

IP ISSUES POSED BY CLOUD COMPUTING

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Oct. 14, 2011

RANGE OF POSSIBILITIES

- Very little effect
- Renewed importance of trade secrecy
- Licensing/contracts will take care of all issues
- CFAA & DMCA anti-circumvention rules will be more important than © or trade secrecy
- Temporary buffer copies = surrogate for exclusive rights that don't match new biz models
- Data portability issues
- Erosion of first sale, fair use rights of users
- Some big surprise will happen

LITTLE EFFECT?

- For information-rich resources that are in the cloud, IP laws may well be irrelevant
- Technology sometimes replaces IP (e.g., CSS protecting DVD movies, access controls to online databases)
- Role of IP is mainly to regulate information resources that are available “in the wild,” that is, available in a way that allows them to be copied and sold in the marketplace

SW & KNOW-HOW ON FACE

- J.H. Reichman: Big challenge for IP law to respond appropriately to information-rich products, such as computer software & biotechnology innovations, because they bear the know-how required to make them on or very near the surface of the product in the market
 - Trade secrecy has traditionally protected applied know-how necessary to make valuable products because this know-how could generally be kept inside the factory walls, much of it not easily reverse-engineered
 - Software & biotech innovations bear their know-how on the face of the product, vulnerable to market-destructive copying, easily reverse-engineered and then copied
 - Manifesto article (1994) proposed sui generis form of protection for applied know-how, a kind of “portable trade secrecy” protection to give lead-time to innovators

SECRECY PROTECTS CLOUD

- Software as a service, & other information-rich resources in the cloud seem to reverse the know-how-on-the-face pattern, renew importance of secrecy as form of IP protection for software, other information-rich resources kept in the cloud
 - Will it be possible to reverse-engineer these resources?
 - Will it be possible to develop interoperable products without the cloud-vendor's consent?
 - Competition and follow-on innovation rendered more difficult

LICENSING?

- To the extent that firms entrust information resources to cloud service providers, a license will be in place to set forth terms on which the resources will be processed, etc.
 - What if the IP-protected data is inadvertently destroyed or corrupted?
- IP law may inform some terms
 - e.g., trade secrecy norms as to limits on uses that can be made of information resources based on the purposes for which the resources were made available
 - e.g., © norms may inform limits on copying, distribution of information resources provided

CFAA & DMCA ANTI-CIRC?

- Information resources in the cloud may look like rich targets for hackers
- Security will become very important
- Some of the same kinds of considerations will affect IP-protected information resources in the cloud
- © & trade secrecy, as such, may not be all that useful to deter hacking
- CFAA: gaining unauthorized access to computing resources, exceeding authorized access
- DMCA anti-circumvention rules: bypassing technical protection measures that copyright owners use to protect access to, or uses, of their works

TWISTING © TO GET RESULTS?

- Goofy © ?s:
 - should processing software in the cloud be treated as a communication to the public?
 - should computer program processing be considered a public performance?
- EMI v. MP3tunes: users storing music in cloud lockers, ISP liable if infringing materials not taken down
- RAM-copying is likely to be asserted as a basis for a © challenge even if core objection different
 - Big fight over how “temporary” the copying is cf. definition of “copy”
 - Countries differ in rules about temporary copies, so the same act may be lawful in A but unlawful in B; where is the data?

NON-DISPLAY USES?

- So far Google is only displaying “snippets” of 15M + books scanned for Google Book Search
 - Unless RH gives permission for more
 - Unless work is in the public domain
- But Google regularly makes “non-display” uses of in-© books in the corpus
 - To refine search technologies
 - To develop automated translation tools, etc.
 - Also allowing digital humanities scholars to use GBS corpus for research projects
 - Underlying presumption: © owners only entitled to control “display” uses (e.g., making contents available for reading)
 - Are non-display uses fair uses?

NON-DISPLAY AS FAIR?

- Copying of whole books is said to be necessary to index them, make non-display uses
 - G certainly has a commercial purpose in mind
- Is this “transformative”? Maybe in the sense that it is a use of ©’d works for a different purpose, but caselaw on this is mixed
- Not supplanting demand for existing markets for the in-© works, but is this a new market that © owners should be able to control?
 - Andrew DeVore for Arlo Guthrie et al: we don’t even know what non-display uses G is making of ©’d works
- Will G and other cloud computing providers make non-display uses of ©-protected owned by firms that store the content there?

DATA PORTABILITY?

- Foreseeable that people & firms who have stored their data in someone else's cloud may want to “port” that data to another cloud (or elsewhere) at some point
 - Might be dissatisfied with cloud provider
 - Might find cheaper, better terms elsewhere
- If the cloud provider has formatted the data in a proprietary manner, will it be willing to allow that data to be ported elsewhere?
 - New IP interface wars?
 - Antitrust scrutiny because of lock-in potential?

EROSION OF USER RIGHTS?

- Google Book Search settlement imagined “consumer purchase model”
 - Out-of-print books to be sold either at price set by RHs or at algorithmic prices ranging between \$1.99 & \$29.99 with so-many-% in each of 12 bins—average of \$8.65 per book, which is higher than might expect
 - Books will only be accessible in the cloud
 - “Owners” cannot download them
 - Limits on # of pages that can be printed out
 - Limits on annotations that you can be make of your book

USER RIGHT EROSION?

- Limits on annotation-sharing with others
- Can't lend the book to anyone, can't sell it, can't lease it, can't give it away, can't share it
- Not really “consumer purchase,” which suggests you actually own something, but a “single user license access model”
- Publishers' dream: G to sell you a book which you cannot effectively take possession of!
- Fair use, first sale rights under © law effectively eroded

BIG SURPRISE?

- Advances in technology have often been creatively used by some in disruptive ways that led to IP challenges
 - Peer-to-peer file-sharing technologies
 - Bots to “scrape” data from websites, as in *eBay v. Bidders Edge*
- Seems likely to me that cloud computing may give rise to similar disruptions that will give rise to creative uses of IP laws
 - But hard for me to predict what will be the next big thing in this space