

Measuring QoE for Short-Form Videos

May 10th 2023 Yoann Hinard COO, Witbe

About the presenter



Yoann Hinard Chief Operations Officer at Witbe since 2009 Project manager for the first replay TV services in France PhD in Network Security and Group Communications (2007)



V For me, a good TikTok app needs to be fast and smooth so I can quickly swipe through my feed and watch videos without any lag. At the same time, the video quality should be clear and sharp, so I can see all the details of the content.



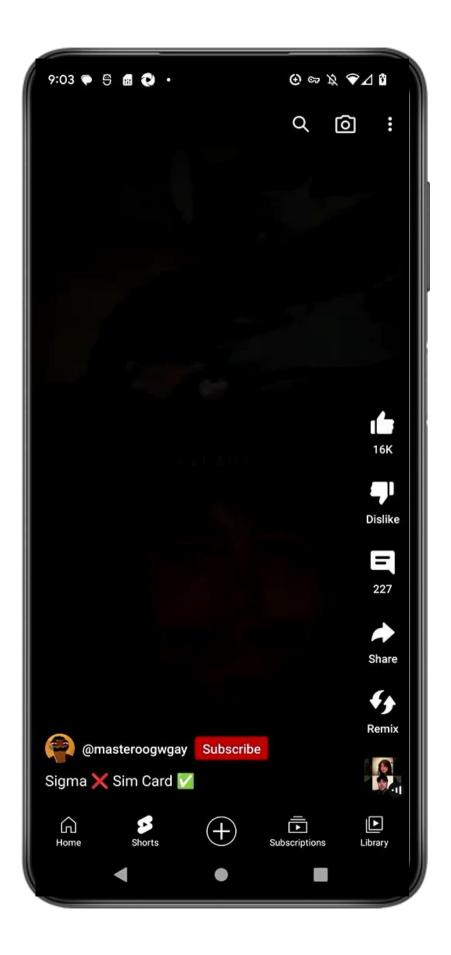
ChatGPT

Key takeaways

- Fast
- Smooth
- Quickly swipe through feed and watch videos without any lag
- Video quality should be clear and sharp



How do users evaluate this quality?







Challenges

User-generated content \rightarrow no reference « by design »

A lot of in-app optimizations thanks to smart developers and Ops Engineers

- Prefetch
- On net, off net cache
- HTTP/2 and QUIC

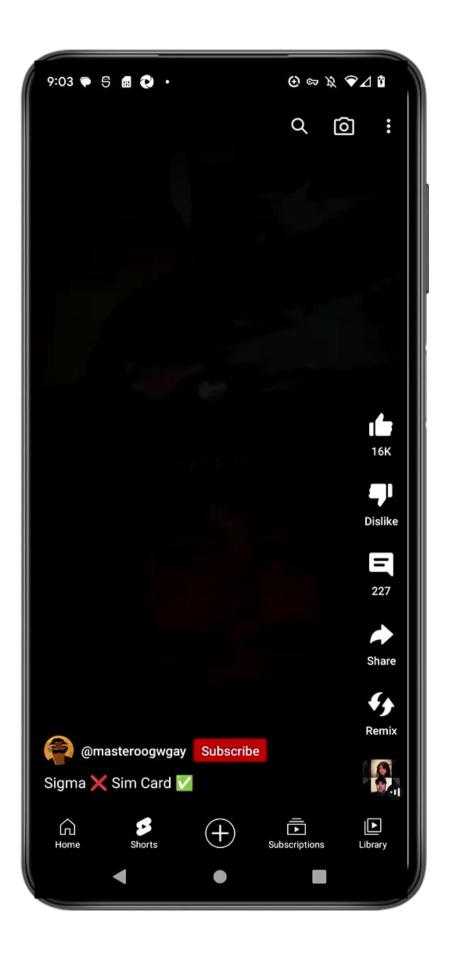
Constantly changing, updating, and evolving: So far in 2023 alone, 14 TikTok releases on 5 iOS public releases!

• No way to emulate app behavior with accuracy





What if it were that simple?



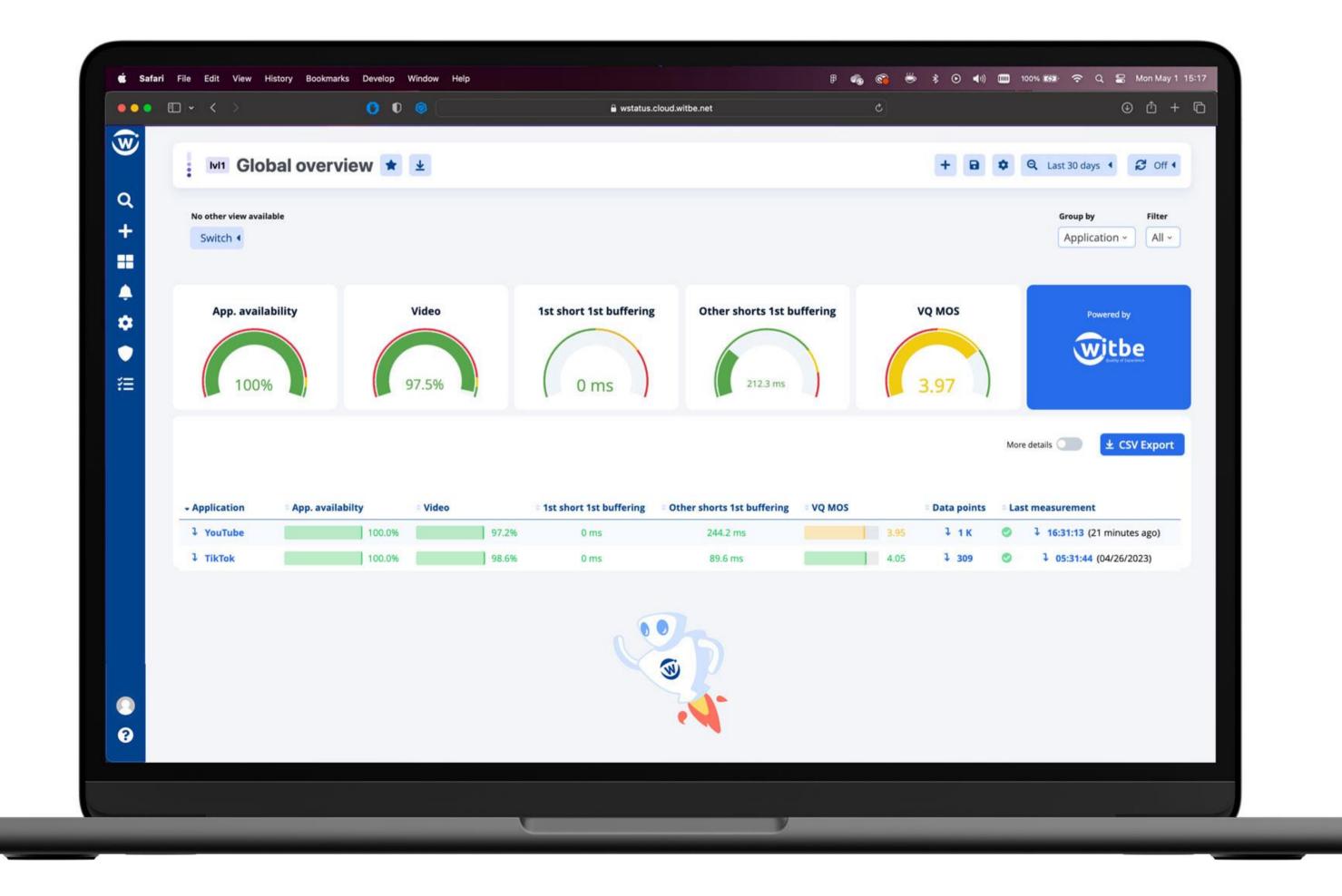


Initial buffering time for first reel : 100ms Video quality Blur : 5% No Rebuffering First frame 0ms Rebuffering

Rebuffering









Witbe Video MOS – Non-reference video quality assessment





MOS: 4.7 Block: 1% Blur: 0.4%

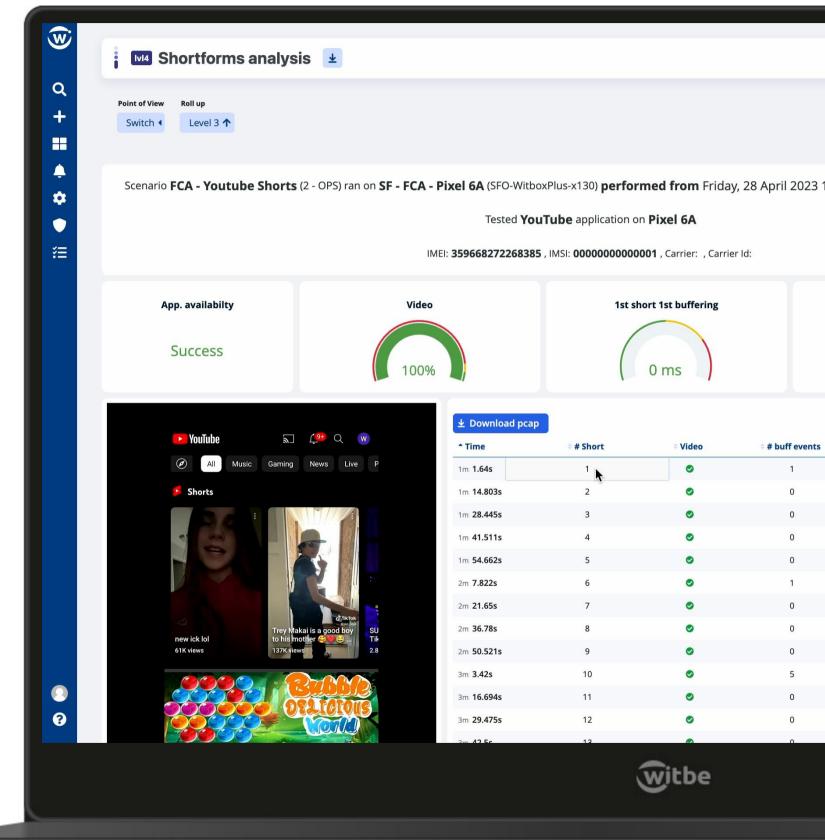
5

MOS: 1.9 Block: 12% Blur: 66%





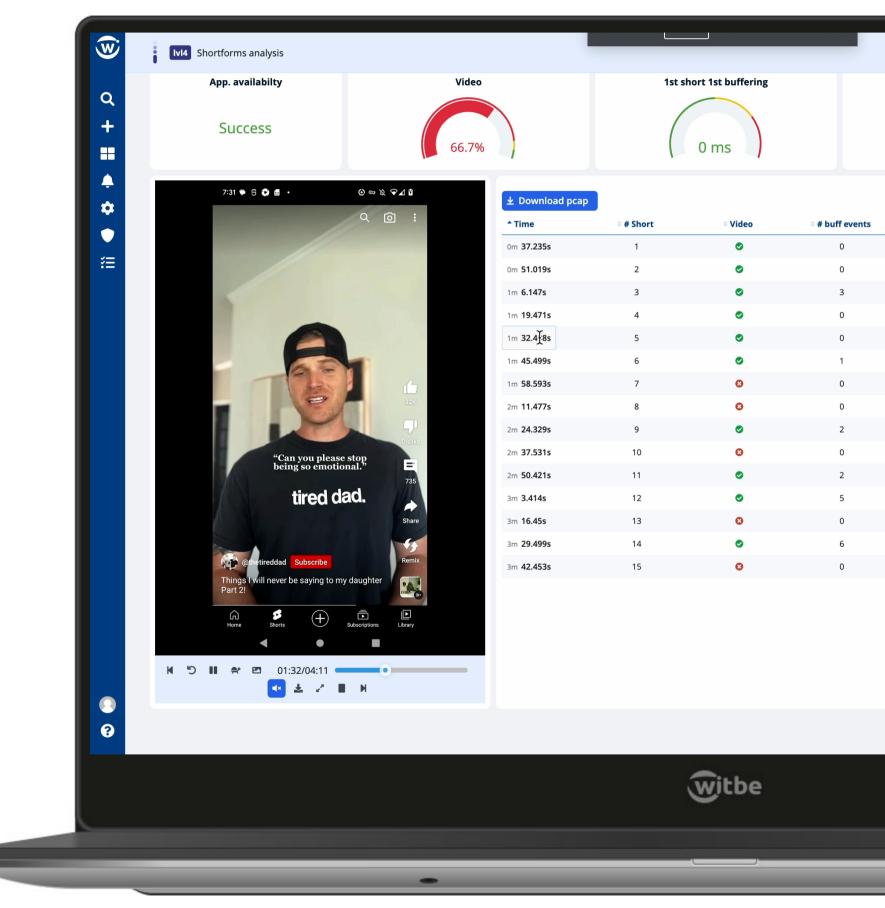
Initial buffering time ?





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Video vs. Network Analysis

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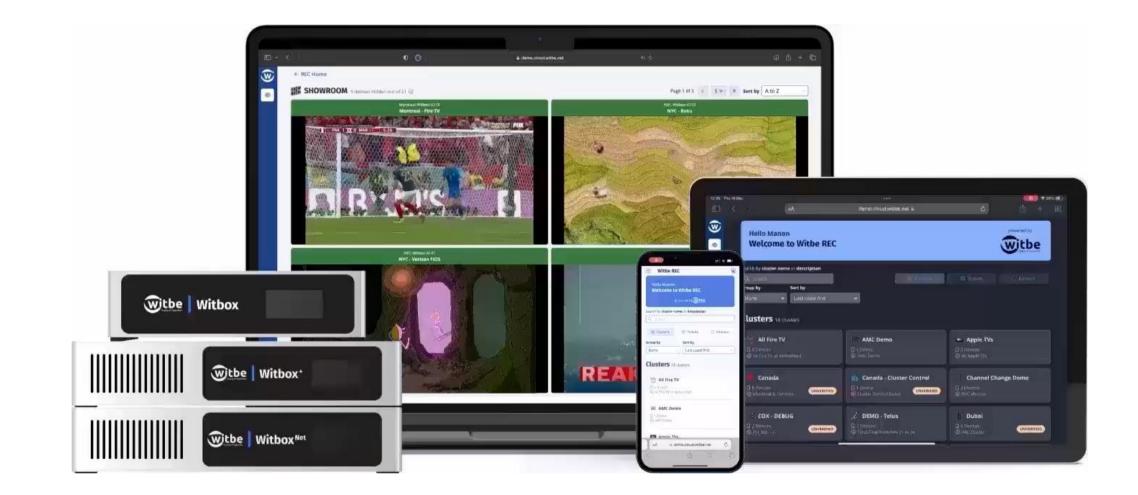


About Witbe

Automated testing and proactive monitoring technology for video services

Test on the same real, physical devices that customers are using

Launched short-form video testing technology in 2022













Any questions?



Thank you!