

# To the Communications Community —2026 New Year’s Message



Zhang Ping

At this historic juncture of deepening technological revolution and industrial transformation, China’s communication sector stands on the eve of another great leap forward. Reflecting on the development of communications over the past two decades, China has forged an innovative path from catching up to keeping pace and then to leading the way. Today, at the new starting point of 6G development and facing the paradigm shift brought about by “AI + communications,” China’s scientific research community, with the courage to venture into uncharted territory, is advancing original theories such as the new communication paradigm based on a unified theoretical framework of information theory to the global forefront. This fully demonstrates the strategic resolve and institutional advantages of Chinese modernization in the realm of technological innovation.

If the evolution from 3G to 5G represented continuous upgrades in communication technology—innovations along the extension of Western-led classical information theory—its fundamental characteristic was driving generational progress in mobile communications through technological accumulation and resource consumption, particularly energy. In the era of artificial intelligence, big data demands ever-increasing data bandwidth, and bandwidth expansion requires resource compensation. In other words, in the 6G era, it is no longer feasible to continue along the traditional trajectory. There is an urgent need to find an “inflection point” to meet the demand for bandwidth. This inflection point technology will mark an unprecedented paradigm shift in the field of communications.

The traditional paradigm of communication theory can no longer meet the new demands of the “AI +” era. The diverse data generated by massive “device-end” equipment urgently requires more efficient communication paradigms to support it. The proposal of semantic communication has fundamentally altered the core logic of communication: it no longer pursues the mere transfer of information symbols but emphasizes task orientation, intelligent understanding, and efficient collaboration. This is not merely a technical upgrade but a fundamental reconstruction of communication theory.

The core advantage of modern semantic communication lies in its use of end-to-end intelligent learning models, enabling transmission systems to accurately understand task intent rather than

mechanically transferring symbols. This approach significantly enhances communication efficiency and markedly reduces network bandwidth and energy resource consumption. This innovative thinking breaks through the traditional boundaries of communication and is widely regarded by the international academic community as the “second communication revolution.”

However, such a revolution must address several challenging questions: First, what is the foundational theory supporting this revolution? Second, if this theory overturns traditional theory, how can we explain the success of traditional communication over the past century? Third, how can we explain the generalization of AI’s empowerment of communication systems?

It is at such an unprecedented juncture that I hope all communication professionals will possess the unwavering determination to traverse this “uncharted territory.” In the new year, let us use our research findings to provide definitive answers that eliminate future uncertainties, thereby laying the foundation for a new edifice of science and technology.

As the Year of the Horse approaches, I wish everyone immediate success, renewed pride, and a relentless pursuit of greater scientific achievements in the journey ahead.

## Biography



**Zhang Ping** is a Counsellor of the State Council, an Academician of the Chinese Academy of Engineering, a Professor at Beijing University of Posts and Telecommunications, China and the Director of the State Key Laboratory of Networking and Switching Technology, China. He also serves as the Editor-in-Chief of *Journal on Communications*, an IEEE Fellow, a member of the Expert Group for IMT-2020 (5G), a member of the Advisory Committee of the IMT-2030 (6G) Promotion Group, and the leader of the Innovative Research Group funded by the National

Natural Science Foundation of China. He has long been dedicated to theoretical research and technological innovation in mobile communications, and has made fundamental and pioneering contributions to promoting China’s independent communication technologies to become mainstream international standards. Previously, he held important academic and research leadership positions, including serving as the Chief Scientist of the National Basic Research Program of China (“973” Program) and an expert of the Theme Expert Group for the National High-Tech Research and Development Program of China (“863” Program). He has been honored with numerous prestigious national and industrial awards in recognition of his outstanding academic achievements and technological contributions, including the Special Grade Award and the First Class Award of the State Science and Technology Progress Award, three Second Class Awards of the State Technological Invention Award, and two Second Class Awards of the Science and Technology Progress Award. In addition, he has received the National Innovation Pioneer Medal, the Guanghua Engineering Science and Technology Award, and the Ho Leung Ho Lee Prize for Scientific and Technological Progress, and the research team led by him was selected into the first batch of Huang Danian-Style Teacher Teams by the Ministry of Education of China.

DOI:10.12142/ZTECOM.202601001

Manuscript received: 2025-12-20

Citation: (Format 1): Zhang P. To the communications community—2026 new year’s message [J]. *ZTE Communications*, 2026, 24(1): 1. DOI: 10.12142/ZTECOM.202601001

Citation: (Format 2): P. Zhang, “To the communications community—2026 new year’s message,” *ZTE Communications*, vol. 24, no. 1, pp. 1, Mar. 2026. doi: 10.12142/ZTECOM.202601001.