

September 2023

ICS 35.240.01; 97.190

English version

Age appropriate digital services framework

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**CEN-CENELEC Management Centre:
Rue de la Science 23, B-1040 Brussels**

Contents	Page
European foreword.....	4
Introduction	6
1 Scope	8
2 Normative references	8
3 Terms, definitions, acronyms and abbreviations.....	9
3.1 Terms and definitions	9
3.2 Acronyms and abbreviations	17
4 Conformance.....	17
5 Key concepts and application	18
5.1 General application	18
5.2 Specified context of use	18
5.3 The organization	19
5.4 Stakeholders	19
5.5 Stages and processes	21
6 Key roles in Engineering project teams for age appropriate design	21
6.1 General.....	21
6.2 Role descriptions.....	21
6.3 Team competency	23
7 Preparation phase	24
7.1 Purpose.....	24
7.2 Outcomes	24
7.3 Activities and tasks	24
7.4 Inputs	26
7.5 Outputs	26
8 Recognizing child users and meeting their needs and diversity	26
8.1 Purpose.....	26
8.2 Outcomes	27
8.3 Activities and tasks	27
8.4 Inputs	29
8.5 Outputs	29
9 Upholding children's rights	29
9.1 Purpose.....	29
9.2 Outcomes	29
9.3 Activities and tasks	30
9.4 Inputs	30
9.5 Outputs	30
10 Child-centred approach to data use	31
10.1 Purpose.....	31
10.2 Outcomes	31
10.3 Activities and tasks	31
10.4 Inputs	32
10.5 Outputs	32
11 Moderation and redress	33
11.1 Purpose.....	33
11.2 Outcomes	33
11.3 Activities and tasks	33

11.4	Inputs	34
11.5	Outputs	34
12	Presenting published terms in age appropriate formats	35
12.1	Purpose	35
12.2	Outcomes	35
12.3	Activities and tasks	35
12.4	Inputs	37
12.5	Outputs	37
13	Implementing the Age Appropriate Digital Service Framework (AADSf), including across your supply chain	37
13.1	Inputs	37
13.2	Purpose	38
13.3	Outcomes	38
13.4	Activities and tasks	38
13.5	Outputs	38
14	Risk based age appropriate design and development	39
14.1	Purpose	39
14.2	Outcomes	39
14.3	Activities and tasks	39
14.4	Inputs	41
14.5	Outputs	41
15	Age appropriate deployment, operation, upgrade, monitoring, and decommissioning	41
15.1	Purpose	41
15.2	Outcomes	41
15.3	Activities and tasks	42
15.4	Inputs	42
15.5	Outputs	43
	Annex A (normative) Case for Age Appropriate Conformity	44
	Annex B (informative) Illustrative AAR	46
	Annex C (informative) Frameworks for Age Appropriate Design	48
	Annex D (informative) Illustrative Age Appropriate Enterprise Policy Statement	49
	Annex E (informative) Examples of regulations	50
E.1	Data protection regulations in Europe, including regulations and guidelines that focus on the protection of children's personal data specifically	50
E.2	Digital services law	50
E.3	Media Law and Regulation	51
E.4	Consumer legislation	51
E.5	Children's Rights or Human Rights legislation that applies to safety, well-being and treatment of children	51
E.6	Equality legislation	52
E.7	Health and Safety legislation	52
E.8	Criminal law, regulations and policy	52
	Bibliography	54

European foreword

This CEN-CENELEC Workshop Agreement (CWA 18016:2023) has been developed in accordance with the CEN-CENELEC Guide 29 “CEN/CENELEC Workshop Agreements – A rapid prototyping to standardization” and with the relevant provisions of CEN/CENELEC Internal Regulations - Part 2. It was approved by a Workshop of representatives of interested parties on 2023-04-17, the constitution of which was supported by CEN/CENELEC following the public call for participation made on 2022-03-28. However, this CEN/CENELEC Workshop Agreement does not necessarily include all relevant stakeholders.

The final text of this CEN-CENELEC Workshop Agreement was provided to CEN-CENELEC for publication on 2023-06-28.

This CEN-CENELEC Workshop Agreement was approved by the following organizations,

5Rights Foundation	Baroness Beeban Kidron OBE
Age Check Certification Services Ltd	Tony Allen
Arizona State University	Katina Michael
Accessibility for Children Community Group at World Wide Web Consortium (W3C)	Maud Stiernet
BBA Law Firm Turkiye	Levent Berber
China Council for the Promotion of International Trade (CCPIT) Commercial Sub-council	Huang Yuan, Jack Yao
ECPAT International	Guillaume Landry
Eurochild	Mieke Schuurman
IEEE Standards Association	Konstantinos Karachalios
Istanbul Bilgi University	Leyla Keser Berber
OVE Austrian Electrotechnical Association	Christian Gasser
Privately SA	Deepak Tewari
Stiftung Digitale Chancen	Jutta Croll

and the following individuals:

Emma Day	Independent human rights lawyer
Simone van der Hof	Leiden University
Elizabeth Milovidov	Digital Parenting Coach.com
Brian O'Neill	Retired from Technical University of Dublin

Chairman: Jean-Philippe Faure IEEE Standards Association

Secretary: Christian Gasser OVE Austrian Electrotechnical Association

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Introduction

This CWA is based on IEEE Std 2089™-2021, IEEE Standard for an Age Appropriate Digital Services Framework Based on the 5Rights Principles for Children. Used under license from The Institute of Electrical and Electronics Engineers, Incorporated.

Purpose

This specification provides a set of processes for digital services when end users are children, and, by doing so, aids in the tailoring of the services that are provided so that they are age appropriate. This is essential to creating a digital environment that supports, by design and delivery, children's safety, privacy, autonomy, agency, and health, specifically providing a set of guidelines and best practices and thereby offering a level of validation for service design decisions.

Use of the specification

The specification describes the set of processes by which engineers and technologists can consider children's rights and well-being throughout the stages of concept exploration and development. It provides implementable processes to help align innovation management to make processes, system design approaches, and software engineering methods age appropriate and, in doing so, reduce risk and, wherever possible, amplify the benefits of the digital world for end users under the age of 18.

The specification reflects the rights of children under the United Nations Convention on the Rights of the Child, further elaborated in the UNCRC General comment No. 25 (2021) as regards the digital environment. Many digital systems impact children in intended or unintended ways and, therefore, should take them into account. All organizations for which that is the case are encouraged to use this specification to help make that engagement age appropriate. This specification can be used to create services that build the digital world that reflects the full range of the rights of the child, including services that are safe and age appropriate.

Before using this specification, it is necessary to consider that your product or service is likely to be accessed by children or engage with children either directly, indirectly, or deliberately in the course of their operations. Data analytics, independent research, research about similar services and products, or research from surveys and research with children may help identify if and how your products, services, or systems engage with children and/or their data. In each case, if children use your services and/or if you collect children's data, this specification aims to help organizations create services that benefit children. This specification is based on the foundation that the 'best interests' (see Clause 3) of the child are placed in primary focus during the design of digital services.

To reach this goal, this specification supports organizations in identifying how their products and services impact children and how to verify that engagement is age appropriate. It is applicable within any life cycle model or set of methods for systems and software engineering and/or new or modified product or service development including brokering children's data. If organizations have running systems that cause risks to children, then the processes in this specification can be used for reiteration of analysis and redress.

Process overview

The goal of this specification is to enable organizations to design and deliver systems with the rights and well-being of children in mind. Age appropriateness includes a variety of values that support children. For example, values such as dignity, fairness, autonomy, sustainability, accountability and inclusivity. Age appropriateness also includes a variety of children's rights such as privacy, access to information, freedom of expression, participation, play, health and protection from sexual and economic exploitation. These values and rights are realized by this specification. This specification also supports values or attributes in systems typically considered in system engineering, such as functionality, efficiency, and effectiveness. An overview of the key processes in this specification is depicted in Figure 1.

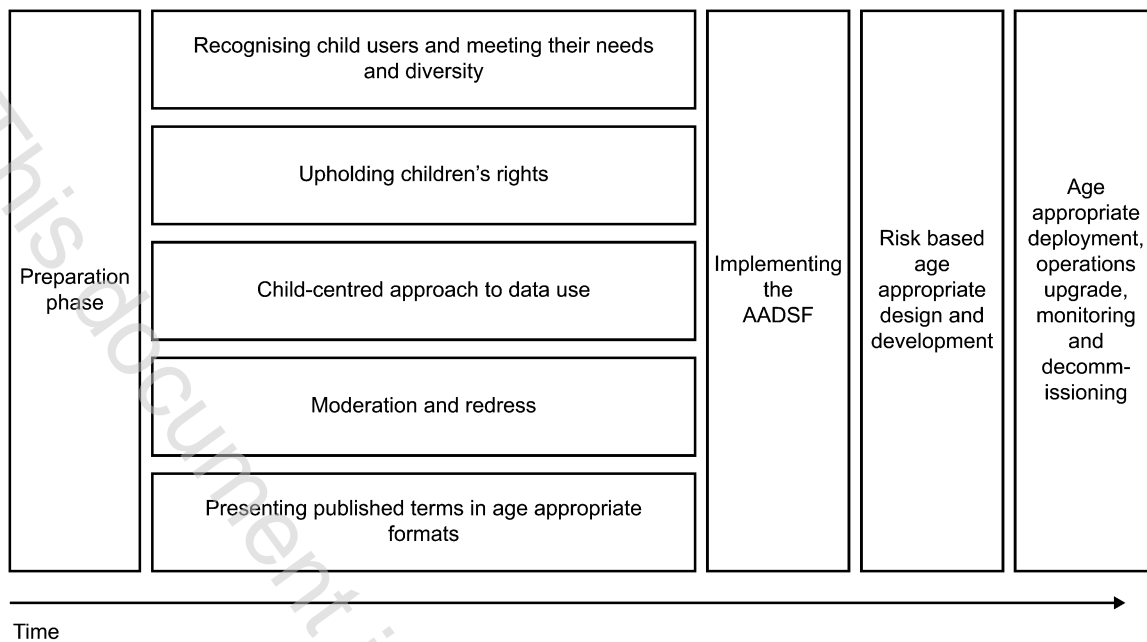


Figure 1 —Relationship of processes and stages in IEEE Std 2089-2021

1 Scope

This specification establishes a set of processes for developing age appropriate digital services for situations where users are children. The specification has the following features:

- a) Recognition that the user may be a child
- b) Consideration for the evolving capacities of the child
- c) Upholds the rights of children
- d) Offers terms appropriate to children
- e) Presents information in an age appropriate way
- f) Offers a level of validation for service design decisions

This specification provides a specific impact rating system and evaluation criteria and explains how vendors, and public institutions used by children such as in the education, health, social welfare, and criminal justice sectors can meet the criteria.

This specification sets normative requirements for published terms, design, and delivery that can uphold children's rights and promote their well-being.

Data privacy and security are complex and highly regulated areas of law, particularly as related to children and young people. The relevant legal definitions and requirements are rapidly evolving, and may vary at the local, state, national, and regional level. It is also important to have regard for national and regional human rights laws which also apply to children, such as the European Convention on Human Rights and the EU Charter of Fundamental Rights applying the child's best interests as a primary consideration in all matters that affect them. No specification can provide unconditional consistency with all such laws and regulations. Users of this specification are responsible for referring to and observing all applicable legal and regulatory requirements, and should refer questions of compliance to competent legal counsel with expertise in the relevant jurisdiction.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO Guide 73:2009, Risk management—Vocabulary.¹

ISO 9000:2005, Quality management systems—Fundamentals and vocabulary.

ISO 9000:2015, Quality management systems—Fundamentals and vocabulary.

ISO/IEC 25010:2011, Systems and software engineering—Systems and software Quality Requirements and Evaluation (SQuaRE)—System and software quality models.^{2,3}

ISO/IEC/IEEE 15288:2015, Systems and software engineering—System life cycle processes.⁴

ISO/IEC/IEEE 15289:2011, Systems and software engineering—Content of life-cycle information products (documentation).

ISO/IEC/IEEE 29148:2018, Systems and software engineering—Life cycle processes—Requirements engineering.

¹ ISO publications are available from the ISO Central Secretariat (<https://www.iso.org/>). ISO publications are also available in the United States from the American National Standards Institute (<https://www.ansi.org/>).

² ISO/IEC publications are available from the ISO Central Secretariat (<https://www.iso.org/>). ISO/IEC publications are available in the United States from the American National Standards Institute (<https://www.ansi.org/>).

³ IEEE publications are available from The Institute of Electrical and Electronics Engineers, 445 Hoes Lane, Piscataway, NJ 08854, USA (<https://standards.ieee.org/>).

⁴ The IEEE standards or products referred to in this clause are trademarks of The Institute of Electrical and Electronics Engineers, Inc.

ISO/IEC/IEEE 42010:2011, Systems and software engineering—Architecture description.

UNCRC General Comment No. 14, Para.4, General Comment No. 5, Para. 12 CESCR General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12).⁵

United Nations Convention on the Rights of the Child (UNCRC), 1989.⁶

UN Committee on the Rights of the Child General Comment No.25 (2021) on Children's Rights in Relation to the Digital Environment.⁷

Universal Declaration of Human Rights (General Assembly resolution 217 A), United Nations General Assembly, 10 December, 1948.⁸

U.S. Code 230—Protection for private blocking and screening of offensive material, US Communications and Decency Act, 1996.

In addition to the normative references listed above, consideration needs to be given to meeting the relevant national and regional legislation and industry standards, in the jurisdictions(s) in which the service or product will be offered, but there are instances where the law does not go far enough and so this specification sets the baseline to prioritize the rights of children and may go beyond the requirements of the law. See also Annex E for examples of regulations at the time of publication of the specification.

3 Terms, definitions, acronyms and abbreviations

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply. The *IEEE Standards Dictionary Online* should be consulted for terms not defined in this clause.⁹

3.1.1

Acquirer

A stakeholder that acquires or produces a product or service from a supplier.

NOTE—Other terms commonly used for an acquirer are buyer, customer, owner, purchaser, or internal/organizational sponsor.¹⁰

3.1.2

Acquisition

The process of obtaining a product, service, or system.

3.1.3

Activity

A set of cohesive and purposeful tasks for a process.

3.1.4

Age appropriate

Products and services, terms and conditions and policies, that are (1) suitable for children in general taking into account their rights and well-being, including rights specific to children such as the right to play, and (2) suitable for children given their specific age or stage of development, pursuant to the evolving capacities of children as referred to in Article 5 UNCRC.

⁵ Available at: https://www2.ohchr.org/English/bodies/crc/docs/GC/CRC_C_GC_14_ENG.pdf.

⁶ See <https://www.ohchr.org/en/professionalinterest/pages/crc.aspx>.

⁷ Available at: https://tbinternet.ohchr.org/_layouts/15/treatybodyexternal/Download.aspx?symbolNo=CRC%2fC%2fGC%2f25&Lang=en.

⁸ Available at: [https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_217\(III\).pdf](https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_217(III).pdf).

⁹ IEEE Standards Dictionary Online is available at: <http://dictionary.ieee.org>. An IEEE Account is required for access to the dictionary, and one can be created at no charge on the dictionary sign-in page.

¹⁰ Notes in text, tables, and figures of a specification are given for information only and do not contain requirements needed to implement this specification.