REPORT PREPARED FOR:

MEGA

CRITIQUE

BY ANTON, ERIN, HA, HELEN, KSENIA

POSTGRADUATE DIPLOMA IN BUSINESS

APMG 8119: DIGITAL ENTERPRISE

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EXECUTIVE SUMMARY

Megaupload was an online Hong Kong based company which provided file storage and viewing services and operated since 2005 until 2012. Megaupload and its founder, Kim Dotcom, were accused by the United States department of Justice for copyright infringement by encouraging users to upload the most popular copyright files and ignoring requirements to remove infringement copies stipulated by The Digital Millennium Copyright Act (DCMA) of 1998 U.S. Copyright Council of New Zealand (2014) consents with the United States Copyright laws where both laws categorize exhibiting resources in public or distributing infringed copies are copyright violation.

Compared with Megaupload, Apple Cloud controls and monitors the upload data without copyright infringement by minimising the risk, monitoring the operation and authorizing third party to investigate the copyright infringement.

Mega is a file storage and sharing service which encrypts files in the browser before uploading them. This site is the New Zealand-based and was launched on January 19, 2013 by Kim Dotcom, the founder of Megaupload. Mega's main selling point, the encryption technology, is the subject to several controversies New Zealand copyright laws aspire to protect rights of owners of the information, both locally and internationally. Due to the laws, encryption should be considered as a mechanism of transmission protection instead of illegal coverage of infringing data. Both New Zealand copyright laws and Mega's 'Terms of Services', customer owns all uploaded data and is responsible for law infringements.

Cloud computing storage companies need to understand the roots of copyright infringement and illegal downloaders behavior; cooperate with copyright owners in terms of prevention the copyright infringement; optimise searching algorithms and user experience to stimulate consumers to behave positively.
1. MEGAUPLOAD CASE

a. The prosecution of Megaupload by the USA Government

Megaupload (see Appendices, A) was an online Hong Kong based company which provided file storage and viewing services and operated since 2005 until 2012. During that time, Legal Monitor Worldwide (2014) acknowledged that the company had more than 180 million registered users. Despite huge numbers of users registered, Megaupload was closed down in January 2012 by the United States department of Justice and their assets that worth about HK $330 million were frozen (Appendices, B).

The Computer & Internet Lawyer (2012) demonstrates that, based on the indictment, Megaupload:

- encouraged users to upload the most popular copyright files by running an incentivizing financial reward system
- paid money to users uploading explicitly infringing content and shared the download links to public
- ignored requirements to remove infringing copies stipulated by The Digital Millennium Copyright Act (DCMA) of 1998 U.S.

Finally, Megaupload and its founder, Kim Dotcom, were accused by the United States department of Justice for copyright infringement, racketeering and money laundering.

b. Copyright and Data Ownership

i. Megaupload's copyright infringement

Megaupload had breached U.S. copyright laws during its operation time. This is according to Copyright Law of the United States (2016), “without the authority of the
owner of copyright under this title, of copies or phonorecords of a work that have been acquired outside the United States is an infringement of the exclusive right to distribute copies or phonorecords” (p. 180).

The rapid evolvement of digital technology has made sharing resources achievable and convenient. Given this fact, the service providers and users must be aware of copyright as well as obligations and responsibilities of each party. Thus, DCMA designates that System caching and Storage of information on networks are infringement for service provider. Therefore, Megaupload breached the Copyright Act by encouraging violating the laws uploads without the copyright owner’s permission.

Copyright Council of New Zealand (2014) consents with the United States Copyright laws where both laws categorize exhibiting resources in public or distributing infringed copies are copyright violation. Furthermore, Copyright (New Technologies) Amendment Act (2008) indicates that accounts of perpetrators should be shut down by the Service Providers. Nevertheless, according to Copyright Council of New Zealand (2017), the penalty for infringement is monetary compensation to the copyright owner, so as Herald (2017) reported that the founder of Megaupload denied the extradition before 2017, as he claimed New Zealand has no equivalent of criminal charges in copyright violations to the United States.

ii. Data ownership and its implications for Apple Cloud

1. Data ownership

Megaupload Limited was charged of encouraging users to upload numerous copyrighted works of all categories illegally online by sharing and the website was forcefully shut down by FBI in 2012 (U.S. Department of Justice, 2012). This case has raised one issue about the ownership of personal data uploaded by users. According to the copyright law
of New Zealand which stipulates that copyright includes the Literary works, Dramatic works, Music works, Artistic works, Sound recordings, Films, Communication works and Typographical arrangements of published editions belongs to the original creators.

As sites similar to Megaupload provides the data storage and files sharing services, the uploaded data ownership should be discussed in three categories: Personal owned data without copyright where it belongs to the data uploader; The work Copyright belongs to the single author instead of the uploader where the data owner should be the work creator; The work with copyright combines with multiple authors which the upload data ownership should belong to all the authors. Copyright Act (1994).

There are widespread applications to address this issue. Take Apple iCloud for example, under section III (F) of the terms for iCloud, they warned that infringers of relevant copyright laws might result in account suspension and termination. Under another clause of Section VI (B), Apple warns any inappropriate use of iCloud will result in civil and criminal penalties for the uploader.

As technology advances, file sharing would be trending therefore in order to protect the copyright of the author well meanwhile providing users more access to the information resources, a new model of cooperation between copyright author and file sharing services providers would be valuable in the industry (Helme & Davies, 2015).

2. Implications for Apple Cloud

As a host for its users to store and share photos, videos, documents, apps, notes and more, Apple iCloud emphasizes on its Legal Agreement between users and Apple which governs the uploaded data copyright by notifying the user to be aware of and conform to its agreement prior to use (iCloud Terms and Conditions, 2017, see Appendices, C).
This can be perceived as Apple Cloud relies on the consciousness of user regarding the upload data copyright and ownership.

Compared with Megaupload, Apple Cloud controls and monitors the upload data without copyright infringement to reduce the risk. The Legal Agreement clarifies the issues regarding copyright and data ownership from three stages. Firstly Apple minimises the risk before user started using the service. Apple Cloud reminds the responsible for the upload, download, post, email, transmit, store rests with the user rather Apple and one uses iCloud at one’s risk. Secondly Apple will monitor the operation by reserving the right to interrupt uploading and remove any content that Apple considered as in violation of copyright. Thirdly, Apple authorizes third party to investigate the copyright infringement by written complaint. Any user could write to Apple’s Copyright Agent for contents that are in breach of copyright regulations.

The individuals as users are the core of personal data collection, management and use (Rubinstein, 2013). How to use and control the uploaded data is also a crucial issue that involves both users and sites. In practice, compared with trying to establish the liability for uploaders, the most effective way is to trace against providers (Clark, 2007). Nowadays, service provider should establish middle ground as being an entity that scrutinizes potential threat of copyright infringement with due diligence while respect the liberty of free speech of individual user without dampening creativity.
2. MEGA.NZ Case

a. Analysis of Mega.nz site

Mega is a file storage and sharing service which encrypts files in the browser before uploading them to the servers. This site is the New Zealand-based and was launched on January 19, 2013 by Kim Dotcom, the founder of Megaupload.

Mega provides 50 GB of storage for free users, compared to only 2 GB given by Dropbox, and up to 4 TB of storage for paid accounts.

Mega Mobile applications are available for iOS, BlackBerry, Windows Phone, and Android users. There is also MEGAsync desktop program for Windows, Mac, and Linux. MEGAbird add-on is also available to simply share large files via email.

A comparison of features among free cloud storage services by Stacy Fisher (2016) pointed out significant differences between Mega and its main competitors.

<table>
<thead>
<tr>
<th>Feature</th>
<th>MEGA</th>
<th>Dropbox</th>
<th>Box</th>
<th>MediaFire</th>
<th>iCloud</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Storage</td>
<td>50 GB</td>
<td>2 GB</td>
<td>10 GB</td>
<td>10-50 GB</td>
<td>10-20 GB</td>
</tr>
<tr>
<td>Bandwidth Limitation</td>
<td>10 GB</td>
<td>20 GB</td>
<td>Unlimited</td>
<td>Unlimited</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Public File Sharing</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Public Folder Sharing</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Advanced Sharing Options</td>
<td></td>
<td></td>
<td></td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Feature</td>
<td></td>
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<td>-------------------------------</td>
<td>---</td>
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<td>---</td>
</tr>
<tr>
<td>Streams Media Files</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Bulk Downloads</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Public Uploads</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Bulk File Uploads</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Folder Uploads</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>URL Uploads</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Upload Files From Other Sites</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Control Upload Bandwidth</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Desktop Program</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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</tr>
<tr>
<td>Mobile Application</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Automatic Mobile Uploads</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Although both Megaupload and Mega were created by the same person, Kim Dotcom, Mega is very different from Megaupload for several reasons.
<table>
<thead>
<tr>
<th>Mega</th>
<th>Megaupload</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals store their personal or collaborated material</td>
<td>Individuals uploaded and shared copyright document with other users</td>
</tr>
<tr>
<td>Users need to create accounts before using any service</td>
<td>Users could upload a file without creating accounts</td>
</tr>
<tr>
<td>Material is encrypted before being uploaded</td>
<td>Material was not encrypted</td>
</tr>
<tr>
<td>Mega has no idea what content it is hosting</td>
<td>Megaupload knew its users uploaded infringing content</td>
</tr>
<tr>
<td>Rights holders can register for direct access letting them remove files containing copyright material</td>
<td>Megaupload often failed to follow removal notices from rights holders</td>
</tr>
<tr>
<td>Mega does not provide any financial reward systems for users</td>
<td>Megaupload provided financial rewards for users to upload copyrighted material for others to download</td>
</tr>
</tbody>
</table>

However, Mega's main selling point, the encryption technology, is the subject to several controversies. As files are encrypted before being uploaded, neither Mega nor anybody is able to see the decrypted versions unless they receive decryption key from the uploader. In theory, that would give Mega plausible deniability in the event of a crackdown because Mega cannot see the contents of the file (Jeffries, 2013). Moreover, the fact that copyright owners are not able to see infringing files being shared on Mega if they don't have the keys is one of real reason for small number of takedown requests from Mega (Dredge, 2013).
Dotcom seems to avoid Mega being put on notice of copyright infringement by encrypting files, improving privacy and giving rights holders direct access to the site. But the views about copyright are very clear, sharing copyrighted content without licences is illegal no matter the files are encrypted or not encrypted (Huthwaite, 2013).

b. New Zealand Copyright laws and data ownership

i. Many researchers point out a range of flaws in the copyright system: the functioning of formalities (Carroll, 2013), absence of a broad fair use rights (Sims, 2016) and, generally, critique Digital Economy Act (Mendis, 2013). Furthermore, New Zealand copyright laws aspire to protect rights of owners of the information, both locally and internationally. It means that distribution of information has to be considered as a laws violation if users do not have authorities to such actions, even if encryption is used. Due to the laws, therefore, encryption should be considered as a mechanism of transmission protection instead of illegal coverage of infringing data.

ii. According to the New Zealand laws, only authors and their representatives can distribute their works, excluding number of "permitted acts" such as educational reasons or reviewing. Moreover:

- sharing of unassigned or unlicensed digital information considered as a laws infringement
- copyright laws equally apply to private use of a data
- due to the absence of copyright registration, the author's creation is considered to be protected by laws even without any copyright notices

Thus, exploiting file sharing sites, users themselves are responsible for their content and its illegal distribution, and violate laws by sharing files without creator's writing permission. These implications are also fortified by Mega’s 'Terms of Service' (see
Appendices, D), where responsibility for data access is fully imposed on customers and disclaimers release its owners from any responsibility for any law violations made by users. Consequently, in spite of encryption technology, the resource creators are also aware of and admit possibility of laws violations through mega.nz.

Overall, following both New Zealand copyright laws and Mega's 'Terms of Services', customer owns all uploaded data and is responsible for law infringements.

c. Key findings

Mega is a file storage and sharing service which encrypts files in the browser before uploading them. This site is the New Zealand-based and was launched on January 19, 2013 by Kim Dotcom, the founder of Megaupload. Mega's main selling point, the encryption technology, is the subject to several controversies. In theory, encryption would give Mega plausible deniability in the event of a crackdown because Mega cannot see the contents of the file, and copyright owners are not able to see infringing files being shared on Mega if they don't have the keys. Dotcom seems to avoid Mega being put on notice of copyright infringement by encrypting files, improving privacy and giving rights holders direct access to the site.

New Zealand copyright laws aspire to protect rights of owners of the information, both locally and internationally. Due to the laws, encryption should be considered as a mechanism of transmission protection instead of illegal coverage of infringing data. According to the New Zealand laws, only authors and their representatives can distribute their works, excluding number of "permitted acts" such as educational reasons or reviewing. Exploiting file sharing sites, users themselves are responsible for their content and its illegal distribution, and violate laws by sharing files without creator's writing permission. Both New Zealand copyright laws and Mega's 'Terms of Services', customer owns all uploaded data and is responsible for law infringements.
d. Practical implications to Cloud computing storage companies:

In order to reduce the level of copyright infringement and prevent a company from being closed down, it is recommended to:

1. Understand the roots of copyright infringement (Mirza & Islam, 2013; Borja & Dieringer, 2016) and illegal downloader's behaviour (Williams, Nicholas & Rowlands, 2010) (see Appendices, E). Based on this knowledge, develop clear term and conditions policy that will explain users their rights and duties and a company’s responsibilities in order to cut future possible copyright infringement.

2. Optimise searching algorithms and user experience in the way that to stimulate consumers to behave positively and take advantage of legal content (Sivan, Smith & Telang, 2014; Danaher, Smith & Telang, 2017).

3. Cooperate with big copyright owners (for instance, record labels, films production companies) in terms of the building of the new model of cooperation based on different user needs (entertainment or education) and prevention the copyright infringement (Helmer & Davies, 2015).

4. Create and use quick and effective methods allowing to find and recognize illegal or legally bought content and, according to collected data, to make decisions about either deleting or keeping it.

5. Develop a check system which will be able to get hash-codes of legal contents (see Appendices F), filters or other algorithms from copyright owners in order to block copyright-protected files from being shared between users. It is a perfect solution against copyright infringement allowing to storage legally bought content without deleting it (Kumparak, 2014).
CONCLUSION

Cloud storage service providers in general and Megaupload in particular have raised the controversial issue about the ownership of personal data uploaded by users. In digital age, balancing between the author copyright and free speech creativity for uploader is the difficult task for file-sharing providers. These service providers should work as a bridge that not only helps users to access knowledge but also protects copyright and rights holders.

The practical recommendations for file-sharing and cloud companies to prevent copyright infringements have been made. These initiatives would allow businesses like Mega.nz to operate lawfully.
REFERENCES


APPENDICES

A.

B.

This domain name associated with the website Megaupload.com has been seized pursuant to an order issued by a U.S. District Court.

A federal grand jury has indicted several individuals and entities allegedly involved in the operation of Megaupload.com and related websites charging them with the following federal crimes:

C.

VI. Software

A. Apple’s Proprietary Rights. You acknowledge and agree that Apple and/or its licensors own all legal right, title and interest in and to the Service, including but not limited to graphics, user interface, the scripts and software used to implement the Service, and any software provided to you as a part of and/or in connection with the Service (the “Software”), including any and all intellectual property rights that exist therein, whether registered or not, and wherever in the world they may exist. You further agree that the Service (including the Software, or any other part thereof) contains proprietary and confidential information that is protected by applicable intellectual property and other laws, including but not limited to copyright. You agree that you will not use such proprietary information or materials in any way whatsoever except for use of the Service in compliance with this Agreement. No portion of the Service may be reproduced in any form or by any means, except as expressly permitted in these terms.

B. License From Apple. THE USE OF THE SOFTWARE OR ANY PART OF THE SERVICE, EXCEPT FOR USE OF THE SERVICE AS PERMITTED IN THIS AGREEMENT, IS STRICTLY PROHIBITED AND INFRINGES ON THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS AND MAY SUBJECT YOU TO CIVIL AND CRIMINAL PENALTIES, INCLUDING POSSIBLE MONETARY DAMAGES, FOR COPYRIGHT INFRINGEMENT.

C. Public Beta. From time to time, Apple may choose to offer new and/or updated features of the Service (the “Beta Features”) as part of a Public Beta Program (the “Program”) for the purpose of providing Apple with feedback on the quality and usability of the Beta Features. You understand and agree that your participation in the Program is voluntary and does not create a legal partnership, agency or

Legal

1. interfere with or disrupt the Service (including accessing the Service through any automated means, like scripts or web crawlers), or any servers or networks connected to the Service, or any policies, requirements or regulations of networks connected to the Service (including any unauthorized access to, use or monitoring of data or traffic thereof);

j. plan or engage in any illegal activity; and/or

k. gather and store personal information on any other users of the Service to be used in connection with any of the foregoing prohibited activities.

C. Removal of Content

You acknowledge that Apple is not responsible or liable in any way for any Content provided by others and has no duty to pre-screen such Content. However, Apple reserves the right at all times to determine whether Content is appropriate and in compliance with this Agreement, and may pre-screen, move, refuse, modify and/or remove Content at any time, without prior notice and in its sole discretion, if such Content is found to be in violation of this Agreement or is otherwise objectionable.
F. Copyright Notice - DMCA

If you believe that any Content in which you claim copyright has been infringed by anyone using the Service, please contact Apple’s Copyright Agent as described in our Copyright Policy at https://www.apple.com/legal/trademark/claims-of-copyright.html. Apple may, in its sole discretion, suspend and/or terminate Accounts of users that are found to be repeat infringers.

G. Violations of this Agreement

If while using the Service, you encounter Content you find inappropriate, or otherwise believe to be a violation of this Agreement, you may report it by sending an email to abuse@iCloud.com.

E. No Resale of Service

You agree that you will not reproduce, copy, duplicate, sell, resell, rent or trade the Service (or any part thereof) for any purpose.

V. Content and Your Conduct

A. Content

“Content” means any information that may be generated or encountered through use of the Service, such as data files, device characteristics, written text, software, music, graphics, photographs, images, sounds, videos, messages and any other like materials. You understand that all Content, whether publicly posted or privately transmitted on the Service is the sole responsibility of the person from whom such Content originated. This means that you, and not Apple, are solely responsible for any Content you upload, download, post, email, transmit, store or otherwise make available through your use of the Service. You understand that by using the Service you may encounter Content that you may find offensive, indecent, or objectionable, and that you may expose others to Content that they may find objectionable. Apple does not control the Content posted via the Service, nor does it guarantee the accuracy, integrity or quality of such Content. You understand and agree that your use of the Service and any Content is solely at your own risk.

B. Your Conduct

You agree that you will NOT use the Service to:
D.

Your data

If you allow others to access your data (e.g. by, amongst other things, giving them a link to, and a key to decrypt, that data), in addition to them accepting these terms, you are responsible for their actions and omissions while they are using the website and services and you agree to fully indemnify us for any claim, loss, damage, fine, costs (including our legal fees) and other liability if they breach any of these terms.

Our service includes UCE. You should keep your password and encryption keys safe and confidential. You must not share your password with anyone else and should not release encryption keys to anyone else unless you wish them to have access to your data. If you lose or misplace your password, you will lose access to your data. We strongly urge you to use best practices for ensuring the safety of your system and devices (e.g. via security upgrades, firewall protection, anti-virus software, securing your devices). Mega will never send you emails asking for your password or suggesting that you click a link to login to your account, so do not be fooled by any such email since it will not be from us.

You must maintain copies of all data stored by you on our services. We do not make any guarantees that there will be no loss of data or the services will bebug free. You should download all data prior to termination of services.

Our service may automatically (without us viewing the file content) delete a file you upload or give someone else access to where it determines that that file is an exact duplicate of the original file already on our service (a process usually referred to as deduplication). In that case, the original file will be accessed by you and any other user and that file will be retained for so long as any user has a right to access it under these terms.

We will store your data on our service subject to these terms and any plan you subscribe to. If you choose to stop using our services, you need to make sure you download your data first because after that we may, if we wish, delete it. If we suspend our services to you because you have breached these terms, or someone you have given access to has breached these terms, during the term of that suspension, we may, if we wish, deny you access to your data but keep it for evidential purposes. If we terminate our services to you because you or someone you have given access to has breached these terms, we may, if we wish, delete your data immediately or keep it for evidential purposes. In circumstances where we cease providing our services for other reasons, we will, if reasonably practicable and we are not prevented by law or likely to incur any liability in doing so, give you 30 days' notice to retrieve your data.

Copyright Infringement Notices

We respect the copyright of others and require that users of our services comply with copyright laws. You are strictly prohibited from using our services to infringe copyright. You may not upload, download, store, share, display, stream, distribute, e-mail, link to, transmit, share or otherwise make available any files, data, or content that infringes any copyright or other proprietary rights of any person or entity.

We will respond to notices of alleged copyright infringement that comply with applicable law and are properly provided to us. If you believe that your content has been copied or used in a way that constitutes copyright infringement, please provide us with the following information:

- a physical or electronic signature of the copyright owner or a person authorised to act on their behalf;
- identification of the copyrighted work claimed to have been infringed;
- identification of the material that is claimed to be infringing or to be the subject of infringing activity and that is to be removed or access to which is to be disabled, and information reasonably sufficient to permit us to locate the material including the exact URL link to that material on Mega;
- your contact information, including your address, telephone number, and an email address; a statement by you that you have a good faith belief that use of the material in the manner complained of is not authorised by the copyright owner, its agent, or the law; and
- a statement that the information in the notification is accurate, and, under penalty of perjury (unless applicable law says otherwise), that you are authorised to act on behalf of the copyright owner.
DISCLAIMERS

17. We don’t give you any warranty or undertaking about the services or the website which are provided “as is”. To avoid doubt, all implied conditions or warranties are excluded as much as is permitted by law, including (without limitation) warranties of merchantability, fitness for purpose, safety, reliability, durability, title and non-infringement.

18. We will try to give you access to our website and our mobile apps all the time, but we do not make any promises or provide you with a warranty that our website or the services will be without any faults, bugs or interruptions.

19. Whilst we intend that the services should be available 24 hours a day, seven days a week, it is possible that on occasions the website or services may be unavailable to permit maintenance or other development activity to take place or be periodically interrupted for reasons outside our control.

20. Information on our website will change regularly. We will try to keep our website up to date and correct, but again, we do not make any promises or guarantees about the accuracy of the information on our website.

21. We do not warrant that the services will meet your requirements or that they will be suitable for any particular purpose. It is your sole responsibility to determine that the services meet the needs of your business or otherwise and are suitable for the purposes for which they are used.

E.

Reasons behind Piracy

<table>
<thead>
<tr>
<th>Roots of Copyright Infringement</th>
<th>Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is free</td>
<td>85%</td>
</tr>
<tr>
<td>Legal content is too expensive</td>
<td>75%</td>
</tr>
<tr>
<td>Quick access in any time</td>
<td>80%</td>
</tr>
<tr>
<td>Mass effect</td>
<td>60%</td>
</tr>
<tr>
<td>No reasons to buy hard copies</td>
<td>80%</td>
</tr>
</tbody>
</table>

Source: DigitalCommons@University of Nebraska - Lincoln. 2013
F.

<table>
<thead>
<tr>
<th>Input</th>
<th>Hash Function</th>
<th>Fingerprint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fox</td>
<td></td>
<td>DFC3454 BBEA788A</td>
</tr>
<tr>
<td>The red fox jumps over the blue dog</td>
<td></td>
<td>008646BB FB7DCBE2</td>
</tr>
<tr>
<td>The red fox jumps over the blue dog</td>
<td></td>
<td>8FD87558 78514F32</td>
</tr>
</tbody>
</table>
PRESENTATION

REPORT PREPARED FOR:
Mega.nz
Critique

By Ha, Helen, Erin, Ksenia, Anton

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https://www.mega.nz/

Hong Kong based online file storage and viewing services company

Operated from 2005 to 2012

More than 180 million registered users and 50 million visitors per day

Was closed down in January 2012 by the US DOJ

Assets worth ~HK$330 million were frozen
US GOVERNMENT INDICTMENT

- Encouraging users to upload the most popular copyrighted files by running an incentivizing financial reward system
- Paying money to users who explicitly uploaded infringing content and shared download links with public
- Ignoring requirements about removing infringement copies stipulated by the DMCA

Breaching US and NZ Copyright Law

<table>
<thead>
<tr>
<th>Category</th>
<th>The United States</th>
<th>New Zealand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Similarities</td>
<td>Definition</td>
<td>Define selling, hiring, exhibiting in public or distributing infringing copies are infringements</td>
</tr>
<tr>
<td></td>
<td>Must get the authority from owner</td>
<td></td>
</tr>
<tr>
<td>Requirement</td>
<td>Restrict ISPs to do infringement by using system cashing and storage of information directly on users' computers</td>
<td>Should shut down the accounts of users who do the infringe copyright</td>
</tr>
<tr>
<td>for ISPs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Differences</td>
<td>Penalty</td>
<td>Provide monetary compensation</td>
</tr>
<tr>
<td></td>
<td>Have every right to invoke the power of the courts to combat such activity, it can also be a crime to a jail time</td>
<td></td>
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</tbody>
</table>
DATA OWNERSHIP

- Copyright includes Literary, Dramatic, Music, Artistic works, Sound recordings, Films, Communication works and Typographical arrangements of published editions belongs to the original creators.

- Uploaded Data Category:
  - Personal owned data without Copyright
  - A work Copyright belongs to a single author instead of an uploader
  - A work with Copyright combines with multiple authors

IMPLICATION FOR APPLE CLOUD

- 1. Legal Agreement between users and Apple

Apple Cloud relies on the consciousness of users regarding the upload data copyright and ownership

Eg: Section III (F), Section VI (B)

- 2. Three stages to clarify copyrights issue:

Remind/Monitor/Authorizes third party to investigate

Eg: Section V (A), V (C), V (F)
DATA SHARING IN DIGITAL

- Data Storage and Sharing (Copyright + liberty of free speech)
- Uploader (User)
- Service Provider (Megaupload/Apple Cloud)
- Downloader (User)
- Author
- Payment

MEGA

- File storage and sharing service which encrypts files before uploading
- Launched on January 19, 2013 by Kim Dotcom, the founder of Megaupload
- Provides 50 GB of storage for free and up to 4 TB of storage for paid accounts
- Provides Mobile applications, MEGAsync desktop program and MEGAbird add-on for sharing large files via email
MEGA vs MEGAUPLOAD

<table>
<thead>
<tr>
<th>MEGA</th>
<th>MEGAUPLOAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals store their personal or</td>
<td>Individuals uploaded and shared</td>
</tr>
<tr>
<td>collaborated material</td>
<td>copyright document with other users</td>
</tr>
<tr>
<td>Users need to create accounts before</td>
<td>Users could upload a file without creating</td>
</tr>
<tr>
<td>using any service</td>
<td>accounts</td>
</tr>
<tr>
<td>Material is encrypted before being</td>
<td>Material was not encrypted</td>
</tr>
<tr>
<td>uploaded</td>
<td></td>
</tr>
<tr>
<td>Mega has no idea what content it is</td>
<td>Megaupload knew its users uploaded</td>
</tr>
<tr>
<td>hosting</td>
<td>infringing content</td>
</tr>
<tr>
<td>Rights holders can register for direct</td>
<td>Megaupload often failed to follow</td>
</tr>
<tr>
<td>access letting them remove files</td>
<td>removal notices from rights holders</td>
</tr>
<tr>
<td>containing copyright material</td>
<td></td>
</tr>
<tr>
<td>Mega does not provide any financial</td>
<td>Megaupload provided financial rewards</td>
</tr>
<tr>
<td>reward systems for users</td>
<td>for users to upload copyrighted material</td>
</tr>
<tr>
<td></td>
<td>for others to download</td>
</tr>
</tbody>
</table>

MEGA’S ENCRYPTION TECHNOLOGY CONTROVERSIES

- Neither Mega nor anybody is able to see the decrypted versions
- Plausible deniability in the event of a crackdown
- Mega cannot see the contents of the file
- Copyright owners are not able to see infringing files being shared on Mega
- Small number of takedown requests
**NEW ZEALAND COPYRIGHT LAWS**

- Copyright laws aspire to protect rights of owners of the information, both locally and internationally.
- Distribution of information has to be considered as a laws violation if users do not have authorities to such actions, even if encryption is used.
- Encryption should be considered as a mechanism of transmission protection instead of illegal coverage of infringing data.
- Copyright laws equally apply to private use of data.
- The author’s creation is considered to be protected by laws even without any copyright notices.

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**MEGA.NZ CASE: DATA OWNERSHIP**

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- WE DON'T GIVE YOU ANY WARRANTY OR UNDERWARRANTY ABOUT THE SERVICES OR THE SITE WHICH ARE PROVIDED "AS IS". TO AVOID DOUBT, ALL IMPLIED CONDITIONS AND WARRANTIES ARE EXCLUDED AS MUCH AS IS PERMITTED BY LAW, INCLUDING (BUT NOT LIMITED TO) QUALITY, MERCHANTABILITY, FITNESS FOR PURPOSE, SAFETY, RELIABILITY, DURABILITY, TITLE AND NON-INFRINGEMENT.

- We will try to give you access to our website and our mobile apps all the time, but we do not make any promises or provide you with a warranty that our website or the services will be without any faults, bugs or interruptions.

- Whilst we intend that the services should be available 24 hours a day, seven days a week, it is possible that on occasions the website or services may be unavailable to permit maintenance or other development activity to take place or be periodically interrupted for reasons outside our control.

- Information on our website will change regularly. We will try to keep our website up to date and correct, but again, we do not make any promises or guarantees about the accuracy of the information on our website.

- We do not warrant that the services will meet your requirements or that they will be suitable for any particular purpose. It is your sole responsibility to determine that the services meet the needs of your business or otherwise and are suitable for the purposes for which they are used.

**Therefore...**

Customer owns all uploaded data and is responsible for law infringements.
PRACTICAL IMPLICATIONS

- Understanding the roots of copyright infringement and illegal downloaders behaviour
- Term and conditions policy which influences responsible behaviour
- Searching algorithms optimisation
- New model of cooperation with copyright owners
- Recognizing methods of different types of content
- Hash codes, filters or based on other algorithms check system allowing to block copyright-protected files from user-to-user sharing

TO UPLOAD OR NOT TO UPLOAD? THAT IS THE QUESTION