The AAAI Video Archive

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■ *The AAAI video archive is a central source of information about videotapes and films with information about AI that are stored digitally on other sites or physically in institutional archives. For each video, the archive includes a brief description of the contents and personae, one or more representative short clips for classroom or individual use, and the location of the archival copy (for example, at a university library).*

Scientists have a responsibility to provide accurate information about their disciplines to the public. Since more and more people look to the web for information—sometimes exclusively—providing information online is an effective way to reach the public and fulfill this obligation.

The video archive[1] is part of AAAI's ongoing effort to communicate the science of AI to interested people around the world. AAAI currently maintains the web portal AI Topics[2] as a means of providing credible and timely information to the general public as well as the AI community (Buchanan and Glick 2002). The site has grown to include a variety of textual materials including overviews, news stories, technical articles, and some audio and video materials about AI. While search engines such as Google and Yahoo will find everything online that mentions a topic of interest, a mediated site such as AI Topics offers well-written, accurate materials that provide good starting places for learning about the topic and paves the way for further exploration.[3]

The AI Topics site is heavily used by a diverse group of visitors from around the world, and our statistics show that usage has increased steadily over the years. Requests[4] come from colleges and universities of all sizes, research labs, industrial sites, government and military institutions, and many other domains not readily categorized. Spikes in the usage charts around the ends of academic terms suggest that students are using the site to find material for term papers and projects. Frequency of access from more than two hundred nations suggests that the site is filling gaps in library collections. An informal look at many undergraduate syllabi for AI courses reveals that the site provides useful background information and discussion material for classroom use. Unsolicited feedback suggests that high school students as well as graduate students are finding the site useful. The site consistently ranks high in online search results for AI-related inquiries.

It is now much easier for anyone with a computer to access video content online than it was when AI Topics was launched. One result is that the public now expects more than text-based information and it is clear that video is fast becoming the most effective communications channel. A recent article in *New Scientist* (Busse 2007) reports:

> TV is already the dominant format for communicating science. In November 2006, the Pew Internet and American Life project based in Washington DC found that it is the general public's number one portal for science information, with the internet a close second. However, with the rise of broadband internet connections, people are increasingly getting their video fix, and that means science communicators have to keep up. "We have to be looking pretty closely at online video as an outlet for the public understanding of science," says Stewart Wills, online editor of the journal *Science,* based in Washington DC.

In addition, the *New York Times* (Richtel 2007) reports:

> ComScore, which measures consumer Internet habits, reported today that 75 percent of Internet users in the United States watch an average of three hours of online video a month. The average online video duration was 2.7 minutes....

Moreover, the survey indicates that more than 2.5 billion videos are watched by Internet users every day. Although these numbers may not reflect the habits of AI students and professionals, they certainly point to a trend among the general population we would like to reach.

As yet another confirmation of the timeliness of using video, a new website[5] has been launched with NSF funding specifically to use video to communicate scientific results (CORDIS News 2007). Called SciVee, the site puts emphasis on making published work more accessible to a new audience. To date most of its videos are in biology and astronomy.

> "SciVee, created for scientists, by scientists, moves science beyond the printed word and lecture theatre, taking advantage of the Internet as a communication medium where scientists young and old have a place and a voice," explains the website. The benefit for scientists is the opportunity to disseminate their research to a wider and potentially new audience. They are also able to create a professional profile and join science groups. The larger scientific community is able to access new scientific information, comment on what is published, and subscribe to relevant channels and groups. Authors must have published their paper in an open access journal in order to upload it to SciVee. This dynamic form of presentation could also encourage a lay audience to investigate science. The appeal of the website to a general audience does however depend on the quality of the content, and the presentation skills of the scientists submitting their work. Users are able to tag, rate and comment on videos. The current offerings are all biology-

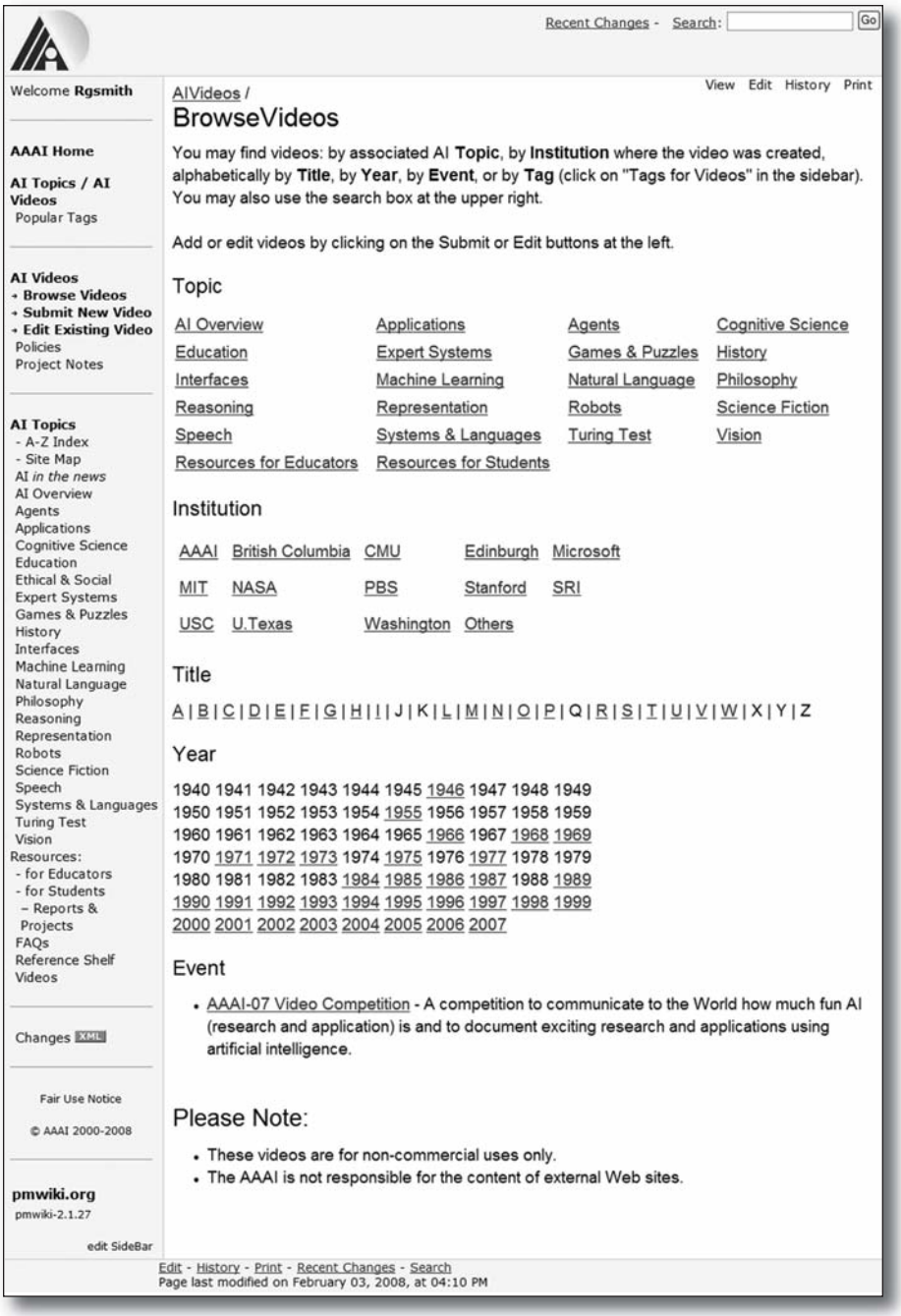

Figure 1. The Browse Videos Page.

focused, dealing with subjects from evolution to proteins (CORDIS News 2007).

Therefore, it is now appropriate to make video an important component of AI Topics by incorporating more video materials of informational and pedagogical value. Moreover, it is in the best interests of the community to have a central place for the public to turn for videos that responsibly represent research and applications in AI and also topical social and ethical issues.

It is also the case that although the written record of AI's history is deposited in library collections—including books, journals, and conference proceedings, not to mention papers available on the Web—the video record demands attention. Many early demonstrations of AI programs and many of the pioneers' lectures explaining basic AI concepts have been captured on videotape and film, but not all have been digitized, and few of these have been preserved in archival form. Videotapes and films stored on closet shelves will become brittle or unreadable when players are no longer available. Thus the historical record is increasingly threatened as time passes.

The purpose of the AAAI video archive is to be a central source of information about AI-related videotapes and films that are available somewhere, thereby providing scholars with a single starting place when searching for videos about AI.

The three main goals for the archive are to (1) collect a master catalog of AI-related videos already digitized, (2) archive as many videos of historical importance as we can for posterity, and (3) make interesting clips available for pedagogical purposes now.

The media and formats utilized must ensure that the information will be available for the longest time. In addition, we need to take account of the remaining half-life of the videotapes and films as well as the historical interest of the content. Three audiences are envisaged for the short clips: individual students accessing the site through a variety of devices, including hand-held devices and cell phones, professors wishing to assemble video materials for lectures, and media crews looking for video material on short notice We can count on XML, MP2, MP3 (for audio), and maybe MP4 (or other formats) to make clips available now and count on future browsers to be downward compatible for a while, or migrate the interesting content to newer formats. We may find that most people will access the video clips through the web, using hand-held devices or cell phones.

History

The AAAI video archive began in late 2006 with a pilot project whose goals are to create an archival video record to preserve the historical archive of the early days of the AI field and share the information for widespread peda-

gogical purposes. We set out to create a site that is easily maintained and extended without large cost. We also set out to design procedures and standards acceptable to archivists for handling fragile tapes and films, digitizing them with noise reduction and color correction, and storing original copies with appropriate metadata.

A pilot project was funded by NSF, and the website[6] was officially announced at the AAAI-07 conference in July 2007. Continuation funding has recently been granted by NSF.

The Wiki Model

The AAAI video archive has been implemented as a Wiki to enable and encourage the AI community to annotate videos, comment, add historical context, link to seminal papers and course materials, and so on.[7] Figure 1 shows the entry page, Browse Videos. As shown in the figure, videos can be browsed by topic (drawn from AI Topics), by institution (for example, Stanford), alphabetically, by year, or by "tag" (that is, keyword or social bookmark). Videos may also be found by searching for any term used anywhere in their descriptions.

Content

As of October 2007, the AAAI video archive includes about 100 videos and pointers to several collections from major universities, research labs, and other institutions shown in figure 1. Figure 2 is a sample page showing the kinds of information collected on each video.

The Submit New Video button in every sidebar opens a form in which anyone can submit information about a video. Figure 2 shows the kinds of information that is saved for each video, but only the briefest amount is necessary at the initial submission since other users can supply the rest. Contributors are encouraged to add tags[8] (social bookmarks) that will be useful to others who might want to find a video. Tags already used for other videos can be viewed, and all videos with a given tag can be listed. As protection against offensive material, each submission is sent to the site manager who creates the new page.

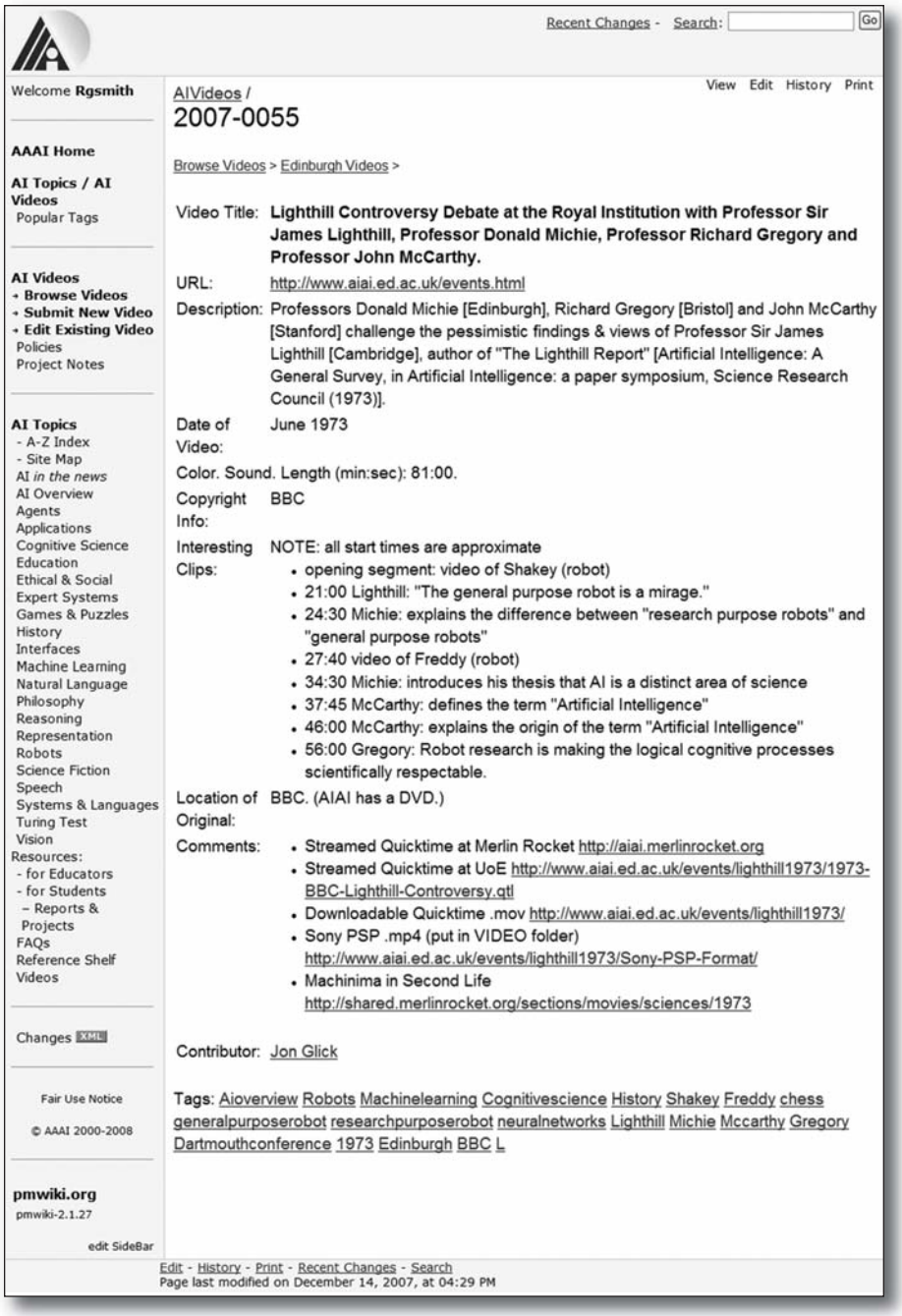

Figure 2. The Sample Video Page.

There is a trade-off with any Wiki, which has been much-noted with Wikipedia, between accepting all modifications from users and controlling the quality of modifications. The accuracy of information is of primary importance, and part of the Wiki model assumes that modifications by a large community will converge on accurate, understandable material (Silverthorne 2007). A 2005 *Nature* study lent some support to this assumption by concluding that the accuracy of the Wikipedia was comparable to that of the *Encyclopedia Britannica* (Giles 2005). But as editors at the *Boston Globe* (2007) have pointed out:

> The Internet is great at fostering democracy when it creates more access to original sources of information, from scientific databases to the

Congressional Record. And Wikipedia shines when it does the same, offering entries with links to such sources. But democracy alone doesn't create truth. Users, especially students, still have to be wary of spin, fluff, and falsehoods. It's exciting to try to get at the truth in sprawling editing groups. But as WikiScanner shows, its also important to identify the editors and judge the truth they tell.

Self-serving changes are discouraged by this process (Blakely 2007a, Blakely 2007b, Borland 2007, Greenberg 2007, Hafner 2007), as are blatantly commercial or offensive additions. It has also been found highly desirable to institute an editorial review to maintain standards.[9] As an additional control, links to new videos are added only by the project coordinator after information has been submitted. We assume AAAI members will want the site to be useful and will avoid cluttering it with junk.

Conclusion

The site is ready for use. We invite the AAAI community to submit videos, add comments or tags, and highlight short clips that are particularly interesting in the current videos. In addition, suggestions for improvements are most welcome (some are already noted on the Project Notes/Suggested Improvements page). We especially welcome offers to help write new code for the Wiki and review new submissions.

In short, the site belongs to the AI community, and its utility will increase in direct proportion to the involvement of the community.

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Notes

1. www.aaai.org/video/.

2. www.aaai.org/AITopics.

3. The AI Topics site includes a "springboard" page that encourages exploration. See www.aaai.org/AITopics/html/springbd.html.

4. AI Topics receives about close to a million hits a month. In a recent summer month (July 2007) there were about 810,000 hits to AI Topics pages from about 130,000 visitors. About 5500 hits were to the robots pages, nearly 4000 to expert systems, 2500 to agents, and about 2500 to ethics.

5. www.scivee.tv/.

6. www.aaai.org/video.

7. We used Patrick Michaud's PmWiki implementation (www.pmwiki.org) due to its simplicity and robustness and the wealth of functional add-ons that have been contributed by the PmWiki community.

8. Tags have been popularized by their use in Flickr and other sites that emphasize community sharing.

9. We have not yet set up a formal review process because all suggested changes come from just a few people, namely those named on the site (under "Project Notes /People").

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