In 2001, The Andrew W. Mellon Foundation announced that it would create a new organization, Artstor (artstor.org), to assemble a large and growing library of images from disparate sources to support teaching and research in the arts and humanities. It was not created within the art image content-owning museum community (though a museum-based consortium had urged Mellon to pursue this approach); it was not created within the community of educational users of images (though for decades, colleges and universities had created and gathered their own images for teaching). It was deliberately created as an intermediary organization that would reach across the understanding gap that separated these two communities and would respect and balance the interests of both sides. At the same time that Napster was using technology to facilitate the unbalanced transfer of digital (music) content from creators to (and among) users, the Mellon Foundation set up a new institution aimed at respecting the concerns of one side of the market and supporting the socially desirable work of the other.

In the 15 years that followed, Artstor assembled image collections from over 300 institutions and individuals (including the Metropolitan Museum of Art, MoMA, the Victoria & Albert Museum, Berlin State Museums, Réunion des Musées Nationaux, Mark Rothko Estate, the Warhol Foundation, Renzo Piano Building Workshop, and the Bodleian Library at University of Oxford. Artstor was also able to attract content from commercial image vendors such as Magnum Photos and The New Yorker cartoons.) It made sense that when a teacher wanted to teach Rembrandt, he or she did not want to have to hunt and peck across hundreds of different museum websites. And the content from one or two places just wouldn’t suffice. Providing aggregation was helpful, and the service was even more helpful because that aggregator could also address the rights issues (without each supplier and each user needing to work out separate agreements) and manage the use of the content by license terms and technological constraints. Finally, the aggregator could also add value (in terms of advanced searching, collaborative filtering, and tools to help users do what they needed to do). In creating Artstor, we figured out the terms, policies, and logistics that allowed us to span a gulf between the fragmented content owning community and those who wanted to make use of that content.

The work of assembling the Artstor collections included:

- Identifying the various constituencies within content owning institutions who could make or block the decision to share institutional content and determining the right approaches to building relationships with them;
• Making and strengthening various value propositions about why those decision-makers and their institutions should place their content with the intermediary organization;

• Devising pragmatic legal and intellectual property regimes for doing so in ways that respected the concerns of the gatekeepers;

• Working out feasible and practical technology solutions for carrying out the work, depending upon institutionally based partners who had their own work to do, their own priorities, and their own standards;

• Creating a business model to support the operating costs of the maintenance of, and controlled access to, the aggregated content.

• Extending the use and outputs of the data held within the TDI in accordance with changing exogenous opportunities and evolving norms, while sustaining the trust of the content providers.

Although the financial stakes associated with the use of art images were low (unlike digital music), the passions around their use ran very high. Various stakeholders within the content community held widely varying views about who should be allowed to access content and for what purpose. The disparate views of curators, museum directors, museum marketing staff, general counsels, and technology staff/digital content managers were driven in large part by their devotion to their work – about how their objects would be represented, the integrity of the project and the alignment with their own mission, their authority in providing information about the work, the rights of the artists and photographers and the institution’s relationship with those rights holders or other interested parties.

Building a TDI in such an environment represented more of a social and relationship challenge than a technical one (though there were technical aspects as well). The lessons learned in building Artstor as a TDI and the trust that enabled its use are more interesting and more generalizable than the particular gains that accrued to the study of art and culture at the 1,800 institutions that use Artstor.

**From an aggregator to an agent:**

Artstor’s 15 year history in building the Artstor Digital Library (ADL) which was narrowly aimed at supporting classroom teaching and research led to some unanticipated outgrowths that were consistent with the original goal of building a bridge between content owners and educational users. The first expansion (beyond our limited-use and subscription-supported library service) was *Images for Academic Publication* (IAP), created in 2008 and now providing over 35,000 publishable images from 15 museums to ADL subscribers as well as non-subscribers at no charge. Even though providing images for publishing was a frightening idea to content providers at the beginning of Artstor’s work (and still is today for many content providers), we readily agreed to take on IAP when a few of the content providers asked if we would do this, since it was such an obvious win-win for all of our stakeholders.
In 2013, we assisted 6 museums to channel their content to the Digital Public Library of America (DPLA). When DPLA was formed, museums and the DPLA asked Artstor to serve as a conduit that would enable the flow of public domain content beyond the constrained bounds of Artstor as originally designed and into this new portal; this expanded utilization wouldn’t have been possible at the same scale had the trusted intermediary not been created earlier.

Because Artstor had been constructed to fill a gap, and was able to gain and maintain the trust of the various constituencies involved, we were able to move from a one lane bridge to a flexible node in an evolving network.

**TDI and philanthropy: the same as any other non-profit organization?**

In creating Artstor, the Mellon Foundation acted as a social venture capitalist, investing significant funds in the ramping up on an organization that would eventually be self-supporting but which needed to build infrastructure and relationships long before it would have sufficient subscribers. As a missing bridge in an emerging network, an intermediary organization tends to require philanthropic seed capital in lieu of traditional fundraising since, as gap-filling infrastructure they have evoke little sentimental attachment on the part of donors. Artstor, for example, served the interests of colleges, universities, schools, and museums – but the donors who were attached to those end-node institutions were not likely to support the shared plumbing that would connect them.

The Mellon Foundation made a “big bet” on Artstor – believing that spending over $40 million to create a solution that had the potential to serve thousands of institutions was a better investment than spending $1 million dozens of times to create numerous local and at least partially redundant solutions. These local solutions (i.e. scanning and cataloging many of the same images like the Mona Lisa and addressing the intellectual property and software issues at different places) would not only not benefit what could be a network of institutions but would also entail local investment and support of content management and software solutions. The TDI would provide better data services for various uses, at far less collective cost, and would respect the needs and concerns of those who created, maintained, and provided the content. Less foreseen at the time was the capacity of such an intermediary – once established and trusted – to play new roles as the ecosystem around it evolved.