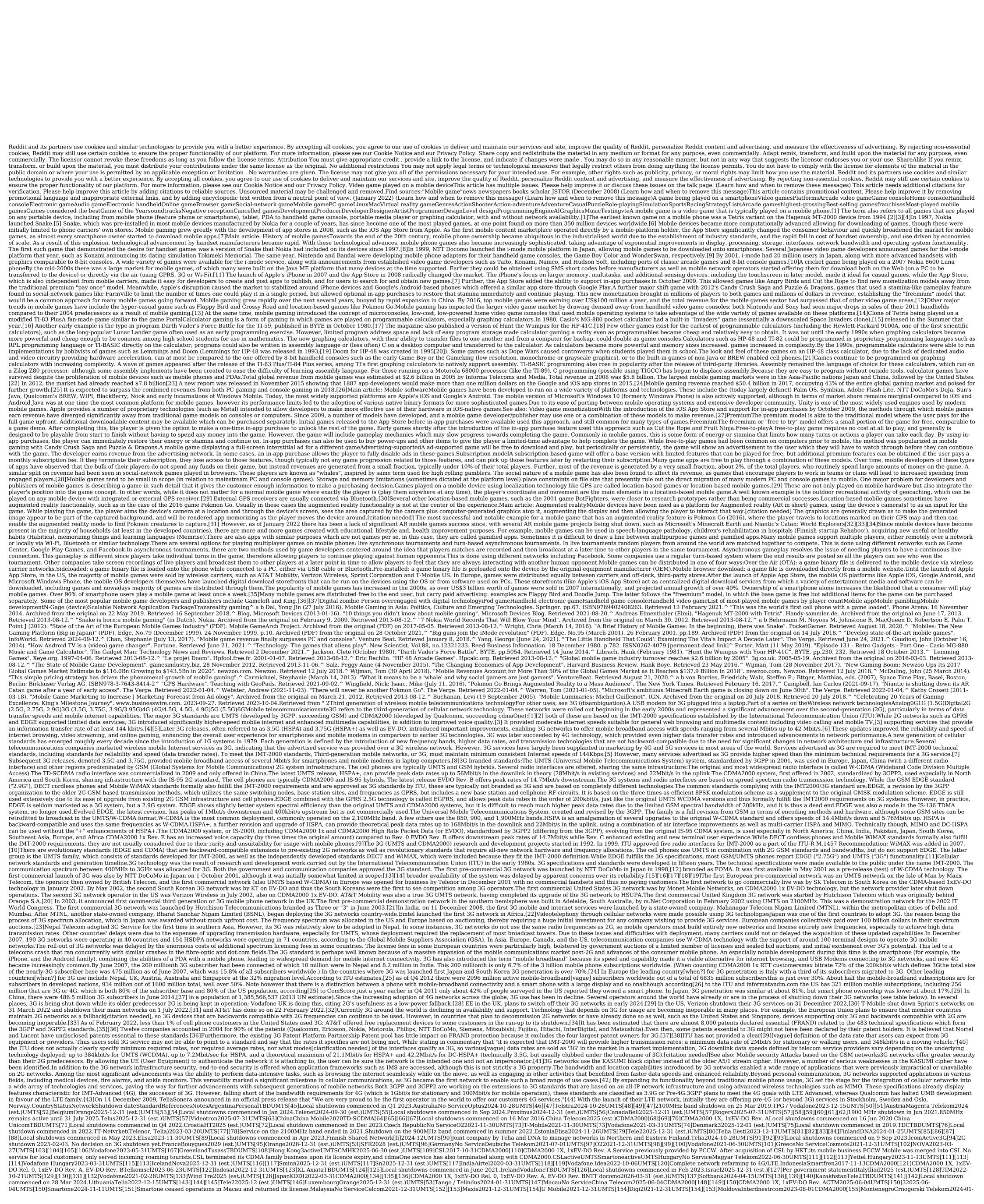
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commence "towards the end of 2025". NorwayNo ServiceTelia 2021-11-11UMTS[168] Telenor 2021-01-31UMTS[172][173] PhilippinesSmart (PLDT) TBDUMTS[174] GlobeTBDUMTS[175] Shutdown commenced in Oct 2020. PolandT-Mobile 2023-04 (est.) UMTS[176] Commence "towards the end of 2025". NorwayNo Service Telia 2021-11-11UMTS[168] Telenor 2021-01-31UMTS[170][171] Pakistan No Service Telia 2021-11-11UMTS[168] Telenor 2021-01-31UMTS[170][171] Philippines Smart (PLDT) TBDUMTS[170][171] Philippines Smart (PLDT) 
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[224]Taiwan Star2018-12-31 (Data)2024-06-30 (Voice)UMTS[222][223][224]United KingdomEE2024-02-25UMTS[225][226][227][228]Shutdown commenced on 17 Jul 2023 in Warrington (Cheshire).[229][230]Three2024-12-31 (Data)2024-02-25 (Data)2024-02-28 (Data
phone generationsMobile radio telephone (also known as "0G")Mobile broadbandWireless device radiation and health1G2G4G5G6GLTE (telecommunications. August 2004.^ Nunno, Richard (September 2003). "Migration to 3G Technology Standards:
 A Comparison of Selected Countries" (PDF). FCC.^ a b "All about the Technology=2011-04-04". itu.int. Retrieved 17 August 2019.^ "3G CELLULAR STANDARDS WITH PATENTS". projectsatbangalore.com. 24 June 2014. Retrieved 17 August 2019.^ a b "3G vs. 4G: What's the Difference?". PC Magazine. 10 February 2015. Retrieved 17 August 2019.^
2019. "HSPA - About Us". GSMA. 9 July 2017. Archived from the original on 9 July 2017. Retrieved 17 August 2019. "HTC Touch Phone, PDA Phone, Smartphone, Smartpho
Mobile Computer". 22 November 2008. Archived from the original on 22 November 2008. Retrieved 17 August 2019. TITU Radiocommunication Assembly approves new developments for its 3G standards" (Press release). ITU. Archived from the original on 19 May 2009. Retrieved 1 June 2009. Telephone approves new developments for its 3G standards (Press release).
Networks?". MakeUseOf. 15 February 2019. Retrieved 17 August 2019. Retrieved 17 August 2019. Retrieved 30 October 2012. Retrieved 30 October 2012. "Economists"
 Pick". HKTDC Research. Archived from the original on 31 March 2020. Retrieved 12 January 2020. "Brids to a start". broadbandmag.co.uk. Archived from the original on 23 April 2001. "World's first 3G phone network goes live"
ZDNet. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001). "World's first 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2001. Retrieved 16 August 2019. "First 3G mobiles launched in Japan". 1 October 2019. "First 3G mobiles launched in Japan". 1 October 2019. "F
in UK". 3g.co.uk. and Hutchison. Hutchison Telecommunications (Australia) Limited. 11 June 2008. Retrieved 7 April 2012. Retrieved 7 April 2012. Retrieved 7 April 2018. Retrieved 7 April 2018.
Generation of Mobile Telephones National Audit Office (NAO) Report". National Audit Office (NAO) Report". National Audit Office (NAO) Report". Plus 8 Star presentation, "Is 3G a Dog or a Demon Hints from 7 years of 3G Hype in Asia"". Plus 8 star presentation, "Is 3G a Dog or a Demon Hints from 7 years of 3G Hype in Asia"".
 "Global mobile statistics 2013 Part A: Mobile subscribers; handset market share; mobile operators". mobiThinking. May 2013. Archived from the original on 6 September 2014. Retrieved 15 October 2013. Archived from the
original on 26 September 2013. Retrieved 15 October 2013. A steven Millward (29 July 2014). "China now has 486.5 million on new 4G network". Tech in Asia. Retrieved 4 August 2014. A million on new 4G network. Tech in Asia. Retrieved 4 August 2014. Steven Millward (29 July 2014). "China now has 486.5 million 3G subscribers, but only 14 million on new 4G network." Tech in Asia. Retrieved 4 August 2014. Steven Millward (29 July 2014). "China now has 486.5 million 3G subscribers, but only 14 million on new 4G network." Tech in Asia. Retrieved 4 August 2014. Steven Millward (29 July 2014). "China now has 486.5 million 3G subscribers, but only 14 million on new 4G network." Tech in Asia. Retrieved 4 August 2014. Steven Millward (29 July 2014). "China now has 486.5 million 3G subscribers, but only 14 million on new 4G network." Tech in Asia. Retrieved 4 August 2014. Steven Millward (29 July 2014). "China now has 486.5 million 3G subscribers, but only 14 million on new 4G network." Tech in Asia. Retrieved 4 August 2014. Steven Millward (29 July 2014). "China now has 486.5 million 3G subscribers, but only 14 million on new 4G network." Tech in Asia. Retrieved 4 August 2014. Steven Millward (29 July 2014). "China now has 486.5 million 3G subscribers, but only 14 million 3G subscr
Off Our 3G Network". EE. Retrieved 2 January 2024. "T-Mobile Network Shut off date set for December 31, 2022". www.verizon.com. 30 March 2021. Retrieved 2 January 2024. Sebruary 2024. "T-Mobile Network Shut off date set for December 31, 2022". www.verizon.com. 30 March 2021. Retrieved 2 January 2024. Sebruary 2024. Sebr
 Here's how it could impact you | CNN Business". CNN. Retrieved 2 January 2024.^ arsyline.cz. "2G and 3G networks are shutting down globally?!". SECTRON s.r.o. Retrieved 26 February 2022.^ Kelly, Samantha Murphy (22 February 2022). "AT&T is shutting down its 3G network. Here's how it could impact you". CNN.^ "3G CELLULAR
 STANDARDS AND PATENTS". engpaper.com. 13 June 2005. Retrieved 24 June 2012. a b David J. Goodman (13 June 2005). "Study on the Interplay
between Standards and Intellectual Property Rights (IPRs)" (PDF). European Commission. 18 July 2009. Archived from the original (PDF) on 24 December 2012. Retrieved 24 June 2012. Retrieved 24 June 2012. Retrieved 27 June 2019. The control of the actual IPR for a standard are not very useful. It is essential that the large licensees sign up. Examples of pools that have little
impact are the 3G Licensing pool (which excludes the four largest IPR owners for 3G) and the 802.11 pool by ViaLicensing. Possible 'showstoppers' shadow 3G patent pool". Even so, Qualcomm (San Diego) is still a wild card in the patent-pooling effort. Qualcomm was a member of the UMTS
group when it was formed in February 1998, but deactivated its membership last September. "3G Licensing Workshop (1921 September 2001)". www.itu.int. Retrieved 17 June 2021. "Cellular Standards for the Third Generation". ITU. 1 December 2001)". www.itu.int. Retrieved 17 June 2021. "Cellular Standards for the Third Generation". ITU. 1 December 2001)".
 System" (PDF). Network Systems & Security Technologies. Archived from the original (PDF) on 12 September 2003. Ashworth, Boone. "3G Service Is Going Away Next Year. Here's What That Means". WIRED. Retrieved 26 February 2022. Qualcomm halts UMB project, Reuters, 13 November 2008. "first in the world with 4G services"
TeliaSonera. 14 December 2009. Retrieved 6 September 2010. "Personal to commence 3G shutdown in 1Q23". TeleGeography. 2 November 2022. Retrieved 16 February 2023. a b "Australian 3G Network Shutdown: Everything you need to know"
 whistleOut. 6 May 2024. Retrieved 4 July 2024.^ "3G Service Closure". Telstra. Archived from the original on 21 November 2019. Retrieved 25 June 2021. Retrieved 4 July 2024.^ "TPG Telecom confirms it will switch off 3G network in
December 2023". TeleGeography. 27 September 2022. Retrieved 6 October 2022. Retrieved 14 December 2023. Retrieved 18 April 2022. Retrieved 18 April 2022. Retrieved 18 April 2022. Retrieved 18 April 2022. Retrieved 19 Indicate the secondary of t
SA vendors; provides timetable for 2G/3G shutdowns". TeleGeography. 1 March 2022. Retrieved 6 March 2022. Retrieved 6 June 2023. Retrieved 6 June 2023. Telenet to switch off 3G from September 2024". TeleGeography. 1 September 2022. Retrieved 6 March 2022.
 "Proximus to switch off 3G network by end-2024". TeleGeography. 30 November 2022. Retrieved 4 December 2022. a b c "What's the 3G Sunset and How Will It Affect Existing IoT Deployments?". hologram.io. Retrieved 4 December 2020. "Important Notice Regarding Upcoming 2G/3G Changes on the Rogers Network". Bulwark. 15 July 2020.
 Retrieved 24 October 2020. "1900 MHz Shutdown on our 2G and 3G Shutdowns Continue". blog.telegeography.com. 15 February 2023. Retrieved 13 May 2023. "3G Alarm Systems Need To Be Upgraded". alarmtech.ca. 6 August 2024. Retrieved 19 May 2023. "3G Alarm Systems Need To Be Upgraded".
October 2024. "3G Network retirement Everything you need to know". rogers.ca. Retrieved 29 November 2024. "China's 3G failure". Fierce Network. 30 March 2008. Retrieved 29 August 2024. "China Mobile Not Serious About TD-SCDMA, Betting Big on TD-LTE". TechNode. 9
May 2011. Retrieved 29 August 2024.^ "China Mobile starts to turn off 3G base stations". GSM Association (GSMA), Mobile World Live. 16 March 2019. Retrieved 29 August 2024.^ "China Mobile to shut down 3G network". China Daily. 13 March 2019. Retrieved 29 August 2024.^ "China Mobile to shut down 3G network".
2023. China Telecom: 3G Network Will Be Shut down Gradually Starting from June. Montnets. 5 June 2022. Retrieved 4 December 2022. Retrieved 4 December 2022. Retrieved 4 December 2022. Retrieved 4 December 2022.
 Retrieved 6 November 2022.^ "HT to begin 3G shutdown soon". TeleGeography. 7 December 2023. Retrieved 14 December 2021. Retrieved 6 December 2021. Retrieved
 with a helicopter, ending in silence in two weeks. Vodafone's 3G network] (in Czech). mobilmania.zive.cz. 17 March 2021. Retrieved 14 April 2021. Retrieved 14 April 2021. Retrieved 14 April 2021. Retrieved 15 September 2024.
fra slutningen af 2022" (in Danish). TDC. 2022. Retrieved 7 September 2024. Telenor Denmark launching 5G SA in 2022, shutting 3G in late summer". TeleGeography. 20 April 2023. Retrieved 23 April 2023. Telenor Denmark launching 5G SA in 2022, shutting 3G in late summer". TeleGeography. 20 April 2023. Retrieved 23 April 2023. Telenor Denmark launching 5G SA in 2022, shutting 3G in late summer".
completes 3G shutdown". Data Centre Dynamics Ltd. 26 November 2024. Retrieved 24 December 2024. Retrieved 27 August 2022. "Telia Estonia to close 3G network by end-2025". TeleGeography. 28 May 2021. Retrieved 11 April 2022. "Telia Estonia to start 3G network by end-2025". TeleGeography. 28 May 2021. Retrieved 11 April 2022. "Telia Estonia to start 3G network by end-2025".
 shutdown at end-February". TeleGeography. 17 January 2023. Retrieved 17 January 2023. Retrieved 17 January 2023. Retrieved 2 October 2023. "Telia completes Estonian 3G shutdown". TeleGeography. 13 December 2023. Retrieved 14 December 2023. Retrieved 2 October 2023. Retrieved 17 January 2023. "Schedule published: This is how DNA's
3G network will be shut down in 20232024". DNA Oyj. Retrieved 12 July 2023. Poly 2023. Retrieved 19 November 2023.
 Down its 3G Networks Next Week Common Devices Will Need to Transition to 2G Network". Alma Media Oyj. 2024. 5 January 2024. Retrieved 3 March 2024. 7 "Suomen Yhteisverkon 5G-urakka valmistui, vanhat 3G-taajuudet 3 March 2024. 7 "Suomen Yhteisverkon 5G-urakka valmistui, vanhat 3G-taajuudet 3 March 2024. The strieved 3 March 2024. 8 January 2024. 8 J
otettu 4G:n kyttn" (in Finnish). STT Info. 24 March 2025. Retrieved 17 May 2025.
lokakuun lopussa Helsingiss" (in Finnish). Telia. 9 October 2024. Retrieved 17 May 2025.^ "Bouygues TeleGeography. 3 February 2023. Retrieved 11 February 2023. Retrieved 11 February 2023. Retrieved 11 February 2023. Retrieved 12 February 2023. Retrieved 13 February 2023. Retrieved 14 February 2023. Retrieved 15 February 2023. Retrieved 16 February 2023. Retrieved 17 May 2025. Retrieved 17 May 2025. Retrieved 17 May 2025. Retrieved 17 May 2025. Retrieved 18 February 2023. Retrieved 18 February 2023. Retrieved 19 February 2023. Retrieved 29 February 2023. Re
 January 2023.^ "Telekom switches off 3G network". TeleGeography. 6 July 2021. Retrieved 13 July 2021. ^ "Telefonica Deutschland to begin 3G switch-off on 1 July". TeleGeography. 8 June 2021. Retrieved 8 June 2021. ^ "Telefonica Deutschland accelerates 3G shutdown".
 accelerates 3G switch-off in Germany". TeleGeography. 27 August 2021. Retrieved 27 August 2021. "Vodafone Germany to switch off 3G by end of year". TeleGeography. 15 April 2021. Retrieved 5 February 2022. "Wind Hellas to shut down 3G by
end-2022". TeleGeography. 6 July 2021. Retrieved 13 July 2021. Retrieved 13 January 2023. Retrieved 14 January 2023. Retrieved 15 January 2023. Retrieved 16 January 2023. Retrieved 17 January 2023. Retrieved 18 January 2023. Retrieved 18 January 2023. Retrieved 19 July 2022. 
 "Vodafone Greece to switch off 3G by mid-2023". TeleGeography. 24 January 2023. Retrieved 28 January 2023. "Tusass to discontinue 3G services in 2023". TeleGeography. 21 December 2022. Retrieved 22 December 2022. Tusass to discontinue 3G services in 2023". TeleGeography. 24 January 2023. Retrieved 28 January 2023. TeleGeography. 29 January 2023. TeleGeography. 20 January 20 
Government of Hong Kong. 28 April 2024. Retrieved 28 April 2024. Retrieved 28 April 2024. Retrieved 28 April 2024. Retrieved 28 April 2024. Telekom confirms 3G shutdown will complete this
month". TeleGeography. 17 June 2022. Retrieved 19 June 2022. ^ a b c "National 2G/3G handset replacement scheme ends; 120,000 devices subsidised". TeleGeography. 20 April 2023. ^ "Yettel switching off Hungary's last 3G network on 13 November". TeleGeography. 13 October 2023. Retrieved 14 October 2023. ^
 "Hrek/Cikkek - Vodafon 3G-hlzat lekapcsolsa" (in Hungarian). T.E.L.L. Software Hungaria Kft. 4 October 2022. Retrieved 4 December 2022. ^ a b c "Lokun 2G og 3G farsmajnustu" (in Icelandic). Fjarskiptastofa. 6 September 2024. Retrieved 28 April 2023. *
January 2025.^ "Airtel begins phasing out Indian 3G networks". TeleGeography. 1 July 2019. Retrieved 1 January 2022.^ "Bharti Airtel shuts down 3G networks" Coverage for its Customers in Maharashtra & Goa to Enable Seamless Conversations
and Internet Experience" (PDF). Vodafone Idea Limited. 6 October 2022. Retrieved 28 January 2023. Telkomsel switches off 3G network Nationwide" (in Indonesian). Inilah. 23 June 2023. Retrieved 14 March
2025.^ "Siap-Siap Indosat Matikan Sinyal 3G Di Akhir 2022". detikcom. 31 May 2022. Retrieved 16 July 2022.^ "Penataan Ulang Teknologi 3G ke 4G" [Reconfiguring 3G to 4G Technology] (in Indonesia Dusiness Post
21 February 2023. Retrieved 25 January 2024.^ "Vodafone Ireland unveils plans to phase out 3G". TeleGeography. 2 July 2021. Retrieved 6 June 2022.^ a b "WindTre e Iliad verso il cambiamento definitivo | Possiamo dire addio alla
rete storica" (in Italian). Player.it - Dadafree Srl. 4 September 2022. Retrieved 4 December 2022. Retrieved 5 February 2022. Ret
TeleGeography. 10 June 2022. Retrieved 19 June 2022. Retrieved 20 June 2022. Retrieved 19 June 2022. Retrieved 20 June 2022. R
in March 2022". nippon.com. 16 November 2018. Retrieved 14 April 2021.^ "KDDI (au) shutting 3G network today; advises users to upgrade if they wish to keep its services". TeleGeography. 31 March 2022. Retrieved 18 April 2022.^ "FOMAi" [End of service for "FOMA" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAi" [End of service for "FOMA" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAi" [End of service for "FOMA" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAi" [End of service for "FOMA" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAi" [End of service for "FOMA" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAi" [End of service for "FOMA" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAi" [End of service for "FOMA" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAi" [End of service for "FOMA" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAi" [End of service for "FOMA" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAI" [End of service for "FOMAI" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAI" [End of service for "FOMAI" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAI" [End of service for "FOMAI" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAI" [End of service for "FOMAI" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAI" [End of service for "FOMAI" and "i-mode"] (in Japanese). NTT DOCOMO Inc. 29 October 2019. Retrieved 14 April 2022.^ "FOMAI" [End of service for "FOMAI" [End of service for "FOMAI" [End of service for "FOMAI" 
April 2021. "SoftBank confirms date for 3G switch-off". TeleGeography. 21 November 2022. Retrieved 4 December 2022. Retrieved 19 January 2024. Retrieved 19 January 2024. Retrieved 19 January 2024. Retrieved 18 January 2024. Retrieved 19 
May 2024.^ "Turning off 3G in Almaty Oblast". Tele2/Altel to Disable 3G in Six Cities of Kazakhstan. 26 February 2024. Retrieved 6 March 2025.^ "Telia to commence Lithuanian 3G shutdown in March"
TeleGeography. 17 February 2022. Retrieved 19 February 202
 March 2024. Retrieved 19 October 2024. Tango and Telindus to shut down 3G network in January 2024. TeleGeography. 2 March 2023. Retrieved 5 March 2023. Retrieved 27 August 2024. Thina Unicom sells off CDMA arm to China Telecom.
ChinaDaily. 29 July 2008. Retrieved 27 August 2024. a b c "Macau will switch off 3G in 2025". Data Centre Dynamics. 9 December 2024. Retrieved 29 April 2025. "Celcom to shutter 3G network in stages; ready for 5G launch by end-2021". TeleGeography. 8 September 2021.
Retrieved 12 September 2021. a b "Digi confirms 3G shutdown timeline". TeleGeography. 26 November 2021. a b c "3G network to be terminated on Dec 31, users advised to switch to 4G". New Straits Times. 25 November 2021. a b c "3G network to be terminated on Dec 31, users advised to switch to 4G". New Straits Times. 25 November 2021.
network and the termination of the provision of cellular services in the CDMA standard] (in Russian). Interdnestrcom. 4 August 2023. Retrieved 2 October 2023. Retrieved 2 October 2023. Retrieved 2 October 2023. Retrieved 2 October 2023. Telekom to shutter 3G network on 22 January."
TeleGeography. 10 January 2024. Retrieved 12 January 2024. Retrieved 12 January 2024. Retrieved 12 January 2024. Retrieved 14 April 2021. Retrieved 14 April 2021. Retrieved 14 April 2021. Retrieved 15 January 2024. Retrieved 16 January 2024. Retrieved 17 January 2024. Retrieved 18 January 2024. Retrieved 19 January 2
 12 May 2023. "Vodafone Ziggo closing 3G network on 4 February 2020". TeleGeography. 11 December 2019. Retrieved 14 April 2021. "Vodafone announces 4G or 5G to fully replace 3G in late 2024". TeleGeography. 24 August 2022. Retrieved 14 April 2021.
27 August 2022. "One NZ reschedules 3G shutdown, plots 2G termination". GSMA Mobile World Live. 4 April 2024. Retrieved 3 October 2024. "The 3G farewell is coming". One NZ. Retrieved 3 October 2024. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. Retrieved 31 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. Retrieved 31 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. Retrieved 31 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. Retrieved 31 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. Retrieved 31 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. Retrieved 31 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. Retrieved 31 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. Retrieved 31 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". TeleGeography. 29 March 2023. "Spark to shutter 3G network in late 2025 to clear space for rural 5G". "Spark to shutter 3G network in late 2025 to clear space for rural 5G". "Spark to shutter 3G network in late 2025 to clear space for rural 5G". "Sp
network closure | Spark NZ". Spark NZ". Spark NZ. Retrieved 3 October 2024.^ "Telia Norge confirms closure of 3G network". TeleGeography. 11 November 2021. Retrieved 3 March 2024.^ "Oman plans 3G shutdown from Q3 2024".
TeleGeography. 27 February 2023. Retrieved 7 March 2023.^ "Jazz to completely phase out 3G services by Nov". Business Recorder. 9 October 2024. Retrieved 11 October 2024. Retrieved 11 October 2024.^ "Jazz Sunsets 3G in Support of Its '4G for All' Vision
Marking 50 Million 4G Subscribers and Driving Digital Transformation". ProPakistani. 18 November 2024. Retrieved 19 August 2022. Retrieved 19 August 2022. Retrieved 19 August 2022. Retrieved 19 August 2024. Retrieved 19 August 2024. Retrieved 19 August 2024. Retrieved 20 August 2024. Retrieved 19 August 2024. Retrieved 19 August 2024. Retrieved 19 August 2024. Retrieved 19 August 2024. Retrieved 20 August 2024. Retrieved 20 August 2024. Retrieved 20 August 2025.
October 2020. T-Mobile Poland to begin 3G switch-off this month. TeleGeography. 2 February 2022. Retrieved 5 February 2022. Retrieved 14 September 2022. Retrieved 14 September 2022. Retrieved 5 February 2022. Retrieved 5 February 2022. Retrieved 14 September 2022. Retrieved 14 September 2022.
TeleGeography, 9 January 2023. Retrieved 11 January 2023. Retrieved 11 January 2023. Retrieved 11 September 2023. Retrieved 11 September 2023. Retrieved 11 September 2023. Retrieved 11 September 2023. Retrieved 11 January 2023. Retrieved 31 March 2023. Retrieved 31 March
 data deixarei de ter acesso rede 3G" (in European Portuguese). MEO. Retrieved 21 October 2023. "Descintinuao 3G" (in European Portuguese). 4 January 2024. Retrieved 21 October 2023. "Desligamento da rede 3G em Portuguese). Vodafone Portuguese). 4 January 2024. Retrieved 21 October 2023. "Descintinuao 3G" (in European Portuguese). Vodafone Portuguese). Vodafone Portuguese). 4 January 2024. Retrieved 21 October 2023. "Descintinuao 3G" (in European Portuguese). Vodafone Portuguese). 4 January 2024. Retrieved 21 October 2023. "Descintinuao 3G" (in European Portuguese). Vodafone Portuguese). Vodafone Portuguese). 4 January 2024. Retrieved 21 October 2023. "Descintinuao 3G" (in European Portuguese). 4 January 2024. Retrieved 21 October 2023. "Descintinuao 3G" (in European Portuguese). 4 January 2024. Retrieved 21 October 2023. "Descintinuao 3G" (in European Portuguese). 4 January 2024. Retrieved 21 October 2023. "Descintinuao 3G" (in European Portuguese). 4 January 2024. Retrieved 21 October 2023. "Descintinuao 3G" (in European Portuguese). 4 January 2024. Retrieved 21 October 2023. "Descintinuao 3G" (in European Portuguese). 4 January 2024. Retrieved 21 October 2023. "Descintinuao 3G" (in European Portuguese). 4 January 2024. Retrieved 21 October 2023. "Descintinua 2024. "Descintinua 2024.
network, refarms 2100MHz spectrum for 4G and 5G". TeleGeography. 29 August 2023. Retrieved 1 September 2023. Retrieved 27 February 2023. "Modernizare reea mobil Vodafone" [Modernisation of Vodafone mobile network] (in Romanian). Vodafone. Retrieved 27 February 2023.
17 April 2025.^ "Beeline starts replacing 3G UMTS-900 with LTE in Moscow city, large parts of Moscow region". TeleGeography. 21 July 2023. Retrieved 9 August 2023.^ "3G network - How much time do I have to switch to a 4G device?"
2024.^ "O2 Slovakia to start 3G shutdown next month; e& purchase gains local approval". TeleGeography. 16 November 2023. Retrieved 19 November
 January 2024. Retrieved 5 January 2024. ^ "Slovak Telekom to begin 3G shutdown on 3 October". TeleGeography. 27 September 2023. Retrieved 26 November 2023. Retrieved 5 January 2024. Telekom Slovenije 3G shutdown by end-September". TeleGeography. 5 April
2022. Retrieved 18 April 2022. "A1 Slovenia to say goodbye to 3G in June". TeleGeography. 26 April 2023. Retrieved 27 April 2023. Retrieved 19 June 2022. Retrieved 19 June 2022. Retrieved 19 June 2022. Retrieved 27 April 2023. TeleGeography. 16 June 2022. Retrieved 19 June 2022. Retrieved 27 April 2023. TeleGeography. 16 June 2022. Retrieved 28 April 2023. TeleGeography. 16 June 2022. Retrieved 29 June 2022. Re
6 September 2022. a b c "cdma users top 30 million". TeleGeography. 19 July 2004. Retrieved 23 January 2021. Terminating 2G Service in Korea: Policy Review. 1 March 2014. Retrieved 23 January 2021. a b "2G Phone Users Create Dilemma for Telecom Carriers ahead of
 Beginning of 5G Era". BusinessKorea. 27 March 2018. Retrieved 24 April 2022.^ a b "2G Bows Out, 5G Grows in South Korea - Older Technologies in Decline". TeleGeography Blog. 5 November 2021. "CDMA2000 Operators - LG U+". CDG. Retrieved 7 July 2023.^ "LGT plans EV-DO Rev. A tests ahead of commercial
 launch in 1H07". TeleGeography. 11 October 2006. Retrieved 31 December 2016.^ "S. Korea to end 2G network services by June". The Korea Herald. 17 January 2021. Retrieved 7 July 2023.^ "SK Telecoms shutters 2G service". TeleGeography. 28 July 2020. Retrieved 28 July 2020. Retrieved 7 July 2023. The Korea Herald. 17 January 2021. Retrieved 23 January 2021. The Korea Herald. 17 January 2021. The Korea Herald. 18 January 2021. The Korea Herald. 19 January 2021. The Korea
2020. "Vodafone activa la fase final del apagado del 3G" (in Spanish). BandaAncha. 12 September 2024. Retrieved 10 October 2024. Retrieved 10 October 2024. Retrieved 10 October 2024. "Vodafone Spain to complete 3G shutdown next month". Data Centre Dynamics Ltd. 16 September 2024. Retrieved 10 October 2024. "Vodafone Spain to complete 3G shutdown next month". Data Centre Dynamics Ltd. 16 September 2024. Retrieved 10 October 2024. "Vodafone Spain to complete 3G shutdown next month". Data Centre Dynamics Ltd. 16 September 2024. "Vodafone Spain to complete 3G shutdown next month". Data Centre Dynamics Ltd. 16 September 2024. Retrieved 10 October 2024. "Vodafone Spain to complete 3G shutdown next month". Data Centre Dynamics Ltd. 16 September 2024. Retrieved 10 October 2024. "Vodafone Spain to complete 3G shutdown next month". Data Centre Dynamics Ltd. 16 September 2024. Retrieved 10 October 2024. "Vodafone Spain to complete 3G shutdown next month". Data Centre Dynamics Ltd. 16 September 2024. Retrieved 10 October 2024. "Vodafone Spain to complete 3G shutdown next month". Data Centre Dynamics Ltd. 16 September 2024. Retrieved 10 October 2024. "Vodafone Spain to complete 3G shutdown next month". Data Centre Dynamics Ltd. 16 September 2024. Retrieved 10 October 2024. "Vodafone Spain to complete 3G shutdown next month". Data Centre Dynamics Ltd. 16 September 2024. Retrieved 10 October 2024. "Vodafone Spain to complete 3G shutdown next month next m
 TeleGeography. 29 April 2022. Retrieved 7 May 2022. Retrieved 6 January 2023. "Nu slcker vi 3G- och 2G-nten - s pverkas du" (in Swedish). Telia. Retrieved 26 November 2023. "Vi allow 2022. "Vi allow 2023." "Vi allow 2023." "Vi allow 2023." "Signification 2023." "Vi allow 2023." "Nu slcker vi 3G- och 2G-nten - s pverkas du" (in Swedish). Telia. Retrieved 26 November 2023." "Vi allow 2023." "Vi a
 frnyar mobilntet vi fasar ut 3G" (in Swedish). Tre. Retrieved 26 November 2023.^ "S br du tnka nr 2G och 3G-ntet avvecklas" (in Swedish). Tre. Retrieved 26 November 2023.^ "So long, 3G". Swisscom.^ "CDMA2000 Operators of the confirms mid-2025 date for 3G shutdown". TeleGeography. 29 November 2023. Retrieved 4 December 2023.^ "So long, 3G". Swisscom.^ "CDMA2000 Operators of the confirms mid-2025 date for 3G shutdown".
Asia Pacific Telecom". CDG. Retrieved 7 July 2023. "FET to decommission 5,000 APT towers post-merger". TeleGeography. 28 March 2023. a b c d "Taiwan to switch off 3G networks by year end". ZDNet. 18
 December 2018. Retrieved 14 April 2021. a b c d "NCC urges updating old phones ahead of 3G shutdown pilot in Warrington". TeleGeography. 30 May 2023. Retrieved 30 May 2023. a "EE's 3G network shutdown to be completed by March
2024". TeleGeography. 19 September 2023. Retrieved 2 October 2023. Retrieved 2 October 2023. Retrieved 26 February 2024. "EE outlines plan to retire
3G in Warrington this summer". EE Ltd. Retrieved 27 May 2025.^ "3G connectivity from EE to be scrapped in Warrington this summer". Warrington this summer. Warrington this summer. EE Ltd. Retrieved 27 May 2025.^ "VMO2 confirms it will complete
3G switch off by end-2025". TeleGeography. 11 September 2023. Retrieved 18 April 2025. Virgin Media O2 (VM O2) has confirmed plans to switch off 3G services from April this year, beginning in the city of Durham. "Vodafone UK to begin retiring
its 3G network in 2023". TeleGeography. 26 January 2022. Retrieved 18 April 2022.^ "Vodafone UK confirms its first 3G network switch-off in June 2023". TeleGeography. 10 May 2023. Retrieved 13 May 2023.^ "Vodafone UK completes
3G shutdown to enhance 4G/5G services". Telecoms Tech News. 28 February 2024. Retrieved 7 July 2023.^ "Appalachian Wireless". CDG. Retrieved 7 July 2023.^ "Appalachian Wireless to shut down 3G/CDMA service this
 month". Mountain Top Media. 4 January 2023. Retrieved 18 March 2023. Retrieved 18 March 2023. Retrieved 18 March 2021. Retrieved 19 Regional US mobile operator Cellcom to
switch off 2G on 1 December; 3G was deactivated in March". TeleGeography. 20 September 2023. Retrieved 2 October 2023. Retrieved 4 May 2023. Retrieved 5 February 2024. TeleGeography. 4 May 2023. TeleGeography. 
network on 22 February". TeleGeography. 31 January 2022. Retrieved 31 January 2022. Retrieved 31 January 2022. Retrieved 31 January 2023. "Wireless Exit FAQs". Silver Star. 20 April 2022. Retrieved 25 January 2023. "Wireless Exit FAQs". Silver Star. 20 April 2023. "Wireless Exit FAQs". Silver St
a b "T-Mobile's 2G, 3G shutdown dates leaked". TeleGeography. 8 February 2021. Retrieved 14 April 2021.^ a b "T-Mobile US to shut down 3G network on 1 July 2022". TeleGeography. 17 September 2021. Retrieved 18 September 2021. TeleGeography. 10 August 2021. TeleGeography. 10 Augu
2021.^ "Sprint reaches the finishing line: legacy LTE networks switched off by T-Mobile". TeleGeography. 4 July 2022. Retrieved 7 July 2022.^ "T-Mobile US commences of July 2022.^ "T-M
CDMA shutdown; expands 5G Home Internet footprint". TeleGeography. 31 March 2022. Retrieved 18 April 2022. "UScellular to switch off CDMA network on
14 January 2024". TeleGeography. 1 December 2023. Retrieved 1 December 2023. Retrieved 1 December 2023. "CDMA 2000 Operators - Verizon Wireless". CDG. Retrieved 7 July 2023. "Verizon to shut down 3G CDMA networks on 31 December 2022". TeleGeography. 31 March 2021. Retrieved 14 April 2021. "Verizon ramps up 5G coverage as 3G shutdown looms"
TeleGeography. 6 December 2022. Retrieved 11 December 2022. Retrieved 1 December 2022. Retrieved 4 March 2025. Media related to 3G at Wikimedia CommonsPrecededby2nd Generation (2G) Mobile Telephony Generations Succeededby4th Generation (4G)Retrieved from "3Mobile phone specification
system project3rd Generation Partnership Project 2Abbreviation3GPP2TypeStandards organizationThe 3rd Generation between telecommunications associations to make a globally applicable third generation (3G) mobile phone system specification within the scope of the ITU's IMT-2000 project. In
 practice, 3GPP2 was the standardization group for CDMA2000, the set of 3G standards based on the earlier cdmaOne 2G CDMA technology. The participating association (North America) and Telecommunications Technology Association
 (South Korea). The agreement was established in December 1998. Ultra Mobile Broadband (UMB) was a 3GPP2 project to develop a fourth-generation successor to CDMA2000. In November 2008, Qualcomm, UMB's lead sponsor, announced it was ending development of the technology, favoring LTE instead. [1] 3GPP2 should not be confused with
 3GPP; 3GPP is the standard body behind the Universal Mobile Telecommunications System (UMTS) that is the 3G upgrade to GSM networks, while 3GPP2 was the standard body behind the Universal Mobile Telecommunications System (UMTS) that is the 3G upgrade to GSM networks, while 3GPP2 was the standard body behind the Universal Mobile Telecommunications System (UMTS) that is the 3G upgrade to GSM networks, while 3GPP2 was the standard body behind the Universal Mobile Telecommunications System (UMTS) that is the 3G upgrade to GSM networks, while 3GPP2 was the standard body behind the Universal Mobile Telecommunications System (UMTS) that is the 3G upgrade to GSM networks, while 3GPP2 was the standard body behind the Universal Mobile Telecommunications System (UMTS) that is the 3G upgrade to GSM networks, while 3GPP2 was the standard body behind the Universal Mobile Telecommunications System (UMTS) that is the 3G upgrade to GSM networks that was used mostly in the Universal Mobile Telecommunications System (UMTS) that is the 3G upgrade to GSM networks that was used mostly in the Universal Mobile Telecommunications System (UMTS) that is the 3G upgrade to GSM networks that was used mostly in the Universal Mobile Telecommunications and the Universal Mobile Telecommunications are upgrade to GSM networks and the Universal Mobile Telecommunications are upgrade to GSM networks and the Universal Mobile Telecommunications are upgrade to GSM networks and the Universal Mobile Telecommunications are upgrade to GSM networks are upgrade to GSM networks and the Universal Mobile Telecommunications are upgrade to GSM networks are upgrade to GSM network
China, Canada, South Korea and India).GSM/UMTS were the most widespread 2G/3G wireless standards worldwide. Most countries used only the GSM family. A few countries used on the GSM family. A few countries used on the GSM family. A few count
group has been dormant ever since. The 3GPP2 website was taken offline in 2023, primarily due to CDMA carriers deploying 3GPP's LTE instead of UMB the decade prior and later shutting down CDMA networks making the 3GPP2 redundant and unneeded. However, as of 2024 the 3GPP2 website has since come back online. Qualcomm halts UMB
 project, Reuters, 13 November 2008^ "3GPP2 Technology Webinar". 3GPP2.3GPP2 Official Web siteAbout 3GPP2TIA U.S. 3GPP2 Standards DeveloperThis article about wireless technology is a stub. You can help Wikipedia by expanding it.vteRetrieved from "4Mobile telecommunications standards body3rd Generation Partnership
 ProjectAbbreviation3GPPFormation1998; 27years ago(1998)TypeStandards organizations. Its best known work is the development and
 maintenance of:[1]GSM and related 2G and 2.5G standards, including GPRS and EDGEUMTS and related 3G standards, including HSPA and HSPA+LTE and related 5G standards, including 5G-AdvancedAn evolved IP Multimedia Subsystem (IMS) developed in an access
 independent manner3GPP is a consortium with seven national or regional telecommunication standards organizations as primary members ("market representation partners"). The 3GPP organizes its work into three different streams: Radio Access Networks,
Services and Systems Aspects, and Core Network and Terminals.[2]The project was established in December 1998 with the goal of developing a specification for a 3G mobile phone system based on the 2G GSM system, within the scope of the International Telecommunications of the International Telecommunications and Terminals.
3GPP.[3] It should not be confused with 3rd Generation Partnership Project 2 (3GPP2), which developed a competence Centre") is located at the European Telecommunications Standards Institute headquarters in the Sophia Antipolis technology park
in France.[5]The seven 3GPP Organizational Partners are from Asia, Europe and North America. Their aim is to determine the general policy and strategy of 3GPP and perform the following tasks: The approval and maintenance of the Partnership Project Description; Take the decision to create or cease a Technical
 Specification Groups, and approve their scope and terms of reference; The approval of Organizational Partner funding requirements; The allocation of human and financial resources provided by the Organizational Partners to the Project Co-ordination Group; Act as a body of appeal on procedural matters referred to them. Together with the Market
 Representation Partners (MRPs) perform the following tasks: The maintenance of the Partnership Project Agreement; The approval of applications for 3GPP partnership; Take the decision against a possible dissolution of Radio Industries
 and Businesses (ARIB)JapanARIBAlliance for Telecommunications Industry Solutions (ATIS)USAATISChina Communications Standards Development Society (TSDSI)IndiaTSDSITelecommunications Technology
 Association (TTA)South KoreaTTATelecommunication Technology Committee (TTC)JapanTTCThe 3GPP Organizational Partners can invite a Market Representation Partner to take part in 3GPP, which: Has the ability to offer market advice to 3GPP and to bring into 3GPP a consensus view of market requirements (e.g., services, features and
 functionality) falling within the 3GPP scope; Does not have the capability and authority to define, publish and set standards within the 3GPP scope; Has signed the Partnership Project Agreement. As of January 2025 [update], the Market Representation Partners are: [6] Market Partnership Project Agreement. As of January 2025 [update], the Market Representation Partners are: [6] Market Partnership Project Agreement. As of January 2025 [update], the Market Representation Partners are: [6] Market Partnership Project Agreement. As of January 2025 [update], the Market Representation Partners are: [6] Market Partnership Project Agreement. As of January 2025 [update], the Market Representation Partners are: [6] Market Partnership Project Agreement. As of January 2025 [update], the Market Representation Partners are: [6] Market Partnership Project Agreement. As of January 2025 [update], the Market Representation Partners are: [6] Market Partnership Project Agreement. As of January 2025 [update], the Market Representation Partnership Project Agreement. As of January 2025 [update], the Market Representation Partnership Project Agreement. As of January 2025 [update], the Market Representation Partnership Project Agreement. As of January 2025 [update], the Market Representation Partnership Project Agreement. As of January 2025 [update], the Market Representation Partnership Project Agreement. As of January 2025 [update], the Market Representation Partnership Project Agreement. As of January 2025 [update], the Market Representation Partnership Partnership Project Agreement. As of January 2025 [update], the Market Representation Partnership Partnersh
Representation PartnersOrganizationWebsite5G-ACIA Automotive Association (6G-IA) Slicing Association (6G-IA) Society of Automotive Association (6G-IA) Society (
Engineers (CSAE) //ctia.org/Global Satellite Operators Association (GSOA) Certification Forum (GCF) mobile Suppliers Association (GSOA) Certification Forum (GCF) mobile Suppliers Association (GSOA) Certification Forum (GCF) mobile Suppliers Association (GSOA) //www.gsma.com/IPV6 Forum Generation Mobile Networks (NGMN) Safety Communication Europe (PSCE) Forum Cell Forum //tcca.info/TD Industry Alliance Broadband Alliance standards are structured as
 Releases. Discussion of 3GPP thus frequently refers to the functionality in one release or another. Version [7] Released [8] InfoPhase 11992GSM Features, EFR Codec, Release 971998 Q1GSM Features, GPRSRelease 981999 Q1GSM Features, AMR codec, EDGE
GPRS for PCS1900Release 992000 Q1Specified the first UMTS 3G networks, incorporating a CDMA air interface[9]Release 42001 Q2Originally called the Release 52002 Q1Introduced IMS and HSDPA[11]Release 62004 Q4Integrated operation with Wireless LAN networks and addsdrease 52002 Q1Introduced IMS and HSDPA[11]Release 62004 Q4Integrated operation with Wireless LAN networks and addsdrease 52002 Q1Introduced IMS and HSDPA[11]Release 52002 Q1Introduced IMS and HSDPA[1
 HSUPA, MBMS, enhancements to IMS such as Push to Talk over Cellular (PoC), GAN[12]Release 72007 Q4Focuses on decreasing latency, improvements to QoS and real-time applications such as VoIP.[13] This specification also focus on HSPA+ (High Speed Packet Access Evolution), SIM high-speed protocol and contactless front-end interface (Near
 Field Communication enabling operators to deliver contactless services like Mobile Payments), EDGE Evolution. Release 82008 Q4First LTE release. All-IP Network (SAE). New OFDMA, FDE and MIMO based radio interface, not backwards compatible with previous CDMA interfaces. Dual-Cell HSDPA. UMTS HNB. Release 92009 Q4SAES
 Enhancements, WiMAX and LTE/UMTS Interoperability. Dual-Cell HSDPA with MIMO, Dual-Cell HSDPA (4 carriers). Release 112012 Advanced fulfilling IMT Adv
Q3Advanced IP Interconnection of Services. Service layer interconnection providers. Heterogeneous networks (HetNet) improvements, Coordinated Multi-Point operation, dual control of Services. Service layer interconnection providers. Heterogeneous networks (HetNet) improvements, Coordinated Multi-Point operation, dual control of Services. Services as well as third-party application providers. Heterogeneous networks (HetNet) improvements, Coordinated Multi-Point operation, dual control of Services. Services as well as third-party application providers.
connectivity, cell discovery, self configuration), Carrier aggregation (2 uplink carriers, FDD/TDD carrier aggregation), MIMO (3D channel modeling, elevation beamforming, massive MIMO), New and Enhanced Services (cost and range of MTC, D2D communication, eMBMS enhancements)[14]Release 132016 Q1LTE-Advanced
Pro. LTE in unlicensed, LTE enhancements for Machine-Type Communication. Elevation Beamforming / Full-Dimension MIMO, Indoor positioning.[15]Release 142017 Q2Energy Efficiency, Location Services (LCS), Mission Critical Data over LTE, Mission Critical Video over LTE, Flexible Mobile Service Steering (FMSS), Multimedia Broadcast
 Supplement for Public Warning System (MBSP), enhancement for TV services over eMBMS, massive Internet of Things, Cell Broadcast Service (CBS)[16]Release 152018 Q2First 5G NR ("New Radio") release. Support for 5G Vehicle-to-x service, IP Multimedia Core Network Subsystem (IMS), Future Railway Mobile Communication System[17]Release.
162020 Q3The 5G System Phase 2: 5G enhancements, NR-based access to unlicensed spectrum (NR-U), Satellite access[18]Release 172022 Q1TSG RAN: Several features that continue to be important for overage Enhancements. RAN1 will
also undertake the necessary study and specification work to enhance the physical layer to support frequency bands up to 71GHz.TSG SA groups focused on further enhancements to the 5G system and enablers for new features and services. Enhanced support of: non-public networks, industrial Internet of Things, low complexity NR devices, edge
computing in 5GC, access traffic steering, switch and splitting support, network automation for 5G, network slicing, advanced V2X service, multiple USIM support, proximity-based services in 5G, 5GC location services, Multimedia Priority Service...[19]Release
182023 Q45G-Advanced. Introducing further machine-learning based techniques at different levels of the wireless network. Edge computing, Evolution of IMS Multimedia Telephony Service, Smart Energy and Infrastructure, Vehicle-Mounted Relays, Low Power High Accuracy Positioning for industrial IoT scenarios, Enhanced Access to and Support
of Network slicing, Satellite backhaul in 5G...[20][21][19]Release 19 [22]2025 Q45G-Advanced. Each release incorporates hundreds of individual Technical Specification and Technical Specification and
are made available without charge on 3GPP's web site. The Technical Specifications cover not only the radio part ("Air Interface") and Core Network, but also billing information and speech coding down to source code level. Cryptographic aspects (such as authentication, confidentiality) are also specified. The 3GPP specification work is done in
Technical Specification Groups (TSGs) and Working Groups (WGs).[23]There are three Technical Specifications Groups, each of which consists of multiple WGs:RAN (Radio Access Network): RAN specifications Groups, each of which consists of multiple WGs:RAN (Radio Access Network): RAN specifications Groups, each of which consists of multiple WGs:RAN (Radio Access Network): RAN specifications Groups, each of which consists of multiple WGs:RAN (Radio Access Network): RAN specifications Groups, each of which consists of multiple WGs:RAN (Radio Access Network): RAN specifications Groups, each of which consists of multiple WGs:RAN (Radio Access Network): RAN specifications Groups, each of which consists of multiple WGs:RAN (Radio Access Network): RAN specifications Groups, each of which consists of multiple WGs:RAN (Radio Access Network): RAN specifications Groups, each of which consists of multiple WGs:RAN (Radio Access Network): RAN specifications Groups (Radio Access Network): RAN specifications (Rad
layer)List of specsRAN WG2RAN2Radio Layer 2 and Radio Layer 3 Radio Resource ControlList of specsRAN WG3RAN3UTRAN, E-UTRAN, MG-RAN architecture and related network interfacesList of specsRAN WG4RAN4Radio performance testingList of specsRAN WG4RAN4Radio performance and protocol aspectsList of specsRAN WG5RAN5Mobile terminal conformance testingList of specsRAN WG4RAN4Radio performance and protocol aspectsList of specsRAN WG5RAN5Mobile terminal conformance testingList of specsRAN WG4RAN4Radio performance and protocol aspectsList of specsRAN WG5RAN5Mobile terminal conformance testingList of specsRAN WG5RAN5Mobile terminal conformance and protocol aspectsList of specsRAN WG5RAN5Mobile terminal conformance testingList of specsRAN WG5RAN5Mobile terminal conformance testingList of specsRAN WG5RAN5Mobile terminal conformance testingList of specsRAN5Mobile terminal conformance testing te
and System Aspects): SA specifies the service requirements and the overall architecture of the 3GPP system. It is also responsible for the coordination of the project. SA is composed of six working groups. WG3SA3SecurityList of specsSA wG3SA3Secu
WG4SA4CodecList of specsSA WG5SA5Management, Orchestration and ChargingList of specsSA WG6SA6ApplicationsList of specsSA WG6SA6Application Enablement and Critical Communication ApplicationsList of specsSA WG6SA6Application Enablement and Critical Communication Applications and ChargingList of specsSA WG6SA6Application Enablement and Critical Communication Applications and ChargingList of specsSA WG6SA6Application Enablement and Critical Communication Applications and ChargingList of specsSA WG6SA6Application Enablement and Critical Communication Applications and ChargingList of specsSA WG6SA6Application Enablement and Critical Communication Applications and ChargingList of specsSA WG6SA6Application Enablement and Critical Communication Applications and ChargingList of specsSA WG6SA6Application Enablement and ChargingList of specsSA WG6SA6Application Enables and Charging Enables and Charging Enables and Charging Enables and Charg
 five working groups.WGShorthandScopeSpecificationsCT WG1CT1User Equipment Core Network protocolsList of specsCT WG2CT2closedCT WG3CT3Interworking with external networksList of specsCT WG4CT4Core Network ProtocolsList of specsCT WG2CT2closedCT WG3CT3Interworking with external networksList of specsCT WG4CT4Core Network ProtocolsList of specsCT WG5CT5closedCT WG4CT4Core Network ProtocolsList of specsCT WG4CT4Core Netw
Access Network): The closure of GERAN was announced in January 2016.[24] The specification work on legacy GSM/EDGE system was transferred to RAN WG, RAN6. RAN6 was announced in July 2020 (.The 3GPP structure also includes a Project Coordination Group, which is the highest decision-making body. Its missions include the management of
overall timeframe and work progress.3GPP standardization work is contribution-driven. Companies ("individual members") participate through their members.[25]Specification work is done at WG and at TSG level:[26]the 3GPP WGs hold several
meetings a year. They prepare and discuss change requests against 3GPP specifications. A change request accepted at WG level is called "agreed". the TSGs can "approve" the change requests that were agreed at WG level. Some specifications are under the direct responsibility of TSGs and therefore,
change requests can also be handled at TSG level. The approved change requests are subsequently incorporated in 3GPP specifications defined in ITU-T Recommendation I.130:[27]stage 1 specifications defined in ITU-T Recommendation IIII specifications defined in ITU-T Recommendation III specification III specification III specification III specification III specification III specification I
to support the service requirements.stage 3 specifications define an implementation of the architecture by specifications are grouped into releases. A release consists of a set of internally consistent set of features and specifications. Timeframes
are defined for each release by specifying freezing dates. Once a release is frozen, only essential corrections are defined for each stage. The 3GPP specifications are transposed into deliverables by the Organizational Partners. List of mobile phone
generationsUniversal Mobile Telecommunications System (UMTS)3GPP Long Term EvolutionEvolution to 3GIP Multimedia Subsystem3GP3GPP2 The 3GPP's counterpart in the CDMA2000 sphere.GSM services & Protocols for Advanced Networks (TISPAN)Open Mobile AllianceService data
 adaptation protocolService layerEuropean Telecommunications Standards Institute 3GPP Scope and Objectives, 31 August 2007 "About 3GPP". 3GPP Background". 7 June 2000. Archived from the original on 6 July 2000. 3rd Generation Partnership Project 2". Archived from the original on 23 January 2004.
 Retrieved 25 November 2012.^ "Mobile Competence Centre". 3GPP. Retrieved 10 March 2019.^ a b "Partners". 3GPP. Retrieved 1 January 2025.^ Releases 99, Summary of all Release 99, Features. ETSI Mobile Competence Centre,
 Version xx/07/04^ Overview of 3GPP Release 4, Summary of all Release 4 Features, v.1.1.0 (draft) ETSI Mobile Competence Centre, Version 9 September 2003^ Overview of 3GPP Release 6, Summary of all Release 6 Features, Version TSG #33, ETSI Mobile Competence
 Centre 2006^ Review of the Work Plan at Plenaries #31, 3GPP, SP-060232 3GPP TSG SA#31 Sanya, 1316 March 2006^ "Highlights of 3GPP Release 12". Retrieved 20 November 2014.^ "3GPP Portal > Specifications". portal.3gpp.org. Retrieved 27 October 2016.^ "3GPP Portal >
 Specifications". portal.3gpp.org. Retrieved 27 October 2016.^ "3GPP Portal > Specifications". portal.3gpp.org. Retrieved 25 August 2022.^ "Release 18". 3gpp.org. Retrieved 25 November 2021.^ "5G-Advanced's system architecture
 begins taking shape at 3GPP". Nokia. Retrieved 25 November 2021.^ "Release 19". 3GPP. Retrieved 8 September 2024.^ "Specification Groups". Archived from the original on 9 May 2011. Retrieved 11 April 2011.^ closure of GERAN^ 3GPP membership^ 3GPP TR 21.900 Technical Specification Group working methods^ ITU-T Recommendation
I.1303GPP website3GPP Standards List of Acronyms & Terminology3GPP freely published, detailed technical specification numbering Tool for visualizing multiple inter-related 3gpp standards List of Acronyms & Terminology3GPP freely published, detailed technical specification numbering Tool for visualizing multiple inter-related 3gpp standards List of Acronyms & Terminology3GPP freely published, detailed technical specifications numbering Tool for visualizing multiple inter-related 3gpp standards List of Acronyms & Terminology3GPP freely published, detailed technical specifications numbering Tool for visualizing multiple inter-related 3gpp standards List of Acronyms & Terminology3GPP freely published, detailed technical specification numbering Tool for visualizing multiple inter-related 3gpp standards List of Acronyms & Terminology3GPP freely published, detailed technical specification numbering Tool for visualizing multiple inter-related 3gpp standards List of Acronyms & Terminology3GPP freely published, detailed technical specification numbering Tool for visualizing multiple inter-related 3gpp standards List of Acronyms & Terminology3GPP freely published, detailed technical specification numbering Tool for visualizing multiple inter-related 3gpp standards List of Acronyms & Terminology3GPP freely published, detailed to the specific s
messages defined by 3gppLTE-3GPP.info: online 3GPP messages decoder fully supporting Rel.15Retrieved from "5Multimedia file format families3GPFilename extension.3gp, .3gppInternet mediatypevideo/3gppUniform Type Identifier(UTI)public.3gppDevelopedby3GPPInitial release4April 2003; 22 years ago(2003-04-04)[1]Latest
release17.0.0[1]7April 2022; 3 years ago(2022-04-07) Type of format? YesFree f
release January 2004; 21 years ago(2004-01)[2] Latest release C.S0050-B v1.0[2] September 2024; 9months ago(2024-09) Type of format? Yes Free 
 Project (3GPP) for 3G UMTS multimedia services, largely based on MPEG-4 Part 12. A 3GP container may consist of H.263 or H.264 video codecs or AMR or AAC-LC audio codecs. 3G2 (3GPP2 file format) is a multimedia container format defined by the 3GPP2 for 3G CDMA2000 multimedia services. It is very similar to the 3GP file format but
consumes less space and bandwidth, and has some extensions and limitations in comparison to 3GP.3GP is defined in the ETSI 3GPP technical specification.[1] 3GP is a required file format for video and associated speech/audio media types and timed text in ETSI 3GPP technical specifications for IP Multimedia Subsystem (IMS), Multimedia
Messaging Service (MMS), Multimedia Broadcast/Multicast Service (PSS).[3][4][5][6]3G2 is defined in the 3GPP2 technical specification.[2]The factual accuracy of parts of this article (those release 12 of 2016 p.65)) may be compromised due to out-
of-date information. The reason given is: 3GP has expanded codec lists while 3G2 has stagnated. Please help update this article to reflect recent events or newly available information. (February 2021)Relations between ISO Base Media File Format, MP4 File Format, MP4 File Format, and 3GPP2 file format. Based on the 3GPP2 technical specification
MPEG-4 Part 12. The 3GP and 3G2 file format were designed to decrease storage and bandwidth requirements to accommodate mobile phones. They are good for lower end smartphones for faster streaming & download.3GP and 3G2 are similar standards, but with some differences: 3GPP file format was designed for GSM-based phones and may have
the filename extension .3gp3GPP2 file format was designed for CDMA-based phones and may have the filename extension for 3GP video. The 3GP file format stores video streams as AMR-WB, AMR-WB+, AAC-LC, HE-
AAC v1 or Enhanced aacPlus (HE-AAC v2). 3GPP allowed use of AMR and H.263 codecs in the ISO base media file format (MPEG-4 Part 12), because 3GPP specified the usage of the Sample Entry and template fields in the ISO base media file format (MPEG-4 Part 12), because 3GPP specified the usage of the Sample Entry and template fields in the ISO base media file format (MPEG-4 Part 12), because 3GPP specified the usage of the Sample Entry and template fields in the ISO base media file format (MPEG-4 Part 12), because 3GPP specified the usage of the Sample Entry and template fields in the ISO base media file format (MPEG-4 Part 12), because 3GPP specified the usage of the Sample Entry and template fields in the ISO base media file format (MPEG-4 Part 12), because 3GPP specified the usage of the Sample Entry and template fields in the ISO base media file format (MPEG-4 Part 12), because 3GPP specified the usage of the Sample Entry and template fields in the ISO base media file format (MPEG-4 Part 12), because 3GPP specified the usage of the Sample Entry and template fields in the ISO base media file format (MPEG-4 Part 12), because 3GPP specified the usage of the Sample Entry and template fields in the ISO base media file format (MPEG-4 Part 12), because 3GPP specified the usage of the Sample Entry and template fields in the ISO base media file format (MPEG-4 Part 12), because 3GPP specified the usage of the Sample Entry and the ISO base media file format (MPEG-4 Part 12), because 3GPP specified the usage 3GPP specified the usage
registration authority for code-points in ISO base media file format ("MP4 Family" files).[11][12] For the storage of MPEG-4 media specific information in 3GP files, the 3GP specification refers to MP4 and the AVC file format, which are also based on the ISO base media file format. The MP4 and the AVC file format specifications described usage of
MPEG-4 content in the ISO base media file format. [8]A 3GP file is always big-endian, storing and transferring the most significant bytes first. [citation needed]The 3G2 file format. In addition, 3G2 stores audio streams as EVRC, EVRC-B, EVRC-WB, 13K
(QCELP), SMV or VMR-WB, which was specified by 3GPP2 for use in ISO base media file format.[12] The 3G2 specification also defined some enhancements to 3GPP Timed Text. 3G2 file format does not store Enhanced aacPlus (HE-AAC v2) and AMR-WB+ audio streams.[7] For the storage of MPEG-4 media (AAC audio, MPEG-4 Part 2 video, MPEG-4
Part 10 H.264/AVC) in 3G2 files, the 3G2 specification refers to the MP4 file format and the AVC file format specification, which described usage of this content in the ISO base media file format specification, which described usage of this content in the ISO base media file format specification, which described usage of this content in the ISO base media file format specification, which described usage of this content in the ISO base media file format. For the storage of H.263 and AMR content in the ISO base media file format specification refers to the MP4 file format specification.
playback and recording of video in 3GP format (memory, maximum filesize for playback and recording, and resolution limits exist and vary).[citation needed]Some newer/higher-end phones without 3G capabilities may also playback and record in this format (again, with said limitations).[citation needed]Audio imported from CD onto a PlayStation 3
when it is set to encode to the MPEG-4 AAC format copies onto USB devices in the 3GP format. [citation needed]The Nintendo 3DS used 3GP technology to play YouTube videos. Apple iDevices used to support files for playback only as passthrough files, hence no editing ability, but since iOS 9 this has been deprecated meaning files of this format have
to be manually converted to H.264.[citation needed]When transferred to a computer, 3GP movies can be viewed on Microsoft Windows, Apple macOS, and the various Linux-based operating systems; on the former two with VLC media
player.[15] Programs such as Media Player Classic, K-Multimedia Player, and GOM Player, and GOM Player, and GOM Player can also be used.3GP and Windows using the open source AtomicParsley command-line utility.
 17 computer programming portalComparison of (audio/video) container formatsSIF (Source Input Format) a b c ETSI 3GPP 3GPP TS 26.244; Transparent end-to-end packet switched streaming service (PSS); 3GPP file format (3GP) Retrieved on 2009-06-02. a b c "3GPP2 C.S0050, 3GPP2 File Formats for
 Multimedia Services, File Format for Multimedia Services for cdma2000". 3GPP TS 26.234; Transparent end-to-end Packet-switched Streaming Service (PSS); Protocols and codecs Page 58. Retrieved on 2009-06-02. ETSI (2009-01) ETSI TS 126 140 V8.0.0
(2009-01); 3GPP TS 26.140; Multimedia Messaging Service (MMS); Protocols and codes Page 11. Retrieved on 2009-06-02. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346; Multimedia Broadcast/Multicast Service (MBMS); Protocols and codes Page 11. Retrieved 2009-10-13. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346; Multimedia Broadcast/Multicast Service (MBMS); Protocols and codes Page 11. Retrieved 2009-10-13. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346; Multimedia Broadcast/Multicast Service (MBMS); Protocols and codes Page 11. Retrieved 2009-10-13. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346; Multimedia Broadcast/Multicast Service (MBMS); Protocols and codes Page 11. Retrieved 2009-10-13. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346; Multimedia Broadcast/Multicast Service (MBMS); Protocols and codes Page 11. Retrieved 2009-10-13. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346; Multimedia Broadcast/Multicast Service (MBMS); Protocols and codes Page 11. Retrieved 2009-10-13. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346; Multimedia Broadcast/Multicast Service (MBMS); Protocols and codes Page 11. Retrieved 2009-10-13. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346; Multimedia Broadcast/Multicast Service (MBMS); Protocols and codes Page 11. Retrieved 2009-10-13. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346; Multimedia Broadcast/Multicast Service (MBMS); Protocols and codes Page 11. Retrieved 2009-10-13. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346; Multimedia Broadcast/Multicast Service (MBMS); Protocols and codes Page 11. Retrieved 2009-10-13. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346; Multimedia Broadcast/Multicast Service (MBMS); Protocols and codes Page 11. Retrieved 2009-10-13. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346; Multimedia Broadcast/Multicast Service (MBMS); Protocols and codes Page 11. Retrieved 2009-10-13. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346 V8.3.0 (2009-06); 3GPP TS 26.346 V8.3.0 (2009-06); 3GPP TS 26.346 V8.3.0 (2009-06); 3GPP TS
(2009-01); 3GPP TS 26.141; IP Multimedia System (IMS) Messaging and Presence; Media formats for Multimedia Services (PDF). 3GPP2. 18 May 2007. pp.67, 68. Archived from the original (PDF) on 7 October 2009. Retrieved 2009-06-12. ^ a
b "3GPP TS 26.244; Transparent end-to-end packet switched streaming service (PSS); 3GPP file format (3GP)" (PDF). ETSI 3GPP. 2008-12-11. p.9. Retrieved 2009-05-30. ^ "ISO Base Media File Format white paper Proposal". April 2006. Archived from the original on 2008-07-14. Retrieved 2009-12-26. ^ "ISO Base Media File Format white paper Proposal".
Proposal". Chiariglione. October 2009. Retrieved 2009-12-26. TSO/IEC 14496-12:2008, Information technology -- Coding of audio-visual objects -- Part 12: ISO base media file format (PDF). International Organization for Standardization.
 "MP4 Family" files mp4ra.org. 2008. Archived from the original on 2009-04-19. Retrieved 2020-07-25.^ "What's New in QuickTime 6.3 + 3GPP". Apple, Inc. Retrieved 2020-07-25.^ "VLC Media Player features". VLC. Retrieved 2020-07-25.^ "FFmpeg, General
Documentation, Supported File Formats and Codecs". FFmpeg. Retrieved 2009-06-11.^ "AtomicParseley". Wez Furlong. Retrieved 2024-06-24.3GPP codecs specifications; 3G and beyond / GSM, 26 series3GPP file format (3GP); 3GPP TS 26.244; Transparent end-to-end packet switched streaming service (PSS) - specification3GPP2
specifications3GPP2 File Formats for Multimedia Services; 3GPP2 C.S0050-B Version 1.0 - specificationRFC3839, MIME Type Registrations for 3GPP2 Multimedia FilesRFC4281, The Codecs Parameter for "Bucket" Media Types3GP & 3G2 File
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help update this article to reflect recent events or newly available information. (February 2021)Relations between ISO Base Media File Format, 3GPP file format and 3GPP2 technical specification published on 18 May 2007. [7] The 3GP and 3G2 file format are both structurally based on the ISO base
media file format defined in ISO/IEC 14496-12 MPEG-4 Part 12,[8][9][10] but older versions of the 3GP and 3G2 are container formats similar to MPEG-4 Part 12. The 3GP and 3G2 file format were designed to decrease storage and bandwidth
requirements to accommodate mobile phones. They are good for lower end smartphones for GSM-based phones and may have the filename extension .3gp3GPP2 file format was designed for CDMA-based phones and may
have the filename extension .3g2Some cell phones use the .mp4 extension for 3GP video.The 3GP file format stores video streams as MPEG-4 Part 2, H.263, or MPEG-4 Part 10 (AVC/H.264), and audio streams as MPEG-4 Part 2, H.263, or MPEG-4 Part 10 (AVC/H.264), and audio streams as AMR-NB, AMR-WB +, AAC-LC, HE-AAC v1 or Enhanced aacPlus (HE-AAC v2).
ISO base media file format (MPEG-4 Part 12), because 3GPP specified the usage of the Sample Entry and template fields in the ISO base media file format ("MP4 Family" files).[11][12] For
the storage of MPEG-4 media specific information in 3GP files, the 3GP specification refers to MP4 and the AVC file format, which are also based on the ISO base media file format. [8]A 3GP file is always big-endian, storing and
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needed]The Nintendo 3DS used 3GP technology to play YouTube videos. Apple iDevices used to support files for playback only as passthrough files, hence no editing ability, but since iOS 9 this has been deprecated meaning files of this format have to be manually converted to H.264. [citation needed]When transferred to a computer, 3GP movies can be
viewed on Microsoft Windows, Apple macOS, and the various Linux-based operating systems; on the former two with VLC media player, [15] Programs such as Media Player Classic, K-Multimedia Player, Totem, RealPlayer, MPlayer, MPlayer, and on all three with VLC media players), and on all three with VLC media players, and on al
and GOM Player can also be used.3GP and 3G2 files can be encoded with open source software FFmpeq.[16] Media tags can be read and written on Linux, macOS and Windows using the open source AtomicParsley command-line utility.[17]computer programming portalComparison of (audio/video) container formatsSIF (Source Input
Format)CIF (Common Intermediate Format) a b c ETSI 3GPP 3GPP TS 26.244; Transparent end-to-end packet switched streaming service (PSS); 3GPP file Formats for Multimedia Services, File Format for Multimedia Services for cdma2000". 3GPP2. 2003. Retrieved 2009-06-02.
06-12. ^ ETSI (2009-04) ETSI TS 126 234 V8.2.0 (2009-04); 3GPP TS 26.234; Transparent end-to-end Packet-switched Streaming Service (PSS); Protocols and codecs Page 58. Retrieved on 2009-06-02. ^ ETSI (2009-01); 3GPP TS 26.140; Multimedia Messaging Service (MMS); Media formats and codes Page 11.
Retrieved on 2009-06-02. "ETSI TS 126 346 V8.3.0 (2009-06); 3GPP TS 26.346; Multimedia Broadcast/Multicast Service (MBMS); Protocols and codecs". ETSI, June 2009. p.85. Retrieved 2009-10-13. ETSI TS 126 141 V8.0.0 (2009-01); 3GPP TS 26.141; IP Multimedia System (IMS) Messaging and Presence; Media formats and
codecs Page 10. Retrieved on 2009-06-02. a b c d "3GPP2 C.S0050-B Version 1.0, 3GPP2 File Formats for Multimedia Services" (PDF). 3GPP2. 18 May 2007. pp.67, 68. Archived from the original (PDF) on 7 October 2009. Retrieved 2009-06-12. a b "3GPP TS 26.244; Transparent end-to-end packet switched streaming service (PSS); 3GPP file format
(3GP)" (PDF). ETSI 3GPP. 2008-12-11. p.9. Retrieved 2009-05-30. ^ "ISO Base Media File Format white paper Proposal". Chiariglione. October 2009. Retrieved 2009-12-26. ^ "ISO/IEC 14496-12:2008. Information
technology -- Coding of audio-visual objects -- Part 12: ISO base media file format" (PDF). International Organization for Standardization authority for code-points in "MP4 Family" files mp4ra.org. 2008. Archived from the original on 2009-04-19. Retrieved 2009-05-31.
 "File types supported by Windows Media Player". Microsoft. Retrieved 2020-07-25.^ "VLC Media Player features". VLC. Retrieved 2020-07-25.^ "FFmpeg, General Documentation, Supported File Formats and Codecs". FFmpeg. Retrieved 2020-06-11.^ "AtomicParseley". Wez
Furlong. Retrieved 2024-06-24.3GPP codecs specifications; 3G and beyond / GSM, 26 series3GPP file format (3GP); 3GPP TS 26.244; Transparent end-to-end packet switched streaming service (PSS) - specification3GPP2 specification3GPP2 File Formats for Multimedia Services; 3GPP2 C.S0050-B Version 1.0 - specificationRFC3839, MIME Type
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Registrations for 3rd Generation Partnership Project (3GPP) Multimedia filesRFC4393, MIME Type Registrations for 3GP2 Multimedia FilesRFC4281, The Codecs Parameter for "Bucket" Media Types3GP & 3G2 File FormatsRetrieved from " 7The following pages link to 3GP and 3G2 External tools(link counttransclusion countsorted list) See help page for transcluding these entriesShowing 50 items. View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)Au file format (links | edit)JTU-T (links | edit)JPEG (links | ed

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