

# Trustworthy Technical Implementations of Children's Online/Offline Experiences

## Industry Connections Activity Initiation Document (ICAID)

Version: 1.0, 11 November 2020

IC20-025-01 Approved by IESS SMDC 18 December 2020

### Instructions

- Instructions on how to fill out this form are shown in red. It is recommended to leave the instructions in the final document and simply add the requested information where indicated.
- **Shaded Text** indicates a placeholder that should be replaced with information specific to this ICAID, and the shading removed.
- Completed forms, in Word format, or any questions should be sent to the IEEE Standards Association (IEEE SA) Industry Connections Committee (ICCom) Administrator at the following address: [industryconnections@ieee.org](mailto:industryconnections@ieee.org).
- The version number above, along with the date, may be used by the submitter to distinguish successive updates of this document. A separate, unique Industry Connections (IC) Activity Number will be assigned when the document is submitted to the ICCom Administrator.

### 1. Contact

Provide the name and contact information of the primary contact person for this IC activity. Affiliation is any entity that provides the person financial or other substantive support, for which the person may feel an obligation. If necessary, a second/alternate contact person's information may also be provided.

**Name:** Nishan Chelvachandran

**E Email Address:** nishan@ironlakes.io

**Employer:** Iron Lakes

**Affiliation:** Iron Lakes

IEEE collects personal data on this form, which is made publicly available, to allow communication by materially interested parties and with Activity Oversight Committee and Activity officers who are responsible for IEEE work items.

### 2. Participation and Voting Model

Specify whether this activity will be entity-based (participants are entities, which may have multiple representatives, one-entity-one-vote), or individual-based (participants represent themselves, one-person-one-vote).

Entity-based.

### 3. Purpose

### **3.1 Motivation and Goal**

Briefly explain the context and motivation for starting this IC activity, and the overall purpose or goal to be accomplished.

The intersection of technology and children is an area of high impact, in terms of reach and scope. Innovations in technology are fueling its use in many aspects of child centricity, from education to the gamification of the play and recreational space, and there is an increasing merging of online and offline spheres through connected toys or social networking services. There are possibilities to enhance inclusion, opportunity, and flourishing of children, but also risks relating to privacy, safety, and security. The current landscape is unmanaged and unregulated, with high-level principles having emerged but a lack of technical specificity in standardization or certification, to govern and promote better practice for the use and implementation of innovative technology. As such, there seems to be a real danger that innovative technology moves from the betterment and advancement of children centric applications, to that of invasive and exploitative uses of surveillance capable technologies that loses the focus on respecting children’s dignity.

The primary goal is to create a community-forged ecosystem to lower the barriers of engagement and enable a collaborative community to build, develop and continually iterate better practice for products and services intended for children, such as connected toys, social platforms, or online games. To ensure the practical relevance and deployability of this program, it will develop a market-based framework to define and enable transparent, accountable operations of children’s products and services. The benefit of this is that it will lower barriers to engagement, cultivating and influencing key stakeholders and groups in a newly defined child-centric arena.

This workflow will create a “kitemark” for safe and trusted applications of technologies in the children’s sphere, and cultivating the better practice of stakeholders and operators within the ecosystem.

The certification program will focus on layers such as, but not limited to:

1. Data
2. Algorithmic Systems
3. Applications.

The goal of the program will be to create specifications with key industry, government and policy stakeholders for certification and marking processes that advance the positive and safe interactions between Children and Technology. The certification development program would also look to create a safe ecosystem that engages and enables children to participate in the development cycle, be that in Toys, or in the deployment of A/IS technologies in education, and the child-centric space (gamification), and the toolkits needed for this ecosystem.

The resultant outputs from this Industry Connections Program would support innovators and regulators in this space to create and enforce a governance layer to the certification, as well as the generation of novel standards that will better shape industry, intersectional engagement and representation to support the ecosystem for solutions that contribute to children’s wellbeing and flourishing.

### **3.2 Related Work**

Provide a brief comparison of this activity to existing, related efforts or standards of which you are aware (industry associations, consortia, standardization activities, etc.).

IEEE work that has relevance to this space and will be informed of this activity:

- [IEEE P2089](#)
- [IEEE P7004](#)
- [IEEE P7012](#)
- [IEEE P2876](#)
- [IEEE P2812](#)
- [IEEE P3527.1](#)
- [Digital Inclusion, Identity, Trust, and Agency \(DIITA\)](#).
- [IC20-007 The IEEE Global Artificial Intelligence Systems \(AIS\) Well-being Initiative](#)
- [IC16-002 The Global Initiative on Ethics of Autonomous and Intelligent Systems](#)

Another relevant body of work is UNICEF’s draft policy guidance on Children and AI. This guidance provides policy guidance and global awareness. Our IC Program is intended to provide a certification program that would be complementary to such policy guidance.

### **3.3 Previously Published Material**

Provide a list of any known previously published material intended for inclusion in the proposed deliverables of this activity.

International, regional, and national policy and regulatory guidance documents set out requirements that developers of technology for children have to meet in different markets, and are establishing best practices that may be followed globally, so they set out important context and reference for this IC Program. These include:

- UK Information Commission Office (ICO) CoP for Age Appropriate Design
- UNICEF Policy Guidance on Children and AI
- US Child Online Privacy and Protection Act (COPPA)

### **3.4 Potential Markets Served**

Indicate the main beneficiaries of this work, and what the potential impact might be.

Developers of products and services where users are children, including:

- Connected toys
- Online games
- Mobile apps
- EdTech
- Social networking

Children and their caregivers are in the end the main beneficiaries when the products and services for them meet certain best practices.

### **3.5 How will the activity benefit the IEEE?**

The certification programme offers an ecosystem to bring IEEE’s technical and ethical standards work flows into tangible, deployable tools and better practice models, made accessible to the global audience. There are expected synergies with other IEEE initiatives, as well as those from other NGO, government and industry stakeholders.

The safe development ecosystem proposed in this Industry Connections Programme offers IEEE and key development stakeholders an environment that can be utilized by its working groups, membership, and relevant leads in industry to lower the barriers of engagement, and provide enable the inclusion of children and young people in the development and deployment of innovative technologies.

The certification model and parameters for better practice developed in this Industry Connections Programme can be applied to environments in both the Global North and South, providing access to knowledge and developmental toolkits to progress an aligned safe approach to child-centric technological deployments, whilst also utilizing the capabilities to address challenges highlighted by the UN Sustainable Development Goals.

In addition, the entire IEEE SA will benefit from this program by enhancing a portfolio of work, as it resonates strongly with the IEEE Global Artificial Intelligence Systems Well-Being Initiative, DIITA, the P70xx series, AI Licensing standards, and other related technical IEEE standards projects. IEEE has been the driver of the term “From Principles to Practice”. Putting these concepts into practice requires good governance, and while this may be easier for those in the regulated or technical fields, it is not always as evident nor clear to others. Thus, having a governance framework that also provides the ability for implementers to consider and prototype provides greater accessibility and scale to responsible innovation. Concluding, this IC program would function as a bridge in support of the good work that the IEEE community has achieved

## **4. Estimated Timeframe**

Indicate approximately how long you expect this activity to operate to achieve its proposed results (e.g., time to completion of all deliverables).

**Expected Completion Date:** 12/2022

IC activities are chartered for two years at a time. Activities are eligible for extension upon request and review by ICCom and the responsible committee of the IEEE SA Board of Governors. Should an extension be required, please notify the ICCom Administrator prior to the two-year mark?

## **5. Proposed Deliverables**

Outline the anticipated deliverables and output from this IC activity, such as documents (e.g., white papers, reports), proposals for standards, conferences and workshops, databases, computer code, etc., and indicate the expected timeframe for each.

The programme is to serve as a hub for ideating and coordinating inclusive and trustworthy children centric technologies.

Estimated Timeline - 2 year work effort.

Integration with other initiatives in the first quarter.

Working groups and IC operational structure to be established in the first quarter.

Discovery phase in first quarter to hone timeline and parameters for the work group efforts.

Workshops interconnected with other initiatives, or every 2 quarters, depending on milestones achieved.

Year 1 - prototypes - framework for the certification and deployment toolkits.

Themes defined below as working groups to run in parallel, depending on entities.

Year 2 - Sandbox for toolkits and Child ecosystem build.

Year 1 and 2 will have a quarter overlap on each side to accommodate migration/transition of efforts.

- Working groups on focused thematic areas will be established during the first quarter after activation, each led by an entity in the program community.
- Measurable specifications for certification activity and marking processes that advance the positive and safe interactions between Children and Technology, focusing on:
  - Data
  - Algorithmic Systems
  - Applications
  - Dignity and Trust
  - Privacy and Security

- Policy Guidance
- Standards
- Integration with standards and policy guidance initiatives to combine multi-agency efforts and initiatives.
- Develop sandbox environments to pilot and further develop toolkits for Child-centric deployments.
- Workshops to integrate this workstream as a follow on from and connector to other related initiatives.
- Generate wider outreach and engagement with the community build and related IC programmes.
- Create an ecosystem for children and young people to be involved in the design and implementation of toys and other relating child-centric applications.

### **5.1 Open Source Software Development**

*Indicate whether this IC Activity will develop or incorporate open source software in the deliverables. All contributions of open source software for use in Industry Connections activities shall be accompanied by an approved IEEE Contributor License Agreement (CLA) appropriate for the open source license under which the Work Product will be made available. CLAs, once accepted, are irrevocable.*

Will the activity develop or incorporate open source software (either normatively or informatively) in the deliverables?

We are considering open source approaches and options, but it is too early to tell. As the work develops, we will decide and engage with the appropriate committees and communities.

### **6. Funding Requirements**

*Outline any contracted services or other expenses that are currently anticipated, beyond the basic support services provided to all IC activities. Indicate how those funds are expected to be obtained (e.g., through participant fees, sponsorships, government or other grants, etc.). Activities needing substantial funding may require additional reviews and approvals beyond ICom.*

This IC Program will leverage the IEEE SA provided resources. In addition, it will look at options for sustainability beyond the incubation period through different funding options.

### **7. Management and Procedures**

#### **7.1 Activity Oversight Committee**

*Indicate whether an IEEE committee of some form (e.g., a Standards committee) has agreed to oversee this activity and its procedures.*

Has an IEEE committee agreed to oversee this activity? No.

The ICAID intends to actively coordinate with a number of IEEE communities, including SSIT, CTS, CS, and DIITA.

If yes, indicate the IEEE committee's name and its chair's contact information.

**IEEE Committee Name:** Committee Name

**Chair's Name:** Full Name

**Chair's Email Address:** who@where

Additional IEEE committee information, if any. Please indicate if you are including a letter of support from the IEEE Committee that will oversee this activity.

IEEE collects personal data on this form, which is made publicly available, to allow communication by materially interested parties and with Activity Oversight Committee and Activity officers who are responsible for IEEE work items.

## **7.2 Activity Management**

If no Activity Oversight Committee has been identified in 7.1 above, indicate how this activity will manage itself on a day-to-day basis (e.g., executive committee, officers, etc.).

An executive community will be established, to operate as the core leadership team for the program. Officers, such as a Chair, a Vice-Chair, Secretary and one chair for each of the decided program subgroups.

- Chair: Nishan Chelvachandran
- It is anticipated that there will be a Vice Chair and Secretary appointed

## **7.3 Procedures**

Indicate what documented procedures will be used to guide the operations of this activity; either (a) modified baseline *Industry Connections Activity Policies and Procedures*, (b) Standards Committee policies and procedures accepted by the IEEE SA Standards

Board, or (c) Working Group policies and procedures accepted by the Working Group's Standards Committee. If option (a) is chosen, then ICCom review and approval of the P&P is required. If option (b) or (c) is chosen, then ICCom approval of the use of the P&P is required.

Abridged Entity P&P.

## **8. Participants**

### **8.1 Stakeholder Communities**

Indicate the stakeholder communities (the types of companies or other entities, or the different groups of individuals) that are expected to be interested in this IC activity, and will be invited to participate.

Example types of participants will be representatives of entities, industry, NGO or state representatives, such as:

- Different types of stakeholders working in areas of child wellness, child safety, communications technologies, consumer devices areas
- Ministries of foreign affairs, education, societal issues and wellbeing
- Regional and municipal representatives
- Intergovernmental institutions in the child wellness, child safety, communications technologies, consumer devices areas
- Large and small companies developing apps, games, toys

**8.2 Expected Number of Participants**

Indicate the approximate number of entities (if entity-based) or individuals (if individual-based) expected to be actively involved in this activity.

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**8.3 Initial Participants**

Provide a number of the entities or individuals that will be participating from the outset. It is recommended there be at least three initial participants for an entity-based activity, or five initial participants (each with a different affiliation) for an individual-based activity.

Use the following table for an entity-based activity:

Entity	Primary Contact	Additional Representatives
Iron Lakes	Nishan Chelvachandran	
Future Memory Inc.	Galit Ariel	
Xprize	Amir Banafatemi	
AI Commons	Buse Cetin	
Government of Finland	TBC (Meeting with ministries on 20 Nov)	
Lego	TBC (expressed interest, awaiting meeting to confirm)	
5Rights Foundation	Rys Farthing (TBC 20th)	
3D Bear	TBC (expressed interest, awaiting meeting to confirm)	
Moomin Finland	TBC (expressed interest, awaiting meeting to	



	confirm)	
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