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Legal Regulation of Digital Content and Copyright on the Internet: The Case of Uzbekistan in Comparative Perspective

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Abstract

The regulation of digital content and internet copyright presents complex challenges at national and global levels. This article examines Uzbekistan's legal framework for digital content and copyright, comparing it with practices in the United States, European Union, China, and Russia. The Results detail Uzbekistan's current laws – rooted in international treaties and recent reforms – and contrast them with the DMCA regime in the U.S., the EU's evolving directives, China's state-driven enforcement, and Russia's site-blocking approach. We discuss regulatory measures across content types (video, music, software, AI-generated content, etc.), highlighting expert views and case studies. The common challenges such as online piracy, platform liability, and the emerging issue of AI-generated works. This concludes with observations on best practices and recommendations for strengthening Uzbekistan's digital content regulation while safeguarding fundamental rights.

Keywords: Digital Content, Internet Law, Copyright, Uzbekistan, Comparative Law, Online Piracy, Safe Harbor, AI-Generated Content

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I. Introduction

The rapid proliferation of digital content from streaming videos and music to software and AI-generated works has upended traditional notions of copyright and compelled lawmakers worldwide to adapt legal frameworks. In the internet era, creative works can be copied or distributed globally with a few clicks, leading to unprecedented opportunities for creators but also rampant piracy and unauthorized use (Bukhari et al., 2023). Balancing the rights of content creators with the public's interest in access and innovation has become a pressing legal challenge in virtually every country. Nowhere is this balance more delicate than on the internet, where jurisdictional borders blur and enforcement is complicated by the transnational nature of online content.

Uzbekistan provides a compelling case study of these issues in a developing legal context. As a post-Soviet nation integrating into the global intellectual property regime, Uzbekistan has been reforming its copyright laws to meet international standards. The country's Law on Copyright and Related Rights (2006), along with relevant provisions of the Civil Code, form the backbone of its domestic copyright system. Uzbekistan joined the Berne Convention in 2004 and more recently acceded to the WIPO Internet Treaties (WCT and WPPT) in 2019, signaling commitment to align with global norms. These steps have extended protection terms and introduced modern concepts like the author's exclusive right of communication to the public, essential for internet-age copyright. Yet, the country still grapples with enforcement challenges such as online piracy and low public awareness of copyright.

Comparing Uzbekistan's approach with those of other jurisdictions can illuminate best practices and gaps. The United States, with its Digital Millennium Copyright Act (DMCA), pioneered a notice-and-takedown system that grants internet platforms a degree of safe harbor from liability. The European Union has moved toward stricter platform responsibility through its 2019 Copyright Directive, aiming to close the "value gap" between content industries and tech platforms. China has built an aggressive enforcement regime that combines civil, criminal, and administrative actions to curb infringement, while also exerting regulatory control over content distribution in its tightly managed internet. Russia similarly enacted robust anti-piracy laws enabling swift website blocking, though critics note these measures sometimes double as tools of broader information control. Each model carries distinct philosophies and implications for creators, users, and intermediaries.

This study aims to analyze how digital content and internet copyright are legally regulated in Uzbekistan, in comparison with the U.S., EU, China, Russia, and other notable jurisdictions. Key questions include:

1. What laws and regulations govern digital content and online copyright in Uzbekistan, and how effective are they?
2. How do Uzbekistan's laws compare to international practices in terms of

protecting rights and regulating platforms or users?
3. How are emerging issues (like AI-generated content) being addressed? And
4. What lessons or recommendations can be drawn to improve the legal framework in Uzbekistan?

In the following sections, we first outline the methods used for this comparative legal research. We then present results detailing the legal frameworks and empirical observations in Uzbekistan and the comparator jurisdictions. In the discussion, we interpret these findings, highlighting common trends, divergences, expert opinions, and policy implications including ethical and societal considerations. Finally, the conclusion summarizes the insights and suggests ways forward for policymakers and stakeholders in Uzbekistan and beyond.

II. Methodology

We employed a qualitative, comparative research design integrating doctrinal legal analysis with empirical data review. The study followed the IMRAD structure typical of scholarly research. In the Introduction, we identified the research problem and contextual background. The Methods section (this section) describes our approach to data collection and analysis. Results are presented as a comparative narrative of each jurisdiction's legal framework and findings. We then Discuss the implications, and end with a Conclusion and necessary declarations. We conducted an extensive literature review of legal statutes, academic articles, policy reports, and case law related to digital content regulation and copyright. Key sources included national legislation (e.g., Uzbekistan's Law on Copyright and Related Rights), international treaties (Berne Convention, TRIPS, WIPO Internet Treaties), and analyses by legal experts. We also reviewed commentary by scholars, such as discussions of the DMCA safe harbors and critiques of various systems. This provided a doctrinal understanding of each jurisdiction's laws and the intended policy goals behind them.

For each jurisdiction (Uzbekistan, U.S., EU, China, Russia, and others as relevant), we identified the primary legal instruments governing online copyright and digital content. We compared substantive provisions (e.g., scope of rights, exceptions like fair use or fair dealing, liability of internet service providers), as well as enforcement mechanisms (notice-and-takedown procedures, penalties for infringement, etc.). We drew on secondary sources including law firm reports, government publications, and international IP indexes to ensure up-to-date information. For instance, a December 2023 report by an Uzbek law firm was used to confirm recent amendments in Uzbek law. To ground the analysis in real-world context, we incorporated empirical data and case studies where available. This included statistics on piracy rates, enforcement actions, and notable court cases:

This research did not involve human subjects or personal data collection beyond analyzing publicly available information, so formal ethical clearance was not required. Nonetheless, ethical principles were observed in conducting and presenting the

research. We ensured academic integrity by properly citing all sources and not misrepresenting authors' viewpoints. The potential biases in sources (e.g., industry reports advocating for stronger enforcement) were acknowledged and balanced with counter-perspectives (e.g., digital rights advocates' concerns about censorship). In discussing sensitive issues like state censorship or piracy, we aimed for a fair, evidence-based tone without defamation or unfounded accusations.

III. Results

In this section, we present the findings on how various jurisdictions regulate digital content and enforce copyright on the internet. We start with Uzbekistan, the focal country, examining its legal framework, recent reforms, and enforcement practices. We then survey the approaches in the United States, European Union, China, and Russia, as representative models. Each sub-section covers the types of content regulated (e.g., music, video, software, AI content), the legal mechanisms in place (laws, regulations, and systems like notice-and-takedown or filtering), and any empirical or notable examples. The section concludes with a comparative summary highlighting key similarities and differences.

Uzbekistan's primary copyright law is the Law of the Republic of Uzbekistan "On Copyright and Related Rights" (2006), which provides protection for a wide range of works, including literary and artistic works, musical compositions, computer programs, databases, and films. This law grants authors extensive economic rights (e.g., reproduction, distribution, adaptation) as well as moral rights to attribution and integrity of the work. In addition to the dedicated copyright law, the Civil Code of Uzbekistan reinforces these principles and governs related contractual and property aspects (Ilyasov, 2024).

Uzbekistan has actively updated its laws to comply with international standards. A milestone was the country's accession to the Berne Convention (effective 2005), which instituted automatic protection of works without formalities and the principle of national treatment for foreign works. More recently, in 2019 Uzbekistan acceded to the WIPO Copyright Treaty (WCT) and WIPO Performances and Phonograms Treaty (WPPT) collectively known as the WIPO Internet Treaties which address digital rights and technological measures. To implement these obligations and in anticipation of joining the World Trade Organization, Uzbekistan enacted amendments in 2021. Notably, the copyright term was extended from 50 years post-author's death to 70 years, aligning with global norms and TRIPS requirements. These reforms were acknowledged by the U.S. Trade Representative as significant progress, although some legal gaps remain.

Oversight of copyright in Uzbekistan is primarily vested in the Department for Intellectual Property under the Ministry of Justice. This body handles administrative functions like voluntary registration of works (which is not required for protection but aids enforcement). It also leads updates to legislation to keep pace with technology.

Enforcement involves both civil and criminal avenues. Rights holders can bring civil lawsuits in Uzbek courts seeking injunctions and damages for infringement. For willful or severe infringements, the law provides for criminal penalties and fines; Uzbek authorities can seize illegal copies and equipment, and infringers may face sanctions including imprisonment in egregious cases. Administrative penalties (fines, confiscation of infringing goods) can also be imposed for minor violations, offering a graduated enforcement scheme.

Despite a solid legal framework on paper, enforcement challenges persist. The government has recognized that the "rapidly evolving digital sphere" introduces issues such as online piracy and unauthorized use on digital platforms that strain existing mechanisms. An example is the proliferation of websites or social media channels sharing unlicensed music and videos to Uzbek audiences. In response, Uzbekistan has been enhancing regulations against online piracy. For instance, enforcement authorities have been given mandates to focus on internet violations, and there are ongoing discussions about improving digital rights management (DRM) provisions to help content creators monetize their works online. Uzbekistan's efforts include international cooperation and learning from foreign best practices, evidenced by its participation in U.S.-Central Asia IP working groups and development of a National IP Strategy in 2022 (Urinboyev, 2023).

In addition to copyright-specific laws, Uzbekistan has broader regulations for online content which can impact how copyrighted material is handled. In 2020, the government adopted a procedure for removing unlawful online content across the board. Under this system, the state regulator (the Center for Mass Communications within the Agency of Information and Mass Communications) monitors websites, social media, and messaging platforms for "prohibited information." If illegal content is found (which could include copyrighted material posted without authorization, as well as content violating other laws), the regulator sends a notice to the site owner or the individual (e.g., a blogger) to remove it within 24 hours. Failure to comply can lead the regulator to ask the platform administrators or a court to block or delete the content. This swift notice-and-takedown procedure is content-neutral (covering everything from hate speech to IP violations).

Empirical data on digital piracy in Uzbekistan is scarce, but indications suggest it is a significant issue. Uzbekistan has been listed on the USTR Special 301 Watch List for IP enforcement in recent years. The USTR's 2023 report acknowledged Uzbekistan's improvements (joining treaties, high-level political commitment to IP) but pointed out ongoing problems like the availability of unlicensed software (including within government agencies) and insufficient protection for foreign music recordings. One specific recommendation from the U.S. side was that Uzbekistan mandate government use of licensed software, implying that piracy or unlicensed use even in public institutions had been an issue.

Anecdotal evidence suggests that Uzbek consumers have widespread access to

pirate websites or use VPNs to reach content not officially licensed domestically. Software piracy in particular has been high; for example, earlier global surveys indicated that unlicensed software installations in countries like Uzbekistan were well above 50% in the past (global average was 37% in 2017). This is slowly improving as legal software becomes more affordable and as awareness grows about cybersecurity risks of pirated software (malware, lack of updates).

Uzbekistan has a fundamentally sound legal structure for copyright that covers digital content and adheres to international standards. Recent reforms show a willingness to strengthen protection. The main challenges lie in enforcement and implementation: ensuring that legal remedies (takedowns, court actions) are accessible and effective against online infringements, while also educating the public and officials about copyright in the digital age. The use of expedited takedown notices for illegal content is a positive step for quick action, but it must be coupled with transparency and due process to avoid abuse. The United States has one of the most developed bodies of law regarding digital content and internet copyright, shaped by decades of technological innovation and legal battles. Key features of the U.S. approach include robust copyright protection with high penalties, a broad doctrine of fair use as a user right, and the famous "notice-and-takedown" regime (Marsoof, 2015).

U.S. copyright law, primarily codified in Title 17 of the U.S. Code, grants authors exclusive rights to reproduce, distribute, publicly perform/display, and create derivatives of their works. These rights apply equally to digital content – software code, mp3 music files, digital videos, images, etc., are all protected. U.S. law also uniquely provides for fair use (17 U.S.C. §107), a flexible exception allowing use of copyrighted material without permission for purposes like commentary, criticism, education, or research. Fair use has been crucial in the digital era to enable transformative creations (e.g., memes, remixes) and activities like search engine caching or text/data mining, which might otherwise be infringing.

To address the liability of online service providers (OSPs) for content uploaded by users, the DMCA introduced safe harbor provisions (Section 512). Under Section 512, OSPs (which include internet service providers, web hosts, and user-generated content platforms) are immune from monetary copyright liability for user-posted content, provided they meet certain conditions. One key condition is implementing a notice-and-takedown system: when a rights holder sends a proper infringement notice, the platform must expeditiously remove or disable access to the infringing material. If they do so and weren't aware of obvious ("red flag") infringement, they keep the safe harbor. This "Section 512 safe harbor" effectively shifts much of the policing burden to content owners, who must monitor and notify, while requiring cooperation from platforms once notified (Kaye & Gray, 2021).

The U.S. enforces copyright through a combination of civil litigation and criminal prosecution. Civil remedies are potent – statutory damages can be up to

$150,000 per willful infringement, which can multiply dramatically in mass online piracy cases, creating a strong deterrent. U.S. content industries (music, film, software) have aggressively pursued both infringing sites and individual uploaders/downloaders in court. Landmark cases include A&M Records, Inc. v. Napster, Inc. (2001) which shut down the Napster service for contributory infringement (shaping the landscape for P2P file sharing), and MGM Studios, Inc. v. Grokster, Ltd. (2005) where the Supreme Court held that services inducing users to infringe could be liable even if the service has non-infringing uses.

Under the DMCA's anti-circumvention rules (Section 1201), it is also illegal to bypass DRM or offer tools to do so, adding another layer of control over digital content (important for software and streaming media). The U.S. Copyright Office holds triennial rulemakings to carve out exceptions to these anti-circumvention rules (for example, allowing jailbreaking of smartphones or breaking DVD encryption for documentary filmmakers under certain conditions). One major trend has been the rise of Content ID and other automated filtering systems by platforms like YouTube. While not mandated by law (in fact, U.S. law does not require proactive monitoring by platforms and explicitly says no general duty to monitor), in practice large platforms use these systems to swiftly identify and either monetize or remove copyrighted music/videos uploaded by users.

The U.S. approach is often viewed as a compromise between fostering innovation and protecting rights. Many observers credit Section 512's safe harbors for enabling the explosive growth of user-driven platforms (YouTube, Facebook, etc.) that rely on user. On the other hand, U.S. content industries (music, film, etc.) have grown increasingly vocal that the DMCA is outdated. They argue that "notice and takedown" has become an endless game of "whack-a-mole," where removed content pops up elsewhere almost immediately. A coalition of music organizations submitted comments to the Copyright Office stating that "the DMCA safe harbors suffer from key failings", creating a skewed playing field where platforms can meet minimal requirements to avoid liability and use that leverage to negotiate lower licensing fees. They point out that some large platforms (implicitly YouTube) host vast amounts of infringing material and rely on notice-and-takedown rather than proactively licensing all content, contributing to a "value gap" where creators aren't fully compensated.

The U.S. model highly values both strong protection (with heavy penalties and anti-circumvention rules) and innovation (via safe harbors and fair use). This has enabled the growth of internet platforms and a vibrant remix culture, but also led to friction between content owners and tech companies. The notice-and-takedown system is a cornerstone: it has removed countless infringing materials (over 1 billion DMCA notices have been sent to Google alone for search result delisting), yet it is straining under volume and being re-examined in light of new technology. The U.S. experience provides a reference point for how a legal framework can attempt to keep pace with digital content issues and how stakeholder interests can be balanced or collide.

The European Union's approach to digital content and copyright is characterized by regional harmonization through directives and an increasing emphasis on making online platforms accountable for copyright enforcement. While individual member states implement and enforce the rules, EU directives set common standards. Two eras can be discerned: the early 2000s framework that was more intermediary-friendly (similar to the U.S.), and the recent reforms culminating in the Digital Single Market (DSM) Copyright Directive 2019/790, which tilt more toward rights-holder interests (Ferri, 2021).

Early Framework Safe Harbors and Limited Liability: Historically, the EU had its own safe harbor regime via the E-Commerce Directive 2000/31/EC, which, among other things, provided that certain online intermediaries are not liable for user content if they play a passive, technical role (for example, mere conduits, caches, or hosts) and act expeditiously to remove illegal content upon obtaining actual knowledge. This was akin to the DMCA's concept, though implementation varied by country. Additionally, the InfoSoc Directive 2001/29/EC reinforced rights (like making available to the public) and required members to provide legal protection against DRM circumvention, echoing WIPO treaties.

The DSM Copyright Directive introduced significant changes. It created a new right for press publishers to be remunerated for online use of their news by platforms (often dubbed the "link tax" or press publishers' right). This targets news aggregators like Google News, requiring licensing for snippets of news articles. Article 17 effectively says that large content-sharing service providers (like YouTube, Facebook, etc.) must obtain authorization from rights holders for content uploaded by users, and if they don't, they can be held directly liable unless they demonstrate that they have made best efforts to prevent unlicensed uploads of protected works. In practice, this provision pressures platforms to implement upload filters or content recognition technologies to screen out infringing material, or to negotiate broad licenses with content owners (Schlag, 2023).

The Council of the EU's goal with these reforms was explicitly to "reduce the value gap between the profits made by Internet platforms and by content creators" and "encourage collaboration" between them. Essentially, the EU pivoted towards the view that big tech platforms should shoulder more responsibility and cost for policing copyright, rather than leaving it mostly to rights holders. This shift was influenced by heavy lobbying from European media and creative industries, and frustration that the U.S.-centric model (with broad safe harbors) was not adequately rewarding European content producers. The directive was approved in 2019 amidst widespread debate tech companies, digital rights groups, and many internet users campaigned against it (remember the "SaveYourInternet" protests), whereas creators' groups supported it.

By 2021, EU member states began transposing the directive into national laws, sometimes with variations in approach. For instance, Germany's implementation of Article 17 included nuanced provisions allowing users to upload small snippets of

protected works (like 20 seconds of music or 160 characters of text) under a de minimis threshold without being blocked, to safeguard user expression. France implemented it more strictly, directly empowering rights holders. This variation means the exact practice can differ, but overall, large platforms in the EU now operate under a more liability-sensitive regime. Licensing deals between platforms and content industries have multiplied (e.g., YouTube securing licenses with music rights societies in Europe). Automated filters are effectively standard – something like Content ID for music and video, Audible Magic or similar for smaller companies, etc., to comply with "best efforts" to prevent known unlicensed content.

EU's IP Observatory published a 2023 report on online infringement in the EU, showing mixed trends: TV and film piracy stabilized around 5 accesses per user per month on average, with streaming dominating over downloading. Music piracy had declined thanks to streaming services, but is still present. There is considerable variation e.g., piracy is higher in countries where legal content is less affordable or available, and among younger demographics, a certain percentage still access pirate content despite awareness campaigns (Oprysk, 2021).

China's regulation of digital content and copyright is shaped by its unique internet governance regime one that couples strengthening intellectual property laws with heavy state oversight of online activities. Over the past two decades, China has moved from being seen as a high-piracy environment to making significant strides in IP enforcement, driven in part by international pressure and in part by domestic industry growth. However, enforcement in China often relies on administrative action and campaigns, and the internet itself is tightly controlled through censorship and licensing, which indirectly affects copyright enforcement(He & Shan, 2024).

China's copyright law (the PRC Copyright Law) underwent a major amendment effective June 1, 2021 often referred to as the third revision of the law. This amendment brought Chinese law closer to international standards: it extended the economic rights (adding a right of communication through information networks, which is crucial for online transmissions), increased the maximum statutory damages (up to RMB 5 million, approx. $770k, and even punitive damages up to 5× actual damages for willful infringements in serious cases), and extended the term of protection for many works to 50 years after author's death (for most works, except photographic works and similar which got 50 years from publication; note: China's term is still 50, not 70, years post-mortem for most works, which is less than Berne's maximum, but it did improve other aspects). China is a member of Berne, TRIPS, WCT, WPPT, etc., so its statutes incorporate those obligations (like providing moral rights and anti-circumvention rules).

One distinguishing feature is that China has a "three-track" enforcement system: civil, criminal, and administrative. Rights holders can go to civil court (and since 2014, specialized IP courts in major cities have improved expertise). For egregious piracy (like large-scale profit-making piracy), criminal prosecutions are possible under

Article 217 of the Criminal Law, though historically few cases met the high thresholds. The administrative route is particularly important: agencies such as the National Copyright Administration of China (NCAC) and local copyright bureaus have authority to conduct investigations, raids, and levy fines without a court order. They can seize infringing goods, shut down infringing services, and impose penalties relatively swiftly. This is attractive to rights holders because it's faster and cheaper than litigation, and China uses it extensively and resolves thousands of infringement cases annually in this manner, taking pressure off courts (Xu & Yu, 2022).

China does have a mechanism akin to notice-and-takedown, established by regulations. The key regulation is the Regulation on Protection of the Right of Communication through Information Networks (2006). It provides that if a rights owner notifies an online service provider of infringing content, the OSP should delete or block it; failing to do so can incur liability. OSPs that act promptly enjoy a safe harbor. This is similar to the DMCA's approach, though under Chinese law the nuances differ (and it's an administrative regulation rather than a statute). In practice, major Chinese platforms like Baidu, Tencent's platforms (WeChat, QQ, etc.), Alibaba's platforms, and Bilibili have teams and systems to handle takedown requests. As in the West, the scale is huge e.g., tens of millions of takedowns per year across big services.

China often pursues IP enforcement via named campaigns. One longstanding series is the "Jianwang (Sword Net)" campaigns that target online piracy each year under the NCAC. As reported in state media, these campaigns have resulted in the investigation of hundreds of cases and closure of hundreds of websites in a few months. For instance, a campaign in late 2020 targeted online literature and education materials piracy, while another in 2021 focused on cracking down illegal streaming devices and sports event piracy. In a recent example (June 2024), authorities launched a campaign specifically against piracy of textbooks and educational content that could harm the interests of minors, aiming to inspect printing shops and e-commerce platforms for pirated books. The government publicizes these efforts to raise awareness and deter infringement. During one nationwide drive in 2009, officials reported 541 copyright infringement cases investigated and 362 illegal websites closed in a few months, with servers seized and fines imposed (Zou & Chen, 2024).

In the past decade, Chinese internet companies themselves have matured and become stakeholders in IP (Tencent, Alibaba, etc., own music services, film studios, game companies). This has shifted the incentive from tolerating piracy to wanting to monetize content legally. For instance, there was an era when almost all music in China was freely downloadable (often without permission). By 2015, the government ordered a cleanup of unlicensed music online, leading platforms to remove millions of songs. Now, services like Tencent Music or NetEase Cloud Music operate mainly under licensed libraries. In 2021-2022, Chinese regulators even tackled competition issues in digital content: the NCAC and market regulator forced Tencent

Music to give up exclusive deals that made it a near-monopoly, in order to foster fair licensing and more streaming options. Thus, the state intervenes not only to enforce copyright but to shape the market structure.

Enforcement in the massive Chinese market is still challenging. The sheer volume of online content means infringements slip through. Also, cross-border issues occur (e.g., Chinese content pirated on overseas sites or vice versa). China has increased cooperation with international bodies and bilateral agreements (as part of U.S.-China trade talks, China committed to more IP enforcement). Nonetheless, piracy has not disappeared: a 2021 NCAC report might list popular forms like pirate anime streaming sites that cat-and-mouse with authorities. The difference is many such sites operate via servers outside China now, targeting Chinese users via mirror sites and requiring constant blocking efforts.

China's model shows strong government involvement in regulating digital content. Copyright law has been modernized significantly, and enforcement is pursued with a top-down approach using the administrative powers of the state. This has led to visible successes (large-scale crackdowns, improved licensing environment) but also raises concerns: administrative actions lack some due process protections of court cases, and the mixing of political censorship with anti-piracy efforts can blur motives. For example, an anti-piracy law can be leveraged to shut down a site that is also a political nuisance, as some critics point out. Still, from a pure copyright perspective, China has moved closer to a "rule of law" approach on paper while maintaining a "rule by law" approach in execution (the laws are another tool for state control). For content creators, China presents both a huge market of legitimate digital consumers and a battleground where state regulation defines what content can be distributed at all (Han, 2016).

Russia's strategy for regulating online content, particularly copyright, involves stringent laws that allow rapid blocking of infringing websites. Introduced in the 2010s, these measures were a direct response to rampant piracy on the Russian internet (often called the "RuNet"), but they also align with a broader trend of increasing state control over the internet. In 2013, Russia enacted Federal Law No. 187-FZ (often dubbed the "anti-piracy law"), which initially targeted websites sharing movies and TV shows without authorization. The law provided that rights holders could file a lawsuit with the Moscow City Court and obtain a preliminary injunction to have an infringing website blocked by ISPs countrywide, if the site failed to comply with a takedown notice within 72 hours. The process was unusually swift: site owners have a short window (48–72 hours) to remove infringing content after a complaint, or else telecom regulators (Roskomnadzor) can implement a block pending a full court decision. At the time, this was unprecedented in Russian law, it bypassed lengthy trial processes to deliver immediate relief to rights holders (Khasimova & Gumerova, 2020).

In 2015, amendments significantly broadened the law's scope to all copyrighted

content (except photographs). This meant music, e-books, software, etc., were now covered by the same blocking mechanisms, not just video. The amendments also improved procedures: rights holders could directly send notices to site owners and the site owners were obliged to respond within 24 hours (remove the content, prove authorization, or ask for more info). Failure to respond or remove could result in the site being permanently blocked after a court order, particularly for repeat offenders. The law created a centralized process through the Moscow City Court and Roskomnadzor, ensuring consistency. Roskomnadzor maintains a continually updated "register of pirate resources" a blacklist of sites to be blocked.

One striking enforcement provision is that if a site is found to infringe repeatedly, it can be "permanently" (indefinitely) blocked at the IP level in Russia. This nuclear option was meant to deter site operators: for example, major torrent sites or streaming portals that lost a case would effectively be inaccessible in Russia thereafter. Indeed, Russia has permanently blocked many famous piracy sites (Pirate Bay, RuTracker, etc.), although savvy users may use VPNs or mirror sites to circumvent this. The effect of these laws was immediate. Within weeks of the 2013 law's entry into force, dozens of popular sites were blocked, including major torrent trackers. Vkontakte (VK), the Russian social network notorious at the time for hosting unlicensed music and videos was repeatedly called out by USTR as a "notorious market." Facing the new law and lawsuits from record labels, Vkontakte eventually entered into licensing agreements with music rights holders around 2015-2016 and implemented its own content fingerprinting to police uploads. This marked a turning point: a platform with hundreds of millions of users transformed from a piracy haven to a mostly legitimate service (at least for music), largely due to legal pressure (Muravyeva & Gurkov, 2021).

The anti-piracy law has teeth: by 2018, over 4,000 websites had reportedly been blocked for copyright reasons in Russia (including mirror domains). Roskomnadzor continues to block new URLs as they appear; rights holders provide updated lists of domain names (via a procedure called the "dynamic injunction"). The approach is considered successful by the local film industry, some reduction in casual piracy has been observed, and growth in legal streaming services like ivi, Okko, etc., has been attributed partly to the crackdown pushing users to legal options. However, a critical aspect is that Russia's technical ability to block websites is also used for political and social censorship. The anti-piracy law came around the same time as other laws enabling blocking of extremist content, gambling sites, and later, in 2019, the "sovereign internet" law to allow Russia to isolate its internet. Observers noted that once the infrastructure and legal precedent for blocking sites was in place, it was relatively easy for authorities to use it for other purposes.

The anti-piracy law was itself criticized by human rights activists as being rushed and lacking safeguards. Free expression advocates worry that under the guise of protecting filmmakers and artists, the government created a mechanism that, if ever

directed at other content, could silence websites without due process. There is some evidence of misuse: for instance, one could imagine a scenario where a site hosting leaked information might be blocked by submitting a copyright claim (if the content is copyrighted). Russia's lack of independent judiciary exacerbates this concern. Russian content industries (music, film, publishing) supported the law as they were losing revenue to piracy. International pressure also played a role: the U.S. placed Russia on watchlists and made IP enforcement a condition in trade talks and WTO accession. So, Russia had external incentive to show progress on IP, and indeed the 2013 law's passage was linked to Russia's WTO entry (2012) commitments. At the same time, foreign companies remained cautious since enforcement can be selective and unpredictable.

As of 2025, Russia has not publicly dealt with AI and copyright in a big way. Likely it follows the human authorship norm. Given Russia's focus on control, one could foresee that if AI-generated propaganda became an issue, they might require disclosure. But purely from a copyright perspective, no significant law or case has emerged. Russia's approach underscores the power of direct government intervention to enforce copyright via network control. In terms of outcomes, it did lead to a decrease of open piracy sites in the .ru domain and forced platforms like VK to legitimize. But it also exemplifies a double-edged sword: the same tools limiting piracy can curtail internet freedom. For Uzbek policymakers, Russia's model shows an effective enforcement mechanism (quick blocking) but also serves as a caution about ensuring such measures have oversight and are not overly broad.

IV. Discussion

We synthesize the results to address the core themes of digital content regulation and copyright enforcement, drawing comparisons among the jurisdictions studied. The goal is to evaluate how different legal approaches succeed or falter in practice, and what lessons can be gleaned for Uzbekistan. We also consider the perspectives of various stakeholders' creators, consumers, platforms, and regulators and how each regime balances their interests. Finally, we discuss emerging issues like AI content and propose considerations for policy refinement.

Russia similarly has weak user exceptions and focuses on stopping unlicensed sharing. In both, if you are a user wanting to engage in transformative use or share content freely, the law is not on your side. The advantage in those regimes is more for creators and rightsholders (especially state-favored ones) because the systems can be used to enforce their rights swiftly. But ironically, in Russia and China, many creators have historically been fine with a degree of piracy because it expanded their audience a dynamic less relevant now as monetization improves. For Uzbekistan, whose governance might be closer to Russia/China in terms of ability to control the internet, there's a temptation to adopt those strict measures for the sake of protecting local content industries. The caution is that such strictness can stifle the nascent digital

creative community e.g., YouTubers, remixers, educators using materials if fair use/fair dealing or flexible exceptions are not present. Uzbekistan's current law likely enumerates specific exceptions (like for personal use, quotation, etc.), as is common in civil law systems. The challenge will be to ensure these exceptions remain meaningful when enforcement ramps up so that not *every* unlicensed use is treated as a violation requiring removal (Moyakine & Tabachnik, 2021).

Users are also stakeholders' today's fan video maker could be tomorrow's film director. Overly harsh regimes might discourage creative reuses that are actually culturally valuable. Conversely, insufficient enforcement might discourage professional creation (why invest in a film if everyone will pirate it?). Thus, a balanced regulatory environment ideally provides ample legal content to users at reasonable cost (reducing the incentive to pirate) and enforces against truly harmful infringement (large-scale for-profit piracy, counterfeit operations) while not targeting individual, small-scale acts too aggressively.

For Uzbekistan, this means while building up enforcement, also consider adopting something akin to fair use or broad exceptions (the country as a Berne member can't have fair use per se, but can allow flexible dealings) and providing public education: e.g., allow teachers and students some freedom to use content in education, allow quotation in user commentary, etc. The literature suggests that countries that blend enforcement with public awareness campaigns and legal alternatives see better outcomes than enforcement alone. The EU, for instance, alongside stricter rules, funds the IP Observatory's outreach and encourages content services. The U.S. has public-private campaigns (like "Creative Future") and increasingly relies on making legal content easier to get (Spotify, Netflix success was key in curbing music and video piracy).

It's useful to note outcomes like piracy rates: The fall in music piracy globally correlates with streaming availability, not just law. Video piracy recently ticked up because users face too many fragmented subscriptions (some go back to pirate sites). This underscores that legal supply and consumer-friendly services are a critical part of enforcement success. Laws alone might push users from one illegal method to another if demand is unmet. For Uzbekistan, fostering legal digital content markets (e.g., localizing global platforms or supporting local streaming services for music/movies) will complement any legal crackdowns. If Uzbek users have no affordable way to watch popular movies or listen to music, piracy will remain attractive regardless of law.

Strong copyright enforcement is often justified as necessary for creative industries (film studios, music labels, game developers) to flourish. The U.S. and EU industries are robust in part because they can monetize content (though some argue enforcement was only one factor and that competition/innovation played a big role). In China, improved IP laws have coincided with a boom in domestic content production. Chinese streaming platforms now fund many shows, knowing they can profit without

immediate piracy leakage. In Russia, the legal crackdown arguably enabled growth of domestic legitimate services. Thus, there is evidence that when piracy is curtailed, consumers shift to legal options and industries get revenue, some of which (ideally) goes into making more content, employing more people in creative jobs.

For Uzbekistan, nurturing a local creative economy (films, music, software, even digital art or literature) could benefit from solid copyright rules. For example, if Uzbek filmmakers know their movies won't be freely on Telegram channels the day after release, they might be more likely to invest in quality productions. It can also attract foreign investment international studios might be more willing to distribute in Uzbekistan if they trust the IP environment (e.g., licensing content to Uzbek streaming sites rather than fearing rampant piracy).

However, heavy-handed copyright laws can also stifle tech innovation. The classic example is a startup like YouTube: if from day one they were liable for any user upload, they might never have succeeded. The safe harbor was pivotal. EU recognized this tension; during Article 17 debates, it was noted by startups that automatic liability would crush any new European platform trying to compete with U.S. giants (since only giants can afford compliance). For Uzbekistan, which wants to modernize its digital sector, it's important not to inadvertently hamper local startups or the adoption of global platforms. For instance, if Uzbekistan required every platform to store data locally or remove content within 24 hours of any allegation (like Russia's law or the Uzbek 24-hour removal rule), international platforms might hesitate to operate locally or could be blocked (like Twitter was temporarily in Uzbekistan in 2021 for not complying with data localization). That cuts off Uzbek users and entrepreneurs from global conversations (Al-Busaidi et al., 2024).

Transparent, narrowly targeted approaches (like focusing on clearly illegal sites) tend to not scare off legitimate businesses. But unpredictable, broad actions (like blocking an entire domain that includes legal content, or jailing someone for minor infringement) can create a climate of caution or fear in the tech community. The music and film industries often argue that strong enforcement is pro-innovation because it ensures a marketplace for content startups (like new streaming services) can thrive without being undercut by pirates. On the other hand, internet entrepreneurs argue that some of the greatest innovations in content distribution began as ways to share or access content more freely (Napster's legacy led to iTunes and Spotify once the legal piece caught up). So, there's a dynamic interplay: innovation sometimes runs ahead of law (challenging it), then law adapts, and then innovation finds new models within that law.

For Uzbekistan, this might seem a bit futuristic, but it's relevant already if AI technologies are being adopted (for instance, local media using AI to generate music or artwork). Currently, Uzbek law (like most) probably implies only natural persons (and in cases, legal entities) can be authors. So, an AI alone can't be an author. This default is similar to the U.S. position. Until there is more international consensus,

Uzbekistan might simply continue to apply existing principles: an AI-generated work either is unprotected or is considered a joint work with whoever provided creative parameters. An important consideration is also how Uzbek law treats databases and compilations since AI training involves copying datasets, having exceptions for that process could be important.

Another future challenge is blockchain and NFTs, digital content is now also "owned" or monetized through tokens. Copyright law intersects with these (an NFT of an artwork doesn't transfer copyright by default, for example). While not covered deeply here, it's worth noting as digital content evolves, laws might need updating to clarify rights in such contexts. One observation is that despite international treaties aiming to harmonize IP, each jurisdiction's approach to internet issues has local flavor. Uzbekistan should tailor solutions to its socio-economic context. For instance, heavy criminal enforcement might not be feasible if court capacity is limited; administrative fines and takedowns might work better. Or, focusing on public education might yield better results if piracy is more due to lack of awareness than malice.

Bringing the discussion to focus on Uzbekistan, what steps could be taken to improve digital content regulation and copyright protection, drawing from global experiences? Uzbekistan has modernized its legal framework significantly (Berne, WCT/WPPT adherence, term extension). It also has the political will, as seen in its National IP Strategy and engagement with partners. The recognition of issues like online piracy in official documents is a positive sign. In making these improvements, ethical and human rights considerations should remain in view. Uzbekistan is also on a journey of improving its overall human rights record; ensuring that copyright enforcement doesn't inadvertently become a tool to restrict criticism or competition is important. Building trust through fair, transparent processes will lend credibility to enforcement actions.

Conclusion

The landscape of digital content regulation and internet copyright enforcement is continually evolving, as evidenced by our comparative analysis of Uzbekistan, the U.S., EU, China, and Russia. Each jurisdiction's approach reflects a balance (or imbalance) between protecting intellectual property and accommodating the realities of the internet. Uzbekistan, standing at the crossroads of reform, has made commendable progress in updating its laws to international standards and now faces the challenge of effective implementation.

Uzbekistan has a solid legislative foundation for copyright protection, having aligned with major international treaties and extended protections to digital works. The primary need is to bolster enforcement mechanisms to combat online piracy while ensuring those mechanisms are applied fairly and transparently. Uzbekistan's use of swift takedown notices for unlawful content is a promising tool, but it should be

refined to avoid overreach and to integrate with a more formal notice-and-takedown regime for copyright specifically.

The United States model demonstrates the importance of safe harbor protections and user rights (like fair use) in fostering a thriving digital economy. The European Union's recent shift shows a willingness to innovate in law by placing greater responsibility on platforms, an experiment that will yield lessons on bridging the "value gap" China illustrates how robust government-led enforcement can substantially reduce piracy, though possibly at the expense of some openness. Russia's case highlights the raw efficacy and risks of aggressive site-blocking. These varying approaches offer a menu of strategies from which Uzbekistan can adopt elements suited to its context.

All countries grapple with common issues: the scale of online infringement, cross-border jurisdictional difficulties, the emergence of new technologies like AI that strain existing legal definitions, and the tug-of-war between rights holders and intermediaries. There is a global trend toward encouraging cooperation (e.g., voluntary codes of conduct for online platforms, cross-industry partnerships to develop copyright detection tools), recognizing that legislation alone cannot solve these issues in isolation.

In regulating digital content and copyright, Uzbekistan has the opportunity to learn from others' successes and missteps to chart its own course. By aiming for a "Goldilocks" balance not too lax, not too draconian Uzbekistan can protect creators (thus encouraging production of Uzbek music, films, software, and literature) while also nurturing an open and innovative internet ecosystem. The digital realm evolves rapidly, and laws must be adaptive: today's issues include streaming and AI, tomorrows may involve virtual reality or whatever new form content takes. A flexible, principles-based approach in law, combined with ongoing stakeholder dialogue, will help ensure that the legal regulation remains relevant and effective.

Do creators feel confident their rights are enforceable and worth investing in new works? Do users have access to a rich array of content (local and global) at fair terms, without feeling the need to resort to piracy? Can tech platforms operate and innovate without undue legal uncertainty, while acting responsibly to deter infringement? Achieving affirmative answers to these questions in Uzbekistan will indicate a healthy balance. This article's comprehensive analysis and comparative perspective aim to assist in moving toward that equilibrium, whereby the internet can be both a marketplace of ideas and creativity and a marketplace of protected, remunerated works.

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