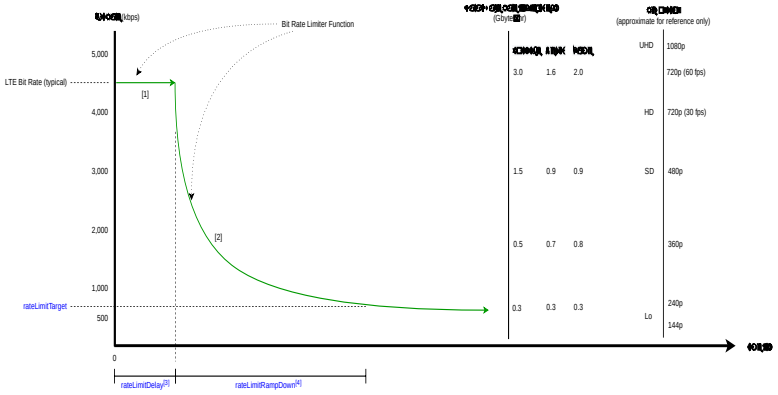
CORA℠ ME User Case Study

Overview: 80% of data volume on wireless networks today is from streaming video. Video content is transmitted to mobile devices at the highest resolution possible, using copious amounts of data and energy. On-network traffic managers have been the only management possibility for the onslaught of data. The growth of 5G availability could see this data consumption more than double and is projected to need more than 70% more power to meet consumer demands! CORA℠ ME is the on-device solution that uses smart-shaping technology to right-size video content for mobile devices. This Case Study will show results from real users of CORA ME.

Approach: Users downloaded CORA ME to their mobile device, split between Android and iOS users and were tasked with streaming video on Netflix, YouTube and/or Amazon Prime. Users were asked to send their on-device reports on a weekly basis and report on phone performance while using CORA ME. We show detailed results of two users and aggregate data for full group of 16 users.

CORA ME's Smart Shaping:



1. Video segment begins streaming as usual with no smart shaping.
2. Bit Rate Limiter begins to decrease bit rate resulting in lower stream resolution over time supporting acceptable UX
3. Rate Limit Delay is minimum two segments, typically 4 – 20 seconds, may be unique for each stream and content provider
4. Rate Limit Ramp Down is typically 3 – 5 segments to support acceptable UX, may be unique for each stream and content provider.

Aggregate Results:

Aggregate results account for 16 total users for the month of January.

Month of January, all UA Testers combined used ~50% less data to stream video on Amazon Prime.

Month of January, all UA Testers combined used ~90% less data to stream video on Netflix.

Month of January, all UA Testers combined used ~91% less data to stream video on YouTube.

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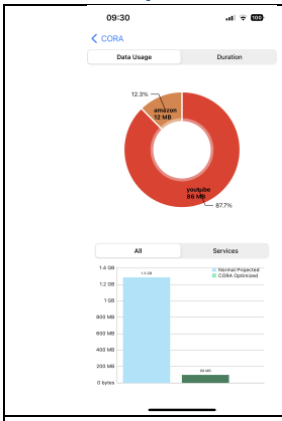
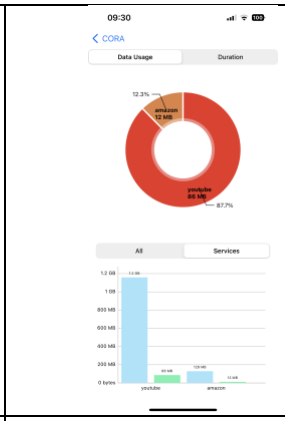
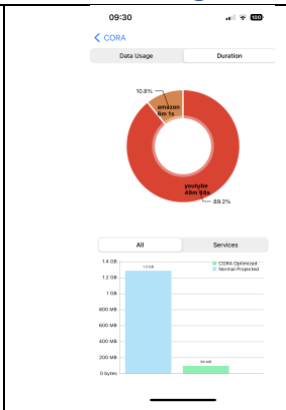
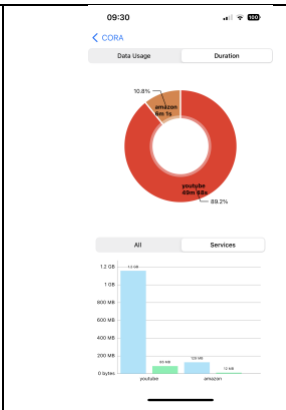
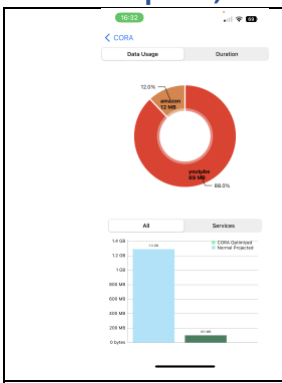
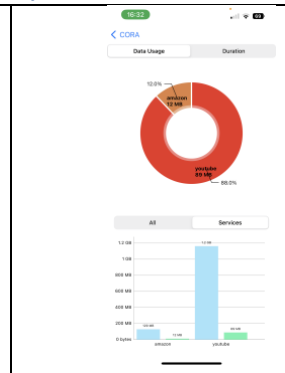
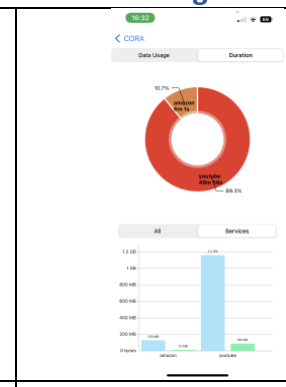
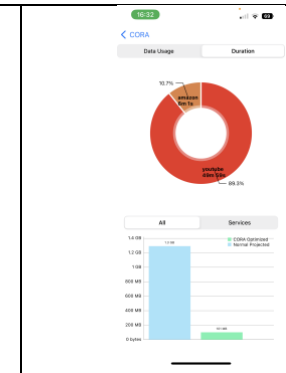
Individual Results:

Digging deeper, we analyze data for two users over two weeks in January 2023 with a high volume of CORA usage. Individual results are provided as part of this Case Study, Operators will not have access to individual on-device reports.

Week 1 Reports, Individual B, Amazon Prime and YouTube Streaming:

			
Aggregate Data Usage 12.3% of streaming with CORA was on Amazon, 87.7% on YouTube. Aggregate data savings around 75%. Individual B did not stream on Netflix.	Breakdown of data savings by streaming service.	Aggregate Streaming Duration 10.8% of streaming with CORA was on Amazon, 89.2% on YouTube.	Breakdown of streaming duration by streaming service.

Week 2 Reports, Individual B, Amazon Prime and YouTube Streaming:

			
Aggregate Data Usage 12% of streaming with CORA was on Amazon, 88% on YouTube. Aggregate data savings around 90%. Individual B did not stream on Netflix.	Breakdown of data savings by streaming service.	Aggregate Streaming Duration 10.7% of streaming with CORA was on Amazon, 89.3% on YouTube.	Breakdown of streaming duration by streaming service.

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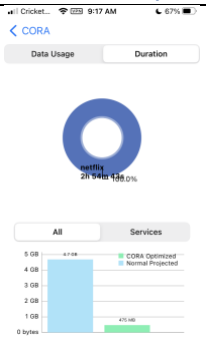
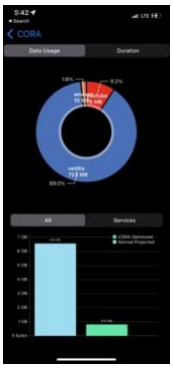
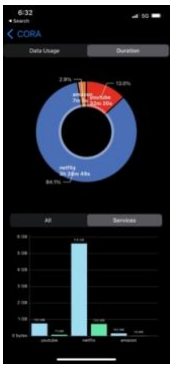
Week 1, Individual A, Netflix Streaming		Week 2, Individual A, Netflix Streaming	
	Individual A's data usage for about 3 hours of Netflix viewing. Streaming with CORA used about 90% less data than streaming without CORA. Individual A did not stream on YouTube nor Amazon Prime.		Individual A's data usage grew to a total of about 4 hours of Netflix viewing. Streaming with CORA continued to use about 90% less data than streaming without CORA. In the second week Individual A did not stream on YouTube nor Amazon Prime.

For Reference, Sample Data Reports for Individual who streamed on all three available video services:



Other Feedback:

- Users were able to install and use CORA without issue or need for support.
- Across CORA users we have seen no more than a 20% use of battery life for 90 minutes of continuous data.
- No noticeable change in user experience.

Conclusion:

Consumer demand for streaming video is exponentially increasing. Data savings using CORA ME to stream video content uses up to 90% less data than mobile devices without CORA ME.

- Assuming $2.75/GB* of data for an operator and an average of 75% data savings across three content sources, this is approximately 376 GB/user and $1034/person in one month! For our group of 16 users in this Case Study, that's a total savings of approximately $16,500 in one month! Data savings is monetary savings for mobile users and mobile operators.
- Users can stream more video content with their current plan or avoid being throttled or deprioritized on unlimited plans, thus making for happier customers, who are less likely to change services providers, therefore CORA ME can help reduce subscriber churn.
- Users did not have issues with installing or using CORA ME.

**https://www.statista.com/statistics/994913/average-cellular-data-price-per-gigabyte-in-the-us/*