

A New Relevance for Multimedia When We Record Everything Personal

Gordon Bell
Microsoft Research

455 Market Street, Suite 1690
San Francisco, CA 94105
415 778 8228

gbell@microsoft.com

Categories and Subject Descriptors

H.5.1 Multimedia Information Systems; I.2.10 Vision and Scene Understanding; H.2 DATABASE MANAGEMENT; H.3 INFORMATION STORAGE AND RETRIEVAL; H.3.1 Content Analysis and Indexing

General Terms

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Memex, personal information stores, continuous recording and monitoring

Extended Abstract

Even school children know Moore's Law, but the effects of exponential change are only clear when the change arrives to impact our lives. For example, in the last decade, all of us moved from 50 Megabyte disks to 50 Gigabyte disks, enabling video to become an everyday data-type as common as text. Research needs to be predicated on the ubiquity of Terabyte sized disks that will enable content of all types to be held and maintained.

The era of unlimited storage has arrived and, hopefully, unlimited fixed and mobile network bandwidth will follow in the coming decade. Hence it is clear that those great bit-producers - digital audio, video, and real time data streams - can take a vastly increased role in all of our everyday lives.

We are beginning to experience this impact with MyLifeBits, a project that began with an attempt to make my life paperless, and that has expanded to include the capture, storage, access, and use of a vast array of data-types including documents, photos, audio, and video from my past.

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We are now moving toward 24 x 7 continuous recording of audio, images, video, and sensors (including health monitoring devices) that give new meaning to multimedia as multiple media types. Recorders may sometimes be turned off, but this is more like to be due to privacy concerns than lack of bandwidth or storage.

The real problem is not space, but how to "make use of the record" as Vannevar Bush said in his 1945 classic "As We May Think." His Memex vision gave us a manifesto for creating MyLifeBits software, with specifications for links, text and audio annotations, and head-mounted cameras. Extending Memex into more media (video, sensors, etc.) includes a range for problems from standards to long term data preservation, with tools of all kinds from simple editing, storage, production, and presentation to automatic meta-data creation.

The humble cell phone is on a course to become the main platform for capturing everyone's lives. These combine camera, video camera, navigation, PDA, A/V player, phone (and videophone) - and place in the hands of 5 billion users in an age unlimited storage.

Whether other continuous recording and monitoring devices for environments, rooms, meetings, personal points of view, and health monitoring will be ubiquitous or even useful will depend on net cost versus benefit. And the net benefit will depend on multimedia research making the plethora of new data streams as convenient to work with as text and numbers are today.