

THE CURRENT STATE OF PEER-TO-PEER NETWORKS

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Abstract

This paper investigates the current usage of peer-to-peer (P2P) networks in the entertainment industry. P2P file sharing networks are extremely popular and can be used to show users interests, preferences and trends over time. P2P systems share and distribute globally huge amounts of data by allowing users to download various forms of artistic files without the need of storage space for storing files and bandwidth for transferring them between computers. In this paper, we will utilize Muzit's Trace (MuzitTrace®) proprietary software to examine the latest statistics of P2P entertainment users.

Introduction

MuzitTrace is both a big data solution software and a disruptor to the way the entertainment industry has treated the world's largest distribution channel, which is a P2P file sharing systems. MuzitTrace was conceived by copyright owners, industry insiders and technology industry veterans to offer artists and other copyright owners a unique solution to market and monetize the untapped P2P file sharing community. With approximately 3.5 billion people connected to internet globally, and only 10% of them paying for subscriptions to streaming services, piracy is a thriving current phenomenon and an enormous opportunity for creating a new market of paid subscribers. MuzitTrace software collects unauthorized global P2P distribution of copyrighted content and provides powerful data analytics by utilizing artificial intelligence and machine learning techniques.

MuzitTrace data analytics platform identifies the explicit entertainment preferences and geographical locations of millions of P2P fans of music, movies, television and other digital media. P2P networks are a fertile ground to extract valuable metadata, in which copyright owners and media professionals can truly know what artistic content drives millions of consumers around the world. Owners of the copyrighted content can use MuzitTrace platform to reach millions of new customers via laser targeted marketing campaigns to capture huge revenue streams from this untapped global community.

MuzitTrace Data Statistics

The MuzitTrace dataframe is able to identify for each infringement, the copyright owner, the IP address, location, time and other pertinent metrics.

The dataset currently monitors globally over 16.7 million torrents and results in the identification of over 18.4 billion infringements mapped into about 278 million distinct IP addresses. MuzitTrace data continues to grow at an impressive rate of about 1 billion infringements every two months, which is a strong indication of the increased popularity of P2P networks in recent times.

Table 1 shows the current worldwide distribution of infringements by categories. Software, movies, music and TV episodes are the most popular infringed files in the database.

Table 1: Frequency of Infringements

Games	1.5%
Movies	34.23%
Music	15.01%
Software	34.51%
TV Shows	14.66%
Other	<1%

The top 20 countries (Table 2) contribute to about 75% of the worldwide infringement activity of P2P networks. The biggest market is China with about 20% of the total number of infringements.

Table 2: Total Unique IP addresses

China	55,410,823
Korea	21,475,435
Russian Federation	20,067,291
Brazil	16,809,004
United States	10,944,013
India	10,926,578
Spain	10,093,878
Turkey	8,187,824
Taiwan	7,683,363
Italy	6,234,130
Japan	6,217,000
United Kingdom	6,007,813
Ukraine	5,262,907
France	4,911,735
Australia	3,780,248
Canada	3,545,267
Viet Nam	3,179,115
Argentina	3,046,606
Mexico	3,019,524
Germany	3,001,706

In the US market, MuzitTrace currently has about 11 million of unique IP addresses. A top 10 list (Table 3) of the most infringed artists includes some familiar household names, such as Marvel Entertainment, Game of Thrones and DC Entertainment.

Table 3: Top 10 artists by distinct IP addresses

Zona	13,173,230
Marvel Entertainment	4,760,262
Game of Thrones	4,206,890
DC Entertainment	3,201,022
The Walking Dead	2,295,568
Grand Theft Auto	2,077,393
The Sims	1,848,571
The Flash	1,390,938
Westworld	1,368,571
Vikings	1,346,604

Summary

This paper provides an insider look of the current state of P2P networks in the entertainment industry. There is a strong evidence that the popularity of P2P file sharing is growing rapidly at rates never seen before. At the same time, the utilization of artificial intelligence can harness the P2P big data volumes in order to provide the maximum revenue benefit to the intellectual property owners.

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