

(1) and (2), respectively, inserted par. headings, and substituted “The requirements of paragraphs (2), (3), and (5) of subsection (a)” for “The requirements of subparagraphs (B), (C), and (E) of paragraph (1)” in introductory provisions of par. (1).

Subsec. (c)(1). Pub. L. 116-283, § 1850(k)(6)(A), redesignated cls. (i) to (iii) as subpars. (A) to (C), respectively.

Subsec. (c)(1)(A). Pub. L. 116-283, § 1850(k)(6)(C)(i), substituted “pursuant to section 4376(a) of this title” for “pursuant to subsection (a)” in introductory provisions.

Pub. L. 116-283, § 1850(k)(6)(B), redesignated subcls. (I) and (II) as cls. (i) and (ii), respectively.

Subsec. (c)(1)(A)(i). Pub. L. 116-283, § 1850(k)(6)(C)(ii), substituted “paragraph (2)” for “subparagraph (B)”.

Subsec. (c)(1)(A)(ii). Pub. L. 116-283, § 1850(k)(6)(C)(iii), substituted “clause (i)” for “subclause (I)”.

Subsec. (c)(1)(C). Pub. L. 116-283, § 1850(k)(6)(D)(i), substituted “subsections (d) and (e) of section 4375” for “section 2433(g)” and “section 4356” for “section 2432(f)” in introductory provisions.

Pub. L. 116-283, § 1850(k)(6)(B), redesignated subcls. (I) and (II) as cls. (i) and (ii), respectively.

Subsec. (c)(1)(C)(i). Pub. L. 116-283, § 1850(k)(6)(D)(ii), substituted “subparagraph (A)” for “clause (i)”.

Subsec. (c)(1)(C)(ii). Pub. L. 116-283, § 1850(k)(6)(D)(iii), substituted “subparagraph (B)” for “clause (ii)”.

Subsec. (c)(2). Pub. L. 116-283, § 1850(k)(7)(A), (B), substituted “this paragraph” for “this subparagraph” in introductory provisions and redesignated cls. (i) and (ii) as subpars. (A) and (B), respectively.

Subsec. (c)(2)(A), (B). Pub. L. 116-283, § 1850(k)(7)(C), redesignated subcls. (I) and (II) as cls. (i) and (ii), respectively.

EFFECTIVE DATE

Section and amendment by Pub. L. 116-283 effective Jan. 1, 2022, with additional provisions for delayed implementation and applicability of existing law, see section 1801(d) of Pub. L. 116-283, set out as an Effective Date of 2021 Amendment note preceding section 3001 of this title.

CHAPTER 327—WEAPON SYSTEMS DEVELOPMENT AND RELATED MATTERS

Table with 2 columns: Subchapter and Sec. I. Modular Open System Approach in Development of Weapon Systems 4401 II. Development, Prototyping, and Deployment of Weapon System Components or Technology 4421

PRIOR PROVISIONS

A prior chapter 327 “RESEARCH AND DEVELOPMENT CENTERS AND FACILITIES”, consisting of reserved section 4401, was repealed by Pub. L. 116-283, div. A, title XVIII, §1841(a)(1)(A), Jan. 1, 2021, 134 Stat. 4242.

A prior chapter 329 “OPERATIONAL TEST AND EVALUATION; DEVELOPMENTAL TEST AND EVALUATION”, consisting of reserved section 4451, was repealed by Pub. L. 116-283, div. A, title XVIII, §1841(a)(1)(A), Jan. 1, 2021, 134 Stat. 4242.

SUBCHAPTER I—MODULAR OPEN SYSTEM APPROACH IN DEVELOPMENT OF WEAPON SYSTEMS

Table with 2 columns: Sec. and description. 4401. Requirement for modular open system approach in major defense acquisition programs; definitions. 4402. Requirement to address modular open system approach in program capabilities development and acquisition weapon system design. 4403. Requirements relating to availability of major system interfaces and support for modular open system approach.

§ 4401. Requirement for modular open system approach in major defense acquisition programs; definitions

(a) MODULAR OPEN SYSTEM APPROACH REQUIREMENT.—A major defense acquisition program that receives Milestone A or Milestone B approval after January 1, 2019, shall be designed and developed, to the maximum extent practicable, with a modular open system approach to enable incremental development and enhance competition, innovation, and interoperability. Other defense acquisition programs shall also be designed and developed, to the maximum extent practicable, with a modular open system approach to enable incremental development and enhance competition, innovation, and interoperability.

(b) DEFINITIONS.—In this chapter:

(1) The term “modular open system approach” means, with respect to a major defense acquisition program, an integrated business and technical strategy that—

(A) employs a modular design that uses modular system interfaces between major systems, major system components and modular systems;

(B) is subjected to verification to ensure that relevant modular system interfaces—

(i) comply with, if available and suitable, widely supported and consensus-based standards; or

(ii) are delivered pursuant to the requirements established in subsection (a)(2)(B) of section 804 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, including the delivery of—

(I) software-defined interface syntax and properties, specifically governing how values are validly passed and received between major subsystems and components, in machine-readable format;

(II) a machine-readable definition of the relationship between the delivered interface and existing common standards or interfaces available in Department interface repositories; and

(III) documentation with functional descriptions of software-defined interfaces, conveying semantic meaning of interface elements, such as the function of a given interface field;

(C) uses a system architecture that allows severable major system components and modular systems at the appropriate level to be incrementally added, removed, or replaced throughout the life cycle of a major system platform to afford opportunities for enhanced competition and innovation while yielding—

(i) significant cost savings or avoidance;

(ii) schedule reduction;

(iii) opportunities for technical upgrades;

(iv) increased interoperability, including system of systems interoperability and mission integration; or

(v) other benefits during the sustainment phase of a major weapon system; and