

WILL COLLABORATION AROUND TECHNOLOGY EVER REALLY SAVE MONEY?

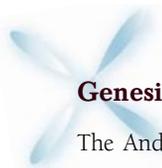
ARTstor is a nonprofit organization founded by The Andrew W.

Mellon Foundation to contribute to the work of the arts and educational communities. ARTstor's mission is to use digital technology to enhance scholarship, teaching, and learning in the arts and associated fields—by both improving quality and increasing productivity. Its charter collection is a repository of hundreds of thousands of digital images and related data; ARTstor offers tools enabling the active use of those images in a controlled environment that balances the rights of content providers with the interests of content users. James Shulman, executive director of ARTstor, describes the project's start-up and the obstacles encountered along the way. Despite hurdles, he remains convinced that by working together, institutions can depend upon a community-wide, nonprofit, technology-based resource that is bigger, better, more effective, and more efficient than what they can do on their own.



MISSION CONTROL

- ✗ ARTstor is a technology-based collaboration aimed at improving quality and increasing productivity, thereby saving scarce resources.
- ✗ ARTstor's charter collection is a repository of hundreds of thousands of digital art images and related data. It has agreements in place with major museums around the world to help create content.
- ✗ To help manage intellectual property risks, images are wrapped in software and not distributed as free-floating files. ARTstor has tools and software to catalog, manage, use, and share collections.
- ✗ Colleges, universities and other nonprofits can join ARTstor for annual access fees based on their size; 450 higher education institutions are currently signed up.



Genesis of ARTstor

The Andrew W. Mellon Foundation has a history of supporting the humanities and the arts, often through innovative projects that, especially more recently, have sought to capitalize on the possibilities presented by advances in technology. ARTstor traces its roots and name to the foundation's earlier creation of JSTOR, which contains nearly 15 million digitized pages from almost 400 academic journals, all available to users in some 2,000 institutions in more than 80 countries.

Given the foundation's history and the success of JSTOR, in the late 1990s several colleges and universities separately approached the foundation for funding to convert their massive slide collections into digital images. It quickly became apparent that these institutions were each hoping to carry out what seemed to be essentially the same

task—that is, scanning slides, cataloging them, and building a database so that the collections could be used effectively. Thus, in 2000, Mellon Foundation committed funds and began to explore the creation of digital image resources to support teaching and learning.

A few key decisions made in the early rounds of discussion determined the nature of ARTstor:

We decided to “give the people what they want.” While some museums were working hard to handle the added burden of providing to educational users images of the content they *already had*, we started with the demand-side approach of trying to figure out what we had to do to get the users what they *wanted*. This meant digitizing an entire slide library and dealing with the plethora of related intellectual property issues.

We decided to work with a broad community of suppliers and users. This meant striving to address the concerns of artists, museums, and image suppliers rather than casually calling everything “fair use” without focusing on the intellectual property issues in a serious way. We felt—and continue to feel—that those who create art or images and those who are entrusted to care for works and sites need to be a part of what we are doing or the project will not be built on solid ground.

To allow users to make active use of the content and to manage the risk associated with all the varying and often conflicting intellectual property interests, we decided that the images would be distributed wrapped in software and

not as free-floating files. This was the only way we saw to deal with the panoply of intellectual property and patrimony issues—both real and potential—that swirl around art images. It was also a fundamentally significant decision for ARTstor because it committed us to building a software environment rather than just a Web site.

As we made these early decisions, our enthusiasm for the prospects of the project grew. One consequence of our strategy was the possibility that in addition to not having to digitize their slides, catalog them, build databases, or figure out the rights issues and manage those risks, some institutions could also avoid having to buy or build software for managing and presenting images. In this way, ARTstor might not only create a community-wide way of sharing the costs of building digital image content, but also offer a way to avoid costly infrastructure and service commitments. We thought this approach would appeal to the library world—a world of shared planning with a record of undertaking significant money-saving efforts, ranging from OCLC (the large cooperative enterprise that provides shared cataloging records for all new books and journals) to interlibrary loans and consortial efforts to stand up and protest profiteering pricing on the part of major science journal publishers.



Lessons Learned

We've learned much since those early days. In many ways, the fundamental idea seems to be working. Since ARTstor was launched as a live service in July 2004, more than 450 institutions have signed up to participate, including the Michigans and Stanfords of the world, and more than 100 community colleges. In addition to a one-time capital fee, participating institutions pay annual access fees ranging from \$1,200 for small community colleges to \$20,000 for Research I universities. Additionally, ARTstor has agreements in place with major museums around the world to contribute or work with us to create content, and we have an ever-growing library of wonderful images useful to all sorts of academic fields. For many of the participating institutions, ARTstor has already meant that they could resist “brewing their own.” Among liberal arts colleges, members of the Appalachian Colleges Association, community colleges, and even a few major land grant universities that had not already embarked down the path of building their own tools and creating their own digital versions of everything, there has been genuine enthusiasm—both for the collections and for the ability to sit out this costly technology investment.

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It's still early, but it seems that for some significant number of institutions, the ARTstor proposition, as originally conceived, makes a great deal of sense. These institutions are likely to continue to spend some money and space on a physical slide library since the transition to digital will clearly take some time. But the prospect of avoiding new digital costs is very real, and, at some point in time, the costs associated with building, maintaining, and storing analog image collections might also be recaptured.

For other institutions, particularly leading research universities and selective liberal arts colleges that have already started down the path of solving this problem on their own, the benefits of ARTstor are not so obvious. Some of these institutions are on the pioneering edge of the digital horizon, forging their own solutions, and are reluctant to give up their independence to join a community effort. It is difficult for them to appreciate the benefits of using someone else's library (ARTstor's) and to justify giving up what they have already built. Moreover, at institutions with significant resources, ARTstor bumps into a set of institutional buyers (librarians, instructional technologists, and visual resource specialists) who face a conflict between the potential of a resource like ARTstor to serve institutional needs and their own role in serving those needs. In some cases, this raises all the emotions of an outsourcing decision. Finally, the grip of deeply ingrained behavior patterns is very real—some potential users simply refuse to let go of their slide carousels and the personalized service they have received for 30 years from the slide librarian.

But perhaps the most important lesson we have learned is that the “rational world” in which library science and information technology intersect is in fact in the midst of dramatic redefinition. One example will suffice: “Real world” companies such as Google are penetrating the cloistered world of the library and campus in fundamental ways. For the last decade, one of the hottest topics in the library world has been “metasearching”—the process by which the electronic resources that a library owns or subscribes to are mapped to one common search engine, allowing users to turn to one definitive source for information. Some places have been slowly building their own search engines, or tentatively implementing (usually on a limited number of the hundreds of databases they have access to) a product built by a large library systems vendor (such as Endeavor). As they work through these crafted solutions, they look up from their desks to realize that all their users use Google—for everything. The first stop for practically every researcher and every student is Google; so, what's the point of creating a local Google-esque access portal that cannot possibly compare in power or scope to

Google? One-stop shopping via a library-based metasearch engine that searches a dozen different databases might seem an awful lot like a perfect buggy whip in the age of Henry Ford.

Into this mix of seismic shifts, ARTstor introduces a service that bridges content, software, and services, and forces institutions to answer the question of who is going to “own” the project when it arrives on campus without prescribed labels. This is not a theoretical question. ARTstor is a messy, natural experiment defined by its context—which is in a state of flux. Some institutions use ARTstor as a locus for experimenting with how relationships between the library, instructional technology, visual resource libraries, and information technology might be redefined. At some institutions, the library and instructional technology groups work together seamlessly; at others, they are at each other's throats.

But the larger question, beyond the changing world of the library and academic computing, is, “When and how can institutions share technological resources without having to customize to the point of building it themselves?” There are no easy answers, but some observations and suggestions from ARTstor's experience may shed light on the broader issue of making collaboration around technology work:

The existence of legacy data and behavior increases the difficulty of switching anything. Whether the topic at hand is historical accounting data or a given professor's old spreadsheet containing cataloging that describes a Chinese cave painting's various Buddhas, migrating old data and the user behavior associated with it represents a sizable barrier to change. Sometimes it is easier to start from scratch and to have had nothing before, though this is often not the case.

Projects that touch mission-central endeavors are extraordinarily sensitive. There will always be activities on campus that are more or less central and hence can be considered more or less optimal for experimentation. But supporting the public performance of a professor standing up in front of a class of students must be done very well. It is entirely reasonable that proposed changes in the systems that support the most central of these activities must be able to clear a very high bar.

An externally purchased “product” must be good at dealing with both of these first two issues, or it is likely to be rejected.

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Implementing systems that will be cost-efficient over the long run might well require *highly inefficient* parallel commitments to bridge from the short term to the long term.

As the song says, “The slow one now will later be fast.” Previously underserved constituencies embrace change faster. ARTstor is adored by many historians, classicists, language teachers, sociologists, geographers, engineers, and others who may have wanted to use images before but never had any support in doing so.

Institutional boundaries must evolve. In the specific case of ARTstor’s rollout, the departments involved include the library, the slide library, and instructional technology. The role of these areas will inevitably change over time, and these changes can be greeted strategically or passively. The community that has to work through these large-scale shifts cannot depend on people to act against their vested interests. This is

likely true for other areas in which there is a possibility of trans-institutional collaboration.

Trade-offs are trade-offs. If the trade-off isn’t worth it, someone will not make the trade (at least not of his or her own free will). Optimizing the trade-offs involved in any transition—establishing valuable “pluses” and progressively eliminating the “minuses” associated with a change—can be a step-by-step process, but it has to happen.

Conclusion

ARTstor is based on the premise that collaboration around technology can save money and improve the quality of scholarship, teaching, and learning. To accomplish that for a variety of institutions—ranging from those previously underserved in this realm to those whose resources permit and inspire them to innovate and act on their own—ARTstor has laid out a clear path for moving forward: We know that ARTstor must provide ways for institutions and end users to mix their local content with ARTstor’s content, which we will continually expand. Further, we will also continue to expand and develop the tools by which ARTstor enables other software environments to mingle with its own, via searching and exporting. And finally, ongoing development of content, data, and tools will always take place with improvement of services to the educational user and shared values with local campus libraries in mind. In the end, however, the success of a collaborative experiment such as ARTstor is most dependent upon the will of colleges and universities to collaborate.

James Shulman is executive director of ARTstor. His most recent book is *The Game of Life: College Sports and Educational Values* (2001), co-authored with William Bowen. Shulman can be reached at js@artstor.org.

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