Augmented Reality & Video Service Emerging Technologies

Skype, YouTube & H.264/MPEG-4 AVC

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 Skype is a service that supports video chat and voice call service applications





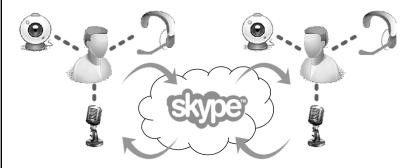
Skype

"Skype" was derived from "sky" and "peer-to-peer"





 Skype communicates voice using a microphone, speaker, video webcam over the Internet





Skype

- Hybrid peer-to-peer and client & server system
- Audio codecs supported
 - G.729, SVOPC, SILK, and Opus
- Video codecs supported
 - H.264
- Applications
 - VoIP (Voice-over-IP), Video Conferencing, Instant Messaging, and File Transfer



- Skype video conference calls can be made from various platforms using smartphones, tablets, and PCs
- Desktop Client OSs (Operating Systems)
 - Windows XP
 - Windows Vista
 - Windows 7
 - · Windows 8 and Windows 8.1
 - Windows 10



- **Universal Windows Platform Client OSs**
 - Windows 10
 - Windows 10 Mobile
 - HoloLens



- OS X (10.6 or newer)
- Linux (Ubuntu and others)
- Linux (Alpha version)
 - Client using WebRTC technology







- Other Mobile Device OSs
 - iOS (Apple's iPhone & iPad)
 - Android
 - BlackBerry 10
 - Fire OS
 - Nokia X
 - Previously available for selected
 Symbian and BlackBerry OS devices



Skype

- Skype calls to other Skype users within the Skype service are free
- Skype can also be used in making traditional phone calls to landline telephones and mobile phones for a debit based user account charge using Skype Credit or by subscription



- Similar technologies that support
 VoIP and Video Conferencing include
 SIP (Session Initiation Protocol) and H.323
 based services
- Used by companies like Linphone and Google Hangouts







Skype History

- 2003, Skype was founded by Niklas
 Zennström (Sweden) and Janus Friis
 (Denmark) based on the software created
 by Ahti Heinla, Priit Kasesalu, and Jaan
 Tallinn (Estonia)
- 2003 August 29, the first public beta version of Skype was released



Skype History

- 2005 June, Skype made an agreement with the Polish web portal Onet.pl which enabled integration in to the Polish market
- 2005 September 12, eBay Inc. agreed to acquire Skype Technologies SA for approximately US \$2.5 billion



Skype History

 2009 September 1, based on Skype's value of US \$2.75 billion, eBay announced it was selling 65% of Skype (to Silver Lake, Andreessen Horowitz, and the Canada Pension Plan Investment Board) for US \$1.9 billion



Skype History

- 2010, Skype had 663 million registered users
- 2011 May 10, Microsoft acquired Skype for US \$8.5 billion and began to integrate Skype services into Microsoft products





Skype History

 2013 February 27, Microsoft introduced Office 2013 which included 60 Skype world minutes per month in the Office 365 consumer plans, which was for Home and Personal, and Universities





Skype History

2013 April 8~30, the Windows
 Live Messenger instant messaging service
 was phased out in favor of promoting
 Skype (but Messenger use continued in mainland China)





Skype History

- 2014 November 11, Microsoft announced that Lync would be replaced by Skype for Business in 2015
 - Later versions included combined features of Lync and the consumer Skype software
 - E-organizations were given the option to switch their users from the default Skype for Business interface to the Skype for Business (Lync) interface

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References

References

- W. Mazurczyk, M. Karas, K. Szezypiorski, and A. Janicki, "Youskyde: information hiding for skype video traffic," Multimedia Tools and Applications, pp. 1-20, 2015.
- L. B. Aal, J. N. Parmar, V. R. Patel, and D. J. Sen, "Whatsapp, Skype, Wickr, Viber, Twitter and Blog are Ready to Asymptote Globally from All Corners during Communications in Latest Fast Life," Research J. Science and Tech., vol. 6, no. 2, pp. 101-116, 2014.
- Skype, http://www.skype.com
- · Wikipedia, http://www.wikipedia.org

Image Sources

- Skype Logo, By Skype (http://www.skype.com) [Public domain], via Wikimedia Commons
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References

- A. C. Begen, T. Akgul, and M. Baugher, "Watching Video over the Web, Part 1: Streaming Protocols," IEEE Internet Computing, Mar./Apr. 2011.
- I. Sodagar, "The MPEG-DASH Standard for Multimedia Streaming Over the Internet," IEEE MultiMedia, Oct.-Dec. 2011.
- J. Anorga, S. Arrizabalaga, B. Sedano, M. I. Alonso-Arce, and J. Mendizabal, "YouTube's DASH implementation analysis," in Proc. IEEE CCSC, 2015.
- D. K. Krishnappa, D. Bhat, and M. Zink, "DASHing YouTube an analysis of using DASH in YouTube video service," in Proc. 38th IEEE Conf. LCN, 2013.
- Youtube, http://www.youtube.com
- · Wikipedia, http://www.wikipedia.org

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- Hangouts Logo, By Google [Public domain], via Wikimedia Commons
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