

COLORADO TECHNOLOGY LAW JOURNAL

University of Colorado Law School
320-L Wolf Law Building, 401 UCB, Boulder, CO 80309-0401
1.303.735.1032 • ctlj@colorado.edu • <http://ctlj.colorado.edu>

POSTMASTER: Please send address changes to the address above.

The Colorado Technology Law Journal (ISSN 2374-9032) is an association of students sponsored by University of Colorado Law School and the Silicon Flatirons Center for Law, Technology, and Entrepreneurship.

Subscriptions

Issues are published semiannually. Domestic volume subscriptions are available for \$50.00. City of Boulder subscribers add \$3.74 sales tax. Boulder County subscribers outside the City of Boulder add \$2.21 sales tax. Metro Denver subscribers outside of Boulder County add \$1.85 sales tax. Colorado subscribers outside of Metro Denver add \$1.31 sales tax. International volume subscriptions are available for \$55.00. Inquiries concerning ongoing subscriptions or obtaining an individual issue should be directed to ctlj@colorado.edu or by mail to the address above. Back issues in sets, volumes, or single issues may be obtained from:

William S. Hein & Co., Inc.
1285 Main Street, Buffalo, NY 14209
p: 1.716.882.2600 • <http://www.wshein.com>
<http://heinonline.org> (for back issues in electronic format)

Cite as: 14 COLO. TECH. L.J. __ (2016).

© 2016, Colorado Technology Law Journal

COLORADO TECHNOLOGY LAW JOURNAL

Volume 14

Issue 2

EXECUTIVE BOARD

Editor-in-Chief
JOELY DENKINGER

Executive Editor
COBUN KEEGAN

Managing Editor
BILL GILLESPIE

Lead Production Editor
CHRIS LAUGHLIN

Lead Articles Editor
STEPHANIE VU

Lead Student Note Editor
CALLI SCHROEDER

Production Editor
LAURA PESZEK

Digital Resources Editor
CHRISTINE FITCH

EDITORIAL STAFF

Articles Editors
MOLLY HOGAN
ANDRE KAISER
SAM LITZ
JORDAN MOLIVER
DELANY STEELE

Student Note Editors
GREGORY GARCIA
JORDAN UNDERHILL
SPENCER RUBIN

Symposium Editor
ARIEL DIAMOND

MEMBERS

KYRIAKI COUNCIL	KATHERINE MCANALLEN	ABIGAIL RINGS
NATHAN DAVIS	MOLLY PRIYA MCCLURG	BRADLEY SANDS
COLTER DONAHUE	DANYELLE MCNEARY	SAVANNAH SCHAEFER
DERIK GOATSON	SAM MOODIE	KELTON SHOCKEY
BENJAMIN GOLOPOL	COLIN J.A. OLDBERG	ASHTON SEIP
KELLY HUGHES	BEN PHILLIPS	CHANEL SOCHACKI
AYSHAN IBRAHIM	BRYAN RECH	LAUREL WITT
CHRIS IVY		COLE WOODWARD
JOSH KOHLER		KRISTINE YATES

FACULTY ADVISORS

BLAKE REID
HARRY SURDEN

OFFICE MANAGER

SARA SCHNITTGRUND

THE UNIVERSITY OF COLORADO LAW SCHOOL

FACULTY, 2015–16

Deans

- PHILIP J. WEISER, *Dean, Charles Inglis Thompson Professor of Law, and Faculty Director and Founder of the Silicon Flatirons Center for Law*. B.A., Swarthmore College; J.D., New York University.
- ERIK GERDING, *Associate Dean for Academic Affairs and Professor of Law*. A.B., Duke University; J.D., Harvard University.
- MARK LOEWENSTEIN *Associate Dean for Faculty Development and Professor of Law*. A.B., University of Illinois; J.D., University of Illinois;
- FREDERIC BLOOM, *Associate Dean for Research (Spring 2016) and Professor of Law*. B.A., Washington University in St. Louis; J.D., Stanford University.
- KRISTEN A. CARPENTER, *Associate Dean for Research (Fall 2015) and Professor of Law*. B.A., Dartmouth College; J.D., Harvard Law School.
- WHITING LEARY, *Senior Assistant Dean for Students*. B.A., Williams College; J.D., University of Colorado.
- MARCI FULTON, *Assistant Dean for Outreach, Engagement, and Alumni Relations*. B.A., University of Colorado; J.D., University of Colorado.
- KRISTINE M. JACKSON, *Assistant Dean for Admissions and Financial Aid*. B.S., University of North Carolina; J.D., George Mason University.
- TODD ROGERS, *Assistant Dean for Career Development*. B.S., Trinity University; J.D., University of Texas.

Emeritus Faculty

- NORMAN F. AARONSON, *Clinical Professor Emeritus, Legal Aid and Defender Program*. A.B., Brandeis University; J.D., Boston University.
- EMILY M. CALHOUN, *Professor Emeritus*. B.A., M.A., Texas Tech University; J.D., University of Texas.
- HOMER H. CLARK, JR., *Professor Emeritus*. A.B., LL.D., Amherst College; LL.B., LL.M., Harvard University.
- JAMES N. CORBRIDGE, JR., *Professor Emeritus*. A.B., Brown University; LL.B., Yale University.
- TED J. FIFLIS, *Professor Emeritus*. B.S., Northwestern University; LL.B., Harvard University.
- H. PATRICK FURMAN, *Clinical Professor Emeritus, Legal Aid and Defender Program, and Director of Clinical Programs*. B.A., J.D., University of Colorado.
- WAYNE GAZUR, *Associate Professor of Law*. B.S., University of Wyoming; J.D., University of Colorado; LL.M., University of Denver.
- DAVID S. HILL, *Professor Emeritus*. B.S., J.D., University of Nebraska.
- J. DENNIS HYNES, *Professor Emeritus*. B.A., LL.B., University of Colorado.
- HOWARD C. KLEMME, *Professor Emeritus*. B.A., LL.B., University of Colorado; LL.M., Yale University.
- WILLIAM T. PIZZI, *Professor Emeritus*. A.B., Holy Cross College; J.D. Harvard University; M.A. University of Massachusetts.

PETER N. SIMON, *Professor Emeritus*. B.S., M.D., University of Wisconsin; J.D., University of California, Berkeley.

NORTON L. STEUBEN, *Professor Emeritus*. A.B., J.D., University of Michigan.

ARTHUR H. TRAVERS, JR., *Professor Emeritus*. B.A., Grinnell College; LL.B., Harvard University.

MICHAEL J. WAGGONER, *Professor Emeritus*. A.B., Stanford University; LL.B. Harvard University.

MARIANNE WESSON, *Professor of Law and Wolf Nichol Fellow*. A.B., Vassar College; J.D., University of Texas.

Tenured and Tenure-Track Faculty

J. BRAD BERNTHAL, *Associate Professor of Law, Faculty Director of the Silicon Flatirons Entrepreneurship Initiative, and Director of LL.M Program in Entrepreneurial Law*. B.A., University of Kansas; J.D., University of Colorado.

WILLIAM BOYD, *Professor of Law and Director of the Governor's Climate and Forests Task Force Project*. B.A., University of North Carolina, Chapel Hill; J.D., Stanford University; Ph.D., University of California, Berkeley.

HAROLD H. BRUFF, *Nicholas Rosenbaum Professor of Law*. B.A., Williams College; J.D., Harvard University.

PAUL F. CAMPOS, *Professor of Law*. A.B., M.A., J.D., University of Michigan.

DEBORAH J. CANTRELL, *Associate Professor of Law and Director of Clinical Programs*. B.A., Smith College; M.A., University of California, Los Angeles; J.D., University of Southern California.

MING CHEN, *Associate Professor of Law*. B.A., Harvard University; J.D., New York University; Ph.D., University of California, Berkeley.

RICHARD B. COLLINS, *Professor of Law*. B.A., Yale College; LL.B., Harvard University.

JUSTIN DESAUTELS-STEIN, *Associate Professor of Law*. B.A., University of North Carolina, Asheville; J.D., University of North Carolina, Chapel Hill; LL.M., Harvard University.

KRISTELIA GARCIA, *Associate Professor of Law, Faculty Director of the Content Initiative at the Silicon Flatirons Center for Law*. B.A., Columbia University; J.D., Yale University.

AYA GRUBER, *Professor of Law*. B.A., University of California at Berkeley; J.D., Harvard University.

LAKSHMAN D. GURUSWAMY, *Nicholas Doman Professor of International Environmental Law*. LL.B., Sri Lanka; Ph.D., University of Durham, U.K.

MELISSA HART, *Professor of Law and Director of the Byron R. White Center for the Study of American Constitutional Law*. B.A., Harvard-Radcliffe College; J.D., Harvard University.

DAVID HASEN, *Associate Professor of Law*. B.A., Reed College; Ph.D. Harvard University; J.D. Yale University.

JENNIFER S. HENDRICKS, *Professor of Law and Co-Director of the Juvenile and Family Law Program*. B.A., Swarthmore College, J.D., Harvard University.

PETER HUANG, *Professor of Law and DeMuth Chair*. A.B., Princeton University; S.M., Harvard University; J.D., Stanford University; Ph.D., Harvard University.

SHARON JACOBS, *Associate Professor of Law*. B.M., Cleveland Institute of Music, M.M., Juilliard/Columbia University Exchange Program; J.D. Harvard Law School.

SARAH A. KRAKOFF, *Professor of Law and Schaden Chair in Experiential Learning*. B.A., Yale University; LL.B., University of California, Berkeley.

ALEXIA BRUNET MARKS, *Associate Professor of Law*. B.A., Colgate University; M.S., Purdue University; Ph.D., Purdue University; J.D., Northwestern University.

DAYNA BOWEN MATTHEW, *Professor of Law*. A.B., Harvard-Radcliffe College; J.D., University of Virginia.

SCOTT A. MOSS, *Professor of Law*. B.A., M.A., Stanford University; J.D., Harvard University.

CHRISTOPHER B. MUELLER, *Henry S. Lindsley Professor of Procedure and Advocacy*. A.B., Haverford College; J.D., University of California, Berkeley.

ROBERT F. NAGEL, *Ira C. Rothgerber Professor of Constitutional Law*. B.A., Swarthmore College; J.D., Yale University.

HELEN NORTON, *Professor of Law*. B.A., Stanford University; J.D., University of California, Berkeley.

SCOTT R. PEPPET, *Professor of Law*. B.A., Cornell University; J.D., Harvard University.

CAROLYN B. RAMSEY, *Professor of Law*. B.A., University of California, Irvine; A.M., J.D., Stanford University.

PIERRE J. SCHLAG, *University's Distinguished Professor and Byron White Professor of Constitutional Law*. B.A., Yale University; J.D., University of California, Los Angeles.

AMY J. SCHMITZ, *Professor of Law*. B.A., Drake University; J.D., University of Minnesota.

ANDREW SCHWARTZ, *Associate Professor of Law*. Sc.B., Brown University; J.D., Columbia University.

ANNA SPAIN, *Associate Professor of Law*. B.A., Denison University; J.D., Harvard University.

SLOAN SPECK, *Associate Professor of Law*. B.A., Rice University; J.D., University of Chicago Law School; L.L.M., New York University School of Law.

MARK SQUILLACE, *Professor of Law*. B.S., Michigan State University; J.D., University of Utah.

HARRY SURDEN, *Associate Professor of Law*. B.A., Cornell University; J.D., Stanford University.

AHMED WHITE, *Professor of Law*. B.A., Southern University and A&M College; J.D., Yale University.

CHARLES F. WILKINSON, *University's Distinguished Professor and Moses Lasky Professor of Law*. B.A., Denison University; LL.B., Stanford University.

Clinical Faculty

DEBORAH J. CANTRELL, *Associate Professor of Law and Director of Clinical Programs*. B.A., Smith College; M.A., University of California, Los Angeles; J.D., University of Southern California.

VIOLETA CHAPIN, *Associate Clinical Professor of Law*. B.A., Columbia College; J.D., New York University.

ANN ENGLAND, *Clinical Professor, Legal Aid and Defender Program*. B.A., University of Michigan; J.D., University of Denver.

CARLA FREDERICKS, *Associate Clinical Professor and Co-Director of the American Indian Law Program*. B.A., University of Colorado; J.D., Columbia Law School.

AUDREY HUANG, *Associate Professor of Law and Director of the Getches-Green Natural Resources, Energy and Environmental Law Clinic*. B.A., Johns Hopkins University; J.D., University of Southern California.

BLAKE REID, *Assistant Clinical Professor*. B.A., University of Colorado; J.D., University of Colorado.

COLENE ROBINSON, *Clinical Professor, Juvenile and Family Law*. B.A., Valparaiso University; J.D., Loyola University School of Law, Chicago.

Legal Writing and Appellate Advocacy Faculty

AMY BAUER, *Legal Writing Professor*. B.A., Duke University; J.D., William & Mary School of Law.

AMY GRIFFIN, *Legal Writing Professor and Director of Academic and Legal Writing Support*. B.A. Boston College; J.D. University of California, Berkeley.

DEREK H. KIERNAN-JOHNSON, *Legal Writing Professor*. A.B., Princeton University; J.D., University of Michigan.

NATALIE MACK, *Legal Writing Professor*. B.S., University of South Carolina; J.D., University of Colorado.

CORIE ROSEN FELDER, *Legal Writing Professor*. B.A., University of California, Berkeley; J.D., University of California, Los Angeles, School of Law.

GABRIELLE M. STAFFORD, *Legal Writing Professor*. B.A., University of Pennsylvania; J.D., Boston University.

TODD M. STAFFORD, *Legal Writing Professor*. B.A., Southern Methodist University; J.D., Duke University.

Law Library Faculty

ERIK BECK, *Digital Librarian. Digital Services Librarian*. B.A., University of Wisconsin; M.S.I.S., University of Texas.

GEORGIA K. BRISCOE, *Associate Director and Head of Technical Services*. B.S., Washington State University; M.A., University of San Diego; M.L.S., University of Michigan.

NICKHOLAS HARRELL, *Student Services and Outreach Librarian*. B.B.A. Temple University; J.D. Lewis & Clark; M.L.I.S. University of Washington.

ROBERT LINZ, *Head of Public Services and Associate Director of Law Library*. B.A., Wake Forest University; J.D., University of Florida; M.L.I.S., Florida State University.

SUSAN NEVELOW MART, *Associate Professor and Director of the Law Library*. B.A., University of California, Santa Cruz; J.D., University of California, Berkeley; M.L.I.S., San Jose State University.

JOAN POLICASTRI, *Collection Services and Research Librarian*. B.A., University of Colorado, Denver; M.A., University of Colorado, Denver; M.A., University of Denver; Certificate, Denver Paralegal Institute.

LISA SCHULTZ, *Instructional Services Librarian*. B.A., University of Nebraska-Lincoln; J.D., University of Nebraska-Lincoln; M.L.S., University of Missouri-Columbia.

KAREN SELDEN, *Catalog Librarian*. B.S., Pennsylvania State University; M.L.S., Simmons College.

JANE E. THOMPSON, *Head of Faculty Services*. B.A., University of Missouri; M.A., J.D., University of Denver.

FROM THE EDITOR

It is my pleasure to present Volume 14, Issue 2 of the *Colorado Technology Law Journal*. This issue is our first issue not sourced from a symposium in many years, and its high-caliber content is a testament to the dedication of all *CTLJ* members and the team that supports us. In this Issue, the authors broaden the discussion of law and policy beyond individual disciplines or individual nations. This Issue explores technology law and policy across borders and across subject areas.

The eminent Professor Epstein opens our Issue with an essay based on his keynote speech at the law school last year exploring commons and public domain governance strategies for water, intellectual property, and wireless spectrum. The authors of our three international and comparative articles—Aleksandra Kuczerawy & Jef Ausloos, Scott Marcus, and Gregory Voss & Céline Castets-Renard—explore the implementation of the *Google Spain* decision in Europe, compare the new EU Net Neutrality rules with the Open Internet Order in the U.S., and search for a more global understanding of the “right to be forgotten.” We welcome them to *CTLJ*, and thank them for publishing their excellent scholarship with us. I am also proud to present four student notes in this Issue, written by Chris Laughlin, Jordan Moliver, Calli Schroeder, and Stephanie Vu. Their notes address timely and significant issues in technology law, and in doing so continue the *CTLJ* tradition of innovative and original writing by students.

This issue is dedicated to two people at the heart and soul of *CTLJ*. The first is Dale Hatfield, a great friend and mentor to us all. At the beginning of each summer, Dale—together with Bryan Tramont—teaches a group of law and interdisciplinary telecom students a month-long course on Wireless Spectrum Management. There, we attempt to absorb even a small part of Dale’s vast knowledge of spectrum and telecommunications policy, and we all strive to adopt his pragmatic and engineering-centered approach. In that class, and at many other times, Dale’s charge to all of us is to think about technology policy through an international lens. We have taken Dale’s advice to heart and created this Issue with an international focus in mind. After all, as the technological capacity and social importance of our networks grows, we are all increasingly interconnected without regard for national boundaries. Our laws may stop at our borders, but our networks do not. This fundamental shift over the last few decades becomes more true each day, and we thank Dale for inspiring us to grapple with this challenge.

The second person is our Dean, Phil Weiser. As he “graduates” from the deanship this summer and returns to the faculty, we thank him for his support of *CTLJ* and his extraordinary vision for our law school. Under his leadership, our law school has become one of the best in the

nation for the study of telecommunications and technology law. This Journal and all students interested in this field have benefitted from Dean Weiser's leadership and depth of experience in this area. We will miss him as Dean but are fortunate that he will continue as Executive Director of the Silicon Flatirons Center, and in his work as Professor Weiser.

This publication would not be possible without all the help from our talented faculty and supportive staff: Professors Surden, Garcia, and Bernthal, and Anna, Cactus and Jamie at Silicon Flatirons (along with many others) make *CTLJ* possible. In particular, Sara Schnittgrund helped us keep all the wheels on this spring, even as she transitioned to her new role as Director of Student Programs for Silicon Flatirons, and Professor Blake Reid continued to advise and support us even as he added a new member to his family and took family leave this semester.

All our members did outstanding work this year by writing student notes, cite-checking, volunteering to help with conferences and symposia, and generally being wonderful human beings. In particular, Christy kept our digital presence updated all year and improved the look of our website, and Calli shepherded all of our student note writers through the note process successfully. Every person on our Executive Board has been a pleasure to work with, and I will miss working with them next year. Bill read dozens and *dozens* of article submissions to find those we ultimately chose to publish. Chris made numerous last-minute formatting fixes far beyond my comprehension. Cobun never ceases to amaze me with his positive spirit and seemingly boundless capacity for detail. As I write this letter (literally) he is looking up minutiae of European Data Protection Law to make final updates on our last article.

On a personal note, *CTLJ* has been the most powerful part of my law school experience, and for that I will be forever grateful. I wanted to be a lawyer and come to law school because I love to write. I knew I would get the chance to do so here. I didn't realize, however, that I would find such an outstanding community of colleagues, scholars, and true friends. I am proud of what we have achieved this year, and proud to be part of the (growing!) *CTLJ* alumni legacy. We did this. We read every word of this book, we checked every cite, and I hope we all hold on to this satisfaction of completing something that is truly ours. I hope each of us finds a project like this again.

Congratulations to our new Editor-in-Chief, Ariel Diamond, and her Executive Board! I know they will not only continue, but improve, the path we have paved with our Journal. I hope they grow to love it the way we did this year. I have no doubt that they will do an excellent job—I can't wait to read Volume 15.

Joely R. Denkinger
Editor-in-Chief, Volume 14

CONTENTS

KEYNOTE ESSAY

PROPERTY RIGHTS AND GOVERNANCE STRATEGIES: HOW BEST TO DEAL WITH LAND, WATER, INTELLECTUAL PROPERTY, AND SPECTRUM <i>RICHARD A. EPSTEIN</i>	181–218
--	---------

INTERNATIONAL & COMPARATIVE TECHNOLOGY LAW

FROM NOTICE-AND-TAKEDOWN TO NOTICE-AND-DELIST: IMPLEMENTING <i>GOOGLE SPAIN</i> <i>ALEKSANDRA KUCZERAWY & JEF AUSLOOS</i>	219–258
NEW NETWORK NEUTRALITY RULES IN EUROPE: COMPARISONS TO THOSE IN THE U.S. <i>J. SCOTT MARCUS</i>	259–280
PROPOSAL FOR AN INTERNATIONAL TAXONOMY ON THE VARIOUS FORMS OF THE “RIGHT TO BE FORGOTTEN”: A STUDY ON THE CONVERGENCE OF NORMS <i>W. GREGORY VOSS & CÉLINE CASTETS-RENARD</i>	281–344

STUDENT NOTES

CYBERSECURITY IN CRITICAL INFRASTRUCTURE SECTORS: A PROACTIVE APPROACH TO ENSURE INEVITABLE LAWS AND REGULATIONS ARE EFFECTIVE <i>CHRIS LAUGHLIN</i>	345–370
NON-POSSESSION AS ONE-TENTH OF THE LAW: RIGHT TO REFUSE OR DUTY TO DEAL IN MOLECULAR MONOPOLIES <i>JORDAN MOLIVER</i>	371–408
WHY CAN’T WE BE FRIENDS? A PROPOSAL FOR UNIVERSAL ETHICAL STANDARDS IN HUMAN SUBJECT RESEARCH <i>CALLI SCHROEDER</i>	409–436
PLEDGING PATENTS EFFECTIVELY: COPYRIGHT AND OPEN SOURCE AS A FRAMEWORK FOR PATENT PLEDGES <i>STEPHANIE VU</i>	437–458

