

Why Public Research Universities need to join the YouTube Generation

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Recently I picked up the New York Times and read this phrase: "the camera-friendly, perfectly pixalted, easily downloadable" professor. In a sense that's the subject completely of my talk tonight. The article discussed the rise to international glory of Walter Lewin, an MIT physics whose lectures, available free on the Web, have become among the globe's most downloaded. A 17-year old from India wrote "Through your inspiring video lectures I have managed to see just how beautiful physics is, both astounding and simple." That is the type of global impact I focus on tonight.

A symposium like this is a time to think big - to sketch out major thrusts. And so I'm talking about work-in-progress that I'm doing with a group of media and computer experts on our campus. Specifically, developing the Illinois Media Engine - we use the acronym *TIME*. I'm now going to speak a sentence that says everything I need to say tonight, but its nearly impossible to understand. Here it is: We intend for this "Engine" to make University of Illinois the "thought leader" by developing a content-rich web video presence - based on the principles of what's called Web 2.0 or social media. Just what the heck is that? I mean: "thought leader", "content-rich", "Web 2.0", "social media" -- what does that all mean?

In the next fifteen minutes I'll define those terms and outline why this university needs to blaze a trail in communicating with what's been called "new media". The Illinois Media Engine isn't a parochial concern: It strikes at the core and the heart of whether this University will thrive in the future.

Let me begin by, gently, introducing you to the world of a typical twenty-something year old - the universe of YouTube, Facebook, and Twitter. All places where discourse about our research, our teaching, and our outreach needs to live.

Architecture of Participation: The Facebook Generation

This generation has replaced Descartes "I think, there I am" with "I have webcam, therefore I am." No one under 25 uses e-mail any more -- its all instant messaging. Facebook now dominates in every campus computer cluster. And 23 year olds use media communally: At parties five or six people gather around

a laptop and share their favorite YouTube videos. (I've actually seen this: My wife has been in vet school for the last three years and so I occasionally attend parties filled with 23 year olds!) The key point is this: These new media aren't just a different outlet, they change fundamentally how the media world works. We haven't seen such a change since the introduction of television. I know that in this room we feel that we've lived through huge changes in media, but in a sense until now we haven't. If you think of LP record, then tapes, then CDs you only a change in delivery, not in content correction. Until today with the rise of so-called "Social Media" or "Web 2.0" - they mean the same thing. Instead of a viewer being a passive user of media, they can - and do! - create. Wikipedia is an excellent example of this, as is YouTube.

These new media tools remove older obstacles to public expression, and thus remove the bottlenecks that characterized mass media. The internet has resulted in the mass amateurization of efforts previously reserved for media professionals. Just yesterday as I was preparing my remarks I learned that this weekend a group of fans is distributing a movie they made called *The Hunt for Gollum*. They are, of course, Lord of the Rings devotees. They made a movie with about six thousand dollars. I looked at the trailer: Its really good! Not "good for six thousand dollars," but good with a period after it. Twenty or twenty-five years ago such a thing would be impossible to even attempt. But now - with cheap digital tools - we've entered an era where the distribution of media lies in the hands of the public.

Or, to take another example more in the spirit of what a university might do, researchers at CERN - the nuclear research facility - created a YouTube sensation: "The Large Hadron Rap." By far the greatest physics rap of all time, it accurately conveys a lot of knowledge related to particle physics and the supercollider - and it gathered millions of views.

So, the expectation of the Facebook generation is that they will be able to participate, create, and share multimedia: As a university we must be in the forefront of this revolution. This calls for a change in how we think, as an institution, about communicating.

Goals of the Illinois Media Engine

So, let me repeat and clarify what I said at the beginning: We intend for the Illinois Media Engine to make University of Illinois the "thought leader" by developing a content-rich web video presence - often based on the principles of what's called Web 2.0 or social media. To key to continuing the University's reputation for academic excellence lies in offering a global audience the core of the university: The minds and thoughts of its faculty and students. While some of the content of this engine could be prepared by public affairs, I emphasize that much of it should be unmediated by an office of public affairs, and instead firmly under the aegis of the Provost, the University's chief academic officer. This isn't PR effort, but true engagement. The punchline: We're not talking about simply using the web to deliver video instead of via television - that doesn't make for new media. The latter requires three essential elements: a) an architecture of participation, namely the ability for the public to sort and rate it; b) the ability of any person at the University of Illinois to create and upload content, and c) a "long tail" - essentially an infinite digital archive - which meets the rigorous standards needed by scholars. Let me tackle, briefly, those last three items.

Think community, not audience

A key change is to stop thinking about audience, but think of community. A Chinese proverb reads "Tell me and I'll forget; show me and I may remember; involve me and I'll understand." This ancient aphorism highlights that we need to stop thinking in terms of audience. The web has blurred the borderline between a private communication and a public broadcast. In the past one would never listen in on a phone call, or open a letter, and similarly one knows that a broadcast of a public radio piece is designed for all; yet, the web is filled with blog entries that describe mundane things like going to the store!

Social networking sites like MySpace and Facebook have millions of accounts, yet the median number of friends in MySpace is two, the average is 55 - a skewed high at that. This means the social networking is largely done pairwise. A blogger, then, is one of millions of pairwise or a bit higher interactions. So, from an "old" mass media viewpoint this is a failure of sorts - an audience of tens or 100s - yet audience is the wrong word to use. What a blogger has is a "community", a community which he or she, for whatever reason, resonates. It's a secret of Web 2.0 (or social networking) sites that one doesn't need professional quality in video, or narrative technique, or performance to be successful. The success of a content-rich site is like a dinner party: It isn't important what's on the plates, but instead

what's on the seats. The social networking of Web 2.0 allows people to choose what appeals, rather than sit and receive coarse marketing message - with the cost of global communication so low the lowest common denominator in communication can be overcome. This means the tyranny of the most popular has been defeated by what's called the long tail.

The Long Tail: Content Richness

In a popular 2006 book Chris Anderson outlined the essence of the long tail: "The theory of the Long Tail is that our culture and economy is increasingly shifting away from a focus on a relatively small number of 'hits' (mainstream products and markets) at the head of the demand curve and toward a huge number of niches in the tail. As the costs of production and distribution fall, especially on-line, there is now less need to lump products and consumers into one-size-fits-all containers. In an era without the constraints of physical shelf space and other bottlenecks of distribution, narrowly targeted goods and services can be as economically attractive as mainstream fare."

For the University that long tail means that we can now serve previously underserved audience: Prior to the Web it would have been extremely expensive to reach small audiences, but businesses like Amazon find that everything in their offerings is sampled once, perhaps not more than that, but at least once. The same applies to any new media site created by your lab or University and its content. One may well ask who would want to hear about the gory details of CO2 sequestration? Or, listen to the anthropological details of the African diaspora? Yet like Amazon.com and their infinite book shelf each of these videos would likely get at least one pairwise interaction because the topic resonates with someone. So, instead of thinking of a content-rich web site as a way to filter for hits, envision it as a method to create a community and pair-up users with what exactly interests them. Each community may be small by old media standards, but you might have a ton of such communities learning about Illinois. So, the power of the long tail lies in creating these communities, rather than in hit making. We need to look at this "content rich" site as touching huge numbers - albeit in pairs.

What Illinois brings to this

Now you might say: Look YouTube exists; we don't need our own media presence. But I think that Universities - not just this one - but all of them need the proper tools to fulfill their missions. The Modern research university is a company of scholars engaged in discovering and sharing knowledge, with a responsibility to see that such knowledge is used to improve the human condition. Thus we need to create the proper

"apparatus" for scholarly use. Right now YouTube is a giant amorphous repository. For use in education a video archive needs to meet standards of archiving, or being index correctly and being searchable so it can be retrieved, or to be accessible for all. The Illinois Information Technology went into effect recently: It requires captions, transcripts and alternative accessibility options on all digital media. Other Universities and States have or will have this requirement: Illinois can lead the way here. We need to have our students and faculty thoughts flow out via the Illinois Media Engine, which will be robust enough to use content that ranges from cell phones videos, screen casts from the desktop, recording of lectures, to high end photos shoots. We have on this campus the right mix of talent to deliver just this. We have a strong history of innovation in computation and a world-class - ranked #1 in the US News Rankings - Graduate School of Information and Library Science. The fusion of these two will give us a huge competitive advantage in showing all research universities, especially public ones, how to harness the new digital tools for sharing knowledge.

Conclusion

I appreciate you taking the time to be here, so I've brought two things for you. First, a copy of exactly what I said here today; but also a more detailed white paper on new media. I've written it to outline why we need to develop a Web 2.0 presence. If you are looking for more details behind the hows and whys of new media this paper has very much a tutorial approach

which might help you get oriented. Both are labeled "Draft" or "Not for circulation", but you can do what you want: These are only there so I'm blameless for any typos. With that I close and say thanks for listening.

About the Speaker

IN OVER 300 radio pieces Bill Hammack has explored the technological world. He's revealed the secrets of his high-tech underwear, explored the mysteries of mood rings, probed the perils of nanotechnology, and examined the threats to privacy from technology. Bill's work reflects a humanistic approach: He emphasizes the human dimension to technology - from the trial, tribulations, and triumphs of inventors and scientists to the effect of technology on our daily lives.

He's a regular commentator for American Public Media's premier business show *Marketplace*, for Illinois Public Radio, and for Radio National Australia's *Science Show*. His home station is WILL-AM 580 in Urbana. (Be sure to donate to your station!)

Many journalism, scientific and engineering organizations have recognized his work. He's received the top awards in science journalism: The National Association of Science Writers Science in *Society Award*, the American Institute of Physics *Science Writing Award*, and the American Chemical Society's *Grady-Stack Medal*. He recently spent a year as a U.S. Diplomat working as a Senior Science Adviser at the Department of State.

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