IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

DISNEY ENTERPRISES, INC., *Plaintiff*, v. INTERDIGITAL, INC., et al., *Defendants*.	:	C.A. No. 25-996-MN

THE MOTION PICTURE ASSOCIATION, INC.'S
MOTION FOR LEAVE TO SUBMIT *AMICUS CURIAE* BRIEF

The Motion Picture Association, Inc. ("MPA") respectfully moves for leave to submit the attached amicus curiae brief related to Defendants' (collectively, "InterDigital") pending motion to dismiss (D.I. 23).

The MPA is a not-for-profit trade association founded in 1922. The MPA is a leading advocate for major producers and distributors of filmed entertainment and streaming services in the United States.[1] The MPA and its members have a strong interest in ensuring that the antitrust laws continue to serve as a backstop when standard essential patent ("SEP") holders engage in deceptive conduct during standards development and in post-standardization holdup. That type of conduct harms competition in markets that rely on standardized technologies. The Plaintiff in this case, Disney Enterprises, Inc. ("Disney"), alleges in exhaustive detail that InterDigital is deliberately engaged in a wide-ranging scheme of just such anticompetitive conduct in the market for video streaming.

[1] The MPA's member companies include Amazon MGM Studios LLC, Netflix Studios, LLC, Paramount Pictures Corporation, Sony Pictures Entertainment Inc., Universal City Studios LLC, and Warner Bros. Entertainment Inc. Walt Disney Studios Motion Pictures, an MPA member and affiliate of Plaintiff Disney Enterprises, Inc., did not take part in the preparation or submission of this brief.

A number of the MPA's members and/or their affiliates have first-hand experience with the same type of conduct of which Disney complains. The MPA's members come to the issues involved in this case with a unique appreciation for the necessary balance between intellectual property rights and antitrust enforcement. The MPA's members are committed to the protection of intellectual property rights. Intellectual property is the lifeblood of the members' businesses. At the same time, the members also recognize the vital role the antitrust laws play in protecting against anticompetitive conduct. For these reasons, the MPA is well positioned to provide the Court with a balanced perspective on the antitrust and intellectual property issues that are raised in the briefing on the pending motion to dismiss.

The attached amicus curiae brief explains that competition is undermined when an SEP owner engages in deceptive conduct during the standard-setting process and, post-standardization, renounces its RAND commitments and makes "holdup" demands to license the patented technologies that are necessary to the standards' implementation. It further explains that digital compression standards are an important component of the streaming ecosystem. Content must be compressed and decompressed through standards-compliant processes, irrespective of the content-delivery system or the consumer device used to receive streamed content. Once an industry standard for compression technology is widely adopted, no participant can switch to a different technical feature outside the scope of the SEP holder's patent without abandoning the standardized technology altogether, thereby sacrificing interoperability, efficiency, and possibly quality. Although the SEP holder's technology faced competition from alternative technologies during the standard-setting process, these competitors are now effectively excluded from the market, leaving the SEP holder with monopoly power. This power only increases as participants further lock themselves into the standard via large investments in

deploying standard-compliant products and services. Thus, SEP owners who use deceptive practices in the standard-setting process and thereafter ignore their RAND commitments achieve a monopoly without competing on the merits and are able to make exorbitant holdup licensing demands.

The attached amicus curiae brief makes clear that, as the Third Circuit has long recognized, the antitrust laws are fully available as a remedy against such abuse. "Deception in a consensus-driven private standard-setting environment harms the competitive process by obscuring the costs of including proprietary technology in a standard and increasing the likelihood that patent rights will confer monopoly power on the patent holder." *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 314 (3d Cir. 2007). It is therefore "actionable anticompetitive conduct." *Id.*

The attached amicus curiae brief also addresses the position of the Antitrust Division of the United States Department of Justice ("DOJ"). Notwithstanding the clarity of the controlling law, DOJ has filed a Statement of Interest. DOJ claims that it "takes no position on the resolution of" InterDigital's pending motion to dismiss. D.I. 28, DOJ Statement of Interest at 1. Nevertheless, DOJ argues at length that the antitrust laws have no role to play in deterring such anticompetitive conduct by the holders of standard essential patents. The MPA respectfully explains in the amicus curiae brief that DOJ's legal and policy arguments are misguided, and that the Court should not rely on them in resolving the pending motion. Contrary to DOJ's arguments, the allegations of the complaint in this case fit squarely within *Broadcom*.

There is no rule in this District governing the appearance of amicus curiae, so courts have been guided by the Third Circuit's application of Federal Rule of Appellate Procedure 29. *See In re Weinstein Co. Holdings, LLC*, C.A. Nos. 19-242-MN and 19-243-MN, 2020 WL 1320821, at

*1 n.3 (D. Del. Mar. 20, 2020). "The Third Circuit has advised that motions for leave to file such briefs should be granted 'unless it is obvious that the proposed briefs do not meet Federal Rule of Civil Procedure 29's criteria as broadly interpreted.'" *Id*. (quoting *Neonatology Assocs., P.A. v. Comm'r*, 293 F.3d 128, 133 (3d Cir. 2002)). "Courts will exercise their discretion to allow an *amicus curiae* brief to be filed if [Rule 29] is satisfied by demonstrating, under the most lenient standard, that (1) the movant has an adequate interest in the [case]; (2) the information supplied is desirable; and (3) the information being provided is relevant." *Id*. Courts will deny leave when the arguments and facts are "patently partisan, are untimely, and where the litigant is competently and adequately represented." *Id*. In the Third Circuit, "it is preferable to err on the side of granting leave," including because the Court can "simply disregard the amicus brief." *Neonatology Assocs.*, 293 F.3d at 133. The attached amicus curiae brief clearly meets this standard and should be accepted.

Accordingly, the MPA respectfully requests that the Court grant it leave to file in this action the attached amicus curiae brief.

Dated: November 21, 2025

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[PROPOSED] AMICUS CURIAE BRIEF OF MOTION PICTURE ASSOCIATION, INC.

Dated: November 21, 2025

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I. INTEREST OF THE AMICUS CURIAE

The Motion Picture Association, Inc. ("MPA") is a not-for-profit trade association founded in 1922. The MPA is a leading advocate for major producers and distributors of filmed entertainment and streaming services in the United States.[1] The MPA and its members have a strong interest in ensuring that the antitrust laws continue to serve as a backstop when standard essential patent ("SEP") holders engage in deceptive conduct during standards development and in post-standardization holdup. That type of conduct harms competition in markets that rely on standardized technologies. The plaintiff in this case, Disney Enterprises, Inc. ("Disney"), alleges in exhaustive detail that the defendants (collectively, "InterDigital") are deliberately engaged in a wide-ranging scheme of just such anticompetitive conduct in the market for video streaming.

A number of MPA's members and/or their affiliates have first-hand experience with the same type of conduct of which Disney complains. The MPA's members come to the issues involved in this case with a unique appreciation for the necessary balance between intellectual property rights and antitrust enforcement. The MPA's members are committed to the protection of intellectual property rights. Intellectual property is the lifeblood of the members' businesses. At the same time, the members also recognize the vital role the antitrust laws play in protecting against anticompetitive conduct. For these reasons, the MPA is well positioned to provide the Court with a balanced perspective on the antitrust and intellectual property issues that are raised in the briefing on the pending motion to dismiss.

[1] The MPA's member companies include Amazon MGM Studios LLC, Netflix Studios, LLC, Paramount Pictures Corporation, Sony Pictures Entertainment Inc., Universal City Studios LLC, and Warner Bros. Entertainment Inc. Walt Disney Studios Motion Pictures, an MPA member and affiliate of Plaintiff Disney Enterprises, Inc., did not take part in the preparation or submission of this brief.

II. INTRODUCTION

Many standards development organizations ("SDOs") require, as a condition of participation in the standard-setting process, that owners of patented technologies essential to implementing adopted standards declare that they will license any such patents on reasonable and non-discriminatory ("RAND") terms.[2] These declarations are contractual commitments intended to ensure that technology essential to implementing the resulting standards is available to everyone on fair terms. SDOs rely on these commitments in selecting technologies to incorporate into standards, and in the absence of such commitments may steer (and have steered) standards away from technology not available on RAND terms. Deception in the standards setting process and evasion of RAND commitments undermines this fundamental bargain. Thus, safeguards against such deception and evasion are critical to preserving competition in markets that rely on standardized technologies.

The standards at issue in this case—video compression standards adopted by the International Telecommunication Union ("ITU")—are essential for interoperability between the services that provide motion picture content and the consumer devices on which that content is displayed. The use of standardized video compression technology facilitates competition among content-delivery platforms, which are able to offer consumers access to their favorite shows and movies across a broad range of standards-compatible devices. Market participants agree to use standards-based technologies knowing that licenses to intellectual property rights necessary to the operation of the standards are available on RAND terms. RAND licensing thus facilitates

[2] RAND and FRAND (which stands for "fair, reasonable, and non-discriminatory") are often used interchangeably.

robust competition in terms of the overall quality of services offered by content-delivery platforms (how the standardized technology is *implemented*) and the prices that consumers pay.

The complaint's allegations vividly describe how that competition is undermined when an SEP owner engages in deceptive conduct during the standard-setting process and, post-standardization, renounces its RAND commitments and makes "holdup" demands to license the patented technologies that are necessary to the standards' implementation. Digital compression standards are an important component of the streaming ecosystem. To achieve reasonable costs in transmitting video data over the Internet, content must be compressed and decompressed through standards-compliant processes, irrespective of the content-delivery system or the device used to receive streamed content. This is because consumer hardware manufacturers (e.g., TV, phone, and computer makers) make devices that decode content according to these standards-compliant processes. Once an industry standard for compression technology is widely adopted, no participant can switch to a different technical feature outside the scope of the SEP holder's patent without abandoning the standardized technology altogether, thereby sacrificing interoperability, efficiency, and possibly quality. Although the SEP holder's technology faced competition from alternative technologies during the standard-setting process, these competitors are now effectively excluded from the market, leaving the SEP holder with monopoly power. This power only increases as participants further lock themselves into the standard via large investments in deploying standard-compliant products and services. Thus, SEP owners who use deceptive practices in the standard-setting process and thereafter ignore their RAND commitments achieve a monopoly without competing on the merits and are able to make exorbitant holdup licensing demands.

As the Third Circuit has long recognized, the antitrust laws are fully available as a remedy against such abuse. "Deception in a consensus-driven private standard-setting environment harms the competitive process by obscuring the costs of including proprietary technology in a standard and increasing the likelihood that patent rights will confer monopoly power on the patent holder." *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 314 (3d Cir. 2007). It is therefore "actionable anticompetitive conduct." *Id.*

Notwithstanding the clarity of this controlling law, the Antitrust Division of the United States Department of Justice ("DOJ") has filed a Statement of Interest. DOJ claims that it "takes no position on the resolution of" InterDigital's pending motion to dismiss. D.I. 28, DOJ Statement of Interest ("SOI") at 1. Nevertheless, DOJ argues at length that the antitrust laws have no role to play in deterring such anticompetitive conduct by the holders of standard essential patents.

Respectfully, the MPA submits that DOJ's legal and policy arguments are misguided, and that the Court should not rely on them in resolving the pending motion. Contrary to DOJ's arguments, the allegations of the complaint in this case fit squarely within *Broadcom* and other analogous precedent.

III. ARGUMENT

A. Adherence to RAND Commitments Is Critical to the Ability of Streaming Providers to Offer High-Quality Content at Competitive Prices

Modern digital streaming relies on technical interoperability in order to provide consumers a seamless viewing experience across different devices and content providers. Interoperability also enhances competition on price and quality. Consumers are able to access a range of streaming services on a single device, improving choice and spurring competition. And streaming services can rely on the same basic infrastructure to disseminate content to different

devices. This obviates the need for services to invest in device-specific compression infrastructure—investments that would significantly increase the cost of streaming.

Interoperability in this area is possible because the industry follows consensus standards for video compression and decompression technologies. These technologies are popularly referred to as "codecs." The standards for codecs are developed and promulgated by the ITU, as noted above. The standardized codecs incorporate a range of patented technologies, the practice of which is essential to implement the ITU standards. Industry participants, including digital streaming companies and device manufacturers, invest heavily in standard-compliant technologies, including devices and processes that comply with the standardized codecs at issue here: the H.264 or Advanced Video Coding ("AVC") standard and the H.265 or High Efficiency Video Coding ("HEVC") standard. Those investments secure optimal interoperability, all to the benefit of the consumers who watch streamed content.

Reliance on standards provides valuable advantages and efficiencies, but it also leaves market participants vulnerable to the phenomenon of "post-standardization holdup." Once a standard has been adopted, the SEP owner "is in a position to 'hold up' industry participants from implementing the standard" unless they agree to pay supra-RAND license fees. *Broadcom*, 501 F.3d at 310.

The holdup problem has been widely documented and empirically validated.[3] Leading commentators on antitrust and patent law have recognized that "[t]he danger of patent holdup is particularly high" where, as here, "SEPs that read on popular industry standards" are involved.

[3] The holdup problem has been validated by "[a]n impressive body of empirical work," including "[l]iterally hundreds of papers . . . published in peer-reviewed journals." Carl Shapiro & Mark A. Lemley, *The Role of Antitrust in Preventing Patent Holdup*, 168 U. Pa. L. Rev. 2019, 2028 (2020). The holdup problem is not unique to intellectual property licensing, but "[t]he conditions under which holdup is a danger apply with unusual force to patent holdup." *Id.* at 2050.

Carl Shapiro & Mark A. Lemley, *The Role of Antitrust in Preventing Patent Holdup*, 168 U. Pa. L. Rev. 2019, 2043 (2020) ("Shapiro & Lemley"). That is because "[i]ndustry participants who have invested significant resources developing products and technologies that conform to the standard will find it prohibitively expensive to abandon their investment and switch to another standard." *Broadcom*, 501 F.3d at 310. When industry participants become "'locked in' to the standard," an SEP holder is in a "unique position of bargaining power" and "may be able to extract supracompetitive royalties." *Id.*

The ITU, like many other SDOs, addresses the holdup problem by requiring parties that have (or that have applied for) patents essential to standards under consideration to make RAND commitments as a condition of participating in the standards-development process. A RAND commitment requires a patent holder to grant licenses on reasonable and non-discriminatory terms if its patent is essential to a standard that the SDO ultimately adopts. As the complaint here alleges, InterDigital made RAND commitments to secure the inclusion of its patented technology in codec standards adopted by the ITU and associated SDOs. D.I. 1, Compl. ¶ 59.

The reliability and enforceability of RAND commitments are vital to the continued growth of streaming offerings and to preserving the incentives for content creation and follow-on technological innovation. If streaming service providers are able to rely on SEP holders complying with their RAND commitments, those providers can and will make significant investments in standard-compliant technologies to maximize the reach and price-adjusted quality of their product offerings. By contrast, the prospect of SEP holders *repudiating or evading* their RAND commitments disincentivizes such investments. As that investment incentive erodes, so too do the benefits to consumers.

B. InterDigital's Deception of the ITU and Refusal to License SEPs on RAND Terms Harms Competition, Consumers, and Innovation

The complaint describes in exhaustive detail how InterDigital's conduct has inflicted the exact harms long recognized to flow from deception in the standards-development process. InterDigital promised to grant licenses to its technology on RAND terms "as necessary for implementation of the resulting [standard]" in order to influence the ITU's standard selection process. D.I. 1, Compl. ¶ 59.[4] But InterDigital never had any intention of honoring its RAND commitments. *Id.* ¶ 61.

ITU's selection of InterDigital's patented technology for inclusion in the standard, and the corresponding "effective[] exclu[sion]" of other technologies, D.I. 1, Compl. ¶ 40, was based on that deception. InterDigital did not provide ITU or participants in the standard-setting process the opportunity to evaluate the true cost-adjusted value of InterDigital's technology and thus to design around that technology. The streaming services that Disney and others offer implement the H.264 and H.265 codec standards when compressing video content to provide compatibility with consumer devices that decompress that content and comply with the same standards (and that often are already licensed to InterDigital's patents). *Id.* ¶ 38. If a streaming service were to employ a different codec technology, the service's offerings would not work with most of the devices that consumers use to receive streaming content, thereby undoing the benefits of interoperability. *Id.* ¶ 39. This is because device makers (again most of whom are already licensed to InterDigital's patents) have widely adopted the H.264 and H.265 codecs. InterDigital engaged in deception not only to ensure that its patented technology would be necessary to

[4] InterDigital also was bound by RAND commitments made to the ITU by the Research & Innovation research and development organization of Technicolor—which InterDigital acquired in 2019—in connection with additional patents that supposedly covered technologies included in the H.264 and H.265 codec standards. D.I. 1, Compl. ¶¶ 51-58.

practice ITU's adopted standards, but also to induce other market participants, including content owners and streaming providers, to invest in products and related technologies that would comply with those standards and thereby put themselves at risk of patent holdup. *Id.* ¶ 60.

With streaming providers locked into implementing the H.264 and H.265 codec standards (due to wide adoption by device makers), InterDigital turned to classic holdup tactics. InterDigital refused to grant licenses to streaming providers on RAND terms, instead demanding terms and conditions that "grossly exceed" those terms. D.I. 1, Compl. ¶¶ 62-63. Further, InterDigital has sought to "double-dip," demanding that streaming providers take royalty-bearing licenses even where those providers stream content to devices whose manufacturers *already are paying* InterDigital to license the same patents. *Id*. ¶ 65. And InterDigital is threatening to exclude streaming providers entirely from major global markets unless they capitulate to InterDigital's exorbitant demands. InterDigital has filed patent infringement cases in foreign jurisdictions, seeking injunctive relief that would effectively prevent providers from offering their services in those markets. *Id*. ¶ 71.

Disney is the plaintiff in this case, but it is hardly the only target of InterDigital's holdup campaign. InterDigital is also in litigation with Amazon over patents associated with the same codecs at issue here. *See* Ex. 1. And there are many other market participants at risk of InterDigital's overreach. InterDigital's public statements boast that there is "near ubiquity in consumer hardware support" for the HEVC/H.265 codec. Ex. 2 at 12; *see id.* at 6 (explaining that "over 96% of consumer video products sold today have HEVC playback capability"). And InterDigital's analysis of 13 streaming service providers showed that *all* implement one or both of the H.264 or H.265 codecs. These include Amazon Prime Video, Apple TV+, Netflix, and Hulu as well as the streaming services provided by NBC, Paramount, and Warner Bros.

Discovery. *Id.* at 14-15. Absent legal intervention, InterDigital has every incentive to hold up any streaming service that is locked into the implementation of ITU's standardized codecs.

Faced with InterDigital's extortionary conduct, MPA's members are put in the bind of either meeting InterDigital's demands for supra-RAND royalties or fighting in court to hold InterDigital to its RAND commitments. All of this involves substantial costs, which could lead to higher subscription fees or a reduction in the production and dissemination of content that is streamed.

C. ***Broadcom* Squarely Holds that Antitrust Law Is an Important Backstop Against Anticompetitive Conduct by SEP Owners, and DOJ's Arguments for Disregarding or Distinguishing *Broadcom* Are Not Persuasive**

As the allegations in this case make clear, an unscrupulous SEP owner's improper conduct pre-and post-standardization can undermine the competition-enhancing safeguards that RAND commitments are meant to protect. Where, as alleged here, the SEP holder makes a *false* RAND commitment and thereby "side-steps these safeguards in an effort to return the standard to its natural anti-competitive state, anti-competitive effects are inevitable." *Rsch. In Motion Ltd. v. Motorola, Inc.*, 644 F. Supp. 2d 788, 796 (N.D. Tex. 2008). "FRAND deceitfulness may lead to the improper exclusion of technologies that would have benefitted consumers in the long run." Christopher R. Leslie, *The DOJ's Defense of Deception: Antitrust Law's Role in Protecting the Standard-Setting Process*, 98 Or. L. Rev. 379, 397 (2020) ("Leslie").

In cases like this, the antitrust laws serve as a necessary "complement and [] backstop" to contractual RAND agreements. Shapiro & Lemley at 2024. The Third Circuit has expressly held that "[d]eception in a consensus-driven private standard-setting environment harms the competitive process," including by "increasing the likelihood that patent rights will confer monopoly power on the patent." *Broadcom*, 501 F.3d at 314. Accordingly, the Third Circuit has concluded that:

> (1) in a consensus-oriented private standard-setting environment, (2) a patent holder's intentionally false promise to license essential proprietary technology on FRAND terms, (3) coupled with an SDO's reliance on that promise when including the technology in a standard, and (4) the patent holder's subsequent breach of that promise, is actionable anticompetitive conduct.

Id.

The Third Circuit's holding in *Broadcom* follows from the most fundamental principles of antitrust law. When an SEP holder enters into a RAND commitment that it does not intend to keep in order to secure its inclusion in an adopted standard, the SEP holder excludes competitors through means other than "skill, foresight and industry." *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 430 (2d Cir. 1945) (Hand, J.). Such exclusionary conduct is quintessentially anticompetitive.[5]

In a footnote, DOJ claims to acknowledge that this Court is bound to follow *Broadcom*. D.I. 28, SOI at 13 n.13. But the thrust of DOJ's filing asks the Court either to effectively disregard *Broadcom* or to distinguish the case to the point of rendering it meaningless. None of DOJ's arguments withstand scrutiny.

First, DOJ claims that *Broadcom* has "been rejected elsewhere." *Id*. That observation is of little moment given that *Broadcom* is controlling in this Circuit. Nevertheless, DOJ's claim about *Broadcom*'s rejection is significantly overblown. DOJ identifies only a single district court decision from outside the Third Circuit that declined to follow *Broadcom*. *See id.* (citing *Continental Auto. Sys. v. Avanci*, 485 F. Supp. 3d 712 (N.D. Tex. 2020)). Yet numerous courts

[5] *Broadcom* fits comfortably within the broader antitrust jurisprudence establishing that deceptive conduct may qualify as anticompetitive conduct that triggers liability under Section 2 of the Sherman Act. *See, e.g.*, *Conwood Co. v. U.S. Tobacco Co.*, 290 F.3d 768, 783 (6th Cir. 2002) (antitrust liability for deceiving retailers into stocking product by furnishing false sales data); *In re Buspirone Patent Litig.*, 185 F. Supp. 2d 363, 376-77 (S.D.N.Y. 2002) (antitrust liability for attempting to exclude generic competitors by providing false information to the FDA).

have *followed Broadcom* in denying motions to dismiss where plaintiffs alleged exclusionary deception during the standards-setting process; notably, several of these cases have involved allegations of deceptive conduct in the standard-setting process by InterDigital, the defendant in this case. *See, e.g.*, *Wi-LAN Inc. v. LG Elecs., Inc.*, 382 F. Supp. 3d 1012, 1022-1023 (S.D. Cal. 2019); *Amphastar Pharms., Inc. v. Momenta Pharms., Inc.*, 297 F. Supp. 3d 222, 230 (D. Mass. 2018); *Rsch. In Motion*, 644 F. Supp. 2d at 796; *Lenovo (United States) Inc. v. Interdigital Tech. Corp.*, 2021 WL 1123101, at *8 (D. Del. Mar. 24, 2021); *u-blox AG v. InterDigital, Inc.*, 2019 WL 1574322, at *4 (S.D. Cal. Apr. 11, 2019); *Funai Elec. Co. v. LSI Corp.*, 2017 WL 1133513, at *5 (N.D. Cal. Mar. 27, 2017); *Microsoft Mobile Inc. v. Interdigital, Inc.*, 2016 WL 1464545, at *2 (D. Del. Apr. 13, 2016); *Zenith Elecs., LLC v. Sceptre, Inc.*, 2015 WL 12765633, at *5 n.1 (C.D. Cal. Feb. 5, 2015); *Actividentity Corp. v. Intercede Grp. PLC*, 2009 WL 8674284, at *3 (N.D. Cal. Sept. 11, 2009).

It is not only courts that have found *Broadcom* persuasive. A leading antitrust treatise has endorsed that decision, concluding that "[a] sequence of (a) deception about one's current or contemplated patent rights, plus (b) the alleged infringer's adoption of the covered technology in reliance on this deception, and then (c) the patentee's announcement in contradiction to the statements in (a), is clearly improper conduct." Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 712d ("Areeda & Hovenkamp").

Second, DOJ argues that antitrust remedies are unnecessary given the availability of contract remedies where a party violates its RAND commitments. D.I. 28, SOI at 15-16. But the potential existence of a breach-of-contract claim does not adequately address the full range of anticompetitive consequences that flow from SEP deception and holdup. Many downstream

market participants and consumers may not be in privity with the entity making a RAND commitment and therefore may lack standing to enforce that commitment. *See* George S. Cary, Mark W. Nelson, Steven J. Kaiser, Alex R. Sistla, *The Case for Antitrust Law to Police the Patent Holdup Problem in Standard Setting*, 77 Antitrust L.J. 913, 941 (2011). Moreover, certain foreign courts, such as German courts, do not recognize RAND contractual commitments. *See General Instrument Corp. v. Microsoft Deutschland GmbH*, 2 O 240/11 (Landesgericht Mannheim May 2, 2012), certified translation available at *Microsoft Corp. v. Motorola Inc.*, No. 2:10-cv-01823-JLR (W.D. Wash.), Dkt. 324-6 at p. 37.

The costs that flow from SEP holdup are not limited to just those cases where an SEP owner repudiates its RAND commitments and *actually* demands exorbitant license fees. There are costs to competition from the *threat of SEP holdup*. *See* Shapiro & Lemley at 2027. The implementation of contractual mechanisms, including RAND commitments, to counter the threat of SEP holdup itself imposes costs. And in some cases, the SEP holder may engage in gamesmanship or claim vagueness or ambiguity in the RAND commitment. It costs significant resources, including expensive and time-consuming litigation, to rebut meritless contract arguments. *Id.* at 2038.

With respect to the video compression codec standards at issue in this case, InterDigital has engaged in just such hair-splitting. InterDigital tries to make much of the fact that the AVC and HEVC standards detail only the steps necessary for *decompressing* (or "decoding") content; InterDigital claims that this leaves it free to demand exorbitant license fees for the use of its patented technologies to *compress* (or "encode") the content. *Compare* D.I. 24, InterDigital's Memorandum in Support of Its Motion to Dismiss at 2 (acknowledging that InterDigital "agreed to the SSO RAND terms" with respect to patents it contributed to "standard for decoding,

including H.264 ("AVC") and H.265 ("HEVC")"), *with id.* at 3 ("Disney *claims* that InterDigital's *encoding-only* patent claims are RAND encumbered" (emphasis added)). This argument misreads the standard and is unjustified legally and economically. It ignores, among other things, that compression and decompression are two sides of the same coin: decompression is worthless without compression. That is, in order to deliver content that will be decompressed using a standards-compliant device, the streaming service *must* compress the content according to the same standard. *See* Ex. 2 at 13 (explaining that "encoding decisions are influenced by the population of consumer devices targeted for delivery, and their video decoding capabilities"); *see also Qualcomm Inc. v. Broadcom Corp.*, 2007 WL 1031373, at *15-16 (S.D. Cal. Mar. 21, 2007) (finding that encoding claims "reasonably may be essential to the practice of the H.264 standard"). InterDigital's argument is a contrived excuse for its blatant repudiation of RAND commitments.

The bottom line is that where RAND commitments are perceived as providing weak protection from SEP holdup, market participants' incentives to invest in standardized technologies will be chilled. That risks additional costs to consumers. A meaningful antitrust backstop that deters abuse of the standard-setting process and circumvention of RAND commitments can reduce those costs and support the efficient functioning of the standardization process.[6]

[6] DOJ cites *NYNEX Corp. v. Discon, Inc.*, 525 U.S. 128 (1998), in support of its argument that contract remedies should be exclusive. D.I. 28, SOI at 14. But that case is inapposite; it deals with deceptive conduct by a monopolist that had already *lawfully obtained* monopoly power. *See id.* at 129 (noting that the "consumer injury naturally flowed not so much from a less competitive market for removal services, as from the exercise of market power lawfully in the hands of a monopolist . . . combined with a deception worked upon the regulatory agency that prevented the agency from controlling the exercise of monopoly power"). Under *Broadcom* and its progeny, deception in the SDO process may give rise to antitrust liability because, among other reasons, the SEP holder may *unlawfully* obtain monopoly power *by virtue of* that deception.

Third, DOJ argues that the antitrust concern with hold*up* is overstated because (DOJ hypothesizes) there may exist a hold*out* problem. In particular, DOJ argues that the existence of an antitrust remedy arising out of RAND violations could "incentivize bad faith bargaining on the part of a potential licensee who would have more to gain from failing to reach a deal." D.I. 28, SOI at 16. DOJ offers no empirical support for this claim, and commentators have labeled the holdout theory "deeply flawed." Shapiro & Lemley at 2055; *see* A. Douglas Melamed & Carl Shapiro, *How Antitrust Law Can Make FRAND Commitments More Effective*, 127 Yale L.J. 2110, 2120 (2018) (finding "no factual support" for patent holdout argument). Market participants who infringe valid patents have much to lose from failing to secure a license on RAND terms: infringers face the risk of patent remedies, including a reasonable royalty and in some cases treble damages, *see* 35 U.S.C. § 284, as well as injunctive relief in foreign courts, *see* D.I. 1, Compl. ¶ 71. In any event, such concerns have little relevance where, as here, the SEP holder is alleged to have made false RAND commitments to ensure that their patents will cover standardized technologies. An SEP holder that has achieved superior bargaining power through deceit should not be heard to complain of the speculative possibility of "bad faith bargaining" by his counterparty. *See Broadcom*, 501 F.3d at 310-11.

Finally, DOJ argues that the straightforward application of *Broadcom* threatens to undermine incentives to innovate or to participate in "procompetitive" standards-development activity. D.I. 28, SOI at 9. That is both speculative and wrong. DOJ has not shown, for example, that InterDigital or its predecessors were less incentivized to participate in standards

---

See Microsoft Mobile, 2016 WL 1464545, at *2 n.1 (rejecting argument that there is tension between *NYNEX* and *Broadcom*).

setting after *Broadcom*.[7] SEP owners that make RAND commitments have agreed to receive compensation on RAND terms in return for the inclusion of their patented technologies in the adopted standard. SEP owners are not entitled to a windfall, and certainly not a windfall secured through deception and extortion. Imposing liability on patentees that seek to manipulate that bargained-for exchange does not deter innovation; rather, allowing meaningful remedies for intentional, deceptive conduct *promotes* investment and innovation. *Broadcom* thus incentivizes a patentee to compete for inclusion of its standard based on the technology's scalability, interoperability, or cost rather than through false promises or deceit. *See* Leslie, 98 Or. L. Rev. at 391-92.

D. Disney's Complaint More Than Adequately Pleads a Claim for Section 2 Liability under *Broadcom*

Disney's complaint straightforwardly pleads a violation of Section 2 of the Sherman Act. The complaint's allegations, discussed in relevant part in Section III.B, *supra*, are materially indistinguishable from those held sufficient by the Third Circuit in *Broadcom* as well as by courts in other cases in which InterDigital has sought to dismiss antitrust complaints against it stemming from its holdup tactics.

As in *Broadcom*, Disney alleges that the defendant deceived an SDO by willfully making false RAND Commitments. D.I. 1, Compl. ¶ 61. Like the plaintiff in that case, Disney alleges that the SDO relied on those commitments in deciding to include the defendant's technology in the standard. *Id*. ¶¶ 54, 59. And, just as in *Broadcom*, Disney alleges the defendant subsequently breached its RAND commitments by refusing to offer a license on RAND terms

[7] Nor could it. *Broadcom* preceded standardization of H.265 by several years, a standard on which InterDigital claims to have thousands of patents. *See* InterDigital, Portfolio Data, https://www.interdigital.com/portfolio-data (last visited Nov. 18, 2025).

and engaging in a holdup campaign. *Id*. ¶¶ 62-74. Disney's complaint accordingly states a claim. *See Microsoft Mobile*, 2016 WL 1464545, at *2 (denying motion to dismiss antitrust claims against InterDigital where it was "difficult to discern any material differences between [plaintiff's] complaint and the complaint which the Third Circuit found sufficient in *Broadcom*").

DOJ seeks to avoid this conclusion in two ways, both erroneous. First, DOJ attempts to superimpose on *Broadcom* a heightened pleading standard with respect to alternative technologies, even though the Third Circuit expressly rejected that very requirement *in the* Broadcom *opinion*. DOJ argues there can be "no presumption of market power . . . without an assessment of the alternatives to the standard," D.I. 28, SOI at 10, and faults the complaint in this case for not including an "identification of potential alternative technologies," *id*. at 12. Yet *Broadcom* makes clear that a plaintiff does not have to identify potential alternative technologies in order to state an antitrust claim. *Broadcom* notes that the defendant there "ma[de] much of the Complaint's failure to allege that there were viable technologies competing . . . for inclusion in the [relevant] standard." 501 F.3d at 316. But the Third Circuit declined to say that this was a pleading defect. The court of appeals instead held that it was sufficient for the complaint to allege "that an SDO's adoption of a standard *eliminates competing technologies*." *Id*. (emphasis added). Disney has done just that. *See* D.I. 1, Compl. ¶¶ 10-12, 40.

Notably, InterDigital itself sought—and failed—to convince another court in this District to impose the "potential alternative technologies" pleading requirement the DOJ seeks here. *See* Opening Brief in Support of Motion to Dismiss, *Microsoft Mobile, Inc. v. Interdigital, Inc.*, 2015 WL 7069903 (D. Del. Nov. 4, 2015) (arguing plaintiff failed to allege, "as the law requires," the specific "alternative technologies" the SDO did not adopt). The court did not accept

InterDigital's argument, and instead held the plaintiff sufficiently pleaded an antitrust violation based on allegations that mirrored those in *Broadcom*. *Microsoft Mobile*, 2016 WL 1464545, at *2.[8]

Second, DOJ impermissibly reads Disney's key allegations of deception out of the complaint. DOJ claims to take no position on the resolution of InterDigital's motion to dismiss, D.I. 28, SOI at 1, yet nonetheless offers an assessment of the sufficiency of the pleadings, suggesting that "Disney's allegations of fraud during the competitive SDO standards-development process . . . appear largely conclusory." *Id.* at 13 (citing *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009)). DOJ does not explain what additional allegations would be required to properly plead SDO deception. Instead, the balance of DOJ's discussion simply assumes away any allegation of deception and critiques the strawman left behind. For example, DOJ argues that Disney's attempt to "hing[e] antitrust liability on whether a patent holder violated its RAND commitment . . . would create a 'sea of doubt' in standards development." *Id.* at 15. Of course, Disney alleges far more than RAND commitment violation. *See, e.g.*, D.I. 1, Compl. ¶¶ 59-61 (alleging deception of ITU); *id.* ¶¶ 62-74 (alleging global holdup campaign). But, having waved away Disney's core deception allegations, DOJ's argument proceeds as though those allegations do not exist. DOJ's legal analysis is therefore unhelpful in assessing the sufficiency of Disney's complaint for purposes of the pending motion to dismiss.

E. DOJ's Analysis of *Noerr*'s Purported Relevance Is Incomplete

The damages inflicted by InterDigital's abusive litigation campaign are properly recoverable in an antitrust suit. DOJ asserts that "parties petitioning the government" are

[8] A leading antitrust treatise opines that, under a *Broadcom* theory of liability, the burden should be "on the patentee to show that the other party would have adopted the technology even if the misrepresentation had not been made." Areeda & Hovenkamp ¶ 712d.

generally "exempt[]" from antitrust liability under the *Noerr-Pennington* doctrine. D.I. 28, SOI at 17. That is true so far as it goes.[9] But where petitioning activity is part and parcel of a broader anticompetitive scheme that includes independently actionable conduct to which the petitioning activity is "causally connected," a court in this District has held it can be considered as part of the anticompetitive harm for purposes of assessing damages. *Microsoft Mobile*, 2016 WL 1464545, at *3. Other courts have followed the same approach, and leading antitrust and intellectual property commentators have endorsed that approach as "mak[ing]" particular "sense" in the SEP holdup context. Herbert Hovenkamp, Mark D. Janis, & Mark A. Lemley, *IP & Antitrust* § 11.04(f); *see, e.g.*, *Hynix Semiconductor Inc. v. Rambus Inc.*, 527 F. Supp. 2d 1084, 1096-97 (N.D. Cal. 2007); *Zenith Elecs., LLC v. Sceptre, Inc.*, 2015 WL 12765633, at *6 n.2 (C.D. Cal. Feb. 5, 2015). DOJ does not address these cases.

Disney's allegations meet the "causal connection" test. The complaint alleges conduct that is independently actionable under the antitrust laws: InterDigital's scheme to deceive the ITU with a false RAND commitment in order to make supra-RAND royalty demands for licenses to its SEPs. *See supra* Section III.D. And the complaint further alleges a causal connection between InterDigital's litigation campaign and its broader anticompetitive scheme, explaining that InterDigital's efforts to seek injunctive relief that would exclude Disney from key global markets "support[] its hold-up and discrimination" scheme by providing leverage to force Disney to "capitulate" to its extortionary demands. D.I. 1, Compl. ¶¶ 71, 73. Accordingly, the costs imposed by InterDigital's abusive litigation campaign should properly be considered as

[9] As DOJ recognizes, there are exceptions to *Noerr-Pennington* immunity, including where a defendant engages in "sham" petitioning conduct designed to use legal process to inflict competitive harm or where a plaintiff seeks to enforce a patent obtained by fraud. D.I. 28, SOI at 17.

part of Disney's harms for purposes of calculating damages caused by InterDigital's broader anticompetitive scheme.

IV. CONCLUSION

For the foregoing reasons, the MPA respectfully submits that the Court should decline DOJ's invitation to rewrite controlling antitrust law and should deny InterDigital's motion to dismiss the antitrust claims.

Dated: November 21, 2025

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EXHIBIT 1

Learn more about LSEG

InterDigital sues Amazon over video-compression patents

By **Blake Brittain**

November 10, 2025 9:08 AM PST · Updated November 10, 2025

The logo of Amazon is seen on the door of an Amazon Books retail store in New York City, U.S., February 14, 2019. REUTERS/Brendan McDermid Purchase Licensing Rights

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Nov 10 (Reuters) - Research and development company InterDigital (IDCC.O) has sued Amazon (AMZN.O) in Delaware federal court for allegedly violating its patent rights in digital video technology, according to a lawsuit made public on Monday.

InterDigital said in the complaint that it was suing Amazon after it was sued by the tech giant in the UK and Brazil amid negotiations over a potential license to InterDigital's technology.

Get a quick look at the days breaking legal news and analysis from The Afternoon Docket newsletter. Sign up here.

InterDigital, which owns and licenses thousands of patents related to digital video, wireless communications and other technologies, said in a press release on Monday that it has also filed related lawsuits against Amazon in Brazil and Germany.

"Our preference is always to sign licenses through amicable negotiation, but Amazon's decision to initiate litigation against InterDigital earlier this year shows that Amazon is more interested in litigating than negotiating," InterDigital chief legal officer Josh Schmidt said in a statement.

Amazon said in a statement that it had sued earlier this year to "establish fair licensing rates for InterDigital's video codec patents."

The lawsuit said that Amazon's Prime and Fire TV streaming services misuse InterDigital's technology for enabling high dynamic-range video and improving streaming efficiency. Wilmington, Delaware-based InterDigital accused Amazon of infringing five of its U.S. patents.

InterDigital requested an unspecified amount of monetary damages and a court order blocking Amazon from infringing its patents.

The case is InterDigital Inc v. Amazon.com Services LLC, U.S. District Court for the District of Delaware, No. 1:25-cv-01365.

For InterDigital: Richard Kamprath, Joshua Budwin and Kevin Burgess of McKool Smith

For Amazon: attorney information not immediately available

Reporting by Blake Brittain in Washington

Our Standards: **The Thomson Reuters Trust Principles.**

Suggested Topics:

Litigation | Intellectual Property

Purchase Licensing Rights

Blake Brittain
Thomson Reuters

Blake Brittain reports on intellectual property law, including patents, trademarks, copyrights and trade secrets, for Reuters Legal. He has previously written for Bloomberg Law and Thomson Reuters Practical Law and practiced as an attorney.

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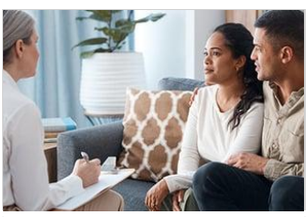

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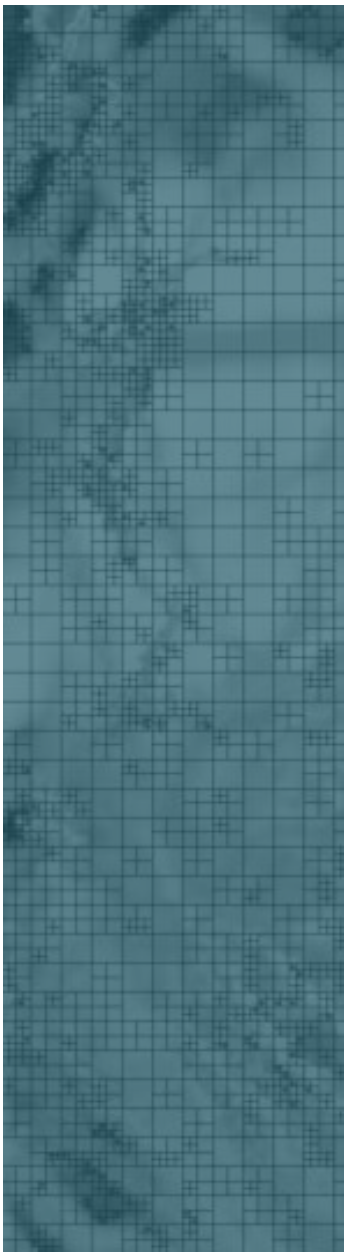
EXHIBIT 2

Spotlight on HEVC

The codec of choice for the video streaming industry

December 2023

Simon Forrest, James Duvall



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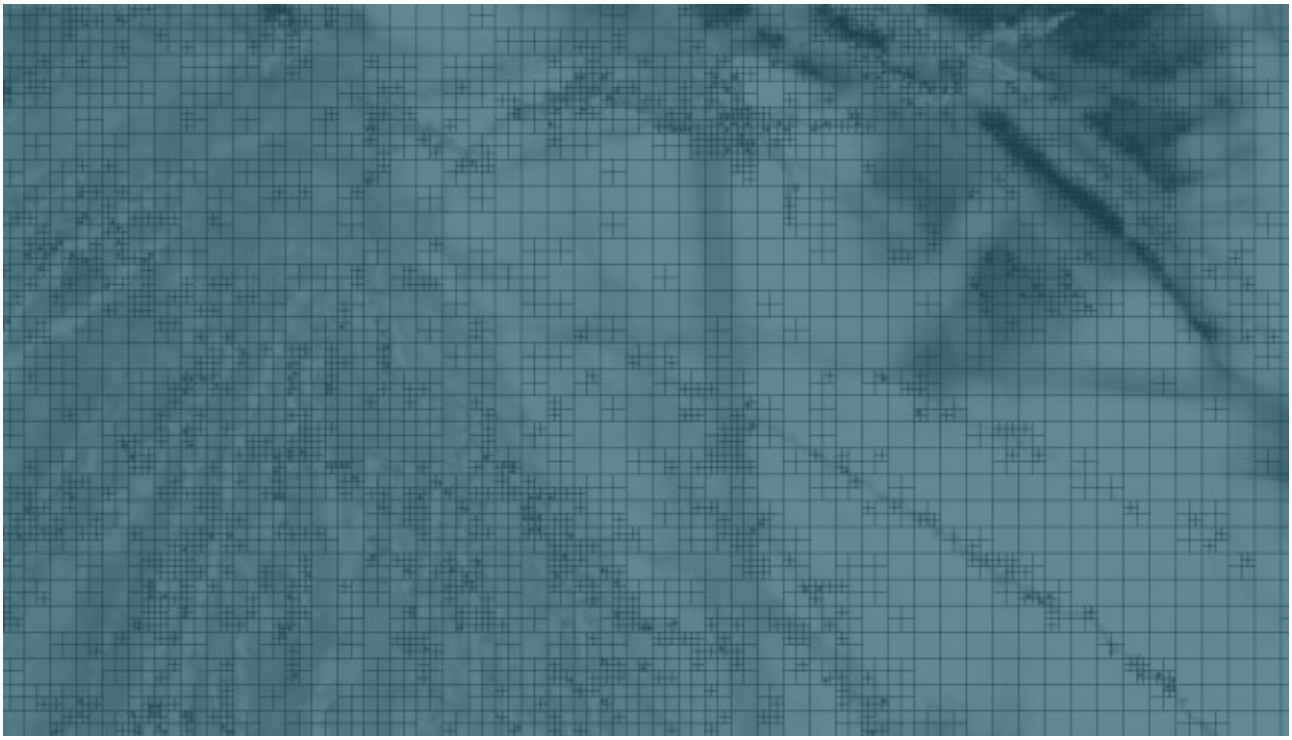

Introduction

Since the standard was finalised a decade ago, HEVC has been on a slow but steady journey to become one of the leading video codecs. HEVC's adoption may not have been as rapid as the developers of the codec originally anticipated. Nevertheless, there is evidence that adoption of the codec is now expanding, partly due to the news last year that Google had added native support for HEVC video decoding in its Chrome web browser, mirroring Apple's continued support for HEVC in Safari.

This adoption has provided a considerable impetus to HEVC and its prospects of becoming the first choice for developers and content creators. Indeed, this decision convinced other browser developers to also follow a similar path. But beyond Google's endorsement, one area of significant growth and interest in the implementation of HEVC is within the streaming industry. The largest video streaming services depend on advanced video compression to deliver ever higher quality content to consumers as efficiently as possible. HEVC's ability to support ultra-high definition video means that it is particularly well placed to encode premium content on services from providers including Netflix, Disney, Amazon, Apple, Paramount and Warner Bros.

Commissioned by InterDigital, researched and written by Futuresource Consulting, this white paper analyzes the reach of HEVC within consumer devices, how the codec is enabling higher quality for subscribers, examines HEVC's rise amongst the streaming giants, and explores what's next for codecs within the rapidly evolving delivery of video content.

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Overview of HEVC

Building upon a solid baseline

Commenced in 2004 and finalised in 2013, H.265/HEVC was jointly developed by the ISO/IEC Moving Picture Experts Group (MPEG) and ITU-T Video Coding Experts Group (VCEG) as an immediate successor to H.264/AVC. The standard directly addressed the growing need for higher compression in broadcast and internet video streaming applications, defining a far more efficient codec designed for ultra-high definition (UHD) video use-cases. Furthermore, the new standard established support for 10-bit colour, essential for encoding high dynamic range (HDR) content.

Greater efficiency

HEVC achieves significantly better compression than its predecessor, enabling storage of video using smaller file sizes. This makes HEVC a far better choice for streaming and downloading content over the Internet because it reduces data bandwidth requirements, speeds up video transfers, and further helps optimise cloud storage costs for streaming service providers.

At the equivalent bitrate to AVC, HEVC provides enhanced video quality. This affords streaming service providers the opportunity to maintain a higher level of visual clarity even when using the same amount of data. Furthermore, each video can be encoded at multiple bitrates. As a result, viewers enjoy sharper and more realistic video experiences at higher resolutions without a necessity to increase data and bandwidth requirements.

Future proofed

HEVC targets 4K resolution and frame rates up to 300 frames per second. This is significantly beyond the existing baselines for broadcasting, streaming, and home video, effectively making HEVC a solid choice for providing longevity and futureproofing those applications. For instance, broadcast television adopted HEVC for the Digital Video Broadcasting DVB-T2 standard, now on air in several European countries.

Supported by consumer devices

Lastly, semiconductor providers utilise elements of HEVC's design that allows for parallel processing. This makes it the more efficient compression algorithm during encode for capturing HD and 4K video from devices such as smartphones, tablets, and VR headsets, which today utilise multi-core CPUs.

In fact, much of the underlying commonality coupled with extension of the methods used in AVC allowed semiconductor vendors to rapidly innovate silicon solutions. This is a primary reason why hardware accelerated HEVC decoders quickly became widely available across entertainment focused consumer electronics products.

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Continuous development

In common with other video standards, H.265/HEVC is not static and continues to receive regular updates, expanding the profiles to provide additional capabilities. As of today, the standard is at Version 8, published two years ago in August 2021.

Comparison between H.264/AVC and H.265/HEVC

	AVC	HEVC
Full name	Advanced Video Coding	High-Efficiency Video Coding
Year of Release	2003	2013
Resolution	Up to 4K (3,840 x 2,160 pixels)	Up to 8K (7,680 x 4,320 pixels)
Popular applications	OTT video, Blu-ray disc, broadcast TV, video conferencing	OTT video, 4K HDR, broadcast TV, Ultra HD
Colour Bit Depth	8-bit	10-bit
Dynamic Range	Standard	High
Processing method	Macroblocks	Coding Tree Units
Block Size	16x16	64x64
Motion Prediction	Spatial Median	Motion Vector Prediction, Spatial and Temporal
Intra Modes	9	35
Inter Modes	7	24
Prediction Unit	16x16 ←→ 4x4	64x64 ←→ 4x4
Transform Unit	8x8 ←→ 4x4	32x32 ←→ 4x4

Successors to HEVC

Beyond this, H.266/VVC is the candidate successor to HEVC, developed by a cross-standards group known as the Joint Video Experts Team (JVET for short). This is a partnership between ITU-T Study Group 16 – known colloquially as VCEG – and ISO/IEC JTC 1/SC 29, known as MPEG.

VVC will likely follow a similar adoption path to HEVC. Hardware decoders are only just becoming available in consumer products today, plus it takes time for all technology vendors within the delivery chain to optimise their implementations. Consequently, it will take several years for VVC to become a dominant standard, perhaps even into the next decade.

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Consumer device support for HEVC

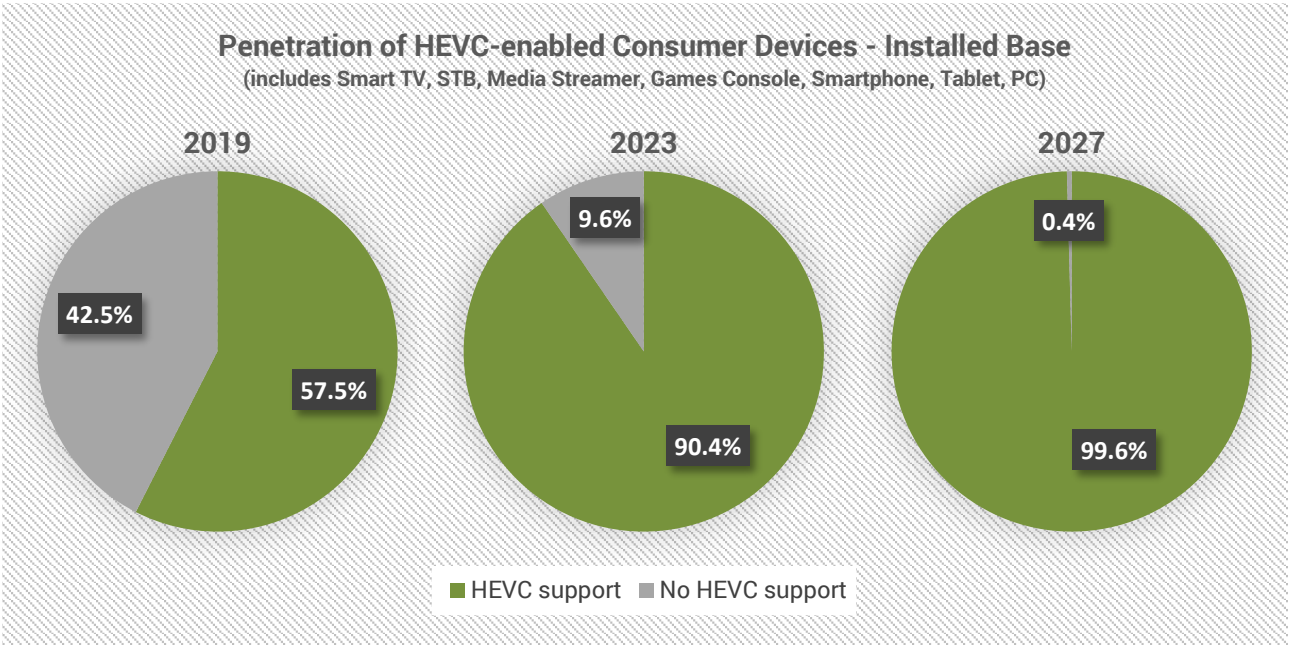
As part of this study, Futuresource examined the penetration of HEVC across seven primary consumer electronics categories. These include Smart TVs, Set-Top Boxes (STBs), Media Streamers and Games Consoles, alongside those classified as personal electronics products, namely Tablets, Smartphones and Personal Computers/Laptops (PCs).

The increase in HEVC penetration

Until AV1 became an alternative option, most companies servicing the video industry had expected to migrate from AVC to HEVC, especially for 4K video applications and more efficient digital television broadcast. Furthermore, some of the common design features underpinning H.264/AVC and H.265/HEVC enabled semiconductor vendors to reuse and extend existing hardware encoder and decoder blocks in their SoCs (system on chips), rather than redesign from the ground up, presenting a favourable upgrade path. As a result, the number of HEVC-capable consumer electronics products has been steadily expanding over recent years.

"Over 96% of consumer video products sold today support HEVC"

In terms of shipments, over 96% of consumer video products sold today have HEVC playback capability, totalling 2.3 billion devices annually; and this is rising year over year. Product replacement cycles are lengthening, partly due to the cost-of-living crisis presently impacting most regions, so forecasts show that it will take a few more years before HEVC support is ubiquitous across consumer products in the market. Essentially, it takes time for older, non-HEVC capable products to be retired.



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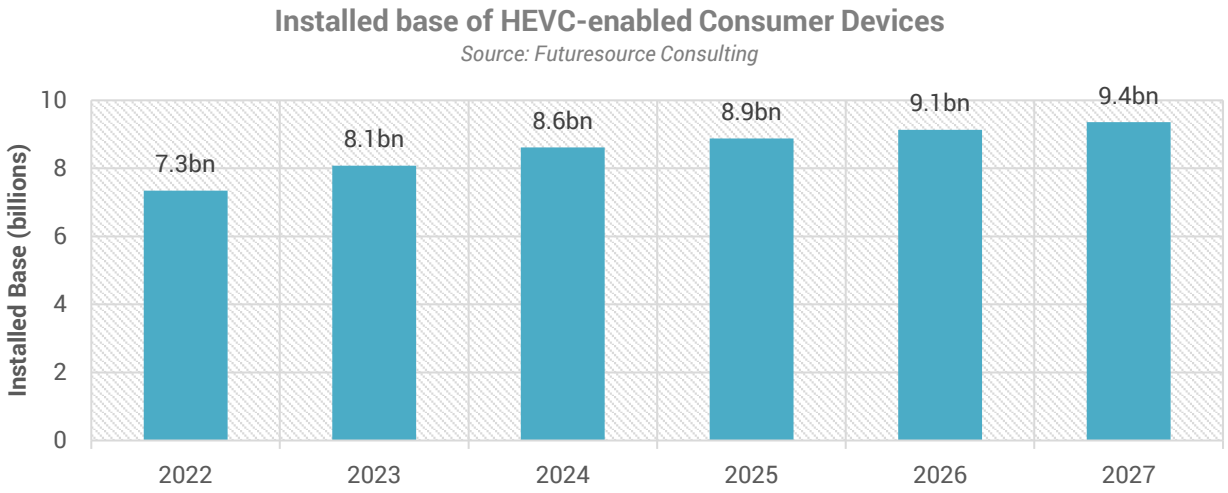
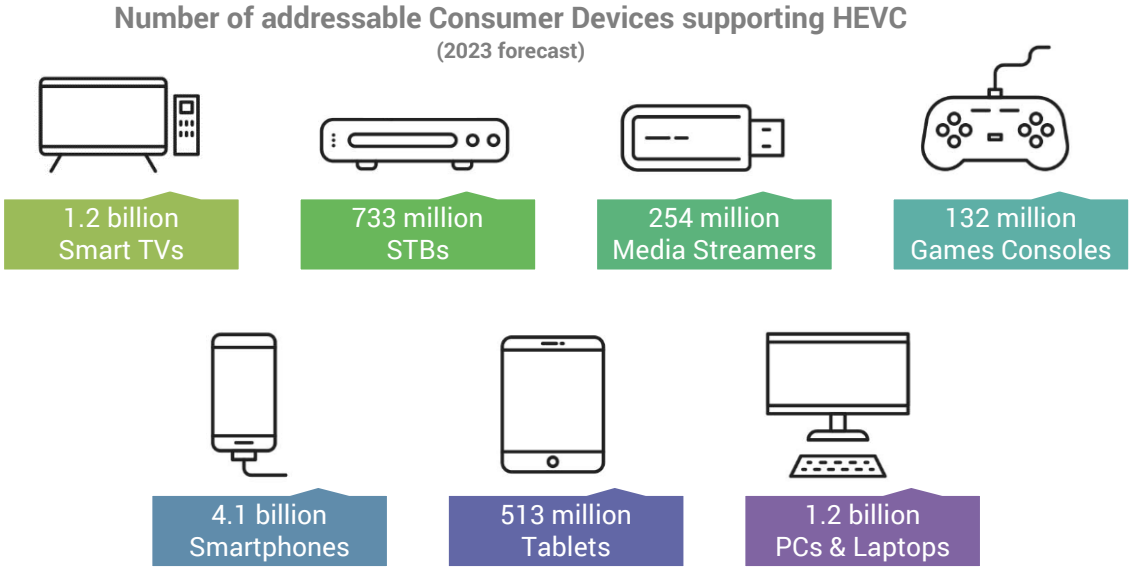


Examining the features of those consumer products already in regular use – known as the "installed base" in research studies – we discover that the penetration of HEVC-capable devices will reach 90% overall in 2023, up from 58% only four years ago.

> *"HEVC penetration across consumer devices will reach 90% in 2023, a market of 8.1 billion addressable units globally"*

This presents a market of 8.1 billion addressable devices in use globally with HEVC decoding capability. As the market reaches saturation, forecasts show a rise to 9.4 billion devices by 2027, at which point almost all will have native support for HEVC, fourteen years after the standard was first published.



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TV-based ecosystems

Smart TVs and most mainstream Media Streamers have integrated HEVC decoders for several years, although set-top boxes lag slightly since a large proportion of these are Pay TV devices maintained by operators. When combined, these products alone are forecast to account for 417 million HEVC-enabled devices sold this year, contributing towards a 2.3 billion unit installed base in living rooms worldwide.

Although most possess the hardware capability and raw performance, Games Consoles are one of the few entertainment products that have yet to fully embrace support for HEVC. Instead, these tend to require the download of additional software components to access HEVC video decoder hardware. For instance, Microsoft offers this feature for Xbox games consoles, yet Sony PlayStation is not natively enabled for HEVC. Despite this, just under 40% of Games Consoles are addressable today, equating to around 130 million units.

Personal electronics products

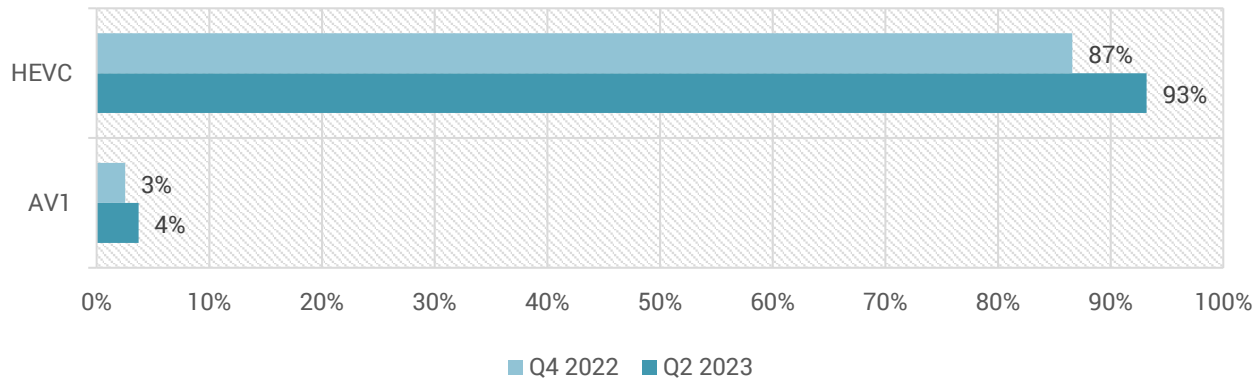
Across personal electronics, Smartphones contribute significantly towards the addressable population of HEVC-capable devices. By the end of 2023, Futuresource predict there will be 4.1 billion Smartphones globally in the field with the capacity to decode HEVC video. Hardware video decoders are a prerequisite for Smartphones given the necessity to minimise power usage to maintain longevity during video applications.

"In 2023, there will be 4.1 billion Smartphones in the field with HEVC"

Third-party analysis from *ScientiaMobile* discovered that 93% of Smartphones advertised HEVC video playback capability in Q2 2023, up from 87% six months earlier. This contrasts markedly with AV1, which featured on only 3% to 4% of Smartphones in the same timeframe; nevertheless, this will accelerate in line with the introduction of newer devices, such as iPhone 15 Pro, which now include hardware AV1 video decoding.

Smartphone adoption of hardware-supported decode: HEVC and AV1

Source: ScientiaMobile



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Apart from a boost in sales during the COVID-19 pandemic, where devices were purchased for education and home schooling, Tablet shipments have exhibited steady declines over the last six years. Replacement cycles have lengthened with typical lifespans now over five years: essentially, innovation in has stalled somewhat whilst tablet use-cases remain broadly similar year over year.

"The number of tablets addressable for HEVC video is likely to peak in 2024"

Presently there are over half a billion Tablets in regular usage worldwide, the majority of which have HEVC video decoding, given their secondary application as video entertainment devices. But the continued downward trend in sales means that the number of Tablets addressable for HEVC video is likely to peak in 2024, at 522 million units globally.

Browser based implementations

Tablets and smartphones must fundamentally have hardware decode support for video, since the complexity in modern codecs means that energy usage is higher, directly affecting battery life. This contrasts markedly with PCs that support software decoding of all popular codecs today. Recent changes to enable browsers to play HEVC encoded content natively mean that OTT video providers can now exploit HEVC more widely for web-based video applications.

Support on PC platforms further opens up potential to exploit the efficiency gains in video conferencing and real-time applications that demand low latency alongside high quality, although hardware support is favoured to offload encoding workloads from the CPU.

HEVC acceptance was given a major boost in 2022, when Google integrated the HEVC video decoding capability directly into the Chrome web browser; around 64% of users globally use Chrome as their primary browser. Based upon the same engine, Microsoft Edge also offers support on PCs that also have the paid HEVC video codec extension installed. Opera also offers HEVC playback on the same platforms as Chrome. Meanwhile, Apple's Safari browser has maintained HEVC support since September 2017.

Implementation in browsers has widened the opportunity for usage across online video and streaming service providers. Browser-based HEVC support is presently missing the associated copy protection mechanisms, notably DRM (digital rights management), that would permit paid video-on-demand services. Google is likely to go further by including their Widevine DRM. The solution requires existing HEVC decoder support on the underlying hardware, but this is no barrier, available across most premium consumer devices manufactured in the last few years. Therefore, it is now feasible for websites to present free-to-view video assets using HEVC, meaning that support for the standard now looks likely to proliferate a decade after it was released. The upshot of browser integration is that over 1.1 billion PCs and laptops become capable of participating in the HEVC ecosystem.

Apple has supported HEVC video in their Safari browser from 2017 within macOS High Sierra onward.

Google introduced HEVC decode support in v105 of its Chrome Browser, released in 2022.

These two browsers together account for 83% of users combined.

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4K HDR drives HEVC adoption

Globally, the development of ultra-high definition (UHD) devices has witnessed strong growth in the past few years, with the technology establishing itself as a core feature in all media device categories. As a result, UHD video is rapidly becoming a common feature expected by consumers from streaming services. Certainly, HEVC encoded content is now more widely available.

At the close of 2023, sales of 4K capable devices are expected to grow by around 4% worldwide. The share of 4K devices across total shipments including TVs, Set Top Boxes, Media Streamers, Game Consoles, and home video player hardware is forecast to reach 81% by 2027, up from 68% last year. 4K resolution looks set to be the pinnacle of broadcast and streaming services for the foreseeable future.

Meanwhile 8K resolution devices are likely to remain a niche segment, with the broadcast and film production industry not making any major steps toward the promotion of 8K. Concurrently, the 8K content supply chain has been growing very slowly despite the launch of professional 8K cameras by vendors including Nikon, Leica, Sony, Kinefinity, and Red Digital Cinema. Undeniably, 4K HDR video is considered sufficient for most production uses today.

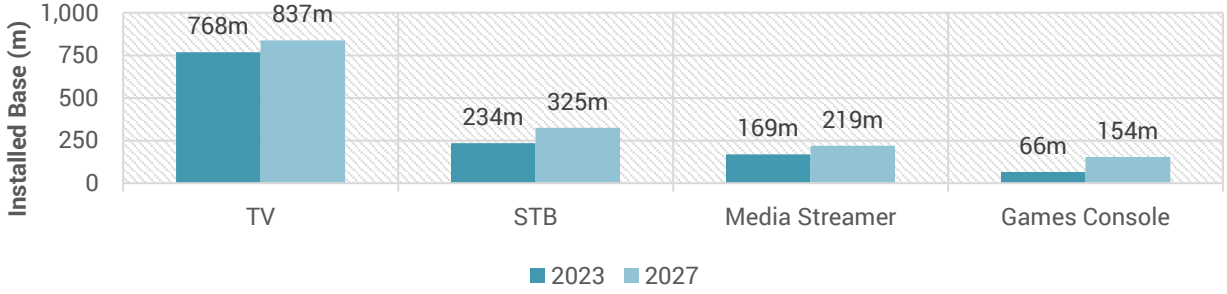
"8K televisions are predicted to account for only 3% of global shipments by 2027"

Consequently, 8K consumer products are currently a niche segment representing a very small share of the total UHD devices market. 8K resolution is most prevalent in the Smart TV market, whereas in STBs and media streamers only a few regional players offer 8K capable products. 8K televisions accounted for just 0.4% of global shipments throughout 2022 and are predicted to reach only 3% by 2027.

Moreover, the EU Energy Saving Directive came into effect in March 2023. This is influencing sustainable TV design; 8K HDR displays often exceed energy consumption limits, but there are mitigating technologies to save energy, such as adaptive brightness. The regulation has had no immediate impact on the sales of 8K TVs, however, revisions to this regulation may hamper the 8K device market if manufacturers cannot comply with regulatory measures.

Installed base of UHD Video Entertainment Devices

Source: Futuresource Consulting



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Streaming video: Service providers embrace change

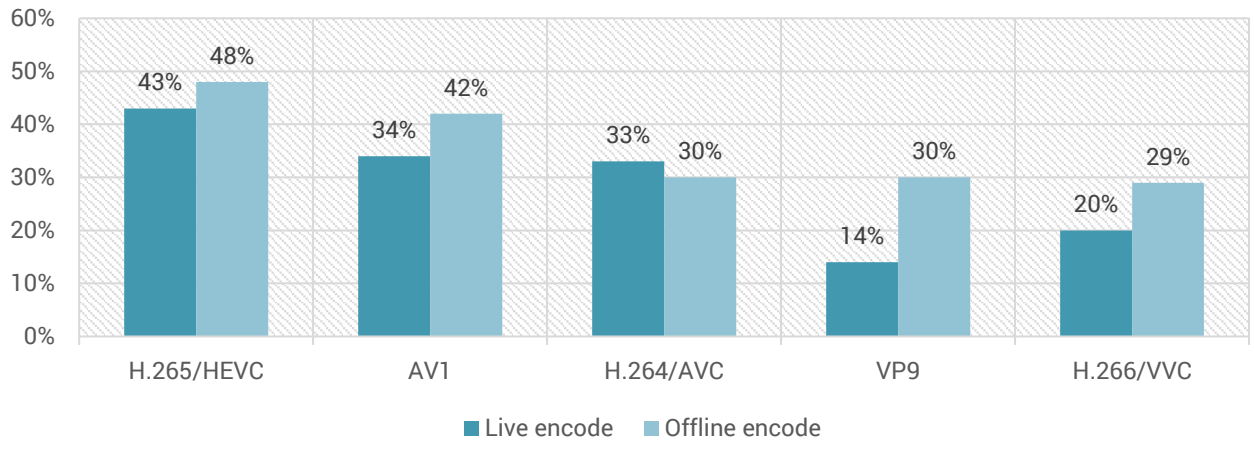
The migration to HEVC is largely determined by the primary streaming service providers. They regularly evaluate the population of devices in the field that have hardware or software video decoders available. Even discounting the potential to deliver 4K HDR content, most indicate that a device penetration of around 30% is the required trigger level for deployment of any codec, not just HEVC. This is the point at which it becomes commercially viable to re-encode video catalogues and provide entertainment services to a population of devices using a newer codec.

> *"A device penetration of around 30% is the required trigger level for deployment of any codec to be commercially viable"*

Codec deployment

A primary consideration driving codec deployment is where those videos can be played, not how easy it is to encode the media assets. The first question is whether the codec can play without hardware acceleration. If the answer is no, then that codec is unlikely to be embraced until hardware support is widely available, which can take several years. Notably, HEVC already enjoys widespread hardware support on all devices streaming providers target.

Planned video codec deployment
(within 1 to 2 years)
Source: 6th Annual Bitmovin Video Developer Report



Transcoding company, Bitmovin, commissions annual research across the video industry. Their most recent data shows that H.264/AVC continues to be a popular choice for live and offline encoding, but this has been supplanted by H.265/HEVC as streaming service providers steadily transition to the newer video standard over the next couple of years. AV1 is also positioned strongly, initially in video-on-demand applications, given that the codec is now likely to gain traction in the next four to five years as device support widens.

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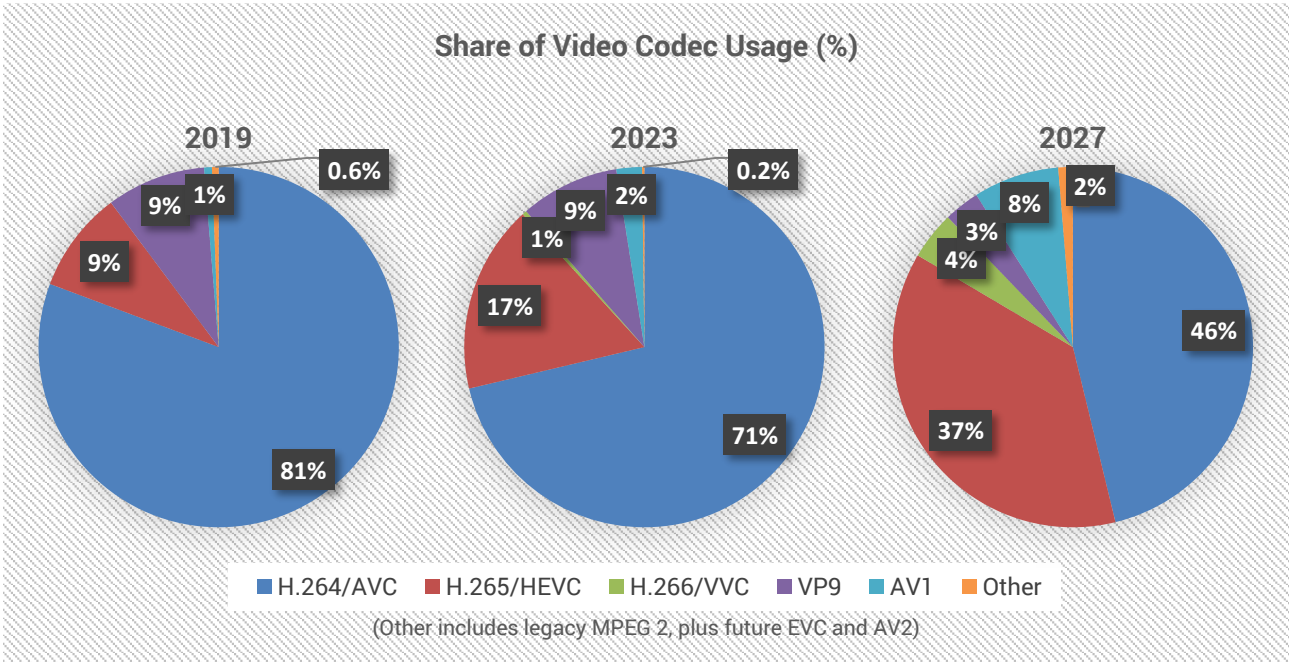
The world beyond AVC

H.264/AVC enjoyed an extraordinarily long lifespan because it introduced an optimum set of encoding features just as Internet video began to proliferate. The standard arrived at the intersect point between the transition to "HD-Ready" flat panel TV displays and the first online videos, both of which presented an ideal market opportunity for the standard to flourish. Moreover, the awkward licensing situation surrounding H.265/HEVC extended the lifespan for H.264/AVC, such that encoders for the older standard were continuously updated and modernised for both television and mobile applications. H.264/AVC maintains around 71% share of codec usage in 2023, yet this is expected to reduce to under half (46%) by 2027.

"Migration to 4K HDR effectively forces a move to H.265/HEVC and AV1"

Migration to 4K HDR effectively forces a move to H.265/HEVC and AV1, both of which are displacing the older codec, with forecasts of 37% and 8% share in 2027 respectively. H.265/HEVC is expected to become the most prevalent video codec: by 2030 it will be employed in around 45% of video streaming applications, with H.264/AVC usage declining to around half of this (22%).

Meanwhile, interviews with experts across the industry revealed consensus that the introduction of the newer H.266/VVC standard might be inhibited by HEVC's projected dominance in broadcast and streaming applications. While streaming video service providers will assess the opportunity to move directly from AVC to VVC, this is considered unlikely given the near ubiquity in consumer hardware support for HEVC and the advantages it currently offers. Hence, it is practical to conclude that HEVC is not perceived as merely a transient step on the video encoding journey.



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Service provider codec adoption

An independent assessment of the leading streaming service providers discovered the prevalent video codecs in use on each platform. The survey selected a random subset of movies and episodic video content accessible on each service, then examined the bitstreams to identify the codecs, profiles and resolutions embedded within each delivery.

The study also sought to identify whether there has been a shift in encoding preference over time. Clearly, this is an inexact science: the favoured encoding standard can differ between movies and episodic content, depending upon the video resolution, the audio profiles, and whether the content uses SDR or HDR; moreover, encoding decisions are influenced by the population of consumer devices targeted for delivery, and their video decoding capabilities.

Generally, the results established that leading video service providers retain H.264/AVC as a baseline, yet the majority now also deliver content encoded using H.265/HEVC.

Where do VP9 and AV1 feature?

To maintain reach across a diverse set of platforms and devices, Netflix delivers video content encoded using all the current codecs. Besides YouTube, Netflix is one of the only mainstream video streaming services to offer VP9 and AV1 to devices advertising support for those standards.

> *"Besides YouTube, Netflix is one of the only mainstream video streaming services to offer VP9 and AV1"*

YouTube continues to prefer VP9 for the delivery of higher resolution UHD and HDR content. Concurrently, the company is experimenting with offering 8K in AV1 format to compatible devices. Furthermore, YouTube recently enabled ingestion of AV1 live streamed upload for content creators, however those streams are transcoded to VP9 in the cloud for distribution to viewers.

H.264/AVC is maintained for the majority of videos consumed on the platform: this is more than sufficient, since there is often no requirement to present videos in quality beyond HD SDR. Moreover, the costs associated with re-encoding YouTube's vast video catalogue would be substantial and prohibitive, considering the typically shorter length of content often covering niche or specific topics. Essentially YouTube has an enormous library of content with fewer average views per asset when compared to SVoD and live viewing.

In terms of codec choices, Lionsgate owned US streaming service, Starz, differs slightly. There are over 1,100 movies available on the platform, but all content is presented in HD SDR only, so Starz employs a combination of H.264/AVC and VP9 for content delivery.

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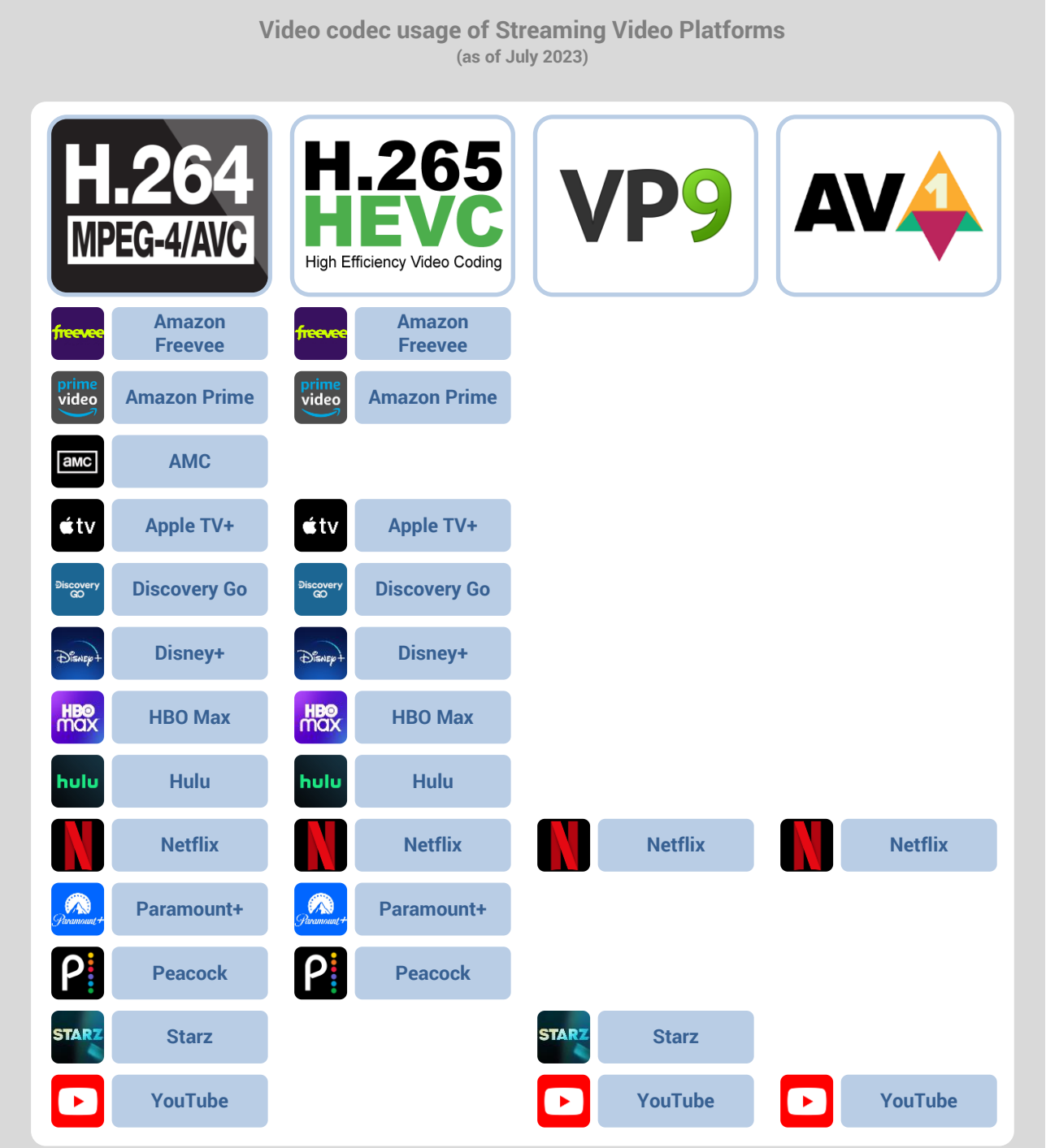

Analysis of the output from thirteen streaming service providers discovered the video codecs commonly utilised by each platform. The study was conducted during July 2023.

A sample of movies and episodic video content were selected randomly for study on each platform, and the bitstreams examined to identify the codecs, profiles and resolutions used for content delivery.

The results show that all services retain H.264/AVC as a baseline; and 77% also routinely deliver content encoded using H.265/HEVC. Although leading service providers continue to evaluate AV1, the codec is yet to be fully established in real-world deployments, featuring in just over 15% of the platforms surveyed.

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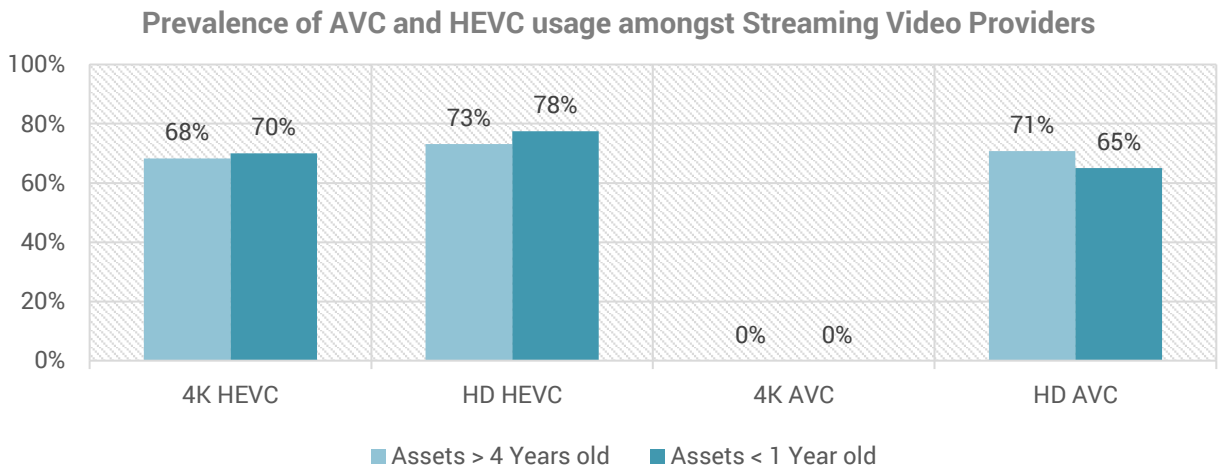
AVC and HEVC are most prevalent

H.265/HEVC offers a typical streaming service between 52% to 62% average bitrate savings over H.264/AVC across both standard and high definition (HD) videos; and up to 64% for UHD/4K content. The cost of using H.265/HEVC for encoding is almost negligible today; meanwhile HDR video effectively mandates the use of newer standards.

Incumbents Amazon Prime, Apple TV+, Netflix and Hulu are counted amongst more recent streaming services provided by Disney, NBC, Paramount and Warner Bros. which all utilise H.264/AVC and H.265/HEVC for content delivery. As expected, the choice of codec is heavily influenced by the type of content being delivered. Some examples:

- Video content on HBO Max is encoded in H.264/AVC for their entry-level plans and H.265/HEVC Main 10 profile for their "Ultimate" subscription offering 4K HDR with Dolby Atmos.
- In the sampled content, Amazon Prime do not appear to use VP9 or AV1 for any of their assets, instead using H.264/AVC and H.265/HEVC to encode video on their platform.
- Netflix uses H.264/AVC and VP9 for all HD video content. They favour H.265/HEVC for 4K video, with the codec used across 95% of all assets made available on the service within the last year. There is indication that their usage of AV1 might be declining: the codec was discovered in around 45% of sampled videos released over four years ago, but in only 15% of videos made available during the last year. Clearly, this assumes that older content has not been re-encoded since release, but hints at a probable transition from AV1 to HEVC as the favoured codec.

Examining the data more widely across platforms, H.264/AVC usage shows a slight decline (from 71% to 65% over the last four years) when employed for encoding HD videos. H.264/AVC is not used for 4K content on any of the platforms studied in detail that support UHD delivery. Meanwhile, H.265/HEVC shows an increase in utilisation for HD content (from 73% to 78%) alongside a smaller uptick of two percentage points for 4K, revealing HEVC's status as a long-standing preferred codec for UHD video assets.



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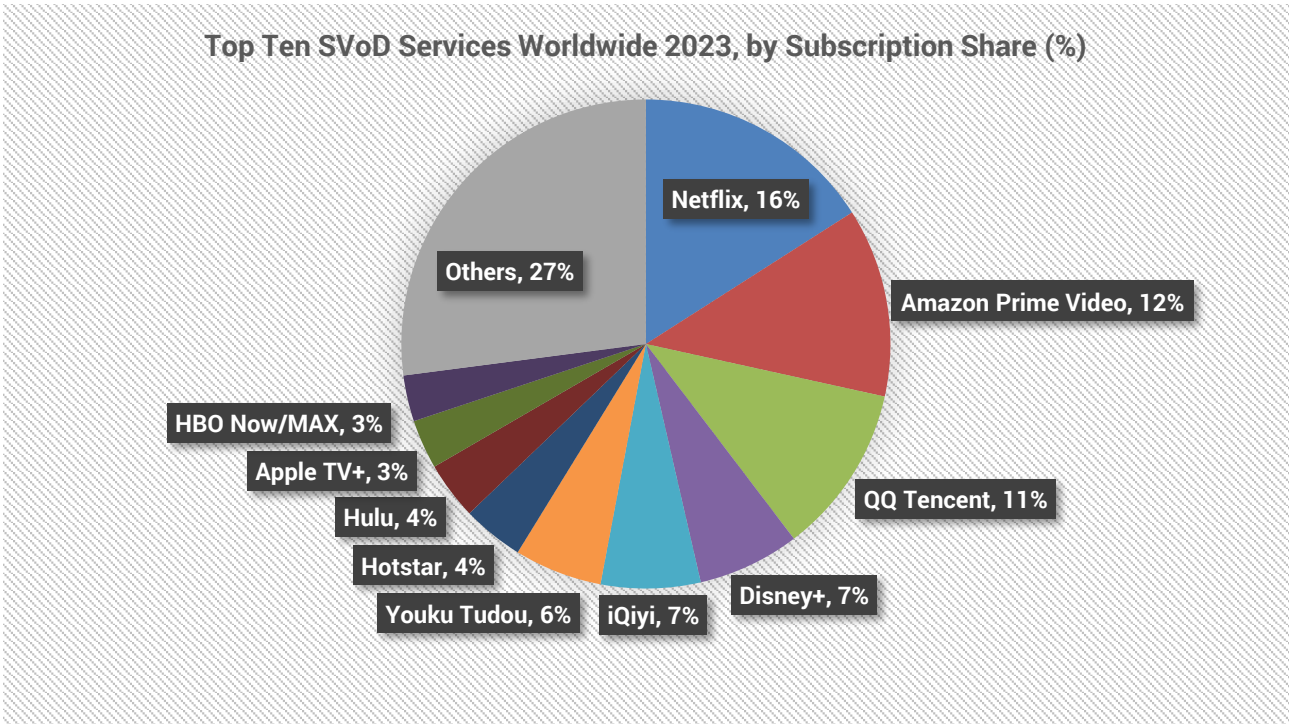
Streaming video: Subscriber demand

The OTT (over-the-top) streaming video industry endured major changes throughout the past few years. At the close of 2022, there were 1.47 billion active SVoD subscriptions globally, with the industry posting a substantial 12% rise in subscriber numbers year over year.

Leading service providers introduced price increases and curtailed the propensity for password sharing, with revenues increasing 22% as a result: today the SVoD industry alone is worth an estimated $85 billion annually.



NETFLIX

Since opening their account, the average user has spent 1,103 hours watching Netflix.

183 hours watching movies, equivalent to 17% of viewing time.

And 920 hours watching TV series, accounting for 83% of overall viewing time on the service.

Equilibrium in video-on-demand services

The COVID-19 pandemic accelerated growth in OTT: many households in lockdown increased their video consumption habits and elected to purchase additional subscriptions from the leading streaming service providers. This year, in 2023, subscriptions have effectively reached equilibrium in most countries, with each household typically maintaining an average of 2.3 SVoD subscription services; this represents a marginal increase from 2.1 services throughout the previous year.

Consumer surveys confirm that households are now satisfied with the number and type of SVoD services they have access to. Consequently, there has been a sharp reduction in the intention to unsubscribe, suggesting that the major market correction has already occurred, with audiences becoming more stable in the services they take because of an increased confidence in cost of living and available disposable income. Some of the largest declines have come from Apple TV+ and Paramount+, however, these two services also experience the highest churn among top global subscription services. On the opposite end of the scale, Netflix maintains the most loyal subscriber base, with average likelihood to cancel at just 6%, whilst close behind is Amazon Prime at 7%.

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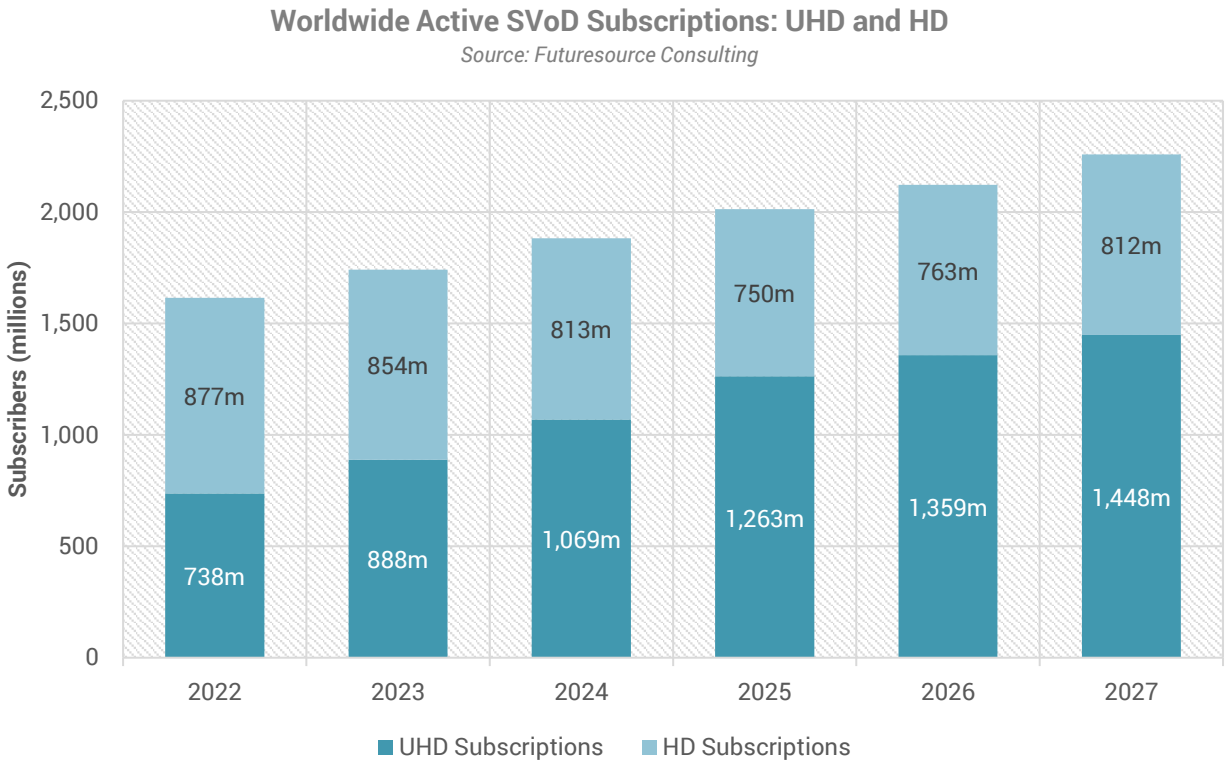
UHD overtakes HD for SVoD

Although not exclusive to HEVC, usage of the codec is closely associated with the delivery of 4K HDR streaming video services, given the lower storage requirements and bandwidth efficiency gains at the same visual quality. Intrinsic support for 10-bit colour profiles is a necessity to present HDR content; this is a central feature of the HEVC standard and one of the primary incentives for an increase in deployment.

While all SVoD services have the capacity to stream 4K content through to audiences, the amount of content available varies greatly. Netflix maintains the largest volume of 4K content offered to their Premium subscribers, with over half of this being episodic, a split also matched by Apple TV+. Contrast this with Amazon Prime, where the majority of its 4K content is presented as feature length movies.

"Of the 1.6 billion SVoD subscriptions in 2023, UHD will account for 51% globally"

By the end of this year, forecasts show there will be just over 1.6 billion active SVoD subscriptions worldwide. And 2023 is likely to witness the transition point when the number of UHD subscriptions overtakes standard HD, with 51% of those – equivalent to 888 million – being premium 4K services watched on UHD-enabled equipment.



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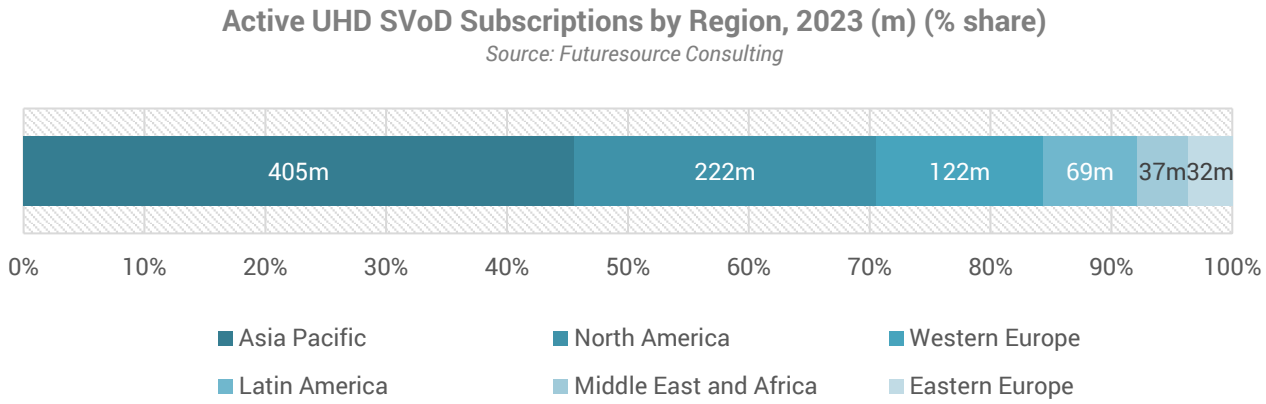


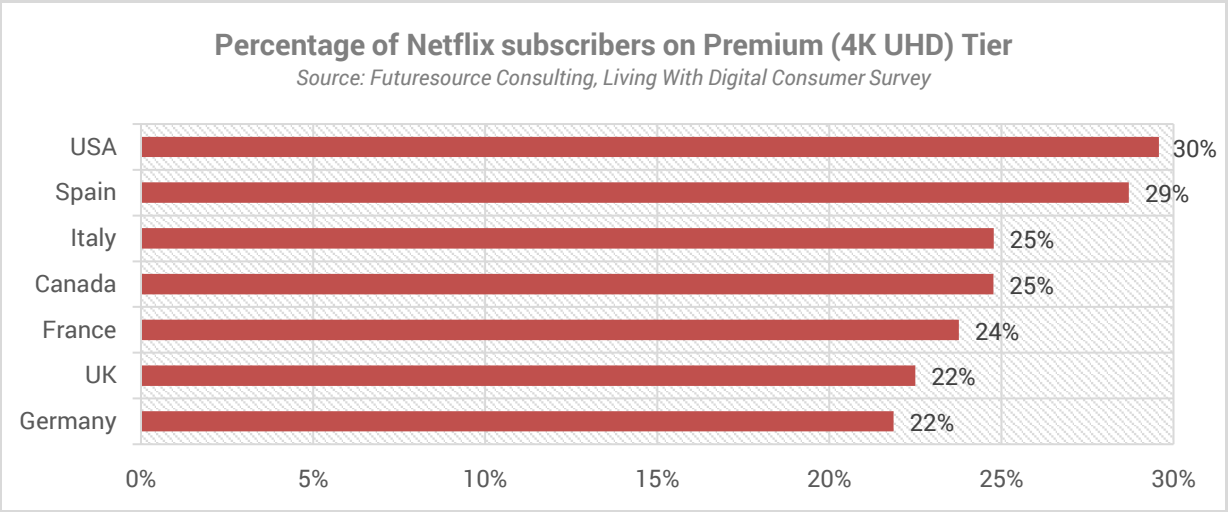
The market for UHD is growing by 20% annually and is expected to retain double digit growth for the next couple of years. Whilst Latin America plus the Middle East and Africa will deliver the largest yearly percentage growth, the Asia Pacific region is expected to provide the largest number of net additions. This is forecast at just over 47 million in 2023, outpacing combined net additions in Europe during the same period.

Continued expansion is driven by an increasing number of households being ready to receive 4K streaming services. This is assisted by the continued penetration of UHD capabilities in TV and STB shipments, which is creating sustained growth in the install base.

NETFLIX

Netflix is the leading service providing 4K content, having presented a 15% increase in available content since November 2022. Futuresource's *Living with Digital* survey across seven countries shows that, on average, 25% of Netflix subscribers were on the highest available tier.

The premium tier isn't just about the ability to stream 4K UHD services; it also allows users to experience content encoded with spatial audio. This tier further enables concurrent viewing across up to four devices in addition to downloading content to a maximum of six supported devices.



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Future potential

The content industry is transitioning towards 4K services as the new baseline. All leading video streaming services, including Netflix, Amazon Prime and Hulu, presently offer 4K HDR content streamed via the Internet. Therefore, the switch from AVC to newer codecs – notably HEVC and AV1 – is now a pragmatic and sustained objective; indeed, our study discovers that these new codecs are unlikely to be displaced until early into the new decade.

Following the success in media streaming products, service providers are launching their own branded smart TVs. This is redefining business models to ensure they become more central to the overall TV experience. In fact, the industry has almost come full circle, going from ad-funded cable and satellite TV controlled by broadcasters to ad-supported OTT video services controlled by streaming service providers. Having end-to-end control of the video delivery chain allows them to build vertically integrated and more economic solutions by selecting codecs and video formats tailored specifically for their services.

In tandem, the addressable market for HEVC-capable video entertainment devices continues to rise, expected to approach an installed base of 10 billion units worldwide by 2030, the upshot being that device support is no longer a blocking issue to HEVC deployment.

Meanwhile, HEVC has a competitor. Support for AV1 is now being introduced into smartphones, with Apple and Qualcomm adding the necessary decode hardware into the new A-Series and Snapdragon SoCs, respectively. iOS and Android devices will proliferate. AV1 will penetrate further into tablets, since they often use similar semiconductor technology, the result being that an addressable market of over a billion devices will emerge quickly in response.

And what about the market opportunities beyond? Even with the proposition of more efficient replacement codecs such as VVC and AV2 on the horizon, SVoD companies and OTT video service providers are unlikely to expand business significantly into 8K UHD video. 4K HDR is considered sufficient, and the expected low penetration of 8K-capable consumer entertainment devices in the short to medium term presents the formidable challenge of supporting a potentially more expensive business model with even fewer addressable consumers. And this looks even more unlikely to be mitigated by alternative entertainment form-factors where 8K resolution finds better application, such as virtual reality and spatial computing.

Finally, new methods of creating video will undoubtedly emerge. Generative AI can create convincing audio and visual assets entirely artificially, so the future for video coding must surely intersect with synthetic media. AI processing capability must expand considerably for such assets to be created on demand and at scale. But whatever happens, the future for video coding and entertainment looks destined for significant transformation.

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About Futuresource

Futuresource is a specialist research and knowledge-based consulting firm with a 30-year heritage, providing organisations with ongoing insight and forecasting into media & entertainment, broadcast equipment, education technology, consumer electronics, digital imaging, storage media and professional displays.

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interdigital

About InterDigital

InterDigital develops mobile and video technologies that are at the core of devices, networks, and services worldwide. We solve many of the industry's most critical and complex technical challenges, inventing solutions for more efficient broadband networks, better video delivery, and richer multimedia experiences years ahead of market deployment. InterDigital has licenses and strategic relationships with many of the world's leading technology companies. Founded in 1972, InterDigital is listed on Nasdaq.

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

DISNEY ENTERPRISES, INC., *Plaintiff*, v. INTERDIGITAL, INC., et al., *Defendants*.	:	C.A. No. 25-996-MN

[PROPOSED] ORDER

At Wilmington this ____ day of _____, 202__, having considered The Motion Picture Association, Inc.'s Motion for Leave to Submit *Amicus* Curiae Brief (the "Motion"), and all the papers and argument submitted therewith,

IT IS HEREBY ORDERED that the Motion is GRANTED. The Motion Picture Association, Inc. shall file its brief on the docket within two (2) business days of this order.

_____
The Honorable Maryellen Noreika

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on November 21, 2025, a copy of the foregoing document was served on the counsel listed below in the manner indicated:

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