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IN A
PEER TO PEER
WORLD

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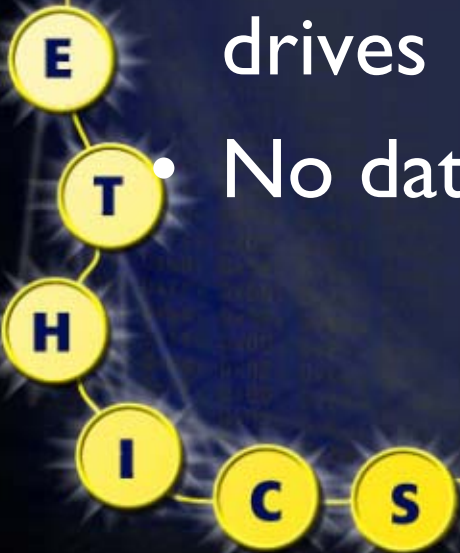
The Consumers' Perspective

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File Sharing: The Past

- Examples: Napster, Audiogalaxy
- Central Server based
- Efficient searches
- Easy to track and monitor users
- Files stored completely on user's hard drives
- No data validation

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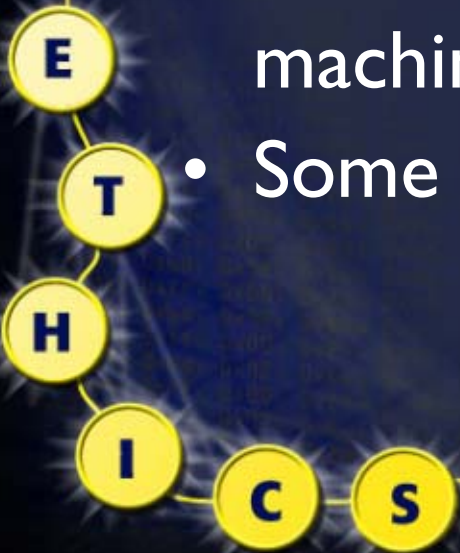


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File Sharing: The Present

- Examples: Gnutella, Souseek, eDonkey
- Largely serverless, some are node or super-peer based
- Less efficient searching
- Harder, but still possible, to track users
- Some store only partial files on user machines
- Some have data validation using checksums

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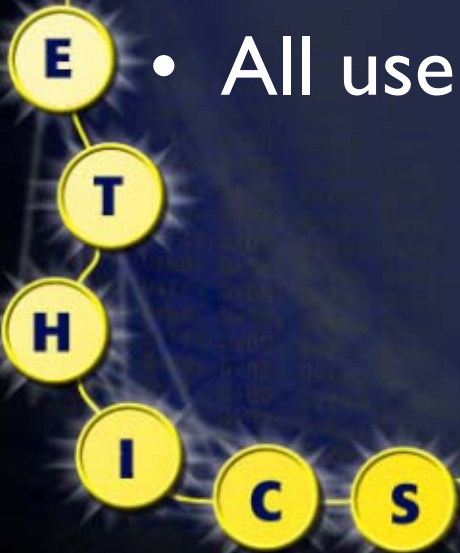


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File Sharing: The Future

- Example: Freenet
- Node based
- Anonymous and encrypted
- All files hashed across network
- Impossible to track single files
- All use crypto-sum data validation

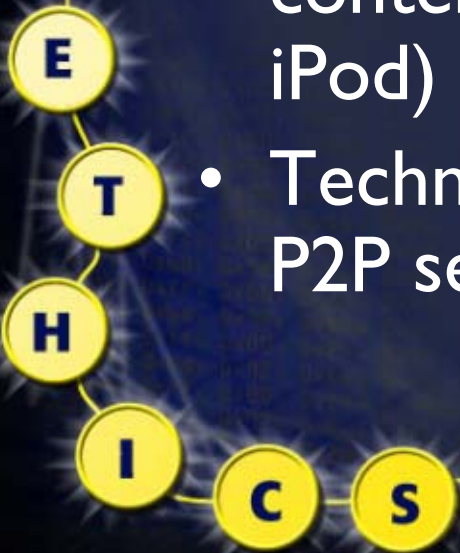
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File Sharing: Pay Sites

- Example: **PressPlay, AppleMusic**
- Owned and operated by the large recording companies
- Users pay per song or album
- Some providers only allow you to download content to single machine and not copy content to CD or external music player (e.g. iPod)
- Technologically similar to the first generation P2P services (e.g. Napster)



The Legal Side of P2P:

Copyright Laws

- **Copyright Act of 1976**
 - △ defined “Fair Use” guidelines
- ***Sony v. Universal* [“Betamax” case] (1984)**
 - △ allowed home users to make video recordings of TV shows for archival purposes
 - △ also allowed potentially infringing technologies if they had significant non-infringing uses
- **Digital Millennium Copyright Act [DMCA] (1998)**
 - △ clouds the issue of permissible use, and thus degree of ownership

The Legal Side of P2P: Fair Use

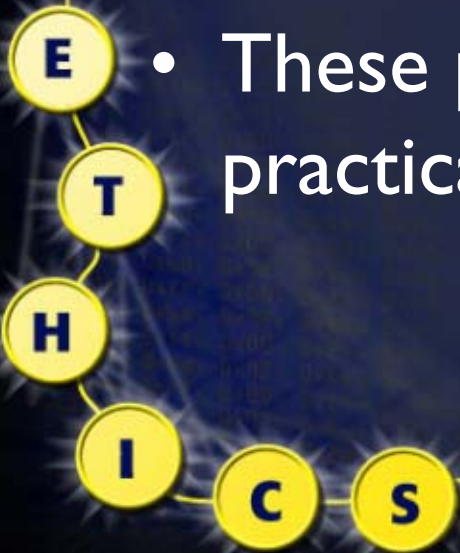
The **Copyright Act of 1976** outlines the uses of copyrighted works that may be considered by the courts as “fair” (and thus permissible) by evaluating the use against following four criteria:

1. **Purpose:** is the proposed copying for commercial or non-profit use?
2. **Nature:** is the copied work factual or creative?
3. **Relative amount:** how much (as a percentage) of the original work is being copied?
4. **Effect:** what is the market effect of the alleged

The Legal Side of P2P: DMCA

- Passed by Congress in 1998, the **DMCA** makes it a crime to:
 - △ circumvent any means of encryption or protection of copyrighted works
 - △ traffic such encryption software
- These provisions significantly limit the practical extent of fair use

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The Legal Side of P2P: Ownership

- With the passage of the DMCA, many questions of ownership and permissible usage have arisen:
 - △ who actually owns the content on digital media?
 - △ what rights is the owner of the media entitled to? (e.g. can the owner make backup copies of the media?)

The Legal Side of P2P: Liability

- Who exactly should be held liable for copyright infringement on P2P networks?
 - △ Individual consumers (e.g. Napster users)
 - △ Internet Service Providers (e.g. *Verizon v. RIAA*)
 - △ Businesses or Universities (e.g. Penn State)

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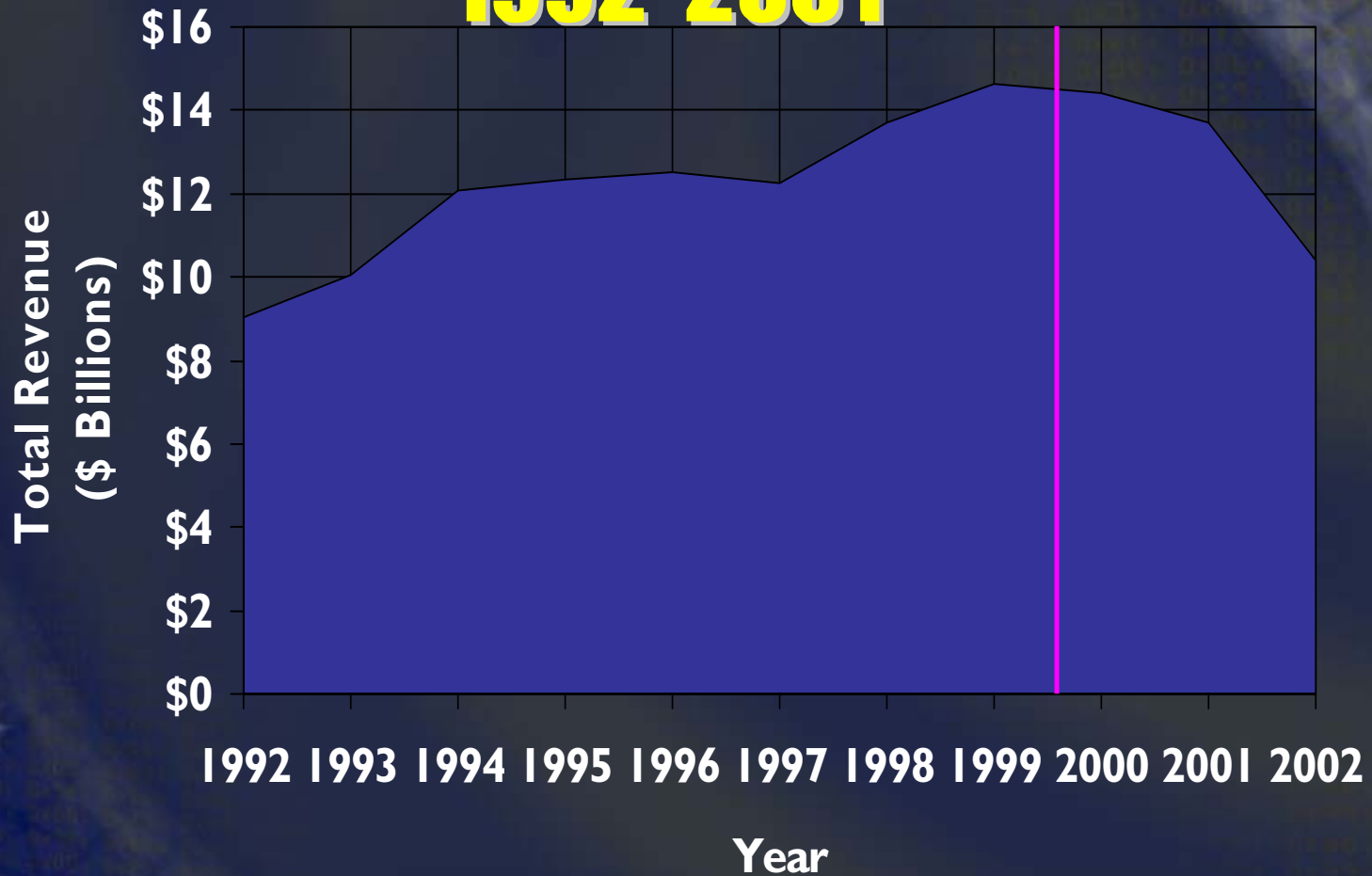
The Piracy Myth:

The Entertainment Industry Data

- Every year, the MPAA estimates that \$3 billion is lost to non-Internet movie piracy.
- Similarly, the RIAA estimates that \$1 billion in revenue is lost annually to overseas piracy.
- Recently, however, the entertainment industry has blamed Internet users and the proliferation of digital downloads for the slump in sales.

Consider the example of the music industry...

Total Music Sales Revenue 1992-2001



Sources: RIAA Website <http://www.riaa.org> (1992-2000); Nielsen SoundScan (2001-2002)

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New Music Releases 1992-2001



Sources: RIAA Website <http://www.riaa.org> (1992-2000); Nielsen SoundScan (2001-2002)

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Music Revenue per Release 1992-2001



Sources: RIAA Website <http://www.riaa.org> (1992-2000); Nielsen SoundScan (2001-2002)

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The Piracy Myth:

Demographics of Digital Media Users

Type of User	Burning Frequency	% of pop.	% of total sales	CD purchased per year
Non-users	Never	54	39	2.7
Beginning	1-2 CDs per month	24	25	4.9
Intermediate	3-8 CDs per month	17	21	6.1
Heavy	9+ CDs per month	5	15	9.7

Sources: Dan Bricklin, RIAA

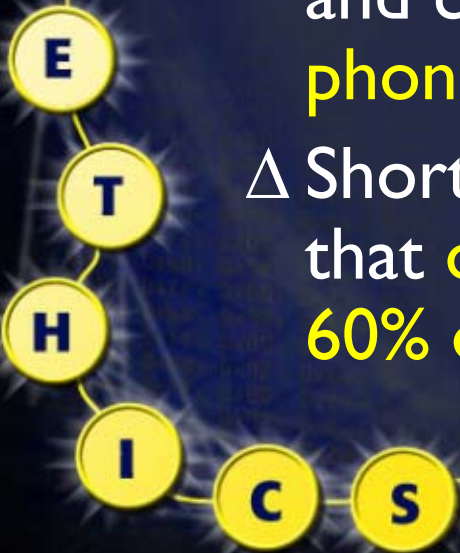
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The Piracy Myth Demystified: Record Sales Data Explained

- Here are some of the REAL reasons why we feel CD sales are in a rut... and none of them are piracy:
 - △ The slowing economy (aka **the dot-com collapse**)
 - △ Competition of other forms of entertainment and communication (e.g. **DVD, mobile phones**)
 - △ Shorter radio playlists (especially considering that **one company – ClearChannel – controls 60% of the rock stations**)



P2P Consumer Ethics:

Western Philosophical Traditions

- **Utilitarianism**
 - P2P technologies enable consumers to receive a large amount of utility at the expense of only a few (i.e. producers).
- **Rights-based** (Thomas Hobbes)
 - P2P technologies facilitate the person's rights to pursue happiness.
- **Communism** (Karl Marx)
 - Since all property is communal, or owned by the whole of the community, P2P is just a means to facilitate the sharing of the goods.

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P2P Ethics:

Eastern Religious and Philosophical Traditions

- Buddhism: the entire structure of the Music Industry at the present is wrong. Reorganization on communal basis, sharing and more direct consumer to artist communication is desirable.
- Taoism: harmony above all, so a state of peer to peer sharing is very harmonious, and thus beneficiary. Again the current system needs change, perhaps best exemplified by Apple music.
- Confucianism: clearly against peer to peer sharing, as it disrupts an established hierarchy, under which peer to peer sharing has no place

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The Artists' Perspective

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The Artists Perspective

- On one side of the copyright divide are users of music from general public to musicians who wish to incorporate another's song into their own
- Other side are musicians and their sponsors who wish to have the lyrics and music they have created protected to stop other people from using them unfairly.

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Positive Effects on Artists

- market and promote music to mass audiences
- foster creativity and generate “buzz”
- help emerging artists spread word
- build loyal following, establish brand name
“great way for fans to taste an album before they buy it”

– Fred Durst, Limp Bizkit



Negative Effects on Artists

- lost source of income
- not getting credit for their creation
- art being traded like a commodity

“The trading of such information – whether it’s music, videos, photos, or whatever – is, in effect, trafficking in stolen goods.”

- Lars Ulrich, Metallica



Metallica vs. Napster



- Metallica began as an unknown band that built a loyal following by encouraging fans to record its live shows and distributing bootlegging tapes as widely as possible.
- Now, copyright infringement suit against Napster.. Dr. Dre soon followed with another suit
- Suit filed by RIAA resulted in Napster being ordered to halt the trading of copyrighted material over the Internet.

Response of other artists

- In a vain attempt to prevent P2P users from swapping songs off her new American Life album, Madonna floods file-sharing networks with dummy tracks.



- Counterproductive, since her website was hacked and tracks from American Life were offered for download off her own personal website

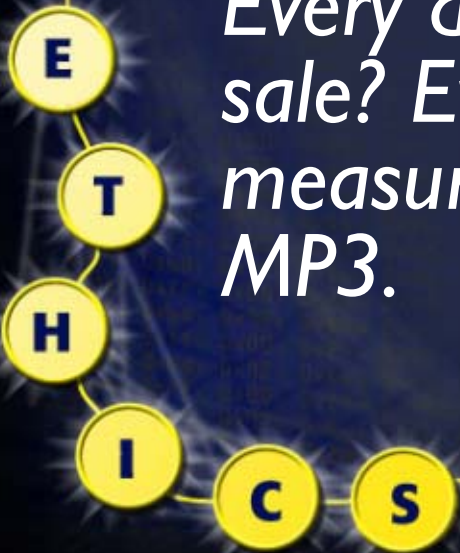
Ethical Issues

Should music be shared and experienced rather than bought and sold?

Countless numbers use MP3 and Napster to avoid buying music they want. Is this considered theft? Does the fact that record companies overcharge justify that “theft?”

Every downloaded song a potential CD sale? Every dozen songs? No way to measure accurately the financial impact of MP3.

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P2P Artists' Ethics

Communitarianism

- users expected to consider whether his actions conform to traditions of sharing
- Do actions promote or reinforce communal values?
- if artists disapprove of sharing, then relationship between users and artists is strained → music downloading against communitarianism

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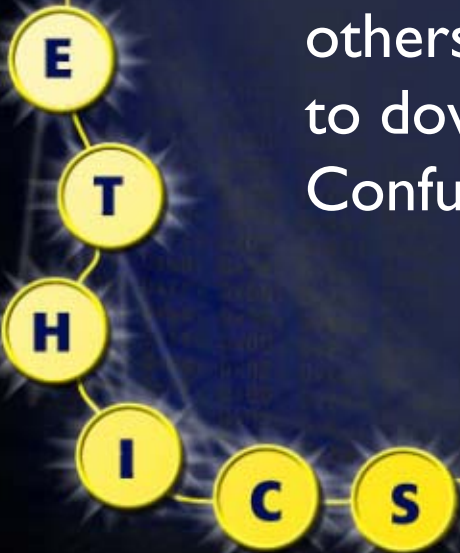
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P2P Artists' Ethics

Confucianism

- Famous Confucian maxim: "Never do to others, what you would not like them to do to you." → Users probably would not want artists taking their creation and sharing
- Confucianists put an emphasis on sympathizing over others when they are suffering → Users continuing to download while artists are suffering is against Confucianist doctrine

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The Producers' Perspective

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Video can be found online at
<http://www.musicunited.org/images/spot%201.avi>

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The Problem

- Same basic problem, new guise
 - Cassette Recorders => MP3
 - VHS/Betamax => MPG
- Abuse of technology
 - Easy & efficient ~~file transferring~~ crime

Peer to peer technologies' killer app is piracy

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Why Piracy is BAD

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- Economics of content
 - Only 15% of music recordings make a profit
 - 40% of movies do not break even domestically
- Physical piracy costs billions
 - RIAA : \$4.2 Billion/year
 - MPAA : over \$3 Billion/year
 - Online piracy causes “untold additional damages”
- Hurts more than just millionaires
 - CD plant workers, retailers – lost wages
 - **Consumers**

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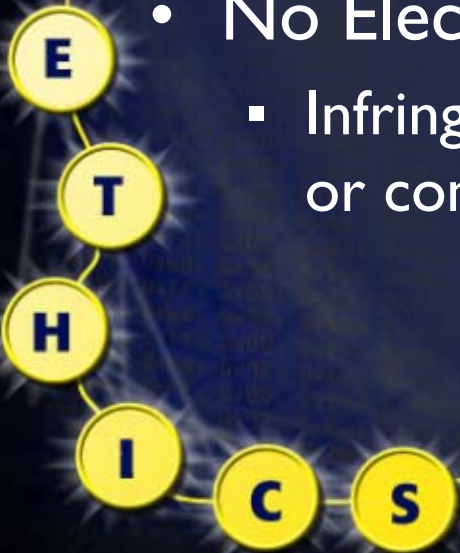
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Legal Remedies

- Title 17, US Code
 - Artists have sole right to reproduce their work
- Digital Millennium Copyright Act
 - Criminalizes circumvention of anti-piracy measures
 - Outlaws manufacture and sale of devices used to circumvent said measures
- No Electronic Theft Act
 - Infringement on copyright illegal regardless of profit or commercial gain



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Producers' View of Ethics

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- Kantianism
 - Getting content free is a contradiction – no one would make any
 - Categorical imperative – rules irrespective of desires. Not OK to download just because you want to.
- Utilitarianism
 - Copyright infringers do not consider utility of producers and artists
 - Consider honesty, integrity having intrinsic worth i.e. utility, thus file-swapping reduces utility
- Rights-based Ethics
 - Producers and artists have the right to control the distribution of their creations
 - File-sharing takes away that right and is therefore unethical

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Producers and Buddhism

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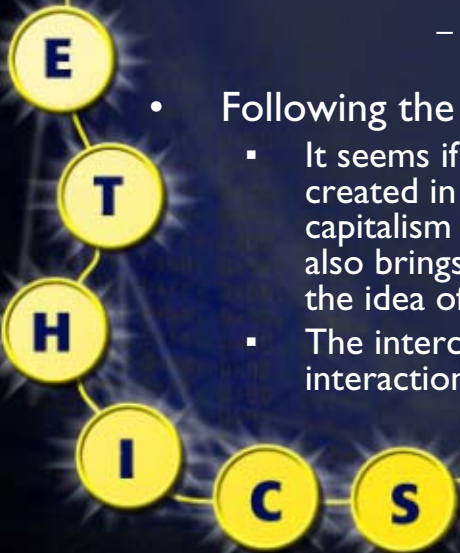
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- Applying the eight-fold path
 - Right Action
 - Refrain from stealing/taking what is not given
 - Mindful of the rights of others
 - Right Thoughts
 - Oppose sense-pleasures
 - Consumers do not consider the mental, financial and suffering of producers when their work is stolen
 - Right Intention
 - Producers intents include keeping an economical system running and providing jobs and products to the community. They must keep a broad view of everyone else's needs in order to survive.
 - Consumers intents in downloading products which they have not paid for is selfish and serves only them.
 - Right Speech
 - The message consumers are giving is that it is right to steal and be inconsiderate.
 - Some consumers accuse producers of bad practices giving little evidence.
 - Right Livelihood
 - Those who do not follow the eight-fold path are not ensuring that they are living a righteous.
 - Right Effort
 - Consumers can follow this tenant if they understand that downloading what they do not own is equivalent to stealing and should make an effort to reform themselves and others.
 - Producers involve large networks of people and attaining their goals means meeting the goals of others as well.

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Producers and Buddhism

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- Where Consumers and Producers meet
 - It is important to note that producers are not perfect in the light of Buddhism, however, unethical consumers lack in more areas (as stated earlier)
 - The following is where producers as well as consumers fail to meet the tenants of Buddhism:
 - Right Concentration
 - It seems that both sides are not oriented toward a single goal, rather, each have sets of goals to meet.
 - Illegal downloaders fail to look deeper in to the consequences of their actions.
 - Right Mindfulness
 - P2P technology and contemplating issues of the body, feeling, state of mind and phenomena are ideas neglected in discussions and debates
 - What is this technology doing to our essence? This question is yet to be addressed because of the difficulty in acquiring axiological data.
 - Desire/Suffering
 - Producers may create a desire for product, however, this is spawned by the inherent desire in the consumers.
 - Consumers who illegally download create a desire in the producers to get what seems rightfully theirs.
- Following the Path
 - It seems if the path was fully followed then a whole new paradigm would need to be created in the structure of society itself, since there is desire and craving built into capitalism and the market structure that most of the world runs on today. P2P technology also brings up the issue of ownership, which by some Buddhist tenants is a non-issue since the idea of individualism does not apply.
 - The interconnectivity of P2P actually disconnects users from physical and emotional interaction and would be considered a deviation from the path.

Producers and the Master Mentality

- Consumers perpetrate the *master mentality*
 - Backgrounding
 - The valuable services provided by producers—management, distribution, marketing—are ignored by consumers
 - Instrumentalism
 - Consumers feel that the role of a producer is determined by the needs of the consumer
 - But, producers have their own concerns
 - Homogenization
 - Consumers lump all producers into one group and do not consider individual record companies on a case by case basis.

Common Misconceptions

- Fair Use
 - Downloading content for which you have no license is ILLEGAL
 - In practice, very little “fair use” occurs on P2P networks – vast majority of traffic is piracy-related
- Victimless Crime
 - Ease of committing the crime doesn't make it OK
 - Victims include : record companies and employees thereof (including artists) as well as network providers – bandwidth costs money

Proposed Solutions

Fire with Fire – **Technology vs. Technology**

- MusicGuard, SecuROM, CD-Protect, Softlock
 - Basically restricts copying
 - Some allow for backups
- Digital Rights Management
 - Conjunction hardware and software that puts copy control back to the IP owner
 - Allows for backups and portable reader copies
- Social Pressure
- Legal online distribution ventures

Current Events

- Cases in litigation
 - RIAA vs. Verizon
 - Artists vs. pirates
- AppleMusic.com
- College Students Settle

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