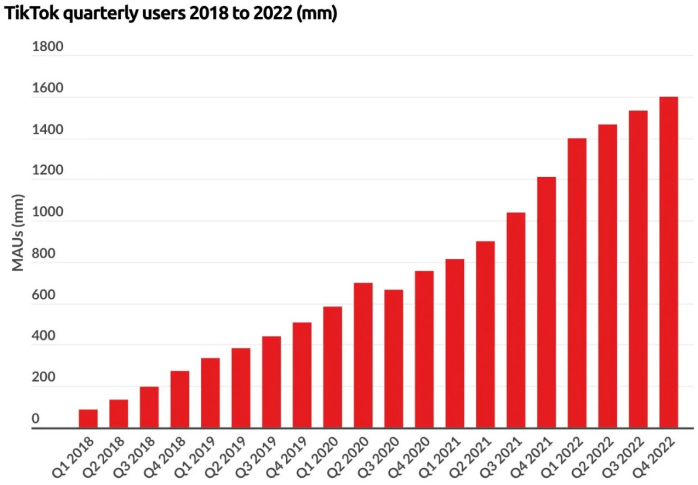
TikTok Performance

TikTok VoD by the numbers

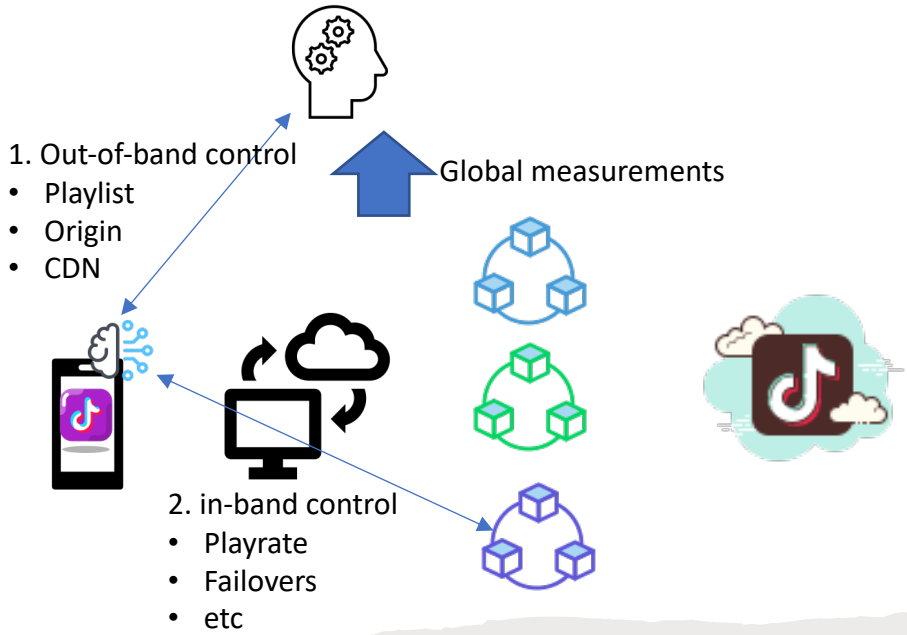
- Over a billion daily active users all over the world (except China, which runs the counter part DouYin)
- Most videos are 15-60 seconds long
- Active users on average spend ~100 minutes per day on the app
  - That translates to dozens of video clips they watch
- Micro-influencers had much higher (5x) engagement rate on TikTok than other major social app platforms
  - Good UI design and Recommendation engine played big role
  - So are the delivery performance



TikTok users by quarter. Source: Business of Apps

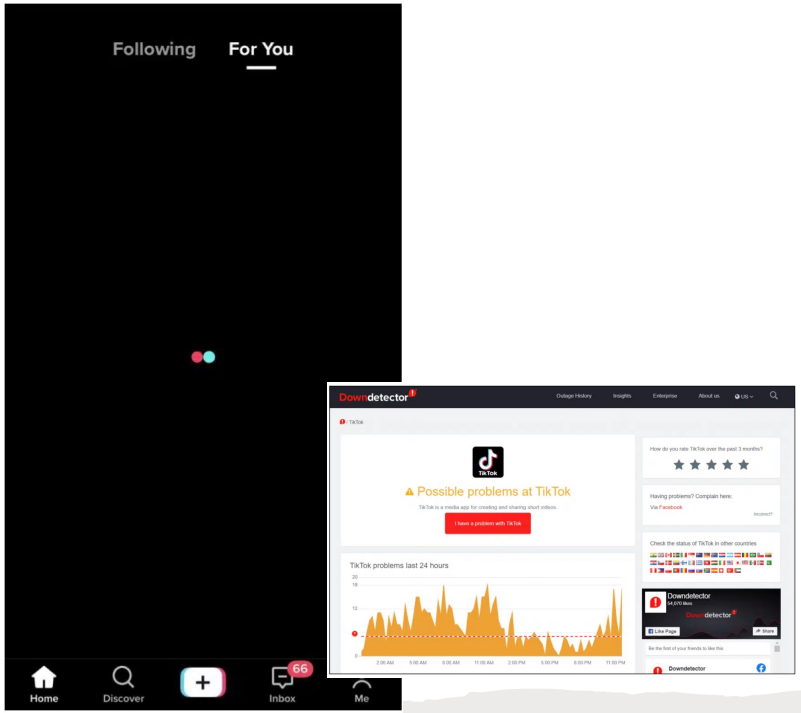
How TikTok delivers video

- Multi-CDN delivery strategy
- Centralized controller to send playlist and CDN choices based on recommendation and performance metrics
- Player use in band measurements to decide play rate for each video
- Native failover setups everywhere



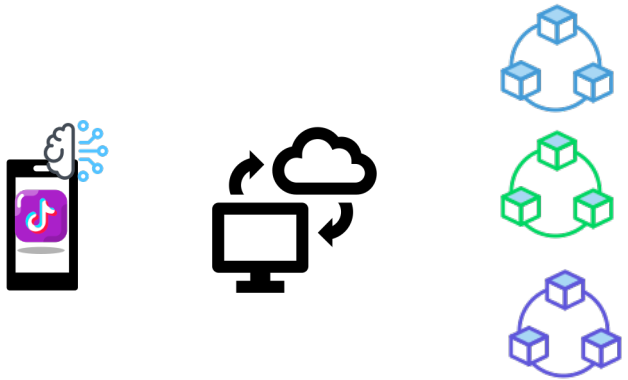
What matters the most

- User experience, obviously
  - Experience in opening the video (first frame duration)
  - Spinning wheels (response rate of feed) -> this is not during play and feed is empty, this is dsa
  - glitches (rebuffering rate -> frequency and longevity of rebuffering)
  - Or complete fiasco (failures, interruptions, etc.)



What are the key factors

- Usually something on the ‘last mile’
  - Network speed is the most significant factor
  - So is the accuracy of the measurement
  - Suffers the most when bandwidth prediction is wrong



Where is the pain

- Rate limiting practices of different forms
  - More common in mobile or satellite providers
  - Some are related to contract terms (e.g. tiered usage)
  - Some target at specific (popular/bandwidth heavy) apps

Provider assisted rate limiting

- Some form of provider assisted rate ‘adaptation’
  - The T-mobile Binge On program
  - AT&T’s Video Management (a.k.a Stream Saver) program
- Previous attempt with voluntary downgrade didn’t go well

Q&A