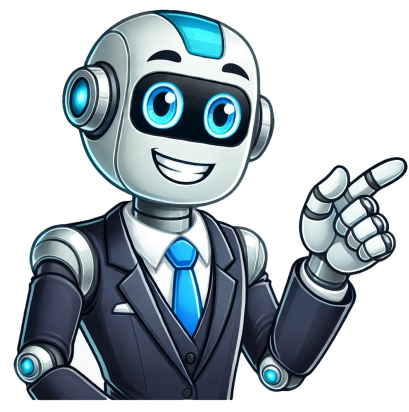


Click to prove
you're human



[illegible]

Sony wanted the player to have to boot the game, see what's up, boot the game, see what's up", so all of these options are "visible in the UI."[[14]] Matt MacLaurin, the current vice president of UX design at PlayStation, described the redesigned user interface as a "very interesting evolution of the OS", and a "100 percent overhaul of the PS4 UI and some of the OS."[[22]][[23]][[24]][[25]][[26]][[27]][[28]][[29]][[30]][[31]][[32]][[33]][[34]][[35]][[36]][[37]][[38]][[39]][[40]][[41]][[42]][[43]][[44]][[45]][[46]][[47]][[48]][[49]][[50]][[51]][[52]][[53]][[54]][[55]][[56]][[57]][[58]][[59]][[60]][[61]][[62]][[63]][[64]][[65]][[66]][[67]][[68]][[69]][[70]][[71]][[72]][[73]][[74]][[75]][[76]][[77]][[78]][[79]][[80]][[81]][[82]][[83]][[84]][[85]][[86]][[87]][[88]][[89]][[90]][[91]][[92]][[93]][[94]][[95]][[96]][[97]][[98]][[99]][[100]][[101]][[102]][[103]][[104]][[105]][[106]][[107]][[108]][[109]][[110]][[111]][[112]][[113]][[114]][[115]][[116]][[117]][[118]][[119]][[120]][[121]][[122]][[123]][[124]][[125]][[126]][[127]][[128]][[129]][[130]][[131]][[132]][[133]][[134]][[135]][[136]][[137]][[138]][[139]][[140]][[141]][[142]][[143]][[144]][[145]][[146]][[147]][[148]][[149]][[150]][[151]][[152]][[153]][[154]][[155]][[156]][[157]][[158]][[159]][[160]][[161]][[162]][[163]][[164]][[165]][[166]][[167]][[168]][[169]][[170]][[171]][[172]][[173]][[174]][[175]][[176]][[177]][[178]][[179]][[180]][[181]][[182]][[183]][[184]][[185]][[186]][[187]][[188]][[189]][[190]][[191]][[192]][[193]][[194]][[195]][[196]][[197]][[198]][[199]][[200]][[201]][[202]][[203]][[204]][[205]][[206]][[207]][[208]][[209]][[210]][[211]][[212]][[213]][[214]][[215]][[216]][[217]][[218]][[219]][[220]][[221]][[222]][[223]][[224]][[225]][[226]][[227]][[228]][[229]][[230]][[231]][[232]][[233]][[234]][[235]][[236]][[237]][[238]][[239]][[240]][[241]][[242]][[243]][[244]][[245]][[246]][[247]][[248]][[249]][[250]][[251]][[252]][[253]][[254]][[255]][[256]][[257]][[258]][[259]][[260]][[261]][[262]][[263]][[264]][[265]][[266]][[267]][[268]][[269]][[270]][[271]][[272]][[273]][[274]][[275]][[276]][[277]][[278]][[279]][[280]][[281]][[282]][[283]][[284]][[285]][[286]][[287]][[288]][[289]][[290]][[291]][[292]][[293]][[294]][[295]][[296]][[297]][[298]][[299]][[300]][[301]][[302]][[303]][[304]][[305]][[306]][[307]][[308]][[309]][[310]][[311]][[312]][[313]][[314]][[315]][[316]][[317]][[318]][[319]][[320]][[321]][[322]][[323]][[324]][[325]][[326]][[327]][[328]][[329]][[330]][[331]][[332]][[333]][[334]][[335]][[336]][[337]][[338]][[339]][[340]][[341]][[342]][[343]][[344]][[345]][[346]][[347]][[348]][[349]][[350]][[351]][[352]][[353]][[354]][[355]][[356]][[357]][[358]][[359]][[360]][[361]][[362]][[363]][[364]][[365]][[366]][[367]][[368]][[369]][[370]][[371]][[372]][[373]][[374]][[375]][[376]][[377]][[378]][[379]][[380]][[381]][[382]][[383]][[384]][[385]][[386]][[387]][[388]][[389]][[390]][[391]][[392]][[393]][[394]][[395]][[396]][[397]][[398]][[399]][[400]][[401]][[402]][[403]][[404]][[405]][[406]][[407]][[408]][[409]][[410]][[411]][[412]][[413]][[414]][[415]][[416]][[417]][[418]][[419]][[420]][[421]][[422]][[423]][[424]][[425]][[426]][[427]][[428]][[429]][[430]][[431]][[432]][[433]][[434]][[435]][[436]][[437]][[438]][[439]][[440]][[441]][[442]][[443]][[444]][[445]][[446]][[447]][[448]][[449]][[450]][[451]][[452]][[453]][[454]][[455]][[456]][[457]][[458]][[459]][[460]][[461]][[462]][[463]][[464]][[465]][[466]][[467]][[468]][[469]][[470]][[471]][[472]][[473]][[474]][[475]][[476]][[477]][[478]][[479]][[480]][[481]][[482]][[483]][[484]][[485]][[486]][[487]][[488]][[489]][[490]][[491]][[492]][[493]][[494]][[495]][[496]][[497]][[498]][[499]][[500]][[501]][[502]][[503]][[504]][[505]][[506]][[507]][[508]][[509]][[510]][[511]][[512]][[513]][[514]][[515]][[516]][[517]][[518]][[519]][[520]][[521]][[522]][[523]][[524]][[525]][[526]][[527]][[528]][[529]][[530]][[531]][[532]][[533]][[534]][[535]][[536]][[537]][[538]][[539]][[540]][[541]][[542]][[543]][[544]][[545]][[546]][[547]][[548]][[549]][[550]][[551]][[552]][[553]][[554]][[555]][[556]][[557]][[558]][[559]][[560]][[561]][[562]][[563]][[564]][[565]][[566]][[567]][[568]][[569]][[570]][[571]][[572]][[573]][[574]][[575]][[576]][[577]][[578]][[579]][[580]][[581]][[582]][[583]][[584]][[585]][[586]][[587]][[588]][[589]][[590]][[591]][[592]][[593]][[594]][[595]][[596]][[597]][[598]][[599]][[600]][[601]][[602]][[603]][[604]][[605]][[606]][[607]][[608]][[609]][[610]][[611]][[612]][[613]][[614]][[615]][[616]][[617]][[618]][[619]][[620]][[621]][[622]][[623]][[624]][[625]][[626]][[627]][[628]][[629]][[630]][[631]][[632]][[633]][[634]][[635]][[636]][[637]][[638]][[639]][[640]][[641]][[642]][[643]][[644]][[645]][[646]][[647]][[648]][[649]][[650]][[651]][[652]][[653]][[654]][[655]][[656]][[657]][[658]][[659]][[660]][[661]][[662]][[663]][[664]][[665]][[666]][[667]][[668]][[669]][[670]][[671]][[672]][[673]][[674]][[675]][[676]][[677]][[678]][[679]][[680]][[681]][[682]][[683]][[684]][[685]][[686]][[687]][[688]][[689]][[690]][[691]][[692]][[693]][[694]][[695]][[696]][[697]][[698]][[699]][[700]][[701]][[702]][[703]][[704]][[705]][[706]][[707]][[708]][[709]][[710]][[711]][[712]][[713]][[714]][[715]][[716]][[717]][[718]][[719]][[720]][[721]][[722]][[723]][[724]][[725]][[726]][[727]][[728]][[729]][[730]][[731]][[732]][[733]][[734]][[735]][[736]][[737]][[738]][[739]][[740]][[741]][[742]][[743]][[744]][[745]][[746]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Summary limitations in distributing 4K broadcasts (including the increased cost of 4K-compatible production equipment)[20] have led some broadcasters deciding against the format in favour of emphasizing 1080p/HDR broadcasts instead. After having broadcast UEFA Euro and the Champions League final in the format, UFLPA discontinued 4K transmissions from its schedule starting January 2020[21]. The BBC's coverage of the 2020 Summer Olympics, USA Network's "4K" coverage was sourced from host broadcaster Olympic Broadcasting Services (OBS) in UK, but downconverted to 1080p when received by NBC Sports' studios, and then upconverted to 4K for distribution.[125] Examples of some 4k resolutions used in displays and media Format Resolution Aspect ratio Pixels - 4096 x 3772 1.33x 44 12,582,912 4096 x 2560 1.6 10,140,865,760 - 4096 x 2304 1.77 9,437,184 DCI 4K (full frame) 4096 x 2160 1.90 25,355 8,847,360 DCI 4K (CinemaScope cropped) 4096 x 1716 + 2.39 10,244,429 7,020,544 DCI 4K (flat cropped) 3996 x 2160 1.85 37,280 8,631,360 WQXGA 3840 x 2400 1.6 16,110 9,216,000 4K UHD 3840 x 2160 1.77 16,9 8,294,400 - 3840 x 1920 2.0 12,1 7,372,800 - 3840 x 1620 2.33 6,247 6,220,800 - 3840 x 1600 2.4 12,5 6,144,000 DFHD 3840 x 1080 3.55 3,260 2,414,720 The resolution of 3840 × 2160 is the dominant 4K resolution in the consumer media and display industries. This is the resolution of the UHD-TV format defined in SMPTE ST-2086-1 [15] as well as the 4K UHD-TV format defined by ITU-R Rec. Bt.2020 [16] and is also the minimum resolution for CEA's definition of Ultra HD displays and projectors.[21] The resolution of 3840 × 2160 was also chosen by the DVB project for their 4K broadcasting standard, UHD-1 [56] This resolution has an aspect ratio of 16:9, with 8,294,400 total pixels. It is exactly double the horizontal and vertical resolution of 1080p (1920 × 1080) for a total of 4 times as many pixels, and triple the horizontal and vertical resolution of 720p (1280 × 720) for a total of 9 times as many pixels. It is sometimes referred to as “2160p”, based on the naming patterns established by the previous 720p and 1080p HDTV standards.

The term “Ultra High Definition” or simply “UHDF” refers to the same resolution after a change of nomenclature adopted in 2016. In digital cinema projection, it has been used since at least 2006, and has had a total of 8,847,360 pixels with an aspect ratio of 2.0 (10:1). It is standardized as the resolution of the 4K cinema format defined by Digital Cinema Initiatives in the Digital Cinema System Specification (DCS), which specifies both the native resolution of DCI-compliant digital projectors and monitors. The DCS specification defines two different resolutions depending on the desired aspect ratio. The allowed resolutions are defined in SMPTE 211-1:[6]:33–171.] p. 6 4096 × 2160 (full frame, 256:135 or ~1.90:1 aspect ratio) 4096 × 2160 (flat crop, 1.85:1 aspect ratio) 4096 × 1716 (CinemaScope crop, ~2.39:1 aspect ratio) The DCI 4K standard has twice the horizontal and vertical resolution of DCI 2K (2048 × 1080), with four times as many pixels overall. Digital movies made in 4K may be produced, scanned, or stored in a number of other resolutions depending on what storage technology is used.[127][128] In the digital cinema production chain, a resolution of 4096 × 3112 is often used for acquiring “open gate” or anamorphic input material, a resolution based on the historical resolution of scanned Super 35 mm film.[129] Various other non-standardized 4K resolutions have been used in displays, including: 4096 × 2560 (1.60:1 or 16:10); this resolution was used in the Canon DP-V301A , a 30-inch (76 cm) 4K reference monitor designed for reviewing cinema footage in post-production, released in 2013.[130] 4096 × 2304 (1.77:1 or 16:9); this resolution was used in the 21.5-inch (55 cm) LG UltraFine 22MD4KA 4K monitor, jointly announced by LG and Apple in 2016,[131] and used in the 21.5″ 4K Retina iMac computer. 3840 × 2400 (1.33:1 or 16:10); this resolution was used in the 22.2-inch (56 cm) IBM T2201 and T221 monitors, released in 2001 and 2002 respectively. This resolution is also referred to as “WQUXGA”, and is four times the resolution of WXGA (1920 × 1200).[132] More recently, this resolution has returned in the Dell XPS Laptop series, under the name “UHDA”.(133) 3840 × 1920 (2.1:1 or 16:8); this resolution is largely used by 360° videos[134] as they largely use a 2:1 aspect ratio. The reason is to allow a video recorded vertically to be viewed horizontally without cropping. A video shot in landscape orientation can be rotated so that it appears to be oriented vertically, while maintaining height by ≈26%.[135] LG refers to this resolution as “WOHDD”(Wide Quad HD+).[136] while Acer uses the term “UW-QHD+.”(Ultra-Wide Quad HD+) [137] and some media outlets have used the term “UWAK”(Ultra-wide 4K) [138][139] 3840 × 1080 (3.55:1 or 32:9); this resolution was first used in the Samsung CAHQ90L, a 49-inch (120 cm) curved gaming monitor released in 2017. This resolution is equivalent to wide Quad 1080p displays (1920 × 1080) side-by-side, but with no border interrupting the image. It is also exactly one half of a 4K UHD (3840 × 2160) display. Samsung refers to this resolution as “DFHD”(Dual Full HD).[140] Sony Handycam FDR-XR1 See also: List of 4K video recording devices The main advantage of recording video at the 4K standard is that fine spatial detail is resolved well.[141] Individual still frames extracted from 3840×2160 pixel video footage can act as 8.3 megapixel still photographs, while only 2.1 megapixels at 1080p and 0.9 megapixels at 720p. If the final video resolution is reduced to 2K from a 4K recording, more detail is apparent than had been achieved from a native 2K recording.[141] Increased fineness and contrast is thus possible with output to DVD and Blu-ray.[142] Some cinematographers record at 4K with the Super 35 film format to offset any resolution loss that may occur during video processing.[143] In full size, this image shows the difference between four subsampling schemes. The color images appear similar. The lower row shows the result of the color information. Many consumer electronics such as mobile phones store video footage in YCBCR format with 4:2:0 chroma subsampling. This records color information at only one quarter the resolution as the original format allows. [44] From 1984 onwards, this means that most home informaticians could not see differences between colors, even if they were able to view the source file directly. As a consequence, most cameras cannot sample higher rates (usually 50 bits/frame) than 4:2:0, usually 1 bit/frame. This highly reduces the rate of sampling, reducing the visibility of compression artifacts, even if viewed on monitors with a much greater resolution than 1080p. Full digital video recordings with a resolution of 1080p, with a resolution of 1080 lines per frame, would require a resolution of 1080 lines per frame, resulting in a resolution of approximately 10 million pixels. Most current digital video formats with a horizontal resolution of around 2,000 pixels VR resolution - digital video formats with a horizontal resolution of around 5,000 pixels, aimed at non-television computer monitor usage 8K resolution - digital video formats with a horizontal resolution of around 8,000 pixels 10K resolution - digital video formats with a horizontal resolution of around 10,000 pixels 16K resolution - experimental VR format 32K resolution Aspect ratio (image) – proportional relationship between an image’s width and height Digital cinema Display Resolution Standards High Efficiency Video Coding (HEVC) – video standard that supports 4K & 8K UHDTV and resolutions up to 8192 × 4320 REC. 2020 - ITU-R recommendation for UHDVT, defining formats with resolutions of 4K (3840 × 2160) and 8K (7680 × 4320) Ultrawide formats • Gouleaks, Karen (2001). Visual Effects in a Digital World. Morgan Kaufmann, p. 587. ISBN 9780080052071.. 4K resolution: A general term referring to any digital image containing an X resolution of approximately 4096 pixels...“Is Now the Time to Buy a 4K TV Set?”. Wall Street Journal. 11 May 2014. Archived from the original on 6 January 2015. Retrieved 25 July 2024. @DInnocenzo, Anne (3 July 2014). “Gigantic TV sales starting to take off”. The Poughkeepsie Journal. Archived from the original on 7 March 2021. Retrieved 25 July 2024. @ b c eA Market Research Report—Ultra-High Definition: State of the Industry, Consumer Electronics Association, August 2013. “What Is 4K Photo? Panasonic’s camera tech explained - Pocket-Life”. www.pocket-life.com. 3 January 2017. Retrieved 24 October 2021.@ b c d e “Digital Cinema System Specification Version 1.2 with Errata as of 30 August 2012 Incorporated” (PDF). Digital Cinema Initiatives. December 2010. Archived from the original (PDF) on 22 November 2018. Retrieved 24 April 2018. “Defining 2K & 4K”. Cinematography Mailing List. March 25, 2004. Archived from the original on 22 December 2018. Retrieved April 29, 2018. “2K Film Resolution”. CGSociety. June 6, 2003. Archived from the original on 22 December 2018. Retrieved September 25, 2020. “what resolution/ratio/frame/rate?”. CreativeCOV.net. September 25, 2002. Archived from the original on April 30, 2018. Retrieved April 29, 2018. “WEAPON/EPIC+W 8K S35 Operation Guide v7.0” (PDF). Red Digital Cinema Camera Company. Archived from the original (PDF) on May 28, 2018. Retrieved May 28, 2018. OV 2036-G-015: ‘Ultra High Definition Television’ – Overview for the SMPTE ST 2036 Document Suite. Society of Motion Picture and Television Engineers (SMPTE). March 27, 2015. doi:10.5594/SMPTE.OV2036-0.2015.@ b c d f g h Ultra High Definition Television – Image Parameter Values for Program Production, Society of Motion Picture and Television Engineers (SMPTE), October 13, 2014, doi:10.5594/smpte.st2036-1.2014, ISBN 978-1-61482-835-8@ b “Ultra High Definition Television: Threshold of a new age”. ITU-R. May 24, 2012. Archived from the original on March 28, 2022. Retrieved April 29, 2018.ITU-R Recommendation BT.2020-2: Parameter values for ultra-high-definition television systems for production and international program-exchange (PDF). ITU-R October 15, 2015. Retrieved April 29, 2018.“New TV reports help shape next tv revolution: High Dynamic Range (HDR)”. ITU News. ITU-R. November 21, 2017. Retrieved April 29, 2018.ITU-R Recommendation BT.2020-2: Parameter values for ultra-high-definition television systems for production and international program-exchange (PDF). ITU-R October 15, 2015. Retrieved April 29, 2018.CFA Updates Characteristics of Ultra-High-Definition Displays (for Consumer Electronics Applications) (CEAA) June 2, 2019. Archived from the original (PDF) on 20 February 2020. Retrieved February 24, 2019.Xperia 1 III (エクスペリア ワン スリー) | Xperia (エクスペリア) とは？サイト .xperia.sony.jp (in Japanese). Retrieved October 21, 2018.“How does the 4K display work in Xperia 1 or Xperia 1 II?”. sony.com.CNET. Retrieved 2021-07-28.“Leading Television Industries Players Line Up To Support ‘4K Ultra HD’” (Press release). Consumer Electronics Association. 11 November 2014. Archived from the original on 23 September 2015. Retrieved 18 December 2014.Lowneshon, Josh (9 July 2010). “YouTube now supports 4K-resolution videos”. Tech Culture. CNET. Retrieved 18 December 2014.Brown, Heather (16 October 2014). “Good Question: When Will We See Broadcasts in 4K?”. local. CBS Minnesota. Retrieved 18 December 2014.Luckerson, Victor (12 November 2014). “Amazon Wild Stream in ‘Ultra-High Def’ by January”. Tech Companies. TIME. Retrieved 18 December 2014.Anderson, Jim (17 December 2014). “4K Ultra HD, High Quality