

The background is a solid blue color with several overlapping, semi-transparent blue circles of various sizes scattered across it. The word "preseem" is written in a white, lowercase, sans-serif font. To the left of the text is a logo consisting of a vertical column of seven white dots of varying sizes, with a single white dot to the left of the top two dots, suggesting a stylized 'P' or a cluster of particles.

preseem

“Beyond Latency – Measuring Customer Experience”

Understanding Latency 2.0

11-13 DEC | ONLINE

**Jeremy
Austin**

Preseem, Aterlo
Networks

www.understandinglatency.com



Preseem at a Glance

- Quality of Experience platform for ISPs
 - Measure, Analyze, Improve
 - Highly granular throughput, TCP latency and loss stats for operators
 - FQ-CoDEL-managed latency at ISP core
 - Access layer PHY analytics in addition to payload
- Preseem released by Aterlo Networks (Ontario) in 2017
 - Low cost per subscriber without expensive retrofits
 - Well over 400 T2–T3 ISPs globally
 - Majority initially fixed wireless, growing fiber
- Yearly free FW/Network Report for industry



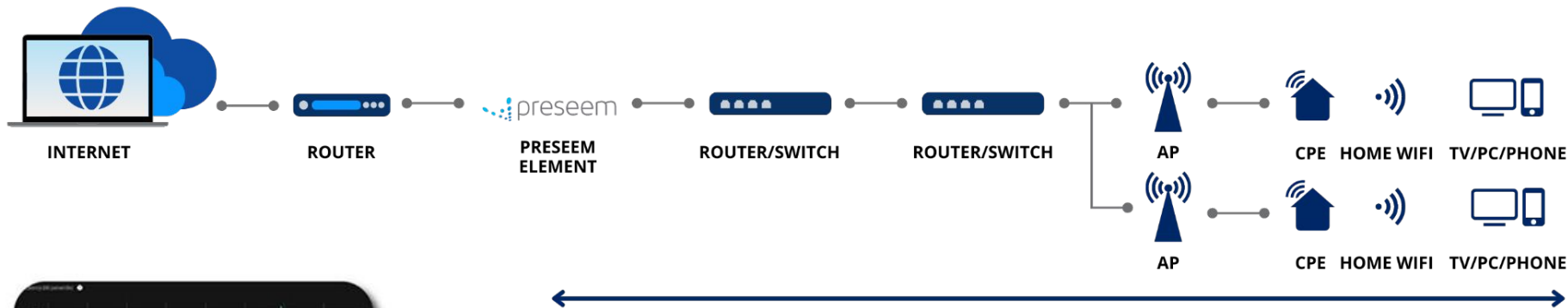
A screenshot of a data dashboard showing a table of network performance metrics. The table has columns for Name, Status, Connections, Model, and Subscriber Capacity. Below this, there are more rows with columns for Name, Model, Wireless Value Score, and Firmware.

Name	Status	Connections	Model	Subscriber Capacity
spcamban-40m-57ghz...	Online	91	PMP 450m	6 →
spcamban-40m-57ghz...	Online	73	PMP 450m	9 →
spcamban-40m-57ghz...	Online	67	PMP 450m	11 →
spcamban-40m-57ghz...	Online	59	PMP 450m	15 →
spcamban-40m-57ghz...	Online	59	PMP 450m	5 →
spcamban-40m-57ghz...	Online	52	ePMP 3000	5 →

Name	Model	Wireless Value Score	Firmware
Andy Stegler (Airtel 84211)	spcamban-40m-57ghz...	5.2 →	CANOPY 22.0.1
Airtel Enginet	spcamban-40m-365ghz...	3.1 →	CANOPY 22.0.2
Airtel Networks (Other A...	spcamban-40m-57ghz...	4.0 →	CANOPY 22.0.1
Bezeq Texas	spcamban-40m-57ghz...	1.7 →	CANOPY 22.0.1
David Hassel (Data World...	spcamban-40m-57ghz...	5.6 →	CANOPY 22.0.1
David Nelson (User 47810)	spcamban-40m-57ghz...	5.8 →	CANOPY 22.0.1



TCP Latency in Preseem

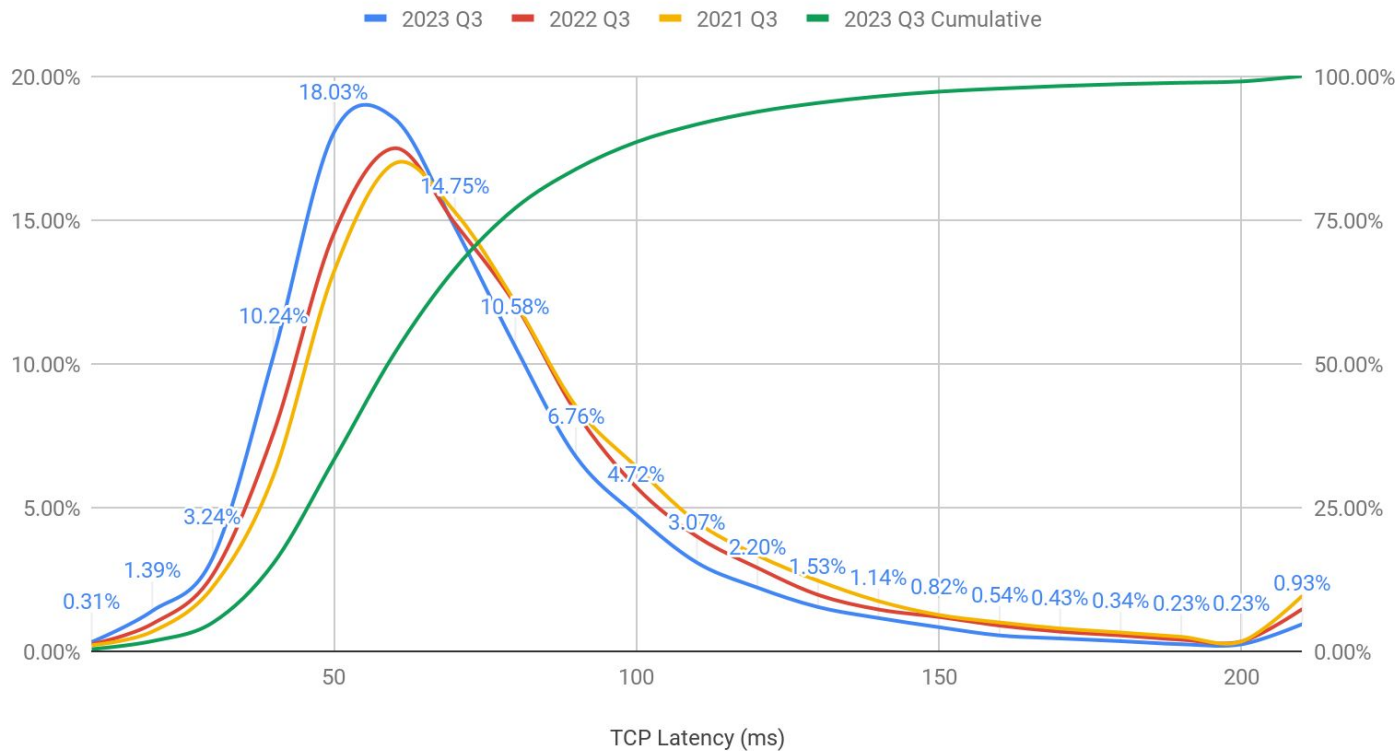


- ISP TCP latency inband in distribution/access network
- TCP RTT as proxy for overall connection latency
- Includes in-home Wifi latency
- Maps latency to network topology to discover bottlenecks



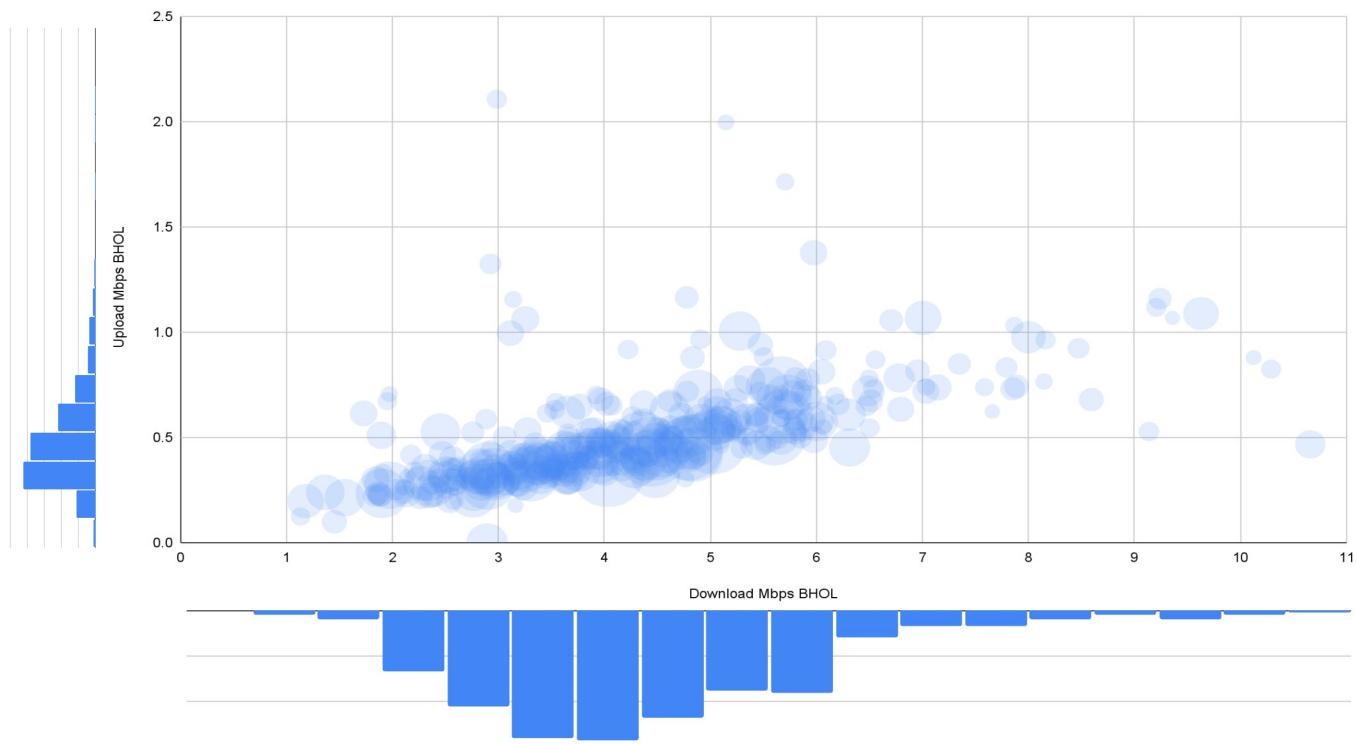
ISP Access TCP Latency

Preseem Latency Histogram 2021-2023



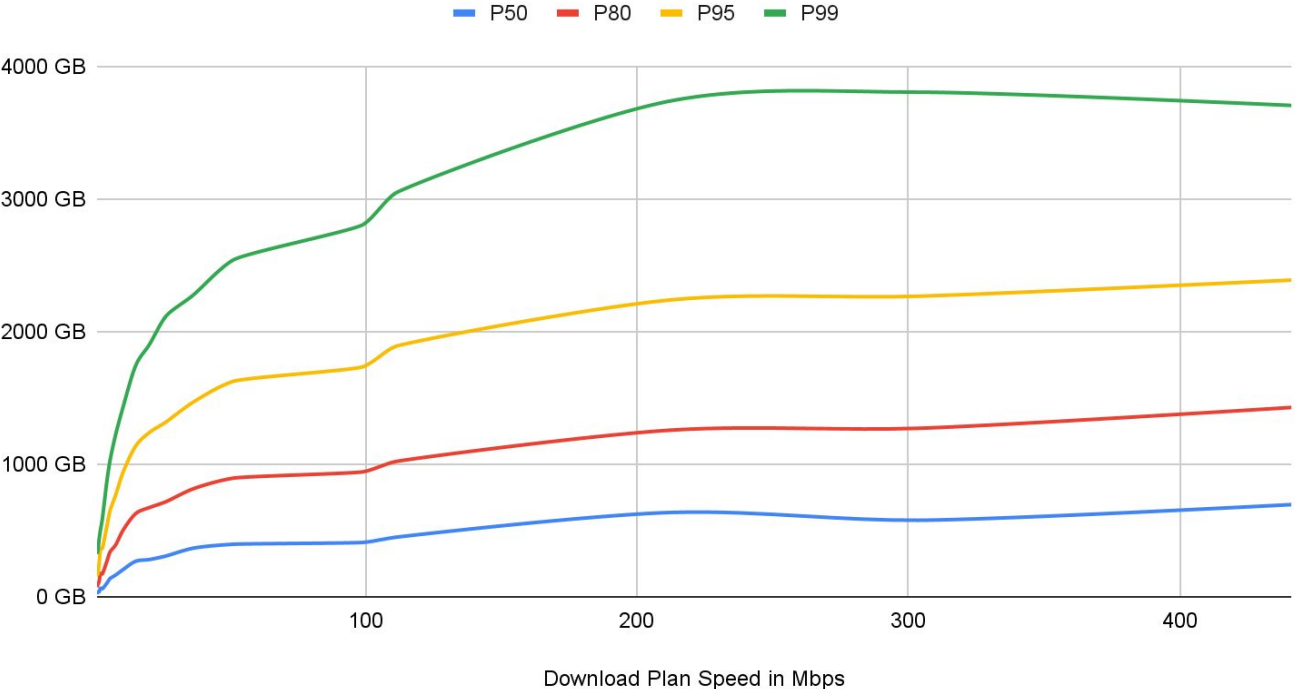
Optimal Download/Upload Ratios

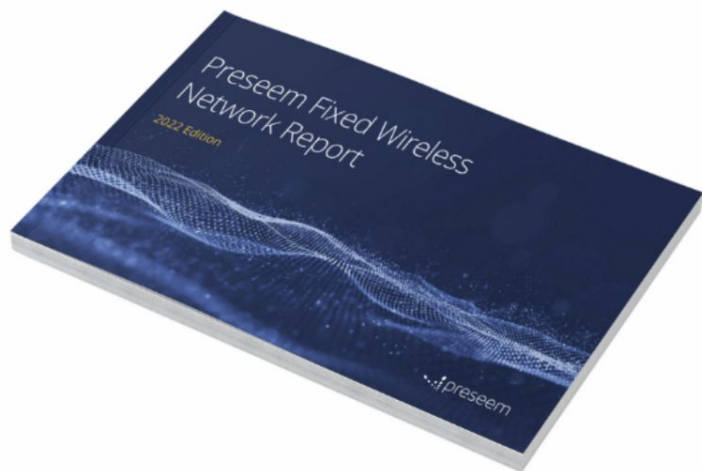
Global Peak Busy Hour Average Throughput Per Subscriber (grouped by ISP)



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Preseem Plan Speed vs. Monthly Downloaded Bytes





Meet the New Fixed Wireless Network Report

Preseem ingests billions of metrics per day from WISPs across the U.S., Canada, and internationally. This report leverages this huge data pool to present a view of the fixed wireless industry across service providers and vendors. You can't get this information anywhere else!

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