TECHNOLOGYINSIGHT

US-China Tech Rivalry Escalates with New Export Controls

The Quantum Race Heats Up

Al Governance Gains Traction at the Global Stage



US-China Tech Rivalry Escalates with New Export Controls

The United States has tightened its technology export restrictions, revoking licenses previously granted to several suppliers and imposing new limitations on exports to China. A central focus has been advanced AI chips, particularly Nvidia's H20 model, which is now barred from the Chinese market. This move has already cost Nvidia an estimated \$8 billion in lost sales, prompting the company to announce a new, lower-priced "Blackwell" AI chip tailored for China.

In response, China is doubling down on its push for technological self-reliance. One of the most striking developments was the launch of ADA Space's first batch of Al-powered satellites, part of a 2,800-satellite constellation designed to process large datasets in orbit. This ambitious step underscores Beijing's determination to secure an edge in Al-driven defense and communications.

While Washington believes these restrictions will cement its leadership in the global tech race, industry voices—most notably Nvidia CEO Jensen Huang—have cautioned that they may instead accelerate the growth of Chinese competitors, altering the balance of power in the Al landscape.

The Quantum Race Heats Up

Quantum computing is no longer confined to theory—it is now a core element of global tech geopolitics. China has announced plans to invest between \$10–15 billion in quantum technologies over the next five years, dwarfing the United States' reported \$1 billion commitment.

This month saw a flurry of major breakthroughs worldwide:

- China's Origin Quantum unveiled the Tianji
 4.0, a control system supporting 500+ qubit quantum computers.
- Japan launched ABCI-Q, the world's largest supercomputer dedicated exclusively to quantum research.
- France's Quandela introduced Belenos, a 12-qubit photonic quantum computer boasting 4,000 times the computing power of its predecessor.
- Ireland's Equal1 debuted the world's first silicon-based quantum computer designed for seamless integration into existing data centers.

These developments highlight an emerging multipolar quantum ecosystem, where the ability to commercialize, scale, and secure quantum technologies could define national competitiveness for decades to come.

Al Governance Gains Traction at the Global Stage

The United Nations has taken a decisive step toward global AI governance with a draft resolution proposing the creation of a 40-member Independent International Scientific Panel on AI.

Appointed through a mix of UN member nominations and Secretary-General selections, the panel will provide scientific assessments, publish annual reports on Al's risks and opportunities, and issue thematic briefs to guide policymaking.

Complementing this initiative is the proposed Plenary on AI, a new UN body tasked with reviewing the panel's findings, convening a global dialogue on Al governance, and fostering cooperation across governments, academia, and industry.

The move reflects growing recognition that Al's impact-ranging from economic growth to human rights-requires consistent, multilateral oversight.

Meanwhile, Al companies themselves are facing intensified scrutiny. OpenAI has reaffirmed that its nonprofit parent will retain control of the organization amid ongoing lawsuits and criticism. Google and startup Character.Al have been hit by a lawsuit in the United States, after a Florida woman alleged that an Al chatbot contributed to her son's suicide. These episodes underscore the urgency of aligning development with robust ethical and regulatory safeguards.

D106 SF Defence Colony asp@sinhapartners.com New Delhi - 110024 www.sinhapartners.com

+91 11 41 046 911 +91 11 40 536 008