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STRATEGIC TECHNOLOGY AND ADVANCED RESEARCH SUBCOMMITTEE
HOUSE PERMANENT SELECT COMMITTEE ON INTELLIGENCE HEARING
Microelectronics: Levers for Promoting Security and Innovation
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[GAVEL]

The Subcommittee will come to order.

Before we begin, I want to remind all of our Members that we are in OPEN session, and as such we will discuss UNCLASSIFIED matters only.

Without objection, the chair may declare a recess at any time.

I welcome our Members and witnesses to the today's hearing.

Good morning and thank you to our witnesses for being here today. This hearing is an important topic that will examine how U.S. investments in microelectronics can both spur American innovation and provide the Department of Defense and the Intelligence Community with secure, reliable chips that are essential to their missions.

The microelectronics market has evolved considerably in the past 50 years. Where once U.S. companies were the global leaders in design, fabrication, and packaging of microelectronics, we now face a world where a single chip can travel to more than 70 countries during the production process. Where once the U.S. Government drove market innovation and production schedules, we now see private companies commanding nearly all the demand for chip production.

These changes bring both opportunities and challenges. The innovation and advances in microchip technologies over the past several decades have unlocked enormous economic activity and prosperity. They've brought us the iPhone, cars with safety cameras, and countless other devices that we now take for granted. For the DOD and the IC however, the globalization of the microelectronics market has created both reliability and security concerns. And, as the pandemic has shown us, our supply chains are more fragile than we ever imagined, and we see that now in the chip shortage for auto manufacturers. Single points of failure along vital supply chains create cascading effects and chaos to our everyday lives.

This subcommittee is not the first to look at ways in which the U.S. can gain access to secure, reliable, and state-of-the-art microelectronics. For years, DOD and the IC have relied on "Trusted Foundries" to produce the chips that go into our most advanced weapon systems. This model, however, has created a situation where these Trusted Foundries are not taking advantage of the cutting-edge production capabilities that are used elsewhere.

In balancing these challenges there is an opportunity for microelectronics production to be an industry of the future for American workers. Advanced manufacturing, chip design, and chip packaging are areas where we need to make sure the U.S. remains the global leader in innovation. These are the jobs of the future and a key to ensuring American prosperity for generations to come.

Today, we will hear from the witnesses about what options and tools are at our disposal that address the legitimate security and reliability concerns within the microelectronics market, while spurring American innovation.

As a subcommittee, we intend to look at existing programs such as the Small Business Innovation Research (SBIR) program, which provides small

businesses an opportunity to contract with the federal government and creates a pipeline for new, high-tech products.

We also intend to look at new areas where the U.S. can reduce the friction and cost for private companies to innovate and bring new technologies to market, such as a potential fund that bridges the gap between research and development and commercialization.

Essential to the development of all technologies of the future is a technical and talented workforce. Our skilled and diverse workforce has been the key to American success for generations and we must continue to invest in our people if we hope to compete in the decades to come. This means both making it easier for immigrants to come to the U.S. and creating new incentives for Americans to enter these high-tech fields. The U.S. Government must also create an environment where we can recruit, hire, promote, and retain a technical, talented, and diverse workforce. Only by having access to the top talent in chip design and chip manufacturing, can we ensure that the advanced chips we buy are performing as intended.