AUDEAMUS GROUP, LLC

Telecommunications Weekly Brief

October 30, 2026 | Research published October 23-30, 2026

THIS WEEK'S JUDGMENT

This week's results justify targeted trials and sharper vendor questions. They do not justify revised performance guarantees. Keep simulated gains, emulator timing, vendor comparisons and operator laboratory results separate in the decision record.

01 / ACCEPTED PAPER REPORTED BY ARXIV / SIMULATION / 2026-10-26

ML-OLLA: adapting satellite links for real-time traffic

Key finding. The ML-OLLA authors report ns-3 simulations with up to fourfold supported-user capacity. At a 99.9% reliability target, the minimum supported latency budget fell from 60 to 40 ms against baseline OLLA. The arXiv record reports GLOBECOM 2026 acceptance.

Why it matters for Audeamus. Link adaptation deserves a place in satellite service trials alongside coverage and headline throughput. Ask which traffic deadlines, retransmission assumptions and terminal conditions a capacity claim uses.

Evidence limits. These are simulated results, not commercial satellite performance. The modeled downlink and serving-beam assumptions do not establish an end-to-end service guarantee.

Read in full? Read the simulation setup and baseline definitions before selecting a trial target.

Open original source

02 / PREPRINT / EMULATOR AND TESTBED EXPERIMENTS / 2026-10-28

MIRAGE: test policies with a running network stack

Key finding. MIRAGE applies channel effects to live 5G stack samples using a GPU emulator. Four 2-by-2 links met a tested 0.5 ms bidirectional processing criterion at 61.44 million samples per second on an NVIDIA H100.

Why it matters for Audeamus. A running stack can expose timing and policy problems before a physical network change. Consider emulator-to-testbed comparisons when planning future-network experiments.

Evidence limits. The processing benchmark and full-stack traffic tests are separate evaluations. The authors report synchronization and transfer limitations. This is not a demonstrated 6G air interface or a deployment latency promise.

Read in full? Read the component timing tests and full-stack limitations separately.

Open original source

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03 / VENDOR-AUTHORED PERFORMANCE CLAIM / 2026-10-27

QuantalRF: ask how the RF front end handles mismatch

Key finding. QuantalRF claims EVM variation stayed within 1 dB under 3:1 VSWR mismatch, compared with up to 7 dB deterioration in its GaAs comparison. The announcement and linked vendor paper describe CMOS-SOI Wi-Fi power amplifiers.

Why it matters for Audeamus. Antenna mismatch belongs in equipment evaluation. Ask for board-level measurements across operating conditions, not only a favorable nominal-load result.

Evidence limits. This is the vendor's comparison, without independent validation in this review. Confirm sample selection, test conditions and relevance to the intended product before drawing a procurement conclusion.

Read in full? Read the measurement conditions and request reproducible comparison data.

Open original source

04 / OPERATOR LABORATORY TEST / NOT DEPLOYMENT EVIDENCE / 2026-10-29

Orange Romania: 50G PON remains a laboratory result

Key finding. Orange Romania reports about 40 Gbps in both directions to one computer and sub-1 ms latency in its Bucharest laboratory's 50G PON test.

Why it matters for Audeamus. Use the result to frame targeted coexistence, terminal and service-load trials.

Evidence limits. Loaded-network conditions and detailed methodology are unspecified. This is a laboratory result, not deployment evidence or a subscriber performance guarantee.

Read in full? Request the test setup and loaded-network results before changing a deployment assumption.

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ONE EXPERIMENT TO RUN

Choose one service requirement and write a trial acceptance test: traffic load, equipment, reliability target, measurement point and failure conditions. Ask the supplier to reproduce the relevant result under those conditions before it changes an architecture or commercial commitment.

Original sources checked October 30, 2026. Evidence comprises an accepted-paper claim on arXiv, a preprint, a vendor comparison and an operator laboratory test. Strategic implications are Audeamus analysis; none is a commercial performance guarantee.

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