



## **The View: How to Secure Online Content and Access in Today's Device-Laden World**



## On-Demand Digital Content Served Across Multiple Ecosystems, Devices

A dramatic increase in the usage of mobile devices coupled with the escalating popularity of on-demand content has created a connected world where companies must be significantly more wary about protecting their digital content. Digital rights management (DRM) is a proactive approach that allows content providers and IT vendors to safeguard those assets from piracy—and thereby protect their revenue streams.

Cloud computing and bring-your-own-device (BYOD) trends are driving innovation in the media and content industries, as consumers turn to high-performance mobile devices to consume content anytime and anywhere. For example, improved internet connectivity and the proliferation of video-equipped smartphones and tablets have put pressure on service providers to stream live TV programs as well as video-on-demand and offer new releases on these devices. Content owners and operators are thus compelled to provide a level of seamless flexibility that meets consumer demands while ensuring they can still comply with licensing agreements and fully monetize the content.

As the digital universe has continued to expand across geographically dispersed audiences, so, too, has the need for flexible DRM tools that can address multiple ecosystems, span across a large number of devices, and cover the entire content delivery cycle from creation to consumption.

## Internet of Things Will Only Contribute to More Device-Driven Content

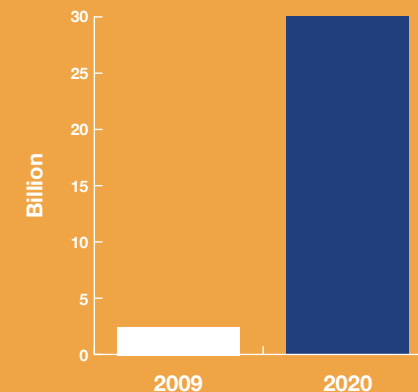
Content transformed into digital formats continues to drive media consumption around the world. The surge in the number of devices with capabilities to support digital media, along with improving internet access and increasing speeds, has provided consumers with unprecedented access to content of their choice—anytime, anywhere.

Mobile digital media time around the world is now significantly higher when compared to desktop. On average globally, people spend 86 minutes a day using the internet on their phones, compared to 36 minutes on a desktop.<sup>1</sup>

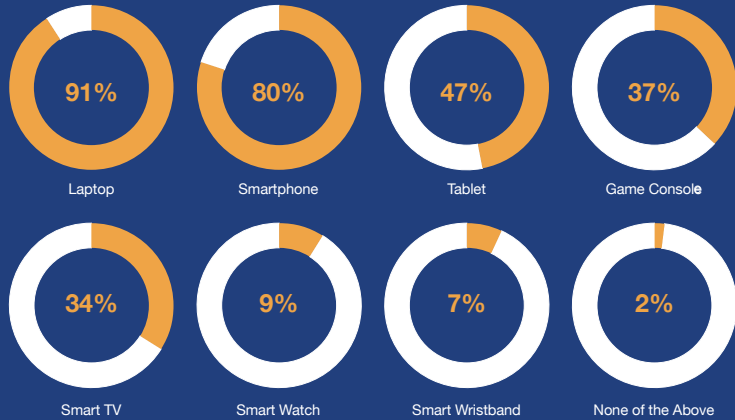


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## Connected Devices with a Unique IP.



# Most Popular Devices:<sup>2</sup>



The DRM market is expected to reach **\$2.96 billion in 2017** - up from **\$977.2 million in 2012**.

The majority of global digital media consumption is attributed to entertainment services that rely heavily on video and audio content. The devices used to access this type of digital content have advanced during the last few years, providing an assortment of platforms on which users can easily stream audio and video.

By 2019, 80 percent of the world's internet traffic is projected to be video.<sup>3</sup>

The Internet of Things (IoT) will only continue to add to the myriad of intelligent, connected devices available to capture and share data and content as more buildings, vehicles, equipment and other items become "smarter." The total economic value for the IoT is projected to be \$1.9 trillion dollars in 2020, benefitting a wide range of industries such as healthcare, retail and transportation.<sup>4</sup>

## More Content. More Devices. More Protection.

So what are the key drivers contributing to the rapid growth in DRM technology?

### Video on Demand:

DRM is used to encode videos in Video-on-Demand (VOD) services. It protects the content of videos by allowing access where licensing and copyright agreements are in place—and to restrict access where it is illegal.

### Online Gaming:

Preventing unauthorized copying and distribution of games is the principle use of DRM. Since most mobile games are downloaded from app stores, the technology also helps protect the free transfer of games to other devices.

### eBooks:

To protect against the mass copying of content within a particular eBook, DRM technology can be utilized to block access from unauthorized readers.

### Mobile Content:

The increasing use of smart devices generates huge amounts of data containing confidential information. DRM solutions help secure mobile content from hackers.

Of all the internet users who consumed content online over a three-month period, **31% accessed at least one item illegally.**<sup>5</sup>

**1/5**  
of global internet users around the world **regularly access sites offering copyright infringing music.**<sup>6</sup>

Excluding pornography, **movies represent the most pirated items on the web.**<sup>7</sup>

A whopping **67%** feel comfortable **downloading content if it's not for commercial use.**<sup>8</sup>

## Look Before You Leap into the Digital Content Marketplace

Despite the fact that digital media has overtaken many mainstream content channels—due in large part to its ability to quickly engage mobile audiences—it doesn't mean challenges don't exist. Before companies jump into the digital content world, they should understand the issues and growing concerns in regard to this medium, many of which involve managing digital rights. As with any high-growth medium, the solutions to the existing problems do not appear that simple. For example, trying to secure online video content distribution and comply with licensing and copyright agreements can be challenging. Figure in the different cultural boundaries that should be respected, and companies now have a global challenge that far exceeds the pages of any download site.

The solution in its simplest form can be summed up in one word: control. However, that control needs to be risk-free for companies and transparent to end users.

While there are certainly very sophisticated fraudsters who intentionally look to exploit the digital world for larger monetary ends, there is also little Johnnie next door who wants to quickly download the latest version of "Call of Duty" to share and play with his friends. Or, Aunt Alice who wants to binge watch HBO's "Game of Thrones" during a rain-filled vacation in Canada.

No brand can afford to underestimate the risks of managing and monetizing digital assets in today's online economy.

Online piracy began in earnest with the music industry. Today, all content creators, including publishers, studios, software developers and record labels, suffer from piracy. Although legal content distribution services such as Amazon, EPIX, Hulu, iTunes, Netflix, and VUDU have made accessing entertainment content legally more convenient, it is estimated that online piracy costs the global entertainment economy an estimated \$6 billion per year.<sup>9</sup>

## A Fine Balance Between Protection and User Experience

A large majority of online users don't see illegal downloading as a form of "theft." Therein lies the problem.

Nothing does more damage more quickly to your company's brand than making it excruciatingly hard to access products or content online—especially for users who have legally paid for that content previously.

**42%**  
**of software installed globally  
is illegally downloaded.**<sup>10</sup>



**The average mobile phone,  
iPod, or tablet contains  
\$800 worth of pirated  
content.**<sup>11</sup>

The challenge is often finding a DRM solution that strikes the right balance between protection and user experience. The best solutions transparently make it more convenient to access content legally while making it inconvenient for the “pirates.”

Companies around the world have been successfully using IP Intelligence technology to protect and control the distribution of digital assets while streamlining and making the user experience as easy as possible.

### **Successful Use of IP Intelligence and Geolocation Starts with Accurate Data**

By leveraging IP Intelligence, companies can effectively create the necessary control to manage the distribution of and access to online content, relying heavily on geographic location to serve as the foundation of a DRM agenda. IP Intelligence is the anonymous data derived from analyzing an Internet user’s IP address and includes geographic location (country, region, state, city and ZIP code); connection speed; Internet Service Provider (ISP); proxies; language; and other information.

In essence, it all begins with accurate, reliable data. Accuracy is the most important feature companies should look for when they start evaluating DRM technology. This is the area where other DRM technologies have previously fallen short in their drive to deliver the desired results and expected protection.

Digital Element, for example, is one company with a DRM application that strives to continually improve its accuracy levels. It is the first provider of IP geolocation data to receive accreditation from the Media Rating Council (MRC).

### **How DRM Technology Works**

By deploying Digital Element’s NetAcuity IP Intelligence and geolocation technology, companies in digital media markets can accurately and anonymously pinpoint a person’s location down to the city level worldwide without being invasive, allowing them to effectively control and restrict the distribution of content to a worldwide, online audience. Beyond geography, NetAcuity also identifies a multitude of data points about users including connection speed, Internet Service Provider (ISP), domain, proxy type, time zone, and more. By providing IP-based

information in real time, NetAcuity offers a cost-effective and easy-to-deploy tool for proactively controlling digital assets, reducing associated risks, and preserving the online experience.

**Benefits your company can expect with DRM technology:**

**Improve Control**

Manage access to digital content based on licensing agreements at the country, state/region, city and even ZIP or postcode level.

**Increase Flexibility**

Adapt and respond quickly to constantly changing rules for content management and distribution.

**Ensure Compliance**

Comply with license and copyright agreements made with licensors by allowing access to content based on authenticated, real-time user geographic location.

**Enforce Restrictions**

Ensure users in prohibited or embargoed areas are restricted from accessing your digital assets.

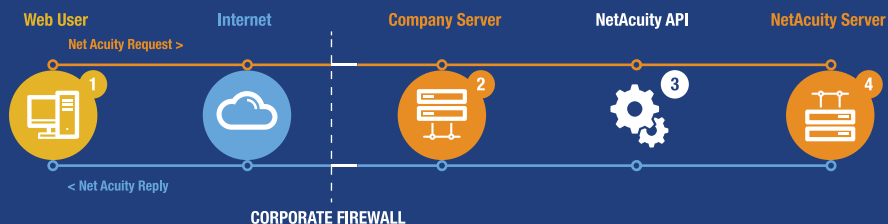
**Reinforce the Customer Experience**

Make sure customers aren't offered content that is not available to them by localizing information on the website and geotargeting ads or promotions.

**Use Cases: IP Intelligence and Geolocation at Work**

Digital Element has been building success—and bringing value to companies—in the DRM space since 1999. Two examples of successful DRM initiatives involving Digital Element's NetAcuity technology are described below:

**Internet users looking to circumvent online location-detection technologies have contributed to the growing use of proxies. This requires more sophisticated DRM solutions that have the capabilities to accurately identify the use of proxies (i.e. VPNs, TOR points, spoofed HTTP headers, hosting facilities, etc.).**



- 1** User seeks content
- 2** Content or application server asks NetAcuity Field Server for IP Parameters using NetAcuity's APIs.
- 3** NetAcuity Server responds in 0.03 milliseconds, allowing client server to display information to the user in real-time.
- 4** NetAcuity Server retrieves requested data elements from database comprised of the global Internet's over 2 billion routable IP addresses.

# Case Study One



## Scenario

VUBIQUITY connects content owners and video providers to deliver entertainment to viewers on any screen. Working with nearly 650 leading film studios, television networks, independent producers and multi-channel networks (MCNs), VUBIQUITY brings premium content to more than 1,000 global video distributors, spanning 109 million households, across 121 territories and working with 80 languages. Due to the global interest in video on demand, studios mandate that providers have IP geolocation technology incorporated into their content distribution platforms in order to adhere to licensing rights across regions. While the studios do offer a list of approved IP geolocation technology providers, the list is small and many of the companies tend to operate only in very specific regions of the world.

## Solution

VUBIQUITY needed to find an IP geolocation provider that would offer accurate and reliable data for African and Latin American regions. The company selected Digital Element's IP Intelligence and geolocation solution, NetAcuity, to gain access to high-quality, all-encompassing datasets that were continually updated. NetAcuity is the gold standard in the industry and uncovers actionable information about online users such as geographic location and proxies (including virtual private networks or VPNs)—all while respecting the user's right to privacy. VUBIQUITY incorporates this technology into its Content as a Service (CaaS) platform which consists of a cloud-based centralized repository of pre-licensed, pre-configured content that is stored, hosted and distributed across a global delivery network. The technology is similarly offered through VUBIQUITY's Digital Storefront, an end-to-end white-label service for today's video distributors or content providers.

## Success

The use of Digital Element's datasets assists VUBIQUITY in processing incoming requests and delivering content to any point on the network on demand while managing entitlements and access to video assets based on the authentication of user rights and integration into the order process. VUBIQUITY takes comfort in knowing that it is using reliable, quality data to meet the studios' licensing requirements—protecting not only the studios but also the company and its operators. According to VUBIQUITY, the risks are significant without this type of digital protection.

## Case Study Two



### Scenario

YouView, a joint venture between BBC, ITV, Channel 4, Five, BT, Talk Talk and Arqiva, is the UK's on-demand service delivering more than 70 live, free-to-air digital TV and radio channels as well as seven-day catch-up from the UK's public service broadcast players. A range of quality content is also available via on-demand players from Netflix, UKTV Play, NOW TV, Sky Store, Quest OD from Discovery, milkshake!, S4C and STV for viewers in Scotland. YouView set-top boxes are offered as part of broadband subscription bundles from TalkTalk, BT and Plusnet. It is also available to buy subscription-free from all major retailers and many independent electrical stores including John Lewis, Currys, Argos, Tesco, Amazon and Richer Sounds.

### Solution

Alongside great free TV channels and on-demand TV, YouView also offers pay-on-demand content, and pay content through internet channels from selected partner ISPs and national broadband providers that offer on-screen branding, packaged services and features.

A key challenge for YouView in setting up its pay content distribution was identifying set-top boxes being installed for the first time on BT, TalkTalk or Plusnet ISP lines; serving the relevant on-screen branding, packaged services and features provided by those ISPs'; and – on a daily basis – ensuring each set-top box continued to accurately surface relevant ISP features. By deploying Digital Element's IP Intelligence data, YouView is able to meet its pay content distribution requirements and serve only the relevant ISP-packaged service to the set-top box. By determining the Autonomous System Number (ASN)—a critical element in the internet routing architecture—IP Intelligence identifies the ISP of the home so the relevant packaged service can be delivered. In the same way, routing management is possible for content delivery. YouView required a highly accurate solution that is regularly and automatically updated as the device base grows, ISPs IP ranges change, and as homes migrate between ISPs.

### Success

With NetAcuity Edge technology, YouView has benefitted from: regular, automatic updates; staying compliant with stakeholders' legal requirements; and immediate recognition of providers for automatic adaptation of relevant features. YouView is also able to ensure a seamless, personalized viewing experience for the consumer—and to continue to deliver extraordinary TV to everyone.



The global **DRM market** is estimated to **continue to grow** at a compound annual growth rate (CAGR) of approximately **16 percent through 2020**.<sup>12</sup>

Contact us to learn more about how IP Intelligence can help drive digital rights management at your organization.

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## Trends Point to an Even Bigger Future for Digital Content

Global consumer demand for and 24/7 availability of mobile content, live streaming video, mobile gaming, digital music and e-books will continue to drive the need for reliable DRM solutions. However, trends such as increasing government support for a safer digital economy, growing options for pay-TV services, and rising digital watermarks technology will also help propel the demand for DRM worldwide.

The online distribution of content and advertising by all accounts is destined for continued growth. And the delivery and protection of this type of digital content must be able to change with new business models, marketplace fluctuations, and evolving consumer expectations as well as licensing and copyright compliance issues. Any company managing and distributing content on the internet must understand how to find the balance between marketing savvy, technology innovation, asset protection, and reasonable fair use for its consumers.

## About Digital Element

Since 1999, Digital Element has been providing global geolocation solutions that bring anytime, anywhere relevance and context to online initiatives—from desktops to mobile devices. The company's patented technology has been certified and accredited to deliver real-time access to accurate and reliable location intelligence without invading Internet users' privacy. For more than a decade, many of the world's largest websites, brands, ad networks, security companies, social media platforms and mobile publishers have trusted Digital Element's technology to target advertising, localize content, enhance analytics, and manage content rights as well as detect and prevent fraud. Headquartered in Atlanta and London, Digital Element is a division of Digital Envoy Inc.

1 <http://digiday.com/publishers/mobile-overtaking-desktops-around-world-5-charts/>

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