EXECUTIVE SUMMARY

Last year’s 2013-2014 Berkman Center Annual Report outlined ideals to guide our work this academic year. Specifically, we sought to continue pioneering teaching and research with new, more sophisticated, and more integrative methodologies and partnerships. In the year that followed, the Center’s portfolio can be viewed in terms of three key areas of increased investment and attention that encompass these same goals. Since 1997, the Berkman Center has catalyzed dozens of projects and initiatives concerning the Internet in three areas of activity: 1) Law and Policy, 2) Education and Public Discourse, and 3) Access to Information. Updates and significant milestones related to each of these areas are described in the following sections of the Executive Summary. In addition to these three focal areas, the Berkman Center has continued to expand its collaboration across institutions and taken a leadership role in building a global research network through collaboration on projects and events. The Center also completed a rigorous revisioning and reimplementation of its organizational processes.

Across and within the three areas of activity, platforms, privacy, and public discourse were at the core contexts of many of the Center’s activities in the past year, which were addressed and explored in its scholarship, technical innovations, collaborations, and communications. Platforms include the unowned Internet and World Wide Web itself along with organizations and companies that serve as conduits for online communications. Companies that offer network access (like ISPs) and online services (like cloud storage, email platforms, and social networks), and even government institutions that filter or moderate citizens’ access to content online, play a crucial role in intermediating online communications among individuals connected to the Internet. Which platforms dominate, those platforms’ intentions, and what those platforms mean
for shaping the online world—and, by extension, the offline world—are key questions that the Center is exploring through many of its projects and initiatives.

Rapid technological advances and the wide-scale adoption by individuals of hardware and software tools that facilitate communications online have brought about critical privacy issues affecting nearly every facet of human life. The Berkman Center’s diverse community of scholars, scientists, lawyers, and entrepreneurs seeks to analyze, understand, articulate, and contextualize many of these issues, from government surveillance and security; to the ethics, opportunities, and consequences of big data; to changing human behavior and societal norms; through the implication of tools like wearable cameras and sensors. We understand that, just as reality shapes discourse, discourse shapes reality. Both online and offline, conversations are shaped by power dynamics: who has a voice in the debate and who is left out. The Center’s scholars study the landscape of public discourse online, engage as active participants in that discourse, and strive to understand and document the consequences of restricting access to information and debate.

The Berkman Center’s projects from 2014-2015 aimed at exploring these contexts can be grouped into the three areas of activity mentioned before, which have become core to the Center’s work: Law and Policy, Education and Public Discourse, and Access to Information. The scope of initiatives operating during this time is very broad; many of the projects outlined below fit into more than one category. However, it is because our entrepreneurial spirit inspires us to take risks such as these—to pioneer new areas of study and seek to understand complex topics, including public discourse in all its forms—that the Center has been able to build bridges and foster connections among diverse communities and perspectives. Intentionally interdisciplinary, we collaborate on topics across the fields of technology, social science, and the humanities.

A. Law & Policy

The Center’s work relating to Internet policy, law, and governance has increasingly focused on issues such as broadband infrastructure, access and equity, Internet governance, cybersecurity privacy, and surveillance. Over the past year we were able to add new initiatives on these key topics and with a focus on human rights implications.

For instance, the Center relaunched a major effort focusing on Municipal Fiber, building upon an earlier project in which an independent expert review of broadband deployment and usage throughout the world was submitted to the FCC's National Broadband Plan committee, and resulting in a widely recognized report. More globally, Global Access in Action (GAiA) held expert workshops on improving access and promoting socially beneficial innovation to combat communicable diseases that disproportionately harm the world’s most vulnerable populations and engaged in research efforts on pressing topics such as the fight against Ebola.

The Center’s Internet Governance work, in close collaboration with the Global Network of Internet and Society Research Centers (NoC), included the development of case
studies on distributed and collaborative governance models both inside and outside the Internet space, which resulted in a landmark report on multi-stakeholder governance groups. The report marks the first research output of the network and informs policy discussions about the future of Internet governance nationally and internationally and serves as a basis to distill best practices as well as lessons learned for leaders. A second major NoC report facilitated by the Berkman Center focused on the liability of online intermediaries in various countries, with findings presented to policy-makers in Asia and Europe and considered in the context of a Supreme Court case in India.

The Berkman Center invested in a number of cross-disciplinary initiatives that investigate privacy and privacy-relevant questions in the digitally networked environment. Many of our projects continued this year, offering research, resources, workshops, and other outputs aiming to pinpoint novel solutions to privacy problems. The Privacy Tools for Sharing Research Data project, supported by the National Science Foundation (NSF), continued to develop methods, tools, and policies to further the tremendous value that can come from collecting, analyzing, and sharing data while more fully protecting individual privacy. The Student Privacy Initiative continued to conduct research and organize working meetings and ongoing conversations around the rapidly evolving ecosystem of networked technology being used in education. Launched in 2014, a new initiative—bringing together a diverse group of experts—began to evaluate the roles and responsibilities of foreign intelligence services with respect to a broad range of pressing and controversial cybersecurity issues.

As it has since it began in 2009, the Cyberlaw Clinic continued to offer Harvard Law School students a well-rounded educational experience that reflects the reality of high-tech practice. In addition to Berkman faculty, staff, and fellows teaching dozens of courses at the Law School, the Clinic served a growing number and a wider range of clients than ever before, including individuals, small start-ups, non-profit organizations, academics, and government entities. The Clinic also continued ongoing targeted expansion with the hiring of an additional clinical instructor and the appointment of its Managing Director as a Clinical Professor of Law at the Law School and as a Faculty Director of the Berkman Center; Faculty Director Susan Crawford also accepted an offer to join the Law School faculty as a Clinical Professor of Law. The Center also continued to provide academic support to certain research and policy initiatives being explored by companies and civil society organizations through the Global Network Initiative (GNI), a multi-stakeholder initiative focused on advancing human rights issues in the technology sector.

B. Education & Public Discourse

The Center’s work in this area focuses on the future of education and public discourse in the digitally networked environment. Specifically, the Center seeks and creates opportunities to build upon the promise of online tools towards enhancing or complementing in person and hybrid learning experiences. Our faculty and affiliates teach and mentor across the University and beyond the gates of Harvard. We build platforms to facilitate new ways of learning, open our classrooms to the world, and turn
education into action. This year, we placed a particular focus on expanding our global efforts, rethinking pedagogy, and teaching in practice around the world.

Several education and discourse related initiatives take place at the international level. As part of the Center’s new partnership with the World Economic Forum (WEF), we are serving as a research partner and ambassador to other academic programs around the world to help scope and plan the Forum’s Future of the Internet (FII) Global Agenda Challenge. The NoC held meetings around the world and orchestrated collaborative research efforts across Internet and society research centers worldwide with the goal to share knowledge with policy- and decision-makers. The Center also hosted nine visiting researchers from the Moscow-based Center for the Study of New Media and Society (CSNMS) as part of a US-Russia Peer-to-Peer Dialogue aimed at strengthening knowledge sharing internationally.

New efforts within communities closer to home include the the Digital Literacy Toolkit Project, which is targeted at hard problems that arise out of connected learning environments. The Center also continued existing efforts in education and public discourse with emphasis on real-world problem solving: the Harvard Digital Problem-Solving Initiative (DPSI) brought together a diverse group of students, faculty, fellows, and staff for a second year to work on projects to address problems and opportunities across the university. The Coding for All Project, funded by the NSF and in collaboration with MIT and the University of California, also continued to explore challenges and pathways to computational fluency and STEM interests and careers.

The Center’s focus on public discourse extends to efforts to understand how such discourse is conducted online, and the implications of this discourse for society. Mobilization for Change in the Middle East and North Africa, a collaborative research effort with the Access to Knowledge for Development Center at the American University in Cairo, continued to analyze social media and the networked public sphere as an alternative platform for social mobilization in the Arab world. Media Cloud continued to develop its technological platforms and research efforts, adding new media sets to its collections and creating studies of media coverage of major media stories. We not only studied public discourse, but also continued efforts to create discourse platforms and protocols, for instance in the context of the the bid to hold the 2014 Olympics in Boston, where the Center engaged in the creation and piloting of a novel group deliberation model and method that engages citizens.

The Center also continued its efforts in curricula and open educational resource development. Continuing our international expansion, the CopyrightX course was offered for a third time during Spring 2015, which a record-setting number of participating partner institutions in this novel, hybrid online/offline teaching effort. In collaboration with the HLS Library, H2O continued to add faculty and student users to its suite of classroom tools and free, adaptable digital casebooks. Berkman faculty, staff, and fellows also contributed significantly to Harvard’s teaching programs, teaching 26 courses and seminars within the University. In addition to teaching classes within the Law School, Berkman faculty, staff, and fellows taught courses at Harvard College, the Harvard School of Engineering and Applied Sciences, Harvard Business School, Harvard
Extension School, and in one instance at Stanford Law School (offering credit for Harvard Law School students).

In order to maximize access to and distribution of its own educational materials and “fruits of [the Berkman Center’s] research and scholarship,” the Center’s faculty directors and staff adopted an open-access policy in October 2014. With this policy the Center’s faculty directors and staff join the nine School faculties in granting Harvard nonexclusive rights to their future scholarly articles. Through this landmark unanimous vote, the Berkman Center became the first research center at Harvard to adopt an open-access policy, and the first to extend the scope of Harvard’s open-access policies beyond the faculty. Ongoing related projects include the Harvard Open Access Project (HOAP), which continued to consult with universities, foundations, government agencies, and nonprofit publishers about open access (OA) and OA policies.

C. Access to Information

The Center cares deeply about the underpinnings of the Internet as a global communications platform, and we have sought to facilitate the preservation of knowledge and study the means by which people create, access, and share information, content, and technology. Our work in this area includes evaluation of the means of delivering Internet services to individuals and organizations and ensuring protections for free expression online.

This year, the Center continued to build out each of our existing Access to Information projects. Internet Monitor published its second annual report and three special reports on the state of the Internet and launched the Internet Monitor platform, which provides free public access to data about Internet access and infrastructure, online content controls, and online activity in 92 countries. Crowd-sourced, real-time information from Herdict about Internet filtering, distributed denial of service (DDoS) attacks, and other web blockages were included in the Internet Monitor dashboard and have continued to be featured in Twitter’s transparency reports.

Internet Robustness completed its third year of developing, testing, and piloting Amber, a distributed service which allows websites to seamlessly mirror one another’s content, conducting alpha testing with a major Persian language blog partner before its launch into a small beta community of blogs and websites. Perma.cc, an open source, user-directed solution to link rot, won the 2015 Webby Award for the law category and was cited in The Bluebook as a reliable web archiving service. Chilling Effects re-launched a new, powerful version of its website and continued to work closely with major sources of takedown notices, including Google and Twitter. The Center also contributed to the transparency effort this year by working with the Open Technology Institute (OTI) to refine our understanding of best practices for drafting transparency reports through several meetings and workshops.
D. Collaboration and Organizational Re-Visioning

The Berkman Center continued to expand its involvement across institutions and has taken a leadership role in building global research and thematic networks through collaboration on projects and events. Here at Harvard, the Berkman Center continued this year to build, strengthen, and sustain partnerships with organizations across the university. Harvard’s Library Lab, a four-year partnership with the Harvard Library Office for Scholarly Communication and Harvard Library Information & Technical Services, was completed in 2014. The Center offered infrastructural and financial support to give individuals the opportunity to innovate, cooperate across projects, and make original contributions to the way libraries work; when the project was sunseeded this year, 57 projects had been completed.

The Center continued concerted efforts toward internationalization and global capacity building. The fruits of those efforts can be seen in development and expansion of the Global Network of Internet and Society Research Centers (NoC), which Berkman formally launched three years ago. Today, the NoC brings together over 50 centers from five continents and over 25 countries, half of which are located in the Global South. This year, NoC events were held in Turkey, Italy, Chile, Argentina, and India, and the project has developed its own research sub-projects on Internet Governance models and Online Intermediaries. In addition, the Berkman Center deepened its collaboration with UNICEF on children, youth, and digital media issues. The Center led joint research efforts as well as events in Latin America as part of the joint global Digitally Connected initiative, and published a first-of-its-kind ebook with contributors from around the world.

Complementing these ongoing efforts, the Berkman Center entered a partnership with the WEF and launched a new cooperation on a number of activities that build upon a shared commitment and strategic plan of these two unique platforms to foster an open, interoperable, and affordable Internet, serving the global public interest, under the umbrella of the Forum’s Future of the Internet (FFI) Global Agenda Challenge. With Berkman serving as a knowledge partner, the collaboration focuses on Internet governance issues and seeks to strengthen information for decision-makers through data infrastructures and partnerships, among other approaches.

The end of the 2015 academic year also marked the completion of Professor Jonathan Zittrain’s first year as Chair of the Board of Directors. In addition to this leadership shift, other significant organizational changes were completed this year. Following the departures of the Berkman Center Managing Director and Associate Director in October 2013, the Center seized the moment to begin a rigorous analysis of the way the Center works, how it is structured, and how it functions as an organization. The outcome of that extensive analysis has included expansion in management capacity, clarification of roles and responsibilities, efforts toward better workload and bandwidth management and improved communications, and facilitation of increased collaboration among staff, faculty, and fellows. The Center also implemented a pilot set of practice groups to facilitate collaboration and development across interested staff, faculty, and fellows around strategic topic areas.
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I. REPORT OF ACTIVITIES

A. Teaching, Practice, and Advocacy

Since the Berkman Center’s inception, its top priority has been teaching across the wide range of our areas of inquiry.

1. Contributions to Harvard’s Teaching Programs

The Center’s faculty, staff, and fellows taught a number of courses during the 2014–2015 academic year, including:

Fall 2014

- “Aesthetic and Interpretive Understanding 51 - The Cosmos of the Comedy,” a course taught by Professor of Romance Language & Literature and Berkman Center Faculty Director Jeffrey Schnapp at Harvard College;

- “American Jury,” a seminar taught by Harvard Law School William F. Feld Professor of Law and Berkman Center Faculty Director Charles Nesson at Harvard Law School;

- “Communications and Internet Law and Policy,” a seminar taught by Berkman Center Faculty Director Yochai Benkler at Harvard Law School;

- “Computer Science 187 - Computational Linguistics,” a course taught by James O. Welch, Jr. and Virginia B. Welch Professor of Computer Science and Berkman Center Faculty Director Stuart Shieber at the Harvard School of Engineering and Applied Sciences;

- “Computer Science 323 - Human Computer Communication through Natural, Graphical, and Artificial Languages,” a course taught Professor Stuart Shieber at the Harvard School of Engineering and Applied Sciences;

- “Counseling and Legal Strategy in the Digital Age,” a seminar taught by WilmerHale Clinical Professor of Law and Berkman Center Faculty Director Christopher Bavitz and Assistant Director of the Cyberlaw Clinic Dalia Topelson Ritvo at Harvard Law School;

- “Cyberlaw Clinic Seminar,” a seminar taught by Clinical Professor Christopher Bavitz and Dalia Topelson Ritvo at Harvard Law School;

- “Fostering Innovation,” a 1L reading group taught by Clinical Professor Christopher Bavitz at Harvard Law School;
• “Internet and Society,” a seminar taught by Professor Charles Nesson at Harvard Law School;

• “Law of Surveillance,” a course taught by Visiting Professor and Berkman Center Faculty Director Susan Crawford at Harvard Law School;

• “Marketing,” a course taught by Harold M. Brierley Professor of Business Administration and Berkman Center Faculty Director John Deighton at Harvard Business School; and

• “Romance Studies 201 - Questions of Theory,” a course taught by Professor Jeffrey Schnapp at Harvard College.

Winter 2015

• “Internet & Society: The Technologies and Politics of Control,” a seminar taught by George Bemis Professor of International Law and Faculty Chair Jonathan Zittrain at Stanford Law School (offering credit for Harvard Law School students).

Spring 2015

• “Future of Privacy,” a 1L reading group, and “Comparative Online Privacy,” a seminar taught by Professor of Practice and Berkman Center Executive Director Urs Gasser at Harvard Law School;

• “Copyright,” a course taught by Wilmer Hale Professor of Intellectual Property Law and Berkman Center Faculty Director Terry Fisher at Harvard Law School (offered concurrently as an online course; in addition to the Executive Summary, please see “CopyrightX” in the section on research and scholarship below for further detail);

• “Cyberlaw Clinic Seminar,” a seminar taught by Professor Christopher Bavitz and Dalia Topelson Ritvo at Harvard Law School;

• “Humanities Studio 4 - The Mixed Reality City,” a course taught by Professor Jeffrey Schnapp at Harvard College;

• “International Trade Law,” a course taught by Assistant Professor of Law and Berkman Center Faculty Director Mark Wu at Harvard Law School;

• “Internet & Society: Technologies and Politics of Control,” a seminar taught by Clinical Fellow and Berkman Center Corydon B. Dunham First Amendment Fellow Andy Sellars at the Harvard Extension School;

• “Law and the International Economy,” a course taught by Professor Mark Wu at Harvard Law School;
• “Law and the Global Health Crisis,” a reading group taught by Professor Terry Fisher and Assistant Professor Mark Wu at Harvard Law School, with a session led by Berkman Center fellow John Stubbs;

• “Music and Digital Media,” a seminar taught by Professor Christopher Bavitz at Harvard Law School;

• “Rhetoric and Public Discourse,” a seminar taught by Professor Jonathan Zittrain at Harvard Law School;

• “Teaching Copyright,” a course taught by Professor Terry Fisher at Harvard Law School; and

• “The Internet: Governance and Power,” a seminar taught by Berkman Center Fellow Bruce Schneier at Harvard Law School.

As part of the Berkman Center’s teaching program, HLS students participated in the Center’s Cyberlaw Clinic, which—as described more fully below—offered seats to interested students in the Clinic’s program during the fall, winter, and spring terms. DPSI brought together a diverse group of learners (students, faculty, fellows, and staff) to work on projects aimed at addressing problems and opportunities across the university, and offering novel opportunities to enhance and cultivate competencies in various digital literacies.

2. The Cyberlaw Clinic

The Berkman Center’s Cyberlaw Clinic engages Harvard Law School students in real-world litigation, licensing, client counseling, advocacy, and legislative projects and cases covering a broad spectrum of legal issues. The Cyberlaw Clinic was the first of its kind, and it continues its tradition of innovation in this area.

In recent years, the Clinic has grown dramatically in popularity due to the breadth and complexity of its projects, the variety of clients it serves, the sophistication of its pedagogy, and the richness of the connections it develops for its students among theory, doctrine, and practice.

The 2014-15 academic year represented a period of ongoing targeted expansion for the Cyberlaw Clinic. Christopher Bavitz, appointed a Clinical Professor of Law at Harvard Law School effective July 1, 2014, became a Faculty Director of the Berkman Center, and continued in his role as the Clinic’s Managing Director. Dalia Topelson Ritvo was named Assistant Director of the Cyberlaw Clinic and helped manage the program and handle a wide variety of Clinic projects involving privacy, intellectual property transactions, and corporate social responsibility. The Clinic hired a new Clinical Instructor, Vivek Krishnamurthy, who joined the program from the law firm Foley Hoag to help support the Clinic’s core work and build out its international and human right practices.
Former Clinical Instructional Fellow Kit Walsh moved to the West Coast to join the staff of frequent Cyberlaw Clinic collaborator the Electronic Frontier Foundation. And Andy Sellars—former Assistant Director of the Berkman Center’s Digital Media Law Project and longtime member of the Berkman community—stepped into a Clinical Fellow role. Andy worked primarily on matters relating to copyright and speech and continued his work as Harvard Law School’s Corydon B. Dunham First Amendment Fellow, based at the Berkman Center. Cyberlaw Clinic Project Coordinator Shannon Walker departed for graduate studies, and Kira Hessekiel joined the staff of the Clinic to help run day-to-day operations and support the work of the program and other Berkman Center initiatives.

The Clinic was extremely fortunate to have Susan Crawford continue her year-long visit at Harvard Law School during Fall 2014, taking the lead on numerous fruitful collaborations as a senior advisor to the clinical program. Susan worked directly with several of the Clinic’s students during Spring and Fall 2014, focusing on civic innovation initiatives. The Clinic is thrilled that Susan accepted Harvard Law School’s offer to join the faculty as a Clinical Professor of Law effective July 1, 2015, which will offer significant further opportunities for collaboration.

The Cyberlaw Clinic enrolled 29 students in Fall 2014, 1 continuing student in Winter 2015, and 25 in Spring 2015, for a total of 55 student slots during the 2014-15 academic year. Those students enrolled for a total of 143 credits over the course of the year, and the Clinic’s supervising attorneys managed more than 8,580 hours of student work.

During the summer, the Clinic welcomes students from a diverse range of law schools in order to continue its ongoing work for existing clients and help with intake for the coming year. In Summer 2015, the Clinic brought on three law student summer interns.

Substantive Practice and Client Base
During the 2014-15 academic year, the Clinic continued to focus its work on a number of key subject areas, including: consumer protection, privacy, and compliance; cybercrime and youth online safety; general Internet business law; government innovation; intellectual property (including copyright, trademark, and patent); litigation and amicus advocacy; online speech, media law, and the First Amendment; and access to justice. The Clinic served a growing number and a wider range of clients than ever before, including individuals, small start-ups, non-profit organizations, academics, and government entities. Simultaneously, the Clinic intensified its strategy to integrate student representation and legal support with research projects at the Berkman Center. For example:

- Chris Bavitz, Vivek Krishnamurthy, and Andy Sellars all contributed articles to the Internet Monitor’s second annual report, “Reflections on the Digital World,” a unique collection of essays addressing developments in the digitally networked environment. Each one explored current legal issues in the field: the Aereo decision and what it meant for innovators in remote content suppliers; the human rights implications of the extraterritorial expansion of courts; and the ways in which copyright law is being used to reanimate the abandoned SOPA.
• The Clinic played a key role in preparing a far-reaching report released by the NoC and the Berkman Center in February 2015, addressing questions about intermediary liability around the world. The report is a first output of a larger initiative on the governance of online intermediaries. Clinical Fellow Andy Sellars helped to support the project overall, and he—along with the Chris Bavitz and two Summer 2014 Cyberlaw Clinic interns, Nick DeCoste and Michael Lambert—helped to craft a case study looking at intermediary liability regimes in the US.

Clinic students provided representation to a wide variety of non-Berkman-affiliated clients throughout 2014-15 as well, including mission-driven startups, governmental organizations, advocacy groups, and arts and cultural institutions.

Teaching and Pedagogy
The surge in student interest and participation in the Cyberlaw Clinic in recent years has caused Clinic staff to rethink the program’s mode of engaging with students inside and outside the classroom. In 2014-15, this translated into the addition of a dedicated, mandatory Cyberlaw Clinic Seminar to augment the student experience. Beginning in Fall 2014, students were required to enroll in the Seminar simultaneously with enrollment in the Clinic.

The new class offered opportunities for teaching about practice and professional responsibility issues that arise when counseling clients on matters relating to technology, intellectual property, privacy, and speech. It also permitted students to participate in skill-building exercises and—perhaps most importantly—regular case rounds sessions, in which they shared information about their projects and learned from one another. The addition of this classroom component was generally quite successful, and the Clinic looks forward to continuing to refine the Seminar during the upcoming year.

The Clinic’s supervisors taught other courses and engaged in other teaching initiatives this year as well, as noted under the heading “Contributions to Harvard Teaching Programs” above. For the second consecutive year, Chris Bavitz also participated as a mentor in the Harvard University-wide Digital Problem Solving Initiative (discussed in “Research and Scholarship” below), working with a team of students during Fall 2014 to consider issues relating to accessibility of educational materials in the context of online education.

Representative Cases and Matters
A few notable examples of cases and projects handled by Clinic students during the past academic year include the following.

(a) Litigation. The Clinic, both directly and working in tandem with law firms located around the United States, has represented individuals and organizations in connection with pre-litigation disputes and active litigation concerning a range of issues, including court access, online speech, and intellectual property. Of particular note in 2014-15, the Clinic advised an arts institution, the creator of a parodic social media account, and a student organization in response to threatened intellectual property claims, preparing
detailed responses to cease-and-desist letters that raised copyright and trademark issues.

(b) Amicus Advocacy. Amicus advocacy remains a core part of the Clinic’s practice, and the Clinic regularly contributes to amicus briefs and related filings on behalf of clients throughout the year. For example:

- In April 2015, the Cyberlaw Clinic filed an amicus brief in the Supreme Judicial Court of Massachusetts on behalf of the American Civil Liberties Union of Massachusetts and the Electronic Frontier Foundation in Commonwealth v. Estabrook, SJC–11833. The case concerns location privacy and cell phone technology, specifically, whether law enforcement can gather a large amount of cell phone location information if it only plans to use a small part of it in a prosecution. Amici argue that the SJC’s previous decision in Augustine (in which case the Clinic also submitted a brief) requires police to get a warrant to obtain vast amounts of location information even if they only plan to use a small amount. The brief urges the SJC to establish a blanket warrant requirement for whenever police seek cellphone location data.

- The Clinic filed an amicus brief in the Supreme Judicial Court of Massachusetts on behalf of the New England First Amendment Coalition, Boston Globe Media Partners, LLC (owners of the Boston Globe), Hearst Television, Inc. (owners of WCVB-TV Channel 5 in Boston), the Massachusetts Newspaper Publishers Association, the New England Newspaper and Press Association, Inc., and the New England Society of Newspaper Editors in Commonwealth v. Lucas, SJC-11830. The case was brought under the Massachusetts false campaign speech law, M.G.L. ch. 56 § 42 (“Section 42”). The brief argues that Section 42 is an unconstitutional restriction on the content of speech and is also unconstitutionally vague. It describes the robust protection for speech in the realm of political debate and notes several cases in other jurisdictions where courts struck false campaign speech statutes. As the brief notes, Section 42 presents more serious concerns than the statutes in those cases, as it can potentially extend to any person who makes or publishes a false statement that aids or injures a candidate, whether or not they knew the statement was false, or whether the statement would be understood as false by the reader or viewer.

- The Clinic filed an amicus letter with the California Supreme Court on behalf of Global Voices Advocacy and the Media Legal Defence Initiative, urging the Court to hear a case involving defamation allegations against an anonymous defendant. Plaintiff sued defendant over critical comments on a website targeting plaintiff, and amici argued that lower courts had not done enough to safeguard defendant’s right to speak anonymously on issues of public concern.

- The Clinic submitted a statement of interest to the Hague Conference on Private International Law on behalf of copyright law scholars Kyle Courtney, Peter Hirtle, and Peter Suber supporting the organization’s efforts to negotiate an international agreement on free digital access to primary domestic legal materials. In particular, the statement of interest described how the open access publishing
model had successfully broadened access to academic writing and drew lessons from this experience for the open digital publication of legal materials.

(c) Media Law and Online Speech. The Cyberlaw Clinic has been very active in addressing a broad spectrum of legal issues faced by web-based media, including bloggers, website commenters, and other online speakers. The Clinic has provided advice and counsel in matters involving First Amendment issues, defamation claims, immunity under Section 230 of the Communications Decency Act, and anonymous speech online. Of particular note this year, the Clinic assisted an international news platform with pre-publication review of content and helped a student examining government use of social media with a series of state and federal public records requests.

(d) Intellectual Property. Copyright and other intellectual property issues remained near the top of the Clinic’s docket. Of particular note:

- Spearheaded by Andy Sellars, the Clinic represented a coalition of medical device researchers who sought an exemption to the technological protection measures present in implantable medical devices, including pacemakers, defibrillators, and glucose monitors, in order to examine their security and effectiveness, as well as to allow interested patients access to their own data at their convenience in order to better manage an individual’s health. Many device manufacturers use encryption methods as a copyright protection measure that researchers must break in order to carry out their work, which is why the coalition sought an exemption to the Digital Millennium Copyright Act. The Library of Congress conducts the tri-annual rulemaking process to grant these exemptions over a series of months with several stages; the Clinic filed a petition on behalf of the coalition in November 2014 and a full comment in February 2015. After responding to comments from opposing parties, Andy Sellars traveled to Washington, DC to testify on behalf of the coalition before the Copyright Office, the culmination of months of student work and preparation. In a final stage, the Copyright Office asked the coalition to advise them on whether the potential exemption should include a requirement that researchers disclose issues to a device’s manufacturer first. The Clinic’s response explained the First Amendment issues with this proposal and the existing regulatory regimes that help guide ethical processes in this field. A full year’s worth of students worked hard to bring the coalition’s ideas to fruition, including Sarah Baugh (HLS JD ’16), Jonathan Diaz (HLS JD ’16), Evita Grant (HLS JD ’16), Megan Michaels (HLS JD ’16), Joo-Young Rognile (HLS JD ’15), Michael Rosenbloom (Columbia Law JD ’17), and Shudan Shen (HLS JD ’16).

- The Clinic advised clients on copyright and trademark matters, including extensive counseling of a documentary film team about copyright questions, licensing, and fair use and intellectual property matters and advising of clients about the viability and registrability of proposed trademarks.
(e) **Government Innovation.** During Fall 2014, Susan Crawford oversaw a number of government technology Cyberlaw Clinic projects in partnership with the mayor's office of the City of Boston, including mapping fiber and conduit in the city and exploring ways to innovate public notice laws to allow for the use of current technology. The Clinic looks forward to Susan’s leading many further such initiatives as she becomes a full-time member of the HLS faculty and an integral component of the Clinic’s teaching team during the 2015-16 academic year.

(f) **Innovation and Entrepreneurship.** The Clinic historically has advised and supported small startups, innovators, and entrepreneurs in a variety of contexts. During 2014-15, the Clinic’s Managing Director continued to serve as Harvard Law School’s Dean’s Designate to Harvard’s university-wide Innovation Lab, assisting with the provision of legal and other resources at the Lab. Chris also supported the Harvard Law School Food Law & Policy team’s management of the Deans’ Food Systems Challenge, notable as the first of the annual i-Lab Deans’ Challenges to be presented since the i-Lab opened with the support of Harvard Law School.

(g) **Child Protection and Youth Online Safety.** The Cyberlaw Clinic continued to promote youth online safety through a wide range of collaborations, and children’s privacy issues—in particular—were at the top of the agenda for many of the Clinic’s clients: Clinic students provided research and counseling support on issues relating to the collection of children’s private information through online tools and networked technologies in traditional and nontraditional learning environments.

(h) **Consumer Protection and Regulatory Compliance.** The Cyberlaw Clinic has done a wide range of work in the area of consumer protection and regulatory compliance. Notably, during the 2014-15 academic year:

- Fall 2014 Clinic student Joe Milner, along with Clinical Instructor Vivek Krishnamurthy, delivered a presentation to the MIT Bitcoin Club about legal issues surrounding bitcoin—from taxes to privacy to currency regulation. The Clinic expects to do more work in this space, as the Center moves to support MIT’s Digital Currency Initiative on law and policy issues.

- Throughout the academic year, the Clinic advised clients on privacy issues related to creating a digital repository of archived materials; consents and processes that should be implemented to use data collected for academic research purposes; privacy issues associated with an online platform aimed at connecting citizens to the local representatives and government officials; and drafting relevant transactional documents (including a terms of use, privacy policies, and service agreements, among others).

(i) **Filtering, Surveillance, and Censorship.** In the aftermath of Edward Snowden’s 2013 revelations about the National Security Agency’s online surveillance programs, concerns about the scope of online surveillance, censorship, and filtering have grown to implicate the activities of most every national government around the world. During the past year, the Cyberlaw Clinic has continued to work with leading domestic and international civil
liberties organizations to study the legality of these programs and evaluate the remedies that are available to individuals and organizations alike. The Clinic’s work has ranged from evaluating how various actors can shed more light on the scope and scale of government information requests to advising our clients on possible avenues for reform through legislation and litigation. Of particular note:

- The Clinic has continued to collaborate with the Global Network Initiative (GNI), a multi-stakeholder group of companies, civil society organizations (including human rights and press freedom groups), investors, and academics that have adopted a collaborative approach to protecting and advancing freedom of expression in the information and communications technology sector. Notably, Clinical Instructor Dalia Topelson Ritvo was appointed this year as a full member of the GNI’s Board of Directors, representing the academic constituency on the board and serving on both the learning and policy committee and governance and assessment committee.

- Under the supervision of Clinical Fellow Andy Sellars, Clinical Instructor Vivek Krishnamurthy, and Patrick Toomey, a staff attorney at the ACLU’s National Security Project, Clinic students Naomi Gilens (HLS JD ’16) and Gabrielle Hodgson (HLS JD ’15) filed a FOIA request for the Inspector General’s internal audit of the FBI’s use of Section 215 of the Patriot Act from 2007-2009, which allows the government to obtain orders from the Foreign Intelligence Surveillance Court for “tangible things” as part of investigations into foreign intelligence or terrorism. This statute was the justification for the far-reaching surveillance program revealed by Edward Snowden. These documents were released in time for the debate surrounding the renewal and revision of the USA PATRIOT Act, and contained information considered by many to be vital to the discussion.

Clinic Events and Outreach
Clinic staff organized and participated in a variety of events and outreach to the HLS community and beyond during the past year, including the following:

- Susan Crawford spoke extensively throughout the year about *The Responsive City* and more broadly on the topic of government use of technology. Of particular note, Susan participated in a panel discussion in April 2015 hosted by Columbia’s Tow Center for Digital Journalism, addressing the topic of how a university center might advance policy making and planning for fiber optic networks that would improve local governance and support civic journalism.

- For the second consecutive year, in June 2015, Chris Bavitz participated in a week-long Internet L@w Summer School course at the University of Geneva.

- Andy Sellars and Chris Bavitz joined Boston attorney Dave Herlihy for a June 10, 2015 lunch event at the Boston Bar Association regarding “Hot Topics in Copyright Law: Content Creation and Distribution and the
Prospects for Copyright Reform.”

- In May, Andy Sellars and others at the Berkman Center, along with the ACLU of Massachusetts, MuckRock, and the MIT Center for Civic Media, teamed up to put on the Point to Point Camp event at the MIT Media Lab. The event brought together people from the fields of technology, journalism, and law to share thoughts and resources on how to address problems around privacy, transparency, and democracy.

- Alongside J. Nathan Matias and Chelsea Barabas, researchers at the MIT Center for Civic Media, Cyberlaw Clinic students Jack Xu (HLS JD ’15) and Cecillia Xie (HLS JD ’16) and Chris Bavitz helped prepare a paper and legal toolkit on the legal and ethical issues in the use of telepresence robots, which allow people to participate actively from a remote location. The Clinic team traveled to Seattle to present their work in a panel discussion at the WeRobot 2015 conference in April 2015, where they discussed the merits of documenting best practices for emerging technologies and whether the legal concerns around telepresence robotics are in some ways analogous to other types of surveillance and recording technologies.

- In April, Vivek Krishnamurthy served as the respondent to former Assistant Attorney General Viet Dinh during a discussion organized by the Harvard Law School Federalist Society on reforming the Electronic Communications Privacy Act.

- Vivek Krishnamurthy addressed the American Bar Association Section of Labor & Employment Law’s National Symposium on Technology in Labor and Employment Law in March 2015, speaking on the topic of organizing using social media.

- Also in March, Chris Bavitz moderated a panel discussion on “The Future of Content Delivery” as part of the Harvard Law School Committee on Sports & Entertainment Law’s 2015 annual symposium.

- Chris Bavitz and Andy Sellars joined HLS student and Berkman Center Affiliate Kendra Albert (HLS JD ’16) and Parker Higgins of the Electronic Frontier Foundation for a discussion of legal and cultural implications of video game modding.

- Both Dalia Topelson Ritvo and Chris Bavitz traveled to Austin, Texas for the annual South by Southwest conference this year. Dalia ran an interactive session during SXSW EDU, leading participants in discussion and design-based activities around future challenges (e.g., interoperability with government platforms) and opportunities (e.g., digital dossiers) at the intersection of student privacy and EdTech. Chris moderated a session at SXSW Music about rights management and collective licensing.
organizations, including representatives of ASCAP, STIM, and the Berklee College of Music.

- Dalia Topelson Ritvo spoke at the MA CTO Clinic hosted by the Consortium of School Networks. Dalia spoke to over 100 chief technology officers from schools and districts around Massachusetts on privacy and other regulatory issues faced by K-12 schools in light of new technologies used within the classroom.

- Andy Sellars spoke on a panel hosted by the Harvard Library Office of Scholarly Communications, to commemorate “Fair Use Week” in February 2015.

- Chris Bavitz hosted a panel discussion at HLS in January 2015 titled “Innovating in the Open,” which brought together experts on the topic of open innovation. The event served to kick off a sprint to the finish of the Harvard Deans’ Food System Challenge, hosted at the Harvard Innovation Lab.

- Chris spoke about US privacy regulation at Suffolk University Law School’s Fall 2014 conference, Emerging Issues in Social Media Liability.

- In October, Andy Sellars spoke at Vanderbilt University about a variety of Internet law issues, with an emphasis on the law governing research activities in the wake of the tragic death of Aaron Swartz.

- During the fall semester, the Clinic helped present discussions at Harvard Law School with EFF attorney Kurt Opsahl on National Security Letters and with Assistant Attorney General for National Security John Carlin on cyberthreats and national security.

Members of the Clinic’s teaching team continued to engage with the broader public through writing and interactions with media. Notable examples include:

- Susan Crawford’s latest book, *The Responsive City* (co-authored with Stephen Goldsmith) received an extraordinary amount of attention throughout the fall, including via *City Journal, Harvard Magazine*, and a mention from the late Mayor Menino of Boston in the *Boston Globe*. In addition, Susan wrote frequently about technology and civic innovation, including pieces in *Bloomberg View, Medium*, and *Tech President*.

- The *Boston Globe* published Clinical Instructor Vivek Krishnamurthy’s letter to the editor, responding to a call by Suffolk County District Attorney Daniel Conley for a ban on digital devices with encryption. Conley expressed his view before the House Committee on Oversight and Government at the end of April, arguing that “companies have encrypted their products in a way that puts the information they contain beyond the
Vivek called Conley’s view “dangerously misguided” and noted that “[i]f Apple and Google weaken their encryption for law enforcement, they’d be undermining the protections that keep foreign governments from spying on a Cabinet member’s smartphone, or cybercriminals from stealing health records from a doctor’s iPad.”

- Vivek also spoke with the San Jose Mercury News about European antitrust enforcement activities against Google.

- Andy Sellars helped The Verge identify six lawsuits that shaped the Internet; spoke with CNBC about non-disparagement clauses; talked to The Hollywood Reporter, the Boston Globe, and the International Business Times about the widely-reported Sony hacks; and commented in The Huffington Post about using one’s cell phone to document voting activities. Andy also joined the Radio Berkman podcast team, alongside several other members of the extended Berkman community, for a discussion entitled “The Internet—a Yearbook.”

- Dalia Topelson Ritvo spoke with Rachel Martin of National Public Radio’s Weekend Edition Sunday about how lawyers, judges, and jurors deal with the appearance of emojis in chat transcripts and other forms of evidence in court.

- Chris Bavitz spoke with Marketplace’s Ben Johnson about the challenges of managing one’s online information and with journalist Tom Vanderbilt for an Outside Magazine piece about TripAdvisor.

- Vivek Krishnamurthy and Andy Sellars contributed to Beta Boston, writing (respectively) about the United States Supreme Court’s Aereo decision and the Ninth Circuit’s en banc opinion in the Garcia case (which concerned the infamous “Innocence of Muslims” video).

- Chris, Dalia, Vivek, and Andy all contributed to the Media Law Resource Center’s 2014 year-end “Copyright Roundtable.” Alongside Andrew Bridges of Fenwick & West LLP and Nancy Wolff of Cowan Debaets Abraham & Sheppard LLP, the Clinic team offered thoughts on major developments in copyright law during 2014.

**B. Research and Scholarship**

The Berkman Center enjoys a global reputation for cutting-edge work centered on the relationships between the Internet, law, and society. Our mode—entrepreneurial nonprofit—embraces our pursuit of scholarly research in the manner and spirit of an academic think tank, anchored by the diverse collaborative and individual work of our
Faculty and fellows. This year, the Center launched a number of new initiatives and continued work on an extensive array of projects.

1. New Projects

**Boston Olympics 2024.** Before the withdrawal of Boston’s bid to host the 2024 Olympic Games, Charlie Nesson proposed a project to orchestrate citywide discussions about the controversial plan. By engaging with Bostonians at the local level, this project aimed to provide residents with a sense of shared ownership over the organizing and planning of the bid and, in doing so, hopes to provide the community with a deeper understanding of what it means to deliberate as a group, to find strength in diversity, and to construct thoughtful, balanced domains of agreement. Pairing in-person meetings with the online Berkman Question Tool, community members were to articulate their vision for Boston’s future, brainstorm how to make that future possible, and decide whether the Olympics fits into or enhances that future. The results of the conversations were to have been given to the Mayor’s office and also distributed in a research paper in late Fall 2015. The project expected to generate useful data gathering so city planners and the Boston’s Olympic planning committee could make informed decisions about hosting the Olympic Games. The project also put Nesson’s own educational methods to a test with a variety of individuals and communities at a large scale.

**Coding for All.** Currently in its second year, with support from the NSF, Coding for All is a collaboration of the Berkman Center with Mimi Ito, Professor in Residence at the University of California Irvine Humanities Research Institute and Research Director of the Digital Media and Learning Hub, Department of Anthropology, Department of Informatics, and School of Education; and Mitchel Resnick, Professor of Learning Research and head of the Lifelong Kindergarten group at the MIT Media Lab. This interdisciplinary collaboration seeks to address resilient challenges in expanding pathways to computational fluency and STEM interests and careers through multiple approaches: designing online tools and environments (primarily using the Scratch programming language), researching social and cultural factors, and examining the legal and policy dimensions. The project aims to create diversified pathways to the Scratch programming environment by integrating the interest areas and cultural referents of non-dominant youth, addressing the national need for a diversified high-tech workforce and a computationally fluent public, as well as providing robust research that can inform the design and deployment of related efforts in STEM education. Over the course of past year, the project explored the potential of introducing Scratch through hip hop dance, and is currently considering alternative pathways. The Berkman Center team, led by Urs Gasser and Fellows Paulina Haduong and Sandra Cortesi, in collaboration with the Cyberlaw Clinic, is leading the legal and policy aspects of the project.

**Cybersecurity.** Supported by the Hewlett Foundation and led by Jonathan Zittrain, former US National Counterterrorism Center Director Matt Olsen, Berkman Fellow Bruce Schneier, and Berkman Senior Researcher David O’Brien, the cybersecurity project is a clean-slate evaluation of the set of responsibilities related to foreign intelligence gathering, which has expanded to include the exploitation of cybersecurity vulnerabilities. The project kicked off in December 2014. Its primary mode of operation
centers around a core group of experts with unprecedentedly diverse backgrounds and perspectives, including active and former members of the US Intelligence Community at the highest levels of government, security technologists, policy advocates, a former Article III judge, and many accomplished scholars. This expert group meets regularly to dive deeply into key issues, brainstorm areas for engagement, and collaboratively produce outputs. The group has touched on a variety of topics in these meetings, including the government’s recent attempts at reorganization within the intelligence community, the challenges of end-to-end encryption cited by senior members of the law enforcement and intelligence communities, and approaches to rebuilding trust. The project is working on several written outputs, which it hopes to share more publicly later in 2015.

[https://cyber.law.harvard.edu/research/cybersecurity]

Digital Literacy Toolkit. With support from the Digital Media and Learning Trust Challenge, the Digital Literacy Toolkit project, led by Urs Gasser, with support from Paulina Haduong, Sandra Cortesi, and Berkman Fellow Leah Plunkett, as well as Dalia Topelson and the Cyberlaw Clinic, is developing and curating an evolving toolkit targeted at hard problems that arise out of connected learning environments and interact with law, policy, and social norms. In collaboration with the MIT Scratch team, New York Public Library, Press Pass TV, NuVu, the Engagement Game Lab, iKeepSafe, WGBH, and the Walnut Hill School, the Toolkit will intervene at the levels of law, policy, and social norms, tackling three sets of issues with cross-layer implications identified by various stakeholders as concerns in connected learning environments: (1) safety concerns; (2) privacy threats; and (3) restrictions on creative expression.

US-Russia Peer-to-Peer Dialogue. In late February 2015, Berkman hosted nine visiting researchers from the Moscow-based Center for the Study of New Media and Society (CSNMS) for a week-long study tour as part of a US-Russia Peer-to-Peer Dialogue Program titled “Crossing Boundaries with New Media.” During this program, Berkman staff arranged nearly 20 substantive sessions that enabled the visiting CSNMS team to meet with staff, fellows, and faculty at the Berkman Center, in the broader Harvard community, and at both the Massachusetts Institute of Technology and Tufts University. The week-long study tour and series of workshops enabled the Berkman Center and the CSNMS to share knowledge on a number of topics of critical interest, including online security, new media literacy, the connection between online and offline civic engagement, and current issues in Internet governance and online regulation. The program revealed several points of mutual interest that may prove to be fruitful grounds for further collaboration.

World Economic Forum Partnership. Berkman and the World Economic Forum are cooperating on a number of activities that build upon a shared commitment and strategic plan of these two unique platforms to foster an open, interoperable, and affordable Internet, serving the global public interest, under the umbrella of the Forum's FII Global Agenda Challenge. Using powerful synergies and leveraging highly complementary networks, the Forum and Berkman will not only team up for the purposes of cultivating discussions, mutual learning, and consensus building, but also work together actively to enhance multistakeholder understanding and cooperation regarding the future of the
Internet. The cooperation between the Forum and Berkman is motivated by a shared vision and commitment to make a contribution to the public interest in the context of the themes of the FII in general and with respect to Internet governance and cooperation in particular. As a “Knowledge Partner” of the FII, Berkman will focus on the following three activities of collaboration: (1) Research and Analysis: The partnership will aim to identify gaps in existing work and areas of opportunity where the FII could be leveraged most effectively and create a leading online platform for publicly and freely available data and analysis on the state of the Internet as a means to improve the future of the Internet through better data; (2) Collaborative Platform-Building and Digital Problem-Solving: Based on research and analysis, the Center will map out the ways in which the FII can serve as an “action platform” and identify concrete opportunities where our collaboration can make a difference, with a particular focus on code-based approaches; and (3) Capacity-Building and Education: The Center will identify ways in which know-how and digital problem-solving capacity among decision makers and leaders from both the private and public sector can be increased. In the initial phase, Berkman will serve as a research partner and ambassador to other academic programs around the world to help scope and plan the Forum’s FII, with focus on Internet governance, cooperation, and priority areas such as fragmentation and national policies, big data and privacy, cybercrime and cybersecurity, access, engagement, and trust.

2. Ongoing Projects

**Broadband Project.** In 2009, the Berkman Center conducted an independent expert review of existing literature and studies about broadband deployment and usage throughout the world, in order to help inform the FCC’s efforts in developing the National Broadband Plan. Since submitting its Next Generation Connectivity report to the FCC's National Broadband Plan committee, the Berkman Center has continued its research on broadband policy. In the last year, led by Berkman Fellow David Talbot and Research Director Rob Faris, the team has focused its efforts on community options for providing high-speed Internet access in Massachusetts. The project released a report describing the successful and innovative telecom business of Holyoke’s municipal utility, and also hosted a daylong event and workshop at Harvard Law School at which 60 local and state officials described in-development projects and strategized on how the state’s 41 municipal electric utilities (only 10 of which are in the Internet access business) might move forward in this area. Waide Warner, a senior fellow in Harvard’s Advanced Leadership Initiative, participated in these projects along with Kira Hessekiel and Cyberlaw Clinic students.

**Chilling Effects.** Led by Project Coordinator Adam Holland and Chris Bavitz, with advice and guidance from project founder and Berkman Fellowship Advisory Board member Wendy Seltzer, the Chilling Effects Clearinghouse is a comprehensive and transparent online database of takedown requests related to online content. The project launched in the early 2000s, focused primarily on tracking takedown notices sent under the United States’ Digital Millennium Copyright Act safe harbor provisions. In Fall 2014, the chillingeffects.org website re-launched with a new interface and an updated backend to its database. The new site contains the contents of the previous site’s entire database,
The new database infrastructure has already proven its worth, as the volume of notices received by Chilling Effects has grown to around three thousand per day, with over one million notices received since the new site’s launch. After launching last fall, Chilling Effects continued to work closely with its two largest sources of notices by volume—Google and Twitter—to help them integrate their notice submissions to the new site and added several more well-known Internet companies (including Medium, Vimeo, and Reddit) as notice submitters. Chilling Effects is in the midst of discussions with many more companies about becoming notice submitters. In the coming months, Chilling Effects expects to announce pilot partnerships with teams at research centers around the world, extending the project’s breadth and reach and leveraging local expertise and connections to gather and analyze notices globally.

[https://chillingeffects.org/]

CopyrightX. CopyrightX is a networked course offered under the auspices of the Berkman Center, Harvard Law School, and HarvardX. Terry Fisher led the course’s third offering during Spring 2015, with support from Project Coordinator Nathaniel Levy, Berkman Fellow Ana Enriquez, and Technical Support Specialist Ed Popko. As in years past, CopyrightX as a whole was made up of online sections, affiliated courses, and the Harvard Law School Copyright course taught by Fisher. Harvard students served as teaching fellows for the online sections, and led their students in weekly realtime seminars and discussion in online forums throughout the 12-week course. After having a cohort of 10 affiliated courses in 2014, the 2015 CopyrightX affiliate class grew to 18. New affiliates were located at universities and organizations in Cairo, Egypt; Bournemouth, United Kingdom; Nairobi, Kenya; Ramallah, Palestine; Melbourne, Australia; Beijing, China; Cape Town, South Africa; Hamburg, Germany; and the law firm WilmerHale in the US. 282 of the online sections’ 452 students took the final exam; of those 282, 82% passed, and 79% received a certificate of completion.

[http://copyx.org]

Digital Problem-Solving Initiative. The Harvard Digital Problem-Solving Initiative (DPSI), led by Urs Gasser, with support from Paulina Haduong and Sandra Cortesi, brings together a diverse group of learners (students, faculty, fellows, and staff) to work on projects to address problems and opportunities across the university. DPSI offers participants a novel opportunity to enhance and cultivate competency in various digital literacies as teams engage with research, design, and policy relating to the digital world. In addition to a rich, networked learning environment and an emerging community of practice, the program will offer students and mentors a unique opportunity to invent, build, and shape the increasingly digital environment in which they live, learn, work, and create. In 2014-2015, DPSI teams explored ten different use cases (seven in Fall 2014 and three in Spring 2015), all of which required interdisciplinary work, touched on a unique suite of issues, and invited different modes of engagement from its participants. In
the next iteration of DPSI, the Center intends to extend the venture across more of the University, explore alternative pedagogical models, and increase its educational impact. [https://www.cyber.law.harvard.edu/research/dpsi]

**Digitally Connected.** Led by Urs Gasser, Sandra Cortesi, and Amar Ashar, Digitally Connected is a collaborative initiative between UNICEF and the Berkman Center building upon a multi-year partnership for analysing digital and social media growth and trends among children and youth globally. This year, the Center and UNICEF co-hosted the first international symposium on children, youth, and digital media in reflection of the 25th anniversaries of the invention of the World Wide Web and the adoption of the Convention on Rights of the Child by the US General Assembly. With the collaboration of PEW Internet, EU Kids Online, the Internet Society (ISOC), Family Online Safety Institute (FOSI), and YouthPolicy.org, the symposium attendees mapped and explored the global state of relevant research and practice, discussed insights and ideas from the developing and industrialized world, and encouraged collaboration between participants across regions and continents. As a follow-up to this event, we published an ebook with more than 30 academics, practitioners, government officials, tech industry representatives and activists, and 25 youth contributors to share views and opinions about digital technologies and the impact the Internet has on young people’s lives. The Center, the Ministry of Justice and Human Rights of Argentina, and UNICEF also co-hosted “Conectados al Sur,” a regional symposium on children, youth, and digital media, in Buenos Aires. We engaged in the writing of two other related publications: a report on children's rights in the digital age with the Young and Well Cooperative Research Centre and Gasser’s “Taking Children Seriously: A Call for the Enhanced Engagement of Children in the Discourse on Digital Rights,” a call for a larger role for children in the digital rights discourse. For the upcoming year, several regional events are planned, including one in Beijing and one in Santiago de Chile.

**Free the Law.** The HLS Library has undertaken to scan and digitize all published US case law. The ultimate goal of Free the Law is to provide free public access to US case law for the benefit of scholars, researchers, governments, entrepreneurs, the legal community and the general public. The project is led by Jonathan Zittrain, HLS Library Associate Director for Collection Development and Digitization Kim Dulin, and Project Manager Adam Ziegler.

**Global Access in Action.** Global Access in Action (GAiA) conducts action-oriented research into access to lifesaving medicines and alternative incentives for the development of medical treatments for underserved populations. Improving access and promoting socially beneficial innovation are key strategies for combatting the communicable disease burden that disproportionately harms the world’s most vulnerable populations. In pursuit of this mission, GAiA, led by Terry Fisher, Mark Wu, and Quentin Palfrey, who works as a lawyer at WilmerHale, with support from Nathaniel Levy, held two workshops with representatives of diverse stakeholder groups, including government, international procurement and donor agencies, civil society, academia, and the pharmaceutical industry. The first focused primarily on the possibility that intra-country differential pricing could be employed under some circumstances as one of several strategies for advancing that goal, but also considered some alternative ways of...
increasing access to medicine among the impoverished populations of developing countries, such as humanitarian licensing. The second workshop focused on identifying lessons learned from the Ebola virus outbreak, with a view to improving future preparedness for public health crises. Participants reviewed the Ebola drug development landscape and explored ways to alter drug development policies—either fundamentally or incrementally—so as to strengthen ongoing research and reduce the incidence and severity of future outbreaks.

[http://globalaccessinaction.org]

**Global Network Initiative.** The Berkman Center has continued its membership in the Global Network Initiative (GNI), a multi-stakeholder initiative composed of companies, academics, and members of civil society that is focused on advancing human rights issues in the technology sector. In Fall 2014, Dalia Topelson Ritvo was named a full member of the GNI Board, serving on both the learning and policy committee and the governance and accountability committees for the organization. In addition, the Center, through the Cyberlaw Clinic, has continued to provide academic support to certain research and policy initiatives being explored by GNI.

[http://www.globalnetworkinitiative.org]

**Global Network of Interdisciplinary Internet & Society Centers.** Since the NoC launched in December 2012 at the Berkman Center, the collaborative initiative has focused on events as a means to build robust capacity while encouraging cross-national and cross-disciplinary conversation and engagement. During the reporting period, several NoC meetings were held across the world, including a NoC global meeting at Politecnico di Torino in Italy. Additional workshops and sessions were held this year in Istanbul, Chile, India, Argentina, and at the Berkman Center. During 2014 and early 2015, the NoC engaged in two large research efforts resulting in landmark reports. In January 2015, the NoC released the results of a globally coordinated academic research effort on Multistakeholder Governance Groups, which informs the ongoing debate about future Internet governance models and mechanisms. The research consists of twelve geographically and topically diverse case studies of governance structures, and a synthesis paper. In February 2015, results from a NoC collective research project on online intermediaries, coordinated by the Center, were published.

In June 2015, the NoC—now coordinated by the Berkman Center’s partner Nexa Center for Internet & Society at Politecnico di Torino and bringing together 50 participating institutions from 26 countries as of July 2015—published its strategic roadmap for 2015-2016, which highlights the need to continue performing policy-oriented research able to inform ongoing global debate on key topics, and to connect not only research institutions but also individuals with the objective of building a community of researchers that address Internet and society topics from different angles.

[http://networkofcenters.net]

**H2O.** As part of their commitment to providing open source online educational resources and materials, the HLS Library and the Center have continued to collaborate to offer the suite of H2O classroom tools, with a particular emphasis on free, adaptable digital casebooks. These free online casebooks can be curated to fit the faculty’s pedagogy and
teaching objectives and draw on a growing corpus of diverse materials. Adam Ziegler and Project Coordinator Brett Johnson have worked closely with Director of Technology Sebastian Diaz and outside developers to enhance the performance and usability of the H2O platform, to expand administrative capabilities, and to prepare for continued growth and adoption among faculty and other users. In the 2014-2015 academic year, the platform counts over 2000 users, including an estimated 40 faculty who use H2O to develop, remix, and share online textbooks under a Creative Commons license. In addition, H2O was used this academic year by CopyrightX and its affiliate instructors. [https://h2o.law.harvard.edu]

**Harvard Library Lab.** 2014 was the fourth and final year of Harvard Library Lab, a collaboration spearheaded by the Harvard Library Office for Scholarly Communication in partnership with Harvard University IT Library Technology Services. Led by Stuart Shieber and Associate Director Sue Kriegsman, the program produced useful tools to improve libraries for librarians, instructors, researchers, and the broader scholarly community. This year, rather than starting new projects, the program focused on closing down and wrapping up everything it started. Dubbed the “Showcase Year,” it was an excellent demonstration of how to intentionally and successful sunset a program. Under the guidance of Faculty Director Stuart Shieber, the Center helped successfully close the program on schedule and on budget. The Geeks provided final touches to development work and technical documentation for a number of Library Lab projects, including Author Names, Class Request Tool, Link-o-matic, and TagTeam. The code and technical documentation for projects is stored in the Berkman Center’s repository on GitHub, an open platform for storing and sharing code. On November 13, 2014, the program held a closing celebration, to which the Harvard community was invited, and launched the program website with links to all of the projects. [https://osc.hul.harvard.edu/liblab]

**Harvard Open Access Project.** Led by Berkman Fellow Peter Suber, with support from Project Coordinator Amanda Page, the Harvard Open Access Project (HOAP) fosters open access (OA) within Harvard and beyond, undertakes research and policy analysis on OA, and provides access to timely and accurate information about OA itself. During the 2014-2015 academic year, HOAP consulted pro bono with 56 universities, foundations, government agencies, and non-profit publishers about OA and OA policies. It supervised the Open Access Tracking Project (OATP) and launched a new version of TagTeam, the open-source social-tagging software HOAP is developing at the Center to serve as the platform for OATP. It enlarged the Open Access Directory (OAD), a wiki-based encyclopedia of OA, and expanded the Societies and Open Access Research (SOAR) catalog of open access journals published by scholarly societies. It expanded its widely endorsed guide to good practices for university OA policies and gathered new endorsements for it, including a recent one from the Association of Research Libraries. While the master edition of the guide evolves online in real time, HOAP started plans to publish a second print edition in the fall. In the same period, HOAP deepened its collaboration with Harvard's Office for Scholarly Communication (OSC) and expanded its outreach on and off campus with 21 public talks on OA. [https://cyber.law.harvard.edu/hoap]
**Herdict.** Herdict, led by Jonathan Zittrain and Senior Researcher Ryan Budish, is a platform for collecting and disseminating crowdsourced, real-time information about Internet filtering, DDoS attacks, and other web blockages. Herdict has accumulated more than 310,500 inaccessible reports and 708,000 accessible reports, covering over 60,000 sites. Herdict reports have been included in the Internet Monitor dashboard and have continued to be featured in Twitter’s transparency reports. Herdict is working with the Internet Monitor team to find ways to incorporate automated testing and Herdict data into a cohesive platform. [https://www.herdict.org](https://www.herdict.org)

**Hate Speech Online (“Viral Peace”).** This initiative leverages the Center’s national and global networks and takes a collaborative and interdisciplinary approach to the issue of youth-oriented online hate speech. The initiative approaches hate speech broadly, encompassing but not limited to attacks on gender, sexual orientation, race, ethnicity, religion, and histories of violence. The initiative consists of research, curriculum development, and stakeholder engagement. After undertaking in-depth research that addresses a myriad of questions about youth-oriented online hate speech, we will collaboratively develop curricula and learning modules that will empower youth to react effectively to online hate while fostering more resilient and tolerant communities. We will also create a thematic advocacy network of experts, educators, practitioners, and ambassadors that will work together to counter and prevent hate speech. The YaM team, supported by Nathaniel Levy, has been working on a literature review as an initial navigation aid that maps multiple issues encompassed by “youth-oriented online hate speech” and knowledge among them. In parallel, the YaM team worked on a “Knowledge Map”; a collection of information on individuals and organizations active in fields relevant to youth-oriented online hate speech. Along with the Institute for Strategic Dialogue, the project also co-hosted a working meeting that brought together participants from multiple fields and perspectives, including academics, practitioners, and company representatives from the Center and Institute for Strategic Dialogue communities who care deeply about youth-oriented hate speech online. The meeting was one in a series of real-space and virtual engagements which will deepen our understanding of the online hate speech phenomenon as it relates to youth and the development, implementation, and evaluation of strategies to counter such speech. The working meeting paid particular attention to potential countermeasures surrounding violent extremism and sought to locate them within the broader set of relevant phenomena. [https://cyber.law.harvard.edu/research/viralpeace](https://cyber.law.harvard.edu/research/viralpeace)

**Information Quality Research Initiative.** The Information Quality Research Initiative (IQRI) builds upon numerous Center publications and aims to develop a theory of information quality that reflects fundamental shifts in the information ecosystem in the age of digital media. Led by Urs Gasser, this research examines the history, contexts, perspectives, intervention tools, coping mechanisms, challenges, and implications of this fundamental shift, paying special attention to the complex interplay of law, norms, technology, and markets. Project Coordinator Annie Pruitt is managing efforts to streamline and critically examine the materials for use in future analytical essays. Pruitt will also provide research support to Gasser in the coming months as he builds off of
previous writings and accumulated materials to draft a book on the information quality framework the Center has formulated and utilized. This work will draw from previous IQRI research, as well the Youth and Media (YaM) Project’s work on health and information quality in the digital space.

**Internet Governance.** This Network of Centers project, led by Urs Gasser and Ryan Budish, with collaboration from Berkman Affiliate Sarah Myers West, aims to inform the debate about the future of Internet governance. In January 2015, the NoC published the results of a globally coordinated, independent academic research project exploring multistakeholder governance models. Facilitated by Berkman, the work evaluated a wide range of governance groups with the goal of contributing meaningfully to the current debate around the future of the Internet governance ecosystem. The report, titled *Multistakeholder as Governance Groups: Observations From Case Studies*, included twelve case studies of real-world governance structures from around the world and from both inside and outside the sphere of Internet governance. The Berkman Center team wrote two of those case studies in addition to a synthesis paper, which drew from the case studies lessons that challenged conventional thinking with respect to the formation, operation, and critical success factors of governance groups. Ongoing work aims to further extend the collection of case studies and share the lessons learned with policymakers and conveners in useful and meaningful ways.

**Internet Monitor.** Internet Monitor, led by Urs Gasser, Jonathan Zittrain, Rob Faris, and Senior Project Manager Rebekah Heacock Jones, evaluates, describes, and summarizes the means, mechanisms, and extent of Internet content controls and Internet activity around the world. In July 2014, the project launched the Internet Monitor platform, which provides free public access to primary and secondary data about Internet access and infrastructure, online content controls, and online activity in 92 countries. The platform also brings together 15 indicators on Internet access and infrastructure to create the Internet Monitor Access Index. This user-configurable index captures Internet access from several angles, including measures of Internet adoption, speed, price, and proxies for the ability of citizens to productively engage in online activity if given the opportunity: gender equality and education. Internet Monitor also provides expert analysis on the state of the global Internet via its special report series and annual reports on notable events and trends in the digital space. In December 2014, the project published its second annual report, a collection of roughly three dozen short contributions that highlight and discuss some of the most compelling events and trends in the digitally networked environment over the past year. Internet Monitor also published three special reports in 2014-2015: “Russia, Ukraine, and the West: Social Media Sentiment in the Euromaidan Protests,” “The Tightening Web of Russian Internet Regulation,” and “Arab Religious Skeptics Online: Anonymity, Autonomy, and Discourse in a Hostile Environment.” The project team is working closely with Web Developers Justin Clark and Ryan Morrison-Westphal to build the new Internet Monitor dashboard, which will offer users the opportunity to customize a collection of data visualization “widgets” according to their interests, whether network traffic worldwide, Internet filtering in Turkey, or online media in Germany. The boards will provide a real-time view of the state of the Internet across a variety of dimensions, enable easy comparisons across countries and data sources, and be easy to configure, edit, and share.
Internet Robustness. The Internet Robustness project, led by Jonathan Zittrain, Rob Faris, Sebastian Diaz, and Project Coordinator Genève Campbell, completed its third year of developing, testing, and piloting a system to allow websites to mirror one another’s content seamlessly as a form of distributed mutual aid. The heart of the project is what the Center calls Amber, a proof of concept for the "Mirror-As-You-Link" protocol initially suggested by Zittrain. When installed on a website, Amber detects when the website publishes a new link and automatically makes a backup of the content at the other end of that link if the linked site does not object. If a visitor to the website clicks on a link that is unavailable, Amber springs into action by notifying the user about the broken link and presenting a mirrored page; the visitor is then able to view the mirror of the page when it otherwise would be inaccessible. In the past year, the team completed a first phase of development of the Amber technical infrastructure and codebase. The project also conducted alpha testing both in-house and with a major Persian language blog partner to improve functionality of Amber and its user interface. Amber was ultimately launched into a small beta community of blogs and websites, the goal of which was to incorporate user suggestions into the Amber system and evaluate strategy for potential future roll-out. Amber was also presented as a tech demo at RightsCon, an annual summit series convened around the Internet and human rights, in March in Manila, Philippines. Pilot community members who have downloaded Amber v1.0 include a legal resources website, an academic study guide clearinghouse, a journalist trainer, a political fact-checking and archiving group, an Internet history digital archive, a Vietnamese activist blog, a European academic job listing website, a fair use blogger, and a Nigerian storytelling archive. Amber is compatible with two of the most popular CMS platforms (WordPress and Drupal) and two major web servers (Apache and Nginx).

Interoperability. Led by Urs Gasser and supported by Ryan Budish, Berkman continued its long-standing exploration into issues of interoperability (or “interop”). In the spring, the interop team researched a variety of new and challenging examples of interop in action, including mobile payments and the Internet of Things. The research was a key input to the International Telecommunication Union (ITU) 2015 Global Symposium for Regulators in Libreville, Gabon. There, Urs Gasser presented the work, and the ITU published the resulting Berkman report, “Interoperability in the Digital Ecosystem,” as a discussion draft.

Media Cloud. A joint project spearheaded by Yochai Benkler and Ethan Zuckerman from the MIT Center for Civic Media, Media Cloud is an open source, open data platform that allows researchers to examine what media sources cover which stories, what language different media outlets use in conjunction with different stories, and how stories spread from one media outlet to another. During the 2014-2015 year the Media Cloud team, which includes fellows, staff, and researchers from both the Berkman Center and the Center for Civic Media, further developed its tools and technological platforms and research efforts:
Tools and Technology. The Media Cloud team continued to support and expand its rich set of publicly available code, data, and tools. The team made a number of important improvements to the core data collection system, including improvements in its text extraction system to more accurately pull substantive text from web pages, better source monitoring to be able to detect and fix broken sources, and a new feed rescraping system to discover new feeds for sources as they are published. The team also added several new media sets to improve coverage in both specific topic areas and geographic regions; added content from the full US Associated Press feed; and added new types of data, including social media metrics from Bitly, Twitter, and Facebook. The public API continued to be updated and refined with many new features, including the availability of geotagging data for most content. And a rich set of network mapping tools were added to the Controversy Mapper system, allowing network analysis by both links and content.

Research Efforts. In the past year, the Media Cloud team undertook a number of research efforts to better understand the nature of the networked public sphere. To this end, the team undertook studies of media coverage of a wide range of topics, including: a range of issues related to sexual and reproductive health and human rights, a variety of topics related to police violence against African Americans, the death of the open web economy in Egypt, and the geographic balance of media coverage in the US. Papers were published or conference presentations were accepted on the coverage of the Ebola crisis, on the net neutrality controversy, and on coverage of the 2014 Israel-Gaza conflict. Also, the team organized a summer data challenge in 2015, for which ten teams from a combination of universities and advocacy groups will use Media Cloud tools and data to produce original research on topics ranging from the moral foundations of partisan behavior to visual framing of the abortion controversy.

Mesh Networking. The Mesh Networking Project has been pursuing a novel approach to creating an auxiliary communication network using mobile phones that is resistant to disruption. The project plans to implement a simple, multi-purpose capability in all mobile phones for communication during emergencies, which would make it substantially easier—indeed, newly possible—for ordinary people to send private, secure messages to one another during times of distress. While standard ad hoc and mesh networks use data-heavy, short-range communications, the Mesh Networking Project uses data-light, long-range communications and a simple, easy-to-use method for establishing trusted identity. This past year, through discussions with various stakeholders, the Center has further refined its proposal to focus on developing a Boston-Cambridge network infrastructure. This long-term infrastructure will enable any person or organization working in this space to develop and deploy an application capable of operating such a network using low-frequency, licensed and unlicensed spectrum. It will also serve as a proof of concept, demonstrating to stakeholders that it is possible, cost efficient, and useful to develop emergency ad hoc networking capabilities. The Center has been collaborating with companies and nonprofits, both large and small, to further
develop and refine its mesh networking proposal, and is currently soliciting support for the planned Boston-Cambridge network.

**metaLAB (at) Harvard.** metaLAB is a project that brings together resources of the Center, the Graduate School of Design (GSD), and the Faculty of Arts and Sciences to explore the roles and boundaries of networked culture and the use of digital tools in the art, sciences, and humanities. Much of metaLAB’s work focuses on collections—in particular, those held in institutional settings, such as museums, libraries, and archives—experimenting with ways such collections are taken up for making arguments and telling stories across academic disciplines, in journalism, and in civic dialogue. The project pursue these questions through a blend of traditional and media-based scholarship, experimental teaching, and technological tools and platforms. metaLAB’s core initiative in this last category, Curarium, saw significant development in the past year. This is due in large part to its collaborative arrangement with Center’s technical staff, in particular Ryan Westphal, who joined the Curarium team as developer. As software, Curarium has matured into a robust platform for the ingestion, integration, and participatory elaboration of images and metadata associated with visually-intensive collections. In the next phase of development, Curarium will benefit from extensive use in classrooms across a variety of disciplines, from art history to foreign-language instruction. Another technology-development project, initiated by Web Developer Jessica Yurkofsky, called “Book-a-Nook,” is prototyping a system for libraries to treat spaces they offer for meetings, projects, and performances like collections—to curate such spaces, increasing awareness of them and the culture they help to support and produce. Book-a-Nook received a prototyping grant from the Knight Foundation, and is in active development in collaboration with Berkman Center staff. In experimental teaching, metaLAB offered another instance of the humanities studio course series offered in partnership with Harvard College’s General Education program. The course, offered in Spring 2015, was a version of Mixed-Reality City, a longstanding metaLAB offering the GSD, refactored for a multi-faculty student body including undergraduates, GSD students, and students in the Graduate School of Arts and Sciences. Another experimental teaching engagement emerged in collaboration with the Getty Foundation, who supported metaLAB in the offering of a summer institute in digital art history for art historians, museum curators, and technologists. The institute was enormously productive, resulting in a series of curatorial initiatives, publications, and experiments in media and technology. In addition, metaLAB hosted a workshop at Harvard, funded by Harvard Institute for Teaching and Learning (HILT) on the role of design thinking in pedagogy. In traditional and media-based scholarship, metaLAB had a productive year, with the publication of two books and the production of a documentary short, Cold Storage, and accompanying multimedia interactive archive.

[http://metalab.harvard.edu](http://metalab.harvard.edu)

**Mobilization for Change in the Middle East and North Africa.** This project seeks to better understand the role of the networked public sphere as an alternative platform for information sharing and mediating collecting actions related to political and social life in the Arab world. This research effort is being carried out in close collaboration with a team of researchers at the Access to Knowledge for Development Center (A2K4D) at the American University in Cairo, led by Berkman Faculty Associate Nagla Rizk, along with
Fares Mabrouk and Jazem Halioui in Tunisia. Yochai Benkler, Rob Faris, and Berkman Fellows Dalia Othman and Bruce Etling, together with Research Affiliate Helmi Noman, contribute to the research effort from the Center. Over the past year, the researchers have analyzed the structure of Twitter conversations related to Bahrain, Egypt, and Tunisia and mapped the Arab blogosphere. This quantitative work is complemented by a series of interviews and focus groups with key digital media actors in the region. In April 2015, the researchers hosted a round-table public discussion on the networked public sphere and social mobilization post-revolutions in the Arab world. The research team is writing a series of forthcoming papers that map the structure of the networked public sphere in the region, track the evolution of a number of civic activity-related topics through digital media, and incorporate on-the-ground surveys, interviews, and focus groups to examine perspectives on the interplay between the online sphere and offline networks.

**Online Intermediaries.** Online Intermediaries is a policy-oriented pilot study in collaboration with the Berkman Center's NoC colleagues on areas of convergence and disagreement regarding the liability and responsibility of online intermediaries. This year NoC participants were invited to (a) contribute to a shared repository of relevant research, including methodologies and approaches, data, and expertise on diverse attitudes related to intermediary liability; (b) engage in an initial analysis of recent policy debates and proposals related to online intermediaries around the globe; and (c) collaborate on a shared methodology for assessing the impact of such developments on the open Internet. In August 2014, the case study authors came together in person for a workshop hosted by the Radcliffe Institute for Advanced Study to begin synthesizing their various reports and identifying areas of convergence and disagreement. This process of consultation and learning continued through the fall, and in February 2015 the eight case studies and a synthesis document co-written by Urs Gasser were published. Gasser presented on these findings and other issues surrounding intermediary liability at a May 2015 conference hosted by Open-Net Korea.

**Perma.** Perma is an open source, user-directed solution to link rot. It enables authors, journals, courts, and publishers to create archived versions of cited web sources and to direct readers to those archives using permanent, unique URLs. To ensure resiliency, the archive will be distributed among multiple “mirror” partners — principally libraries — that dedicate physical or cloud server capacity to the preservation effort. Perma is focusing initially on law journals and courts, where the problem is acute as documented by Jonathan Zittrain, Berkman Center co-founder Lawrence Lessig, and Kendra Albert in their study, “Perma: Scoping and Addressing the Problem of Link and Reference Rot in Legal Citations,” 127 Harv. L. Rev. F. 176 (2014). The project is led by Jonathan Zittrain and a team at the HLS Library that includes Kim Dulin, Adam Ziegler, Harvard Library Innovation Lab Web Developer Matt Phillips, and Berkman Fellow Jack Cushman. Perma currently counts almost 100 library partners, almost 300 journals, 4,750 individual account holders, and multiple courts as users. Together, they have created over 100,000 Perma Links. The Perma Team won the 2015 Webby Award for the law category, and Perma.cc was cited in The Bluebook as a reliable web archiving service.

[https://perma.cc]
Privacy Tools for Sharing Research Data. In this project, the Berkman Center joins Harvard’s Center for Research on Computation and Society, Institute for Quantitative Social Science, and Data Privacy Lab, as well as the Program on Information Science at MIT Libraries, to translate the theoretical promise of new technical measures for privacy protection and data utility into an array of practical tools, methods, and policy recommendations. The project is supported by the NSF and the Sloan Foundation. Led by Urs Gasser, with support from David O'Brien and Berkman Fellow Alexandra Wood, the project’s legal team directs the development of new privacy frameworks, legal instruments, and policy recommendations that complement advanced tools for private data analysis being developed in the project. This team contributed to the November 2014 launch of a prototype of DataTags, a risk assessment tool that generates machine-readable tags describing custom data handling policies that are tailored to the unique risk profile of a given set of data. They also led the authorship of three joint publications: (1) analyzing current approaches and challenges to protecting the privacy of human subjects in long-term longitudinal studies, (2) exploring the evolving definitions of “public” and “private” information in social science research, and (3) critically examining current government practices for releasing data to the public and outlining a framework for a modern privacy analysis that takes advantage of recent advances in data privacy research. They presented the third paper, which was funded in part by a grant from Microsoft and the Berkeley Center for Law & Technology, at a symposium hosted by UC Berkeley in April 2015. Along with other members of the Privacy Tools project, David O'Brien and Alexandra Wood served on the organizing committee for a symposium titled “Privacy in a Networked World,” held at Harvard University in January 2015. This event included a live video conversation between Edward Snowden and Bruce Schneier as one of a series of talks representing perspectives from scientific research, national security, social media, computer science, and the technology industry.

Student Privacy Initiative. The Student Privacy Initiative (SPI), with contributions from the Cyberlaw Clinic and the YaM team, explores the opportunities and challenges that may arise in the new and rapidly evolving ecosystem of networked technology being used in education (“ed tech”), engaging and sustaining a multi-disciplinary, multi-stakeholder conversation on student privacy in the age of connected learning. Led by Urs Gasser and Paulina Haduong, with support from Sandra Cortesi and Leah Plunkett, as well as Chris Bavitz and Dalia Topelson of the Cyberlaw Clinic, SPI conducted research, organized a series of working meetings and ongoing conversations, and produced outputs that assess federal and state laws, expectations, current practices in the field, and social norms in these contexts. Moving forward, the team intends to focus on the innovative opportunities of ed tech, with a particular eye to evolving educational practices and opportunities that may also present unique privacy challenges.

Transparency Reporting. The number of Internet and telecommunications companies releasing transparency reports documenting government requests for user data has continued to increase. Working primarily with the OTI, the Berkman Center has continued to research the current state of transparency reporting and to refine our understanding of best practices for drafting transparency reports through several meetings
and workshops. The Center is working with OTI on a template for transparency reports and a series of explanatory reports to help smaller companies begin the process of writing reports. In July 2014, the research team organized a workshop in Washington, DC to iterate on best practices and emerging issues in transparency reporting. Ryan Budish presented the project’s research findings on a panel titled “Transparency Reporting as a Tool for Internet Governance” as part of the Internet Governance Forum meeting in Istanbul in November 2014.

**Youth and Media.** Led by Urs Gasser and Sandra Cortesi, in cooperation with John Palfrey and colleagues, YaM encompasses an array of research, advocacy, and development initiatives around youth and digital technology. By understanding young people’s interactions with digital media, this collaborative project aims to gain detailed insights into youth practices and digital fluencies, harness the associated opportunities, address challenges, and ultimately shape the evolving regulatory and educational framework in a way that advances the public interest.

The YaM project is split into multiple research projects and initiatives:

- **Youth and News Online.** YaM continued to serve as the research, learning, and development partner to the Chicago-based core group of McCormick Foundation Journalism Program grantees and the McCormick Journalism Program team. The main aim of the project was to better understand how young people think about news, what their news habits and preferred news sources are, how they create, share, and otherwise interact with news, and discover what emerging news genres are—such as memes. In this academic year, the YaM released two major publications, summarizing some of the main learnings and outcomes from the past five years. A peer-reviewed paper, “Youth Online and News: A Phenomenological View on Diversity” was published in the International Journal of Communication. “Youth and Online News: Reflections and Perspectives” includes a series of short essays written by Berkman Center friends and colleagues that offer insightful, thought-provoking, and out-of-the-box reflections and observations at the intersection of news, digital media, and youth.

- **Youth and Online Privacy.** The Youth and Online Privacy project aims to better understand youth’s online information sharing practices and their evolving attitudes toward online privacy and reputation. As part of this ongoing research project, the YaM team has been working on a major publication which draws on findings from focus group interviews conducted between 2011 and 2015 with over 350 youths, across five US states.

- **Youth Behaviors Online: How Youth Access and Share Information in Communities Affected by Gang Violence.** The latest YaM project aims to understand how gang presence in a community might impact youth online behavior and practices. Preliminary data suggests that the community context appears to influence what information is relevant to youth, how information is shared, and how youth relate that information to maintaining safety. Building off of these preliminary findings, the YaM team started a deep dive research study to
better understand how at-risk youth in Chicago, Boston, and Los Angeles relate to peers, present their identities, and engage with information—particularly news related to their neighborhoods and/or communities—online.

[http://youthandmedia.org]

3. Selected Independent Scholarship

The Berkman Center’s institutional advancements, research, and events would be far from complete without including updates from our community. We invited fellows, faculty, faculty associates, and affiliates to contribute short updates to this report about their independent scholarship and accomplishments over the past academic year. While not all community members are represented here, the updates included offer a sense of some of the notable milestones members of the 2014-2015 community chose to share.

Kendra Albert, an affiliate, continued her studies at Harvard Law School. She spent much of her non-school time working on a DMCA §1201 exemption for video game archiving and preservation with the Electronic Frontier Foundation. She also finished a paper on applying the Fourth Amendment to fitness tracker data, which led her to a breakout session at the Quantified Self 2015 conference. She is spending her summer at CloudFlare, an Internet performance and security company in San Francisco.

Geanne Belton, a faculty associate, includes among her 2014-15 highlights conducting news and digital literacy and media law workshops in the South Side of Chicago for local high school students in collaboration with the Truestar Foundation; directing and moderating a three-panel pre-conference on journalism’s role in the future of education in Montreal at the 2014 Association for Education in Journalism and Mass Communication conference; contributing to the Berkman Center’s “Youth and Online News: Reflections and Perspectives”; participating in the organizing task force and leading discussion on adding news literacy into education for a national News Literacy Summit in Chicago in collaboration with the Poynter Institute and the McCormick Foundation; developing and teaching a hybrid online, highly interactive news and digital literacy course at Baruch College; creating a media law and ethics course for CUNY  Journalism's new Social Journalism graduate program; and teaching media law and investigative reporting. She also participated in a June data journalism workshop at Boston University and continued her work as vice chair of the board of directors and chair of the governance committee of the Student Press Law Center.

Susan Benesch, a faculty associate, studied methods for diminishing harm and increasing civility online. This year she began a new project, with Derek Ruths of McGill University, to gather Twitter data on successful counterspeech: tweets that seem to discourage hateful or harmful tweets from other accounts. She also consulted or gave talks regarding hatred and abuse online in places including Bangkok, Abuja, Istanbul, Yangon, Oxford, San Francisco, and Menlo Park. She wrote articles, including one for the Center’s 2014 Internet Monitor annual report, and a forthcoming long piece, expanding and developing her theory of “dangerous speech” in collaboration with
Jonathan Leader Maynard. She also co-chaired and organized the first International Workshop on Misogyny and the Internet at the Center, held in June 2015.

**Dalida María Benfield**, a faculty associate, continued her research in cooperative and distributed art production with the “losarchivosdelcuerpo (body files)” project. The work was exhibited in March at the Huret & Spector Gallery at Emerson College, Boston and in April at Phakt Center, Rennes, France. The project's next iteration is a book and exhibition created in collaboration with Robert Ochshorn of the Communications Design Group in San Francisco at the SALASAB, Bogotá, Colombia. She also created a new iteration of the project “Hotel/Panamá” at Rutgers University in December 2014. Her research on contemporary art, transnational feminist activism, media education, and global social justice movements continued through her book projects *Beyond Binary Code* and *Histories of Now*; a visual essay on the work of the Kongo Astronauts to be published in the SPARCK journal August 2015; and talks delivered at Rutgers University, Concordia University, SXSWedu, and the Université Rennes 2, France. She also continued to build a feminist digital publishing project, “Sí/NOW,” of the transnational feminist collective the Institute of (Im)Possible Subjects (IIS), featured at the Zones Art Fair/Art Basel Miami in December 2014.

**Ellery Roberts Biddle**, a fellow, was promoted to the position of Advocacy director for Global Voices Online in April 2015. Alongside daily in-depth reporting on threats to free expression, privacy, and access to information online, Global Voices Advocacy produces a weekly news digest on this topic that now has over 5000 subscribers. This year, the project has been especially focused on its campaign to free nine bloggers and journalists jailed in Ethiopia, known collectively as the Zone9 bloggers. Several members of the group also worked with Global Voices. President Obama's move to renew diplomatic relations with Cuba elicited an ongoing wave of media coverage and questions about the future of the Internet and technology access in Cuba. Biddle has had several opportunities to write and speak on the topic, including “Decoding the Digital Cold War,” in *Americas Quarterly*, an interview on PRI's The World with Marco Werman, “Cuba isn’t ‘open’ just because the US says it is” in *Quartz*, and “Netflix is coming to Cuba. But will it have any customers?” and “How Obama’s Policy Shift Will and Won’t Affect Tech in Cuba” in Slate. Biddle also spoke at the Web We Want Festival in Southbank Centre, London; the Article19 Mexico Symposium in Mexico City; Re:Publica 15 in Berlin; and Personal Democracy Forum in New York.

**Monica Bulger**, a fellow, continued her collaboration with Sonia Livingstone and the UNICEF Office of Research, publishing “A Global Research Agenda for Children’s Rights in the Digital Age” in *Journal of Children and Media* and convening a symposium at the London School of Economics and Political Science to explore the challenges of studying children’s digital use globally. Forthcoming articles report on a national survey of how children choose what to trust in digital spaces and another using Meetup data to examine differences in MOOC use in developing and industrialized countries. In her new position spearheading the Enabling Connected Learning initiative at the Data & Society Research Institute, she is considering the value of data in education from the perspective of students, teachers, educators, policymakers, and vendors.
Neal Cohen, a fellow, spent his time completing a book on US Government data sharing practices—Guide to US Government Practice on Global Information Sharing, Second Edition (with lead author John Kropf)—and presented the book to the Berkman community as part of the Luncheon Series this past May. In addition, Cohen published an essay in the Center’s 2014 Internet Monitor annual report about the role of data protection and privacy regulators and spoke at various events on data privacy issues, including for the Comparative Online Privacy course at HLS and the University of Geneva Summer Internet Law Program. Cohen also continued his work as a data protection and privacy lawyer at Perkins Coie LLP, including by providing legal support to several non-governmental organizations in relation to their vetting issues arising from US government and private grants, following up on his past work with the Harvard Counterterrorism and Humanitarian Engagement Project.

Sandra Cortesi, a staff fellow, continues to coordinate YaM’s national and international policy, research, and educational initiatives, and leads the collaboration between the Center and UNICEF. She works closely with talented young people and lead researchers in the field as they explore innovative ways to approach social challenges for youth in the digital world. Together with Urs Gasser and the YaM team, she focuses on topics such as inequitable access, information quality, risks to safety and privacy, skills and digital literacy, and spaces for participation, civic engagement, and innovation. Sandra supports the following Berkman Center projects and initiatives: YaM, Digitally Connected, Student Privacy Initiative, Digital Problem-Solving Initiative, and Coding for All.

Jack Cushman, a fellow, continued work on Perma.cc, a web archiving solution for scholarship. The New Yorker wrote this year that “it’s only a matter of time before [Perma.cc is] universally adopted as the standard in legal, scientific, and scholarly citation.” He also started work this year on a new initiative on “strong dark archives”—distributed, encrypted archives that cannot be opened until their release conditions are met. The strong dark archives initiative produced a number of prototypes that are poised for testing and use by researchers in the coming year.

Kate Darling, a fellow, has been running human-robot interaction experiments, exploring people’s visceral responses to robots and their impact on law, policy, and society. Her two resulting papers were accepted to IEEE’s ROMAN conference, We Robot (University of Washington), Governance of Emerging Technology (Arizona State University), and The Man and the Machine (University of St. Gallen). Darling gave numerous other talks on robotics in a variety of venues. She continued to publish on IP and copyright issues with a paper on author termination rights in the Buffalo Law Review and is currently co-editing a volume on Creativity Without Law (forthcoming NYU Press). In November 2014, she co-organized a conference around the book’s themes with the Berkman Center and Case Western University. She contributed a book chapter to Robot Law (forthcoming Edward Elgar), as well as articles on both robotics and IP for various online publications. She convenes the Cyberscholar Working Group on behalf of the Center.

Tim Davies, an affiliate, completed his role as research coordinator of the Open Data in Developing Countries research network at the World Wide Web Foundation in December
2014, also finalising the second edition of the Open Data Barometer study looking at policies and practices across 86 countries. He has continued to work on practical projects around open data standards, participating in the development and launch of the Open Contracting Data Standard, and subsequently co-founding a workers cooperative to support implementation and use of open data standards in open government projects around the world. He co-chaired the first Open Data Research Symposium, as part of the third International Open Data Conference in Ottawa, where he also presented a paper with Jonathan Gray titled “Fighting Phantom Firms in the UK: From Opening Up Datasets to Reshaping Data Infrastructures?” With the Berkman Center, he gave a lunch talk on “Unpacking Open Data: Power, Politics and the Influence of Infrastructures.”

Primavera De Filippi, a fellow, has been researching the concept of “governance by design” as it relates to decentralized online architectures, with particular focus on blockchain-based applications, such as Bitcoin and Ethereum. She published several papers on the topic in peer-reviewed journals, and she is currently co-authoring a book on Blockchain and the Law, soon to be published by Harvard University Press. She was invited to present her research at many international conferences in Europe and in the US, and she taught a course at the Geneva Summer School of Internet Law, co-organized by the Berkman Center. De Filippi also organized three conferences and workshops on the regulatory challenges of blockchain technology at Harvard/MIT, Stanford, and University College in London. She joined the Digital Currency Initiative at Berkman, and she has been invited to join the editorial board of two new journals: Ledger, the Journal of Cryptocurrency Research, and Digital Finance by Springer. Finally, De Filippi recently was appointed as a tenure researcher at the Centre National de Recherche Scientifique in Paris.

Judith Donath, a member of the Fellowship Advisory Board, spent the year finishing one book and starting the next. Following the publication of The Social Machine, she spent the fall and winter giving talks on related subjects: designing data portraits, governing online social spaces, the growth of social super-networks, and the importance of pseudonymity. Her next book (preliminary title, The Economics of Honesty) asks: given that it can be quite profitable to lie, to say you are smarter, stronger, or nicer than you actually are, what keeps communication honest enough to function? The book will examine how this plays out in practices such as gift giving and fashion, discuss how deception enables cooperation, and explore our changing relationship to robots and other increasingly intelligent (seeming) beings. Her shorter form writings this year include the epilogue for the upcoming book Social Media Archeology and Poetics about how nostalgia for the early day of a new technology helps to instill ideals into new designs, an article for Technology Review about how participatory, live-streaming apps such as Periscope change the dynamic between audience and user, and a piece about the social meaning of ugly Christmas sweaters.

Camille François, a fellow, pursued her work on cyber policy through several projects. Over the past year, she worked with Mozilla to conduct a research project based on the Delphi methodology engaging 30 cybersecurity experts to discuss user-focused cybersecurity priorities and measures. In October, she convened and chaired the French-American Foundation's International Working Group on Cybersecurity & the Law in
Washington, DC. She joined the Freedom Online Coalition Working Group “An Internet Free and Secure” to advance a human rights framework in the cybersecurity debate. François also spent some time in France, working as an advisor to the Chief Data Officer of France and the Open Data-Open Government mission. In this context, she worked on governmental innovation programs, on the making of France’s first National Action Plan for Open Government, and developed and deployed a civil servant training program on Internet and society. She also worked with the French Digital Council on France’s Digital Ambition report and the nation-wide consultation on digital affairs launched by the French Prime Minister. This year, François gave keynotes in Campus Party in Sao Paulo, in Rome for the Personal Democracy Forum, in Vienna for a diplomatic conference and to Istanbul for the IGF, and in New York. In June, she taught on robotics at the Geneva Internet Summer School. On ethical and legal issues in robotics, she published a paper called “Robots, War and Society” in Defense Dossier in February. Finally, this year François was invited to join Wikimedia France’s Scientific Committee and kept serving Libraries Without Borders as a Digital Advisor.

Nathan Freitas, a fellow, used his time to begin his process of analyzing the legal and policy trends of lawful intercept requirements and unlawful surveillance regimes in the global telecommunications network, and how encryption and proxying technology can be used by citizens to counteract these trends for their own needs. He also heavily researched the WeChat phenomenon, including understanding the impact of the expansion of China-based mobile communication services and their “surveillance by design” models beyond their borders. His talk “The Great Firewall Inverts,” held at Berkman in early 2015, brought a large diverse audience interested in the subject to the Center, and resulted in contributions of articles to the 2014 Internet Monitor annual report and Slate. In response to increased fears of network shutdowns as a government tactic, Freitas began work on Wind, a nearby network communication concept and protocol that facilitates sharing between people with mobile communication devices in physical proximity. “Wind Farm 0,” a two-day workshop and simulation event, was held at Berkman in May, bringing together developers, activists, and everyday users interested in having this kind of capability available in their own applications and communities. Freitas also deeply enjoy collaborating with others at the Center, such as Fellow Felipe Huesser's Rhinobird and Jack Cushman's Time Capsule encryption.

Sarah Genner, an affiliate, has been working on the ON/OFF study, which assesses risks and rewards of hyper-connectivity (the possibility of being always online), focusing on health and privacy. She conducted a dozen expert interviews in the Boston area and Silicon Valley in addition to a dozen expert interviews previously conducted in Europe. She has been analyzing survey data on online connectivity behavior. At the conference Point to Point Camp at MIT Media Lab, co-organized by the Center, she gave a talk about the ON/OFF scale, which she developed as a framework to define various states of online connectivity. She taught classes in media psychology for future social media managers, co-authored the representative Swiss youth and media studies JAMES 2014 and MIKE 2014, published the piece “Why Screens Can Ruin Your Sleep” and the essay “Of Newsfeeds and Timelines” in a Berkman Center publication.
Dan Gillmor, a faculty associate, continues to work at the intersection of technology and media. He turned his Arizona State University online digital media literacy course into a MOOC, launched in July on the edX platform; the course features video interviews with more than two dozen experts in media, education, and technology. He writes a column for Slate magazine and is a contributor to Medium’s Backchannel site. Over the past year he’s spoken at many events around the world, including Wikimania, Highway Africa, Freedom to Connect, the International Journalism Festival, and Global Editors Network Summit, among others. He serves on the boards of several media-related nonprofits.

Erhardt Graeff, a fellow and also a PhD student at the MIT Center for Civic Media, has been developing a research program around changing trends in civic education, civic technology development, and how they are funded — looking for a new definition for effective civic practice and new metrics for evaluating which programs and approaches best prepare youth to be effective citizens. In Fall 2014, he organized a Berkman Center co-sponsored summit “Putting Youth and Learning at the Heart of Civic Technology” with J. Nathan Matias, which brought together youth civic technology organizations in the UK, along with funders and academics. He then reported on the findings from the summit and his efforts to put together a research agenda on this topic at the 2015 Digital Media and Learning conference in Los Angeles. Part of this work has involved workshops on civic technology design and applications with stakeholders in different contexts. In November 2014, he led a workshop for educators attending the National Council for the Social Sciences conference in Boston on bringing civic technology into the classroom. And as an International Center for Journalism Professional Fellow in Kuwait in January 2015, he led a workshop on civic technology design for local social entrepreneurs, while also documenting the state of civic media in the country through meetings and interviews. In addition to this main focus, Graeff organized and chaired a panel at the Technology Policy Research Conference at George Mason Law School in September 2015 on privacy and regulation of bots and algorithms, which featured Kate Darling, and presented a paper with J. Nathan Matias at the International Studies Association 2015 conference on how to make the design and use of drones a more civic enterprise. And in service to the Center’s community, Graeff ran a joint Berkman-MIT reading group on civic studies in the fall.

Alison Head, a faculty associate, continued her research as the director of Project Information Literacy (PIL), an ongoing national study that investigates how today’s college students conduct research and find information for coursework and solving information problems in their everyday lives. In partnership with the University of Washington Information School (iSchool), where she is a research scientist, she continued to work on a two-year federally funded study about lifelong learning in the digital age. This past fall, a large-scale survey was administered to 1,651 recent college graduates from 10 US colleges and universities, and 63 follow-up interviews with sample members were conducted. A forthcoming research report with findings from all three phases will be published in Fall 2015. During this academic year, she contributed a piece entitled, “Why Blogs Still Matter to the Young” to the 2014 Internet Monitor annual report. She published a paper with Deborah Garson from the Harvard Graduate School of Education (HGSE) in First Monday, presenting a cross-disciplinary content analysis recent research articles on adult participation in lifelong learning. She also presented
across the US this year, including two keynote presentations at three national conferences and five research talks, including two at HGSE this past spring.

**Tatiana Indina**, an affiliate and visiting researcher from the Center for New Media and Society in Moscow, this year worked on her research project about Russian Internet governance. This included monitoring of Runet regulations and recent legislative initiatives as well as interviews with Russian governmental officials and industry representatives. Indina also conducted field research on Internet regulations and Internet governance in Kyrgyzstan and Kazakhstan, focusing particularly on the influence of Russian Internet policies on local Internet governance. This research was conducted in collaboration with the Internet Policy Observatory Project of Annenberg School of Communications at the University of Pennsylvania. Indina was also a part of the Ranking Digital Rights global project team, evaluating corporate policies of Russian companies on privacy and freedom of expression. Indina also published her book CEO2.0, which reflects on how technology, innovations and globalization are shaping new competencies of a new generation of leaders. In addition, Indina visited the Center as part of a peer to peer international collaborative initiative between the Berkman Center and the Center for New Media and Society.

**Malavika Jayaram**, a fellow, has been working on expanding the largely western-centric debate about data privacy and security to a more inclusive global conversation. Focusing on the vectors of jurisdiction and sector, she has been extending her work on the world’s largest biometric identity scheme (the Unique Identity project in India) to map national ID programs in several other countries and to investigate the ethics of big data in governance, welfare, and innovation. She created and taught a course at India’s premier law school titled ‘Dialogues about Data,’ which located emerging global trends such as the Internet of Things, e-governance, open data, smart cities, and biometrics within the local context. She was invited to be program faculty for the Harvard South Asia Institute’s Mobile Technology Summer Program, teaching the module on regulation and policy. Developed under a grant awarded from the President’s Innovation Fund for International Experiences (PIFIE), created to provide seed funding to develop academic experiences abroad for Harvard undergraduates, it pairs students with partner organizations who are implementing innovative solutions using cellphone technology. She was awarded a Visiting Scholar stint by the University of Sydney, Australia, to give lectures and interact with its Surveillance and Everyday Life Research Group, the Centre for International Security Studies, and the Sydney Southeast Asia Centre. She was on the Organizing Committee of the Computers, Privacy & Data Protection conference in Brussels, and is one of the organizers (with the Oxford Internet Institute, Measurement Lab, Microsoft Research, and others) of the “Ethics in Networked Systems Research” workshop at the ACM SIGCOMM conference in London in August 2015. She is completing a set of case studies on evidence based approaches to Internet policy, and has also given several talks and conference keynotes over the year.

**Rey Junco**, a faculty associate, published his third book, *Engaging Students through Social Media: Evidence-based Practices for Use in Student Affairs*. Over the past academic year, his research has focused on evaluating the educational impact of a number of educational applications developed through a Gates Foundation-funded project. In
addition to data collection for the apps project, he continued his research on social media and student learning. Junco published the paper “Student class standing, Facebook use, and academic performance” in the Journal of Applied Developmental Psychology and “Predicting course outcomes with digital textbook usage data” in The Internet and Higher Education. He gave a number of invited and peer-reviewed presentations over the year. Collaborating with the YaM Project, he served on a panel at the Conectados al Sur/Digitally Connected conference in Buenos Aires. Among his other presentations, Junco gave the opening keynote for the Nielsen Entertainment Children’s Book Summit. He published a Wired opinion piece titled “Yik Yak and online anonymity are good for college students,” which presented a more balanced view of Yik Yak and the function of online anonymity in community building on college campuses. This opinion piece led to additional media citations, including a review of his social media research in Congressional Quarterly Researcher.

Kate Krontiris, a fellow, shared the results of a comprehensive look into what motivates everyday Americans to do things that are civic. With colleagues from the Google Civic Innovation portfolio, she has been trying to answer questions that have troubled the United States for some time: “In one of the world’s most established democracies, why is it that so few Americans are actively engaged on the public issues that touch their lives? How have we become a nation of bystanders, and what can we do to nudge everyday people to take small actions that could radically transform the fabric of civic life?” The qualitative and quantitative research she conducted to answer these questions breaks new ground in a number of respects. It demonstrates that most Americans could be called “Interested Bystanders:” aware of the world around them but not actively voicing opinions or taking civic action. It provides new insights into how these Interested Bystanders view their role in civic life. It also pioneers a new quantitative approach to identifying key segments of the population by civic attitudes and behaviors. The work was publicly released in a moderated discussion to a live audience at the Berkman Center and was featured in Fast Company, WBUR, and on the 2015 Personal Democracy Forum mainstage.

Pushpa Kumar Lakshmanan, a faculty associate, has been working on digital technology and copyrights. He was also actively involved in creating awareness about net neutrality and privacy issues among the students of Delhi University. One of his major concerns is how to make use of Internet technology for the development of global poor. Building on his Fulbright postdoctoral research work at Berkman Center and Harvard Law School, he is trying to introduce technological solutions to monitor the utilization of genetic resources and traditional knowledge when they are used for bio-prospecting and other commercial applications, particularly synthetic technology. He believes that the role of digital technology will be central in implementing the Nagoya Protocol on access and benefit sharing under the Convention on Biological Diversity and ensuring global justice. Presently, he is working on legal and technological tools to regulate access to genetic resources and benefit sharing.

Kevin Lewis, a faculty associate, continued his research on online dating and also began a new project documenting network ties based on acknowledgments in published papers. He published a coauthored article in Psychological Science on modeling group genesis in
homogeneous populations; a comment on research studying online behavior in *Sociological Science*; and a piece on the formation of social networks in *Emerging Trends in the Social and Behavioral Sciences*, a new online resource. He also has a forthcoming paper in a special issue of *Big Data & Society* identifying three fallacies in contemporary thinking about “digital footprints.” This academic year, he also gave talks at the business schools at UC Berkeley, Yale, Northwestern, and Stanford; presented work at the Sunbelt Social Network Conference and the Annual Meeting of the American Sociological Association; and taught courses on quantitative methods, social networks, and introductory sociology for pre-medical students.

**Raizel Liebler**, an affiliate, has completed three different publications in connection with her affiliation with the Berkman Center. First, a co-written law review article about the legal implications of combined personal and professional use of social media: “Here We Are Now, Entertain Us: Defining The Line Between Personal and Professional Context on Social Media,” 35 Pace L. Rev 398 (2014). Second, a book chapter about the legal implications of fan-created works, including fan videos: “Copyright and ownership of fan created works: fanfiction and beyond, in the SAGE Handbook of Intellectual Property” (Matthew David & Deborah Halbert, eds. 2014). And third, an interview with legal scholar and activist Mary Ann Franks in *Bitch Magazine* about her efforts to fight online harassment. She has also moved forward with the project at the heart of her connection with the Center, citations in Supreme Court cases, including link rot. She has worked closely with the Perma team to start work on creating a Supreme Court citation database and in other ways to make legal documents more accessible. She presented about issues with link rot and other similar citation issues in last year’s Supreme Court cases at Georgetown University’s conference, “404/File Not Found: Link Rot, Legal Citation and Projects to Preserve Precedent.”

**James Losey**, an affiliate, spent the year writing several academic articles on the Internet and social movements, civil society and information policy, transparency reporting, and digital craftsmanship. His paper, “The Locus of Control in Networked Communications: Implications for Collective Action” received a top paper award from the Global Communication and Social Change division of the International Communication Association annual conference and has been submitted to the *Journal of Communication*. He also presented “Contentious Politics and Digital Repertoires of Action in Iran” with Emad Kahzraee at the annual conference for the International Association for Media and Communication Research. He co-authored with Sascha Meinrath “In Defense of The Digital Craftsman: How Centralized Control of Communications Technologies is Foreclosing 21st Century Craftsmanship,” currently under review at the *Journal of Peer Production*. Losey lectured about Internet activism and Internet policy at the University of Pennsylvania’s Center for Global Communication Studies at the Annenberg School for Communications and Internet Freedom Weekend in Gothenburg, Sweden, and is writing an article on the US net neutrality debate for submission to the *International Journal of Communications*. Additionally, he was the first to compile a list of companies publishing transparency reports, and his article “Surveillance of Communications: A Legitimization Crisis and the Need for Transparency” is forthcoming with the *International Journal of Communication*. During the year he was also a visiting scholar at CGCS, an affiliate at the Internet Policy
Observatory, and a fellow at X-Lab. Losey continues to work on his dissertation at Stockholm University in Sweden and regularly advises government officials on Internet technology and social change in the US and Europe.

**Mary Madden**, an affiliate, spent the year leading a privacy research initiative at the Pew Research Center that included the publication of three signature reports that helped to inform policy debates and public conversations about Americans’ views on information privacy, security and surveillance in the post-Snowden environment. She was the lead author of “Public Perceptions of Privacy in the Post-Snowden Era” and “Americans’ Attitudes About Privacy, Security and Surveillance” as well as the co-author of “Americans' Privacy Strategies Post-Snowden.” Madden promoted this work through various presentations and engagement with the press, including a presentation for the Data & Society Research Institute Databites series in New York and a FTC brownbag talk in Washington, DC. In June, Madden was awarded a grant from the Digital Trust Foundation to lead a new initiative at Data & Society to understand the privacy and security experiences of low-socioeconomic status (SES) populations. The centerpiece of the project is a robust national survey with an oversample of low-SES populations and also includes a “Data Access Grant” for a graduate student to acquire access to the survey data at the same time as the Principal Investigator to support further research in this field. As of July, Madden has officially transitioned to a new role as a Researcher for Data & Society.

**J. Nathan Matias**, a fellow and PhD candidate at the MIT Center for Civic Media, focuses on computational social science about cooperation online. At the Center he co-facilitated the Cooperation Working Group, which convened weekly conversations about the theory, policy, technology, and quantitative research of cooperation. Matias led a team to analyze reports of harassment on Twitter and auditing the company's response to those reports in “Reviewing, Reporting, and Responding to Harassment on Twitter.” Other publications include articles in the *Atlantic* on mutual aid accountability technologies online and networked social movements on Facebook. Academic publications included a paper in the CHI-WIP human-computer interaction report on a novel technique for peer production, reader-sourcing, and a paper on distinguishing civic values in the design of cooperation systems. In the summer of 2015, Matias was a PhD intern at the Microsoft Research Social Media Collective and continued to support MediaCloud related research at the Center.

**Miguel Paz**, a fellow, conducted user and technology development research to develop the next version of Poderopedia.org and its open source software. He also co-edited the Iberoamerican Data Journalism Handbook, a collaborative effort of more than 40 journalists, designers, and technologist from 16 countries. He worked with members of the MacroConnections Group at the MIT MediaLab on developing a prototype of a network visualization tool, and contributed with Chequeado.com to develop and launch “Justiciapedia,” a project to register newsworthy connections in Argentina’s Justice system. He also worked on “Mapa de Medios,” a research project led by Poderopedia members from Chile, Colombia, and Venezuela to map media ownership and legislation in those countries. Paz gave talks about journalism innovation at NPR, ONA Chicago, and the Miami Media Party, and on economy, public policy, and media at Brown
University and the David Rockefeller Center for Latin American Studies. As part of his research around media development he also interviewed Amy O’Leary, one of the authors of the *New York Times* Innovation report, and conducted interviews with technologists at Vox Media, the *New York Times*, the *Washington Post*, and NPR. Paz also organized a digital security workshop alongside Nathan Freitas and contributed to create the Influence Mapping Network.

**Jon Penney**, an affiliate, spent most of last year working to complete his doctoral dissertation at the Oxford Internet Institute, University of Oxford. His doctoral research, currently titled “Chilling Effects Online: Three Case Studies,” focuses on regulatory chilling effects online. Penney gave two talks this year based on aspects of that research, one at Eric Goldman’s Internet Law Work-In-Progress Conference at Santa Clara High Tech Law Institute, Santa Clara Law School in March 2015, and one at the Berkman Center in May 2015, before a smaller discussion group. He plans a third talk in August at the USENIX Security Symposium, Washington, DC, and will likely also discuss the research at Nick Feamster’s Conference on Internet Censorship, Interference, and Control, in October at the Center for Information Technology Policy (CITP), Princeton University. Penny currently has an article under consideration for publication based on doctoral research in these talks. He also contributed two pieces to the 2014 Internet Monitor annual report released last fall— one of which on the law and research ethics (“How Law is Increasingly Determining the Ethics of Code”) was later picked up on and re-published by Slate. Penney also saw the publication of an article in the *University of Pennsylvania Journal of International Law* this year, which was based on work he previously discussed during a Berkman Center Luncheon series talk on the historical aspects of international information conflict.

**Benjamin Peters**, a faculty associate, continued his research and teaching in the field of digital media research at the University of Tulsa. In addition to organizing an international scholarly workshop, giving invited talks at Columbia and Yale, lectures in Moscow and Tulsa, a keynote in Helsinki, and a conference paper in Beijing, he worked on his next major project on the role of thought laboratories in new media history and saw several smaller publications enter print. He also submitted his forthcoming book *How Not to Network a Nation: The Uneasy History of the Soviet Internet* to MIT Press and edited the forthcoming volume *Digital Keywords: A Vocabulary of Information Society and Culture* with Princeton UP. As a faculty associate, he also convened an afternoon workshop with Berkman community members to brainstorm big questions about Internet and society that resulted in the publication “9.5 Theses toward Internet Reformation: An Anti-Manifesto.”

**Leah A. Plunkett**, a fellow, continued to explore issues at the intersection of educational technologies and student privacy, working with the Berkman Center’s Student Privacy Initiative team. She also continued to wear her other professional hat: Associate Professor of Legal Skills & Director of Academic Success at University of New Hampshire School of Law. Plunkett enjoyed presenting on student privacy in various venues, including the LearnLaunch Accelerator in Cambridge and the FETC conference in Florida. She also enjoyed exploring how laws intersect with core concerns of people’s daily lives other than education (like family relationships) with her article on “Contraceptive Sabotage” in
the Columbia Journal of Gender & Law, as well as with the new course on “Access to Justice” that she designed and taught for the first time at UNH Law in Spring 2015. Plunkett also published a software satire piece in Huffington Post, as well as other pieces in popular press outlets.

**Joseph Reagle**, a faculty associate, saw the publication of his latest book *Reading the Comments: Likers, Haters, and Manipulators at the Bottom of the Web* (MIT Press, 2015). He continued his work on aspects of the geek gender gap and Geek Feminism, including the publication of “The Obligation to Know: From FAQ to Feminism 101,” which appeared in *New Media & Society*. Reagle has begun work on his next book project on life hacking. He also gave varied presentations and spoke frequently with the media.

**Justin Reich**, an affiliate, spent the last year as the Richard L. Menschel HarvardX Research Fellow, helping lead research into online courses from HarvardX and MITx. His research and writings appeared in *Science, EDUCAUSE Review Online, Journal of Learning Analytics, MindShift, New Yorker: Elements* blog, *Communications of the ACM, Educational Leadership, Education Week: EdTechResearcher* blog, and proceedings from *Learning@Scale, Educational Data Mining, and Learning Analytics and Knowledge*. He has a book under contract with Harvard University Press tentatively titled *Massive: The Future of Learning at Scale*, based on a course of the same name taught at the Harvard Graduate School of Education. He recently took a new position at MIT, as a research scientist in the Office of Digital Learning, the Executive Director of the MIT PK12 Initiative, and a lecturer in the Scheller Teacher Education Program. With the Center, he gave a luncheon talk on new models of education technology in higher education and convened a talk from Jeffrey Lin from Riot Games about improving community behavior in online games.

**Luis Felipe Rosado Murillo**, a fellow, conducted research on open hardware development and gave guest lectures at Indiana University, Rensaeler Polytechnique Institute, Tsinghua University, and Beijing University. He joined a collaboration for the Research Data Alliance, sponsored by the NSF, to develop guidelines for data management in the humanities and social sciences. He is currently working on the development of a web platform to facilitate data sharing and data analysis in anthropology, Platform for Experimental and Collaborative Ethnography. For the next academic year, he will return to the Center as an affiliate to work on his book project, *Hacking Ties*, which examines cross-cultural collaboration among computer hackers in the Pacific region. The book will draw from his ethnographic research and his PhD dissertation in anthropology.

**Christian Sandvig**, a faculty associate and Associate Professor at the University of Michigan, completed *Digital Research Confidential: The Secrets of Studying Behavior Online* (co-edited with Berkman Fellowship Advisory Board Member Eszter Hargittai and featuring many Berkman scholars), due out from MIT Press this fall. He also co-authored three major studies of curation algorithms in social media. The first, with Berkman Center alumna Karrie Karahalios, was titled “I always assumed that I wasn’t really that close to [her]’: Reasoning about invisible algorithms in the news feed.” The
second, with Berkman Center alumna Aimee Rickman, focused on Twitter and Facebook use among low-income rural communities. It was titled “Broke and Buying Rides: Adolescent Girls and Social Media Brokering.” The third study, also with Karahalios and others, “Auditing Algorithms,” examined new prospects for accountability in computational media. These studies received awards for research quality and these findings were mentioned in Slate, The Washington Post, NPR, Time, USA Today, Engaget, Ars Technica, Wired, Business Insider, pandodaily, Fortune, New Scientist, Fast Company, and The Chronicle of Higher Education, and were mentioned by the national press in Romania, Hungary, Brazil, Portugal, Italy, Austria, and Australia. He also published an additional 12 conference papers, 4 journal articles, 5 book chapters, and several blog posts, as well as writing for Wired magazine. He presented this work at the University of Pennsylvania, NYU, UCSD, Central European University, Columbia University, and elsewhere. This year at the University of Michigan he received the Steelcase Research Professorship.

Molly Sauter, an affiliate, has spent most of last year promoting her new book, The Coming Swarm: DDoS Actions, Hacktivism, and Civil Disobedience on the Internet. The book appeared on several Best of 2014 lists, including Science Friday and io9, and was featured in Slate’s “Ultimate Literary Guide to 2014.” This year Sauter was also appointed a Cybersecurity Fellow at the New America Foundation, and will spend the duration of her fellowship researching the future of hacktivism. She has an article forthcoming in the Case Western Reserve Journal of International Law on the role of geospatial metaphors in international cyberwar policy. She will spend the next year preparing for her comprehensive exams at McGill University and submitting her dissertation proposal, tentatively titled Break in the Signal: The Role of Disruptive Activism, ICT Failures, and Silent Spaces as Zones of Politics.

Max Schorr, an affiliate, explored the intersection of new media, mindfulness, and social change as an affiliate at the center. He traveled to Korea for The Whole World Is A Single Flower Conference, met with city officials and private sector social entrepreneurs working on social innovation, and traveled with a group of Zen masters to visit mountain temples throughout the country as well as traditional tea houses. Working with GOOD, he created a partnership with the UN Foundation to raise awareness around the new UN Sustainable Development Goals. He lived in partial retreat mode to help incubate a new nonprofit organization in Los Angeles called Insight Environment at an 18 acre canyon/nature campus in the city. He led several workshops at the i-lab, including “Building an Authentic Brand” and “Visual Storytelling,” and co-hosted a conversation on media, business models, and social action at a fellows hour. In the next months, he will be writing about his experience as an affiliate, attending the UN Foundation climate convening in Doha, Qatar, and hosting a series of meditation and social action gatherings on the East and West coasts. During the year, GOOD relaunched its print magazine as a quarterly journal for global citizens, reached record online engagement, and won recognition for partnership work.

Bruce Schneier, a fellow, has been studying the intersection of security, technology, and people. He completed and published his book on surveillance and what to do about it: Data and Goliath: The Hidden Battles to Collect Your Data and Control Your World
(Norton, 2015). He has also written extensively about these and other related topics for a variety of publications and has spoken at many conferences. He co-taught a seminar on security and power with Harvard Law Professor Jack Goldsmith in Spring 2015. In June 2015 he co-chaired the first International Workshop on Misogyny and the Internet at the Center.

**Hasit Shah**, an affiliate, is a co-founder of Ketla, a mobile-first content delivery platform that is designed to overcome the common emerging market restrictions of language, literacy, and access to relatively low-end technology. Ketla will initially be built, tested, and launched in Gujarat, western India, where Shah’s grandparents originally came from. Following his 2014 Nieman-Berkman Fellowship in Journalism Innovation, Shah returned to his role at BBC News in London but remained an Affiliate at the Center. He continued his work on digital media platforms for new mobile Internet users in India and, after securing funding for Ketla from the Knight Foundation, he left the BBC and returned to the Center in January 2015. Shah continues to write and speak publicly about India’s digital progress.

**Clay Shirky**, a faculty associate, relocated to Shanghai, where he is studying tensions in local social media firms between optimizing for the local market (which involves a high degree of collaboration with the ruling party) and for export, where users are either uninterested in or actively opposed to the kinds of accommodations Beijing demands. He has just finished a short book on the subject, *Little Rice: Mobile Phones, Xiaomi, and the Chinese Dream*, studying the mobile phone and Internet services startup Xiaomi.

**Dino Sossi**, an affiliate, was a graduate student at Columbia University during the 2014-2015 academic year. In Cambridge, he produced media to promote the Center’s 2014 Internet Monitor annual report, the Digital Public Library of America’s annual meeting, and a series of lightning talks. In New York, Sossi worked at the United Nations. At the Educational Outreach Unit, he created a promotional video regarding the “ark of return” that commemorates the transatlantic slave trade, a series of videos highlighting the work of youth delegates to the third committee, and a video highlighting a special screening of *Selma* with director Ava DuVernay. At the Multimedia Resources Unit, Sossi assisted with the implementation of the new online audiovisual library. And at UNTV, he floor directed for *21st Century* and created a video regarding intern work at the UN General Assembly. At Columbia University’s Instructional Media Lab post-production facility, Sossi consulted with faculty, staff, and students regarding digital media projects, including giving direction and assistance for post-production work. This included the Advanced Consortium on Cooperation, Conflict, and Complexity’s “Sustaining Peace” Conference in 2015 and the finals of the Science Genius Rap BATTLES. Sossi taught digital video storytelling and a practicum in educational technology at Adelphi University, a private institution based in Long Island. Sossi presented his research and multimedia work at the University of Pennsylvania, the American Educational Research Association annual conference, and Oxford Internet Institute’s Summer Doctoral Programme, among others. Finally, Sossi read as part of On Kawara’s installation “One Million Years” at the Guggenheim Museum and performed storytelling at the Moth StorySLAM held at the Shrine World Music Venue, both in New York.
John Stubbs, a fellow, worked with White House and Congressional staff on Trade Promotion Authority legislation to identify opportunities to strengthen US commitments to transparency and public participation in trade policy formulation. Such improvements include providing Congressional access to negotiating documents, on-demand consultations with staff from the Office of the US Trade Representative (USTR), and full participation in trade rounds; publication of regularly updated detailed summaries of US negotiating positions; a longer public review period of final texts; and the creation of a Chief Transparency Officer at USTR. On June 24, 2015, the US Senate passed the Bipartisan Congressional Trade Priorities and Accountability Act of 2015 by a vote of 60-38, signed into law by President Barack Obama on June 29, 2015. Stubbs also works on improving global dissemination and uptake of novel, breakthrough technologies. Working with governments, public health institutions, foundations, NGOs, and research-based and generic pharmaceutical companies, Stubbs is focused on building scalable, sustainable programs to diagnose and deliver treatments to an estimated 150 million people around the world living with the Hepatitis C virus, a curable blood borne infectious disease than kills more than 500,000 people each year.

David Talbot, a fellow, joined the center in 2015 and began researching community options for providing high-speed Internet access in Massachusetts. He and colleagues released a report describing the successful and innovative telecom business of Holyoke’s municipal utility. He also hosted a daylong event and workshop at Harvard Law School at which 60 local and state officials described in-development projects and strategized on how the state’s 41 municipal electric utilities (only 10 of which are in the Internet access business) might move forward in this area. Waide Warner, a senior fellow in Harvard’s Advanced Leadership Initiative, participated in these projects along with the Center’s Kira Hessekiel and students.

Dennis Tenen, a faculty associate, submitted his book-length manuscript, *Plain Text: The Poetics of Human-computer Interaction*, for review. During the academic year he taught Computing in Context, the first course in Columbia’s history to be cross listed between the department of English and Computer Science. His teaching also included the *Code and Poetry* seminar along with Computing Fundamentals for Human(s)ists at University of Victoria. Under the aegis of the Group for Experimental Methods in the Humanities, Tenen received the President’s Global Innovation award to run a series of workshops on digital justice in Santiago and Mumbai. His group received the NEH Digital Humanities Start-Up Grant Award to produce an open-access issue of the *Small Axe*, a premier Caribbean journal of theory and criticism. Together with colleagues from Columbia Journalism and Stanford’s Computer Science the team expanded its efforts to improve science journalism with a flagship grant from the Brown Center for Media Innovation. Tenen is spending the summer writing and running a coding workshop for inmates at Rikers Island.

Mitali Thakor, an affiliate, continued her doctoral dissertation research in the MIT History, Anthropology, and Science & Technology Studies program. She completed ethnographic fieldwork and interviews in the Netherlands and Thailand with two child exploitation NGOs, a UN agency, and various law enforcement groups. Upon returning to Cambridge she designed and taught an undergraduate anthropology course at MIT on
“Human Trafficking & Modern-Day Slavery,” which will soon be published as an accessible online curriculum through MIT OpenCourseWare. Thakor gave various talks on her research on digital strategies and partnerships addressing child exploitation (including avatars and image detection software) at the annual meeting for the American Anthropological Association, the Queer Studies Symposium at UMD, and at the Berkman Center luncheon series. This summer she is completing fieldwork, publishing a report for the GISWatch series on Sexual Rights and the Internet, dissertation writing, and preparing to apply for postdoctoral research positions in the upcoming year.

Pedro Trengrouse Laignier de Souza, an affiliate, spent the Fall 2014 semester at Harvard as a Visiting Scholar, tethered directly to Charles Nesson. He was a featured guest at Internet and society classes; keynote speaker at the event discussing the Future of Brazilian Football, organized by the Harvard-wide Brazilian Students Association, Harvard Undergraduate Brazilian Association, Harvard Brazilian Organization Harvard Law School Brazilian Studies Association, and the Harvard Kennedy School Brazilian Caucus; a guest speaker at a Columbia Business School Sport Business Association event about the impact of great sporting events for countries and companies; a speaker at Soccerex in Barbados; an advisor to projects for the Dean's Innovation in Sports Challenge; and a panelist at discussion on the World Cup and the Olympic Games with the Brazilian Vice-Minister of Sports. He also organized a panel discussion on the future of sports business models from TV to new media together with Charles Nesson and HLS Professors Stephen Greyser and Peter Carfagna. He helped organize and was also a speaker at the Brazil Conference and is still working in close cooperation with Nesson on initiatives to empower sports as a tool for human, social, and economic development.

Sara M. Watson, a fellow, explored how we are learning to live with, understand, and interpret our personal data and the algorithms that shape our experiences. This year she explored these ideas through a series of personal stories and questions in a column with Al Jazeera America, “Living with Data.” She’s also written about the industrial and embodied metaphors we use to understand data and experimented with speculative fiction describing concerns about paternalism applied to the Internet of things for the Center’s 2014 Internet Monitor annual report. As a staff fellow, Watson also launched a pilot for the Center’s Study Groups, an agile and responsive format for exploring the important questions facing the Internet and society through in-depth discussion and development, encouraging cross-pollination between the Center and members of the greater Boston community. She also worked on developing facilitation and moderation skills within the fellows community and continued running the Center’s Tech Book Club. This July, she relocated to Singapore, and in the coming year, she is developing work on constructive technology criticism through a fellowship with the Tow Center for Digital Journalism.

David Weinberger, a member of the Fellowship Advisory Board, spent the year building and writing. In December 2014, Harvard Library went live with the LibraryCloud open metadata platform, thanks to the insight and work of the Harvard Library Innovation Lab and Harvard Library Technology Services. Weinberger initiated and oversaw this project. He spent the spring semester as a Shorenstein Fellow, writing a paper on the history of—and possibilities for—open platforms for news. He also wrote fairly regularly about how well the news media are adapting to the newly networked world. Weinberger worked on
understanding how much the Internet has veered from the course assumed by early cyberutopians, resulting in a talk at South by Southwest ("Is the Internet Disappointed in Us?"), a talk in the Brookline Distinguished Speakers Series, and an article in Atlantic.org. He gave a number of keynotes on the future of libraries and argued against “Resolved: Smart technology is making us dumb” at an Intelligence Squared debate. His primary research project continues to be understanding the ways in which our idea of the future is changing, and he is looking forward to another year on the Center’s Fellows Advisory Board.

Josephine Wolff, a fellow, finished her dissertation, which analyzed a decade of computer security records from MIT and traced the life cycle of several case studies of computer security incidents to identify points where different defensive interventions—including technical, social, and policy-based mechanisms—might have added to the work required of adversaries. She presented a paper at TPRC on the defensive implications of different cybersecurity metaphors and also published in Slate, the New York Times Opinionator blog, and The New Republic this year. In Fall 2015, she will begin as an assistant professor in the public policy and computing security departments at Rochester Institute of Technology, researching liability for cybersecurity incidents, metrics for cybersecurity policies, and methods for making stolen data less valuable to criminals.

4. Publications

Berkman Center community members produced a number of major publications this past year, including the following five books:

- *The Responsive City: Engaging Communities Through Data-Smart Governance*, co-authored by Susan Crawford, is a compelling guide to civic engagement and governance in the digital age that will help municipal leaders link important breakthroughs in technology and data analytics with age-old lessons of small-group community input to create more agile, competitive, and economically resilient cities.

- *The Coming Swarm: DDoS, Hacktivism, and Civil Disobedience on the Internet*, by Molly Sauter, examines the history, development, theory, and practice of DDoS actions as a tactic of political activism.

- *Data and Goliath: The Hidden Battles to Collect Your Data and Control Your World*, by Bruce Schneier, examines the “mass surveillance society of our own making” and offers a path that values both security and privacy.

- *BiblioTech: Why Libraries Matter More Than Ever In An Age of Google*, by Faculty Director John Palfrey. argues that anyone seeking to participate in the 21st century needs to understand how to find and use the vast stores of information available online.
• The Art of Asking: Or How I Learn to Stop Worrying and Let People Help, by Berkman affiliate Amanda Palmer, is part manifesto, part revelation; this is the story of an artist struggling with the new rules of exchange in the twenty-first century, both on and off the Internet.

Among the 13 additional publications released through the Center’s website and other online channels are:

• Four reports from the Internet Monitor project, which focus on key events and new developments in Internet freedom.

• Two publications looking at important issues facing youth in the digital age, collections of essays that offer reflections on youth experiences with digital media;

• Two reports from our Internet Governance series, which look at the landscape of online intermediary liability and existing multistakeholder governance groups with the goal of informing global policy; and

• Five reports covering the diverse topics of privacy and research, the benefits and drawbacks of higher levels of interoperability in the digital ecosystem, the networked public sphere and the net neutrality debate, and the implementation of universal pre-kindergarten in New York City.

Each release was promoted over the Berkman Center listservs and via social media outlets; in some cases, hard copies of the publications were produced. Below are summaries, which are no means comprehensive. A full list of scholarly work published with SSRN can be seen at http://brk.mn/ssrn.

Internet Monitor

• Russia, Ukraine, and the West: Social Media Sentiment in the Euromaidan Protests: This is the fourth paper in the Internet Monitor special report series. The paper analyzes content from a range of online Russian- and English-language sources, including both social media (Facebook, Twitter, and forums) and traditional media, to explore sentiment in the online conversation about the Euromaidan protests in Ukraine last winter. Authored by Bruce Etling.

• The Tightening Web of Russian Internet Regulation: This is the fifth paper in the Internet Monitor special report series. The report tracks the recent growth of Russian legislation targeted at increasing restrictions on Internet users. Authored by Andrey Tselikov.

• Arab Religious Skeptics Online: Anonymity, Autonomy, and Discourse in a Hostile Environment: This report is the sixth paper in the Internet Monitor special report series. The report analyzes the content, discourse, and structure of three prominent Arab atheist web forums and examines the relationship between the
networked information economy and the emergence of religious skeptics in Arab cyberspace. Authored by Helmi Noman.

- **Internet Monitor 2014: Reflections on the Digital World**: Internet Monitor's second annual report is a collection of roughly three dozen short contributions that highlight and discuss some of the most compelling events and trends in the digitally networked environment over the past year. The report focuses on the interplay between technological platforms and policy, growing tensions between protecting personal privacy and using big data for social good, the implications of digital communications tools for public discourse and collective action, and current debates around the future of Internet governance. Edited by Urs Gasser, Jonathan Zittrain, Robert Faris, and Rebekah Heacock Jones.

**Youth and Media**

- **Digitally Connected: Global Perspectives on Youth and Digital Media**: This ebook is a first-of-its kind collection of essays that offers reflections from diverse perspectives on youth experiences with digital media and with focus on the Global South. More than 30 academics, practitioners, government officials, tech industry representatives and activists team up with 25 youth contributors to share their views and opinions about digital technologies and the impact the Internet has on young people’s lives. Collectively, the contributors address a series of big questions related to youth and digital media by exploring key topics such as safety and wellbeing; identity, privacy and reputation; skills, literacies, and cultures of learning; creativity; innovation and entrepreneurship; participation and civic engagement; and youth participation and policy. Edited by Urs Gasser and Sandra Cortesi.

- **Youth and Online News: Reflections and Perspectives**: This series of short essays offers insightful, provoking, and out-of-the-box reflections and observations at the intersection of news, digital media, and youth. The contributions reflect the diversity of ideas and perspectives that form the core and spirit of the Berkman community. Some of the essays are closely connected to specific research and publications conducted by the YaM team, and others reflect more generally on personal observations and/or opinions, or highlight and discuss insights and learnings from other studies or concrete projects. Edited by Sandra Cortesi and Urs Gasser.

**Internet Governance**

- **Governance of Online Intermediaries: Observations From a Series of National Case Studies**: This project examines the rapidly changing landscape of online intermediary liability at the intersection of law, technology, norms, and markets, and is aimed at informing and improving Internet policy making globally. It is a first output of a larger initiative on the governance of online intermediaries and represents a globally coordinated, independent academic research project by the
NoC consisting of a case study series exploring online intermediary liability frameworks and issues in Brazil, the European Union, India, South Korea, the United States, Thailand, Turkey, and Vietnam, and a synthesis paper. Edited by Urs Gasser and Wolfgang Schulz.

- **Multistakeholder as Governance Groups: Observations from Case Studies:** This project explores existing multistakeholder governance groups with the goal of informing the future evolution of the Internet governance ecosystem. The research effort represents a globally coordinated, independent academic research pilot project by the NoC consisting of twelve case studies and a synthesis paper. The case studies examine a geographically and topically diverse set of local, national, and international governance models, components, and mechanisms from within and outside of the sphere of Internet governance. Key findings from these cases are summarized in a synthesis paper, which aims to deepen our understanding of the formation, operation, and critical success factors of governance groups and even challenge conventional thinking. Authored by Urs Gasser, Ryan Budish, and Sarah Myers West.

**Additional Reports**

- **Integrating Approaches to Privacy Across the Research Lifecycle: When Is Information Purely Public?** Researchers are increasingly obtaining data from social networking websites, publicly placed sensors, government records, and other public sources. Much of this information appears public, at least to first impressions, and it is capable of being used in research for a wide variety of purposes with seemingly minimal legal restrictions. The insights about human behaviors we may gain from research that uses this data are promising. However, members of the research community are questioning the ethics of these practices, and at the heart of the matter are some difficult questions about the boundaries between public and private information. This workshop report, the second in a series, identifies selected questions and explores issues around the meaning of “public” in the context of using data about individuals for research purposes. Authored by David O’Brien, Jonathan Ullman, Micah Altman, Urs Gasser, Michael Bar-Sinai, Kobbi Nissim, Salil Vadhan, Michael John Wojcik, and Alexandra Wood.

- **Integrating Approaches to Privacy across the Research Lifecycle: Long-term Longitudinal Studies:** This paper explores interdisciplinary approaches to privacy in long-term longitudinal studies of human subjects. Long-term longitudinal studies collect, at multiple points over a long period of time, highly specific and often sensitive data describing the health, socioeconomic, or behavioral characteristics of human subjects. The value of such studies lies in part in their ability to link a set of behaviors and changes to each individual, but these factors tend to make the combination of observable characteristics associated with each subject unique and potentially identifiable. Using the research information lifecycle as a framework, the paper discusses the defining features of long-term longitudinal studies and the associated challenges for researchers tasked with
collecting and analyzing such data while protecting the privacy of human subjects. It also describes the disclosure risks and common legal and technical approaches currently used to manage confidentiality in longitudinal data. Finally, it identifies urgent problems and areas for future research to advance the integration of various methods for preserving confidentiality in research data. Authored by Alexandra Wood and David O’Brien, with Micah Altman, Alan F. Karr, Urs Gasser, Michael Bar-Sinai, Kobbi Nissim, Jonathan Ullman, Salil Vadhan, and Michael Wojcik.

- **Interoperability in the Digital Ecosystem**: This paper offers a framework for understanding interoperability (“interop”) as a concept, provides examples of some of the many benefits and drawbacks of higher levels of interop, suggests a taxonomy for considering the various approaches that exist within the toolbox for managing and optimizing the level of interop, and identifies some of the biggest questions and challenges that confront future interoperable technologies. Authored by Urs Gasser.

- **Score Another One for the Internet? The Role of the Networked Public Sphere in the U.S. Net Neutrality Policy Debate**: This paper examines the public debate over net neutrality in the United States from January through November 2014. It compiles, maps, and analyzes over 16,000 stories published on net neutrality, augmented by data from Twitter, bit.ly, and Google Trends. Using a mixed-methods approach that combines link analysis with qualitative content analysis, the paper describes the evolution of the debate over time and assess the role, reach, and influence of different media sources and advocacy groups in setting the agenda, framing the debate, and mobilizing collective action. Authored by Rob Faris, Hal Roberts, Bruce Etling, Dalia Othman, and Yochai Benkler.

- **On the Road to 'Pre-K for All': The Launch of UPK in New York City** provides a detailed account of the launch of New York City's universal pre-kindergarten program. Over the spring and summer of 2014, New York City put in place a full-day universal pre-kindergarten (UPK) program. The blistering pace, enormous scale, and administrative complexity of this rollout were all striking: a program that did not exist when funding for it was finalized in March 2014 had put 53,250 four-year-olds in more than 1700 new full-day programs by the first day of school in September. This report provides a detailed account of the launch. Authored by Susan Crawford, Mary-Catherine Lader, and Maria Smith.

## C. Communications and Digital Media

Communications at the Berkman Center are an important component of our commitment to access to knowledge and support for the public good, as well as a driver of community growth. The Center’s communications team continues to develop an adaptive and modular approach, with our fellows, faculty, affiliates, faculty associates, staff, and general community contributing to public discussions through a variety of modes,
channels, and contexts. Our team has strategically employed multimedia production, print and digital design, social networking, email communications, direct communications with press, and many other tools and methods to have an impact on the dialog and practice of our field.

The addition of a Communications Manager to the Center’s team in September 2014 positioned the Center to take a more strategic and coordinated approach to outreach and communications. The goals of integrating this new position into the Center include: (a) increasing the Center’s visibility and influence among policymakers and thought leaders; and (b) underscoring the Center’s role as a vibrant interdisciplinary academic center at the leading edge of exploration, analysis, and documentation of critical issues related to cyberspace (including cybersecurity, freedom of expression, and privacy). In the past year, the communications team has addressed these goals in many ways, including strategic press outreach, coordinated publicity campaigns, a revised and relaunched Berkman Buzz weekly email newsletter, and deeper engagement with communications staff across the University.

The Center’s communications continue to generate high attendance at Berkman events, and also yield an ever-increasing number of requests for comment from faculty and fellows. Our community is quoted almost daily in a vast range of news publications: the New York Times, the Atlantic, the Economist, BBC, NPR, CBC, Wall Street Journal, Washington Post, Financial Times, Harvard Gazette, Ars Technica, Guardian, MIT Technology Review, Al Jazeera, Business Insider, Wired, and many others.

The Center’s own media, including its websites and mailing lists, anchor our communications and community work. Our primary email lists—sharing information about new events, videos, research, and conversations in the Berkman community—have grown to reach tens of thousands of people each week. The Center maintains a substantial presence on platforms such as Facebook, YouTube, and Twitter.

<table>
<thead>
<tr>
<th>Output</th>
<th>2014-2015</th>
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| Berkman Buzz | 7,733 subscribers  
(As part of migrating the Buzz to a new platform that provides us with better editorial flexibility and more robust list management tools, we removed ~4,000 bouncing addresses, and we now have a growing, clean list of active subscribers, with a ~20% open rate (up from 11% before the migration).)|
| Events and Digital Media Roundup | 13,272 subscribers  
(from 12,377 subscribers in 2012-2013) |
| YouTube | 9,668 subscribers/168,430 video views/1.369m views overall  
(from 8,560 subscribers /176,479 video views in 2013-2014) |
<table>
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<th></th>
<th>2014)</th>
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<tbody>
<tr>
<td>Twitter</td>
<td>38,687 followers/9,189 tweets</td>
</tr>
<tr>
<td>as of July 14, 2015</td>
<td>(from 33,142 subscribers/8,025 tweets in 2013-2014)</td>
</tr>
<tr>
<td>Facebook</td>
<td>13,986 followers</td>
</tr>
<tr>
<td>as of July 14, 2015</td>
<td>(from 10,109 followers in 2013-2014)</td>
</tr>
<tr>
<td>RSS Subscribers for all</td>
<td>1,226 subscribers</td>
</tr>
<tr>
<td>Berkman Digital Media</td>
<td>(from 1,491 subscribers in 2013-2014)</td>
</tr>
<tr>
<td>as of July 14, 2015</td>
<td>59,522 downloads</td>
</tr>
<tr>
<td>Radio Berkman episode</td>
<td>211 followers/4,700 listens</td>
</tr>
<tr>
<td>listens/downloads</td>
<td>(from 160 followers/2,193 listens in 2013-2014)</td>
</tr>
<tr>
<td>between June 31, 2014</td>
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<td>and July 14, 2015</td>
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Nearly all public meetings, presentations, book talks, lectures, and other relevant events are webcast live and archived online in a variety of formats, and continue to attract unique and growing audiences. Our technical explainers (including pieces on Mesh Networks and Global Internet Censorship) remain among our most in-demand works. With the return of our Radio Berkman podcast series, we have breathed new life into our philosophy of making our research more accessible, and are riding the crest of the podcasting boom. Another major shift this year has been bringing more design capacity in-house, employing graphics, layout, and data visualizations to improve comprehension of our research.

**D. Events**

Through discussions, lectures, conferences, workshops, and other gatherings, the Berkman Center convenes diverse groups around a wide range of topics that examine the Internet as a social and political space. The unique interactions generated through these events both as process and as product are fundamental elements of the Center’s modus operandi. While research and teaching are the Center’s top priorities, these auxiliary connections facilitate the continuous expansion and renewal of the Center’s core network. They also stimulate interactions with other disciplines and institutions so that diverse perspectives from academics, policy makers, activists, students, and technologists can be brought to bear on the complex issues generated by the interaction between technology and society.
1. Ongoing Events and Series

*Luncheon Series.* For over a decade, the Center has hosted our flagship seminar and discussion series in our offices or on campus. These presentations attract a loyal following among students, faculty, and others from Harvard and beyond, are webcast live, and are made available as a podcast series. Many important projects and scholarly works have been vetted and influenced early in their trajectory at the Berkman Luncheon Series. This year’s seminars featured the following conversations (in chronological order):

- **Justin Reich**, fellow, discussed the challenges that face researchers exploring the extraordinarily detailed records of student behavior online learning platforms like edX and Coursera capture, and discussed how these new datasets can be used to advance the science of learning.

- **Melissa Gira Grant**, journalist and author, discussed the history of the American red-light district and how communication technologies shape sex-for-sale, proposing that sex work has merged with the network.

- **Christian Sandvig**, faculty associate and Associate Professor at the University of Michigan, and **Karrie G. Karahalios** and **Cedric Langbort**, of the University of Illinois, explained the algorithms behind the Facebook News Feed. Their talk included discussion of potential research designs that investigate algorithms and also research on how users think about these algorithms.

- **Tressie (McMillan) Cottom**, Microsoft Research and PhD Student at Emory University, compared and contrasted how Internet studies conceptualize groups as collectivities anchored by shared ideas, interests, and information, while sociologists understand groups as also anchored by identity, social location, and power relationships.

- **John Kaag**, Associate Professor of Philosophy at the University of Massachusetts Lowell, discussed the American public’s perception of drone strikes as well as the moral and legal issues surrounding the media’s coverage of drone warfare.

- **Rebecca Weintraub**, MD, faculty fellow at the Center and Faculty Director of the Global Health Delivery Project, discussed the Global Health Delivery Project, which aims to introduce digital badges as a credentialing mechanism for healthcare professionals to showcase their skills and experience to potential new employers, grant-giving organizations, and others.

- **aestetix**, founder of NymRights, explored digital identities through discussion of the philosophy of names and identity in the digital age, as well as the challenges that arise when the systems come into conflict with individual safety and freedom.
• **Brad Smith** and **Jonathan Zittrain** discussed the role of law in protecting our rights in the physical world online, the complementary roles of law and technology in achieving this protection, and the need for governments to come together so that companies (and customers) do not face conflicting legal obligations.

• **Tim Davies**, affiliate, talked about unpacking open data. This talk drew on a series of empirical studies of open data around the world and questioned the ways in which changing regimes around data can reconfigure power and politics, in addition to exploring the limits of current practice.

• **Jessica Silbey** of the Suffolk University Law School came to discuss her book, *The Eureka Myth: Creators, Innovators and Everyday Intellectual Property*, which analyzes and elaborates upon a qualitative empirical study that aimed to figure out how IP actually works in creative and innovative fields, as opposed to how we think or say it works (through formal law or legislative debate).

• **Nathan Freitas**, fellow, discussed China’s “Great Firewall” and the expansion of Chinese telecommunications’ reach and influence, powered entirely by users choosing to participate in it.

• **Carrie James** discussed her book *Disconnected: Youth, New Media, and the Ethics Gap*, which explores how young people approach everyday online situations, as well as more dramatic ethical dilemmas that arise in digital contexts. *Disconnected* is an account of how youth, and the adults in their lives, think about—and often don’t think about—the moral and ethical dimensions of their participation in online communities.

• **Usman Ahmed** of Ebay, **Jake Colvin** of the Global Innovation Forum, and **Althea Erickson** of Etsy discussed development in the Digital Age and the role of online platforms and payments in enabling entrepreneurship in emerging markets. They discussed the many opportunities for economic development that the Internet unlocks, and the specific challenges that global entrepreneurs and micro-multinationals in developing countries face.

• **Aimee Corrigan**, affiliate, discussed what we can learn from Nigeria’s handling of the Ebola outbreak, which the World Health Organization called a “spectacular success story.” She explained how social media and mobile technology played a central role in Nigeria’s Ebola containment, enabling fast communication, better self-reporting, and identification of Ebola contacts, as well as successful tracking and monitoring.

• **DPSI** hosted student teams who presented their work, seeking feedback from the Berkman Center community.

• **Rebecca Richman Cohen**, HLS Lecturer, discussed lawyering for social justice in the age of digital media. She addressed how we should approach teaching
today’s young advocates to integrate rich, multi-platform media campaigns into their legal work.

- **Willow Brugh**, fellow, discussed examples ranging from Oklahoma to Tanzania where distributed and digital disaster response have proved successful and empowered citizens to respond in ways traditional institutions cannot.

- **Kate Krontiris**, fellow, was joined by research colleagues John Webb of Google and Charlotte Krontiris in a talk that explored the results of research conducted over the past year by the Google Civic Innovation team. The research included a joint qualitative and quantitative study for understanding “Interested Bystanders,” the portion of the population that is paying attention to the world around them, but not regularly voicing their opinions or taking action.

- **Frank Pasquale** discussed his book, *The Black Box Society*, which argues that, at least in areas like privacy, antitrust, and financial regulation, big data can enable obfuscation, stonewalling, and even fraud.

- **Astra Taylor** discussed her book *The People’s Platform: Taking Back Power and Culture in the Digital Age*, drawing from her personal experiences as an artist and an activist. She addressed campaigns by musicians against streaming services and debtors against creditors to reflect on the larger question of how to organize and leverage change in an age of virtual networks.

- **Josephine Wolff**, fellow, discussed classes of defense for computer systems and analyzed security roles and defense design patterns for application designers, administrators, and policy makers. She also discussed the interplay between defenses designed to limit access to computer systems and those oriented towards limiting and mitigating the resulting damage.

- **Neil Richards** discussed his book *Intellectual Privacy*, which offers a new way of thinking about monitoring of our thinking, reading, and communications, one that ensures that our ideas and values keep pace with our technologies.

- **Jim Bessen** and **Karim Lakhani** discussed Jim Bessen’s new book about economic inequality, *Learning by Doing: The Real Connection Between Innovation, Wages, and Wealth*. The discussion also covered knowledge sharing, past and present, about government policies that discourage sharing, and about the broader issue of slow wage growth.

- **John Kropf** and **Neal Cohen**, authors of the *Guide to US Government Practice on Global Information Sharing, Second Edition*, discussed their work. The guide provides an introduction to the principles, practices, and agreements behind how the US government shares personal information with foreign governments, for purposes ranging from taxes to counterterrorism and cybercrime.
Melody Kramer discussed what it means to be a member of a public radio station in the United States. She is creating the framework for a new model of membership within public media that would offer membership to people who may not be able to donate financially, but would like to donate a skill or their time to their local stations.

Christine Borgman, Professor and Presidential Chair in Information Studies at the University of California, Los Angeles, identified some of the challenges faced by universities in managing and governing the many complex categories of data they collect. She drew information from her book, Big Data, Little Data, No Data: Scholarship in the Networked World, and the UCLA Data Governance Task Force.

Microsoft Research PhD Interns Ifeoma Ajunwa, Stacy Blasiola, J. Nathan Matias, and Aleena Chia presented their current research. Their talks were titled, “The Quantified Self,” “Newsfeed: Created by You?,” “Holding Crowds Accountable to the Public,” and “EVE Online and World of Darkness,” respectively.

Mitali Thakor, PhD student in MIT’s HASTS program, discussed her ethnographic fieldwork on new digital approaches to addressing child exploitation online, such as with the use of avatars and image detection software.

Ali Hashmi discussed a tool he has developed as part of his research that uses data-driven approaches for classifying discourse in news media. His research combines critical discourse analysis approaches with corpus linguistics using machine learning and natural language processing techniques.

The Center also hosted more internal community-facing luncheons over the past year. Topics included presentations from Library Lab, the Internet Robustness and Perma projects, Team Fiber, and the Cyberlaw Clinic.

2. Conferences and Special Events

The Center’s conferences engage students, faculty, and fellows as well as government representatives, business leaders, and civil society members through their unique tenor and approach, and often lead to new collaborations. A selection from this year:

Teaching, Tech, and Texts Workshop (H2O Workshop): The Harvard Law School Library, in conjunction with the Center, hosted a workshop to bring select faculty from a number of universities together to discuss ways in which the H2O casebook platform can be leveraged to breathe new life into legal education.

GAiA Inaugural Workshop on Access to Medicines in Developing Countries: This workshop explored best practices for increasing access to pharmaceutical products in the developing world, with particular emphasis on intra-country price
discrimination and humanitarian licensing strategies.

- **Internet Policy Symposium**: Held at the Harvard Kennedy School in partnership with Institute of Politics and the Internet Association, speakers included: Jonathan Zittrain; Susan Crawford; Stephen Kaufer of TripAdvisor.com; Archon Fung of the Kennedy School; and Nicco Mele of the Kennedy School.

- **Launch of the DPSI**: One of the many initiatives and projects at the Center focused on education and digital technologies, DPSI formally launched as an innovative and collaborative project that brings together a diverse group of students, faculty, fellows, and staff to work on projects to address challenges and opportunities across the university.

- **Electronic Frontier Foundation's Cyberlaw Pub Trivia Night**: Held in collaboration with the EFF as part of the Center’s orientation activities, we brought together legal geeks, students, EFF board members, faculty, and others at Harvard Law School for an evening of cyberlaw pub trivia.

- **Kurt Opsahl** of the EFF held a talk about the federal statutes that authorized the Federal Bureau of Investigation to issue National Security Letters, which are administrative subpoenas that require companies to disclose customer information relevant to national security investigations.

- **The Evolution of the Internet Governance Ecosystem**: A conference of the NoC, hosted by the Nexa Center for Internet & Society at Politecnico di Torino, Italy. This event was part of an ongoing events series on the future of Internet governance, and examined existing and potential models of distributed and collaborative governance with the goal of informing the evolution of—and current debate around—the Internet governance ecosystem.

- **John Carlin**, Assistant Attorney General for National Security, discussed how threats to national security have grown to include cyber threats—attempts to access the sensitive data, electronic infrastructure, and resources stored on America's computers. Such plots can originate from a variety of sources and take a variety of forms—from ad hoc efforts of individual hackers, to campaigns waged by terrorist cells, to “cyber espionage” initiatives undertaken by nation states.

- **The Inspection House: An Impertinent Field Guide to Modern Surveillance**: Authors Emily Horne and Tim Maly discussed the evolution of the concept of the panopticon, modern supervision, and surveillance. From Jeremy Bentham’s original idea to its application in places like Guantanamo Bay, the Occupy Oakland camp, or on our own cell phones, the idea that someone is watching you is no longer the stuff of dystopian fantasy.
• **The Responsive City: Engaging Communities Through Data Smart Governance:** Susan Crawford joined Joseph A. Curtatone, Mayor of Somerville; Jascha Franklin-Hodge, Chief Information Officer for the City of Boston; and Harvard Business School Professor and Chief of Staff to Mayor Menino, Mitchell Weiss for a lively discussion around her new book, *The Responsive City*.

• **The Coming Swarm: DDoS, Hacktivism, and Civil Disobedience on the Internet:** Author Molly Sauter examined the history, development, theory, and practice of distributed DDoS actions as a tactic of political activism. In conversation with journalist and activist Laurie Penny, Molly discussed the use of disruptive tactics like DDoS, online civil disobedience, and the role of the Internet as a zone of political activism and speech.

• **FinTech and Entrepreneurship:** In partnership with the Global Innovation Forum, the Center explored the role of innovative financial services in advancing global entrepreneurship and development. This event was co-sponsored by Engine, Intuit, and 1776, with discussion focusing on the role of emerging technology-enabled financial services in empowering global entrepreneurship and development.

• **Authorship in the Digital World: How to Make It Thrive:** With these questions in mind, the Harvard Library Office for Scholarly Communication and the Berkman Center co-sponsored the Authors Alliance in bringing a panel discussion on the challenges and opportunities facing authors in the digital age to the Harvard campus.

• **Creativity Without Law:** This conference covered the growing body of scholarship examining the on-the-ground practices of creators and innovators. That scholarship challenges intellectual property orthodoxy by suggesting that incentives for creative production often exist in the absence of, or in disregard for, formal legal protections.

• **Innovating In The Open:** Efforts to innovate often proceed in black boxes, out of concern for intellectual property protection and first-mover advantage. An alternative model, however, prioritizes engagement with users, consumers, competitors, and the general public throughout the creative process. Experts Matt Tucker of the Harvard Business School Digital Initiative, Emily Broad Leib of the HLS Food Law and Policy Clinic, Hila Lifshitz-Assaf of the New York University Stern School of Business, and Jeff Warren of the Public Lab discussed these open approaches to innovation.

• **We Break Things...Hackers Fight for Freedom:** The Center hosted a pre-release screening with filmmaker Rebecca Wexler. The film introduced us to the hackers who build and break technology to defend civil liberties worldwide.

• **National Security Cyber Operations and Policy:** Luke Dembosky of the Department of Justice led a discussion on economic espionage, protecting
national assets in the digital age, and cyber-based security threats.

- **More Science Behind Shaping Behaviors in Online Games:** This talk explored the next evolution of online society and how to give the online citizen the tools to build and shape their own communities.

- **Data and Goliath: The Hidden Battles to Collect Your Data and Control Your World:** Author Bruce Schneier was joined by Jonathan Zittrain, Yochai Benkler, Joe Nye, Sara Watson, and Melissa Hathaway to discuss the near-constant surveillance citizens face in the modern era, and who is using this collected data. In *Data and Goliath*, Schneier shows what we can do to reform our government surveillance programs and shake up surveillance-based business models, while also providing tips to protect everyday privacy.

- **Big Picture Questions on Internet & Society Workshop:** This big picture discussion built on the significant momentum laid out by the Center’s Internet Monitor 2014 annual report. The workshop focused on rearticulating a research agenda of basic questions about Internet and society studies more expansively than any of us could manage alone.

- **Data, Privacy & Navigating the Change from a (Relatively) Unrecorded to a Recorded World:** A talk by Chris Kelly, Harvard Law School Professor of Practice for Leadership and Progress and former Chief Privacy Officer of Facebook.

- **Love the Processor, Hate the Process: The Temptations of Clever Algorithms and When to Resist Them:** On the occasion of his appointment as the George Bemis Professor of International Law at Harvard Law School, Jonathan Zittrain delivered a lecture addressing the impact of algorithms on our lives, on and offline.

- **Point to Point Camp:** A one day unconference brought together technologists, journalists, lawyers, and academics to advance the interests of privacy, transparency, and democracy in the 21st Century. It was organized in collaboration with the ACLU, Center for Civic Media, Tor, Freedom of the Press Foundation, Mass Pirate Party, and MuckRock.

- **Deconstructing the “Cuban Spring” Fantasy:** In a talk exploring what the new chapter in US-Cuba relations means for digital communities and journalists in Cuba, Elaine Diaz and Ellery Roberts Biddle spoke on Cuban Internet policy and journalistic practice and facilitated a group discussion on issues at the intersection of technology, journalism, and digital communities on the island.

- **The Arab Networked Public Sphere: Social Mobilization Post-Revolutions:** Researchers working with the Berkman Center, the American University in Cairo’s Access to Knowledge for Development Center, Innova Tunisia, and the Arab Policy Institute discussed current research conducted on the evolution of the networked public sphere and social mobilization post-revolutions in Egypt and
Tunisia. Participants presented and discussed research that focuses on tracking and analyzing the socio-political topics in online content and their interplay with offline networks based on fieldwork research in Egypt and Tunisia.

- **BiblioTech: Why Libraries Matter More Than Ever In An Age of Google:** Author John Palfrey discussed his new book, in which he argues that anyone seeking to participate in the 21st Century needs to understand how to find and use the vast stores of information available online.

- **Reforming Mutual Legal Assistance Treaties Workshop:** This small, highly interactive, invitation-only event examined the current legal mechanisms used by governments to obtain digital evidence stored abroad and identify their shortcomings in an era of cloud computing. The event included representatives from government, academia, business, and civil society from around the world.

- **International Workshop on Misogyny and the Internet:** At this two-day event, activists, policy analysts, legal professionals, law enforcement, and social scientists convened to discuss what can (or should) be done about misogyny online, which is an acute and growing problem.

The Center also participated in various international events for the NoC and YaM Projects. These project-related events are described in the Research and Scholarship section of this report.

We also hosted various local events which we supported logistically. These include: a US Patent and Trademark Office roundtable; Wind Farm, an offline Internet simulation event; a Nieman Fellows Program ignite event and luncheon; IndieWeb Camp; a webcast on sexual and reproductive health and rights; Creativity Without Law conference; 21st Century Girl Workshop; a book launch for Affiliate Amanda Palmer; EFF Board Meeting; a Harvard Global Health Unconference in partnership with the Nieman Foundation; several metaLAB workshops; an ACLU Conference; the I&S Big Picture Workshop; and Riot Games.

### 3. Working Groups

**Cyberscholar Working Group.** This working group is a forum for fellows and affiliates of various institutions to discuss their ongoing research and brainstorm around current topics related to the Information Society. In 2014-15, we expanded the participating institutions from Harvard, MIT, Columbia, and Yale to include NYU. Meetings were held monthly during the academic year. The working group aims to expand the shared knowledge of young scholars by bringing together these preeminent centers of thought on issues confronting the information age. Discussion sessions are designed to facilitate advancements in the individual research of presenters and in turn encourage exposure among the participants to the multi-disciplinary features of the issues addressed by their own work.
In addition to working groups, the Center also held study groups, practice groups, fellows groups, and alumni groups. Study groups held at the Center during the 2014-2015 academic year include “Cryptoledger,” “Between First and Fourth: Privacy and Speech on the Frontier of Technology,” “ACLU of Massachusetts Study Group,” and “Teaching Data Storytelling for Civic Impact.”

4. Visitors and Delegations

The Berkman Center hosted a number of special guests and visitors over the course of the year. Notable guests included: Christine Borgman, UCLA; Giovanni Buttarelli, European Data Protection Supervisor; John Carlin, Department of Justice; Debra Martin Chase, HBS i-Lab; Aneesh Chopra, former Chief Technology Officer of the United States; Luke Dembosky, Department of Justice; Eyal Halamish, OurSay.org; Chris Kelly, formerly of Facebook; Terrell McSweeney, Federal Trade Commission; Kurt Opsahl, EFF; Micah Sifry, Personal Democracy Forum; Richard Tofel, ProPublica; and Lila Tretikov, Wikimedia. The Center also hosted a delegation of Russian academics along with the State Department, and a delegation of Presidential Innovation Fellows.

E. Technical Infrastructure and Software Development

“The Geeks”—as the technical staff at the Center are affectionately called—work to sustain two large (and overlapping) mandates. At the core of the Center’s operations, the Geeks build, support, and maintain the hardware and core services on which the Center relies to conduct its day-to-day work; more broadly, the Geeks develop software solutions and provide project management services, frequently in collaboration with teams working elsewhere within HLS or within the wider University, to meet the needs of the Center’s various initiatives.

All software at the Berkman Center, whether developed exclusively in-house or in collaboration with partners, passes through the development group; likewise, all hardware deployed at the Center—from workstations and mobile devices to enterprise-grade servers—is specified, provisioned, and maintained by the technical infrastructure support group. The Geek team consists of Genève Campbell, Justin Clark, Sebastian Diaz, David Larochelle, Edward Popko, and Ryan Westphal. Senior Project Manager Jennifer Jubinville and Developer Anita Patel left the Center in May 2015; we are considering new candidates for their positions.

In the past year, the Geeks have liaised with more than three dozen projects and initiatives within and outside the Center, producing novel solutions to technical challenges. Selected outputs of their participation include, but are by no means limited to:

- the launch of a dramatically improved Chilling Effects clearinghouse website and API, developed with assistance from Justin Clark, David Larochelle, and Anita Patel;
- the Internet Monitor dashboard, which allows users to explore, create, customize, and share data visualizations about Internet access, controls, and activity, developed by Justin Clark and Ryan Westphal;
• development of four Amber plugins compatible with content management systems and web servers, shepherded by Ryan Westphal, in support of the Internet Robustness project which is managed by Genève Campbell; and
• a digital toolkit for enabling the public’s use of the community spaces found in public libraries as part of the Book a Nook prototype project, developed by Justin Clark.

The Geeks were also instrumental in the fourth and final year of the Library Lab Project, a collaboration among the Harvard Library, the Office for Scholarly Communication, and Harvard University IT Library Technology Services that aimed to produce useful tools for librarians, instructors, researchers, and the broader scholarly community. Major projects for which the Geeks provided substantial development and coordination work to close out the project include, but are not limited to:

• Author Names, a tool that enables publishers to exchange author name and identity metadata with librarians, opening access to valuable data of keen interest to libraries when establishing author identities, disambiguating between authors, and linking to external identity registries;
• Class Request Tool allows instructors to request assistance, space, and time for teaching with primary resources at Harvard’s archives and special collection repositories;
• Collection Shift Tool assists library staff to plan and prepare the move of a collection by estimating linear feet required by sets of call number ranges;
• FACADE2/Curator’s Workbench is a joint project of Harvard and MIT to collect, archive and preserve architectural records;
• HOLLIS Geosearch, a project that explores the opportunities that georeferencing library catalog data can provide to enhance catalog searches;
• Inscriptio, an application that allows library patrons to apply for a preferred carrel in the Harvard libraries based on a map of locations and current availability;
• Link-o-matic, an online tool that automates the process of linking digital resources created by Harvard Library and stored in the University’s preservation repository with the associated metadata located in discovery systems like HOLLIS;
• Spectacle, a library collections slideshow generator that integrates with the Zeega presentation platform;
• TagTeam, middleware between tagging platforms which allows readers to harness the power of social tagging;
• Transcription Tool, a research project that explores options for technology that will assist librarians, archivists, and others in transcribing analog text annotations onto digital assets; and
• Zone 1, a “rescue repository” which provides lightweight, interim storage for digital files before they are curated and processed for long-term preservation-level storage.

This extensive development work is undergirded by the hardware and software platforms maintained by the infrastructure support group. As of June 2015, the team oversees over 60 servers with over 190 processing cores and more than 600 GB of RAM, attached to
over 45 terabytes of networked storage. (This amount of networked storage is a substantial increase over last year.) These systems run everything from directory services and e-mail to development and production environments for the vast majority of Center projects and collaborations, with 24/7 monitoring and on-call response.

Over the past year, the Geeks continued to deliver critical infrastructure and technical support to the Center’s community of staff, faculty, and fellows out of its 23 Everett Street home base. The infrastructure support group manages a deployed base of over 35 Windows, OS X, and Linux workstations (17% of which were replaced or added over the past year), in addition to a pool of loaner laptops and mobile devices, a multimedia conference room, and a full-service media production setup. In April 2015, the Geeks implemented a new, improved webmail client to replace the Center’s existing webmail interface. The new software is an open source project with a responsive design and modern user interface, and is used by several universities and web hosting services.

The Geeks have continued to provide guidance and expertise to Center projects in ways that go beyond software development and technical infrastructure support. For example, the team has provided project management support for the redevelopment of the Chilling Effects website and API, the Internet Robustness project, Internet Monitor and the Internet Monitor dashboard, and for metaLAB’s Curarium Project. The Geeks are also heavily involved in support of on-going and stand-alone events—both locally- and remotely-held—serving a critical technical consulting and operations-management role within the events layer of the Center. The Geeks have always collaborated with teams outside of the Center and shared practices and understandings regarding how to navigate through technology. To this end, the Center continues to host blogs, wikis, content management systems, and custom applications for use not only by the Center’s affiliates but also by various other Harvard departments and individuals.

The team continually keeps up with the latest technological trends and expertise, as well as plays a technical advisory role in a variety of initiatives within the Harvard community and beyond. This year, Geek team members began learning and using new frameworks and languages, such as Meteor.js and Julia, new system management tools like Snappy Ubuntu Core, and more fully integrating the testing platforms Travis CI and PhantomJS into development projects. The Geeks also explored natural language processing and projects on alternative hardware platforms like Raspberry Pi, Arduino and Oculus.

In addition, the Geeks regularly speak on topics in which they have expertise at both Harvard and non-Harvard events. In November 2014, Jubinville presented at the American Library Association's 2014 Library and Information Technology Association (LITA) Forum in Albuquerque, New Mexico. The session “Improving Library Services and Transforming Organizational Culture” focused on the successful completion of the Library Lab Project and its development processes and milestones. In February 2015, Diaz and Sue Kriegsman joined Jubinville in a presentation on Library Lab at the LITA Midwinter Meeting in Chicago, Illinois. In March 2015, Campbell gave a tech demo of the Amber system for blogs and websites at RightsCon, an annual summit series convened around the Internet and human rights, in March in Manila, Philippines. Within the Harvard community, Clark presented at ABCD, a University-wide association promoting communication and collaboration on technology-related topics, about Meteor
JS, a real-time JavaScript framework that has been incorporated into both the Internet Monitor dashboard and Question Tool.

II. LOOKING AHEAD

The Internet and the web have grown and changed profoundly since the Berkman Center was founded over fifteen years ago. For the Center to continue its pioneering teaching and research will require new, more sophisticated, and more integrative methodologies and partnerships. The Center’s work will be guided by the notion of the Internet as an invitation to build; the idea that distributed and cooperative approaches to digital policy problems are often overlooked and underused; and a commitment to rigor and, where helpful, data in the Center’s work.

As the Center looks ahead, we are awed by the progress of the digital space since its early days when a center on “Internet and society” seemed to risk being parochial. The Center will continue to embrace its role as the world's pre-eminent university research center on these topics, honoring the Internet's original invitation, building new relationships and technologies to chart the network's path, and to help it attain the best that it can in the public interest. The Center is committed to tackling the most pressing issues of the digital age, being responsive to changes in the field, and maintaining a willingness to take on complex problems. Several projects in various stages of development will help to shape the Center’s agenda. For example:

- **Cybersecurity.** The Center is launching a project to convene leading experts and participants in the field, from all sides, to rethink the role of the state in cybersecurity in a manner that is consistent with protecting the open Internet. The project aims to develop and evaluate different proposals for reform and to clarify roles for the intelligence community, the corporate sector, academics, non-profits, and individuals.

- **Data and Privacy.** The Center has several research projects underway at the nexus of consumer privacy and data collection, including its Student Privacy Initiative and Privacy Tools for Sharing Research Data Project. A common theme that runs through these projects is the need to explore alternative mechanisms for balancing consumer privacy with the potentially transformational benefits of big data, and the necessity of taking a cross-disciplinary holistic perspective on these challenges, integrating legal, economic, technological, and behavioral approaches.

- **Digital Media and Public Discourse Analysis.** The Center plans to expand and continue its ongoing work in the realm of developing technical tools to map and analyze public discourse. The Media Cloud Project continues to build a suite of tools around the corpus of media data collected in recent years. Over the past year, the project’s research team, including Berkman Center staff and fellows and researchers in Egypt and Tunisia, has completed a remapping of the Arab language blogosphere. The team is also analyzing the structure of Twitter conversations related to Egypt and Tunisia.
• **Hate Speech.** In collaboration with the Harvard Institute of Politics and the Institute for Strategic Dialogue, the Center is developing a project to facilitate, promote, and strengthen international collaboration to counter youth-oriented hate speech online. This initiative is convening a thematic network of experts, educators, practitioners, and ambassadors to devise strategies and tools to fight hate speech online and enhance the capabilities of youth, community leaders, social media influencers, and civic activists around the world to stand up to online hate and violence. The project aims to: (a) deepen understanding of youth-oriented hate speech online; (b) develop a set of curricula and learning modules that empower youth to appropriately respond to hate speech online (prevention and intervention mechanisms); (c) field test these teaching and learning materials on the ground; and (d) create a network of collaborators worldwide that will include universities, institutions, and communities in every state in the US and in countries on each continent.

• **Municipal Broadband and Civic Innovation.** The Center has initiated a project to educate and work with key community leaders about the viability and potential for municipal fiber networks to address inadequate broadband infrastructure in the Commonwealth of Massachusetts. Compared to other states, the policy environment in Massachusetts is friendly for the municipal provision of broadband infrastructure and the Center believes that the potential for supporting successful models here is promising as a model for communities in other states. The Center is currently working with six communities (and expects to expand that number in the coming year), and it has already received inquiries about expanding the effort to neighboring states. This effort dovetails with a broader Center-wide interest in the role of government in civic innovation.

• **Networked Research and Policymaking.** The time is right for a more concerted push for sound policy frameworks that promote innovation as well as protect human rights, and this is best achieving by linking together research and evidence with civil society and advocacy efforts. The Center plans to build upon prior research and network-building efforts over the past two years, including: (a) the Digitally Connected Initiative, an international network of academics, practitioners, and policymakers focused on issues related to youth online, with an emphasis on the Global South; (b) the NoC, a group of academic institutions with a focus on interdisciplinary research on the development, social impact, policy implications, and legal issues concerning the Internet; and (c) the Center’s new partnership with the WEF, scoping and planning the Forum’s FII Global Agenda Challenge to foster an open, interoperable, and affordable Internet that serves the global public interest.