

Asking the Oracle: How AI Is Rewiring Networks

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Based on the master's thesis: *Machines don't watch Netflix: A Delphi Study-based Scenario Analysis of the Network for AI Ecosystem in 2035*

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You ask your AI assistant to book a flight. In less than a second, your request travels through a mobile network, reaches a massive data center, gets processed by an AI model and returns to your phone. Simple enough. But what happens when it is not just you asking — but billions of devices, autonomous vehicles, robotic workers and AI agents all doing this simultaneously, talking not just to humans but to each other? That is the question driving a new era of network planning and the answers carry large consequences for who holds power in tomorrow's digital economy.

Consulting the Oracle

To peer into the future, the authors employed a method with an appropriately mythical name: the Delphi method. In ancient Greece, the Oracle of Delphi was a priestess at the temple of Apollo on Mount Parnassus. Kings and generals traveled from across the Mediterranean to ask their most pressing questions to her, trusting that her answers revealed something about the things to come. The modern Delphi method borrows this spirit of consulting those who know.

Rather than one prophet, it gathers a diverse panel of experts, collects their independent views through multiple survey rounds and uses each round's results to sharpen the collective picture. The goal in this thesis is not to predict a single future, but to map some plausible ones.

For this study, 23 experts from academia, technology companies, regulators and industry associations took part in round one, with 14 continuing to round two. The majority holding more than 20 years of professional experience in the field.

From Human Traffic to Machine Traffic

Mobile networks were built for humans. We stream videos, scroll through social media and send messages. By 2035, the traffic on those same networks is set to look fundamentally different. AI agents — software systems that autonomously browse the web, query databases and communicate with other AI systems — i set to generate a growing share of network traffic. Rather than humans pulling content *down* from the cloud, machines will increasingly push data *upward*: sensor readings, telemetry, real-time decisions and agent queries.



Figure 1: The Oracle by Camillo Miola (1880) depicting the Oracle of Delphi. Author's impression of the 2035 edition. Image generated with ChatGPT Images 2.0.

Today, uplink traffic — data travelling *from* your device *to* the network — represents roughly 10% of total mobile traffic. The most common expert prediction puts that figure at 30% by 2035, driven by autonomous vehicles, robotic systems and AI agents that continuously stream data upstream. One expert in the panel captured the shift clearly:

“The most significant shift will be the transition from humans as the primary consumers of network services to AI agents generating a substantial share of traffic.”

Who Controls the Value?

Behind every AI assistant lies a complex ecosystem: hardware manufacturers, cloud providers, telecom operators, AI model developers and network equipment vendors. Today, this ecosystem has a clear power hierarchy. Virtually all experts agreed that AI computing is centralised in the data centres of a handful of “hyperscaler” companies. Economic value is highly concentrated in those same hands. Traditional communication service providers (CSPs), who build and maintain the physical networks, carry vast amounts of data but capture only a thin slice of its value.

By 2035, experts overwhelmingly expect computing to become more *distributed* — spreading toward so-called edge nodes located closer to users. But whether economic value will follow is the open question. As one panelist put it:

“telecom operators cannot afford to sit idly like they did in 4G and 5G or they will once again be “left out of the party”

Four Futures for 2035

Four scenarios were constructed from the Delphi findings and validated with the expert panel:

The Hyperscaler Stranglehold (93 % consensus on plausibility, the highest of any scenario). Computing spreads to the network edge, but hyperscalers extend their software control outward with it. Telecom operators build the infrastructure, tech giants capture the value. This is the most likely future if nothing structurally changes.

The Resilient Mesh. (71 % consensus on plausibility) Compute, value and infrastructure are distributed. No single point of failure, neither technical nor economic. Redundancy is treated as something worth paying for and no player dominates the entire value chain.

The Resilient Fortress. (69 % consensus on plausibility) Geopolitical tensions and security requirements push the ecosystem to prioritise resilience above cost. Powerful incumbents remain dominant, now competing on reliability and security rather than price alone.

The Distributed Marketplace. (54 % consensus on plausibility) Regulation and data sovereignty laws open up the ecosystem. A wider range of players compete for AI workloads, but thin margins make large-scale investment difficult.

Three Forks in the Road

The research identified three structural forces that will determine which future materialises.

Regulation is decisive. Market forces alone are unlikely to redistribute value toward telecom operators. Policy intervention is the primary mechanism through which a more distributed outcome could be achieved.

Infrastructure and value can decouple. If edge computing migrates to telecom operators’ physical sites while economic orchestration stays in hyperscaler software platforms, operators end up providing the real estate without collecting the rent.

Geopolitical fragmentation creates an opening. As data sovereignty becomes a political priority, particularly in Europe, local and regional compute providers may displace global hyperscalers for sensitive AI workloads. The same forces that fragment the geopolitical order could, paradoxically, give smaller players a seat at the table.

The Race Has Already Begun

This transformation is not a distant scenario. It is already underway. The question is whether the companies that build and operate tomorrow’s networks will have a meaningful position when the value is distributed, or whether they will once again be left holding the infrastructure while others capture the reward.

The Oracle has spoken in many voices. What comes next depends on choices being made right now.