

**UNITED STATES OF AMERICA
BEFORE THE FEDERAL TRADE COMMISSION**

IN THE MATTER OF

Michael J. Daugherty,
President, LabMD Inc.

ORIGINAL



**MICHAEL DAUGHERTY'S PETITION TO LIMIT OR
QUASH THE CIVIL INVESTIGATIVE DEMAND**

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**MICHAEL DAUGHERTY'S PETITION TO QUASH
THE CIVIL INVESTIGATIVE DEMAND**

Petitioner Michael Daugherty, in his capacity as president of LabMD, Inc., hereby petitions the Federal Trade Commission ("FTC"), pursuant to 16 C.F.R. § 2.7(d), to quash the Civil Investigative Demand ("CID") issued to Petitioner on December 21, 2011. The FTC issued the CID pursuant to its alleged authority under Section 20 of the Federal Trade Commission Act, 15 U.S.C. § 57b-1 and therein makes various demands, including the production of all documents related to any "security risk, vulnerability, and incidents through which [Petitioner's] documents and information [] either were or could have been disclosed to unrelated third parties."¹ Petitioner respectfully submits that the FTC lacks the authority to issue the CID in its entirety. Accordingly, Petitioner respectfully petitions the Commission to quash the CID.²

I. FACTUAL SUMMARY

Petitioner is the president of LabMD, and the present CID was issued to Petitioner in his capacity as LabMD's president. Although the CID is worded in the broadest possible manner, it appears to be premised on the third-party download of a single document belonging to LabMD, Inc. (the "1,718 File"). The 1,718 File, which contained personally identifiable information ("PII") and protected health information ("PHI") about some of LabMD's patients, was illegally downloaded from LabMD's computers in February of 2008. To Petitioner's knowledge, no other incidents such as this have occurred, nor does the CID reference or allege any additional incidents (despite the absence of any limitation to the CID's testimonial and documentary

¹ A true and correct copy of the December 21, 2011 Civil Investigative Demand is attached hereto as Exhibit A.

² This petition to quash is based on the FTC's lack of authority to issue a CID to LabMD on the basis of the 1,718 File incident. However, Petitioner explicitly reserves any and all arguments or claims concerning the CID itself in the event that the FTC is found to have the requisite authority to issue a CID targeting LabMD on the basis of the 1,718 File incident.

requests). Therefore, and because there is no other conceivable basis for the CID, Petitioner sets forth the facts surrounding the 2008 download of the 1,718 File, all of which are part of the FTC's private investigation record and/or are currently being adjudicated by a federal court in a civil action that LabMD brought against the parties who illegally downloaded the 1,718 File.

A. The 1,718 File Was Illegally Downloaded By Tiversa, Inc., A Technology Corporation Using Patented Computer Technology, With The Support Of Federally-Funded Researchers At Dartmouth College

Tiversa, Inc. is a Pennsylvania Corporation who provides peer-to-peer ("P2P") intelligence services to corporations, government agencies, and individuals based on its patented EagleVision X1 technology that can monitor over 550 million computer users daily.³ On information and belief, both Tiversa and its partner, Dartmouth College, accepted federal funds from the National Institute of Standards and Technology, the United States Department of Justice, the United States of Homeland Security, and the National Science Foundation, among other governmental agencies, to develop P2P search technology. During a 2007 congressional hearing, Tiversa testified that its proprietary technology allowed it to process 300 million searches per day, or over 170 million more searches than Google was processing per day.⁴ At the same hearing, Tiversa admitted that it had downloaded computer files containing, but by no means limited to –

federal and state identification, including passports, driver's license, Social Security cards, dispute letters with banks, credit card companies, insurance companies, copies of credit reports--Experian, TransUnion, Equifax, Individual bank card statements and credit card statements, signed copies of health insurance cards, full copies of tax returns, active user names and passwords for online banking and brokerage accounts and confidential medical histories and records.⁵

³ See Company Overview, Website for Tiversa, <http://www.tiversa.com/about/>.

⁴ See Tiversa's July 24, 2007 testimony before the United States House of Representatives Committee on Oversight and Government Reform, a true and correct copy of which is attached hereto as Exhibit B, at 3.

⁵ *Id.* at 5.

Two years later, in April of 2009, Dartmouth College published a paper entitled *Data Hemorrhage in the Health-Care Sector*.⁶ The paper was based upon activities “conducted in collaboration with Tiversa” using Tiversa’s proprietary technology⁷ and was financially supported by a U.S. Department of Homeland Security Grant Award issued under the auspices of the Institute for Information Infrastructure Protection.⁸ According to the paper, Tiversa and Dartmouth began their project by “looking for files from top ten publicly traded health-care firms” that were available on P2P networks.⁹ As part of the initial search, Tiversa and Dartmouth manually reviewed 3,328 computer files downloaded from P2P networks, many of which contained PII and PHI.¹⁰

Following their initial search, Tiversa and Dartmouth undertook a second search (“Second Search”) lasting approximately six months.¹¹ During the Second Search, Tiversa and Dartmouth downloaded closed to four million documents, including over 20,000 medical patient records.¹² Tiversa described the evolving technology it used for the Second Search in a 2009 hearing before the United States House of Representatives Subcommittee on Commerce, Trade and Consumer Protection (“2009 CTC hearing”). Tiversa testified that, through the use of its proprietary software, it “can see and detect all previously undetected activity” and “where an individual user can only see a very small portion of a P2P file sharing network, [it] can see the

⁶ A true and correct copy of the April 2009 paper is attached hereto as Exhibit C.

⁷ *Id.* at 1.

⁸ *Id.*

⁹ *Id.* at 8.

¹⁰ *Id.* at 9-11.

¹¹ *Id.* at 11.

¹² *Id.* at 13 (referencing the 20,000 medical patient records that were downloaded); *see also* Tiversa’s May 4, 2009 testimony before the United States House of Representatives Subcommittee on Commerce, Trade and Consumer Protection, a true and correct copy of which is attached hereto as Exhibit D, at 10 (referencing the nearly four million documents that were downloaded).

P2P network in its entirety in real time.”¹³ Further, Tiversa “processed as many as 1.6 billion P2P searches per day, approximately 8 times that of web searches entered into Google per day”.¹⁴ To showcase its technology, during the hearing Tiversa, performed a “live demonstration” whereby it intentionally searched for and downloaded over 275,000 tax returns.¹⁵

On July 29, 2009, Tiversa appeared before the United States House of Representatives Committee on Oversight and Government Reform and testified further about the technology it had used to perform the Second Search.¹⁶ According to its testimony, Tiversa deployed newly developed P2P search technology that allowed it to penetrate even “the most technologically advanced” computer security despite the presence of “firewalls and encryption.”¹⁷ It was with this technology, and during the Second Search, that Tiversa and Dartmouth downloaded the 1,718 File, a copy of which Tiversa produced at the 2009 CTC hearing.¹⁸

B. LabMD’s Lawsuit Against Tiversa and Dartmouth College

Rather than agreeing to destroy its copies of the 1,718 File or explain to LabMD how it had downloaded the 1,718 File, Tiversa solicited LabMD on six occasions to purchase its security services in order to “remediate” any issues involving the 1,718 File.¹⁹ For example, on May 15, 2008, Tiversa informed LabMD that any information regarding the means by which it acquired the 1,718 File “would require a professional services agreement.”²⁰ Dartmouth,

¹³ Ex. D at 3-4.

¹⁴ *Id.* at 4.

¹⁵ *Id.*

¹⁶ A true and correct copy of Tiversa’s July 29, 2009 testimony before the United States House of Representatives Committee on Oversight and Government Reform is attached hereto as Exhibit E.

¹⁷ Ex. E at 3.

¹⁸ Ex. B at 11.

¹⁹ *See infra* note 22, Ex. F at ¶¶ 72-98.

²⁰ *Id.* at ¶ 87.

meanwhile, used federal funding to publish at least two additional papers discussing the activities leading to the download of the 1,718 File.²¹

On November 23, 2011, LabMD filed suit against Tiversa and Dartmouth alleging, among other things, computer fraud, computer crimes, conversion, and trespass.²² Tiversa, with the support of Dartmouth, was and is running an extortionist scheme whereby it uses its government-funded technology to penetrate computer networks, download confidential files, and then sell the files back to the owners under the guise of providing network security.

II. ARGUMENT

A. The FTC's Authority Under Section 45

While 15 U.S.C. § 45(a) grants the FTC the authority to investigate deceptive or unfair practices affecting commerce, this authority is not without limits. Likewise, although Congress has empowered the FTC under Section 57b-1 to issue CIDs in support of investigations undertaken pursuant to Section 45, a CID is only enforceable to the extent it rests on a legitimate exercise of Section 45 authority. In part for this reason, CIDs are not self-enforcing and the target of a CID is entitled to judicial review of a CID to prevent misuse of the FTC's statutory authority.²³

In *U.S. v. Morton Salt Co.*, the United States Supreme Court established the standard for determining when a CID should be quashed.²⁴ Although the Court enforced the decree at issue in

²¹ *Id.* at ¶¶ 100-102.

²² *LabMD Inc. v. Tiversa, Inc.*, No 1:11-cv-4044 (Nov. 30, 2011 N.D. Ga.). A true and correct copy of the Complaint is attached hereto as Exhibit F.

²³ *See, e.g., SEC v. Arthur Young & Co.*, 584 F.2d 1018, 1024 (D.C. Cir. 1978), *cert denied*, 439 U.S. 1071 (1979) ("The federal courts stand guard, of course, against abuses of their subpoena-enforcement processes . . .") (citing *U.S. v. Powell*, 379 U.S. 48, 58 (1964) and *Oklahoma Press Publ'g Co. v. Walling*, 327 U.S. 186,216 (1946)); *D.R. Horton, Inc. v. Jon Leibowitz, Chairman*, No. 4:IO-CV-547-A, 2010 WL 4630210, at *2 (N.D. Tex. Nov. 3, 2010). ("As the government notes in its motion documents, the CID is not self-executing, and may only be enforced by a district court in an enforcement proceeding.")

²⁴ 338 U.S. 632 (1950).

that case, it recognized that “a governmental investigation into corporate matters may be of such a sweeping nature and so unrelated to the matter properly under inquiry as to exceed the investigatory power” of the agency.²⁵ Accordingly, the Court held that agency subpoenas or CIDs should not be enforced if they demand information that is: (a) not “within the authority of the agency,” (b) “too indefinite,” or (c) not “reasonably relevant to the inquiry.”²⁶ This standard has been consistently applied by the federal judiciary.²⁷ For example, in *SEC v. Blackfoot Bituminous, Inc.*, the Court of Appeals for the Tenth Circuit confirmed that “an agency must show that the inquiry is not too indefinite, is reasonably relevant to an investigation which the agency has authority to conduct, and all administrative prerequisites have been met”.²⁸

The costs and burdens imposed by a CID must also be considered.²⁹ An administrative agency may not use its investigative powers to go on a fishing expedition.³⁰ Rather, a CID must be based on a justifiable belief that wrongdoing has actually occurred. The Supreme Court did

²⁵ *Id.* at 652

²⁶ *Id.*

²⁷ *See, e.g., SEC v. Blackfoot Bituminous, Inc.*, 622 F.2d 512 (10th Cir. 1980) (citing *Morton Salt*, 338 U.S. at 653) (confirming that “to obtain judicial enforcement of an administrative subpoena, an agency must show that the inquiry is not too indefinite, is reasonably relevant to an investigation which the agency has authority to conduct, and all administrative prerequisites have been met”).

²⁸ *Id.* at 514; *see also Arthur Young & Co.*, 584 F.2d at 1030-31 (noting that a subpoena request must “not [be] so overbroad as to reach into areas that are irrelevant or immaterial” and that specifications must not exceed the purpose of the relevant inquiry) (internal quotation marks and citation omitted); *FTC v. Mt. Olympus Fin. LLC*, 211 F.3d 1278 (10th Cir. 2000) (“the documents requested were reasonably relevant to an inquiry clearly within the authority of the FTC”); *United States v. Construction Prods. Research, Inc.*, 73 F.3d 464, 471 (2d Cir. 1996) (stating that “the disclosure sought must always be reasonable”); *FTC v. Invention Submission Corp.*, 965 F.2d 1086, 1089 (D.C. Cir. 1993) (holding that a CID is enforceable only “if the information sought is reasonably relevant”); *FTC v. Texaco, Inc.*, 555 F.2d 862, 881 (D.C. Cir. 1977) (stating that the “the disclosure sought shall not be unreasonable”).

²⁹ *See, e.g., FTC v. Texaco, Inc.*, 555 F.2d 862, 882 (D.C. Cir. 1977) (a party challenging a subpoena can successfully do so on the grounds that compliance would be overly burdensome or unreasonable); *see also Phoenix Bd. Of Realtors, Inc. v. Dep't of Justice*, 521 F. Supp. 828, 832 (D. Ariz. 1981) (the government should narrow the scope of a CID when compliance may be overly burdensome).

³⁰ *See FDIC v. Garner*, 126 F.3d 1138, 1146 (9th Cir. 1997); *FTC v. Nat'l Claims Serv., Inc.*, No. S. 98-283, 1999 WL 819640, at * 1 (E.D. Cal. Feb. 9, 1999). *See also* S. Rep. 96-500 at 4, 96th Congress 1st Session (1979) (“The FTC's broad investigatory powers have been retained but modified to prevent fishing expeditions undertaken merely to satisfy its 'official curiosity.'”).

not equivocate in *FTC v. Am. Tobacco Co.* when it made clear that “[i]t is contrary to the first principles of justice to allow a search through all the respondents' records, relevant or irrelevant, in the hope that something will turn up.”³¹ And, of course, the mere fact that a party has suffered a data security incident does not imply any wrongdoing on the part of the victimized party.³² That is especially so when (as here) there are no allegations that the petitioner violated any established public policy or that petitioner’s customers suffered any injury as a result of the data incident.³³

B. There Is No Basis Under Section 45 To Support Enforcement Of The Present CID, Which Is In All Events Exceedingly Overbroad And Unduly Burdensome

In the present case, there is no basis under Section 45 for imposing a highly burdensome CID upon Petitioner to investigate either 1) the download of the 1,718 File by Tiversa and Dartmouth specifically or, 2) LabMD’s data security generally. As an initial matter, Tiversa and Dartmouth’s use of government-funded, highly-proprietary, and patented technology — which according to Tiversa’s congressional testimony can penetrate even the most robust network security³⁴ — to download the 1,718 File in February of 2008 cannot conceivably amount to an unfair or deceptive practice on the part of Petitioner or LabMD. Indeed, according to Tiversa

³¹ 264 U.S. 298,306 (1924).

³² See, e.g., Holly K. Towle, Let’s Play “Name that Security Violation!”, 11 *Cyberspace Lawyer*, Apr. 2006, at 11.

³³ “Unjustified consumer injury is the primary focus of the FTC Act.” Unfairness Statement, 104 F.T.C. 949, 1073 (1984); see also *id.* at 1076 (if a public policy is not well-established, the agency will “act only on the basis of convincing independent evidence that the practice was distorting the operation of the market and thereby causing unjustified consumer injury”).

³⁴ Ex. E at 3, 6, 8 (concluding that “the inadvertent file sharing through P2P File Sharing networks is highly pervasive and large in magnitude. It affects consumers, corporations of all sizes, and government agencies”).

itself, the security issues enabling the download of the 1,718 File were not unique to LabMD, but were common to almost every networked computer in the country.³⁵

Likewise, the FTC cannot point to any public policy existing in February of 2008 that LabMD violated, thereby enabling Tiversa and Dartmouth to download the 1,718 File. To date, the FTC has not enacted any rules or standards regarding issues associated with P2P networks, which is the FTC's most common remedy for problematic issues "that occur on an industry-wide basis."³⁶ And it was not until 2010 that the FTC began notifying organizations that failure to take adequate steps to protect against the security issues posed by P2P networks could result in liability under federal law.³⁷ 2010 was also the year in which the FTC first published *Peer-to-Peer File Sharing: A Guide for Business*.³⁸ Thus, by all accounts, the present CID seeks to hold LabMD's 2008 conduct to a standard of perfect security, a standard that the FTC itself has made clear is impossible to attain.³⁹ This is not only unfair and unreasonable, but it grossly exceeds the FTC's authority under Section 45 to investigate unfair and deceptive practices as the 2008 download of the 1,718 File by Tiversa and Dartmouth is evidence of neither.

And yet, based apparently on nothing more than possession of the 1,718 File, the CID seeks, among other things, production within 30 days of all documents relating in any manner to

³⁵ *Id.*

³⁶ A Brief Overview Of The Federal Trade Commission's Investigative And Law Enforcement Authority, July 2008, Section II(b), *available at* <http://www.ftc.gov/ogc/brfovrw.shtm>.

³⁷ *See FTC Warns of Breach Risk From P2P File-Sharing*, 9 No. 3 Employer's Guide HIPAA Privacy Requirements Newsl. 4 (Apr. 2010).

³⁸ *Available at* <http://business.ftc.gov/documents/bus46-peer-peer-file-sharing-guide-business>.

³⁹ *See* Statement of the Federal Trade Commission Before the House Subcomm. on Technology, Information Policy, Intergovernmental Relations, and the Census, Comm. on Government Reform (Apr. 21, 2004) at 4 ("The Commission recognized that there is no such thing as 'perfect' security and that breaches can occur even when a company has taken all reasonable precaution."), *available at* <http://www.ftc.gov/os/2004/04/042104cybersecuritytestimony.pdf>. *See also* Deborah Platt Majoras, *The Federal Trade Commission: Learning from History as We Confront Today's Consumer Challenges*, 75 UMKC L. Rev. 115, 128 (2006) ("The laws and rules we enforce do not require that information security be perfect. Such a standard would be costly and unobtainable.").

all of LabMD's security practices and policies (without temporal limitation). This is not only unduly burdensome, and therefore unenforceable,⁴⁰ but the overwhelming majority of documents related to LabMD's security practices and policies, past and present, have nothing to do with the 2008 download of the 1,718 File. There is absolutely no basis for using the 1,718 File download as a springboard to conduct a costly and burdensome fishing expedition into LabMD's security practices and procedures.⁴¹

The FTC's timing here is also troubling. The 2008 download of the 1,718 File was explicitly reviewed by at least two congressional committees (none of which recommended taking any course of action against LabMD). And yet, in the three years since the download of the 1,718 File was publicized in the chambers of the Congress and elsewhere, the FTC took no action. It wasn't until LabMD declined to engage Tiversa for "security services" for the sixth time and then sued Tiversa for theft and extortion that the FTC was compelled to issue the present CID. This unusual timing only serves to incentivize organizations to pay off Tiversa (as non-payment appears to coincide with the opening of an FTC investigation).

Taken together, the present CID vastly exceeds the FTC's authority under Section 45. The government funded download of the 1,718 File in 2008 by Tiversa and Dartmouth manifestly fails to provide any evidence whatsoever of any unfair or deceptive practice by LabMD. Consequently, the 1,718 File download (and the facts surrounding the download) not only does not provide a basis for a further FTC investigation into the download itself vis-a-vis

⁴⁰ See *FTC v. Texaco, Inc.*, 555 F.2d at 882 (respondent should not have "to cull its files for data" that would "impose and undue burden" and finding that a subpoena requiring production of "all documents that in any way reference" the issue in question "would be unduly burdensome").

⁴¹ When a CID makes demands "of such a sweeping nature and so unrelated to the matter properly under inquiry" such that they are not "reasonably relevant", they should not be enforced. See *Morton Salt Co.* 228 U.S. at 652; see also *In re Sealed Case (Administrative Subpoena)*, 42 F.3d 1412, 1420 (D.C. Cir. 1994) (remanding to the district court to determine whether the information requested related to a "valid purpose" of the agency's investigation).

LabMD, but it emphatically does not provide any basis for a deeply burdensome, open-ended investigation into all of LabMD's past and present security practices and procedures. As a result, the present CID should be quashed.

C. The CID Should Be Quashed Because It Is Not Authorized by A Valid Resolution And Is Therefore Indefinite, Overbroad, And Incapable Of Demonstrating A Valid Exercise Of The FTC's Section 45 Authority

Under 16 C.F.R. § 2.6, "any person under investigation compelled or requested to furnish information or documentary evidence shall be advised of the purpose and scope of the investigation and of the nature of the conduct constituting the alleged violation which is under investigation and the provisions of law applicable to such violation." Courts assess the validity of a CID by looking to the purpose and scope of the investigation and the nature of the conduct constituting the alleged violation as stated in the authorizing resolution.⁴² Importantly, however, a court can look only to the resolutions (and not any outside communications) to evaluate the scope of an investigation.⁴³ Accordingly, the FTC Operating Manual provides that –

Investigational resolutions must adequately set forth the nature and scope of the investigation. The statement may be brief, but it must be specific enough to enable a court in an enforcement action to determine whether the investigation is within the authority of the Commission and the material demanded by the compulsory process is within the scope of the resolution.⁴⁴

The single resolution that purportedly supports the present CID utterly fails the FTC's own rules and operational requirements. The resolution states, in its entirety, that "the nature and scope" of the FTC's investigation is –

To determine whether unnamed persons, partnerships, corporations, or others are engaged in, or may have engaged in, deceptive or unfair acts or practices related to consumer privacy and/or data security, in or affecting commerce, in violation of Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45, as amended.

⁴² See, e.g., *F.T.C. v. Carter*, 636 F.2d 781,789 (D.C. Cir. 1980).

⁴³ See, e.g., *FTC v. Invention Submission Corp.*, 965 F.2d 1086, 1088 (D.C. Cir. 1992).

⁴⁴ O.M.3.3.6.7.4.1.

Such investigation shall, in addition, determine whether the Commission action to obtain redress of injury to consumers or others would be in the public interest.

This resolution is so sweeping that it would allow the Commission to investigate any person or entity with respect to anything. Such a broad resolution is inconsistent with both 16 C.F.R. § 2.6 and the statutory resolution requirement in 15 U.S.C. § 57b-1(i).⁴⁵

In upholding a resolution that was far more specific than the resolution here, the D.C. Circuit made clear that there are limits to the FTC's use of broad, non-specific resolutions. Under the D.C. Circuit's standard, the present resolution is utterly inadequate:

The Commission equaled this standard, and allowed our examination of the relevance of their subpoena requests, by identifying the specific conduct under investigation — cigarette advertising and promotion — and specific statutory provisions that confer authority and duties upon the Commission. Section 8(b) of the Cigarette Labeling and Advertising Act, under which the Commission must report to Congress on the effectiveness of cigarette labeling and current practices and methods of cigarette advertising and promotion, is self-expressive of several purposes of this investigation. We can therefore say that recitation of the statutory authority itself alerts the respondents to the purposes of the investigation. ***Section 5's prohibition of unfair and deceptive practices, which, standing broadly alone would not serve very specific notice of purpose***, is defined by its relationship to section 8(b), as is the extremely broad and non-specific statutory authority to compile information and make reports to Congress conferred upon the Commission in section 6 of the FTC Act. The Commission additionally defined the application of section 5 in the Resolution by relating it to the subject matter of the investigation "the advertising, promotion, offering for sale, sale, or distribution of cigarettes...." We thus feel comfortably apprised of the purposes of the investigation and subpoenas issued in its pursuit, and suspect that respondents, who may feel less comfortable, are also quite aware of the purposes of the investigation.⁴⁶

Here, the bare recitation of Section 5's "prohibition of unfair and deceptive practices ...

⁴⁵ The resolution also cannot be justified as a "blanket resolution." As the FTC Operating Manual states, blanket resolutions are only appropriate "in a limited number of instances", such as to authorize second requests in antitrust investigations. O.M. 3.3.6.7.4.3.

⁴⁶ *F.T.C. v. Carter*, 636 F.2d 781,788 (D.C. Cir. 1980) (emphasis added).

stands broadly alone”. Accordingly, the resolution fails to reasonably define the nature and scope of the present investigation, and is therefore both invalid and incapable of providing the necessary support for the present CID. Consequently, the present CID should be quashed.

D. The CID Improperly Demands Documents And Testimony Concerning Matters That Are Primarily Regulated By The Department Of Health And Human Services

The CID should also be quashed because it demands documents and information concerning data security information over which the United States Department of Health and Human Services (“HHS”) has exclusive administrative and enforcement authority. As a healthcare sector corporation, LabMD was at all times relevant to the 2008 download of the 1,718 File regulated by HHS with respect to the privacy rules and patient data security requirements related to PHI under the Health Insurance Portability and Accountability Act (“HIPAA”).⁴⁷ It is undisputed that Congress gave HHS exclusive administrative and enforcement authority over data privacy and security issues.⁴⁸ As former FTC Chairman Deborah Majoras told Congress in 2005, HIPAA and its Privacy Rule are not enforced by the FTC.⁴⁹ This understanding was affirmed before Congress a year later by FTC Associate Director Joel Winston.⁵⁰ Accordingly, it is unreasonable and unduly burdensome to subject LabMD to the broad investigative demands made in the present CID as the FTC is not the primary regulator of data privacy and security issues in the healthcare sector, and unlike HHS, the FTC does not have

⁴⁷ 45 C.F.R. § 160.300 *et seq.*

⁴⁸ See 65 Fed. Reg. 82,462, 82,472 (Dec. 28, 2000).

⁴⁹ Deborah Platt Majoras, Chairman of the Federal Trade Commission, *Identity Theft: Recent Developments Involving the Security of Sensitive Consumer Information*, a prepared statement before the U.S. Senate, Committee on Banking, Housing, and Urban Affairs (Mar. 10, 2005).

⁵⁰ Joel Winston, Associate Director, Division of Privacy and Identity Protection, Bureau of Consumer Protection, Federal Trade Commission, Statement of Joel Winston, a prepared statement before the U.S. House of Representatives, Subcommittee on Social Security of the House Committee on Ways and Means (Mar. 30, 2006).

the Congressionally-delegated administrative or enforcement powers (or responsibilities) concerning these issues.

Consequently, the present CID improperly inserts the FTC into what is squarely the regulatory jurisdiction of HHS without providing any legal or policy justification for doing so. A regulated entity like LabMD is entitled to one consistent set of data privacy and security regulations. By order of Congress, that set of regulations comes from HHS, not the FTC. Accordingly, the CID should be quashed.

III. CONCLUSION

Because the present CID was issued pursuant to an impermissible exercise of the FTC's Section 45 authority — namely, because there is no basis in law or fact for using the 2008 download of the 1,718 File as grounds to conduct an unbounded, undefined, highly burdensome, and purposeless investigation into LabMD's data security practices and policies, and further because such an investigation would impermissibly intrude upon the regulatory jurisdiction of a sister agency — the present CID should be quashed.

Dated: January 10, 2012



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Counsel for Petitioner

CERTIFICATION

Pursuant to 16 C.F.R. § 2.7(d)(2), counsel for Petitioner hereby certifies that counsel met and conferred with FTC counsel in a good faith effort to resolve by agreement the issues set forth in this Petition, but the parties were unable to reach agreement.


Julian Dayal

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of January, 2012, I caused the original and 12 copies of the foregoing Petition to Quash with attached exhibits to be filed by hand delivery with the Secretary of the Federal Trade Commission, 601 New Jersey Avenue, N.W., Washington, DC, 20580, and one copy of same to be filed by hand delivery with Alain Sheer, Esq., Federal Trade Commission, Division of Privacy and Identity Protection, 601 New Jersey Avenue, N.W., Washington, D.C., 20580.



Julian Dayal



United States of America
Federal Trade Commission

CIVIL INVESTIGATIVE DEMAND

1. TO

Michael J. Daugherty, President
LabMD Inc.
2030 Powers Ferry Road, Bld. 500, Suite 520 Atlanta, Ga 30339

This demand is issued pursuant to Section 20 of the Federal Trade Commission Act, 15 U.S.C. § 57b-1, in the course of an investigation to determine whether there is, has been, or may be a violation of any laws administered by the Federal Trade Commission by conduct, activities or proposed action as described in Item 3.

2. ACTION REQUIRED

You are required to appear and testify.

<p>LOCATION OF HEARING FTC - Southeast Region 225 Peachtree Street NE Suite 1500 Atlanta, Ga 30303</p>	<p>YOUR APPEARANCE WILL BE BEFORE Alain Sheer or other duly designated person</p>
<p>DATE AND TIME OF HEARING OR DEPOSITION JAN 23 2012</p>	

You are required to produce all documents described in the attached schedule that are in your possession, custody, or control, and to make them available at your address indicated above for inspection and copying or reproduction at the date and time specified below.

You are required to answer the interrogatories or provide the written report described on the attached schedule. Answer each interrogatory or report separately and fully in writing. Submit your answers or report to the Records Custodian named in Item 4 on or before the date specified below.

DATE AND TIME THE DOCUMENTS MUST BE AVAILABLE

JAN 18 2012

3. SUBJECT OF INVESTIGATION

See attached resolution.

4. RECORDS CUSTODIAN/DEPUTY RECORDS CUSTODIAN

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Federal Trade Commission, Division of Privacy and Identity Protection
601 New Jersey Ave., NW
Mail Stop NJ-8100
Washington, DC 20001

DATE ISSUED

12/21/11

COMMISSIONER'S SIGNATURE

J. Tom Ross

INSTRUCTIONS AND NOTICES

The delivery of this demand to you by any method prescribed by the Commission's Rules of Practice is legal service and may subject you to a penalty imposed by law for failure to comply. The production of documents or the submission of answers and report in response to this demand must be made under a sworn certificate, in the form printed on the second page of this demand, by the person to whom this demand is directed or, if not a natural person, by a person or persons having knowledge of the facts and circumstances of such production or responsible for answering each interrogatory or report question. This demand does not require approval by OMB under the Paperwork Reduction Act of 1980.

PETITION TO LIMIT OR QUASH

The Commission's Rules of Practice require that any petition to limit or quash this demand be filed within 20 days after service, or, if the return date is less than 20 days after service, prior to the return date. The original and twelve copies of the petition must be filed with the Secretary of the Federal Trade Commission, and one copy should be sent to the Commission Counsel named in Item 5.

YOUR RIGHTS TO REGULATORY ENFORCEMENT FAIRNESS

The FTC has a longstanding commitment to a fair regulatory enforcement environment. If you are a small business (under Small Business Administration standards), you have a right to contact the Small Business Administration's National Ombudsman at 1-888-REGFAIR (1-888-734-3247) or www.sba.gov/ombudsman regarding the fairness of the compliance and enforcement activities of the agency. You should understand, however, that the National Ombudsman cannot change, stop, or delay a federal agency enforcement action.

The FTC strictly forbids retaliatory acts by its employees, and you will not be penalized for expressing a concern about these activities.

TRAVEL EXPENSES

Use the enclosed travel voucher to claim compensation to which you are entitled as a witness for the Commission. The completed travel voucher and this demand should be presented to Commission Counsel for payment. If you are permanently or temporarily living somewhere other than the address on this demand and it would require excessive travel for you to appear, you must get prior approval from Commission Counsel.

A copy of the Commission's Rules of Practice is available online at <http://bit.ly/FTCRulesofPractice>. Paper copies are available upon request.



United States of America
Federal Trade Commission

CIVIL INVESTIGATIVE DEMAND

1. TO

Michael J. Daugherty, President
LabMD Inc.
2030 Powers Ferry Road, Bld. 500, Suite 520 Atlanta, Ga 30339

This demand is issued pursuant to Section 20 of the Federal Trade Commission Act, 15 U.S.C. § 57b-1, in the course of an investigation to determine whether there is, has been, or may be a violation of any laws administered by the Federal Trade Commission by conduct, activities or proposed action as described in Item 3.

2. ACTION REQUIRED

You are required to appear and testify.

LOCATION OF HEARING FTC - Southeast Region 225 Peachtree Street NE Suite 1500 Atlanta, Ga 30303	YOUR APPEARANCE WILL BE BEFORE Alain Sheer or other duly designated person
DATE AND TIME OF HEARING OR DEPOSITION <p style="text-align: center;">JAN 23 2012</p>	

You are required to produce all documents described in the attached schedule that are in your possession, custody, or control, and to make them available at your address indicated above for inspection and copying or reproduction at the date and time specified below.

You are required to answer the interrogatories or provide the written report described on the attached schedule. Answer each interrogatory or report separately and fully in writing. Submit your answers or report to the Records Custodian named in Item 4 on or before the date specified below.

DATE AND TIME THE DOCUMENTS MUST BE AVAILABLE

JAN 18 2012

3. SUBJECT OF INVESTIGATION

See attached resolution.

4. RECORDS CUSTODIAN/DEPUTY RECORDS CUSTODIAN

Ruth Yodaiken/Kevin Havens
Federal Trade Commission, Division of Privacy and Identity Protection
601 New Jersey Ave., NW
Mail Stop NJ-8100
Washington, DC 20001

5. COMMISSION COUNSEL

Alain Sheer
Federal Trade Commission, Division of Privacy and Identity Protection
601 New Jersey Ave., NW
Mail Stop NJ-8100
Washington, DC 20001

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TRAVEL EXPENSES

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A copy of the Commission's Rules of Practice is available online at <http://ftj.gov/FTCRulesofPractice>. Paper copies are available upon request.

Form of Certificate of Compliance*

I/We do certify that all of the documents and information required by the attached Civil Investigative Demand which are in the possession, custody, control, or knowledge of the person to whom the demand is directed have been submitted to a custodian named herein.

If a document responsive to this Civil Investigative Demand has not been submitted, the objections to its submission and the reasons for the objection have been stated.

If an interrogatory or a portion of the request has not been fully answered or a portion of the report has not been completed, the objections to such interrogatory or uncompleted portion and the reasons for the objections have been stated.

Signature _____

Title _____

Sworn to before me this day

Notary Public

*In the event that more than one person is responsible for complying with this demand, the certificate shall identify the documents for which each certifying individual was responsible. In place of a sworn statement, the above certificate of compliance may be supported by an unsworn declaration as provided for by 28 U.S.C. § 1746.

**UNITED STATES OF AMERICA
BEFORE THE FEDERAL TRADE COMMISSION**

COMMISSIONERS: Deborah Platt Majoras, Chairman
Pamela Jones Harbour
Jon Leibowitz
William E. Kovacic
J. Thomas Rosch

**RESOLUTION DIRECTING USE OF COMPULSORY PROCESS IN NONPUBLIC
INVESTIGATION OF ACTS AND PRACTICES RELATED TO CONSUMER PRIVACY
AND/OR DATA SECURITY**

File No. P954807

Nature and Scope of Investigation:

To determine whether unnamed persons, partnerships, corporations, or others are engaged in, or may have engaged in, deceptive or unfair acts or practices related to consumer privacy and/or data security, in or affecting commerce, in violation of Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45, as amended. Such investigation shall, in addition, determine whether Commission action to obtain redress of injury to consumers or others would be in the public interest.

The Federal Trade Commission hereby resolves and directs that any and all compulsory processes available to it be used in connection with this investigation not to exceed five (5) years from the date of issuance of this resolution. The expiration of this five-year period shall not limit or terminate the investigation or the legal effect of any compulsory process issued during the five-year period. The Federal Trade Commission specifically authorizes the filing or continuation of actions to enforce any such compulsory process after the expiration of the five-year period.

Authority to Conduct Investigation:

Sections 6, 9, 10, and 20 of the Federal Trade Commission Act, 15 U.S.C. §§ 46, 49, 50, and 57b-1, as amended; FTC Procedures and Rules of Practice, 16 C.F.R. 1.1 *et seq.* and supplements thereto.

By direction of the Commission.


Donald S. Clark
Secretary

Issued: January 3, 2008

**CIVIL INVESTIGATIVE DEMAND SCHEDULE
FOR ORAL TESTIMONY AND INTERROGATORY RESPONSE
TO MICHAEL J. DAUGHERTY**

**To: Michael J. Daugherty, President
LabMD, Inc.
2030 Powers Ferry Road
Building 500, Suite 520
Atlanta, Ga. 30339**

I. DEFINITIONS

As used in this Civil Investigative Demand, the following definitions shall apply:

- A. **“And,”** as well as **“or,”** shall be construed both conjunctively and disjunctively, as necessary, in order to bring within the scope of any specification in this Schedule all information that otherwise might be construed to be outside the scope of the specification.
- B. **“Any”** shall be construed to include **“all,”** and **“all”** shall be construed to include the word **“any.”**
- C. **“CID”** shall mean the Civil Investigative Demand, including the attached Resolution and this Schedule, and including the Definitions, Instructions, and Specifications.
- D. **“Company”** shall mean LabMD, Inc., its wholly or partially owned subsidiaries, unincorporated divisions, joint ventures, operations under assumed names, and affiliates, and all directors, officers, employees, agents, consultants, and other persons working for or on behalf of the foregoing.
- E. **“Document”** shall mean the complete original and any non-identical copy (whether different from the original because of notations on the copy or otherwise), regardless of origin or location, of any written, typed, printed, transcribed, filmed, punched, or graphic matter of every type and description, however and by whomever prepared, produced, disseminated or made, including but not limited to any advertisement, book, pamphlet, periodical, contract, correspondence, file, invoice, memorandum, note, telegram, report, record, handwritten note, working paper, routing slip, chart, graph, paper, index, map, tabulation, manual, guide, outline, script, abstract, history, calendar, diary, agenda, minute, code book or label. **“Document” shall also include Electronically Stored Information.**
- F. **“Each”** shall be construed to include **“every,”** and **“every”** shall be construed to include **“each.”**
- G. **“Electronically Stored Information” or “ESI”** shall mean the complete original and any non-identical copy (whether different from the original because of notations, different metadata, or otherwise), regardless of origin or location, of any information created,

manipulated, communicated, stored, or utilized in digital form, requiring the use of computer hardware or software. This includes, but is not limited to, electronic mail, instant messaging, videoconferencing, and other electronic correspondence (whether active, archived, or in a deleted items folder), word processing files, spreadsheets, databases, and video and sound recordings, whether stored on: cards; magnetic or electronic tapes; disks; computer hard drives, network shares or servers, or other drives; cloud-based platforms; cell phones, PDAs, computer tablets, or other mobile devices; or other storage media. "ESI" also includes such technical assistance or instructions as will enable conversion of such ESI into a reasonably usable form.

H. "FTC" or "Commission" shall mean the Federal Trade Commission.

I. "Identify" shall be construed to require identification of (a) natural persons by name, title, present business affiliation, present business address and telephone number, or if a present business affiliation or present business address is not known, the last known business and home addresses; (b) businesses or other organizations by name, address, identities of natural persons who are officers, directors or managers of the business or organization, and contact persons, where applicable; and (c) documents by bates number or by title or description, date, and author.

J. "You" and "Your" shall mean Michael J. Daugherty.

K. The singular shall be construed to include the plural, and the plural shall be construed to include the singular.

II. INSTRUCTIONS

A. Sharing of Information: The Commission often makes its files available to other civil and criminal federal, state, local, or foreign law enforcement agencies. The Commission may make information supplied by you available to such agencies where appropriate pursuant to the Federal Trade Commission Act and 16 C.F.R. § 4.11 (c) and (j). Information you provide may be used in any federal, state, or foreign civil or criminal proceeding by the Commission or other agencies.

B. Meet and Confer: You must contact Alain Sheer, at 202.326.3321, or Ruth Yodaiken, at 202.326.2127, as soon as possible to schedule a meeting (telephonic or in person) to be held within ten (10) days after receipt of this CID in order to confer regarding your response.

C. Applicable time period: Unless otherwise directed in the specifications, the applicable time period for the request shall be from January 1, 2007 until the date of full and complete compliance with this CID.

D. Claims of Privilege: If any material called for by this CID is withheld based on a claim of privilege or any similar claim, the claim must be asserted no later than the return date of this CID. In addition, pursuant to 16 C.F.R. § 2.8A(a), submit, together with the claim, a schedule of the items withheld, stating individually as to each item:

1. the type, specific subject matter, date, and number of pages of the item;
2. the names, addresses, positions, and organizations of all authors and recipients of the item; and
3. the specific grounds for claiming that the item is privileged.

If only some portion of any responsive material is privileged, all non-privileged portions of the material must be submitted. A petition to limit or quash this CID shall not be filed solely for the purpose of asserting a claim of privilege. 16 C.F.R. § 2.8A(b).

E. Document Retention: You shall retain all documentary materials used in the preparation of responses to the specifications of this CID. The Commission may require the submission of additional documents at a later time during this investigation. Accordingly, you should suspend any routine procedures for document destruction and take other measures to prevent the destruction of documents that are in any way relevant to this investigation during its pendency, irrespective of whether you believe such documents are protected from discovery by privilege or otherwise. See 15 U.S.C. § 50; see also 18 U.S.C. §§ 1505, 1519.

F. Information Identification: Each interrogatory specification and sub-specification of this CID shall be answered separately and fully in writing under oath. All information submitted shall be clearly and precisely identified as to the specification(s) or sub-specification(s) to which it is responsive.

G. Petitions to Limit or Quash: Any petition to limit or quash this CID must be filed with the Secretary of the Commission no later than twenty (20) days after service of the CID, or, if the return date is less than twenty (20) days after service, prior to the return date. Such petition shall set forth all assertions of privilege or other factual and legal objections to the CID, including all appropriate arguments, affidavits, and other supporting documentation. 16 C.F.R. § 2.7(d).

H. Modification of Specifications: If you believe that the scope of the required search or response for any specification can be narrowed consistent with the Commission's need for documents or information, you are encouraged to discuss such possible modifications, including any modifications of definitions and instructions, with Alain Sheer, at 202.326.3321, or Ruth Yodaiken, at 202.326.2127. All such modifications must be agreed to in writing by an Associate Director, Regional Director, or Assistant Regional Director. 16 C.F.R. § 2.7(c).

I. Procedures: This CID is issued pursuant to Section 20 of the Federal Trade Commission Act, 15 U.S.C. § 57b-1. The taking of oral testimony pursuant to this CID will be conducted in conformity with that section and with Part 2A of the Commission's Rules, 16 C.F.R. §§ 2.8-2.9.

J. Scope of Search: This CID covers documents and information in your possession or

under your actual or constructive custody or control including, but not limited to, documents and information in the possession, custody, or control of your attorneys, accountants, directors, officers, employees, other agents and consultants, and the Company, whether or not such documents and information were received from or disseminated to any person or entity.

K. Certification: You shall certify that the response to this CID is complete. This certification shall be made in the form set out on the back of the CID form, or by a declaration under penalty of perjury as provided by 28 U.S.C. § 1746.

III. SPECIFICATIONS

A. ORAL TESTIMONY

Subjects for testimony will include but not be limited to the following:

1. The Company's information security policies, practices, training, and procedures (collectively, the "security practices").
2. Security risks, vulnerabilities, and incidents through which Company documents and information (such as information collected from or about patients) either were or could have been disclosed to unrelated third parties (collectively, "security incidents"), including, but not limited to, P2P file-sharing applications and documents such as the [REDACTED] file (also known as [REDACTED] in Civil Action File No. 2011CV207137 filed in the Superior Court of Fulton County, Georgia).
3. The roles and responsibilities of Michael J. Daugherty, individual employees, and individual contractors in (a) developing, adopting, implementing, and monitoring the security practices, and (b) responding to security incidents.

B. INTERROGATORIES

1. Identify all documents that provide a basis for your testimony pursuant to this CID.
2. Identify all documents that you reviewed or considered in preparing to testify pursuant to this CID.

**Robert Boback
Chief Executive Officer
Tiversa, Inc.**

**Testimony Before the
House Committee on Oversight and Government
Reform**

July 24, 2007

Good morning Chairman Waxman, Ranking Member Davis and distinguished members of the committee.

My name is Robert Boback and I am Chief Executive Officer of Tiversa, a Pennsylvania-based company that provides information technology and investigation services that help protect organizations, government agencies and individual consumers from the disclosure and illicit use of sensitive, confidential, and personal information on peer-to-peer file sharing, or "P2P", networks.

I wish to extend our most sincere appreciation for inviting us to testify on this very important issue today. And I also want to applaud the Chairman for calling this important hearing and this committee's previous legislation and work on this topic.

While the Internet is a true boon to our society and economy, there are critical personal privacy and national security issues that need to be addressed seriously, urgently and with the immediate intent to find solutions.

These privacy and security threats are caused by the inadvertent misuse of P2P file sharing software, which Tiversa estimates has been installed on over 450 million computers worldwide. P2P file sharing is one of the most powerful technologies created in recent years, however, as with the world wide web, it is not without inherent risks.

P2P technology provides an efficient way for people to share files with each other. Essentially, the technology uses the muscle power of the computers that it connects and allows people to share files directly with each other. When files are shared directly between two P2P users, this is called decentralized file sharing. This means the files do not go through any central computer server in the middle of the exchange.

P2P has gained both popularity and notoriety for the file sharing of entertainment content among its users. Yet, regardless of where one stands on P2P activity, it's unquestioned that P2P usage is rapidly growing and becoming generally accepted as the most efficient way to distribute large pieces of digital content to consumers.

Indeed, with the explosive increase in digital content including online video and user generated digital content, P2P file sharing is being embraced by many legitimate, well-known businesses to distribute and share television shows and full-length movies to consumers in a manner that protects the copyright and privacy of the content.

Therefore, P2P file sharing is becoming as much of a critical and integral part of the Internet's infrastructure as Web browsers are today. As a result, we must consider the privacy and security issues around it accordingly while allowing for legitimate uses of the technology.

Inadvertent file sharing happens when computer users mistakenly share more files than they intend. For example, they may only want to share their music files or a large academic report, but instead open all files on their computer's hard drive to access by other users on the P2P network. This typically occurs by a user error in either installing and/or using the software.

The result of inadvertent file sharing is hundreds of thousands of sensitive, confidential, and classified files are exposed and made available to the universe of P2P users each day.

Today, we would like to provide the committee with concrete examples that show the extent of how inadvertent P2P file sharing can negatively affect consumers, corporations, government entities and, indeed, our national security. During our testimony, we will provide the committee with examples that illustrate the types of sensitive information available on P2P networks, examples of how users on P2P file sharing networks actively search for inadvertently shared sensitive information, and offer our thoughts on actions to address this problem.

Despite the tools that P2P networks are putting into their software to avoid the inadvertent file sharing of private or classified information, this significant and growing problem continues to exist. Any changes made to the P2P software, while welcome and helpful, will not fully address the problem.

Warnings regarding inadvertent file sharing through P2P networks have been sounded in the past. The FTC has issued warnings on exposing private information via P2P mechanisms. The 2003 Government Network Security Act, co-sponsored by Chairman Waxman, Ranking Member Davis and several members of this committee highlighted the dangers facing government agencies and prescribed a course of action. Prominent security organizations, such as Carnegie Mellon University's Computer Emergency Response Team (CERT) and

the SANS Institute have warned corporations, governments, and consumers to the unintended dangers of inadvertent file sharing via P2P networks.

For example, CERT's *ST05-007-Risks of File-Sharing Technology - Exposure of Sensitive or Personal Information* clearly states:

“By using P2P applications, you may be giving other users access to personal information. Whether it's because certain directories are accessible or because you provide personal information to what you believe to be a trusted person or organization, unauthorized people may be able to access your financial or medical data, personal documents, sensitive corporate information, or other personal information. Once information has been exposed to unauthorized people, it's difficult to know how many people have accessed it. The availability of this information may increase your risk of identity theft.”

Additionally, many of the most popular P2P tools prominently display similar warnings to their users.

Regardless, the problem persists, and our opinion is that it's getting worse. Here is why we hold this opinion.

Beginning in 2003, Tiversa has developed systems that monitor and interact with and within P2P networks to search for sensitive information in an effort to protect the confidential information of our clients.

Tiversa centralizes what was previously a decentralized P2P file-sharing network. Tiversa can round-up all the previously untraceable activity on the network in one place to analyze searches and requests. Where an individual user can only see a portion of a P2P file sharing network, Tiversa can see the whole. It is our belief that no other system has this capability. We have the unique ability to observe activity across P2P networks, to see what inadvertent file sharing is taking place, and to see how P2P users are seeking this information, and where the information goes once it is shared.

Tiversa can monitor, on average, at least 300 million total P2P requests per day. We can investigate more fully to determine the intent of those requests. Our systems have the ability to record the searches for files made on P2P networks, as well as the ability to access the files available to users of P2P networks who issue these searches.

Users on a P2P networks must “ask” the network for a file before they can download them. For example, they may request “Frank Sinatra, I Did It My Way.” That search request is then broadcasted to all connected users for a response that says in effect - “I have that song”. At this point, the searcher can initiate a download request from their choice of users who possess that file.

Substitute the Sinatra search for “classified troop movements” and you begin to understand the problem. Or, if someone searches for “ABC Bank August Statement”, we can deem their intent was to obtain bank statements.

For example, Tiversa set its algorithms to record P2P search strings that matched the term “Credit Card” and separately the term “Medical.” Illustrated below is a limited set of English language examples taken from the millions of similar search strings that Tiversa observes each day:

Credit Card

▪ d&b credit card info	▪ credit card pin numbers
▪ corporate credit card log	▪ credit card with cv2 numbers
▪ credit card merch copy sr	▪ credit card statements
▪ davids credit card numbers	▪ credit card comm sept private
▪ credit card charge ctm costa	▪ credit card authorisation july
▪ credit card gateway ubc	▪ credit card app pdf
▪ 2007 batch of credit cards	▪ athens mba credit card payment
▪ cash credit card checks	▪ cathys visa credit card go on
▪ confidential credit card app	▪ credit card with acc
▪ credit card processing	▪ credit card statements

Medical

▪ dear medical insurance my	▪ child medical exam
▪ letter re medical bills 10 th	▪ billing medical august
▪ denial of medical insurance	▪ digital files medical trans
▪ medical passwords	▪ authorizationform medical
▪ hospital records	▪ caulfield general medical
▪ comprehensive medical	▪ medical coding and billing
▪ medical release	▪ medicine medical passwords
▪ classified medical records	▪ isilo medical
▪ electronic medical record	▪ doctors office medical exam
▪ ltr medical maternity Portland	▪ medical abuse records

There are literally thousands of search strings that we can use to illustrate the millions of individual searches targeting sensitive information available on file sharing networks. One has to ask the question, “Why are P2P users searching for these files on a network typically used to share music and movies?” What are these users looking for? What will they do with the information once they find it?

We would now like to describe how consumers, businesses and government entities are victims of this problem by showing and describing actual examples of sensitive, confidential, and classified files inadvertently disclosed by these entities.

Individuals at Risk

P2P is a highly efficient way for a potential identity thief to gather an individual's private, privileged information that can then be used to commit ID theft, other forms of fraud, or put the individual's personal safety at risk. Yet, very few individuals are aware of this problem, let alone how to protect their information. There have been significant public awareness efforts aimed at educating consumers about phishing scams and other malicious activities. There has been very little effort made to protect consumers from inadvertently sharing information through P2P networks. Virus checking and firewalls, commonly highlighted as the solution, are not fully effective at solving inadvertent file sharing problem.

Examples of readily available documents Tiversa has been able to find on P2P file sharing networks include:

- Federal and State identification including passports, drivers licenses, and social security cards
- Dispute letters with banks, credit card companies, or insurance companies revealing account numbers, credit card numbers, insurance ID numbers and social security numbers
- Copies of individual credit check reports (e.g. Equifax Reports)
- Copies of individual bank and credit card statements
- Signed copies of health insurance cards
- Full copies of federal, state, and local tax returns
- Extensive electronic records of active usernames / ID's for online account access
- Wills and trust documents
- Mortgage and credit applications
- Life insurance applications
- Confidential medical history and records including psychiatric records
- Employment applications
- Family photographs and movies revealing children, addresses, and other personal information
- Student loan / aid applications and documents

Redacted examples that protect the privacy of individual document owners have been provided to the Committee.

In essence, whatever an individual stores on his/her computer electronically can be inadvertently shared. The impact of sharing these files not only hurts individual consumers directly, but also impacts the financial institutions, insurance firms, and government agencies who must incur the costs of fraud and investigations into wrong-doing. In these cases, consumers may hold these institutions responsible, when they themselves are exposing their own information. The lack of a mechanism to trace back to the source of the disclosure is often the issue in these cases. Fraud occurs, but consumers, corporations, and government organizations often do not know the root cause.

Corporate Breaches

Corporate inadvertent file sharing includes any entity that is not a governmental organization or an individual. No organization, regardless of its size or industry is immune from this problem. This ranges from the world's largest multi-national corporations across the financial services, insurance, defense, pharmaceutical, professional services and healthcare industries to small medical, accounting and law practices. Equally, no organizational function is immune to inadvertent file sharing. Tiversa has found files disclosed by and affecting human resources, finance, compliance, legal, research and development, sales, marketing, public relations, and the executive office.

With the increasing virtualization of corporate entities and the greater use of outsourcing, the concept of the *Extended Enterprise* has become critical to Tiversa's clients. This means that any entity entrusted with the corporations sensitive or confidential information can become a disclosure point on P2P file sharing networks. These entities include at home or virtual employees, contractors, suppliers, attorneys, consultants, accountants, or partners. These entities are almost always outside of the corporate perimeter and, therefore, outside of the direct control and enforcement of the corporation. How many times have you e-mailed a file home on which to work? Sent a confidential file to your lawyer or accountant? Inadvertent sharing over P2P file sharing networks is perfectly designed to exploit the *Extended Enterprise*. Our examples will show this.

As a matter of record, Tiversa observes searches similar to those previously illustrated for "credit card" and for "medical" for individual corporate names, subsidiaries, and acronyms. The illustration of these search strings would put these corporations at risk. The committee should note that the searches of this nature are every bit as aggressive and more specific as those for credit cards and medical information. In fact, many times we will see P2P users searching for specific file titles on a corporation. A recent example shows P2P users searching for a foreign exchange system design document for a major financial institution more than 40 times over a three week period. Tiversa knows this document is available since we obtained it as part of our work for a client.

The larger and better known a company and its brand, the greater the risks associated with searches for these corporations.

Tiversa has many examples of corporate information disclosures. Obviously, many are extremely sensitive and would put these corporations at significant risk if they were shared in a public domain. We are happy to share illustrative information with the committee in a secure environment if specific examples are needed.

The following, however, represents examples and situations that we have encountered illustrating the risk facing corporations today.

The first example illustrates a number of points relating to corporate disclosures clearly. Tiversa has discovered a third party attorney whose clients are the world's largest pharmaceutical manufacturers disclosing 436 sensitive and confidential files related those clients. The information covers, in part, pending litigation. One document, dated April 2007, is labeled "confidential" and "by hand" and addressed to Chairman Waxman with a carbon copy to Ranking Member Davis. It appears to address questions regarding drug trials of this pharmaceutical company. This is a case of an attorney who has exposed multiple pharmaceutical companies outside of their network – a clear example of extended enterprise risk.

A second case involves the exposure of the recent board minutes of one of the world's largest financial services organizations, and was disclosed by an executive assistant to one of the executive team members. This disclosure was originally found by a private investigator and reported to the corporation.

A third case involves the disclosure of the entire foreign exchange trading backbone for one of the world's largest multi-national financial firms. These files were among hundreds of confidential internal computer design and security files. As we stated earlier, P2P users were searching for these by name.

A fourth case illustrates how a contractor can expose a corporation. Tiversa observed P2P searches involving a contractor to one of our clients. Files exposed include the entire launch plan and expected growth targets for this diversified financial institution's entry into Europe. In addition, Tiversa observed these files in the possession of a P2P user in Nigeria. In this instance, a subcontractor to the initial contractor exposed our client's confidential information.

A fifth case again illustrates how a supplier can expose a corporation. Tiversa recovered the wide-area network and disaster recovery plan for a major banking institution exposed by the company to which the bank's entire trading network was outsourced.

Tiversa can provide literally hundreds of case examples like those illustrated above. In addition, we have found:

- Press releases in mark-up before their public release covering material, non-public information
- Patent related files before submission to the patent and trademark office
- Drug trial test records before FDA approval
- Legal documents including business contracts, non-disclosure agreements, term sheets, etc.
- Human resources related documents including employee reviews, executive recruiter post-interview write-ups, confidential termination and pending litigation documents, etc.
- Accounting related documents including audit reports, corporate tax records, payrolls, invoices, etc.

- Information systems related documents including administrative user ID / passwords to corporate systems, network diagrams, router access codes, functional specifications, disaster recovery plans

Highly select redacted examples that protect the privacy of individual document owners and any other sensitive information have been provided to the committee.

Given the media exposure that “lost laptops” and information disclosures on non-P2P networks has received, P2P inadvertent file sharing represents a significant brand, operational, legal, and regulatory risk to corporations. For example, a recent P2P sourced breach affecting 17,000 current and former Pfizer employees’ personal information illustrates the impact of the inadvertent sharing of sensitive information on P2P file sharing networks. Any one of the examples provided to the committee could result in a similar problem for its respective corporation.

Classified Government Data Exposed

Inadvertent P2P file sharing affects all levels and branches of government, law enforcement, and intelligence agencies. For our testimony today, Tiversa will focus on how inadvertent file sharing affects federal government agencies and law enforcement.

As with corporations, government inadvertent file sharing may originate with the agencies themselves, contractors to these agencies, soldiers or agents in the field. The same “extended enterprise” exposure problem facing corporations faces the government.

In addition, Tiversa regularly sees P2P searches for government related information including classified information and searches that could assist law enforcement.

In 2003, Chairman Waxman, Ranking Member Davis and many members of this committee co-sponsored the Government Network Security Act. It was designed to quite simply: “require Federal agencies to develop and implement plans to protect the security and privacy of government computer systems from the risks posed by peer-to-peer file sharing.”

In a press release announcing the Act, Ranking Member Davis was quoted saying, “Few people recognize these risks. Using these programs is similar to giving a complete stranger access to your personal file cabinet.”

Unfortunately, while the bill passed the House, it stalled in the Senate. Now, four years later, there are hundreds, if not thousands, of examples of federal government classified documents publicly available on P2P networks at this very moment.

A stark example is the discovery of 34 classified documents available and found by Tiversa on P2P networks. At least one of these classified examples was

related to a government contractor. At least one of the classified documents is the secret property of the United Kingdom, which shows the inadvertent release of such sensitive data is unquestionably global in nature.

Prior to our testimony today, Tiversa provided secret classified documents we located to General Wesley Clark, an equity holding member of Tiversa's advisory board. He has since furnished these documents to the Chairman of the National Intelligence Advisory Board for investigation. This information could, and most likely does, pose significant risks to our interests domestically and abroad. Unfortunately, this is not an isolated incident.

Inadvertently shared information is not limited to classified information. A diverse amount of information exists across government agencies and contractors. Here are some examples:

1. A document illustrating over 100 individual soldier's names and social security numbers
2. Physical Threat Assessments for multiple cities such as Philadelphia, St. Louis, and Miami
3. A government contractor exposing an air force base physical security attack assessment
4. A document titled "*NSA Security Handbook*"
5. A detailed report from a well known government contractor for the National Security Agency (NSA) which outlines how to connect two secure DoD networks
6. Numerous Department of Defense Directives (DoDD's) on various Information Security topics – all signed by various Assistant and Deputy Secretaries of State
7. Various Department of Defense Information Security system audits, reviews, procedures, etc. (e.g. retina scanner equipment audits, penetration detection software/equipment reviews)
8. Numerous "Field Security Operations" documents including router checklist procedures, "Network Infrastructure Security Checklist", etc.
9. Numerous presentations for Armed Forces leadership on various Information Security topics including how to profile "hackers" and potential internal information leakers
10. Large numbers of army documents marked "For Official Use Only"

A case example illustrates the risks clearly. On July 17, 2007, Tiversa found a defense contractor employee disclosing 1,900 individual files from one IP address on P2P file sharing networks. This contractor supports 34 "Joint and Army agencies", including the Department of Defense at the Pentagon, Defense Intelligence Agency, National Security Agency, US Air Force, Army, Navy and the National Imagery and Mapping Agency. This person was disclosing a wide array of files including music, personal information, resumes, photos, etc. Alarming, this individual was also disclosing 534 files with extremely sensitive, privileged information regarding the US Government generally, and the Department of

Defense and various US Armed Forces specifically. The types of information disclosed included:

- The entire Pentagon secret backbone network infrastructure diagram including server/IP addresses
- Password change scripts for Pentagon secret network servers
- Department of Defense employees contact information (including cell and home phone numbers)
- Secure Sockets Layer (SSL) instructions and certificates allowing access to the disclosing contractors' IT systems
- A contract issued by the "Army Contracting Agency" at the Pentagon that authorizes expenditures in excess of \$1.5 million with the disclosing contractor
- Numerous policies/procedures regarding the Pentagon's IT infrastructure as well as its threat response activities (including a "Draft Strategic Plan" for 2007 - 2011)
- A letter from a "Deputy Director for Management" at the "Executive Office of the President's Office of Management and Budget" which explicitly talks about some of the risks associated with P2P file sharing networks.

Ironically, it appears that the individual disclosing this information could be a member of a computer incidence response team and could hold top secret clearance – certainly not an uninformed computer user.

The risks posed by this disclosure source are widespread. For one, the disclosed information could be used directly to penetrate the Pentagon's secure IT environment in an effort to access highly classified information. Secondly, the information could be used indirectly against the disclosure source for blackmail, coercion, kidnapping, etc.

Outside of the alarming nature of this instance, this case clearly illustrates a number of key points:

- Extended Enterprise Risks – these disclosures appear to have happened *outside* of the Pentagon's network where traditional perimeter IT approaches and policies are not effective.
- One Source / Many Exposures – one source, in this case, adversely affected multiple government agencies. This exposure is worse than a lost laptop since P2P users have open access to the information on the computer without the knowledge of the owner. Anyone who knows what to look for can obtain this information and share it.
- Risk of "Open Windows" – whatever new files are now added to this individual's computer will then become available to the P2P user community. Despite the fact that sensitive files may or may not be

present on an employee or suppliers computer today, the very existence of P2P file sharing software can expose whatever files are added in the future.

Redacted examples that protect the privacy of the respective government agencies and affected individuals have been provided to the Committee with the exception of classified information which, as noted earlier, was provided to the Chairman of the National Intelligence Advisory Board by General Wesley Clark.

Law Enforcement Related Examples

Citizens expect our government to protect its own classified and confidential information, but to also enforce laws governing illegal uses and exploitation of information. Examples of this include enforcing copyright and licensing laws and export control laws. One example we wish to highlight to the committee is the extensive use of P2P Networks for searching and sharing child pornography. To illustrate the extent of this trafficking of this information, Tiversa collected searches that P2P users were issuing for known child pornography terms. This example is provided to the committee as a separate exhibit.

Live Demonstration

While the examples collected represent various periods of time, a glimpse into what is available *live* on P2P networks dramatically illustrates the extent of exposure for the categories of examples highlighted above. We will now show user issued searches and available files that match a select list of file probing terms.

Evidence of Wrong-doing

Tiversa has shown the committee live views of P2P user issued searches and available sensitive, inadvertently shared files. We have illustrated that P2P users are actively searching for sensitive, confidential, and classified information. We have shown sensitive, confidential, and classified files are present on P2P networks across individual consumer, corporate, and government sources. What happens to these files once they are found, downloaded, replicated, or used? Is there evidence of fraud or wrong doing?

Fraud Test

Tiversa, in conjunction with Dartmouth's Center for Digital Strategies, conducted a test to show that once a file with actionable financial information is inadvertently disclosed on a P2P network, individuals will use it for an ill-gotten financial gain.

Tiversa and Dartmouth purchased a VISA cash card and an AT&T calling card and incorporated the cash card numbers and phone card numbers instructions on how to use these into a letter. An electronic copy of the letter was put on a

Dartmouth test computer and shared using LimeWire file sharing software. Tiversa tracked the spread of the letter globally across P2P file sharing networks, from the point of initial compromise from the original source computer to its sharing and subsequent re-sharing(s). Tiversa and Dartmouth then tracked the real-time use of the cash card and calling card. The VISA cash card was depleted within a week. Even after the original source computer was shut off, the file continued to be shared by others users on P2P file sharing networks.

Professor Eric Johnson from Dartmouth will explain this test in more detail in later testimony to this committee.

Corporate Information Test

A similar Dartmouth experiment was conducted with documents related to a fictitious company placed on a Dartmouth test computer and shared using LimeWire file sharing software. Tiversa then tracked the spread of these files from the original source computer across P2P networks clearly indicating that there was significant “demand” for these “corporate” files.

The Root of the Problem

Why is there such a pervasive and massive amount of sensitive, classified, and confidential information available on peer-to-peer file sharing networks? Corporations and government agencies have installed technologies designed to block access to P2P networks and instituted policies that prohibit employees from using P2P networks or taking or e-mailing information to their homes. Consumers have installed virus checking and firewalls, which is typically the recommended course of action by the world’s major security software providers.

Tiversa’s focus has been working with corporations, government agencies, and consumers to mitigate P2P disclosures and risks. Based on our experience, we believe the reason so much information is present is driven by these factors:

1. A lack of awareness to the pervasiveness and magnitude of sensitive and classified information present on P2P networks. One cannot “fix” a problem that one is unaware of, no matter how much it currently may affect an organization.
2. Overextended information security functions and budgets that prioritize recent “fires” or compliance with legislation and industry mandates. Prioritizing something to which there is little awareness is often not done because it is difficult to gain the attention of senior management and procure budgets and resources.
3. Organizations have “too narrow” a view of their network perimeter. Whose responsibility is it to protect information once it leaves the corporate perimeter? Does a consumer or the US government care

whether a corporation or a supplier to that corporation entrusted with sensitive information disclosed files on P2P File Sharing Networks once the damage is done? The overwhelming evidence shows that a substantial amount of P2P inadvertent file sharing breaches come from an organization's *Extended Enterprise* outside of its network perimeter. Many organizations today focus solely on protecting their network perimeters when their business is becoming more virtual and outsourcing is taking hold. Sensitive, confidential, and classified information follows these new business operations.

Finding Solutions

We would like to provide the committee our initial recommendations on how consumers, corporations, and government entities can mitigate this problem.

The committee should take steps to:

- Create broader and more focused awareness of the dangers of inadvertent P2P file sharing.
- Require continuous auditing of P2P file sharing networks themselves for sensitive, confidential, and classified information disclosures.
- Encourage organizations to adopt policies and to take steps to address their *Extended Enterprise*.

Consumers:

For consumers, Tiversa has a number of recommended actions

- Consumers first need to become aware of this problem. While government warnings already exist, we feel the private sector can play a highly effective role in addressing this issue and in creating awareness. Banks, credit card companies, and healthcare insurance organizations can lead this effort since they are most impacted by P2P originated fraud. They are trusted by their customers and have existing communication channels available. Previous efforts to address phishing serve as a useful model.
- Consumers should consider putting their highly sensitive information on a separate PC or device disconnected from the Internet.
- Consumers should continuously audit P2P networks to ensure that unwanted files are not exposed. If they find personal or sensitive information available, they should be equipped with the knowledge of what actions to immediately take.

Corporate

For corporations, Tiversa has a number of recommended actions:

- Those tasked with managing security risks inside of an organization must be aware of the pervasiveness and magnitude of inadvertent P2P file sharing, and how it affects them. These individuals need to educate senior leadership – especially those in privacy, legal, and compliance – to the risks they face.
- Corporations need to understand their disclosed information exposure by auditing, as fully as possible by a neutral third party, the type and magnitude of their information on P2P file sharing networks.
- Corporations need to continuously monitor for new exposure points on P2P networks, and to judge the effectiveness of their policies and remedial actions.
- Corporations need to identify disclosure sources across their Extended Enterprises that expose them to inadvertent file sharing risks. This includes employees operating outside of the perimeter, suppliers and contractors, agents, and partners.
- Corporations should re-evaluate “four-wall” perimeter approaches to information security and update their policies to address information disclosure by third parties and the general lack of control once information exits an organization. This may include, for instance, requiring contractors, suppliers, attorneys, and accountants to indemnify the organization for peer-to-peer originated information disclosures.

Government

- The government should take the lead in creating greater awareness at corporations and throughout the public on the dangers associated with P2P file sharing.
- The government should immediately and continuously identify the full exposure and global spread of classified information to shut down these disclosure sources.
- The government should conduct a comprehensive audit of P2P file sharing network information disclosures – not just focused on the agencies themselves, but on also on contractors and non-agency sources.
- P2P information exposure risk should be emphasized in the Federal Information Security Management Act Report Card.

- The government should require their contractors to certify that they and their extended enterprises have fully addressed inadvertent file sharing disclosure risk.

Conclusion

In conclusion, the inadvertent file sharing through P2P File Sharing networks is highly pervasive and large in magnitude. It affects consumers, corporations of all sizes, and government agencies.

Existing policies and IT measures have not been effective at preventing information from becoming available. Malicious individuals regularly use P2P file sharing networks to obtain sensitive, confidential, or classified information. They pose an immediate threat to national security, business operations and brands, and consumer fraud and ID theft.

The committee should seek to create broader awareness of the problem. It should encourage individuals, corporations, and government agencies to continuously audit P2P networks themselves to enable these entities to intelligently determine their exposure and to design strategies to mitigate their issues.

Mr. Chairman, taking these steps will better protect us all from the dangers that lurk in these networks while allowing for legitimate uses of the technology in the future.

Thank you for the opportunity to testify here today.

Testimony Before the House Subcommittee on Commerce, Trade and Consumer Protection

Robert Boback, CEO, Tiversa, Inc.

May 4, 2009

TIVERSA

Good afternoon Chairman Rush, Ranking Member Radanovich and Distinguished Members of the Subcommittee.

My name is Robert Boback and I am the Chief Executive Officer of Tiversa, a Pennsylvania-based company that provides security and intelligence services to help protect organizations from the disclosure and illicit use of sensitive, confidential, and personal information on peer-to-peer file sharing, or "P2P", networks.

As P2P file-sharing risk continues to be a major security, risk and privacy issue, let me first start by first providing a brief background on peer-to-peer.

It is important to note that the Internet is comprised essentially of four components: World Wide Web, Instant Messenger (IM), Email, and Peer-to-Peer networks. By many accounts, the largest of these by measure of consumption of overall bandwidth is Peer-to-Peer or P2P. This distinction is necessary to understand the security implications that we are presented with today as a result of both the enormity of the networks as well as the different security challenges that are presented by the networks.

Peer-to-peer networks have been in existence for several years starting most notoriously with the introduction of Napster in the fall of 1999. The networks have provided a gateway for users around the world to share digital content, most notably music, movies and software.

The use of P2P has evolved and is used by individuals worldwide for many different purposes including:

- 1 – Planned file sharing – its intended use.
- 2 – Searching for information with malicious intent – personal information used in identity theft; corporate information and trade secrets; and even military secrets and intelligence.
- 3 – Distribution and sharing of illegal information – Child pornography and information that could be used in terror activity.

P2P networks continue to grow in size and popularity due to the alluring draw of the extent of the content that is present and available on the networks, that in many cases, is not available from any other public source. In addition to movie

and music files, millions of documents, that were not intended to be shared with others, are also available on these networks. It is this that we refer to as inadvertent sharing or disclosure.

Inadvertent sharing happens when computer users mistakenly share more files than they had intended. For example, they may only want to share their music files or a large academic report, but instead expose all files on their computer's hard drive allowing other users to have access to their private or sensitive information. This can occur via several scenarios. These scenarios range from user error, access control issues (both authorized and unauthorized), intentional software developer deception, to malicious code dissemination.

"User error" scenario occurs when a user downloads a P2P software program without fully understanding the security ramifications of the selections made during the installation process. This scenario has been decreasing slightly in the past few years as many of the leading P2P clients have adequately highlighted the security risks associated with sharing various types of files containing sensitive information.

"Access control" occurs most commonly when a child downloads a P2P software program on his/her parents computer. This may occur with or without the parents' knowledge or consent, however the sensitive or confidential information stored on that computer may become exposed publicly nonetheless.

"Intentional software developer deception" occurs when the P2P developers knowingly and intentionally scan and index any or all information during the installation process without the consent of the user. This practice was widely used a few years ago in an effort to populate the P2P networks with large amounts of content. The average user has no incentive to share any files with the other users on the network, confidential or not. The P2P developers recognized that this fact could cause a lack of content to be shared which would negatively impact the network itself. In recent years and in response to legislative intervention and awareness, most mainstream developers have discontinued this controversial tactic. However, there are over 225 P2P software program variants that Tiversa has identified being used to access these networks. Many of these programs continue to surreptitiously index and share files in this fashion.

"Malicious code dissemination" occurs when identity thieves, hackers, fraudsters, and criminals embed malicious code ("worms") in a variety of files that appear innocuous. This scenario is extremely troubling as this malicious code can either force a system to reset its preconfigured security measures, despite the security-focused intentions of the P2P developers, or it can install an aggressive P2P program on a user's computer who may have never intended to install a P2P file sharing program.

This scenario can expose even the most technologically advanced consumer or even an individual who has never intended to use P2P to identity theft or fraud. It can also lead to the inadvertent disclosure of sensitive work-related information that can inflict significant economic or brand damage to an organization and/or lead to the identity theft of customers, employees, or others.

The fact that P2P involves downloading of files from individuals that are unknown to the downloader allows the hacker to overcome the hurdle of getting users to download the worm. These criminals intentionally give the malicious code as the same name as highly sought after music, movie, and software downloads to ensure rapid and effective dissemination. Other criminals will use email attachments embedded with aggressive software that mimics P2P programs when installed. These worms will index and share all information on the victim's computer without any visibility to the victim. This code is very insidious as users cannot detect its presence on their systems. Current anti-virus programs do not detect the presence of such malicious software as it appears to the detection software as an intentionally-downloaded standard P2P software program. It is also important to note that firewalls and encryption do not address or protect the user from this type of disclosure.

These scenarios have resulted in millions of highly sensitive files affecting consumers, businesses large and small, the U.S. government, our financial infrastructure, national security, and even our troops being exposed daily to identity thieves, fraudsters, child predators, and foreign intelligence worldwide.

Today, we would like to provide the committee with concrete examples that show the extent of the security problems that are present on the P2P networks and implications of sharing this type of information. During our testimony, we will provide the committee with examples that illustrate the types of sensitive information available on P2P networks, examples of how identity thieves and others are actively searching for and using the information harvested from these networks, and offer our thoughts on actions to address the problem.

Despite the tools that P2P network developers are putting into their software to avoid the inadvertent file sharing of private and classified information, this significant and growing problem continues to exist. Any changes made to the P2P software, while welcome and helpful, will not fully address the problem. Combine this with the fact that today's existing safeguards, such as firewalls, encryption, port-scanning, policies, etc, simply do not effectively mitigate peer-to-peer file-sharing risk.

Warnings regarding inadvertent file sharing through P2P networks have been sounded in the past. The FTC issued warnings on exposing private information via P2P mechanisms. The 2003 Government Network Security Act highlighted the

dangers facing government agencies and prescribed a course of action. Prominent security organizations, such as CERT (Computer Emergency Response Team) and the SANS Institute have warned corporations, governments, and consumers to the unintended dangers of inadvertent file sharing via P2P networks.

For example, CERT's ST05-007-Risks of File Sharing Technology – Exposure of Sensitive or Personal Information clearly states:

“By using P2P applications, you may be giving other users access to personal information. Whether it's because certain directories are accessible or because you provide personal information to what you believe to be a trusted person or organization, unauthorized people may be able to access your financial or medical data, personal documents, sensitive corporate information, or other personal information. Once information has been exposed to unauthorized people, it's difficult to know how many people have accessed it. The availability of this information may increase your risk of identity theft.”

In July 2007, the House Committee on Oversight and Government Reform held a hearing on the very issue of the “Inadvertent Sharing via P2P Networks,” during which many of the individuals that testified assured the Committee that this problem was being addressed or being remedied. Despite this recognition, most consumers and security experts at corporations worldwide have very little understanding of the information security risks caused by P2P. Most corporations believe that the current policies and existing security measures will protect their information – they will not.

During our testimony today, we will show evidence that despite the numerous warnings and assurances by the developers in previous hearings, the problem continues to exist. In fact, we will also seek to demonstrate the unprecedented increase in identity thieves using P2P software programs to harvest consumer information.

It is important to note that Tiversa believes strongly in the useful technology that is P2P. P2P file sharing is one of the most powerful technologies created in recent years, however, as with the World Wide Web, it is not without its inherent risks.

Beginning in 2003, Tiversa has developed systems that monitor and interact with and within P2P networks to search for sensitive information in an effort to protect the confidential information of our clients. The technology has been architected in a way that is transparent to the network; in a way that preserves the network's sustainability.

Tiversa centralizes what was previously a decentralized P2P file-sharing network. Tiversa can see and detect all the previ-

ously untraceable activity on the network in one place to analyze searches and requests. Where an individual user can only see a very small portion of a P2P file sharing network, Tiversa can see the P2P network in its entirety in real time. With this platform, Tiversa has processed as many as 1.6 billion P2P searches per day, approximately 8 times that of web searches entered into Google per day. This unique technology has led some industry experts (Information Week) to refer to Tiversa as the "Google of P2P."

Financial Fraud

In an analysis of these searches, listed below is a small sampling of actual searches issued on P2P networks brief research window in March 2009. The term credit card was used as the filter criteria for the period.

2007 credit card numbers
2008 batch of credit cards
2008 credit card numbers
a&l credit card
aa credit card application
abbey credit cards
abbey national credit card
ad credit card authorization
april credit card information
athens mba credit card payment
atw 4m credit card application
austins credit card info
auth card credit
authorization credit card
authorization for credit card
authorize net credit card
bank and credit card informati
bank credit card
bank credit card information
bank credits cards passwords
bank numbers on credit cards
bank of america credit cards
bank of scotland credit card
bank staffs credit cards only
barnabys credit card personal
bibby chase credit card

As evidenced by the sampling above, it is clear to see that malicious individuals are issuing searches on P2P networks to gain access to consumer credit cards. Criminals will quickly use the information located to commit fraud using the stolen credit information. This fact was proven during our research with Dartmouth College and published in their subsequent report.

The term "tax return" is also highly sought after on P2P networks. During a live demonstration in January for NBC's Today Show, Tiversa was able to locate and download over 275,000 tax returns from one brief search of the P2P. Many of these individuals have either saved an electronic copy of their

tax return that they prepared themselves or have saved an electronic copy of their tax return that an accountant or professional tax office had prepared for them. There are also cases where accountant and tax offices, themselves, are inadvertently disclosing client tax returns.

It is a fact that identity thieves search for tax returns to primarily gain access to Social Security Numbers ("SSN"). According to a report on the black market, SSNs are worth approximately \$35. This is up from approximately \$8-\$10 only a few short years ago. One plausible explanation for rapid increase in black market pricing is that identity thieves are finding better ways to now monetize the stolen SSN. This is a very important point. Our search data shows that thieves in fact a new degree of sophistication in cyber crime.

Identity thieves will also file an individual's tax return before the actual individual files the return. The thief will use a fabricated W-2, which can be printed using a number of programs, and will attempt to steal the phony refund that results from the fabricated return. When the victim then files his or her tax return, it will automatically be rejected by the IRS's system as "already filed." Eventually, the IRS will determine that the information, provided by the criminal on the W-2, doesn't match the records that it maintains. At this point, the criminal has most likely cashed the check from the fraud and has moved on to other victims only to have the initial victim left to address the problem with the IRS. This is very costly and time consuming to resolve.

Stolen SSNs are also used by illegal aliens as a requirement of their gaining employment here in the United States. This crime has far reaching implications as well as a tremendous tax burden on behalf of the victim.

Medical Fraud

Medical information is also being sought after on P2P networks with alarming regularity. Listed below are some terms issued over the same period regarding medical information.

letter for medical bills
letter for medical bills dr
letter for medical bills etmc
letter re medical bills 10th
ltr client medical report
ltr hjh rosimah medical
ltr medical body4life
ltr medical maternity portland
ltr medical misc portland
ltr orange medical head center
ltr to valley medical
lytec medical billing
medical investigation
medical journals password
medical .txt

medical abuse records
medical abuse
medical abuse records
medical algorithms
medical authorization
medical authorization form
medical autorization
medical benefits
medical benefits plan chart
medical billing
medical billing
medical bill
medical biller resume
medical billig software
medical billing
medical billing windows

Identity thieves and fraudsters use medical information very similarly to financial information, but with much less scrutiny on behalf of law enforcement.

For example, if an identity thief were to download a consumer's medical insurance information, he or she would then immediately have access to significant financial resources (in many cases medical insurance policies have limits set at \$1 million or above). The criminal would most likely use the insurance card to buy online pharmaceuticals (predominantly Oxycontin, Viagra, or Percoset) which he or she would quickly turn into cash by selling the drugs. This is a very difficult crime to detect as most consumers do not read Explanation of Benefit (EOB) forms sent from the insurance company which only serves to prolong the activity by delaying detection. Even consumers who do read the forms may not readily understand the diagnosis and treatment codes that are indicated on the forms. The victimization of the consumer continues when he or she attempts to appropriately use his or her insurance information for medical services only to be turned away or confronted with the suggestion of a potential prescription drug addiction.

Searches attempting to access financial, accounting, and medical information have risen 59.7% since September 2008. In the full year of 2006 and 2007, the average annual rise in the search totaled just over 10%.

As a matter of record, Tiversa observes searches similar to those previously illustrated for "credit card" and for "medical" for individual corporate names, subsidiaries, and acronyms. The illustration of these search strings in this testimony would put these corporations at further risk. The committee should note that the searches of this nature are every bit as aggressive and more specific as those for credit cards and medical information.

The only correlation that we identified is that the larger and better known a company and its brand, the greater the risks associated with the searches for these corporations.

Child Predation

As if the aforementioned fraudulent activities were not enough to demonstrate the security implications of having personally identifiable information (PII) available to the public on these networks, the crimes can become even more heinous.

Tiversa works with federal, state, and local law enforcement agencies to address the rampant child pornography issues that permeate the P2P file sharing networks. The task is large and process is long however we continue to make progress in this ongoing fight. Presumably, child pornographers are using P2P to locate, download, and share sexually explicit videos and pictures of small children because they feel that they cannot be caught on such a disparate network. Tiversa pioneered the research and tactics used to track and catch these individuals. We are also currently training all levels of law enforcement nationwide through the FBI LEEDA program.

Tiversa has documented cases where child pornographers and predators are actively searching P2P networks for personal photos of children and others that may stored on private computers. Once the photos are downloaded and viewed, these individuals will use the "Browse Host" function provided by the P2P software which allows the user to then view and download all additional information being shared from that computer. If personal photos are being shared, it is most likely that the computer will also be sharing other personal, private information such as a resume or tax return. This accompanying information can be used by the predator to locate the address, telephone, workplace, etc. of the potential victim. Individuals at Tiversa have directly assisted in the investigation of these specific types of cases.

Many individuals at this point would consider themselves immune to these types of identity theft and fraud if they never used or downloaded P2P software. This is not an accurate assumption.

Examples to follow on subsequent pages...

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
EmpID	EmpType	EmpName	EmpSSN	EmpDOB	EmpSex	EmpCity	EmpState	EmpZip	EmpHireDate	EmpTerDate	EmpStatus	EmpGrade	EmpRate	EmpPay
92371	HOSPITAL	LOHRE,FRANCOISE												
92372	HOSPITAL	SAMUELLA												
92373	HOSPITAL	MARCOLE												
92374	HOSPITAL	BARBLE												
92375	HOSPITAL	JOHN THEW												
92376	HOSPITAL	LORES												
92377	HOSPITAL	MILLMAN												
92378	HOSPITAL	ANDREA												
92379	HOSPITAL	BRENT												
92380	HOSPITAL	ESPENARBA												
92381	HOSPITAL	BRIM												
92382	HOSPITAL	LORES												
92383	HOSPITAL	JOHNNY												
92384	HOSPITAL	JOHNNY												
92385	HOSPITAL	JOHNNY												
92386	HOSPITAL	STEPHEN												
92387	HOSPITAL	BARBER												
92388	HOSPITAL	LORECHRY												
92389	HOSPITAL	RAVE												
92390	HOSPITAL	SHANG												
92391	HOSPITAL	MICHAEL												
92392	HOSPITAL	RUDOLEH												
92393	HOSPITAL	TYLADICA												
92394	HOSPITAL	LORE												
92395	HOSPITAL	ROSE												
92396	HOSPITAL	BEVIVA												
92397	HOSPITAL	ANDREW												
92398	HOSPITAL	ELORA												
92399	HOSPITAL	HENRY												
92400	HOSPITAL	MICHAEL												
92401	HOSPITAL	HENRY												
92402	HOSPITAL	MICHAEL												
92403	HOSPITAL	HENRY												
92404	HOSPITAL	BARBARA												
92405	HOSPITAL	LORE												
92406	HOSPITAL	LORE												
92407	HOSPITAL	LORE												
92408	HOSPITAL	LORE												
92409	HOSPITAL	LORE												
92410	HOSPITAL	LORE												
92411	HOSPITAL	LORE												
92412	HOSPITAL	LORE												
92413	HOSPITAL	LORE												
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92499	HOSPITAL	LORE												
92500	HOSPITAL	LORE												

4	A	B	C	D	E	F	G	H
EmpID	Last	First	SSN	Taxable?	Degree	School	Major	Division
1000	John			N	Certificate	CFA Institute	CFA	Eastern
1001	Zishan			N	Graduate	NYIT	MBA	Western
1002	David			N	Certificate	CFA Institute	CFA	Western
1003	Anthony			N	Graduate	Stevens Institute	MIS	Eastern
1004	Melissa			N	Certificate	Dowling College	CFP	Eastern
1005	Thomas			N	Certificate	Pace	CFP	Eastern
1006	Mary Linley			N	Certificate	American College	CFP	Eastern
1007	Samuel			N	Certificate	Kaplan University	CFP	Eastern
1008	Sandeep			N	Graduate	Steven Institute	Info Mgmt sys	Eastern
1009	Emmee			N	Certificate	Kaplan	CFP	SouthWest
1010	Scott			N	Certificate	Kaplan	CFP	Western
1011	Darya			N	Undergrad	Montclair State University	Marketing	Eastern
1012	Isaac			N	Certificate	Pace University	CFP	Eastern
1013	Sofland			N	Certificate	Kaplan	CFP	Eastern
1014	James			N	Certificate	Kaplan	CFP	Eastern
1015	Steven			N	Graduate	University of Connecticut	MBA	Eastern
1016	Michael			N	Graduate	Stevens Ins	MIS	Eastern
1017	Alejandra			N	Degree	Pace University	BA	Eastern
1018	Hasan			N	Undergrad	NYU	International MBA	Eastern
1019	Sneh			N	Undergrad	Stevens Institute	MIS	Eastern
1020	Luis			N	Undergrad	Axia College	BA	Eastern
1021	Jared			N	Certificate	Kaplan	CFP	Eastern
1022	Matthew			N	Undergrad	Brooklyn College	Finance	Eastern
1023	Francisco			N	Certificate	CFA Institute	CFA	Eastern
1024	Belinda			N	Undergrad	Universidad	Accounting	PR

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	11/18/2000	SSR1	First Name	Middle Name	Last Name	Grade	Born Date	Sex	NAAC State	201 Grad Year																													
3122			RALEY			01	01/25/1981	F	SULPHUR LA 70000																														
3123			MADISON			03	11/25/1988	F	SULPHUR LA 70000																														
3124			RAQUEL			24	06/22/2003	F	SULPHUR LA 70000																														
3125			SMITHSON			06	10/16/1988	F	SULPHUR LA 70000																														
3126			KAMBERN			01	01/10/2001	F	SULPHUR LA 70000																														
3127			KEMNEBY			04	07/20/1988	F	SULPHUR LA 70000																														
3128			SAMUAL			01	04/19/2001	M	SULPHUR LA 70000																														
3129			SHELBY			21	10/16/2003	F	SULPHUR LA 70000																														
3130			KENNA			04	08/15/1987	F	SULPHUR LA 70000																														
3131			WARRENCE			02	09/16/2000	F	SULPHUR LA 70000																														
3132			DREAHNA			06	05/27/1984	F	SULPHUR LA 70000																														
3133			NICHOLAS			08	03/10/1984	M	SULPHUR LA 70000																														
3134			DANIELLE			06	05/18/1984	F	SULPHUR LA 70000																														
3135			ANABELLE			03	04/14/1985	F	SULPHUR LA 70000																														
3136			EMAY			06	04/27/1987	F	SULPHUR LA 70000																														
3137			JACKSON			07	11/14/1984	M	SULPHUR LA 70000																														
3138			SARAH			08	11/15/1983	F	SULPHUR LA 70000																														
3139			ALEXANDER			03	09/25/1988	M	SULPHUR LA 70000																														
3140			EMILY			24	07/05/2003	F	ORANGE LA 70000																														
3141			EDDYDEN			02	09/25/2000	M	SULPHUR LA 70000																														
3142			CHRISTOPHER			01	08/12/1988	M	LAKE CHARLES LA 7																														
3143			TWYTERNA			04	09/25/1989	F	LAKE CHARLES LA 7																														
3144			DOUGLAS			05	11/13/1988	M	SULPHUR LA 70000																														
3145			JUSTIN			04	12/10/1987	M	SULPHUR LA 70000																														
3146			ALLEN			05	08/23/1986	M	SULPHUR LA 70000																														
3147			HANNAH			06	06/11/1987	F	SULPHUR LA 70000																														
3148			MICHELL			07	04/12/1988	M	SULPHUR LA 70000																														
3149			LANE			04	01/23/1986	F	SULPHUR LA 70000																														
3150			JENNIFER			05	11/21/1986	F	SULPHUR LA 70000																														
3151			JUSTINE			01	11/15/2000	F	SULPHUR LA 70000																														
3152			KATE			01	03/27/2003	F	SULPHUR LA 70000																														
3153			RYLCE			25	03/22/2002	F	SULPHUR LA 70000																														
3154			TANNER			02	10/11/1985	M	SULPHUR LA 70000																														
3155			EMMA			02	10/13/1985	F	SULPHUR LA 70000																														
3156			MARY			03	10/30/1983	F	SULPHUR LA 70000																														
3157			RACHEL			06	01/01/1987	F	SULPHUR LA 70000																														
3158			SARAH			06	05/21/1986	F	SULPHUR LA 70000																														
3159			JANFER			01	06/25/2000	F	SULPHUR LA 70000																														
3160			ASHLEY			01	09/25/2000	F	SULPHUR LA 70000																														

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
1	Account	Balance	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account	Account		
47121	3110	7101	Bank One	3333444			DM		CHICAGO	IL	60609	7017																												
47122	3111	7101	Bank One	3333444			James R		WICKS COCKER	SD	57001	7412																												
47123	3112	7104	Bank One	3333444			Mary		UTICA	NY	12101	4911																												
47124	3113	7103	Bank One	3333444			Clayton		WAXTON	MA	01964	7412																												
47125	3115	7104	Bank One	3333444			Fabian H		WAYNE	PA	19087	3542																												
47126	3117	7101	Bank One	3333444			David A		HUMPHREYS	PA	17030	1223																												
47127	3114	7104	Bank One	3333444			Joseph		NEW SMYRNA BEACH	FL	32189	2846																												
47128	3115	7104	Bank One	3333444			Howard L		WYOMING	WY	82002	3411																												
47129	3116	7104	Bank One	3333444			James H		COLLIER	FL	32613																													
47130	3117	7101	Bank One	3333444			James M		FITZGERALD	PA	17034	2021																												
47131	3118	7104	Bank One	3333444			John I		WAXTON	MA	01964	7412																												
47132	3119	7104	Bank One	3333444			Deanna M		HENDERSONVILLE	NC	27520	3889																												
47133	3120	7104	Bank One	3333444			Edward L		CHARLESTON	SC	29401	2440																												
47134	3121	7104	Bank One	3333444			James L		GOTHAM	AL	36033	3211																												
47135	3122	7104	Bank One	3333444			James Earl		MILLBROOK	AL	36054	3783																												
47136	3123	7104	Bank One	3333444			Monica Lee		JAYVILLE	FL	32018																													
47137	3124	7101	Bank One	3333444			Ann		PENSAFLA	FL	32561	3913																												
47138	3125	7101	Bank One	3333444			Gregory B		WAYNE	FL	31685	3612																												
47139	3126	7104	Bank One	3333444			C		WAYNE	GA	30082																													
47140	3127	7101	Bank One	3333444			Jorge A		MAAM	FL	32144	2814																												
47141	3128	7104	Bank One	3333444			Andrea M		PALM BAY	FL	32917	2312																												
47142	3129	7104	Bank One	3333444			Sydney R		ANCHORAGE	AK	99509	1010																												
47143	3130	7104	Bank One	3333444			David R		SUN DALE	AZ	85244																													
47144	3131	7101	Bank One	3333444			Eric C		HUMBLE	TX	75049	3280																												
47145	3132	7101	Bank One	3333444			Nancy B		HOPKINS	MA	01850	4420																												
47146	3133	7101	Bank One	3333444			Ann		HICKORY	GA	30059	7110																												
47147	3134	7104	Bank One	3333444			Alfred		WALDSTADT	GA	30181																													
47148	3135	7104	Bank One	3333444			Dycko		ROCKTON	NC	27082	3721																												
47149	3136	7104	Bank One	3333444			Arnold J		BERGEN CITY	NJ	07008	2819																												
47150	3137	7104	Bank One	3333444			Gery D		ROSLINDALE	MA	02121	3153																												
47151	3138	7104	Bank One	3333444			Francois F		CRICHTON	MS	39213	3484																												
47152	3139	7104	Bank One	3333444			Brian B		MARSHALL	MS	39059	3840																												
47153	3140	7101	Bank One	3333444			Michelle A		DAYVILLE	CA	94626	3526																												
47154	3141	7101	Bank One	3333444			Lee		IRVING	FL	34491	3100																												
47155	3142	7104	Bank One	3333444																																				

Emp/Sin: [] Employer: [] Local: 952 Status: 03 Paid Thru: Jul/1997
 Name: WANDA Gender: F Birth Date: 09/21/1942
 Address: [] CA
 Phone: [] Sic: [] Water Reg: No BA: 085 Mail: []
 Initiation: 01/13/1977 Seniority: 08/01/1980 CkoAuth: [] Salary: \$13.00
 Reinitiation: [] Rehire: [] Term of: [] Term Emp: 01/15/1987
 Dues Rate: \$26.00 Norm Am: \$26.00 Dues Dvg: [] Dues Last: 06/15/1987
 Ini Rate: \$100.00 Ini Pd: \$100.00 Start: [] Dep: []
 Reint Rate: \$0.00 Reint Pd: \$0.00 Original: Oct/1977 Clock: []
 Beneficiary: [] Relation: 3 Kp: 010 TransRate: \$0.00
 Transfer To: [] From: [] Kp2: [] Trans Paid: \$0.00
 Remarks: TERM 1-07*****WATCH*****
 Assess: 1: [0] 2: [0] 3: [0] 4: [0] PostFlag: [] PostDate: []
 Party: [] Priced: [] **PAYMENTS**
 Record: [] 69495 of 69495

Insurance Aging

INCORPORATED

JOHN J Date of Birth: 0/29/1945 Insured: Self

Insurance: Primary ID: []

Billing	Date	Code/CPT	Billed	Amount	Current	31-60	61-90	91-120	> 120	Total
	05/01/2006		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12/17/2006		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	04/20/2007		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Patient Total:				220.00	0.00	0.00	0.00	0.00	220.00	220.00
Insurance Total:				379.16	0.00	0.00	0.00	147.76	231.40	379.16

TIMOTHY L Date of Birth: 02/21/1945 Insured: Self

Insurance: Primary Group Number: D0001022 ID: []

Billing	Date	Code/CPT	Billed	Amount	Current	31-60	61-90	91-120	> 120	Total
210464	02/17/2008	87098/87098	08/08/2008	41.00	0.00	0.00	0.00	0.00	41.00	41.00
	08/10/2008		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12/09/2008		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Patient Total:				41.00	0.00	0.00	0.00	0.00	41.00	41.00
Insurance Total:				82.00	0.00	0.00	0.00	0.00	82.00	82.00

DANNY T Date of Birth: 01/15/1948 Insured: Self

Insurance: Primary Group Number: D0000905 ID: []

Billing	Date	Code/CPT	Billed	Amount	Current	31-60	61-90	91-120	> 120	Total
233365	06/19/2008	87098/87098	08/08/2008	41.00	0.00	0.00	0.00	0.00	41.00	41.00
Patient Total:				41.00	0.00	0.00	0.00	0.00	41.00	41.00
Insurance Total:				82.00	0.00	0.00	0.00	0.00	82.00	82.00

BEN Date of Birth: 11/28/1935 Insured: Self

Insurance: Secondary ID: []

Billing	Date	Code/CPT	Billed	Amount	Current	31-60	61-90	91-120	> 120	Total
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Tiversa engaged in research involving over 30,000 consumers and found that 86.7% of the individuals whose information was found on the P2P networks, were breached by a third party. Many of these individuals had their information exposed by their doctors, lawyers, hospitals, accountants, employers, banks and financial institutions, payroll companies, etc. Organizations that had a right to have access to the information were predominantly the source of the breach.

In the last 60 days (2/25-4/26), Tiversa has downloaded 3,908,060 files that have been inadvertently exposed via P2P networks. This number is only comprised of Excel spreadsheets, Word documents, PDFs, Rich Text, Emails, and PST files. This number does not include any pictures, music, or movies. Its important to note that these files were only downloaded with general industry terms and client filters running. Much more exists on the network in a given period of time.

This risk also extends to the military and to overall national security. Tiversa has documented the exposure of the PII of men and women in the Armed Forces with frightening regularity. Military families are prime targets for identity theft as the thieves are aware that the soldiers are probably not checking their statements or credit reports very closely due to the serious nature of the work that they are performing. We have seen the confidential information (SSNs, blood types, addresses, next of kin, etc.) of in excess of 200,000 of our troops.

This issue poses a national security risk. In February of this year, Tiversa identified an IP address on the P2P networks, in Tehran, Iran, that possessed highly sensitive information relating to Marine One. This information was disclosed by a defense contractor in June 2008 and was apparently downloaded by an unknown individual in Iran.

On April 22, 2009, the Wall Street Journal printed a front cover story that indicated that former Pentagon officials had indicated that spies had downloaded plans for the \$300B Joint Strike Fighter project. Highly sensitive information regarding the Joint Strike Fighter program was also discovered on P2P networks.

In monitoring the origin of the searches on the P2P networks regarding national security issues, it is clear that organized searching is occurring from various nations outside the United States to gain access to sensitive military information being disclosed in this manner.

Recommendations

Tiversa's focus has been working for several years with corporations and government agencies to mitigate P2P disclosures and risks. Based on our experience, we believe that there are steps that can help significantly decrease the likelihood of inadvertent disclosures and therefore increase the safety and

protection of those most affected, the consumers. We humbly and respectfully provide the following recommendations for your consideration.

Increase Awareness of the Problem

Corporations are just becoming aware of the problem that the P2P poses to its information and data security. Individual consumers are even less prepared for the security threats that it poses. It is very difficult to protect against a threat that you are unaware of.

On the FTC's website on the page "About Identity Theft," there is not a single mention of P2P or file-sharing as an avenue for a criminal gaining access to a consumer's personal information. Of the 6 methods identified on the website, very few if any could ever result in the consistent production, let alone the magnitude, of PII like the P2P networks.

Clearly, victims of identity theft must be educated and notified that P2P could be the source of their stolen information.

Awareness should extend to corporations as well. With consumers being asked to provide PII to employers, banks, accountants, doctors, hospitals, the recipients of this PII must be knowledgeable in the threats that P2P can pose to the security of that information.

Federal Data Breach Notification Standards

41 of the 50 states have now enacted some form of data breach notification law. However, the laws vary state to state and, in our experience, are seldom respected or followed by organizations.

Standardized breach laws should be enacted to provide guidelines for any organization, public or private, that houses consumer or customer PII in the event of a breach of the information. The breach law will also need to be enforced as many of the disclosing companies disregard the current state laws, if any to the severe detriment of the consumer whose information was exposed.

Any breach involving the release of a consumer's SSN should include mandatory identity theft protection for that individual for a minimum of 5 years. The often reported 1 year of credit monitoring is completely inadequate remediation for a consumer whose SSN was breached. Identity thieves will wait for the credit monitoring to expire after the year provided to begin to attack the consumer. This is supported by actual files Tiversa has seen with expiry tags entered directly into the filename and meta-data.

Military Personnel Disclosures

Congress should vigorously act to protect the safety and identity of our men and women in uniform. Soldiers who have had their information disclosed should be provided comprehensive identity theft protection services so as to prevent and guard against the use of the breached information.

National Security Disclosures

P2P networks should be continuously monitored globally for the presence of any classified or confidential information that could directly or indirectly affect the safety or security our citizens.

Consumers

Tiversa also suggests the following recommendation for consumers:

Know Your PC (and who is using it)

Parents need to pay close attention to the actions of their children online, especially when the children are using a shared PC with the parents.

Just Ask!

Consumers need to ask anyone who is requesting their PII (doctor, hospital, lawyer, banking institution, accountant, employer, etc.) what protections that the organization has in place to protect against inadvertent disclosures on the P2P networks.

Consider Identity Theft Protection Service

Organizations offer a wide variety of services to help with identity theft from credit monitoring to the more proactive placing of fraud alerts and black market monitoring. Consumers should select an ID theft protection service that offers proactive monitoring and remediation of P2P related disclosure.

Conclusion

In conclusion, the inadvertent file sharing through P2P File Sharing networks is highly pervasive and large in magnitude. It affects consumers, corporations of all sizes, and government agencies.

Existing policies and IT measures have not been effective at preventing information from becoming available. Malicious individuals regularly use P2P file sharing networks to obtain sensitive, confidential, and private information. They pose an immediate threat to national security, business operations and brands, and consumer fraud and ID theft.

The subcommittee should seek to create broader awareness of the problem. It should encourage individuals, corporations, and government agencies to continuously audit P2P networks themselves to enable these entities to intelligently determine their exposure and to design strategies to mitigate their issues.

Mr. Chairman, taking these steps will better protect us all from the dangers that lurk in these networks while allowing for legitimate uses of this powerful technology in the future.

Thank you for the opportunity to testify here today.



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Data Hemorrhages in the Health-Care Sector¹

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Dartmouth College, Hanover NH 03755
[M.Eric.Johnson@dartmouth.edu](mailto:{M.Eric.Johnson}@dartmouth.edu)

Abstract. Confidential data hemorrhaging from health-care providers pose financial risks to firms and medical risks to patients. We examine the consequences of data hemorrhages including privacy violations, medical fraud, financial identity theft, and medical identity theft. We also examine the types and sources of data hemorrhages, focusing on inadvertent disclosures. Through an analysis of leaked files, we examine data hemorrhages stemming from inadvertent disclosures on internet-based file sharing networks. We characterize the security risk for a group of health-care organizations using a direct analysis of leaked files. These files contained highly sensitive medical and personal information that could be maliciously exploited by criminals seeking to commit medical and financial identity theft. We also present evidence of the threat by examining user-issued searches. Our analysis demonstrates both the substantial threat and vulnerability for the health-care sector and the unique complexity exhibited by the US health-care system.

Keywords: Health-care information, identity theft, data leaks, security.

1 Introduction

Data breaches and inadvertent disclosures of customer information have plagued sectors from banking to retail. In many of these cases, lost customer information translates directly into financial losses through fraud and identity theft. The health-care sector also suffers such data hemorrhages, with multiple consequences. In some cases, the losses have translated to privacy violations and embarrassment. In other cases, criminals exploit the information to commit fraud or medical identity theft.

¹ Experiments described in this paper were conducted in collaboration with Tiversa who has developed a patent-pending technology that, in real-time, monitors global P2P file sharing networks. The author gratefully acknowledges the assistance of Nicholas Willey. This research was partially supported by the U.S. Department of Homeland Security under Grant Award Number 2006-CS-001-000001, under the auspices of the Institute for Information Infrastructure Protection (I3P). The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Department of Homeland Security, the I3P, or Dartmouth College.

Given the highly fragmented US health-care system, data hemorrhages come from many different sources—ambulatory health-care providers, acute-care hospitals, physician groups, medical laboratories, insurance carriers, back-offices of health maintenance organizations, and outsourced service providers such as billing, collection, and transcription firms.

In this paper we analyze the threats and vulnerabilities to medical data. We first explore the consequences of data hemorrhages, including a look at how criminals exploit medical data, in particular through medical identity theft. Next, we examine types and sources of data hemorrhages through a direct analysis of inadvertent disclosures of medical information on publically available, internet-based file sharing networks. We present an analysis of thousands of files we uncovered. These files were inadvertently published in popular peer-to-peer file sharing networks like Limewire and Bearshare and could be easily downloaded by anyone searching for them. Originating from health-care firms, their suppliers, and patients themselves, the files span everything from sensitive patient correspondence to business documents, spreadsheets, and PowerPoint files. We found multiple files from major health-care firms that contained private employee and patient information for literally tens of thousands of individuals, including addresses, Social Security Numbers, birth dates, and treatment billing information. Disturbingly, we also found private patient information including medical diagnoses and psychiatric evaluations. Finally, we present evidence, from user-issued searches on these networks, that individuals are working to find medical data—likely for malicious exploitation.

The extended enterprises of health-care providers often include many technically unsophisticated partners who are more likely to leak information. As compared with earlier studies we conducted in the banking sector (Johnson 2008), we find that tracking and stopping medical data hemorrhages is more complex and possibly harder to control given the fragmented nature of the US health-care system. We document the risks and call for better control of sensitive health-care information.

2 Consequences of Data Hemorrhages

Data hemorrhages from the health-care sector are diverse, from leaked business information and employee personally identifiable information (PII) to patient protected health information (PHI), which is individually identifiable health information. While some hemorrhages are related to business information, like marketing plans or financial documents, we focus on the more disturbing releases of individually identifiable information and protected health information. In these cases, the consequences range from privacy violations (including violations of both state privacy laws and federal HIPPA standards) to more serious fraud and theft (Figure 1).

On one hand, health-care data hemorrhages fuel financial identity theft. This occurs when leaked patient or employee information is used to commit traditional financial fraud. For example, using social security numbers and other identity information to apply for fraudulent loans, take-over bank accounts, or charge purchases to credit cards. On the other hand, PHI is often used by criminals to commit traditional medical fraud, which typically involves billing payers (e.g.,

Medicaid/Medicare or private health-care insurance) for treatment never rendered. The US General Accounting Office estimated that 10% of health expenditure reimbursed by Medicare is paid to fraudsters, including identity thieves and fraudulent health service providers (Bolin and Clark 2004; Lafferty 2007).

PHI can also be very valuable to criminals who are intent on committing medical identity theft. The crime of medical identity theft represents the intersection of medical fraud and identity theft (Figure 1). Like medical fraud, it involves fraudulent charges and like financial identity theft, it involves the theft of identity. It is unique in that it involves a medical identity (patient identification, insurance information, medical histories, prescriptions, test results...) that may be used to obtain medical services or prescription drugs (Ball et al. 2003). Leaked insurance information can be used to fraudulently obtain service, but unlike a credit card the spending limits are much higher—charges can quickly reach tens of thousands or even millions of dollars. And unlike financial credit, there is less monitoring and reporting. Sadly, beyond the financial losses, medical identity theft carries other personal consequences for victims as it often results in erroneous changes to medical records that are difficult and time consuming to correct. Such erroneous information could impact care quality or impede later efforts to obtain medical, life, or disability insurance.

For example, recent medical identity theft cases have involved the sale of health identities to illegal immigrants (Messmer 2008). These forms of theft are a problem impacting payers, patients, and health-care providers. Payers and providers both see financial losses from fraudulent billing. Patients are also harmed when they are billed for services they did not receive, and when erroneous information appears on their medical record.

Between 1998 and 2006, the FTC recorded complaints of over nineteen thousand cases of medical identity theft with rapid growth in the past five years. Many believe these complaints represent the tip of the growing fraud problem, with some estimates showing upwards of a quarter-million cases a year (Dixon 2006, 12-13). Currently, there is no single agency tasked with tracking, investigating, or prosecuting these crimes (Lafferty 2007) so reliable data on the extent of the problem does not exist.

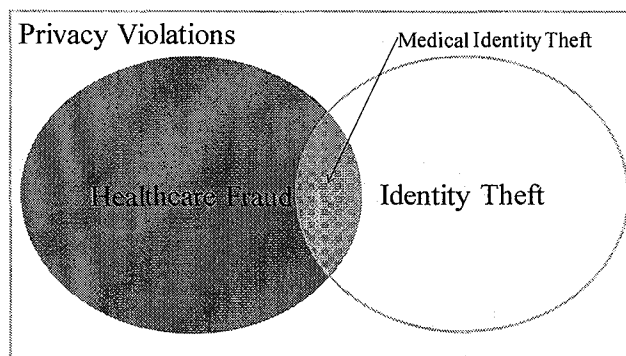


Fig. 1. Consequences of data hemorrhages.

The crime of financial identity theft is well understood with clear underlying motives. A recent FTC survey estimated that 3.7% of Americans were victims of some sort of identity theft (FTC 2007). Significant media coverage has alerted the public of the financial dangers that can arise when a thief assumes your identity. However, the dangers and associated costs of medical identity theft are less well understood and largely overlooked. Of course, PHI (including insurance policy information and government identity numbers) can be fraudulently used for financial gain at the expense of firms and individuals. However, when a medical identity is stolen and used to obtain care, it may also result in life-threatening amendments to a medical file. Any consequential inaccuracies in simple entries, such as allergy diagnoses and blood-typing results, can jeopardize patient lives. Furthermore, like financial identity theft, medical identity theft represents a growing financial burden on the private and public sectors.

Individuals from several different groups participate in the crime of medical identity theft: the uninsured, hospital employees, organized crime rings, illegal aliens, wanted criminals, and drug abusers. In many cases the theft is driven by greed, but in other case the underlying motive is simply for the uninsured to receive medical care. Without medical insurance, these individuals are unable to obtain the expensive care that they require, such as complicated surgeries or organ transplants. However, if they assume the identity of a well insured individual, hospitals will provide full-service care. For example, Carol Ann Hutchins of Pennsylvania assumed another woman's identity after finding a lost wallet (Wereschagin 2006). With the insurance identification card inside the wallet, Hutchins was able to obtain care and medication on 40 separate occasions at medical facilities across Pennsylvania and Ohio, accumulating a total bill of \$16,000. Had it not been for the victim's careful examination of her monthly billing statement, it is likely that Hutchins would have continued to fraudulently receive care undetected. Hutchins served a 3-month jail sentence for her crime, but because of privacy laws and practices, any resulting damage done to the victim's medical record was difficult and costly to erase.

Hospital employees historically comprise the largest known group of individuals involved in traditional medical fraud. They may alter patient records, use patient data to open credit card accounts, overcharge for and falsify services rendered, create phony patients, and more. The crimes committed by hospital employees are often the largest, most intricate, and the most costly.

Take for example the case of Cleveland Clinic front desk clerk coordinator, Isis Machado who sold the medical information of more than 1,100 patients, to her cousin Fernando Ferrer, Jr., the owner of Advanced Medical Claims Inc. of Florida. Fernando then provided the information to others who used the stolen identities to file an estimated \$7.1 million in fraudulent claims (USDC 2006).

Individuals abusing prescription drugs also have a motive to commit medical identity theft. Prescription drug addicts can use stolen identities to receive multiple prescriptions at different pharmacies. Drugs obtained through this method may also be resold or traded. Roger Ly, a Nevada pharmacist allegedly filed and filled 55 false prescriptions for Oxycontin and Hydrocodone in the name of customers. Medicare and insurance paid for the drugs that Ly, allegedly, then resold or used recreationally (USA 2007). The total value of drugs sold in the underground prescription market

likely exceeds \$1 billion (Peterson 2000). Sometimes, the crimes involving prescription drugs are less serious; a Philadelphia man stole a coworker's insurance identification card to acquire a Viagra prescription, which he filled on 38 separate occasions. The plan finally backfired when the coworker he was posing as attempted to fill his own Viagra prescription and discovered that one had already been filled at another pharmacy. The cost to his company's insurance plan: over \$3,000 (PA 2006).

Wanted criminals also have a strong motive to commit medical identity theft. If they check into a hospital under their own name, they might be quickly apprehended by law enforcement. Therefore, career criminals need to design schemes to obtain care. Joe Henslik, a wanted bank robber working as an ad salesman, found it easy to obtain Joe Ryan's Social Security number as part of a routine business transaction (BW 2007). Henslik then went on to receive \$41,888 worth of medical care and surgery under Ryan's name. It took Ryan two years to discover that he had been a victim of medical identity theft. Even after discovery, he found it difficult to gain access to his medical records, since his own signature didn't match that of Henslik's forgery.

Anndorie Sachs experienced a similar situation when her medical identity was used to give birth to a drug addicted baby (Reavy 2006). Sachs had lost her purse prior to the incident and had accordingly cancelled her stolen credit cards, but was unaware of the risk of medical ID theft. The baby, which was abandoned at the hospital by the mother, tested positive for illegal drug use, prompting child services to contact Sachs, who had four children of her own. Fortunately, since Sachs did not match the description of the woman who gave birth at the hospital, the problem did not escalate further. If Sachs was not able to prove her identity, she could have lost custody of her children, and been charged with child abuse. Furthermore, before the hospital became aware of the crime, the baby was issued a Social Security number in Sachs name, which could cause complications for the child later in life. Like Sachs, few individuals consider their insurance cards to be as valuable as the other items they carry in their wallet. Moreover, medical transactions appearing on a bill may not be scrutinized as closely as financial transactions with a bank or credit card.

Illegal immigrants also represent a block of individuals with a clear motive to commit medical identity theft. In the case of a severe medical emergency, they will not be refused care in most instances, but if an illegal immigrant requires expensive surgery, costly prescriptions, or other non-emergency care, they have few options. One of the most shocking and well documented cases comes from Southern California, where a Mexican resident fooled the state insurance program, Medi-Cal, into believing that he was a resident and therefore entitled to health care coverage (Hanson 1994). Mr. Hermillo Meave, was transferred to California from a Tijuana, Mexico hospital with heart problems, but told the California hospital that he was from San Diego, and provided the hospital with a Medi-Cal ID card and number. Although the circumstances surrounding Mr. Meave's arrival were suspicious, the hospital went ahead and completed a heart transplant on Mr. Meave. The total cost of the operation was an astounding one million dollars. Only after the surgery did the hospital determine that Mr. Meave actually lived and worked in Tijuana and was therefore not entitled to Medi-Cal coverage.

Perhaps emboldened by the success of Hermillo Meave, a family from Mexico sought a heart transplant for a dying relative just three months later at the very same

hospital. This time, fraud investigators were able to discover the plot before the surgery could be completed. While processing the paperwork for the patient who was checked in as Rene Garcia, Medi-Cal authorities found nine other individuals around the state, using the same name and ID number. The hospital had the family arrested and jailed for the attempted fraud, which had cost the hospital \$200,000, despite the lack of surgery. The family told investigators that they had paid \$75,000 in order to obtain the ID and set up the surgery. The trafficking of identities between Mexico and California is commonplace, but the sale of Medi-Cal identities adds a new dimension to the crime. The disparity in care between California hospitals and Mexican facilities makes the motivation to commit medical identity theft clear: falsified identification is a low-cost ticket to world-class care.

Finally, identity theft criminals often operate in crime rings, sometimes using elaborate ruses to gather the identities of hundreds individuals. In a Houston case, criminals allegedly staged parties in needy areas offering medical deals as well as food and entertainment (USDJ 2007). At the parties, Medicaid numbers of residents were obtained and then used to bill Medicaid for alcohol and substance abuse counseling. The scheme even included fraudulent reports, written by 'certified' counselors. The fraudulent company managed to bill Medicaid for \$3.5M worth of services, of which they received \$1.8M. In this case, no medical care was actually administered and the medical identity theft was committed purely for financial reasons.

In summary, there are many reasons why individuals engage in medical identity theft, including avoiding law enforcement, obtaining care that they have no way of affording, or simply making themselves rich. Many tactics are used including first hand by physical theft, insiders, and harvesting leaked data. As we saw, PHI can be sold and resold before theft occurs—as in the case of the nine Garcias. The thief may be someone an individual knows well or it could be someone who they've never met.

For health-care providers, the first step in reducing such crime is better protection of PHI by: 1) controlling access within the enterprise to PHI; 2) securing networks and computers from direct intruders; 3) monitoring networks (internal and external) for PII and PHI transmissions and disclosures; 4) avoiding inadvertent disclosures of information. Often loose access and inadvertent disclosures are linked. When access policies allow many individuals to view, move, and store data in portable documents and spreadsheets, the risk of inadvertent disclosure increases.

3 Inadvertent Data Hemorrhages

Despite the much trumpeted enactment of the Health Insurance Portability and Accountability Act (HIPAA), data losses in the health-care sector continue at a dizzying pace. While the original legislation dates back to 1996, the privacy rules regulating the use and disclosure of medical records did not become effective until 2004. Moreover, the related security rules, which mandate computer and building safeguards to secure records, became effective in 2005. While firms and organizations have invested to protect their systems against direct intrusions and hackers, many recent the data hemorrhages have come from inadvertent sources. For

example, laptops at diverse health organizations including Kaiser Permanente (Bosworth 2006), Memorial Hospital (South Bend IN) (Tokars 2008), the U.S. Department of Veterans Administration (Levitz and Hechinger 2006), and National Institutes of Health (Nakashima and Weiss 2008) were lost or stolen—in each case inadvertently disclosing personal and business information.

Organizations have mistakenly posted on the web many different types of sensitive information, from legal to medical to financial. For example, Wuesthoff Medical Center in Florida inadvertently posted names, Social Security numbers and personal medical information of more than 500 patients (WFTV 2008). Insurance and health-care information of 71,000 Georgia residents was accidentally posted on Internet for several days by Tampa-based WellCare Health Plans (Hendrick 2008).

The University of Pittsburgh Medical Center inadvertently posted patient information of nearly 80 individuals including names and medical images. In one case, a patient's radiology image was posted along with his Social Security number, insurance information, medications, and with information on previous medical screenings and procedures (Twedt, 2007). Harvard University and its pharmacy partner, PharmaCare (now part of CVS Caremark), experienced a similar embarrassment when students showed they could easily gain access to lists of prescription drugs bought by Harvard students (Russell 2005). Even technology firms like Google and AOL have suffered the embarrassment of inadvertent web posting of sensitive information (Claburn 2007, Olson 2006)—in their cases, customer information. Still other firms have seen their internal information and intellectual property appear on music file-sharing networks (DeAvila 2007), blogs, YouTube, and MySpace (Totty 2007). In each case, the result was the same: sensitive information inadvertently leaked creating embarrassment, vulnerabilities, and financial losses for the firm, its investors, and customers. In a recent data loss, Pfizer faces a class action suit from angry employees who had their personal information inadvertently disclosed on a popular music network (Vijayan 2007). In this paper we examine health-care leaks from a common, but widely misunderstood source of inadvertent disclosure: peer-to-peer file-sharing networks.

In our past research, we showed that peer-to-peer (P2P) file-sharing networks represented a significant security risk to firms operating within the banking sector (Johnson and Dynes, 2007; Johnson 2008). File sharing became popular during the late 1990s with rise of Napster. In just two years before its court-ordered closure in 2001, Napster enabled tens of millions of users to share MP3-formatted song files. Through its demise, it opened the door for many new P2P file-sharing networks such as Gnutella, FastTrack, e-donkey, and Bittorrent, with related software clients such as Limewire, KaZaA, Morpheus, eMule, and BearShare. Today P2P traffic levels are still growing with as many as ten million simultaneous users (Mennecke 2006). P2P clients allow users to place shared files in a particular folder that is open for other users to search. However, there are many ways that other confidential files become exposed to the network (see Johnson et al. 2008 for a detailed discussion). For example a user: 1) accidentally shares folders containing the information—in some cases confusing client interface designs can facilitate such accidents (Good and Krekelberg (2003)); 2) stores music and other data in the same folder that is shared—this can happen by mistake or because of poor file organization; 3) downloads

malware that, when executed, exposes files; or 4) installs sharing client software that has bugs, resulting in unintentional sharing of file directories.

While these networks are most popularly used to trade copyrighted material, such as music and video, any material can be exposed and searched for including databases, spreadsheets, Microsoft Word documents, and other common corporate file formats. The original exposure of this material over P2P networks is most likely done by accident rather than maliciously, but the impact of a single exposure can quickly balloon. After a sensitive file has been exposed, it can be copied many times by virtually anonymous P2P users, as they copy the file from one another and expose the file to more peers. Criminals are known to engage in the sale and trafficking of valuable information and data. In earlier studies using “honeypot” experiments (experiments that expose data for the purpose of observing how it is stolen), we showed how criminals steal and use both consumer data and corporate information (Johnson et al. 2008). When this leaked information happens to be private customer information, organizations are faced with costly and painful consequences resulting from fraud, customer notification, and consumer backlash.

Ironically, individuals who experience identity theft often never realize how their data was stolen. While there are many ways personal health-care data can be exposed, we will show in the next section how data hemorrhages in P2P networks represent a missing link in the “causality chain.” Far worse than losing a laptop or a storage device with patient data (Robenstein 2008), inadvertent disclosures on P2P networks allow many criminals access to the information, each with different levels of sophistication and ability to exploit the information. And unlike an inadvertent web posting, the disclosures are far less likely to be noticed and corrected (since few organizations monitor P2P and the networks are constantly changing making a file intermittently available to a subset of users). Clearly, such hemorrhages violate the privacy and security rules of HIPAA, which call for health-care organizations to ensure implementation of administrative safeguards (in the form of technical safeguards and policies, personnel and physical safeguards) to monitor and control intra and inter-organizational information access.

4 Research Method and Analysis

To explore the vulnerability and threat of medical information leakage, we examined health-care data disclosures and search activity in peer-to-peer file sharing networks. To collect a sample of leaked data, we initially focused on Fortune Magazine’s list of the top ten publically traded health-care firms (Fortune Magazine (Useem 2007)). Together those firms represented nearly \$70B in US health-care spending (Figure 2).

To gather relevant files, we developed a digital footprint for each health-care institution. A digital footprint represents key terms that are related to the firm—for example names of the affiliated hospitals, clinics, key brands, etc. Searching the internet with Google or P2P networks using those terms will often find files related to those institutions. With the help of Tiversa Inc., we searched P2P networks using our digital signature over a 2-week period (in January, 2008) and randomly gathered a sample of shared files related to health care and these institutions. Tiversa’s servers

and software allowed us to sample in the four most popular networks (each of which supports the most popular clients) including Gnutella (e.g., Limewire, BearShare), FastTrack (e.g., KaZaA, Grokster), Aries (Aries Galaxy), and e-donkey (e.g., eMule, EDonkey2K). Files containing any one or combination of these terms in our digital footprint were captured. We focused on files from the Microsoft Office Suite (Word, Powerpoint, Excel, and Access). Of course, increasing the number of terms included in the digital footprint increases the number file matches found, but also increases false positives—files captured that have nothing to do with the institution in question. Given the large number of hospitals within these ten organizations (more than 500), our goal was to gather a sample of files to characterize the ongoing data hemorrhage. Since users randomly join P2P networks to get and share media (and then depart), the network is constantly changing. By randomly sampling over a 14-day period, we collected 3,328 files for further (manual) analysis.

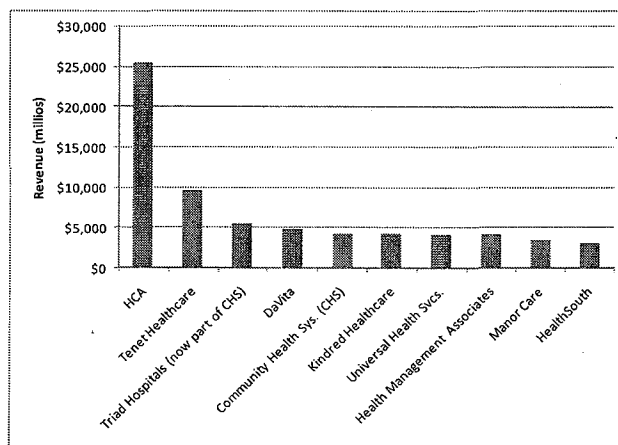


Fig. 2. Revenue of the top ten US health-care firms (Useem 2007).

Of 3,328 documents in our sample, 50.3% could be immediately identified as duplicate copies of the same file (same hash) that had spread or were on multiple IP addresses, leaving us with 1,654 documents to categorize. While duplicate files were not downloaded from the same IP address, duplicate files were collected when a target file had spread to multiple sharing clients. They were also collected from users who joined the network at different IP addresses (what we call an IP shift). Through a manual analysis of the remaining 1,654 files, we found that 71% were not relevant to health care or the organizations under consideration and were downloaded because our search terms overlapped with other subject matter. This was the result of the size and quality of our digital footprint. By casting a large net, we found more files but also many that were not related to the health-care sector. Of the remaining 475 documents, 86 were manually evaluated as duplicate files. With this cross section of

data associated with the health-care organizations, we categorized each file evaluating the dangers associated with it. Figure 3 shows a categorization of the 389 unique, relevant files.

The most common type of files found were newspaper and journal articles, followed by documents associated with students studying medicine. This should not come as a surprise as many P2P users are students. Interestingly, we found entire medical texts being shared. We also found many documents dealing directly with medical issues, such as billings, letters to hospitals, and insurance claims. Many of these documents were leaked by patients themselves. For example, we found several patient-generated spreadsheets containing details of medical treatments and costs—likely for tax purposes. Other documents discovered included hospital brochures and flyers, which were intended for public consumption. Finally there were job listings, cover letters, and résumés, all likely saved on computers of job-seekers. The lack interest in sharing these files for a typical P2P user makes it readily apparent that they were likely shared by mistake. However, all of the files weren't so innocuous. After categorizing the files, we found that about 5% of the files recovered by our loosely tuned search were sensitive or could be used to commit medical or financial identity theft.

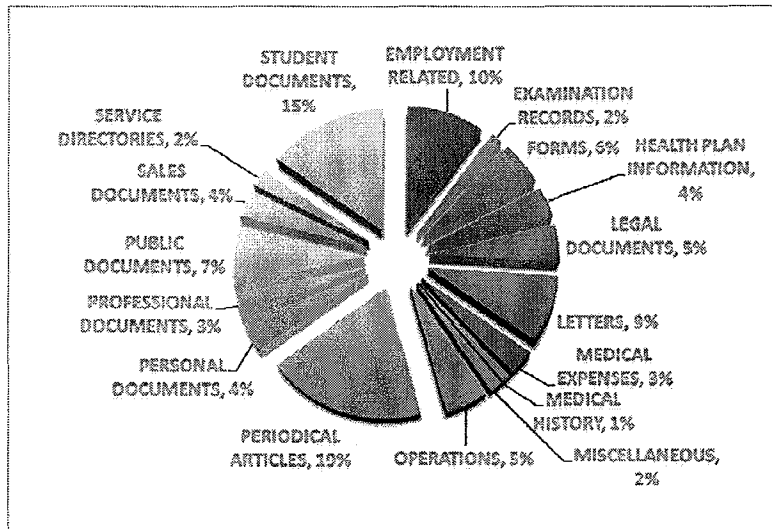


Fig. 3. Summary of unique relevant files.

The set of dangerous documents discovered contained several files that would facilitate medical identity theft. One such document was a government application for employment asking for detailed background information. The document contained the individual's Social Security number, full name, date of birth, place of

birth, mother's maiden name, history of residence and acquaintances, schooling history, and employment history (the individual had worked at one of the hospitals under study). Despite the document's three-page forward highlighting the privacy act measures undertaken by the government to protect the information in the document, and the secure Data Hash code stamped at the bottom of every page along with the bolded text 'PRIVACY ACT INFORMATION', this document somehow ended up on to a P2P network.

More disturbing, we found a hospital-generated spreadsheet of personally identifiable information on recently-hired employees including Social Security numbers, contact information, job category etc. Another particularly sensitive document was an Acrobat form used for creating patient prescriptions. The scanned blank document was signed by a physician and allowed for anyone to fill in the patient's name and prescription information. This document could be used for medical fraud by prescription drug dealers and abusers. Additionally, the doctor's own personal information was included in the document, giving criminals the opportunity to forge other documents in his name. Finally, another example we found was a young individual's medical card. This person was suffering from various ailments and was required to keep a card detailing his prescription information. The card included his doctor's name, parent's names, address, and other personal information. A person with a copy of this identification card could potentially pose as the patient and attempt to procure prescription drugs. All of these dangerous files were found with a relatively simple sample of files published for anyone to find.

As a second stage of our analysis, we then moved from sampling with a large net to more specific and intentional searches. Using information from the first sampling, we examined shared files on hosts where we had found other dangerous data. One of the features enabled by Limewire and other sharing clients is the ability to examine all the shared files of a particular user (sometimes called "browse host"). Over the next six months, we periodically examined hosts that appeared promising for shared files.

Using this approach, we uncovered far more disturbing files. For a medical testing laboratory, we found a 1,718-page document containing patient Social Security numbers, insurance information, and treatment codes for thousands of patients. Figure 4 shows a redacted excerpt of just a single page of the insurance aging report containing patient name, Social Security number, date of birth, insurer, group number, and identification number. All together, almost 9,000 patient identities were exposed in a single file, easily downloaded from a P2P network.

Insurance Aging

INCORPORATED

Insurance Company Name, Address, Phone Number

Insurance: Primary ID: [Redacted] Date of Birth: [Redacted] Insured: Self

Billing Date	Code/CPT	Billed Amount	Current	31-60	61-90	91-120	> 120	Total
03/01/2006		0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/2006		0.00	0.00	0.00	0.00	0.00	0.00	0.00
04/03/2007		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Patient Total:		220.00	0.00	0.00	0.00	0.00	0.00	220.00
Insurance Total:		379.19	0.00	0.00	0.00	147.76	231.40	379.19

Insurance Company Name, Address, Phone Number

Insurance: Primary Group Number: [Redacted] ID: [Redacted] Date of Birth: [Redacted] Insured: Self

Billing Date	Code/CPT	Billed Amount	Current	31-60	61-90	91-120	> 120	Total
02/17/2006		41.00	0.00	0.00	0.00	0.00	0.00	41.00
05/10/2006		0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/03/2006		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Patient Total:		41.00	0.00	0.00	0.00	0.00	0.00	41.00

Insurance Company Name, Address, Phone Number

Insurance: Primary Group Number: [Redacted] ID: [Redacted] Date of Birth: [Redacted] Insured: Self

Billing Date	Code/CPT	Billed Amount	Current	31-60	61-90	91-120	> 120	Total
05/19/2006		41.00	0.00	0.00	0.00	0.00	0.00	41.00
Patient Total:		41.00	0.00	0.00	0.00	0.00	0.00	41.00
Insurance Total:		82.00	0.00	0.00	0.00	0.00	0.00	82.00

Insurance Company Name, Address, Phone Number

Insurance: Secondary ID: [Redacted] Date of Birth: [Redacted] Insured: Self

Billing Date	Code/CPT	Billed Amount	Current	31-60	61-90	91-120	> 120	Total
03/02/2007		110.00	0.00	0.00	110.00	0.00	0.00	110.00
04/05/2007		-18.00	0.00	0.00	-18.00	0.00	0.00	-18.00
03/02/2007		110.00	0.00	0.00	110.00	0.00	0.00	110.00
04/11/2007		3300.00	0.00	3300.00	0.00	0.00	0.00	3300.00
05/17/2007		-2128.40	0.00	-2128.40	0.00	0.00	0.00	-2128.40
05/17/2007		-924.00	0.00	-924.00	0.00	0.00	0.00	-924.00
Patient Total:		493.60	0.00	237.60	202.00	0.00	0.00	493.60

Insurance Company Name, Address, Phone Number

Insurance: Primary ID: [Redacted] Date of Birth: [Redacted] Insured: Self

Billing Date	Code/CPT	Billed Amount	Current	31-60	61-90	91-120	> 120	Total
01/23/2007		25.70	0.00	0.00	0.00	0.00	0.00	25.70
02/23/2007		0.00	0.00	0.00	0.00	0.00	0.00	0.00
04/24/2007		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Patient Total:		25.70	0.00	0.00	0.00	0.00	0.00	25.70

Printed [Redacted] [Redacted] [Redacted] Page 2 of 1718

Fig. 4. Excerpt of an insurance aging report. It contains 1718 pages of patient names, social security numbers, and dates of birth, insurers, group numbers, and identification numbers (exposing nearly 9000 patients). Personally Identifiable Information has been redacted to protect the identities of the disclosers and patients.

For a hospital system, we found two spreadsheet databases that contained detailed information on over 20,000 patients including Social Security numbers, contact details, and insurance information. Up to 82 fields of information (see Figure 5) were recorded for each patient—representing the contents of the popular HCFA form. In this case, the hemorrhage came from an outsourced collection agency working for the hospital. However, besides the patients and hospital system, many other

1. FAFA billNumber	28. dischargeDate	55. firstInsuranceName
2. providerName	29. patientMedRecNo	56. firstInsuranceAddressLine1
3. providerAddressLine1	30. patientMaritalStatus	57. firstInsuranceCity
4. providerCityStateZip	31. guarantorFirstName	58. firstInsuranceState
5. providerPhoneNumber	32. guarantorLastName	59. firstInsuranceZipCode
6. providerFederalTaxId	33. guarantorSSN	60. firstPolicyNumber
7. patientFirstName	34. guarantorPhone	61. firstAuthorizationNumber
8. patientMiddleInitial	35. guarantorAddressLine1	62. firstGroupName
9. patientLastName	36. guarantorAddressLine2	63. firstGroupNumber
10. patientSSN	37. guarantorCity	64. firstInsuredRelationship
11. patientPhone	38. guarantorState	65. firstDateEligible
12. patientAddressLine1	39. guarantorZipCode	66. firstDateThru
13. patientAddressLine2	40. guarantorBirthDate	67. secondInsuranceName
14. patientCity	41. guarantorEmployerName	68. secondInsuranceAddressLine1
15. patientState	42. guarantorEmployerAddressLine1	69. secondInsuranceCity
16. patientZipCode	43. guarantorEmployerAddressLine2	70. secondInsuranceState
17. patientSex	44. guarantorEmployerCity	71. secondInsuranceZipCode
18. patientBirthDate	45. guarantorEmployerState	72. secondPolicyNumber
19. patientEmployerName	46. guarantorEmployerZipCode	73. secondGroupName
20. patientEmployerAddressLine1	47. guarantorEmployerPhone	74. secondGroupNumber
21. patientEmployerAddressLine2	48. guarantorRelationship	75. secondInsuredRelationship
22. patientEmployerCity	49. totalCharges	76. secondDateEligible
23. patientEmployerState	50. amountBalance	77. secondDateThru
24. patientEmployerZipCode	51. totalPayments	78. primaryDiagnosisCode
25. patientEmployerPhone	52. totalAdjustments	79. attendingPhysician
26. caseType	53. accidentCode	80. attendingPhysicianUPIN
27. admissionDate	54. accidentDate	81. lastPaymentDate
		82. providerShortName

Fig. 5. File contents for over 20,000 patients in on inadvertent disclosure.

organizations were comprised. The data disclosed in this file well-illustrates the complexity of US health care with many different constituencies represented, including 4 major hospitals, 335 different insurance carriers acting on behalf of 4,029 patient employers, and 266 different treating doctors (Figure 6). Each of these constituents was exposed in this disclosure. Of course, the exposure of sensitive patient health-information may be the most alarming to citizens. Figure 7 shows one very small section of the spreadsheet (just three columns of 82) for a few patients (of the nearly 20,000). Note that the diagnosis code (IDC code) is included for each patient. For example, code 34 is streptococcal sore throat; 42 is AIDS; 151.9 is malignant neoplasm of stomach (cancer); 29 is alcohol-induced mental disorders; and 340 is multiple sclerosis. In total the file contained records on 201 patients with different forms of mental illness, 326 with cancers, 4 with AIDS, and thousands with other serious and less serious diagnoses.

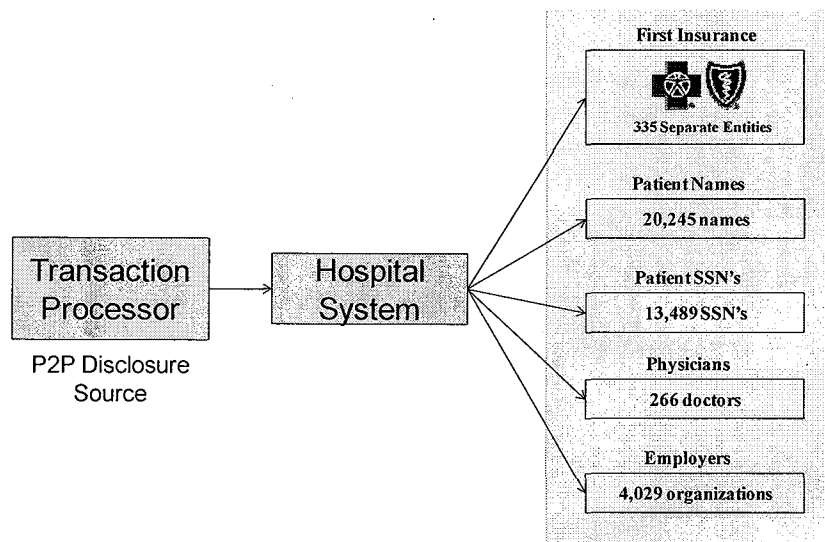


Fig. 6. Hemorrhage exposed a large array of health-care constituents.

CA	CB	CC
primaryDiagnosisCode	attendingPhysician	attendingPhysicianUPIN
8.45		
34		
34		
34		
42		
151.9		
152.1		
291		
291.81		
292		
292.82		
340		
340		
780.39		
780.39		
780.4		
780.6		
780.6		
780.79		
780.79		
780.99		
789		
798		
923		
V70.0		
V75.12		
V76.21		

Fig. 7. Disclosures expose extremely personal diagnosis information. A very small section of a spreadsheet for a few (of over 20,000) patients showing IDC diagnosis codes (see <http://www.cms.hhs.gov/ICD9ProviderDiagnosticCodes/> or <http://www.icd9data.com/>). Personally Identifiable Information has not been included in the illustration to protect the identities of the patients and physicians.

For a mental health center, we found patient psychiatric evaluations. All would be considered extremely personal and some were disturbing. We found similar clinical evaluations leaking from Alabama to Nebraska to California.

Of course, these are just few of many files we uncovered. For a group of anesthesiologists, we found over 350MB of data comprising patient billing reports. For a drug and alcohol rehab center, we found similar billing information. From an AIDs clinic we found a spreadsheet with 232 clients including address, Social Security number, and date of birth. And the list goes on. It is important to note that all of these files were found without extraordinary effort and certainly far less effort than criminals might be economically incented to undertake.

With the vulnerability well established, we also investigated the search activity in P2P networks to see if users were looking for health-care data hemorrhages. Again, using our simple digital signature we captured a sample of user-issued searches along with our files. Figure 8 lists a sample of these searches and clearly shows that users are searching for very specific health-care related data in P2P networks.

care office nbc health	>	billy connolly medical	>	dear medical assurance my	>	letter for medical bills
medicine mental health crc of	>	checkup	>	dear medical insurance my	>	letter for medical bills dr
hospital records	>	billy connolly medical check	>	dear medical my assurance	>	letter for medical bills etmc
mental hospitals	>	canada medical test	>	denial of medical insurance	>	letter re medical bills 10th
hospital	>	canadian medical!	>	dental medical cross coding	>	ltr client medical report
hospital letterhead	>	canadian medical association	>	detective medical	>	ltrhjh rosimah medical
hospital records	>	canadian medical law	>	digital files medical trans	>	ltr medical body4life
niagara hospital	>	caulfield general medical	>	distributeur medical	>	ltr medical maternity portland
american medical	>	cbt6 citc1 medical expenses	>	doctor - medical checkup	>	ltr medical misc portland
connolly medical ups prostate	>	certificat medical	>	doctor fake medical by exam	>	ltr orange medical head center
data entry medical billing fax	>	certicat medical	>	doctor medical exam	>	ltr to valley medical
dear medical insurance my	>	certifica medical	>	Doctors medical billing	>	lytec medical billing
denial of medical insurance	>	certificat medical	>	doctors office medical exam	>	medical investigation
hendee w r medical imaging	>	charlee medical costs	>	doctors order medical doctor	>	medical journals password
isilo medical	>	charlee medical costs on the	>	doctors orders medical	>	medical .txt
medical	>	child medical exam	>	doug medical bill	>	medical abuse records
medical claims	>	child medical exams	>	doug stanhope medical pms	>	medical abuse
medical exam	>	child medical release form	>	edimis medical software 3.9	>	medical abuse records
medical history	>	cigna medical dr	>	electronic medical	>	medical algorithms
medical passwords	>	cigna medical drs	>	electronic medical record	>	medical authorization
medical permission	>	classified medical records	>	electronic medical record osx	>	medical authorization form
medical records certification	>	complete medical exam	>	electronic medical record.pdf	>	medical authorization
medical release	>	comprehensive medical	>	electronic medical records	>	medical benefits
medical secretary cover letter	>	compudoc medical	>	electronic medical systems	>	medical benefits plan chart
medicine medical passwords	>	computerize medical	>	electronics & bio medical	>	medical billing
authorization for medical	>	computerize medical billing	>	emt medical software	>	medical billing
authorization for medical of c	>	tu	>	forms medical	>	medical bill
authorization for medical of j	>	computers in the medical offi	>	forms medical liability form	>	medical biller resume
authorization form medical	>	computers medical doctors	>	forms medical office	>	medical billig software
basic medical forms	>	connolly medical check billy	>	ge medical	>	medical billing
basic medical laboratory techn	>	connolly medical ups	>	ge medical systems	>	medical billing windows
benny medical jack insurance	>	billing medical august	>	medical coding and billing	>	
billing medical	>		>	medical coding exam	>	

Fig. 8. Selection of User-Issued searches that contain the word medical or hospital

5 Conclusion

Data hemorrhages from the health-care sector are clearly a significant threat to providers, payers, and patients. The inadvertent disclosures we found and documented in this report point to the larger problem facing the industry. Clearly, such hemorrhages may fuel many types of crime. While medical fraud has long been a significant problem, the crime of medical identity theft is still in its infancy. Today, many of the well-documented crimes appear to be committed out of medical need. However, with the growing opportunity to commit more significant crimes involving large financial rewards, more and more advanced schemes and methods, such as P2P-fueled identity theft, will likely develop. For criminals to profit, they don't need to "steal" an identity, but only to borrow it for a few days, while they bill the insurer carrier thousands of dollars for fabricated medical bills. This combination of medical fraud along with identity theft adds a valuable page to the playbook of thieves looking for easy targets. Stopping the supply of digital identities is one key to halting this type of illegal activity.

The Health Insurance Privacy Accountability Act (HIPAA) was created to protect patients from having sensitive medical information from becoming public or used against them. However, some of the provisions of the act make medical identity theft more difficult to track, identify, and correct. Under HIPAA, when a patient's medical record has been altered by someone else using their ID, the process to correct the record is difficult for the patient. The erroneous information in the medical file may remain for years. Also due to the intricacies of HIPAA, people who have been victims of medical identity theft may find it difficult to even know what has been changed or added to their record. Since the thief's medical information is contained within the victim's file, it is given the same privacy protections as anyone under the act. Without the ability to remove erroneous information, or figure out the changes contained in a medical record, repairing the damages of medical identity theft can be a very taxing process.

However, HIPAA is also a positive force in the fight against identity theft. Institutions have been fined and required to implement detailed corrective action plans to address inadvertent disclosures of identifiable electronic patient information (HHS 2008). In the case of Isis Machado mentioned earlier, she was charged and fined under HIPAA for disclosing individually identifiable medical records. HIPAA contains rules and punishments for offending medical professionals, which are historically the largest group of health-care fraud perpetrators. This protection of patient identities does discourage inappropriate uses of medical information and reduces the chance of hemorrhages. Nevertheless, HIPAA can do little to stop patients from disclosing their medical identities voluntarily to individuals posing as health care providers, or poorly managing their own computerized documents.

Tighter controls on patient information are a good start, but consumers still need to be educated of the dangers of lost health-care information and how to secure their information on personal computers. Hospitals and others concerned with medical identity theft have begun to undertake measures in order to curb medical identity theft. One of the simplest and most effective measures put in place by hospitals is to request photo identification for admittance to the hospital. In many cases, when a request for photo identification is made, the individual will give up on obtaining care and simply leave the hospital, never to return again. Of course, this measure will likely lose its efficacy in time as criminals become aware of the change in policy. Once a few personal identifiers have been acquired, such as date of birth and Social Security number, a criminal can obtain seemingly valid photo-ID. In the future, insurance companies may need to begin issuing their own tamper-proof photo identification to help stop medical identity theft.

Finally, health-care providers and insurers must enact better monitoring and information controls to detect and stop leaks. Information access within many health-care systems is lax. Coupled with the portability of data, inadvertent disclosures are inevitable. Better control over information access governance (Zhao and Johnson 2008) is an important step in reducing the hemorrhages documented in this report.

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Testimony Before the House Subcommittee on Commerce, Trade and Consumer Protection

Robert Boback, CEO, Tiversa, Inc.

May 4, 2009

TIERSA.

Good afternoon Chairman Rush, Ranking Member Radanovich and Distinguished Members of the Subcommittee.

My name is Robert Boback and I am the Chief Executive Officer of Tiversa, a Pennsylvania-based company that provides security and intelligence services to help protect organizations from the disclosure and illicit use of sensitive, confidential, and personal information on peer-to-peer file sharing, or "P2P", networks.

As P2P file-sharing risk continues to be a major security, risk and privacy issue, let me first start by first providing a brief background on peer-to-peer.

It is important to note that the Internet is comprised essentially of four components: World Wide Web, Instant Messenger (IM), Email, and Peer-to-Peer networks. By many accounts, the largest of these by measure of consumption of overall bandwidth is Peer-to-Peer or P2P. This distinction is necessary to understand the security implications that we are presented with today as a result of both the enormity of the networks as well as the different security challenges that are presented by the networks.

Peer-to-peer networks have been in existence for several years starting most notoriously with the introduction of Napster in the fall of 1999. The networks have provided a gateway for users around the world to share digital content, most notably music, movies and software.

The use of P2P has evolved and is used by individuals worldwide for many different purposes including:

- 1 – Planned file sharing – its intended use.
- 2 – Searching for information with malicious intent – personal information used in identity theft; corporate information and trade secrets; and even military secrets and intelligence.
- 3 – Distribution and sharing of illegal information – Child pornography and information that could be used in terror activity.

P2P networks continue to grow in size and popularity due to the alluring draw of the extent of the content that is present and available on the networks, that in many cases, is not available from any other public source. In addition to movie

and music files, millions of documents, that were not intended to be shared with others, are also available on these networks. It is this that we refer to as inadvertent sharing or disclosure.

Inadvertent sharing happens when computer users mistakenly share more files than they had intended. For example, they may only want to share their music files or a large academic report, but instead expose all files on their computer's hard drive allowing other users to have access to their private or sensitive information. This can occur via several scenarios. These scenarios range from user error, access control issues (both authorized and unauthorized), intentional software developer deception, to malicious code dissemination.

"User error" scenario occurs when a user downloads a P2P software program without fully understanding the security ramifications of the selections made during the installation process. This scenario has been decreasing slightly in the past few years as many of the leading P2P clients have adequately highlighted the security risks associated with sharing various types of files containing sensitive information.

"Access control" occurs most commonly when a child downloads a P2P software program on his/her parents computer. This may occur with or without the parents' knowledge or consent, however the sensitive or confidential information stored on that computer may become exposed publicly nonetheless.

"Intentional software developer deception" occurs when the P2P developers knowingly and intentionally scan and index any or all information during the installation process without the consent of the user. This practice was widely used a few years ago in an effort to populate the P2P networks with large amounts of content. The average user has no incentive to share any files with the other users on the network, confidential or not. The P2P developers recognized that this fact could cause a lack of content to be shared which would negatively impact the network itself. In recent years and in response to legislative intervention and awareness, most mainstream developers have discontinued this controversial tactic. However, there are over 225 P2P software program variants that Tiversa has identified being used to access these networks. Many of these programs continue to surreptitiously index and share files in this fashion.

"Malicious code dissemination" occurs when identity thieves, hackers, fraudsters, and criminals embed malicious code ("worms") in a variety of files that appear innocuous. This scenario is extremely troubling as this malicious code can either force a system to reset its preconfigured security measures, despite the security-focused intentions of the P2P developers, or it can install an aggressive P2P program on a user's computer who may have never intended to install a P2P file sharing program.

This scenario can expose even the most technologically advanced consumer or even an individual who has never intended to use P2P to identity theft or fraud. It can also lead to the inadvertent disclosure of sensitive work-related information that can inflict significant economic or brand damage to an organization and/or lead to the identity theft of customers, employees, or others.

The fact that P2P involves downloading of files from individuals that are unknown to the downloader allows the hacker to overcome the hurdle of getting users to download the worm. These criminals intentionally give the malicious code as the same name as highly sought after music, movie, and software downloads to ensure rapid and effective dissemination. Other criminals will use email attachments embedded with aggressive software that mimics P2P programs when installed. These worms will index and share all information on the victim's computer without any visibility to the victim. This code is very insidious as users cannot detect its presence on their systems. Current anti-virus programs do not detect the presence of such malicious software as it appears to the detection software as an intentionally-downloaded standard P2P software program. It is also important to note that firewalls and encryption do not address or protect the user from this type of disclosure.

These scenarios have resulted in millions of highly sensitive files affecting consumers, businesses large and small, the U.S. government, our financial infrastructure, national security, and even our troops being exposed daily to identity thieves, fraudsters, child predators, and foreign intelligence worldwide.

Today, we would like to provide the committee with concrete examples that show the extent of the security problems that are present on the P2P networks and implications of sharing this type of information. During our testimony, we will provide the committee with examples that illustrate the types of sensitive information available on P2P networks, examples of how identity thieves and others are actively searching for and using the information harvested from these networks, and offer our thoughts on actions to address the problem.

Despite the tools that P2P network developers are putting into their software to avoid the inadvertent file sharing of private and classified information, this significant and growing problem continues to exist. Any changes made to the P2P software, while welcome and helpful, will not fully address the problem. Combine this with the fact that today's existing safeguards, such as firewalls, encryption, port-scanning, policies, etc, simply do not effectively mitigate peer-to-peer file-sharing risk.

Warnings regarding inadvertent file sharing through P2P networks have been sounded in the past. The FTC issued warnings on exposing private information via P2P mechanisms. The 2003 Government Network Security Act highlighted the

dangers facing government agencies and prescribed a course of action. Prominent security organizations, such as CERT (Computer Emergency Response Team) and the SANS Institute have warned corporations, governments, and consumers to the unintended dangers of inadvertent file sharing via P2P networks.

For example, CERT's ST05-007-Risks of File Sharing Technology – Exposure of Sensitive or Personal Information clearly states:

“By using P2P applications, you may be giving other users access to personal information. Whether it's because certain directories are accessible or because you provide personal information to what you believe to be a trusted person or organization, unauthorized people may be able to access your financial or medical data, personal documents, sensitive corporate information, or other personal information. Once information has been exposed to unauthorized people, it's difficult to know how many people have accessed it. The availability of this information may increase your risk of identity theft.”

In July 2007, the House Committee on Oversight and Government Reform held a hearing on the very issue of the “Inadvertent Sharing via P2P Networks,” during which many of the individuals that testified assured the Committee that this problem was being addressed or being remedied. Despite this recognition, most consumers and security experts at corporations worldwide have very little understanding of the information security risks caused by P2P. Most corporations believe that the current policies and existing security measures will protect their information – they will not.

During our testimony today, we will show evidence that despite the numerous warnings and assurances by the developers in previous hearings, the problem continues to exist. In fact, we will also seek to demonstrate the unprecedented increase in identity thieves using P2P software programs to harvest consumer information.

It is important to note that Tiversa believes strongly in the useful technology that is P2P. P2P file sharing is one of the most powerful technologies created in recent years, however, as with the World Wide Web, it is not without its inherent risks.

Beginning in 2003, Tiversa has developed systems that monitor and interact with and within P2P networks to search for sensitive information in an effort to protect the confidential information of our clients. The technology has been architected in a way that is transparent to the network; in a way that preserves the network's sustainability.

Tiversa centralizes what was previously a decentralized P2P file-sharing network. Tiversa can see and detect all the previ-

ously untraceable activity on the network in one place to analyze searches and requests. Where an individual user can only see a very small portion of a P2P file sharing network, Tiversa can see the P2P network in its entirety in real time. With this platform, Tiversa has processed as many as 1.6 billion P2P searches per day, approximately 8 times that of web searches entered into Google per day. This unique technology has led some industry experts (Information Week) to refer to Tiversa as the "Google of P2P."

Financial Fraud

In an analysis of these searches, listed below is a small sampling of actual searches issued on P2P networks brief research window in March 2009. The term credit card was used as the filter criteria for the period.

2007 credit card numbers
2008 batch of credit cards
2008 credit card numbers
ac1 credit card
aa credit card application
abbey credit cards
abbey national credit card
ad credit card authorization
april credit card information
athens mba credit card payment
atw 4m credit card application
austins credit card info
auth card credit
authorization credit card
authorization for credit card
authorize net credit card
bank and credit card informati
bank credit card
bank credit card information
bank credits cards passwords
bank numbers on credit cards
bank of america credit cards
bank of scotland credit card
bank staffs credit cards only
barnabys credit card personal
bibby chase credit card

As evidenced by the sampling above, it is clear to see that malicious individuals are issuing searches on P2P networks to gain access to consumer credit cards. Criminals will quickly use the information located to commit fraud using the stolen credit information. This fact was proven during our research with Dartmouth College and published in their subsequent report.

The term "tax return" is also highly sought after on P2P networks. During a live demonstration in January for NBC's Today Show, Tiversa was able to locate and download over 275,000 tax returns from one brief search of the P2P. Many of these individuals have either saved an electronic copy of their

tax return that they prepared themselves or have saved an electronic copy of their tax return that an accountant or professional tax office had prepared for them. There are also cases where accountant and tax offices, themselves, are inadvertently disclosing client tax returns.

It is a fact that identity thieves search for tax returns to primarily gain access to Social Security Numbers ("SSN"). According to a report on the black market, SSNs are worth approximately \$35. This is up from approximately \$8-\$10 only a few short years ago. One plausible explanation for rapid increase in black market pricing is that identity thieves are finding better ways to now monetize the stolen SSN. This is a very important point. Our search data shows that thieves in fact a new degree of sophistication in cyber crime.

Identity thieves will also file an individual's tax return before the actual individual files the return. The thief will use a fabricated W-2, which can be printed using a number of programs, and will attempt to steal the phony refund that results from the fabricated return. When the victim then files his or her tax return, it will automatically be rejected by the IRS's system as "already filed." Eventually, the IRS will determine that the information, provided by the criminal on the W-2, doesn't match the records that it maintains. At this point, the criminal has most likely cashed the check from the fraud and has moved on to other victims only to have the initial victim left to address the problem with the IRS. This is very costly and time consuming to resolve.

Stolen SSNs are also used by illegal aliens as a requirement of their gaining employment here in the United States. This crime has far reaching implications as well as a tremendous tax burden on behalf of the victim.

Medical Fraud

Medical information is also being sought after on P2P networks with alarming regularity. Listed below are some terms issued over the same period regarding medical information.

letter for medical bills
letter for medical bills dr
letter for medical bills etmc
letter re medical bills 10th
ltr client medical report
ltr hjh rosimah medical
ltr medical body4life
ltr medical maternity portland
ltr medical misc portland
ltr orange medical head center
ltr to valley medical
lytec medical billing
medical investigation
medical journals password
medical .txt

medical abuse records
medical abuse
medical abuse records
medical algoritms
medical authorization
medical authorization form
medical autorization
medical benefits
medical benefits plan chart
medical biling
medical billing
medical bill
medical biller resume
medical billig software
medical billing
medical billing windows

Identity thieves and fraudsters use medical information very similarly to financial information, but with much less scrutiny on behalf of law enforcement.

For example, if an identity thief were to download a consumer's medical insurance information, he or she would then immediately have access to significant financial resources (in many cases medical insurance policies have limits set at \$1 million or above). The criminal would most likely use the insurance card to buy online pharmaceuticals (predominantly Oxycontin, Viagra, or Percoset) which he or she would quickly turn into cash by selling the drugs. This is a very difficult crime to detect as most consumers do not read Explanation of Benefit (EOB) forms sent from the insurance company which only serves to prolong the activity by delaying detection. Even consumers who do read the forms may not readily understand the diagnosis and treatment codes that are indicated on the forms. The victimization of the consumer continues when he or she attempts to appropriately use his or her insurance information for medical services only to be turned away or confronted with the suggestion of a potential prescription drug addiction.

Searches attempting to access financial, accounting, and medical information have risen 59.7% since September 2008. In the full year of 2006 and 2007, the average annual rise in the search totaled just over 10%.

As a matter of record, Tiversa observes searches similar to those previously illustrated for "credit card" and for "medical" for individual corporate names, subsidiaries, and acronyms. The illustration of these search strings in this testimony would put these corporations at further risk. The committee should note that the searches of this nature are every bit as aggressive and more specific as those for credit cards and medical information.

The only correlation that we identified is that the larger and better known a company and its brand, the greater the risks associated with the searches for these corporations.

Child Predation

As if the aforementioned fraudulent activities were not enough to demonstrate the security implications of having personally identifiable information (PII) available to the public on these networks, the crimes can become even more heinous.

Tiversa works with federal, state, and local law enforcement agencies to address the rampant child pornography issues that permeate the P2P file sharing networks. The task is large and process is long however we continue to make progress in this ongoing fight. Presumably, child pornographers are using P2P to locate, download, and share sexually explicit videos and pictures of small children because they feel that they cannot be caught on such a disparate network. Tiversa pioneered the research and tactics used to track and catch these individuals. We are also currently training all levels of law enforcement nationwide through the FBI LEEDA program.

Tiversa has documented cases where child pornographers and predators are actively searching P2P networks for personal photos of children and others that may stored on private computers. Once the photos are downloaded and viewed, these individuals will use the "Browse Host" function provided by the P2P software which allows the user to then view and download all additional information being shared from that computer. If personal photos are being shared, it is most likely that the computer will also be sharing other personal, private information such as a resume or tax return. This accompanying information can be used by the predator to locate the address, telephone, workplace, etc. of the potential victim. Individuals at Tiversa have directly assisted in the investigation of these specific types of cases.

Many individuals at this point would consider themselves immune to these types of identity theft and fraud if they never used or downloaded P2P software. This is not an accurate assumption.

Examples to follow on subsequent pages...

F	A	B	C	D	E	F	G	H	I	J	K	L
9010	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9011	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9012	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9013	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9014	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9015	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9016	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9017	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9018	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9019	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9020	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9021	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9022	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9023	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9024	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9025	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9026	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9027	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9028	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9029	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9030	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9031	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9032	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9033	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9034	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9035	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9036	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9037	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9038	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9039	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9040	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9041	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9042	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9043	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9044	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9045	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9046	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9047	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9048	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9049	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9050	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9051	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9052	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9053	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9054	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9055	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9056	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9057	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9058	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9059	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9060	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9061	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9062	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9063	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9064	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9065	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9066	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9067	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9068	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9069	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9070	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9071	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9072	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9073	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9074	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9075	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9076	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9077	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9078	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9079	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9080	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9081	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9082	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9083	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9084	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9085	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9086	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9087	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9088	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9089	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9090	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9091	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9092	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9093	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9094	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9095	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9096	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9097	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9098	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9099	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27
9100	HOSPITAL	CHARRIS					BRIDGE CITY	77611	Female	12/19/90		322.27

4	A	B	C	D	E	F	G	H
	Last	First	SSN	Taxable?	Degree	School	Major	Division
1000	John			N	Certificate	CFA Institute	CFA	Eastern
1001	Zishan			N	Graduate	NYIT	MBA	Western
1002	David			N	Certificate	CFA Institute	CFA	Western
1003	Anthony			N	Graduate	Stevens Institute	MIS	Eastern
1004	Melissa			N	Certificate	Dowling College	CFP	Eastern
1005	Thomas			N	Certificate	Pace	CFP	Eastern
1006	Mary Linley			N	Certificate	American College	CFP	Eastern
1007	Samuel			N	Certificate	Kaplan University	CFP	Eastern
1008	Sandeep			N	Graduate	Steven Institute	Info Mgmt sys	Eastern
1009	Emmee			N	Certificate	Kaplan	CFP	SouthWest
1010	Scott			N	Certificate	Kaplan	CFP	Western
1011	Darya			N	Undergrad	Montclair State University	Marketing	Eastern
1012	Isaac			N	Certificate	Pace University	CFP	Eastern
1013	Soiland			N	Certificate	Kaplan	CFP	Eastern
1014	James			N	Certificate	Kaplan	CFP	Eastern
1015	Steven			N	Graduate	University of Connecticut	MBA	Eastern
1016	Michael			N	Graduate	Stevens Ins	MIS	Eastern
1017	Alejandra			N	Degree	Pace University	BA	Eastern
1018	Hasan			N	Undergrad	NYU	International MBA	Eastern
1019	Sneh			N	Undergrad	Stevens Institute	MIS	Eastern
1020	Luis			N	Undergrad	Axa College	BA	Eastern
1021	Jared			N	Certificate	Kaplan	CFP	Eastern
1022	Mathew			N	Undergrad	Brooklyn College	Finance	Eastern
1023	Francisco			N	Certificate	CFA Institute	CFA	Eastern
1024	Belinda			N	Undergrad	Universidad	Accounting	PR

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z			
ID Number	DOB	First Name	Middle Name	Last Name	Grade	Birth Date	Sex	Mail City	State Zip	1st Guardian Name	AD	AC	AD	AC	AD	AC	AD	AC	AD	AC	AD	AC	AD	AC	AD	AC		
1200		HALLEY			01	01/25/1981	F	SULPHUR	LA 70683																			
1201		NADISON			03	11/25/1988	F	SULPHUR	LA 70683																			
1202		RAQUEL			24	08/28/2003	F	SULPHUR	LA 70683																			
1203		SPRINGSON			06	10/16/1988	F	SULPHUR	LA 70683																			
1204		KAMERYN			01	01/10/2001	F	SULPHUR	LA 70683																			
1205		KEMERY			04	07/02/1988	F	SULPHUR	LA 70683																			
1206		SAMUEL			01	04/10/2001	M	SULPHUR	LA 70683																			
1207		SELEBY			21	10/10/2003	F	SULPHUR	LA 70683																			
1208		KENYA			04	02/15/1987	F	SULPHUR	LA 70683																			
1209		WAKENGE			02	09/19/2000	F	SULPHUR	LA 70683																			
1210		DREAMA			06	09/27/1986	F	SULPHUR	LA 70683																			
1211		NICHOLAS			08	10/10/1984	M	SULPHUR	LA 70683																			
1212		ANHELLE			06	05/18/1984	F	SULPHUR	LA 70683																			
1213		ANHELLE			03	04/14/1986	F	SULPHUR	LA 70683																			
1214		EMLY			05	09/20/1987	F	SULPHUR	LA 70683																			
1215		JACKSON			09	11/14/1984	M	SULPHUR	LA 70683																			
1216		SARAH			08	12/15/1993	F	SULPHUR	LA 70683																			
1217		ALEXANDER			03	09/25/1989	M	SULPHUR	LA 70683																			
1218		HALLEY			24	07/25/2003	F	SULPHUR	LA 70683																			
1219		SEYDEN			02	08/25/2000	M	SULPHUR	LA 70683																			
1220		CHRISTOPHER			01	08/02/2000	M	LAKE CHARLES	LA 70601																			
1221		THOMAS			04	09/25/1986	F	LAKE CHARLES	LA 70601																			
1222		DANIEL			06	11/23/1988	M	SULPHUR	LA 70683																			
1223		JUSTIN			04	12/10/1987	M	SULPHUR	LA 70683																			
1224		ALEX			03	08/22/1986	M	SULPHUR	LA 70683																			
1225		HANAN			05	02/11/1987	F	SULPHUR	LA 70683																			
1226		MICHAEL			07	04/10/1984	M	SULPHUR	LA 70683																			
1227		LAKE			04	01/23/1986	F	SULPHUR	LA 70683																			
1228		JENNIFER			05	11/27/1984	F	SULPHUR	LA 70683																			
1229		JUSTINE			01	11/15/2000	F	SULPHUR	LA 70683																			
1230		KATE			01	09/27/2001	F	SULPHUR	LA 70683																			
1231		RYLEE			26	05/22/2002	F	SULPHUR	LA 70683																			
1232		TANNER			03	10/11/1988	M	SULPHUR	LA 70683																			
1233		EMMA			02	12/13/1988	F	SULPHUR	LA 70683																			
1234		MARY			00	12/26/1983	F	SULPHUR	LA 70683																			
1235		RAQUEL			06	01/16/1983	F	SULPHUR	LA 70683																			
1236		SARAH			06	05/21/1986	F	SULPHUR	LA 70683																			
1237		SAMBER			01	04/25/2000	F	SULPHUR	LA 70683																			
1238		ASHLEY			01	09/25/2000	F	SULPHUR	LA 70683																			

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z			
ID Number	DOB	First Name	Middle Name	Last Name	Grade	Birth Date	Sex	Mail City	State Zip	1st Guardian Name	AD	AC	AD	AC	AD	AC	AD	AC	AD	AC	AD	AC	AD	AC	AD	AC		
47171	2170	7104	Bank One	3333444		04	M	CHICAGO	IL 60608	2547																		
47172	2171	7104	Bank One	3333444		James R		MENARD COOPER	SC 29461	2628																		
47173	2172	7104	Bank One	3333444		Mary		UTICA	NY 12081	2641																		
47174	2173	7104	Bank One	3333444		CHRISTOPHER		HAWKTON	VA 22064	2632																		
47175	2174	7104	Bank One	3333444		Felicia H		WAYNE	PA 19087	2642																		
47176	2175	7104	Bank One	3333444		David A		HUNTINGTON	PA 15726	2623																		
47177	2176	7104	Bank One	3333444		Joseph		NEW SMYRNA BEACH	FL 32088	2646																		
47178	2177	7104	Bank One	3333444		Howard L		MONROE	LA 70602	2641																		
47179	2178	7104	Bank One	3333444		Thomas M		COLLEGE	PA 17033																			
47180	2179	7104	Bank One	3333444		Justin M		PITTSBURGH	PA 15214	2621																		
47181	2180	7104	Bank One	3333444		John J		WARRIOR	PA 17093	2628																		
47182	2181	7104	Bank One	3333444		Darlene M		HUNTSVILLE	SC 29403	2645																		
47183	2182	7104	Bank One	3333444		Donald		CHARLESTON	SC 29403	2645																		
47184	2183	7104	Bank One	3333444		Joseph		GOTHAM	AL 36033	2621																		
47185	2184	7104	Bank One	3333444		James Earl		MILLERSBORO	AL 36854	2623																		
47186	2185	7104	Bank One	3333444		Morissa Lee		Jacksonville	FL 32218																			
47187	2186	7104	Bank One	3333444		Angie L		PENSACOLA	FL 32501	2613																		
47188	2187	7104	Bank One	3333444		Gregory B		MARI	FL 32788	2612																		
47189	2188	7104	Bank One	3333444		E		MOBILE	GA 30602																			
47190	2189	7104	Bank One	3333444		Joseph A		WABA	FL 32094	2624																		
47191	2190	7104	Bank One	3333444		Andrew M		KALISDAY	FL 32087	2627																		
47192	2191	7104	Bank One	3333444		Steven R		WINSTON-SALEM	NC 27103	2612																		
47193	2192	7104	Bank One	3333444		Colin R		SUNDALE	CA 92524																			
47194	2193	7104	Bank One	3333444		Ely C		HUNBLE	TX 75246	2620																		
47195	2194	7104	Bank One	3333444		Matthew G		NORFOLK	VA 23085	2620																		
47196	2195	7104	Bank One	3333444		John		ROCKFORD	GA 30087	2610																		
47197	2196	7104	Bank One	3333444		Alvin		WALDSTA	GA 30181																			
47198	2197	7104	Bank One	3333444		Darby		COVINGTON	MS 39232	2621																		
47199	2198	7104	Bank One	3333444		Alfred J		GREENSBORO	NC 27409	2625																		
47200	2199	7104	Bank One	3333444		Corey S		ROSELAND	MS 39213	2623																		
47201	2200	7104	Bank One	3333444		Ferrell D		GREENSBORO	NC 27409	2625																		
47202	2201	7104	Bank One	3333444		Erin B		MARSHALL	MS 39258	2640																		
47203	2202	7104	Bank One	3333444																								

Emp/Sir: _____ Employer: _____ Local: 952 Status: 03 Paid Thru: Jul/1987
 Name: WANDA Gender: F Birth Date: 09/21/1942
 Address: _____ CA
 Phone: _____ Sic: _____ Voter Reg: No BA: 065 Mail: 1
 Initiation: 01/13/1977 Seniority: 08/01/1980 Clock Auth: _____ Salary: \$13.00
 Reinitiation: _____ Refire: _____ Term Lof: _____ Term Emp: 01/15/1987
 Dues Rate: \$26.00 Norm Am: \$26.00 Dues Dvg: _____ Dues Last: 06/15/1987
 Ini Pd: \$100.00 Reini Pd: \$100.00 Start: _____ Dep: _____
 Feni Pd: \$0.00 Feni Pd: \$0.00 Original: Oct/1977 Clock: _____
 Beneficiary: _____ Relation: 3 Kof: 010 Trans Rate: \$0.00
 Transfer To: _____ From: _____ Kof2: _____ Trans Paid: \$0.00
 Remarks: TERM 1-07*****WATCH***
 Asses 1: 0 2: 0 3: 0 4: 0 Post Fleg: _____ Post Date: _____
 Paty: _____ Fesinc: _____ **PAYMENTS**
 Record: 69495 of 69495

Insurance Aging

INCORPORATED

JOHN J Date of Birth: 8/29/1945 Insured: Self

Insurance: Primary ID: _____

Billing	Date	Code/CPT	Billed	Amount	Current	31-60	61-90	91-120	> 120	Total
	05/01/2006		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12/17/2006		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	04/30/2007		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Patient Total:			229.00	0.00	0.00	0.00	0.00	0.00	229.00	229.00

Insurance Total:	379.15	0.00	0.00	0.00	147.75	231.40	379.15
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TIMOTHY L Date of Birth: 02/21/1945 Insured: Self

Insurance: Primary Group Number: 00001022 ID: _____

Billing	Date	Code/CPT	Billed	Amount	Current	31-60	61-90	91-120	> 120	Total
216464	02/17/2006	87096/87096	03/08/2006	41.00	0.00	0.00	0.00	0.00	41.00	41.00
	05/19/2006		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12/06/2006		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Patient Total:			41.00	0.00	0.00	0.00	0.00	0.00	41.00	41.00

DANNY T Date of Birth: 01/15/1948 Insured: Self

Insurance: Primary Group Number: 00000905 ID: _____

Billing	Date	Code/CPT	Billed	Amount	Current	31-60	61-90	91-120	> 120	Total
233355	06/19/2006	87096/87096	03/03/2006	41.00	0.00	0.00	0.00	0.00	41.00	41.00
Patient Total:			41.00	0.00	0.00	0.00	0.00	0.00	41.00	41.00
Insurance Total:	82.00	0.00	0.00	0.00	0.00	82.00	82.00			

BEN Date of Birth: 11/28/1935 Insured: Self

Insurance: Secondary ID: _____

Billing	Date	Code/CPT	Billed	Amount	Current	31-60	61-90	91-120	> 120	Total
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Tiversa engaged in research involving over 30,000 consumers and found that 86.7% of the individuals whose information was found on the P2P networks, were breached by a third party. Many of these individuals had their information exposed by their doctors, lawyers, hospitals, accountants, employers, banks and financial institutions, payroll companies, etc. Organizations that had a right to have access to the information were predominantly the source of the breach.

In the last 60 days (2/25-4/26), Tiversa has downloaded 3,908,060 files that have been inadvertently exposed via P2P networks. This number is only comprised of Excel spreadsheets, Word documents, PDFs, Rich Text, Emails, and PST files. This number does not include any pictures, music, or movies. Its important to note that these files were only downloaded with general industry terms and client filters running. Much more exists on the network in a given period of time.

This risk also extends to the military and to overall national security. Tiversa has documented the exposure of the PII of men and women in the Armed Forces with frightening regularity. Military families are prime targets for identity theft as the thieves are aware that the soldiers are probably not checking their statements or credit reports very closely due to the serious nature of the work that they are performing. We have seen the confidential information (SSNs, blood types, addresses, next of kin, etc.) of in excess of 200,000 of our troops.

This issue poses a national security risk. In February of this year, Tiversa identified an IP address on the P2P networks, in Tehran, Iran, that possessed highly sensitive information relating to Marine One. This information was disclosed by a defense contractor in June 2008 and was apparently downloaded by an unknown individual in Iran.

On April 22, 2009, the Wall Street Journal printed a front cover story that indicated that former Pentagon officials had indicated that spies had downloaded plans for the \$300B Joint Strike Fighter project. Highly sensitive information regarding the Joint Strike Fighter program was also discovered on P2P networks.

In monitoring the origin of the searches on the P2P networks regarding national security issues, it is clear that organized searching is occurring from various nations outside the United States to gain access to sensitive military information being disclosed in this manner.

Recommendations

Tiversa's focus has been working for several years with corporations and government agencies to mitigate P2P disclosures and risks. Based on our experience, we believe that there are steps that can help significantly decrease the likelihood of inadvertent disclosures and therefore increase the safety and

protection of those most affected, the consumers. We humbly and respectfully provide the following recommendations for your consideration.

Increase Awareness of the Problem

Corporations are just becoming aware of the problem that the P2P poses to its information and data security. Individual consumers are even less prepared for the security threats that it poses. It is very difficult to protect against a threat that you are unaware of.

On the FTC's website on the page "About Identity Theft," there is not a single mention of P2P or file-sharing as an avenue for a criminal gaining access to a consumer's personal information. Of the 6 methods identified on the website, very few if any could ever result in the consistent production, let alone the magnitude, of PII like the P2P networks.

Clearly, victims of identity theft must be educated and notified that P2P could be the source of their stolen information.

Awareness should extend to corporations as well. With consumers being asked to provide PII to employers, banks, accountants, doctors, hospitals, the recipients of this PII must be knowledgeable in the threats that P2P can pose to the security of that information.

Federal Data Breach Notification Standards

41 of the 50 states have now enacted some form of data breach notification law. However, the laws vary state to state and, in our experience, are seldom respected or followed by organizations.

Standardized breach laws should be enacted to provide guidelines for any organization, public or private, that houses consumer or customer PII in the event of a breach of the information. The breach law will also need to be enforced as many of the disclosing companies disregard the current state laws, if any to the severe detriment of the consumer whose information was exposed.

Any breach involving the release of a consumer's SSN should include mandatory identity theft protection for that individual for a minimum of 5 years. The often reported 1 year of credit monitoring is completely inadequate remediation for a consumer whose SSN was breached. Identity thieves will wait for the credit monitoring to expire after the year provided to begin to attack the consumer. This is supported by actual files Tiversa has seen with expiry tags entered directly into the filename and meta-data.

Military Personnel Disclosures

Congress should vigorously act to protect the safety and identity of our men and women in uniform. Soldiers who have had their information disclosed should be provided comprehensive identity theft protection services so as to prevent and guard against the use of the breached information.

National Security Disclosures

P2P networks should be continuously monitored globally for the presence of any classified or confidential information that could directly or indirectly affect the safety or security our citizens.

Consumers

Tiversa also suggests the following recommendation for consumers:

Know Your PC (and who is using it)

Parents need to pay close attention to the actions of their children online, especially when the children are using a shared PC with the parents.

Just Ask!

Consumers need to ask anyone who is requesting their PII (doctor, hospital, lawyer, banking institution, accountant, employer, etc.) what protections that the organization has in place to protect against inadvertent disclosures on the P2P networks.

Consider Identity Theft Protection Service

Organizations offer a wide variety of services to help with identity theft from credit monitoring to the more proactive placing of fraud alerts and black market monitoring. Consumers should select an ID theft protection service that offers proactive monitoring and remediation of P2P related disclosure.

Conclusion

In conclusion, the inadvertent file sharing through P2P File Sharing networks is highly pervasive and large in magnitude. It affects consumers, corporations of all sizes, and government agencies.

Existing policies and IT measures have not been effective at preventing information from becoming available. Malicious individuals regularly use P2P file sharing networks to obtain sensitive, confidential, and private information. They pose an immediate threat to national security, business operations and brands, and consumer fraud and ID theft.

The subcommittee should seek to create broader awareness of the problem. It should encourage individuals, corporations, and government agencies to continuously audit P2P networks themselves to enable these entities to intelligently determine their exposure and to design strategies to mitigate their issues.

Mr. Chairman, taking these steps will better protect us all from the dangers that lurk in these networks while allowing for legitimate uses of this powerful technology in the future.


Thank you for the opportunity to testify here today.



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Testimony before the House Committee on Oversight and Government Reform

Robert Boback, CEO, Tiversa, Inc.

July 29, 2009

TI ERSA.

EXHIBIT - D

Good morning Chairman Towns, Ranking Member Issa and Distinguished Members of the Committee.

My name is Robert Boback and I am the Chief Executive Officer of Tiversa, a Pennsylvania-based company that provides security and intelligence services to help protect organizations from the disclosure and illicit use of sensitive, confidential, and personal information on peer-to-peer file sharing, or "P2P", networks.

P2P file-sharing continues to be a major security risk and privacy issue. Today, I will provide a brief background on P2P networks, highlight the risks of inadvertent file sharing, provide examples of P2P file disclosures and the impact on consumers, businesses, government, the military and national security, and share our observations and recommendations.

Background: Peer-to-Peer Networks

The Internet is comprised essentially of four components: World Wide Web, Instant Messenger (IM), Email, and Peer-to-Peer networks. By many accounts, the largest of these by measure of consumption of overall bandwidth is Peer-to-Peer or P2P. This distinction is necessary to understand the security implications that we are presented with today as a result of both the enormity of the networks as well as the different security challenges that are presented by the networks.

P2P networks have been in existence for several years starting most notoriously with the introduction of Napster in the fall of 1999. The P2P networks have provided a gateway for users around the world to share digital content, most notably music, movies and software.

P2P networks are growing and dynamic. Since 2005, P2P networks have grown at the rate of over 20% (CAGR). Today, worldwide P2P networks may have over 20 million users at any point in time. P2P networks are ever-changing as users join and exit constantly. The number of P2P programs or "clients" has grown to over 225, with many having multiple versions in use. Additionally, many of the

programs are open source and, accordingly, subject to modification as users see fit. P2P networks are a worldwide phenomenon with users across wide ranges of ages, educational backgrounds and incomes.

The use of P2P has evolved and is used by individuals worldwide for many different purposes including:

- 1 – Planned file sharing – Its intended use.
- 2 – Searching for information with malicious intent – personal information used in identity theft; corporate information and trade secrets; and even military secrets and intelligence.
- 3 – Distribution and sharing of illegal information – Child pornography and information that could be used in terror activity.

Inadvertent File Disclosure

P2P networks continue to grow in size and popularity due to the extent of the content that is present and available on the networks, that in many cases, is not available from any other public source. In addition to movie and music files, millions of documents, that were not intended to be shared with others, are also available on these networks. It is this unintentional sharing that we refer to as inadvertent sharing or disclosure.

Inadvertent sharing happens when computer users mistakenly share more files than they had intended. For example, they may want to share only their music files or a large academic report, but instead expose all files on their computer's hard drive allowing other users to have access to their private or sensitive information. This can occur via several scenarios. These scenarios range from user error, access control issues (both authorized and unauthorized), intentional software developer deception, to malicious code dissemination.

"User error" scenario occurs when a user downloads a P2P software program without fully understanding the security ramifications of the selections made during the installation process. This scenario has been decreasing slightly in the past few years as many of the leading P2P clients have highlighted the security risks associated with sharing various types of files containing sensitive information.

"Access control" occurs most commonly when a child downloads P2P software program on his/her parents' computer. This may occur with or without the parents' knowledge or consent, however the sensitive or confidential information stored on that computer may become exposed publicly nonetheless.

"Intentional software developer deception" occurs when the P2P developers knowingly and intentionally scan and index any or all information during the installation process without the consent of the user. This practice was widely used a few years ago in an effort to populate the P2P networks with large amounts of content. The average user has no incentive to share any files with the other users on the network, confidential or not. The P2P developers recognized that this fact could cause a lack of content to be shared which would negatively impact the network itself. In recent years and in response to legislative intervention and awareness, most mainstream developers have discontinued this controversial tactic. However, there are over 225 P2P software programs that Tiversa has identified being used to access these networks. Many of these programs continue to surreptitiously index and share files in this fashion.

"Malicious code dissemination" occurs when identity thieves, hackers, fraudsters, and criminals embed malicious code ("worms") in a variety of files that appear innocuous. This scenario is extremely troubling as this malicious code can either force a system to reset its preconfigured security measures, despite the security-focused intentions of the P2P developers, or it can install an aggressive P2P program on a user's computer who may have never intended to install a P2P file sharing program. This scenario can expose even the most technologically advanced consumer or even an individual who has never intended to use P2P to identity theft or fraud. It can also lead to the inadvertent disclosure of sensitive work-related information that can inflict significant economic or brand damage to an organization and/or lead to the identity theft of customers, employees, or others.

The fact that P2P involves downloading of files from individuals that are unknown to the downloader allows the hacker to overcome the hurdle of getting users to download the worm. These criminals intentionally give the malicious code as the same name as highly sought after music, movie, and software downloads to ensure rapid and effective dissemination. Other criminals will use email attachments embedded with aggressive software that mimics P2P programs when installed. These worms will index and share all information on the victim's computer without any visibility to the victim. This code is very insidious as users cannot detect its presence on their systems. Current anti-virus programs typically do not detect the presence of such malicious software as it appears to the detection software as an intentionally-downloaded standard P2P software program. It is also important to note that firewalls and encryption do not address or protect the user from this type of disclosure.

These scenarios have resulted in millions of highly sensitive files affecting consumers, businesses large and small, the U.S. government, our financial

infrastructure, national security, and even our troops being exposed daily to identity thieves, fraudsters, child predators, foreign intelligence organizations and terrorists worldwide.

Despite the tools that P2P network developers are incorporating into their software to avoid the inadvertent file sharing of private and classified information, this significant and growing problem continues to exist. Any changes made to the P2P software, while welcome and helpful, will not fully address the problem. Combine this with the fact that today's existing safeguards, such as data loss prevention, firewalls, encryption, port-scanning, policies, etc, simply do not effectively mitigate peer-to-peer file-sharing risk.

Warnings regarding inadvertent file sharing through P2P networks have been sounded in the past. The FTC issued warnings on exposing private information via P2P mechanisms. The 2003 Government Network Security Act highlighted the dangers facing government agencies and prescribed a course of action. Prominent security organizations, such as CERT (Computer Emergency Response Team) and the SANS Institute have warned corporations, governments, and consumers to the unintended dangers of inadvertent file sharing via P2P networks.

For example, CERT's ST05-007-Risks of File Sharing Technology – Exposure of Sensitive or Personal Information clearly states:

"By using P2P applications, you may be giving other users access to personal information. Whether it's because certain directories are accessible or because you provide personal information to what you believe to be a trusted person or organization, unauthorized people may be able to access your financial or medical data, personal documents, sensitive corporate information, or other personal information. Once information has been exposed to unauthorized people, it's difficult to know how many people have accessed it. The availability of this information may increase your risk of identity theft."

In July 2007, the House Committee on Oversight and Government Reform held a hearing on the very issue of the "Inadvertent Sharing via P2P Networks," during which many of the individuals that testified assured the Committee that this problem was being addressed or being remedied. Despite this recognition, most consumers and security experts at corporations worldwide have very little understanding of the information security risks caused by P2P. Most corporations believe that the current policies and existing security measures will protect their information – they will not.

Today, we will provide the Committee with concrete examples that show the extent of the security problems that exist on the P2P networks and the implications of sharing this type of information. During our testimony, we will provide the Committee with examples that illustrate the types of sensitive information available on P2P networks, provide examples of how identity thieves and others are actively searching for and using the information harvested from these networks, and offer our thoughts on actions to address the problem.

During our testimony today, we will show evidence that despite the numerous warnings and assurances by the developers and government agencies in previous hearings, the problem remains. In fact, we will also demonstrate the unprecedented increase in identity thieves using P2P software programs to harvest consumer information.

It is important to note that Tiversa believes strongly in the useful technology that is P2P. P2P file sharing is one of the most powerful technologies created in recent years, however, as with the World Wide Web, it is not without its inherent risks.

Tiversa and Its Technology

Beginning in 2003, Tiversa developed systems that monitor and interact with and within P2P networks to search for sensitive information in an effort to protect the confidential information of our clients. The technology has been designed, developed and implemented in a way that is transparent to the network; in a way that preserves the network's sustainability.

Tiversa centralizes what was previously a decentralized P2P file-sharing network. Tiversa can see and detect all the previously untraceable activity on the P2P network in one place to analyze searches and requests. While an individual user can only see a very small portion of a P2P file sharing network, Tiversa can see the P2P network in its entirety in real time. With this platform, Tiversa has processed as many as 1.6 billion P2P searches per day, more than the number of web searches entered into Google per day. This unique technology has led some industry experts (Information Week) to refer to Tiversa as the "Google of P2P."

Tiversa uses this technology to provide P2P security and intelligence services to businesses, consumers and law enforcement agencies. The following examples demonstrate how inadvertent breaches affect individual consumers, businesses, government, military and national security and are based on our unique perspective on P2P networks.

Examples: Inadvertent Disclosures on P2P

Consumers

Financial Fraud – From analysis of P2P searches, listed below is a small sampling of actual searches issued on P2P networks during a brief research window in March 2009. The term *credit card* was used as the filter criteria for the period.

- 2007 credit card numbers
- 2008 batch of credit cards
- 2008 credit card numbers
- a&l credit card
- aa credit card application
- abbey credit cards
- abbey national credit card
- ad credit card authorization
- april credit card information
- athens mba credit card payment
- atw 4m credit card application
- auslins credit card info
- auth card credit
- authorization credit card
- authorization for credit card
- authorize net credit card
- bank and credit card informati
- bank credit card
- bank credit card information
- bank credits cards passwords
- bank numbers on credit cards
- bank of america credit cards
- bank of scotland credit card
- bank staffs credit cards only
- bamabys credit card personal
- bibby chase credit card

As evidenced by the sampling above, it is clear to see that malicious individuals are issuing searches on P2P networks to gain access to consumer credit cards. Criminals will quickly use the information located to commit fraud using the stolen credit information. This fact was proven during our research with Dartmouth College and published in their subsequent report.

The term "tax return" is also highly sought after on P2P networks. During a live demonstration in January of this year for NBC's Today Show, Tiversa was able to locate and download over 275,000 tax returns from one brief search of the P2P. Many of these individuals have either saved an electronic copy of their tax return that they prepared themselves or have saved an electronic copy of their tax return that an accountant or professional tax office had prepared for them. There are also cases in which accountants and tax offices, themselves, inadvertently disclosed client tax returns.

It is a fact that identity thieves search for tax returns to primarily gain access to Social Security Numbers ("SSN"). According to a report on the black market, SSNs are worth approximately \$35 each. This is up from approximately \$8-\$10 only a few short years ago. One plausible explanation for the rapid increase in black market pricing is that identity thieves are finding better ways to now monetize the stolen SSNs. This is a very important point. Our search data shows that thieves in fact employ a new degree of sophistication in cyber crime.

Identity thieves will also file an individual's tax return before the actual individual files the return. The thief will use a fabricated W-2, which can be printed using a number of programs, and will attempt to steal the phony refund that results from the fabricated return. When the victim then files his or her legitimate tax return, it will automatically be rejected by the IRS as "already filed." Eventually, the IRS will determine that the information, provided by the criminal on the W-2, doesn't match the records that it maintains. At this point, the criminal has most likely cashed the check from the fraud and has moved on to other victims leaving the initial victim to address the problem with the IRS. This is very costly and time consuming for both the victim and the IRS.

Stolen SSNs are also used by illegal aliens to gain employment in the United States. This crime has far reaching implications as well as placing a tremendous tax burden on the victim.

Medical Fraud – Medical information is also being targeted on P2P networks with alarming and increasing regularity. Listed below are some terms issued over the same period regarding medical information.

- *letter for medical bills*
- *letter for medical bills dr*
- *letter for medical bills etmc*
- *letter re medical bills 10th*
- *lir client medical report*
- *lir hjh rosimah medical*
- *lir medical body4life*
- *lir medical maternity portland*
- *lir medical misc portland*
- *lir orange medical head center*
- *lir to valley medical*
- *lytec medical billing*
- *medical investigation*
- *medical journals password medical .txt*
- *medical abuse records*
- *medical abuse*
- *medical abuse records*
- *medical algorithms*

- *medical authorization*
- *medical authorization form*
- *medical authorization*
- *medical benefits*
- *medical benefits plan chart*
- *medical billing*
- *medical billing*
- *medical bill*
- *medical biller resume*
- *medical billing software*
- *medical billing*
- *medical billing windows*

Identity thieves and fraudsters use medical information very similarly to financial information, but with much less scrutiny on behalf of law enforcement.

For example, if an identity thief were to download a consumer's medical insurance information, the thief would immediately have access to significant financial resources (in many cases medical insurance policies have limits set at \$1 million or above). The criminal would most likely use the insurance card to buy online pharmaceuticals (predominantly Oxycontin, Viagra, or Percoset) which can be quickly sold for cash. This is a very difficult crime to detect as many consumers do not read Explanation of Benefit (EOB) forms sent from the insurance company, prolonging the criminal activity by delaying detection. Even consumers who do read the forms may not readily understand the diagnosis and treatment codes that are indicated on the forms. The victimization of the consumer continues when he or she attempts to appropriately use his or her insurance information for valid medical services only to be turned away or confronted with the suggestion of a potential prescription drug addiction.

User-issued P2P searches attempting to access financial, accounting, and medical information have risen 59.7% since September 2008. For the years of 2006 and 2007, the average annual rise in the search totaled just over 10%.

Child Predation – As if the aforementioned fraudulent activities were not enough to demonstrate the security implications of having personally identifiable information (PII) available to the public on these networks, the crimes can be even more heinous.

Tiversa works with federal, state, and local law enforcement agencies to address the rampant child pornography issues that permeate the P2P file sharing networks. The task is large and process is long however we continue to make progress in this ongoing fight. Presumably, child pornographers are using P2P to locate, download, and share sexually explicit videos

and pictures of small children because they feel that they cannot be caught on such a disparate network. Tiversa pioneered the research and tactics used to track and catch these individuals. We are also currently training all levels of law enforcement nationwide through the FBI LEEDA program and have been seeking to work more extensively with other law enforcement and prosecutorial organizations.

Tiversa has used its ability to locate available files and track individual's P2P network searches to document cases where child pornographers and predators are actively searching P2P networks for personal photos of children and others that may be stored on private computers. Once the photos are downloaded and viewed, these individuals will use the "Browse Host" function provided by the P2P software which allows the user to then view and download all additional information being shared from that computer. If personal photos are being shared, it is most likely that the computer will also be sharing other personal, private information such as a resume or tax return. This accompanying information can be used by the predator to locate the address, telephone, workplace, etc. of the potential victim. Individuals at Tiversa have directly assisted in the investigation of these specific types of cases.

Sources of the Breach – Many individuals at this point would consider themselves immune to these types of identity theft and fraud if they never used or downloaded P2P software. This is not an accurate assumption.

In research involving over 30,000 consumers, Tiversa found that 86.7% of the individuals whose information was found on the P2P networks, were breached by a third party. Many of these individuals had their information exposed by their doctors, lawyers, hospitals, accountants, employers, banks and financial institutions, payroll companies, etc. Organizations that had a right to have access to the information were predominantly the source of the breach.

In the 60 day research period (2/25-4/26/09), Tiversa downloaded 3,908,060 files that had been inadvertently exposed via P2P networks. This number is only comprised of Excel spreadsheets, Word documents, PDFs, Rich Text, Emails, and PST files. This number does not include any pictures, music, or movies. It is important to note that these files were only downloaded with general industry terms and client filters running. Many more exist on the network in a given period of time.

Corporations and businesses

As a matter of record, Tiversa observes searches

similar to those previously illustrated for "credit card" and for "medical" for individual corporate names, subsidiaries, and acronyms. The illustration of specific search strings in this testimony would put these corporations at further risk. General search terms include company names in combination with "confidential," "executive," "payroll" and other terms clearly designed to identify files containing important or personal information. The Committee should note that the searches of this nature are every bit as aggressive and more specific than those for credit cards and medical information – the larger and better known a company and its brand, the greater the risks associated with the searches for these corporations.

Corporate information disclosed on P2P networks includes breached PII and personal health information (the basis for much of the personal information used in identity theft described above), intellectual property, strategic documents and business plans. We have identified disclosures of legal documents, performance reviews, Board minutes, merger and acquisition plans, plant physical security plans, network diagrams, user ID's and passwords. Specific examples of inadvertent disclosures are described below.

One Supplier affects Thousands – In one instance, we identified one small company with fewer than 12 employees that provides third party billing services to hospitals. An inadvertent disclosure on patients from three different hospitals by this company exposed personal health information (patient names, SSNs, diagnosis codes, physician names, and other information) involving:

- 20,245 Patients
- 266 Physicians
- 4,029 Employer Organizations
- 335 Insurance Providers

It is easy to see the criminal value of the information exposed in this single breach and the potential impact to a broad range of individuals, professionals and organizations.

Corporate secrets revealed – In another instance, Tiversa discovered the PST file of a high-ranking officer involved in the merger and acquisition area of a Fortune 100 company. The entire Microsoft Outlook information of this officer was exposed to the public:

- Entire calendar
- Schedule of conference calls with dial-in numbers and passcodes
- Business and personal contacts including names, e-mails, addresses, phone numbers, etc.
- Over 12,000 e-mails to and from the individual
- Over 400 e-mail attachments (documents, PowerPoints, spreadsheets, etc.) including:
 - Regional sales information
 - M&A business integration updates
 - Strategic business alliances
 - Revenues through acquisitions

In the wrong hands, this information could be used for individual profit from trading on "insider information" not formally reported by the company, or on a much larger scale to manipulate and undermine the credibility of the capital markets.

Government, the Military and National Security

This risk also extends to the military and to overall national security.

Troop PII exposed – Tiversa has documented the exposure of the PII of men and women in the Armed Forces with frightening regularity. Military families are prime targets for identity theft as the thieves are aware that the soldiers are probably not checking their statements or credit reports very closely due to the serious nature of the work that they are performing. We have seen the confidential information (SSNs, blood types, addresses, next of kin, etc.) of more than 200,000 of our troops.

Classified information searched for...and found – P2P networks also pose a national security risk. In monitoring the origin of the searches on the P2P networks regarding national security issues, it is clear that organized searching is occurring from various nations outside the United States to gain access to sensitive military information being disclosed in this manner.

Searches are directed at identifying and obtaining sensitive information on matters of security using terms such as:

- Classified
- Military classified
- Military confidential
- Top secret
- US Marines classified
- Restricted

Examples of information breaches emanating from P2P networks and known to the public are described below.

In February of this year, Tiversa identified an IP address on the P2P networks, in Tehran, Iran, that possessed highly sensitive information relating to Marine One. This information was disclosed by a defense contractor in June 2008 and was apparently downloaded by an unknown individual in Iran.

On April 22, 2009, the *Wall Street Journal* printed a front cover story reporting that former Pentagon officials had indicated that spies had downloaded plans for the \$300B Joint Strike Fighter project. Highly sensitive information regarding the Joint Strike Fighter

program was also discovered on P2P networks.

Recommendations

For several years, Tiversa's focus has been working with corporations and government agencies to mitigate P2P disclosures and risks. Based on our experience, we believe that there are steps that can help significantly decrease the likelihood of inadvertent disclosures and therefore increase the safety and protection of those most affected, the consumers. We humbly and respectfully provide the following recommendations for your consideration.

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Corporations are just becoming aware of the problem that the P2P poses to its information and data security. Individual consumers are even less prepared for the security threats that it poses. It is very difficult to protect against a threat that you are unaware of.

FTC – On the FTC's website on the page "About Identity Theft," there is not a single mention of P2P or file-sharing as an avenue for a criminal gaining access to a consumer's personal information. Of the 6 methods identified on the website, very few if any could ever result in the consistent production, let alone the magnitude, of PII like the P2P networks.

Clearly, victims of identity theft must be educated and notified that P2P could be the source of their stolen information.

SEC – Awareness should extend to corporations and government agencies as well. Corporations regularly breach personal information of individuals (employees, customers, etc.). With consumers increasingly being asked to provide PII to employers, banks, accountants, doctors, hospitals, and government agencies, the recipients of this PII must be knowledgeable in the threats that P2P can pose to the security of that information.

Corporations also disclose non-public information that could be used for individual profit or to manipulate or undermine the markets. P2P risks and vulnerabilities that lead to these disclosures should be addressed in the application of current laws (Sarbanes-Oxley, Gramm-Leach-Bliley, etc.).

Federal Data Breach Notification Standards

41 of the 50 states have now enacted some form of data breach notification law. However, the laws vary from state to state and, in our experience, are seldom respected or followed by organizations. In some cases, companies that seek to do the right thing are unfamiliar with the various laws that may apply to their situation or have difficulty in complying with the applicable laws.

Standardized breach laws should be enacted to provide guidelines for any organization, public or private, that houses consumer or customer PII in the event of a breach of the information. In this regard, we believe that P2P risks and vulnerabilities should be addressed in the application of current laws, and we support HR 2221 – the Data Accountability and Trust Act. This proposed legislation requires the establishment and implementation of policies and procedures for information security practices and includes notification and remediation provisions in instances of breach.

The breach laws will also need to be enforced. Many disclosing companies disregard the current state laws, if any, to the severe detriment of the consumer whose information was exposed.

Any breach involving the release of a consumer's SSN should include mandatory identity theft protection for that individual for a minimum of 5 years. The often reported 1 year of credit monitoring is completely inadequate remediation for a consumer whose SSN was breached. Identity thieves will wait for the credit monitoring to expire after the year provided to begin to attack the consumer. This is supported by actual files Tiversa has seen with expiry tags entered directly into the filename and meta-data.

Military Personnel & National Security Disclosures

DOD – The safety and identity of our men and women in uniform of Congress should be vigorously protected. Measures should be taken to safeguard personal information, and to monitor, detect and remediate any disclosures. For soldiers who have had their information disclosed, comprehensive identity theft protection services should be provided to prevent and guard against the use of the breached information.

DSS – P2P networks should be continuously monitored globally for the presence of any classified or confidential information disclosed by defense contractors or subcontractors that could directly or indirectly affect the safety or security our citizens.

Consumers

Tiversa also suggests the following recommendation for consumers:

Know Your PC (and who is using it) – Parents need to pay close attention to the actions of their children online, especially when the children are using a shared PC with the parents.

Just Ask! Consumers need to ask anyone who is requesting their PII (doctor, hospital, lawyer, banking institution, accountant, employer, etc.) what protections that the organization has in place to protect against inadvertent disclosures on the P2P networks.

Consider Identity Theft Protection Service – Organizations offer a wide variety of services to help with identity theft from credit monitoring to the more proactive placing of fraud alerts and black market monitoring. Consumers should select an ID theft protection service that offers proactive monitoring and remediation of P2P related disclosure.

Conclusion

In conclusion, the inadvertent file sharing through P2P File Sharing networks is highly pervasive and large in magnitude. It affects consumers, corporations of all sizes, and government agencies.

Existing policies and IT measures have not been effective at preventing information from becoming available. Malicious individuals regularly use P2P file sharing networks to obtain sensitive, confidential, and private information. They pose an immediate threat to national security, business operations and brands, and consumer fraud and ID theft.

The Committee should seek to create broader awareness of the problem. It should encourage individuals, corporations, and government agencies to continuously audit P2P networks themselves to enable these entities to intelligently determine their exposure and to design strategies to mitigate their issues.

Mr. Chairman, taking these steps will better protect us all from the dangers that lurk in these networks while allowing for legitimate uses of this powerful technology in the future.

Thank you for the opportunity to testify today.

TI ERSA.

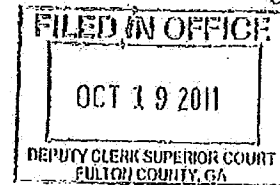
144 Emeryville Drive • (724) 940-9030 office
Suite 300 • (724) 940-9033 fax
Cranberry Township • www.tlversa.com
Pennsylvania 16066



IN THE SUPERIOR COURT OF FULTON COUNTY
STATE OF GEORGIA

LABMD, INC., a Georgia Corporation,)
)
Plaintiff,)
)
v.)
)
TIVERSA, INC., a Pennsylvania Corporation,)
TRUSTEES OF DARTMOUTH COLLEGE, and)
M. ERIC JOHNSON,)
)
Defendants.)

CIVIL ACTION
FILE NO:
2011CV207137



COMPLAINT

Plaintiff LabMD, Inc. ("Plaintiff" or "LabMD") hereby files this Complaint against Tiversa, Inc., a Pennsylvania Corporation ("Tiversa"), Trustees of Dartmouth College ("Dartmouth") and M. Eric Johnson ("Johnson") (Tiversa, Dartmouth and Johnson collectively referred to herein as "Defendants") to show this Honorable Court the following:

PARTIES, VENUE, AND JURISDICTION

1.

LabMD, Inc. is a domestic corporation organized under the laws of the State of Georgia with a principal office address of 2030 Powers Ferry Road, Building 500, Suite 520, Atlanta, Georgia 30339.

2.

Defendant Tiversa, Inc. is a corporation organized under the laws of the State of Pennsylvania. Defendant Tiversa can be served with process through Robert Boback, Tiversa's President, at 144 Emeryville Drive Suite 300, Cranberry Township PA 16066

3.

Defendant M. Eric Johnson is an individual over the age of 18 and can be served with process at Tuck School of Business at Dartmouth College, 100 Tuck Hall, Hanover, New Hampshire 03755.

4.

Defendant Trustees of Dartmouth College are organized according to the laws of the state of New Hampshire and may be served with process at 14 S Main Street 2C, Hanover NH 03755.

5.

Defendants performed certain actions contained herein at 1117 Perimeter Center West, Atlanta, Fulton County, Georgia 30338 ("LabMD Office").

6.

Defendants took deliberate actions at LabMD's office and, as such, created continuing obligations to Georgia residents, including LabMD.

7.

Defendant Tiversa solicited business from LabMD on six separate occasions without any request from LabMD. Solicitation One, Solicitation Two, Solicitation Three,

Solicitation Four, Solicitation Five and Solicitation Six (as defined herein) all occurred at the LabMD Office.

8.

LabMD's causes of action against Defendants arise out of and result from Defendants' actions within Georgia.

9.

Exercising jurisdiction over Defendants is consistent with due process notions of fair play and substantial justice.

10.

Defendants transacted business within the State of Georgia.

11.

Defendants committed tortious acts within the State of Georgia.

12.

Defendants regularly do business in the State of Georgia.

13.

Defendants engage in a persistent course of conduct within the State of Georgia.

14.

Defendants derive substantial revenue from services rendered in the State of Georgia.

15.

Defendants took personal property belonging to LabMD which was in the State of Georgia.

16.

This Court has jurisdiction over the parties and the subject matter of this action.

17.

Venue is proper in this Court.

DEFENDANTS' PATTERN AND PRACTICES

18.

Tiversa provides peer-to-peer ("P2P") intelligence services to corporations, government agencies and individuals based on patented technologies that can monitor over 550 million computer users daily.

19.

Requiring no software or hardware, Tiversa can search for, locate, copy, download and determine the source of a person's computer files utilizing its "patented technologies."

20.

Tiversa offers a Corporate Breach Protection product which establishes a long-term, real-time monitoring program that detects and records customer-specific computer searches, data loss exposures, and corporate intellectual property loss on P2P networks twenty-four (24) hours a day, seven (7) days a week, three hundred sixty-five (365) days a year.

21.

Tiversa's patented EagleVision X1™ technology globally indexes internet and file-sharing networks in real-time.

22.

According to Tiversa's website, "Tiversa's blend of automated, patented technology and deep expertise. . . enables [it] to pinpoint the disclosure source involved in the exposure of data."

23.

According to Tiversa's website, as part of a comprehensive breach investigation, Tiversa can conduct an in-depth network scan to determine file proliferation across P2P file sharing networks to identify the location of a person's computer files.

24.

Defendant Johnson is Director of Tuck School of Business' Glassmeyer/McNamee Center for Digital Strategies ("McNamee Center").

25.

The Tuck School of Business is the business school of Dartmouth College.

26.

Defendant Johnson accepted federal funds from the National Institute of Standards and Technology, the United States Department of Justice, the United States Department of Homeland Security, the National Science Foundation and other federal/state/local governments in furtherance of his position as Director of the McNamee Center and those activities described hererin.

27.

Defendant Dartmouth accepted federal funds from the National Institute of Standards and Technology, the United States Department of Justice, the United States Department of Homeland Security, the National Science Foundation and other federal/state/local governments in furtherance of Defendants' position as Director of the McNamee Center and those activities described herein.

28.

Defendant Tiversa accepted federal funds from the National Institute of Standards and Technology, the United States Department of Justice, the United States Department of Homeland Security, the National Science Foundation and other federal/state/local governments in furtherance of its activities, including those activities described herein.

29.

In as early as 2007, Defendants worked in concert and intentionally to search the internet and computer networks for computer files containing personally identifiable information.

30.

On July 24, 2007, Defendant Johnson testified before the United States House of Representatives Committee on Oversight and Government Reform ("2007 Committee Hearing"). In his testimony, Defendant Johnson admitted that he, in concert with Defendant Tiversa, intentionally posted the text of an e-mail containing an active Visa debit number and AT&T phone card in a music directory that was shared via

LimeWire. Defendants Johnson and Tiversa observed the activity on the file and tracked it across P2P networks.

31.

Defendant Johnson further testified in the 2007 Committee Hearing that he and Tiversa "intentionally searched and downloaded thousands of bank-related documents circulating on the [P2P] networks," including, but not limited to, bank statements and completed loan application forms which "contained enough information to easily commit identity theft or fraud."

32.

Defendant Johnson also testified during the 2007 Committee Hearing that he and Tiversa, in concert, intentionally searched and downloaded "performance evaluations, customer lists, spreadsheets with customer information, and clearly marked confidential bank material."

33.

During the 2007 Committee Hearing, Defendant Tiversa admitted that it "developed technology that would allow it to position itself throughout the various P2P networks" and view all searches and information available on P2P networks. A true and correct copy of the 2007 testimony from Defendant Tiversa is attached hereto as Exhibit A.

34.

During the 2007 Committee Hearing, Defendant Tiversa admitted that its proprietary software allowed it to process 300 million searches per day, over 170 million more searches than Google was processing per day. *See* Exhibit A.

35.

During the 2007 Committee Hearing, Defendant Tiversa admitted that its proprietary technology allows it to not only process all of the search requests over the internet but also to view the information available on the networks, including computer files containing personally identifiable information ("PII") and protected health information ("PHI"). *Id.*

36.

During the 2007 Committee Hearing, Defendant Tiversa admitted that it intentionally searched for and downloaded computer files containing "federal and state identification, including passports, driver's licenses, Social Security cards, dispute letters with banks, credit card companies, insurance companies, copies of credit reports--Experian, TransUnion, Equifax, individual bank card statements and credit card statements, signed copies of health insurance cards, full copies of tax returns, active user names and passwords for online banking and brokerage accounts and confidential medical histories and records." *Id.*

37.

In April, 2009, Defendant Johnson, in concert with Defendants Tiversa and Dartmouth, published an article entitled *Data Hemorrhages in the Health-Care Sector* ("Johnson Paper"). A true and correct copy of the Johnson paper is attached hereto as Exhibit B.

38.

The Johnson Paper was based upon activities "conducted in collaboration with Tiversa who has developed a patent-pending technology that, in real-time, monitors global P2P sharing networks." See Exhibit B.

39.

The Johnson Paper was partially supported by the U.S. Department of Homeland Security under Grant Award Number 2006-CS-001-000001 under the auspices of the Institute for Information Infrastructure Protection (I3P). *Id.*

40.

According to the Johnson Paper, Defendants Johnson and Tiversa initially searched P2P networks" looking for files from top ten publically traded health-care firms" and "randomly gathered a sample of shared files related to health care and those institutions" (the "Initial Search"). *Id.*

41.

Defendant "Tiversa's servers and software allowed [Johnson and Tiversa] to sample in the four most popular networks (each of which supports the most popular clients) including Gnutella (e.g. Limewire, BearShare), FastTrack (e.g., KaZaA,

Grokster), Aries (Aries Galaxy), and e-donkey (e.g. eMule, EDonkey2K)" according to the Johnson Paper. *Id.*

42.

Defendants Johnson and Tiversa "captured" files containing PHI or PII during the Initial Search. *Id.*

43.

Defendants Johnson and Tiversa admitted to intentionally searching for, downloading and "manually" analyzing 3,328 computer files belonging to publically traded health care firms as part of the Initial Search. *Id.*

44.

Defendants Johnson and Tiversa intentionally searched for, downloaded and opened patient-generated spreadsheets containing details of medical treatments and costs, government applications for employment containing detailed background information, social security numbers, dates of birth, places of birth, mother's maiden name, history of residences and acquaintances, schooling history, employment history and other data which, according to Defendant Johnson, "could be used to commit medical or financial identity theft" as part of the Initial Search. *Id.*

45.

Defendants Johnson and Tiversa used the data downloaded during the Initial Search to intentionally search for computer files on computer hosts that Defendants "had found other dangerous data" previously (the "Second Search"). *Id.*

46.

During the Second Search, Defendants Johnson and Tiversa "found a 1,718-page document containing patient Social Security numbers, insurance information, and treatment codes" ("1,718 File"). *Id.*

47.

The Johnson Paper included a "redacted excerpt" of the 1,718 File. *Id.*

48.

The 1,718 File was created on a LabMD computer.

49.

The 1,718 File was stored on a LabMD computer.

50.

The 1,718 File was the personal property of LabMD, Inc.

51.

Numerous other computer files containing PHI and PII were intentionally searched for, downloaded and opened by Defendants Tiversa and Johnson as part of the Johnson Paper. *Id.*

52.

During an interview following the publication of the Johnson Paper, Defendant Johnson publically admitted to intentionally searching major computer networks to locate computer files containing PHI belonging to certain top ten publicly traded healthcare firms across the United States.

53.

During an interview following the publication of the Johnson Paper, Defendant Johnson publically admitted to "looking for" computer files containing PHI and PII.

54.

During an interview following the publication of the Johnson Paper, Defendant Johnson publically admitted to intentionally searching major computer networks in "a rather casual way," over a six month period to locate "promising areas," "places" or search terms which would lead to the download of computer files containing personal health information.

55.

During an interview following the publication of the Johnson Paper, Defendant Johnson publically admitted to intentionally downloading and opening computer files containing over 20,000 medical patient records, "and for those patients, 82 fields of information, not just name, date, social security numbers...but a much more detailed set of information, including their employer, their insurance carrier, the doctor that was treating them, [and] the diagnostic codes that were used."

56.

On May 4, 2009, Defendant Tiversa testified before the United States House of Representatives Subcommittee on Commerce, Trade and Consumer Protection ("2009 CTC Hearing"). A true and correct copy of the 2009 CTC Hearing testimony is attached hereto as Exhibit C.

57.

During the 2009 CTC Hearing, Tiversa testified that, through the use of its proprietary software, it "can see and detect all previously undetected activity" and "where an individual user can only see a very small portion of a P2P file sharing network, [it] can see the P2P network in its entirety in real time. [It] has processed as many as 1.6 billion P2P searches per day, approximately 8 times that of web searches entered into Google per day. *This unique technology has led some industry experts (Information Week) to refer to Tiversa as the "Google of P2P."* See Exhibit C (emphasis added).

58.

During the 2009 CTC Hearing, Tiversa did a "live demonstration" utilizing its proprietary technology whereby it intentionally searched for and downloaded over 275,000 tax returns. *Id.*

59.

During the 2009 CTC Hearing, Tiversa testified that between February 25, 2009 and April 26, 2009, it had "downloaded 3,908,060 files" from P2P networks, some of which contained PHI and PII. *Id.*

60.

During the 2009 CTC Hearing, Tiversa produced redacted copies of computer files it downloaded from P2P networks containing PHI and PII. *Id.*

61.

During the 2009 CTC Hearing, Tiversa produced the 1,718 File and testified about the 1,718 File. *Id.*

62.

Tiversa did not redact the first name, date of birth or group insurance number when it produced the LabMD File at the 2009 CTC Hearing.

63.

Between July 13-27, 2009, Defendants Tiversa and Johnson intentionally searched for and downloaded approximately 7,911 computer files containing PII and/or PHI from twenty-five (25) top medical research institutions. *Id.*

64.

Between July 13-27, 2009, Defendants Tiversa and Johnson intentionally opened approximately 2,966 computer files from twenty-five (25) top medical research institutions, some of which contained PII and/or PHI, including nursing notes, medical histories, patient diagnoses, psychiatric evaluations, letters to patients and spreadsheets with patient data. *Id.*

65.

On July 29, 2009, Tiversa appeared before the United States House of Representatives Committee on Oversight and Government Reform ("2009 COG Hearing") and testified that it had the technology to search and download files from P2P networks even where a company has "the most robust security measures," including "firewalls, anti-virus [sic], intrusion detection, intrusion prevention, and

encryption." A true and correct copy of the 2009 COG Hearing testimony is attached hereto as Exhibit D.

66.

During the 2009 COG Hearing, Tiversa intentionally searched for and downloaded tax returns containing PII in "live time." *See* Exhibit D.

67.

During the 2009 COG Hearing, a hearing open to the general public, Tiversa revealed the social security numbers from tax returns based upon its "live time" demonstration. *Id.*

68.

During the 2009 COG Hearing, Tiversa testified that "beginning in 2003, [it] developed systems that monitor and interact with and within P2P networks *to search for sensitive information. . .*" *Id.*

69.

During the 2009 COG Hearing, Tiversa testified that it searched for and downloaded files containing PII and PHI as part of a research project. *Id.*

70.

Between September 23-October 7, 2009, Defendants Tiversa and Johnson intentionally searched for and downloaded computer files containing PII and/or PHI from medical research institutions.

71.

Between September 23-October 7, 2009, Defendants Tiversa and Johnson intentionally opened computer files from medical research institutions, some of which contained PII and/or PHI, including files with social security numbers, dates of birth and diagnoses codes.

DEFENDANT TIVERSA'S SOLICITATIONS AND ACTIONS

72.

On May 13, 2008, Robert Boback, CEO of Defendant Tiversa, called LabMD (the "Tiversa Call").

73.

During the Tiversa Call, Mr. Boback informed LabMD that he was calling because he was in possession of a computer file containing patient social security numbers and the computer file belonged to LabMD.

74.

During the Tiversa Call, Mr. Boback told LabMD that the computer file in his possession was the type of file individuals were searching for on P2P networks.

75.

During the Tiversa Call, Mr. Boback told LabMD that large financial institutions and medical insurance companies were being targeted by individuals searching for and downloading computer files containing PHI and PII.

76.

During the Tiversa Call, Mr. Boback agreed to provide a copy of the computer file in its possession to LabMD.

77.

On May 13, 2008 at approximately 11:25 AM EST, Defendant Tiversa emailed a copy of the file in its possession to LabMD (the "11:25 Email"). A true and correct copy of the 11:25 Email is attached hereto as Exhibit E.

78.

The file produced in the 11:25 Email was the LabMD File.

79.

In the 11:25 email, Defendant Tiversa agreed to have an engineer review the computer file in its possession to "see when [its] systems first detected/*downloaded* the file from P2P network." See Exhibit E (emphasis added).

80.

On May 13, 2008, at approximately 1:22 PM EST, Mr. Boback again emailed LabMD (the "1:22 Email"). A true and correct copy of the 1:22 Email is attached hereto as Exhibit F.

81.

In the 1:22 Email, Defendant Tiversa informed LabMD that "it checked back against the timeline to see the date that [it] originally acquired the file pertaining to LabMD" and "it appears" that Defendant Tiversa "first *downloaded* the file on 02/05/08 at 3:49PM." See Exhibit F (emphasis added).

82.

In the 1:22 Email, Defendant Tiversa informed LabMD that its "systems show a record of continued availability for sporadic periods over the past month" but that it had not attempted to download the 1,718 File again. *Id.*

83.

In the 1:22 Email, Defendant Tiversa informed LabMD that Tiversa's "system did not auto-record the IP...most likely due to the limited amount of criteria indexed against the DSP." According to Defendant Tiversa, it may "have the actual source IP address in the data store logs but it was not readily available at this point" and it "should be able to get it but it would take some time." *Id.*

84.

On May 13, 2008 at approximately 2:13 PM EST, Defendant Tiversa solicited business from LabMD (the "Solicitation of Services"). A true and correct copy of the Solicitation of Services is attached hereto as Exhibit G.

85.

In the Solicitation of Services, Defendant Tiversa offered to "provide investigative and remediation services through [its] Incident Response Team" if LabMD was in need of Defendant Tiversa's "professional assistance." *See* Exhibit G.

86.

In the Solicitation of Services, Defendant Tiversa offered to "locate and identify the precise source where it downloaded the 1,718 File and could "identify additional disclosed files from that source (of which there are most likely additional files since

most individuals are sharing an average of over 100 files per PC)." Additionally, Defendant Tiversa offered to "perform a Global Spread Analysis." Finally, and according to Defendant Tiversa, "most importantly, [it could] work to recover and cleanse the sensitive documents from the P2P." *Id.* In closing, Defendant Tiversa offered to put LabMD "in touch with [Tiversa's] Operations team" if any of Tiversa's "services [were] of interest" to LabMD. *Id.*

87.

On May 15, 2008 at approximately 4:34 AM EST, LabMD asked Defendant Tiversa for specific information regarding the means it searched for and downloaded the 1,718 File. Defendant Tiversa informed LabMD that any information regarding the means by which it acquired LabMD's file "would require a professional services agreement" and that there were "many more necessary benefits to a proper investigation" by Defendant Tiversa (the Second Solicitation"). A true and correct copy of the Second Solicitation is attached hereto as Exhibit H.

88.

On May 22, 2008, without prompting or contact from LabMD, Defendant Tiversa sent an email to LabMD indicating that "it continued to see people searching for the file in question on the P2P network" and that Defendant Tiversa's system "recorded that the file still exists on the network. . . although [it] *had not attempted to download another copy.*" Defendant Tiversa again solicited business from LabMD and asked LabMD if it needed "some assistance" and again offered Tiversa's "Incidence Response

Services" (the Third Solicitation"). A true and correct copy of the Third Solicitation is attached hereto as Exhibit I.¹

89.

In the Third Solicitation, Defendant Tiversa outlined the costs, turn around time and potential outcome that LabMD could expect if it engaged the services of Defendant Tiversa. *Id.*

90.

On May 23, 2008 at approximately 10:08 AM EST, Defendant Tiversa transmitted a services agreement and confidentiality agreement to LabMD. *Id.* A true and correct copy of the Services Agreement and Confidentiality Agreement are attached hereto as Exhibit J.

91.

On May 30, 2008, Defendant Tiversa solicited the business of LabMD for a fourth time and informed LabMD that if the terms of the Services Agreement and Confidentiality Agreement were acceptable to LabMD, Defendant "Tiversa should get started right away due to the sensitivity of the file" that was in its possession and further informed LabMD that the "title of the file [in its possession] had 'insurance aging' in it, which is being highly sought after" (the "Fourth Solicitation"). A true and correct copy of the Fourth Solicitation is attached hereto as Exhibit K.

¹ A series of email exchanges are contained in Exhibit I for the Court's convenience. The first email LabMD received from Defendant Tiversa, dated May 22, 2008 at 3:22 PM EST is contained on page 3 of 4 of Exhibit I and the email exchange continues in reverse chronological order based upon this first communication.

92.

On June 6, 2008, Defendant Tiversa solicited business from LabMD for a fifth time (the "Fifth Solicitation"). A true and correct copy of the Fifth Solicitation is attached hereto as Exhibit L.

93.

In the Fifth Solicitation, Defendant Tiversa stated the following:

I hope this email finds you doing well. I wanted to follow-up with you as I have not heard anything regarding the disclosure at LabMD. I am not sure if you caught the recent press about Walter Reed Army Medical Center having a disclosure of over 1000 patients SSNs etc. The story of the disclosure has been picked up by over 200 publications. Since then, we have seen the usual increase in search activity on the P2R (presumably media) in attempt [sic] to find this and other information of this type. Given this fact, we should move to remediation very quickly. If you have been able to locate the source of the disclosure internally, that would be helpful. The file, however, will most likely have been already taken by secondary disclosure points which will need to be found and remediated. Please let me know if you need assistance.

See Exhibit L.

94.

On July 15, 2008 at 10:03 AM EST, Defendant Tiversa solicited business from LabMD for a sixth time and stated the following:

I wanted to follow-up with you regarding the breach that we discussed several weeks ago. We have continued to see individuals searching for and downloading copies of the file that was provided. . . it is important to note that LabMD is not the only company that has been affected by this type of breach. This is widespread problem that affects tens of thousands of organizations and millions of individuals. I am not sure if you read the Washington Post, but there was an [sic] front page article last week involving a widely reported file sharing breach of Supreme Court justice

Stephen Breyer's SSN and personal data. Wagner Resources, the investment firm responsible, took immediate action to solve the problem which resonated with the affected individuals. In fact, many of the individuals whose information was disclosed contacted the owner of the firm to say that HE was the victim of this relatively unknown, although dangerous, security risk.

(the "Seventh Solicitation"). A true and correct copy of the Seventh Solicitation is attached hereto as Exhibit M.

95.

In response to the Sixth Solicitation, LabMD directed Defendant Tiversa to LabMD's attorneys.

96.

On September 30, 2010, LabMD, through the undersigned, demanded return of the 1,718 File from Defendant Tiversa. A true and correct copy of the September 30, 2010, correspondence from LabMD to Defendant Tiversa is attached hereto as Exhibit N.

97.

On September 30, 2010, LabMD, through the undersigned, demanded return of the 1,718 File from Defendant Johnson. A true and correct copy of the September 30, 2010, correspondence from LabMD to Defendant Johnson is attached hereto as Exhibit O.

98.

On September 30, 2010, LabMD, through the undersigned, demanded return of the 1,718 File from Defendant Dartmouth. A true and correct copy of the September 30, 2010, correspondence from LabMD to Defendant is attached hereto as Exhibit P.

99.

Defendants Johnson and Dartmouth continue to financially benefit from the searching for, downloading and opening of computer files containing PHI and PII from third parties.

100.

Defendants Johnson and Dartmouth discussed all of the activities referenced herein in a 2011 paper presented at the 44th annual Hawaii International Conference on System Sciences entitled *Will HITECH Heal Patient Data Hemorrhages*. A true and correct copy of the Hawaii International Conference paper is attached hereto as Exhibit Q.

101.

Defendants Johnson and Dartmouth discussed the activities referenced herein in an article entitled *Usability Failures and Healthcare Data Hemorrhages* published in the March/April 2011 issue of the *IEEE Security and Privacy* magazine. A true and correct copy of the IEEE article is attached hereto as Exhibit R.

102.

Defendants received federal funding and used federal funding to perform the activities referenced herein.

103.

As of October 13, 2011, a link to the Johnson Paper appears on the Tuck homepage on the world wide web along with links to Johnson's other articles referenced herein. A true and correct copy of a screenshot of Tuck's homepage taken on October 13, 2011, is attached hereto as Exhibit S.

COUNT I: COMPUTER FRAUD AND ABUSE ACT (18 USC § 1030)
(Defendants Tiversa and Johnson Only)

104.

LabMD realleges the allegations contained in Paragraphs 1-103 as though stated herein verbatim.

105.

LabMD's computers are used in and affect interstate commerce.

106.

Defendant Tiversa intentionally accesses LabMD's computers and networks and downloaded the 1,718 File without authorization.

107.

Defendant Tiversa exceeded any authorizations, if any, it had to access LabMD's computers and networks and downloaded the 1,718 File.

108.

Defendant Johnson intentionally accesses LabMD's computers and networks and downloaded the 1,718 File without authorization.

109.

Defendant Johnson exceeded any authorizations, if any, it had to access LabMD's networks and computers.

110.

Defendant Tiversa transmitted the 1,718 File across state lines in the furtherance of interstate commerce.

111.

Defendant Johnson transmitted the 1,718 File across state lines in the furtherance of interstate commerce.

112.

Defendant Tiversa accessed LabMD's computers and networks with the intent to extort money from LabMD.

113.

Defendant Tiversa impaired the confidentiality of information obtained from LabMD's computers without authorization or by exceeding any authorized access, to the extent any authorization existed.

114.

Defendant Tiversa demanded and/or requested money or other thing of value from LabMD during the First, Second, Third, Fourth, Fifth and Sixth Solicitation.

115.

Tiversa's demands and/or requests for money or other things of value were a direct result of Tiversa's download of the 1,718 File.

116.

Tiversa downloaded the 1,718 File from LabMD's computer in order to facilitate the extortion of money and/or items of value from LabMD.

117.

LabMD suffered and continues to suffer damages as a result of the above actions in an amount to be proven at trial.

COUNT II: COMPUTER CRIMES (O.C.G.A. 16-9-93)
(Defendants Tiversa and Johnson Only)

118.

LabMD realleges the allegations contained in Paragraphs 1 through 117 as though stated hererin verbatim.

119.

O.C.G.A. 16-9-93(a) provides that "[a]ny person who uses a computer or computer network with knowledge that such use is without authority and with the intention of: (1) Taking or appropriating any property of another, whether or not with the intention of depriving the owner of possession. . .[or] (3) Converting property to such person's use in violation of an agreement or other known legal obligation to make a specified application or disposition of such property shall be guilty of the crime of computer theft.

120.

O.C.G.A. 16-9-93(c) provides that "any person who uses a computer or computer network with the intention of examining any employment, medical, salary,

credit, or any other financial or personal data relating to any other person with knowledge that such examination is without authority shall be guilty of the crime of computer invasion of privacy.”

121.

O.C.G.A. 16-9-93 (g)(1) provides that “any person whose property or person is injured by reason of a violation of any provision of [O.C.G.A. 16-9-93] may sue therefore and recover for any damages sustained and the costs of suit.”

122.

Defendant Tiversa used a computer network to search for, download, open and disseminate the 1,718 File.

123.

Defendant Tiversa knew that the searching for, downloading, opening and dissemination of the 1,718 File was not authorized by LabMD.

124.

Defendant Tiversa took LabMD’s personal property.

125.

Defendant Tiversa obtained LabMD’s personal property by a deceitful means and artful practice.

126.

Defendant Tiversa used a computer and/or computer network with the intention of examining employment, medical, salary, credit, and other financial or personal data relating to third parties.

128.

Defendant Tiversa searched computer networks searching for, downloading, opening and dissemination LabMD computer files containing employment, medical, salary, credit, and other financial or personal data on numerous occasions.

129.

Defendant Johnson used a computer network to search for, download, open and disseminate the 1,718 File.

130.

Defendant Johnson knew that the searching for, downloading, opening and dissemination of the 1,718 File was not authorized by LabMD.

131.

Defendant Johnson took LabMD's personal property.

132.

Defendant Johnson obtained LabMD's personal property by a deceitful means and artful practice.

133.

Defendant Johnson used a computer and/or computer network with the intention of examining employment, medical, salary, credit, and other financial or personal data relating to third parties.

134.

Defendant Johnson searched computer networks searching for, downloading, opening and dissemination of LabMD computer files containing employment, medical, salary, credit, and other financial or personal data on numerous occasions.

135.

Defendants Tiversa and Johnson committed computer theft.

136.

Defendants Tiversa and Johnson committed computer invasion of privacy.

137.

As a result of Defendant Tiversa and Johnson's actions, LabMD has suffered damages in an amount to be proven at trial.

COUNT III: CONVERSION
(As to All Defendants)

138.

LabMD realleges the allegations contained in Paragraphs 1 through 137 as though stated verbatim herein.

139.

The 1,718 File is owned by LabMD.

140.

Defendant Tiversa is in possession of the 1,718 File.

141.

Defendant Tiversa is not authorized to assume the right of ownership over the 1,718 File.

142.

The appropriation of the 1,718 File by Defendant Tiversa was not authorized by LabMD.

143.

Defendant Johnson is in possession of the 1,718 File.

144.

Defendant Johnson is not authorized to assume the right of ownership over the 1,718 File.

145.

The appropriation of the 1,718 File by Defendant Johnson was not authorized by LabMD.

146.

Defendant Dartmouth is in possession of the 1,718 File.

147.

Defendant Dartmouth is not authorized to assume the right of ownership over the 1,718 File.

148.

The appropriation of the 1,718 File by Defendant was not authorized by LabMD.

149.

LabMD informed Defendants that the 1,718 File belonged to LabMD. See Exhibits N, O and P.

150.

LabMD demanded return of the 1,718 File from Defendants.

151.

Defendants have not returned the 1,718 File to LabMD.

152.

As a result of Defendants' actions, LabMD has been damaged in an amount to be proven at trial.

COUNT IV: TRESPASS
(As to All Defendants)

153.

LabMD realleges the allegations contained in Paragraphs 1 through 152 as though stated herein verbatim.

154.

Defendants have unlawfully abused LabMD's personal property.

155.

Defendants have damaged LabMD's personal property.

156.

As a result of Defendants' unlawful abuse of LabMD's personal property, LabMD has been damaged in an amount to be proven at trial.

COUNT V: PUNITIVE DAMAGES
(As to All Defendants)

157.

LabMD realleges the allegations contained in Paragraph 1 through 156 as though stated herein verbatim.

158.

Defendants' actions described herein constitute willful misconduct, malice, fraud, wantonness and oppression.

159.

Defendants' actions herein constitute a want of care which would raise the presumption of a conscious indifference to consequences.

160.

LabMD is entitled to punitive damages from Defendants in an amount to be proven at trial.

WHEREFORE, LabMD prays for the following relief:

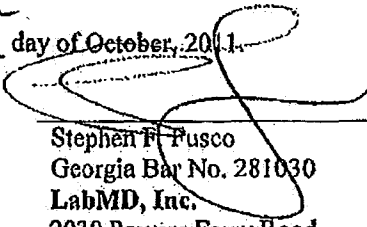
- (a) Judgment against Defendants as outlined herein;
- (b) Damages in an amount to be determined at trial;
- (c) Exemplary damages in an amount to be determined at trial.
- (d) Attorney's fees and costs associated with this litigation;
- (e) A trial by jury on the issues outlined herein;
- (f) All such other and further relief as the Court deems just and

proper.

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[SIGNATURE CONTINUE ON NEXT PAGE]

Respectfully submitted this 7 day of October, 2011.



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