

EXHIBIT 4

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

ARISTA RECORDS LLC; ATLANTIC
RECORDING CORPORATION; ARISTA
MUSIC, fka BMG MUSIC; CAPITOL
RECORDS, INC.; ELEKTRA
ENTERTAINMENT GROUP INC.;
INTERSCOPE RECORDS; LAFACE
RECORDS LLC; MOTOWN RECORD
COMPANY, L.P.; PRIORITY RECORDS LLC;
SONY MUSIC ENTERTAINMENT, fka SONY
BMG MUSIC ENTERTAINMENT; UMG
RECORDINGS, INC.; VIRGIN RECORDS
AMERICA, INC.; and WARNER BROS.
RECORDS INC.,

Plaintiffs,

v.

LIME GROUP LLC; LIME WIRE LLC; MARK
GORTON; GREG BILDSON; and M.J.G. LIME
WIRE FAMILY LIMITED PARTNERSHIP,

Defendants.

ECF Case

06 CV 5936 (KMW)

EXPERT REPORT OF PROFESSOR EMIN GÜN SIRER

51. Finally, the amount of demand seen in this study is at odds with the predictions of Dr. Waterman's own smoothing spline model. For instance, the song "Need You Now" by Lady Antebellum reached number 2 on billboard charts. Dr. Waterman's smoothing spline model predicts more than 1 million downloads of this song on the LimeWire network. Yet Dr. Waterman's honeypots did not encounter a single request for this file over the study period of 30 days.

52. Overall, based on my review of Dr. Waterman's data analysis, I believe that his conclusions about the extent of infringement in the LimeWire Network are based on incorrect assumptions, biased data, and incorrect extrapolation, both conceptually and methodologically.

Assessment of the Connelly/MediaSentry Study

53. Mr. Connelly performs a study ("MediaSentry study") where computers controlled by Mr. Connelly connected to computers in the Gnutella network ("peers"), obtained a listing of files advertised for share by each peer, and downloaded a subset of the advertised files using the Gnutella protocol.

54. A networking protocol defines the messages that computers can exchange in order to perform desired actions. For instance, the Gnutella protocol defines messages for connecting to a peer, listing the files offered for share by that peer, requesting desired parts of a file offered for share by that peer, requesting that a peer act as a proxy for another peer, and so on. The Gnutella protocol is a general-purpose, open-source protocol; in a sense, it defines a common message format and semantics for different clients, each of whom "speaks" the common language in order to facilitate communication between users. LimeWire software is just one of many (as of 2010, more than 15) clients that implement the Gnutella protocol.

55. Networked computers are identified by their IP addresses. IP addresses are similar to telephone numbers, except they are subject to dynamic assignment. Data collection relating to IP addresses should provide a fully-documented snapshot in time that captures the ownership and assignment of that IP address. The MediaSentry study did not capture or present any data that ties the IP addresses to the United States at the time of its data collection. Using 2010 tools and databases to determine the location of IP addresses collected in 2007 is not sound, as the assignments may change over time.

56. Nor did the MediaSentry study provide “traceroute” information, which would provide the path between the MediaSentry-controlled computers and the Gnutella peers. Traceroute is a standard Internet data collection tool that makes it possible to determine a path to any desired IP addresses. Such a path may help establish the location of the targeted IP address by presenting the route that the packets took to get to their destination. Overall, the lack of IP traceroute information, coupled with lack of IP lookups, implies that the location for the IP addresses in the study is not established.

57. Further, IP addresses as observed by Connelly-controlled hosts may not be indicative of the actual country in which a host resides. Virtual Private Networks (“VPNs”) enable a computer in one location to remotely dial in to and obtain an IP address from a different location, such as a company server. A host located in, for instance, London, dialing into a VPN server in New York, will have its packets routed through New York to its actual location in London, yet it will appear to be located in New York to an outsider using MediaSentry’s data collection techniques. Since anyone may run a VPN server, and VPNs make it very difficult to determine the true location of a host, a correction factor needs to be applied to compensate for nodes appearing to be within the United States even though they are elsewhere and connected via

a VPN.

58. In addition, the data logged by the MediaSentry study contains only the responses from the Gnutella peers, but not the requests sent by the MediaSentry host.

59. Finally, the MediaSentry study does not conclusively establish the version of the software that the remote peers were executing. Since the Gnutella protocol defines an open standard to which any client can connect, and since many non-LimeWire clients share the network with LimeWire clients, the study should have attempted to establish that the clients were indeed running the LimeWire software. The MediaSentry study relies solely on the self-reported version strings provided by Gnutella clients. It does not perform software fingerprinting, that is, checking for the presence of protocol features and behaviors specific to a particular version of software, in this instance LimeWire. Since the self-reported version string is entirely at the discretion of the Gnutella client, there is no basis to assume that every host on the network truthfully reports its own version string correctly. The MediaSentry study provides no correction for host misidentification.

Assessment of the Sehested/DtecNet Study

60. Mr. Sehested described a study (“DtecNet study”) where computers controlled by DtecNet connected to computers in the Gnutella network (“peers”), searched for certain files, and downloaded a subset of the advertised files using the Gnutella protocol.

61. The DtecNet study suffers from the same VPN problems as the MediaSentry study. There is no correction factor applied for nodes connected through VPNs and falsely identified as being located in the United States.

62. The DtecNet study attempts to map out the path between DtecNet-controlled computers and targeted Gnutella peers, but these paths are missing or incomplete for 73% (8,036

of the 10,974) of the peers.

63. Further, it can be seen from the data provided by DtecNet that the DtecNet-controlled computers identify themselves as running a version of the LimeWire client, even though they are running their own proprietary software. Thus, the DtecNet study itself violates the key assumption that both the MediaSentry and the DtecNet studies make, namely, that all nodes accurately report their own software version information. The study does not employ any kind of software fingerprint to establish that the Gnutella peers with which they communicate are indeed executing LimeWire software.

Dated: January 14, 2011



Emin Gür Siner