

PROVISIONAL APPLICATION

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Sir:

Transmitted herewith for filing is a provisional patent application under CFR 1.53(c) of:

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Title: INTERNET CAMERA VIDEO PRODUCER

Enclosed are:

23 pages of the specification (including description and drawings).
sheet(s) of formal informal drawing(s).

Abstract.

A verified statement to establish small entity status under 37 CFR 1.9 and CFR 1.27.

The invention was made by or under a contract with the following agency of the United States Government:
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Respectfully submitted,

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LUXXON Corporation

Internet Camera Video Producer

Specifications

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REQUIREMENTS

DEFINITION

The mission of the Internet Video Producer (IVP) is to:

1. **Camera Control:** Provide the interface necessary through which the IVP can control the Sony USB camera.
2. **Unicast MPEG Video/Still Image:** Process the parent stream from Sony USB cameras and seamlessly deliver a unique child stream of MPEG video or a still image to each display which is registered to display such streams or images.
3. **User Interface:** Provide GUIs to the
 - 3.1. user (at camera end), and
 - 3.2. viewer (via a web site) on the Internet.
4. **Feedback Control:** Provide the interface necessary through which the IVP can receive and process commands from agents on the network:
 - 4.1. Viewers
 - 4.2. WEBSITE¹
 - 4.3. Luxxon Gateway

To achieve these goals, the IVP works in concert with the Sony-Luxxon USB Driver to acquire sequential frames of DCT data from a single parent stream off of the USB camera. It then

1. transforms the data to individual child streams of different resolution DCT data,
2. modifies the frame rate and color depth of each child stream,
3. formats each child stream into either MPEG-1,-2, or -4,
4. fragments each stream into TCP/IP frames,
5. encrypts the payloads of these frames,
6. and sends those frame to specific IP addresses over TCP sockets.

Additionally, as required, it pauses video streams from the camera to acquire still images of YUV or SJPEG data for processing and transmission as uncompressed still bitmap or compressed still JPEG images, respectively. It also works with the WEBSITE to register the camera and each session of streaming video.

KEY FEATURES

1. Multiple concurrent MPEG-1,-2, or -4 streams of video and images from a Sony USB camera to remote Internet client displays.
 - The multicasting of streams is enabled by the Luxxon Gateway and Real or MS Media Servers.
 - The production of Real Video and MS Media multicast streams are enabled by the Luxxon Gateway plus Real and MS Encoders and Servers.
2. Displayed video resolution modifiable based on requirements of user, bandwidth and client display.
3. Displayed color depth and frame rate reduction performed if required.
4. Optional:
 - Storing of video/images on remote web site.

¹ The WEBSITE is the site on the Internet through which all cameras running the IVP will register and make themselves available, etc. The Camera Registrar will run on this site maintaining the active registration, including logs, etc., of all cameras. The Session Registrar will run on this site to manage the association of cameras and their streams.

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