

Exploring the Ownership and Sharing of Research

Workshop Examines Appropriate Handling of Intellectual Property in Transportation Research

Ownership, sharing, and use of research results, images, and data are considered integral and growing aspects of transportation applications. As part of an effort to provide guidance for the beneficial handling of intellectual property (IP), a workshop was convened to bring experts together to discuss IP and identify gaps and next steps that the transportation community may benefit from.

Overview

The workshop, “Information, Images, and Data: Practical Guidance for Using and Owning Intellectual Property” (workshop 128), was sponsored by the Transportation Research Board’s (TRB) committees on Conduct of Research, Library and Information Science for Transportation, Technology Transfer, Visualization in Transportation, Emerging Technology Law, and the Data and Information Section. It was held January 22, 2012, at the TRB 91st Annual Meeting in Washington, DC. Attendees listened to presentations from a selection of expert speakers, offering insight and guidance from a legal, publishing, and State department of transportation (DOT) perspective. The session also included an opportunity for attendees to put forward questions and participate in breakout group discussions.

Protecting Copyrighted Assets

Bill McComas of Shapiro Sher Guinot & Sandler began by providing an overview of ownership rights of copyrighted assets from a legal perspective. Four basic IP rights were explained: patents, copyrights, trademarks, and trade secrets. Attendees were advised that determining, in the early stages of a contract, exactly who owns a copyright can avoid complications at a later stage and that broad language should be used to ensure anything done for the company is owned by it. The importance of understanding usage

restrictions was highlighted; for example, items that fall under a Creative Commons license do not require a royalty, but there may be certain usage requirements to be incorporated into any subsequent publication.

The issue of commercializing and implementing royalties was also raised. McComas explained that there are many ways to commercialize a copyright: this could include assignment, where content is given away with no control; buying, where it becomes a legal assignment with exclusive rights; or licensing, where it is effectively ownership of the copyright but with no legal title. It was noted that, as an owner of IP, you may actually be enabling a competitor by licensing the rights for a fee.

Attendees were given an overview of the concept of fair use and how the rights of a copyright owner must be balanced with the rights of the wider community. Criticism, news reporting, and teaching were provided as examples of uses that encourage users to engage in activities for the benefit of others.

Finally, with the increasing popularity of online user-generated content, attendees were informed about the importance of the Digital Millennium Copyright Act. This protects a Web site operator in the event that they inadvertently receive and publish something online that may be a copyright infringement, provided the offending item is removed. McComas concluded that it is important to keep the scope of a license narrow when assigning a copyright but as broad as possible when receiving one. He also stated that it is important to always perform a gap analysis when looking at inbound or outbound licensing issues, i.e. what is coming in must always be balanced against what is leaving.

Publishing Rights

Next, attendees were given an overview from a publisher's perspective. Chris Pringle of Elsevier Ltd., the largest publisher of transportation publications in the world, informed attendees of the structure and complexities of the transportation publishing world and the relationships between creators and consumers of IP. Pringle explained how several different groups create content in the transportation community, including academic researchers, government agencies, and industry. They each have different motivations; for example, academic researchers must "publish or perish," government agencies publish

for the public good and other public obligations, and industry looks to make money or fulfill a client deliverable. Pringle explained that with so many different creators of IP, it is critical to organize the overall structure and process for IP management, and this can be achieved by the central role of an information specialist (e.g., a publisher or librarian).

Pringle then briefed attendees on the role of the publisher in the Internet age of digital content. Although most content can now be found independently by researchers on the Web, there are still several roles for information specialists that are vital to the system. For example, a publisher can assist authors with guidelines and commissioning work; manage quality control; select, manage, and operate the peer review process; manage dissemination of material; and archive research to ensure that what is published is preserved. Another important role for publishers highlighted at the workshop is in protecting IP and identifying plagiarisms, a problem that has been magnified in the Internet age.

Attendees were informed about steps that the publishing industry is taking to combat plagiarism—including establishing guidelines through the creation of the Committee on Publication Ethics (www.publicationethics.org), creating the Publishing Ethics Resource Kit (www.elsevier.com/publishingethicskit), developing a CrossCheck service to identify plagiarism (www.crossref.org/crosscheck), and implementing industry standards. Pringle stated that although information should be free, it must work and pay its way and that protecting IP in this way forms a sustainable business model by ensuring the ongoing protection and dissemination of information. The type of IP will determine who pays and consumes the information, and this is something a publisher can establish before steering the creator and consumer towards the appropriate business model. Finally, attendees were advised to consult an information specialist about their specific IP requirements.

Sharing and Using Digital Documents

Next, the workshop moved from the theoretical to some of the practical issues faced by State DOTs. Ken Winter of Virginia DOT (VDOT) presented a case study on the creation of a consolidated electronic

archive of VDOT research reports at the National Transportation Library (NTL) with the aim of fostering sharing and use of digital documents. The presentation highlighted the steps taken by a State (VDOT) and Federal agency (NTL) to research a licensing agreement for a specific purpose.

Attendees were informed about the practical reasons for digitizing reports and providing consumers with access instead of ownership. According to Winter, many libraries are now realizing that there is a need to move away from traditional tools in an effort to close the “discovery to delivery” loop, responding to the fact that a majority of researchers no longer begin their search in a library catalog. It was noted that digital files can be vulnerable as Web links move and vanish over time. This was highlighted as something that can occur frequently at State DOTs, where staff turnover, workforce changes, and other disruptions can be responsible for losses.

Winter went on to clarify that State DOTs are not professional publishers, and transportation libraries are starting to realize the potential impact of not having a single dedicated archive. In an effort to tackle this problem, VDOT has worked on developing an agreement between its research library and the NTL to collaborate on archiving and digitizing research reports. Since the idea for a joint agreement arose in early 2007, there has been a lengthy process of responding to complex budget and contract issues. Winter explained that, despite the basic intention to secure public access to publicly funded research, there were many steps in the process—including obtaining provisional endorsement from VDOT’s policy division, securing approval from Virginia’s Secretary of Administration’s Office, and working out the intricate license details with Virginia’s Attorney General’s office. Finally, in 2009 a limited license was granted to the NTL by the Commonwealth of Virginia, and the digital repository now contains approximately 1,700 research reports with enhanced bibliographic details.

Winter used the VDOT research library example to demonstrate that the technology does exist to digitize research and extend accessibility for researchers. He explained that it also showed that it is possible to use optical character recognition to provide an abstract and enhance the discovery process. By

using such standards it is now possible to share content directly with the NTL so that the same document appears not only on the VDOT server but is also archived and backed up on the NTL server.

Winter concluded that the VDOT and NTL collaboration offers a bright future for open access to information and data. The monetary costs and legal risks are low, the public gets access to taxpayer-funded research, and with a trend for increased transparency and open access, this concept could become a national model for other State DOT research reports. He also stated that discipline-related repositories, not organization related repositories, hold the most promise for future. For more information on the VDOT case study, visit www.trblist.org/vdotcasestudy.

Providing Guidance

The final presentation, from Joe Bradley of Applied Research Associates, Inc., focused on the development of a National Cooperative Highway Research Program (NCHRP) IP management guide for State DOTs. Bradley explained that the overall aim of this project is to develop a comprehensive guide to IP-related issues for State DOT IP management practitioners and create relevant outreach training and materials. Bradley provided an overview of the motivation, objectives, and current status of the project, which had been active for 5 months at the time of the workshop.

Attendees were informed that the NCHRP project began by seeking to answer a series of questions on IP that would provide useful structure and guidance for State DOTs. Questions included:

- How can State DOTs best provide core services without incurring liability for the use of IP?
- How can States best extract value from their investments in IP and protect their interests?
- How should relationships between State DOTs, employees, and contractors be structured for a win-win scenario?
- What should the overall State DOT strategy be regarding IP management?

Workshop attendees were informed that there are many different areas to consider when handling IP, and it is important to have an appropriate strategy to address relevant issues. According to Bradley, the NCHRP project aims to fulfill several objectives, including defining the nature and types of IP, documenting the laws governing and impacting IP management, and documenting and suggesting new management approaches.

Through the development of an IP management framework, Bradley expects the guidelines will enhance a State DOT's overall freedom of operation. He explained that it will also improve defensive strategy and risk management by ensuring State DOTs have continued access to innovations developed with State DOT funding. Through reciprocal licenses, attendees were told that it will be possible to obtain access to innovations developed by other public bodies and avoid becoming "captive" to incumbent contractors with proprietary technology. The guidance will also enable management to take a proactive strategy and think about IP from an early stage. Additionally, Bradley highlighted that the IP management framework will help to establish whether details on a specific technology should be segmented and what parts should be protected. It will also assist in deciding when property should be protected in its life cycle and assist in calculating any potential economic benefit from royalties and licensing.

Finally, workshop attendees were given an overview of the current status of the project. At the time of the workshop, this included the completion of a literature review, survey of best practice, and ongoing investigation of other approaches. Bradley explained that next steps will include the publication of an interim report and case studies, development of the guide, creation of presentation and training materials, and ultimately a final report.

Questions

The workshop included an opportunity for attendees to put forward questions to each of the presenters. One of the topics discussed included the issue of fair use in the digital world and the direction the publishing industry is taking with this to ensure concerns with plagiarism remain reasonable for all sides.

Chris Pringle explained there is a need for a system that is easy and sensible to administer, without having multiple types of agreement with many different publishers. He confirmed that the formation of industry standards is one area undergoing development and there are other changes taking place. Bill McComas explained that this comes down to contract issues, and because publishers are slowly moving into the digital age, there can sometimes be disparity with contract terms. Ken Winter suggested that attendees look closely at licensing contracts with the publisher to make sure that it explicitly states what can and cannot be done. The consumer has a responsibility to push back on the terms of a contract, and publishers will usually make reasonable changes.

Another concern raised during discussion was that, with reports of publicly-funded research, there is very little potential for commercial gain, and it was suggested that the legal measures may be excessive; however, Bill McComas stated that the more ambiguous a situation is, the more the litigators have to work with. He advised that it is always best to solve something at the front end and avoid any subsequent litigation. It was also highlighted that, just because something has been paid for, it does not indicate ownership: there has to be something in the contract to assign ownership. Ken Winter agreed with this and informed attendees that VDOT came up with a simple arrangement that was vetted on all sides and could then be rolled out by any State DOT. Although he noted that creating a new procedure the first time is a lengthy process but once it exists the process becomes much smoother. Winter also confirmed that there are realistic risks of litigation and such cases have arisen in the past—McComas provided an example of the *New York Times* attempting to upload print articles onto their site but finding out they did not have the right to digitize them, resulting in a class action against them. It was also confirmed that there are ongoing issues with copyrights which are already resulting in the avoidance of content where ownership is unclear—particularly international reports and translated reports. Finally, Winter suggested another risk of not providing guidance to aid the digitizing of reports: if you do not digitize it, someone else will but may not do as good a job.

Breakout Groups

Following the presentations, attendees were divided into two groups, each tasked with identifying knowledge gaps and identifying specific actions that could help to advance IP issues in the transportation community. Each group then summarized their highest priority findings to share with the whole group.

Key factors identified included a need to establish who owns the IP and how to go about finding out who has the ultimate authority. It was suggested that a standard copyright boilerplate language could be established to specify who owns the copyright. Moving forward it would be beneficial to develop a “punch list” of essential facts that could be used to educate researchers about what they need to know about IP. An overall need to increase and improve awareness of IP in organizations was identified as another area to work on. It would also be useful to look at contracts in advance and analyze the language that appears in those. The possibility of using the technical report documentation page (form DOT F 1700.7) in reports to specify IP rights was suggested as one possible option. Finally, the issue of how to deal with derivative works was highlighted as something that needs further clarification, and it was also suggested that a chain of command needs to be established within organizations to manage the IP process.

Next steps following this workshop will include the formation of a working group to move forward some of the items discussed during the session.

Learn More

For more information on this workshop, contact the co-chair of the TRB Conduct of Research Committee and workshop moderator, Barbara Harder of B. T. Harder, Inc., at 215-735-2482 (email: btharder@verizon.net).