

INVENTION DISCLOSURE

1. Invention Title.

Time Shifted Personal Recorder

2. Invention Summary.

This invention describes a method of recording things that have already happened.

3. Invention Description.

a. Describe the invention in detail.

The invention is for a personal recorder (voice, video, or both) that constantly records everything that the user sees and/or hears into volatile memory. The time-shifted personal recorder (TSPR) can then, after the event has happened, move a portion of that recording into persistent/non-volatile memory – thus recording something after it happened.

As illustrated below, all cameras and microphones are constantly streaming their data into a non-accessible, volatile memory bank. When something happens that the user would like to record, they issue a command to the TSPR. Based on the command given, the TSPR can send a still image or certain duration of audio, video, or both to a non-volatile storage. During normal operation, the TSPR is constantly deleting the oldest data to make room for the new data coming in via live stream from input devices.

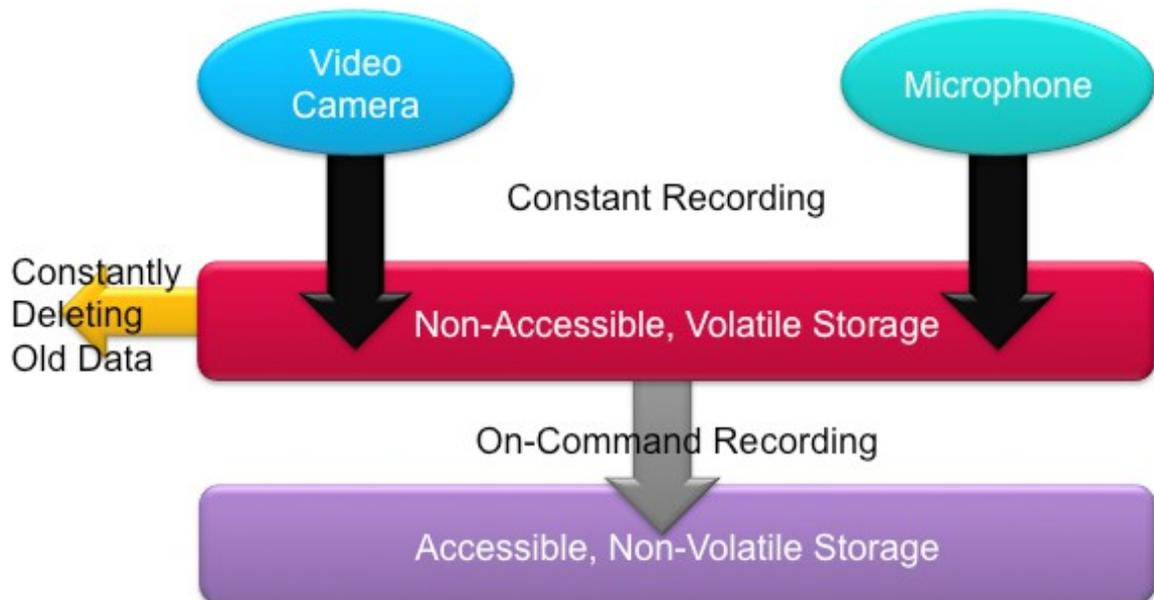


Figure - Time-Shifted Personal Recorder

The reason the volatile storage is non-accessible is for privacy concerns, only what you command the device to record would ever be accessible. This is a design consideration however and is not mandatory. Other design considerations include: The TSPR could be an

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application for a smart-phone, tablet, or other device; it could also be a distinct hardware device itself. The TSPR could be commanded with voice commands (if it records voice), hand gestures (if it records video), or a more traditional UI. The non-volatile, permanent storage could be on-board the device or located in the cloud. The audio recording device could be one or more internal or external microphones. The image and video recording device could be a camera worn as a lapel pin, or cameras inside of a pair of glasses, etc.

All of these factors are points of customization, the key invention is a device or application which constantly records live audio and video streams from user input devices into volatile memory and then transfers segments of that stored data to non-volatile memory on demand.

b. Why was the invention developed? What problem(s) does the invention solve? How is it better?

Currently, all live events that are captured must be anticipated. That is, you must have your camera out and ready before taking a picture, so you need to know that something is about to happen. Likewise for voice recording, you must know that you or the person you are talking to is going to say something memorable ahead of time so that you are able to pull out a recording device of some sort. This is not always practical.

With this invention, you can decide to record events AFTER they happen – no anticipation needed.

c. Briefly outline the potential commercial value and customers of the invention.

With the advent of smart-phones, multitudes of people have become amateur photographers and journalists, all of them would benefit by being able to capture events that have just happened rather than having to anticipate every event. For example: Imagine your first child takes his first step, but you don't happen to have your camera turned on – disaster! But if you had a TSPR, you could snatch that moment out of the recent past and capture it for all time to come.

Another key consumer of the TSPR may be authors and inventors. Many creatives use recording devices to capture ideas, with the TSPR they could have an always-on, always listening Dictaphone which can capture things they say, AFTER they've been said – never missing a great idea.

Also, a side effect of this is increased bandwidth usage – the more images, video, and audio that consumers capture, the more bandwidth they consume. This pushes them to higher tiers of service and generates revenue for ISPs, including MSOs.

4. HOW is this invention different from existing products, processes, systems?

Google's "Project Glass" augmented reality glasses are capable of capturing video but they have no method for selective recording or time-shifted recording that I am aware of.

SixthSense is a wearable device capable of capturing images and video, again no selective nor time-shifted recording.

There are several other augmented reality type devices and projects but none that I have seen allow for time-shifted recording.

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DVRs & PVRs in STBs have the functionality of constantly recording what is being watched so that it can be paused or re-wound, providing time-shifted viewing of programming but not time-shifted recording of actual events.