I. INTRODUCTION

The high information costs associated with the contemporary copyright system are widely acknowledged and lamented. Anxiety regarding the inadequacy of information about copyright is manifest, for example, in policy debates about the status of “orphan works” whose owners cannot be identified and located. The ultimate concern is that poor information provision will lead to inadvertent infringement of unknown rights or to the abandonment of progress-promoting endeavors involving dissemination and/or improvement of existing works of authorship. The search for
solutions includes calls for “reformalizing copyright,” the focus of this Symposium.

The call to reformalize reflects the fact that some of the information costs associated with copyright are attributable to relatively recent policy choices, including amendments to the Copyright Act that have eroded copyright’s information infrastructure by eliminating registration and notice formalities as prerequisites for copyright protection. After a series of amendments starting in 1976, federal copyright protection is now triggered simply by fixation of an original work in a tangible medium of expression—for example, by scribbling words on a napkin or typing them into a computer. ⁵ In a departure from prior U.S. law that was motivated in part by compliance obligations under the Berne Convention, ⁶ registration, notice, deposit, and publication are not required to secure protection (and no renewal registration is required to take advantage of the longest possible copyright term). ⁷ Those barriers have been removed and copyright protection is now automatic. ⁸ This means that when someone comes upon what appears to be an original work of expression fixed in a tangible medium—an old photograph, for example—she may not know how the work is encumbered by copyright. ⁹ It could be in the public domain because it was published without notice during a time when copyright could be lost that way; it could be in the public domain because its copyright has expired; or it could be under copyright, held by an unknown copyright holder. Without more information (or an applicable limitation like fair use), the only safe assumption is that all of those activities that implicate the exclusive rights granted by copyright (reproduction, public distribution, preparation of


⁶. Berne Convention for the Protection of Literary and Artistic Works art. 5, Sept. 9, 1886, as revised at Paris on July 24, 1971 and amended in 1979, S. TREATY DOC. NO. 99-27, 1971 WL 123138 (1986) (“Authors shall enjoy, in respect of works for which they are protected under this Convention, in countries of the Union other than the country of origin, the rights which their respective laws do now or may hereafter grant to their nationals, as well as the rights specially granted by this Convention . . . . The enjoyment and the exercise of these rights shall not be subject to any formality . . . .”).

⁷. See Sprigman, supra note 4, at 494; see also U.S. COPYRIGHT OFFICE, REPORT ON ORPHAN WORKS 3 (2006).

⁸. Id.

⁹. Cf. Landes & Posner, supra note 4, at 477 (describing the tracing costs involved in identifying the copyright holders of old works).
derivative works, etc.) are prohibited. And in part because notice and other formalities are not required, it may be impossible to identify and find a copyright owner from whom to seek the authorization that would lift that prohibition. 10 Even if the initial author/owner can be identified, ownership may well have changed hands in a transfer that need not have been recorded with the Copyright Office. 11

The erosion of the copyright information infrastructure caused by recent legal changes has been accompanied by technological developments that have further complicated the situation. Elsewhere I have described how legal and technological changes combine to complicate the copyright environment by contributing to the proliferation, wide distribution, and fragmentation of copyright ownership—a phenomenon that I refer to as “copyright atomism.” 12

Scholars and policymakers who lament the information costs imposed by copyright in the contemporary legal and technological environment often point admiringly to the law of real property as a model of successful information provision. 13 Physical signs can provide clues that someone owns a given piece of land (often the person in possession). Land recording systems preserve documents that reveal details about the physical dimensions of the parcel, how its ownership has changed over time, and whether express

10. This paragraph is adapted from Molly Shaffer Van Houweling, The New Servitudes, 96 GEO. L.J. 885 (2008).
12. Molly Shaffer Van Houweling, Author Autonomy and Atomism in Copyright Law, 96 VA. L. REV. 549, 553 (2010). This article introduces the concept of copyright atomism and defines it along three dimensions: proliferation (how many works are subject to copyright ownership), distribution (how many different people own copyrights), and fragmentation (how many, what type, and what size of separately-owned rights exist within each copyright bundle). As proliferation, distribution, and fragmentation increase, copyright becomes more atomistic.
encumbrances (liens, servitudes, etc.) complicate ownership. This information helps to prevent inadvertent trespass by those who wish to avoid invading private land, and it facilitates consensual transactions for those who seek permission to use or buy it. Legal mechanisms in physical property thus address just the sorts of problems—inadvertent infringement and squandered transaction opportunities—that plague copyright in the contemporary legal and technological environment.

The conventional narrative that emerges from this comparison is that the information infrastructure was perhaps never as good for copyright as it is for land, but the gap is much wider now that notice and registration formalities have been eliminated as prerequisites for copyright protection. This narrative usefully highlights the weaknesses of a copyright information infrastructure in which provision of information about owners and their rights is optional. It also draws important distinctions between copyright and land. But it obscures key facts about land recording that—when revealed—might help ongoing efforts to improve the copyright information infrastructure within the strictures of the Berne Convention.

I have explored various aspects of the comparison between the information infrastructures supporting intellectual property versus land in other work. In this Article, I will focus in particular on what copyright reformers can learn from land recording systems established in U.S. states. I will explain how recording is not generally required to establish interests in land—just as registration and recording are not required to establish copyright ownership. Instead, land recording systems prioritize competing interests in ways that powerfully incentivize recording and other types of information provision. In that way the system for land is not fundamentally different from the contemporary copyright system in the United States, which incentivizes but does not require registration of initial ownership and recording of transfers. And yet, the land recording system (while imperfect) is widely regarded as more comprehensive and useful than the copyright


This suggests that the copyright system might be improved without fundamental change, but rather through a more effective system of incentives. Numerous copyright reformers have endorsed this general approach, and several new proposals of this type were offered at this Symposium. Looking to land offers additional concrete ideas for how incentives can be structured to create a system of copyright records that would provide those who want to use and transact over copyrights some of the certainty and clarity that the current system lacks.

II. LAND RECORDING AND INFORMATION INCENTIVES

Two distinctions that intellectual property (“IP”) scholars have drawn—(1) between the contemporary copyright information infrastructure and real property recording, and (2) between the contemporary copyright system and the system in the mandatory formalities era—suggest that copyright used to be like land (from an information infrastructure standpoint) and now it is much less like land. This divergence, one might reasonably conclude, has caused the current crises for innocent investors (or would-be investors) in dissemination and improvement of copyrighted works. But this narrative can be usefully augmented by taking a fresh look at land recording not as a system of mandatory formalism—which it is not—but instead as a system of incentives for the provision of information about rights. So understood, the differences between the two information infrastructures do not seem so stark, and the opportunities to improve copyright by looking to the land recording system appear more realistic.

Although every U.S. state has a system of land recording, recording is not strictly required to establish an interest in land. Instead, the public records on which purchasers of real estate rely are a result of voluntary recording of interests that are themselves established by private transactions. Rules regarding land recording merely provide incentives to record (and to search

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17. See infra note 32 and accompanying text.

18. See generally JOSEPH WILLIAM SINGER, PROPERTY 538 (3d ed. 2010) (“Although in almost all states recording is not required to validate the transfer of the property interest, it is essential both to provide an official record of the state of the title and to protect the buyer against any competing claims that may be created by the grantor in others.”).
those records) by establishing priority between competing claimants who both purport to have acquired land through voluntary transactions.  

These contemporary land recording rules are all departures from the common law first-in-time rule, under which a transfer of Blackacre from owner O to buyer A trumped O’s later purported transfer to subsequent buyer B.  

Recording acts all introduce the idea that B’s claim should prevail over A’s under some circumstances. They are typically characterized as one of three general types: under “race” recording statutes (the least common of the three types), B’s interest trumps A’s if B records before A does; under “notice” statutes, B prevails so long as B took without actual or constructive notice of A’s prior claim; and under “race-notice” statutes, B prevails only if he lacked notice and recorded his interest before A recorded hers.

The three types of recording acts differ in the emphasis they place on three overlapping functions: (1) providing notice of prior claims to subsequent would-be purchasers (the “notice function”); (2) protecting the reliance interests of subsequent purchasers who take without notice of prior claims (the “reliance function”); and (3) incentivizing recording in order to establish a system of land records that will avoid future surprises, disappointment, and conflicts (the “information infrastructure function”). To summarize another way, “legal rules should both control what information is relevant for determining ownership rights in a way that allocates risks sensibly between present and would-be owners and, to the extent it is cost justified, provide incentives to increase the amount of information

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19. Id.  
21. See id. at 23 (“Under the common law first-in-time rule, the subsequent taker bore the risk of prior unknown and often unknowable adverse claims. The earlier taker did not have to do anything to protect an interest against later takers; the earlier taker was protected just by being first in time. Through the recording acts a subsequent purchaser gains protection against the otherwise unavoidable risk of a prior conveyance by the grantor.”).  
22. See id. at 19–20; RICHARD R. POWELL, POWELL ON REAL PROPERTY § 913 (Michael Allan Wolf ed., 2013). California’s race-notice statute, for example, provides:  

> Every conveyance of real property or an estate for years therein, other than a lease for a term not exceeding one year, is void as against any subsequent purchaser or mortgagee of the same property, or any part thereof, in good faith and for a valuable consideration, whose conveyance is first duly recorded, and as against any judgment affecting the title, unless the conveyance shall have been duly recorded prior to the record of notice of action.  

CAL. CIV. CODE § 1214.
available.”23 Better information in turn serves the more fundamental policy goal of promoting efficient land transactions by reducing the uncertainty and risk faced by would-be purchasers.24

Although they differ in their particulars and in the emphasis they place on these goals, all U.S. recording statutes serve the purpose that I find most directly relevant to current debates about copyright formalities reform: they all incentivize voluntary recording in order to create a (relatively) reliable property information infrastructure.

Race statutes are most clearly consistent with the goal of incentivizing recording; under these statutes priority of recording is determinative as between competing parties who both claim to have acquired rights via transfer from a prior owner. These statutes thus reward grantees who most quickly contribute to the information infrastructure without regard to whether they had notice of prior claims or instead invested in reliance on the apparent absence of prior claims. But by so heavily emphasizing recording, these statutes fail to account for the perceived unfairness of giving priority to a grantee who takes with actual knowledge of a prior adverse claim but then wins a race to record. Early judicial interpretations were hostile to this type of opportunistic behavior and often denied priority to such bad faith grantees, injecting elements of notice into what seemed, on their face, to be pure “race” statutes.25 Most state legislatures ultimately followed this judicial lead, adopting statutes that denied protection to those who took with actual notice of conflicting claims and instead protected only ignorant “bona fide purchasers.”26 Relative to pure race statutes strictly applied, these judicial interpretations and legislative innovations put more emphasis on the importance of providing notice and protecting reliance interests. They provided slightly less incentive for rapid recording, since rapid recording was no longer a mechanism by which a grantee with actual knowledge could establish priority. But notice statutes still provided some incentive to record, because recording established constructive knowledge for subsequent grantees. By recording her interest, a grantee could ensure that she would never be trumped by a subsequent bona fide purchaser without notice. In

24. See Mattis, supra note 20, at 23 (“By modifying the common law first-in-time rule, the recording acts foster the free alienability of land by creating a system in which purchasers can buy land knowing that it will be free of prior adverse claims. This is accomplished by shifting the risk of inconsistent claims from the subsequent purchaser to the one in a position to avoid the risk—the prior taker.”).
25. Id. at 25.
26. See id. at 20 nn.8–9.
states that adopted “race-notice” statutes, this incentive was augmented by the requirement that a grantee record in order to ensure that she would also be protected against prior adverse claims of which she had no notice.27

Notably, all three types of recording acts share two characteristics: (1) recording is not required to establish a valid property interest, although it may be required to avoid having an interest divested by future events; and (2) recording is incentivized both for earlier-in-time grantees and for later grantees—both of whom want to win the race to record (under race and race-notice statutes) and to provide constructive notice to subsequent would-be purchasers (under notice and race-notice statutes). Thus, land recording in the United States can be best understood as establishing incentives for multiple participants in the property system to contribute to an information infrastructure that provides notice, honors reliance interests, and ultimately promotes land transactions and the efficient land use that those transactions foster.

Copyright in the post-formalities era (in which notice, registration, and recordation are encouraged and incentivized but not required) is thus arguably more like U.S. land recording than it was in the era of mandatory formalities. In both cases property interests can arise and be transferred without any interaction with the government agencies established to maintain property records. But owners who do not provide information to those agencies are vulnerable to having their interests trumped by the affirmative claims or defenses of actors who acted without notice of those interests.

III. LAND RECORDING’S LESSONS FOR COPYRIGHT REFORMERS

Critics of copyright’s current information infrastructure express concern about the fate of institutions and individuals who would like to make

27. But see id. at 99–100. Mattis explains:

By punishing B for not recording before A, the statute seemingly encourages claimants generally to make the public records complete and, as a result, reliable. Certainly, inducement to record is essential to achieving the goal of the recording system, and the threat of having one’s claim to Blackacre subordinated to that of another is reason to record. Punishing B, however, rewards A, who did not record. . . . Pure notice statutes achieve the inducement-to-record function more efficiently . . . The race-notice methodology for inducing recording is overkill. . . . The peril of B’s losing to C is quite sufficient to induce B to get it right the first time by recording in the chain of title, before A.

Id.
investments in disseminating and/or building upon existing works. Some such investors may be able to find and successfully negotiate with copyright owners over transfers or non-exclusive licenses. If they do, and if they record their transfers and get their non-exclusive licenses in writing, they may benefit from an existing provision of the Copyright Act that is clearly inspired by land recording rules: section 205 sets forth priority rules that protect investors who acquire copyrights or licenses that have—unknownst to the investors and unrecorded with the copyright office—already been granted exclusively to someone else.

But in copyright, much more so than in land, gaps in the property information infrastructure impact not only prospective owners and licensees who have engaged in voluntary transactions over rights, but also potential disseminators and improvers. These parties have not acquired copyrights or licenses because they cannot identify a copyright owner—even a purported owner!—with whom to negotiate, or they cannot even determine whether a work is protected by copyright at all. Some of these potential investors may be deterred altogether from undertaking socially beneficial activities. Others might go ahead and make their investments in the absence of information about copyright but then be punished despite their lack of knowledge that their activity would infringe.


29. Section 205 of the Copyright Act states:

(d) Priority Between Conflicting Transfers.—As between two conflicting transfers, the one executed first prevails if it is recorded, in the manner required to give constructive notice under subsection (c), within one month after its execution in the United States or within two months after its execution outside the United States, or at any time before recordation in such manner of the later transfer. Otherwise the later transfer prevails if recorded first in such manner, and if taken in good faith, for valuable consideration or on the basis of a binding promise to pay royalties, and without notice of the earlier transfer.

(e) Priority Between Conflicting Transfer of Ownership and Nonexclusive License.—A nonexclusive license, whether recorded or not, prevails over a conflicting transfer of copyright ownership if the license is evidenced by a written instrument signed by the owner of the rights licensed or such owner’s duly authorized agent, and if—

(1) the license was taken before execution of the transfer; or
(2) the license was taken in good faith before recordation of the transfer and without notice of it.

In the past, copyright law has shown more solicitude for these users (and would-be users) of copyrighted works—both through a system of prerequisites for protection that established a formal information infrastructure and through doctrines that excused those who made facially infringing uses of copyrighted works under circumstances in which information was insufficient. A confluence of developments has eroded both the information infrastructure and most of the forgiving doctrines. As a result, the current system punishes and/or deters many potentially valuable investments in dissemination as well as improvement of copyrighted works.

Many contemporary copyright reform proposals would attempt to improve copyright’s information infrastructure—to “reformalize” copyright—within the confines of Berne by intensifying the incentives for copyright owners to register initial copyrights and record transfers. Register Pallante’s keynote address to this Symposium floated several such ideas, suggesting, for example, that the final twenty years of copyright protection might be available only to owners who registered with the Copyright Office; and that assignees and exclusive licensees “should be required to both register their interests in the work . . . and then record their licenses and assignments in a timely matter as a condition of eligibility for statutory damages.” Copyright reform proposals focused on incentivizing registration and recording are sometimes viewed as second-best solutions, still failing to establish, for copyright, the type of formal information infrastructure that a

31. Anthony Reese carefully documents these developments and summarizes:
By the end of the twentieth century, the copyright system operated radically differently than it had 100 years earlier. The changes in copyright law over this period significantly increased the risk of infringing a copyrighted work, but they simultaneously had the effect of eliminating many of the mechanisms that had protected innocent infringers from liability. As the copyright system evolved over the law century, all of the doctrines and features that mitigated the potential negative effects of liability for unknowing infringement were removed from the system. The legal changes . . . [r]esulted in copyright’s moving away from using constructive notice and knowledge requirements to reduce the risk of innocent infringement, and replaced those mechanisms with adjustments in remedies as the sole recognition of an innocent infringer’s lack of culpability.

Id. at 175; see also Sterk, supra note 13.
32. Maria Pallante, The Curious Case of Copyright Formalities, 28 BERKELEY TECH. L.J. 1415, 1419, 1421 (2013); see also Samuelson et al., supra note 4, at 1198–1202 (recommending more meaningful incentives for registration than under current law); Sprigman, supra note 4, at 554–68 (proposing a system of strongly incentivized “new-style formalities”).
well-functioning property system requires. That may be so—indeed, the inadequacies of land recording systems are well documented and lamented too. But it is nonetheless helpful, as we assess these proposals, to recognize that what we tend to view as a relatively comprehensive and useful system for keeping track of property rights in land is based not on record-keeping requirements, but on a system of incentives.

Another feature of many copyright reform proposals, particularly those focused on the problem of orphan works, is that they offer protection to users based on their reasonable lack of notice (for example, the inability to locate the copyright owner despite a reasonably diligent search) and on their provision of information that makes the system work better. In other words, these proposals incentivize contributions to the property information infrastructure by multiple participants in the property system—much as land recording rules incentivize prior and subsequent owners to record or risk losing out to someone with a superior claim.

The Copyright Office’s 2006 Report on Orphan Works, for example, proposes limiting the remedies available to copyright holders in cases in which the defendant performed a “reasonably diligent search” and was still unable to locate the copyright owner. In addition, use of the orphan work would have to be accompanied by attribution to the author and copyright owner “if such attribution is possible and is reasonably appropriate under the circumstances.” The Report explains that “the user, in the course of using a work for which he has not received explicit permission, should make it as clear as possible to the public that the work is the product of another author, and that the copyright in the work is owned by another.” This proposal encourages provision of copyright ownership information in two ways: it incentivizes copyright owners to register, record transfers, and/or otherwise make themselves locatable or risk being denied remedies; and it extracts additional information from users of orphan works in the form of

33. See, e.g., Sprigman, supra note 4, at 545–68 (proposing amendments to Berne or, in the alternative, the adoption of Berne-compliant “new style” voluntary but strongly incentivized formalities).
35. REPORT ON ORPHAN WORKS, supra note 2, at 95–96.
36. Id. at 110.
37. Id.
attribution. Other proposals include more elaborate requirements for information provision by users in addition to incentives for owners. Lydia Loren, in a proposal debuted at the 2012 Berkeley Center for Law and Technology Symposium on Orphan Works and Mass Digitization, suggests granting immunity from monetary liability for entities that perform non-negligent searches, provide open access copies of the works they use (which she labels “hostage works,” not “orphans”), and embed those copies with the information the disseminators were able to discover about the work. As she explains:

Freedom for hostage works comes in the form of reliable information concerning the copyright status and the copyright owner of the work. . . . Thus, creating incentives to produce and publicize this type of high quality information should be a prime focus of any approach to solving the “hostage work” problem.

By encouraging both original owners and subsequent investors to provide information that enhances the copyright information infrastructure, these proposals mirror land recording rules that encourage all parties to contribute to the information infrastructure, thereby enriching land records and minimizing controversies that turn on thorny factual questions about possession, actual knowledge, and the like. At the same time, these proposals would narrow the circumstances in which a copyright owner would be denied remedies on the basis of her (perhaps innocent) failure to make adequate information available about her work. Avoiding the harshest types of forfeitures of copyrights is likely to make such proposals more attractive to a range of stakeholders and less subject to the type of backlash that mandatory copyright formalities fell victim to in the twentieth century.

Of course differences between the nature of land and intellectual creations complicate the task of drawing lessons for IP from land recording. For example, there may be ways in which the intangible and difficult-to-define subject matter of copyrighted works makes them less amenable to accurate recording. On the other hand, the non-rivalrous nature of

38. Loren, supra note 28, at 1458.
39. Id. at 1456.
40. See generally Baird & Jackson, supra note 23, at 301 (“[L]egal rules should both control what information is relevant for determining ownership rights in a way that allocates risks sensibly between present and would-be owners and, to the extent it is cost justified, provide incentives to increase the amount of information available.”); Carol M. Rose, Crystals and Mud in Property Law, 40 STAN. L. REV. 577, 586 (1988) (“‘First in time, first in right’ may work well enough in a community where everyone knows all about everyone else’s transactions, but outside that context, the doctrine does little to put people on notice of who owns what, and the opportunities for conflicting claims are endless.”).
copyrighted works makes them amenable to some information infrastructure strategies that are inspired by but arguably superior to those available for land. The proposal that Professor Ginsburg offers in her article for this Symposium is an example.\footnote{Jane C. Ginsburg, “With Untired Spirits and Formal Constancy”: Berne-Compatibility of Formal Declaratory Measures to Enhance Copyright Title-Searching, 28 BERKELEY TECH. L.J. 1583 (2013).} She suggests that the failure to record a transfer of copyright should not only subject the transferee to having her interest trumped by a conflicting claim by a later transferee (as under current section 205), but should also invalidate the transfer, which could instead “be treated as effecting a non-exclusive license, much as a non-exclusive license may be inferred from conduct or oral agreement.”\footnote{Id. at 1616–17.} Note how, in one way, this proposal incentivizes recording more powerfully than land recording rules: the transfer of exclusive rights is invalid even against the transferor who was a party to it, who is deemed to have effected merely a non-exclusive license instead.

In land law a grant by O to A is effective as between those parties, whether it has been recorded or not. To oust A in favor of O because of A’s failure to record a transfer, a transfer for which O was on clear notice (having executed it), would be perceived as a harsh forfeiture in the land context. What makes Professor Ginsburg’s solution in copyright much less harsh is the possibility of non-exclusive concurrent “possession” of the resource by transferor and transferee.

Let me illustrate with what I find to be an especially compelling (and close-to-home) hypothetical: imagine an academic author who transfers copyright in a scholarly article to a journal publisher who does not record that transfer (or subsequent transfers) or make any other helpful contribution to the copyright information infrastructure. The author later wants the article to be included in an anthology or posted on her university’s repository of faculty scholarship. Perhaps she cannot locate the original written instrument in which she assigned her copyright. In any event, she cannot locate the current copyright owner in order to seek permission to reuse her article in these ways. She is, in effect, the parent of an “orphan” work. Under Professor Ginsburg’s approach, the author would be able to use her work because the transfer of exclusive rights would be invalidated by the transferee’s failure to record. However, because the non-rivalrous nature of the work makes simultaneous non-exclusive use plausible, this result can be made much less harsh—much less a forfeiture—than the analogous invalidation of a purchaser of land’s unrecorded interest. Professor Ginsburg’s proposal achieves this by allowing the non-recording transferee...
to retain a non-exclusive license. The publisher or successor in my hypothetical is not denied the right to use the article, only the right to exclude the author from her own use. It is hard to imagine a similar compromise being achieved for land, where competing claimants typically have uses in mind that are incompatible with sharing the rivalrous resource.

IV. CONCLUSION

Solitude for both original owners and innocent subsequent investors has shaped real property law for centuries. 43 These competing interests are managed in part by the establishment of property information infrastructures that allow prior and later investors to identify each other and understand their rights. While critics of U.S. copyright law’s abandonment of mandatory formalities lament that the copyright information infrastructure is less reliable, they are sometimes inattentive to the fact that real property law has also eschewed mandatory formalities that would result in forfeiture of unrecorded interests. Instead, the relatively robust land recording system results from rules that merely incentivize recording in order to avoid having an interest trumped by that of a subsequent investor. The best of these systems condition their protections on innocent subsequent investors recording as well, thus incentivizing all actors to contribute to a formal information system that can avoid the most difficult fact-specific inquiries into actual notice and the like. The best of the current proposals for copyright reform share this feature, and a better understanding of land law helps us to appreciate their strengths.

43. Cf. Carol M. Rose, Crystals and Mud in Property Law, 40 STAN. L. REV. 577, 590 (1988) (describing how tension between desire for clear rules and concern for innocent parties has resulted in shifts over time “back and forth between hard-edged, yes-or-no crystalline rules and discretion-laden, post hoc muddy rules”).