

Copyright Infringement

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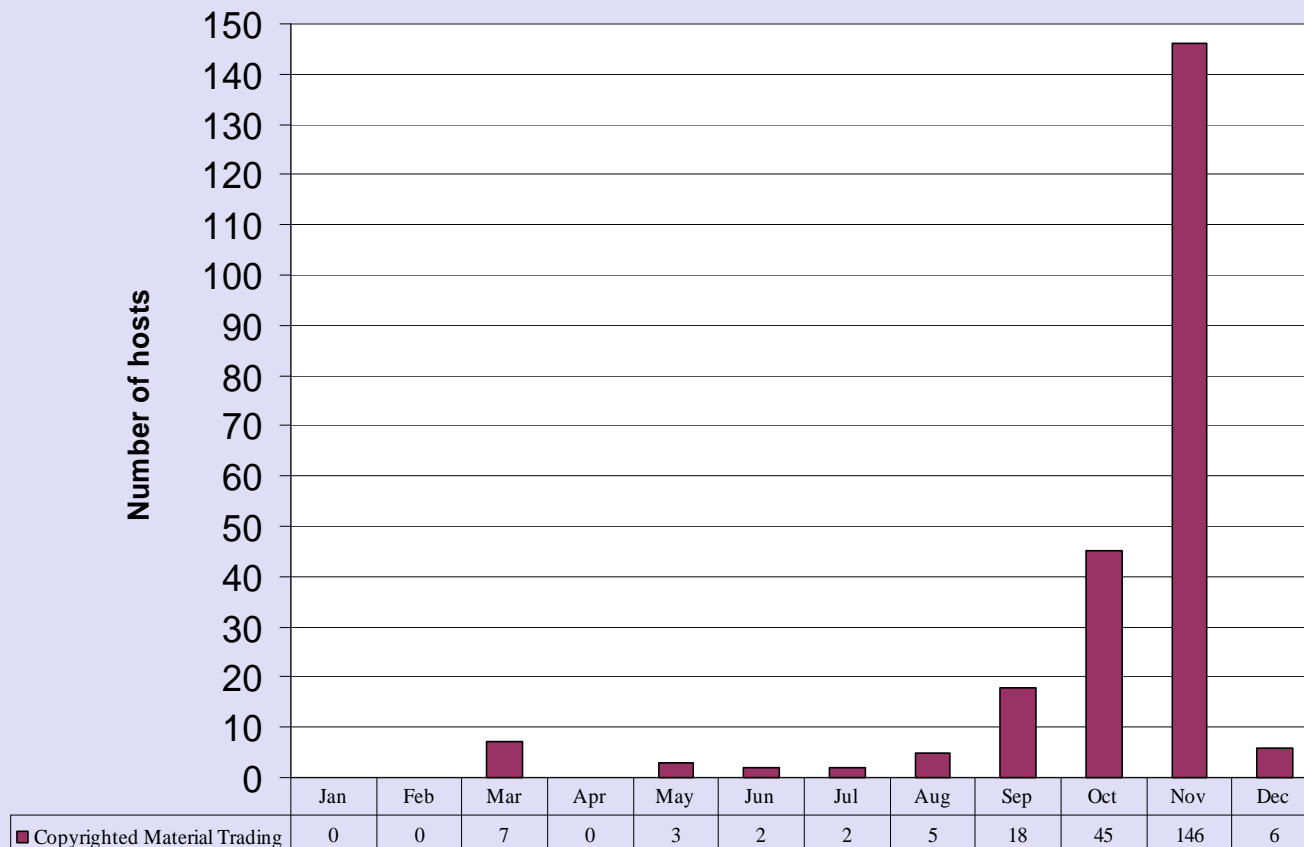
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Copyright Violations in perspective

- Processing complaints is labor intensive
 - We conservatively estimate that each incident requires two person-hours of work to resolve.
 - This is not only a significant drain on resources, but an expensive proposition.
- Violations present not only ethical issues, but a significant legal (financial) risk.
- Probably only a small fraction of the actual violations were reported, so this could really get out of hand.

Unique Copyright Incidents reported per month for 2001

Copyright Incidents in 2001



What are we doing now?

- Complaints arrive and are processed by the Incident Response Team (IRT).
- Log data is used to match the IP Address at time of complaint with MAC (Ethernet) address of suspect's system.
- Network Systems (NSG) is called upon to associate the MAC Address with a physical location, usually by active tracing.
- Directory data is used to match the physical location with residents of that location.
- Data is bundled and given to consulting services to contact residents, identify the culprit, and resolve the situation.

Problems

- 148 incidents in November * 2 person hours per incident = 296 person hours / 7 hours per day / 19 working days in November = 2.22 persons.
- Tracing of the MAC Address requires the host to be (recently) online.
 - Some students don't turn their computers on between 9am and 5pm.

Problems

● Documentation Errors

- Matching MAC Address to physical location
- Matching physical location to residents
 - The Office of Housing uses apartment numbers.
 - Network documentation uses the building plan numbers.
- Rooms have more than one occupant.

● Contacting users is tedious.

- Contacting users is slow, tracking responses is tedious.
- Users often have many questions about the law and how to use their Peer-to-Peer applications that can consume a lot of consulting time.

Solution

- Network Registration is going to be required.
 - This will replace the IP to MAC, MAC to physical location, physical location to resident lookup process, which will substantially reduce processing delays
 - We are still testing ways to implement this via NetReg, PPPoE, VPN, and others.
- Automate the contact and tracking part.
- Allow students the full rights under DMCA while getting BU out of the middle.

Implementation

- A complaint arrives from somewhere
- The Incident Response Team (IRT) associates a user with the offending system via logs from network authentication system.
- Data about the offending user is placed in a database.
- Database management scripts mail the offending user indicating their offense.

The e-mail

- User is informed of violation
 - Complaining Authority (Sony (NetPD), Warner Bros., BU IRT)
 - Material found that is in violation of copyright
 - Date and Time of violation
 - Application used for violation, if known
- User is referred to a web site to respond to the allegation.
- User is told that they have until noon of the second business day after the notification was posted to visit the website and enter a plea.

The Web Site

- You have been reported to be in violation of the Digital Millennium Copyright Act (DMCA) as explained in the e-mail sent to you.
- Resources
 - What is the DMCA and copyright law?
 - How do I turn off file sharing in this application?
 - <http://www.rescomp.berkeley.edu/resources/news/20010911/>
 - Why did I get this e-mail? What's going on?

The Web Site

● Kerberos authentication

- We know who received the e-mail this way.
- Allows us to track user identity.

● You may:

- Claim that you are not currently in violation of the DMCA and will not be in violation in the future.
- Claim that you believe you have the legal right to distribute the material in question.

I didn't do it!

- Users may claim that they are not in violation now and will not be in violation in the future.
- Users are thanked and recorded in the database as having responded to the e-mail.
- The complaining site will be automatically e-mailed stating that we believe we are now in compliance with DMCA.

I did it, and I'll do it again!

- User is told that their contact information will be forwarded to complaining authority if they proceed with this plea.
- User is allowed to change their plea or stick to the plea.
- If they stick to the plea, their contact information is sent to the party that generated the complaint, enabling them to directly sue the violator, and taking us out of the middle.

Just Say No!

- The database manager will watch for signs that the same user has been in the database multiple times and indicated that they aren't in violation each time.
- When such a user is found, the database manager will notify the security team.
- The security team will refer the user to the Dean of Students for disciplinary action!

Ok, I plead the fifth!!

- What happens if a user never visits the web page?
- At noon on the second business day, the database manager notifies the security team.
- The user's network access and kerberos password are disabled.
- The user is referred for disciplinary action.

Disciplinary Action

- User has meeting with the Dean of Judicial Affairs as per the student lifebook.
- Dean may impose fines or other sanctions based on the offense as well as other forms of restitution.
- Dean may require a student with disabled network access to pay restitution to Information Technology for manpower before getting network access restored.

Remaining Work

- All of it.
- Check back with us at the Security Camp @ MIT in the summer.