



History of Streaming Media [Infographic]

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We used to live in a world where watching a video on the internet meant [waiting 28 hours for the file to download](#). I'm referring to the turn of the century, back when dial-up internet was cutting-edge and the term smartphone hadn't made its way into common lexicon.

Table of contents

- [1990-2000: Streaming Debuts as a Proof of Concept](#)
- [2001-2010: The Era of Flash and RTMP](#)
- [2011-2019: Live Broadcasting Is Brought to the Masses](#)
- [2020-2022: COVID-19 Ushers in a Streaming Boom, Flash Dies, and the Rise of FAST](#)
- [2023 – Onward: Streaming Is Here to Stay](#)

What else was happening, you ask? Well, risk-takers like myself were illegally downloading music to the family desktop via the peer-to-peer sharing site [Kazaa](#). And Netflix was disrupting the movie rental

industry by mailing DVDs to subscribers
(how avant garde!)

It goes without saying that [streaming video](#) was in its infancy — but the stage was set for what would come. In fact, many of the budding technologies at the time still play a role in video delivery.

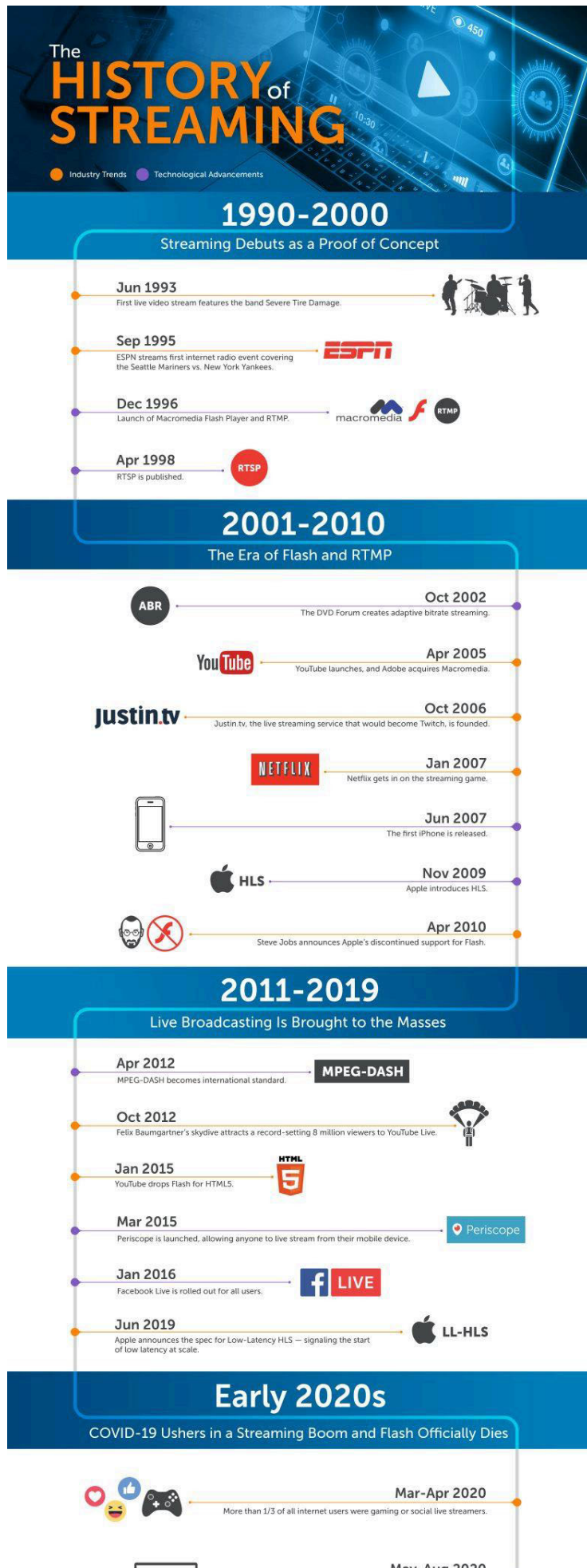
Flash forward to today. The idea of having to wait for a video to download rather than watching it [on demand](#) is akin to commuting to work in a horse-drawn carriage. Besides, who's still going into an office these days, anyways?

Live and [video on demand \(VOD\) streaming](#) is now ingrained into everyday life. We conduct business meetings over Zoom, scream at porch pirates through our doorbell cams, and [sweat to fitness routines on connected gym equipment](#). Robotic vacuums, smartwatches, and [medical devices](#) all have real-time streaming capabilities built in. Binging shows on Netflix is now a common leisure activity, whereas Facetiming is a verb in the Oxford Languages dictionary.

Just imagine the [COVID-19 pandemic](#) without streaming. That wedding you

attended from your living room couch? It wouldn't have ever taken place. And the opportunity to escape the pandemic doldrums by binging The Queen's Gambit? Forget about it.

These days, [online video isn't just popular](#), it's a part of how we live. So how did we get here? **Let's take a trip through the history of streaming.**





[Download The Future of Video Technologies](#)

1990-2000: Streaming Debuts as a Proof of Concept

It all starts in the good old nineties. Beanie babies were all the rage, the Macarena was about to go viral, and Gwen Stefani was still punk rock.

Meanwhile, another decidedly less-punk-rock band was making waves in the tech world. I'm talking about Severe Tire Damage, [the first live internet band](#). Just as many famous startups trace their origin to a Silicon Valley garage, so too does Severe Tire Damage. And because the band members had some hook-ups in the tech community, they were the subjects of the first live stream to ever include both audio and video. This was achieved using a technology called [MBone](#). [According to one of the band](#)

[members](#), the broadcast used up about half of the total available bandwidth for the internet at that time.

The very next year, the Rolling Stones joined Severe Tire Damage as live streaming pioneers. And shortly after that, ESPN took advantage of [live audio streaming](#) for the Seattle Mariners vs. New York Yankees game.

Some key technologies entered the picture during this decade as well. Forget about MBone, we're talking the Macromedia (later Adobe) Flash Player, and two [streaming protocols](#) that remain relevant today: the [Real-Time Messaging Protocol \(RTMP\)](#) and the [Real-Time Streaming Protocol \(RTSP\)](#).

2001-2010: The Era of Flash and RTMP

As bandwidth grew and [compression technologies](#) advanced, Adobe Flash became synonymous with video streaming. Meanwhile, RTMP worked behind the scenes as the quarterback.

The concept of internet video also began to play a role in mass media — with streaming

services like YouTube, Justin.tv (which would become Twitch), and Netflix taking off. Broadband penetration was increasing and mobile cellular technologies were advancing. Adobe Flash was living its best life, [powering 98% of internet browsers](#).

And then Steve Jobs decided to shake things up.

In his now infamous memo, [Thoughts on Flash](#), the CEO of Apple criticized Flash for being proprietary. He then hammered the nail in the coffin by announcing that the iPhone would not support Flash. Instead, Apple would stream video using its own proprietary format: [HTTP Live Streaming \(HLS\)](#).

2011-2019: Live Broadcasting Is Brought to the Masses

Truth be told, Steve Jobs had a point. Moving away from Flash had plenty of benefits. Specifically, HTTP-based technologies outperform the RTMP protocol

in terms of both scale and quality. That's because they allow content distributors to distribute chunk-based [adaptive bitrate](#) media files across web servers rather than requiring dedicated streaming servers.

The move to adaptive streaming helped combat buffering and improve caching efficiency in one fell swoop. But, in dethroning RTMP, we were left with a new set of proprietary technologies looking to seize the throne (including Apple HLS, Microsoft Smooth, and Adobe HDS). For that reason, [MPEG-DASH](#) was developed in 2012 as an alternative to vendor-specific technologies.

And so, when YouTube moved from Flash to HTML5, it chose DASH as its default protocol. But this introduced a new problem: [latency](#).

Live streaming flourished during the 2010s, as well as video consumption on mobile devices. But so did latency. For instance, when eight million people watched Felix Baumgartner break the sound barrier on YouTube Live, [the broadcast actually came with a 20-second delay](#).

2020-2022: COVID-19 Ushers in a Streaming Boom, Flash Dies, and the Rise of FAST

During the first years of the 2020s, live video streaming became ubiquitous.

Pandemic-mandated social distancing meant that collaboration and entertainment took place online. 2020 was also the year that Flash officially died, so broadcasters looked to streaming protocols like [Web Real-Time Communications \(WebRTC\)](#), [Low-Latency HLS](#), [CMAF for DASH](#), and [Secure Reliable Transport \(SRT\)](#) to address latency concerns and power interactive content.

Some highlights of the early 2020s included the [first entirely virtual NFL draft](#), [Nasa and SpaceX's launch to the International Space Station](#), and [more than 3.3 trillion Zoom meetings](#). Use cases like [telehealth](#), [digital fitness](#), and [live commerce](#) became second nature to consumers around the world.

People didn't consume less video even as pandemic restrictions loosened. Rather, the industry presented consumers with an

overwhelming number of choices. Netflix changed the game — and having Hulu around maintained a healthy level of competition — but 2021-2022 saw the births and continued rises of platforms including Disney+, Peacock, Paramount+, Apple TV+, HBO Max, Amazon Prime Video, YouTube TV, fubo TV, Sling TV, and more.

Content that was once between Netflix and Hulu dispersed between these other platforms. Viewers had to pay for a handful of services instead of one or two, racking up the cost in a way they were hoping to escape from with cable and satellite. In mid-2021, the average U.S. household paid for 5.2 unique streaming platforms. The result? Subscription fatigue.

It started to seem as if what was once an innovative idea had come full circle. Countless consumers began cord-cutting in favor of VOD streaming services, but when the market became oversaturated with them, they began turning to another solution: FAST. Free ad-supported television works like cable TV because it's linear, live programming, but accessible on Internet-connected devices. FAST experienced exponential growth in the first few years of the 2020s, [growing by 103%](#) in viewership in

2021 and is expected to reach an industry value of [\\$4.1 billion by 2023](#), up from \$2.1 billion over a two-year period.

This time period also saw an increasing number of companies explore [extended reality and metaverse projects](#). From touring houses virtually and immersive language learning to 3D gaming, the metaverse promises lots of potential when it comes to next-generation video streaming. Broader adoption is still limited — headsets are expensive and there is no singular or unified “metaverse” — but companies began to explore XR more thoroughly in 2021-2022 and will only continue to invest in the technology.

2023 – Onward: Streaming Is Here to Stay

Video technology now powers everything, for everyone, everywhere. Find out what lies ahead by [downloading our free report](#) — or [subscribe to our blog](#) to stay updated.

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Traci Ruether is a Colorado-based B2B tech writer with a background in streaming and network infrastructure. Aside from writing, Traci enjoys cooking, gardening, and spending quality time with her kith and kin. Follow her on LinkedIn at <https://linkedin.com/in/traci-ruether/> or learn more at <https://traciruether.com/>.

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