providing the video to a second viewing device for security monitoring, the second viewing device being associated with a remote control device configured to allow the third party monitor to remotely control the depth of field parameter.

[0010] Various embodiments of tangible computer readable media are described. In one embodiment, the computer readable media comprises computer-readable code for receiving video from a video visitation device in a secure environment, storing the video received from the video visitation device in a data storage device, adjusting a depth of field parameter for the video, such that an image of a first object at a first distance from the video visitation device is in focus and an image of a second object at a second distance from the video visitation device is blurred, and providing the adjusted video to a viewing device located outside of the secure environment.

[0011] In one embodiment, adjusting the depth of field parameter further comprises processing the video received from the video visitation device in a video processing device to blur one or more objects at the second distance from the video visitation device. Adjusting the depth of field parameter may be remotely controllable by a third-party monitor.

[0012] The operations performed may further include providing the video to a second viewing device for security monitoring, the second viewing device being associated with a remote control device configured to allow the third-party monitor to remotely control the depth of field parameter. In an embodiment, the operations include providing the video stored in the data storage device to an investigator in response to indicia from the third-party monitor. In still further embodiments, the operations include providing the video stored in the data storage device to an investigator in response to a request from the investigator.

[0013] Embodiments of systems are also described. One embodiment of a system includes a data communication device configured to receive video from a video visitation device in a secure environment. The system may also include a data storage device coupled to the data communication device and configured to store the video received from the video visitation device. Additionally, the system may include a data processor configured to adjust a depth of field parameter for the video, such that an image of a first object at a first distance from the video visitation device is in focus and an image of a second object at a second distance from the video visitation device is blurred, wherein the data communication device is configured to provide the video to a viewing device located outside of the secure environment.

[0014] In an embodiment, the system includes a camera controller configured to adjust an f-stop setting of a camera associated with the video visitation device. The camera controller may be controllable by a third-party to remotely adjust the f-stop setting. Additionally, the camera controller may be configured to adjust a focal length of a lens coupled to the video visitation device. In an embodiment, the camera controller is further configured to adjust an aperture setting of the camera associated with the video visitation device.

[0015] In one embodiment, the system includes a second viewing device for security monitoring, the second viewing device being associated with a remote control device configured to allow a third-party to remotely control the depth of field parameter.

[0016] The data communication device may provide the video stored in the data storage device to an investigator in response to indicia from the third-party. In another embodiment, the system is configured to provide the video stored in the data storage device to an investigator in response to a request from the investigator.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] Having thus described the invention in general terms, reference will now be made to the accompanying drawings, which are not necessarily drawn to scale, and wherein:

[0018] FIG. 1 is a block diagram of an environment where a visitation system may be employed according to some embodiments.

[0019] FIG. 2 is a diagram of a video visitation device according to some embodiments.

[0020] FIG. 3 is a block diagram illustrating one embodiment of a video camera device for use in a video visitation system.

[0021] FIG. 4 is a block diagram of an embodiment of a visitation system.

[0022] FIG. 5 is a block diagram of an embodiment of a video visitation device.

[0023] FIG. 6 is a block diagram of a computer system configured to implement various systems and methods described herein according to some embodiments.

[0024] FIG. 7 is a flowchart of an embodiment of a method for video blurring in a secure environment.

[0025] FIG. 8 is a flowchart of another embodiment method for video blurring in a secure environment.

[0026] FIG. 9 is an illustrative drawing of one embodiment of a blurred video frame.

DETAILED DESCRIPTION

[0027] This specification discloses systems and methods for video blurring in a secure environment. Generally speaking, the various techniques described herein may find applicability in a wide variety of controlled-environment facilities. Examples of controlled-environment facilities may include correctional institutions or facilities (*e.g.*, municipal jails, county jails,

state prisons, federal prisons, military stockades, juvenile facilities, detention camps, home incarceration environments, etc.), healthcare facilities (*e.g.*, hospitals, nursing homes, mental health facilities, rehabilitation clinics, such as drug and alcohol rehabilitation facilities, etc.), restricted living quarters (*e.g.*, hotels, resorts, camps, dormitories, barracks, etc.), and the like. For convenience of explanation, various examples discussed herein are presented in the context of correctional facilities. For instance, in some of the embodiments discussed below, a controlled-environment facility may be referred to as a jail or prison, and its residents may be referred to as residents, arrestees, detainees, or inmates. It should be understood, however, that the systems and methods described herein may be similarly applicable to other types of controlled-environment facilities and their respective residents (*e.g.*, a hospital and its patients).

[0028] Turning now to FIG. 1, a block diagram of an illustrative environment where a visitation system may be employed is depicted according to some embodiments. As shown, communication processing system 101 may provide telephone services, videoconferencing, online chat, and other communication services to a controlled-environment facility. For example, in some cases, communication system 101 may be co-located with a controlled-environment facility. Alternatively, communication system 101 may be centrally or remotely located with respect to one or more controlled-environment facilities and/or may provide communication services to multiple controlled-environment facilities. More generally, however, it should be noted that communication system 101 may assume a variety of forms, and may be configured to serve a variety of facilities and/or users, whether within or outside of a controlled-environment facility.

[0029] In one embodiment, a hybrid system may be implemented. The hybrid system may include one or more centrally located components and one or more components that are located on the premises of the controlled facility. For example, a data storage may be located in an off-site cloud storage facility. In some embodiments, servers, security monitoring systems and other components described in further detail below may be located in a central or remote facility. In embodiments of a hybrid system, other components may be located within the controlled facility. For example, in some embodiments a video visitation device as described in FIGs. 2-3 may be located within the controlled facility. In certain embodiments, the inmates

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.