Introduction

When simulations are done in situ simulations are taking to the Emergency Room, down the elevator, the ICU, and the CT scanner exceeding the simulation immersion compared to that of the embedded simulation centers and facilitating an increased realistic learning experience. Doing this without compromising (all) the educational principals used in simulation centers, we sought to include an audio-visual (AV) system for video assisted debriefing (VAD). The difference being that components must be portable and adaptable to a range of clinical environments. A mobile AV system would ideally feature:

- Multi camera video capture capability.
- Time tagging.
- Rapid or instant playback capability.
- Lightweight and compact design.
- Non-cabled AV recording.
- Simple, reliable set up and operation.

Description

Commercial products did not meet our requirements why a programmer was hired to design and program the software to meet our expectations for a portable AV system for VAD. The system would make use of “off the shelf” hardware components which are widely available and easily replaced or expanded. The developed AV software and coding is contracted to be available as Copyleft Open Source to ensure low cost and a potential continues improvement and expansion of the AV system.

GintasView – version 1.3

An action camera using SD cards (GoPro) have been chosen for audiovisual capture as they have proven to be flexible and durable. As a concession to the advantages of secure data capture, cameras must be gathered and cabled through a powered USB3.0 hub to a laptop with the open source AV software installed to enable streaming from the connected cameras.

During playback, sound may be sourced separately from vision to combine the best possible view with the best available audio (1 to 4 sources).

GintasView version 1.3 includes the possibility for time tagging using a mobile device like a smartphone or tablet. After simulation the time tagged file is exported to the AV software on the laptop and appears as an integrated video feed/timeline.

Conclusions

We have achieved a stable AV software that has be developed and implemented for an in situ simulation initiative. This version (1.3) is the first on released as Open Source (Copyleft) software (see QR tag).

We have found that it is possible to deliver multi-camera video assisted debriefing in a mobile, in situ simulation environment using an AV system constructed from “off the shelf” components and Open Source software.