

AMENDMENT TO
RULES COMMITTEE PRINT 118-10
OFFERED BY MR. KRISHNAMOORTHY OF ILLINOIS

At the end of subtitle C of title XVIII, insert the following:

1 **SEC. 18__ . PROGRAMS FOR NEXT-GENERATION MICRO-**
2 **ELECTRONICS IN SUPPORT OF ARTIFICIAL**
3 **INTELLIGENCE.**

4 (a) PROGRAM ESTABLISHMENT.—The Director of
5 National Intelligence, acting through the Director of the
6 Intelligence Advanced Research Projects Activity, shall es-
7 tablish or otherwise oversee a program to advance micro-
8 electronics research.

9 (b) RESEARCH FOCUS.—The Director of National In-
10 telligence shall ensure that the research carried out under
11 the program established under subsection (a) is focused
12 on the following:

13 (1) Advanced engineering and applied research
14 into next-generation computing models, materials,
15 devices, architectures, and algorithms to enable the
16 advancement of artificial intelligence and machine
17 learning.

18 (2) Efforts to—

1 (A) overcome challenges with engineering
2 and applied research of microelectronics, includ-
3 ing with respect to the physical limits on tran-
4 sistors, electrical interconnects, and memory
5 elements;

6 (B) promote long-term advancements in
7 computing technologies, including by fostering a
8 unified and multidisciplinary approach encom-
9 passing research and development into—

10 (i) next-generation algorithm design;

11 (ii) next-generation compute capa-
12 bility;

13 (iii) generative and adaptive artificial
14 intelligence for design applications;

15 (iv) photonics based microprocessors,
16 including electro-photonics;

17 (v) the chemistry and physics of new
18 materials;

19 (vi) optical communication networks,
20 including electro-photonics; and

21 (vii) safety and controls for generative
22 artificial intelligence applications for the
23 intelligence community.

24 (3) Any other activity the Director determines
25 would promote the development of microelectronics

1 research for future technologies, including optical
2 communications or quantum technologies.

3 (c) COLLABORATION AND PARTNERSHIPS.—In car-
4 rying out the program established under subsection (a),
5 the Director of National Intelligence shall actively collabo-
6 rate with relevant Government agencies, academic institu-
7 tions, and private industry to leverage expertise and re-
8 sources in conducting research.

9 (d) AUTHORIZATION OF APPROPRIATIONS.—
10 Amounts authorized to be appropriated for the National
11 Intelligence Program of the Office of the Director of Na-
12 tional Intelligence may be made available to award con-
13 tracts and grants, and to enter into transactions other
14 than contracts, to carry out the program established under
15 subsection (a).

16 (e) REPORTING REQUIREMENTS.—The Director of
17 the Intelligence Advanced Research Projects Activity shall
18 provide to the congressional intelligence committees reg-
19 ular briefings on—

20 (1) the progress, achievements, and outcomes of
21 the program established under subsection (a);

22 (2) the partnerships and collaborations con-
23 ducted pursuant to subsection (c); and

1 (3) recommendations for future research prior-
2 ities.

