

## Perspective

# U.S. Intellectual Property Is Critical To National Security

BY ANDREI IANCU AND DAVID J. KAPPOS

America has been the undisputed global leader in science and technology over the past century. But this global order is in flux. China's extensive investments and years of strategic planning—including strengthening its intellectual property regimes—has enabled it to catch up to, and in some areas surpass, our capabilities in artificial intelligence (AI) and other emerging technologies. Congress is mulling over legislative proposals to counter China's economic and geopolitical ambitions for technological dominance and the President is getting ready to announce a national AI strategy. IP reform must be a part of this sea change to ready the United States for the AI era.

The newly emerging technologies are vastly different from technologies of the past. AI provides computers the ability to learn on

their own and make decisions that have traditionally required human intelligence. And when combined with other emerging technologies, its power will be truly dramatic. Quantum computers, for example, which are based on the behavior of energy and materials on the atomic and subatomic levels, can be millions of times faster than current classical computers. Just imagine

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military equipment driven by artificial intelligence and operated by quantum computers. The country that gains the lead in these technologies will enjoy towering national



security advantages, including in economic and military power.

For the United States to maintain its technological edge, we must encourage Americans to make more discoveries in AI and other emerging technologies. This in turn requires providing strong intellectual property (IP) rights to incentivize and protect the huge investments required to make those discoveries. China's President Xi Jinping recognizes the critical role IP plays in innovation and ultimately national security, and has underscored its importance to new fields such as

big data, artificial intelligence and genetic technology. The irony is that China relentlessly steals IP from the United States, while simultaneously working to strengthen its own IP system. China now reliably issues patents on cutting-edge technologies, provides injunctions for infringement of patented inventions, and has created specialty IP courts with procedures and rules similar to those of Western courts. China's AI patenting has increased dramatically in the past few years and is distributed broadly across its companies, government organizations, and universities, while U.S. patenting on AI comes mostly from large companies. On the international stage, China uses its IP policies to attract innovation to its borders and influence the adoption of its technologies as global standards.

Although we are undeniably in a race for technology leadership, the United States is failing to leverage IP to its full advantage. By including IP rights in the Constitution, America had granted itself a global head start in the industrial revolution. But the statute that defines the types of inventions eligible for patent protection has effectively not changed since 1793, well before any of the technologies of the modern era. This has left the Supreme

Court to hold recently that some of the most critical inventions at the very core of AI and some other emerging technologies are outside the scope of our patent laws. This puts the United States at a significant disadvantage vis-à-vis our key competitors. We are also behind our competitors when it comes to IP policies surrounding the big datasets necessary for AI.

If we are to maintain our technological lead, we must re-examine all such key IP weaknesses and embrace IP policies that will incentivize and protect investments in creating AI and other emerging technologies. These are bipartisan issues. As former Directors of the United States Patent and Trademark Office in Democrat and Republican administrations, we know that the U.S. government has the expertise and capabilities to develop comprehensive IP policies to fuel innovation aligned with our national security interests. This government-wide expertise must be coordinated.

A whole-of-government approach to develop comprehensive IP policies is exactly what has just been recommended by the National Security Commission on Artificial Intelligence (NSCAI). An independent commission created by Congress, NSCAI recently published a report

which recommends elevating U.S. IP policy to a national priority integrated into our national security strategies. Under NSCAI's proposal, the Secretary of Commerce, in coordination with the USPTO Director and leaders of other agencies, would recommend reforms and new policies that strengthen our IP system and encourage more American innovation. As reflected in NSCAI's recommendations, public deliberation with stakeholders in industry and academia will be critical in exploring these issues.

If we are going to win the race for AI and other technologies critical to our national security, we must use every available tool to expand America's innovation engine. This means pulling America's IP levers to optimize technology and economic competitiveness. The United States should implement NSCAI's IP recommendations.

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