

**DIGITAL INCLUSION, IDENTITY, TRUST AND
AGENCY (DIITA):
PROGRAM REPORT**

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DIGITAL INCLUSION, IDENTITY, TRUST AND AGENCY (DIITA): PROGRAM REPORT

INTRODUCTION

Many areas of human activity in the twenty-first century take place within cyberspace. Those excluded from cyberspace are thereby excluded from a key domain of human endeavor. Exclusion may arise from many causes, including affordability, availability, discrimination, and concern for safety. *The scope of the Digital Inclusion, Identity, Trust and Agency (DIITA) Industry Connections Program considers causes of exclusion that can be addressed by advancing technology for humanity through standardization and related solutions.*

In March 2019, the second phase of the program was approved by the IEEE Standards Association under the updated name of Digital Inclusion, Identity, Trust and Agency. DIITA currently has five workstreams:

- **Internet Affordability and Accessibility:** The workstream focuses on suggesting suitable network designs with reference to various technologies for underserved communities, identifying parameters that will lead to cost reduction, creating sustainable business models for affordability, and growth pattern of subscribers in rural areas. It also looks at accessibility factors that ensure appropriate technologies for the respective circumstances in underserved communities.
- **Dignity and Agency in Identity:** This workstream seeks to provide guidance and principles in examining dignity and agency in relation to digital inclusion, with an initial focus on communities of people with intellectual disabilities.
- **Privacy by Design:** Triggered by the abuse of information for malicious purposes in the Cambridge Analytica scandal, this workstream looks at privacy issues that can be addressed through standardization and awareness raising and how to propose constructive activities.
- **Governance in Identity:** This workstream develops guidelines and principles relating to the governance and security of users' digital identity.
- **Dignity and Inclusion in Online Gaming:** This workstream establishes best practices for community management in online gaming platforms (industry guidance paper). It also aims to determine the viability of a technical standard that encourages the development of healthy online communities through a combination of incentive systems and privacy tools.

In addition to these current workstreams, the DIITA Industry Connections Program has explored and incubated other activities that have transitioned to other IEEE programs or evolved to new initiatives.

We welcome anyone wanting to join our efforts to address causes of exclusion in or from the digital world and to identify best practices and solutions, including standards, to join our community. Our open consensus-building process ensures all voices are heard.

AN OVERVIEW

The Digital Inclusion, Identity, Trust and Agency Program (DIITA) works through its dedicated workstreams to identify and create consensus around technologies in order to address:

- Inclusion: We can afford to access the digital domain, are able to access it, and are not excluded from doing so by virtue of age, gender, sexual identity, or other factors that should not be a consideration.
- Identity: We are known as we wish to be known.
- Trust: We, and our personal information, are safe and we have dignity in our online engagement.
- Agency: We have control over our data and our activities.

These are essential requirements for the short and long-term health and wellbeing of all people using cyberspace, especially members of underserved and marginalized groups.

Voluntary consensus standards and related activities can play a critical role in supporting the development and use of appropriate technology solutions. They can ensure that the development of these solutions is conducted in an open, inclusive manner with all the relevant stakeholders involved.

The DIITA Program aims to:

- Ensure that the conditions of online access safeguard our personal agency and dignity in ways that are possible off-line, through the standardization lifecycle.
- Create technical capabilities to identify ourselves online in a way that protects our privacy, our right to be forgotten, and our off-line ability to have multiple personas; identify potential standardization opportunities in this vein and encourage the development of practical, technical outputs to realize this goal.
- Develop technical and contextually applicable standards that enable the needs and voices of all.

Our sphere of activity is to identify such challenges and facilitate the development of technical solutions, including:

- Identifying barriers to digital inclusion, focusing on developing roadmaps, solutions, frameworks, or technical standards for affordability and accessibility that support the progress of practical technologies to address those barriers.
- Instantiating families of standards activities based on roadmap effort, including data governance models and frameworks.
- Exploring technical solutions for the concept of contextual sufficiency (the minimum data needed for a specific purpose) in relation to digital identity.
- Engaging the broader community in the domains of digital identity, trust, and agency to increase robustness of the standards collaborative output.
- Supporting other IEEE initiatives in common areas of interest, focus, and applications through standards.
- Identifying and supporting the transition of working efforts to receptive and appropriate areas of IEEE that may sustainably support mature workstream efforts in the mid- to longer term.

Example: IoT IN DOMESTIC ABUSE CHALLENGES

Internet of Things (IoT) can have tremendous benefit for all individuals including vulnerable populations. IoT devices can provide personal safety and empowerment through cameras, for example. Threats of cyber hacking are well known in the industry, and safety and security measures are being built in. However, a potential threat that is often overlooked is abuse by a specific person using IoT as a tool, such as stalking through IoT devices. This is a significant concern for domestic violence survivors and stalking victims.

For more information, view the webinar here:
https://engagestandards.ieee.org/DITA_Webinar_OnDemand.html

OUR ACHIEVEMENTS

DIITA's flexibility has enabled the incubation of various new activities. Specific achievements under the program include:

- IEEE Standards Association has hosted two Open Space workshops under the "InDIITA" banner that utilize an attendee-based participatory experience to work on the solutions needed today in the world of identity. Books of proceedings from InDIITA 2018 and InDIITA 2019 have been published,
 - <https://app.box.com/s/o73nrpt45agpk1sfa1jtt9n10imeq7zc> (InDIITA 2018)
 - <https://app.box.com/s/5ktqqgk0q5kemdhfti28vg03febmcfk5> (InDIITA 2019)
- Discussions to create decentralized identifying standard mechanisms to authenticate users connecting to multi-domain Wi-Fi access providers across various train stations have resulted in the approval of a new standardization project, IEEE P2872™, Draft Standard for Interoperable and Secure Wireless Local Area Network (WLAN) Infrastructure and Architecture, in March 2020.
- Affordability and accessibility: Defining solutions to the challenges faced by rural communities in access to broadband connectivity by standardizing requirements for the quality of service in rural broadband connectivity to measure the efficiency, effectiveness, and reliability of connectivity to the end users in the last mile. As a result of this workstream, a new IEEE standard project was formally initiated in June 2020: IEEE P1941.1™, Draft Recommended Practice for Internet Grades of Service in Rural Areas.
- Dignity in AI: The question of dignity in AI is most clearly exposed in relation to marginalized communities. In October 2018, a significant stakeholder workshop was held considering the use of AI in the homes of people with intellectual disabilities. A report with learnings was developed and the group is designing next steps based on those learnings.
- Dignity and Identity in Online Gaming: The issues of disruptive behavior in online gaming are well known, and this group has developed a report that will serve as the foundation for a standard to define the taxonomy on the topic, and best practices. The standard project was initiated in March 2020 and is called IEEE P2876™, Draft Recommended Practice for Inclusion, Dignity, and Privacy in Online Gaming.

DIITA has also served as an incubation space for initiatives that have transitioned to other programs.

These include:

- Decentralized Identity for Health: This workstream has been moved under the IEEE P2418 standards family [IEEE P2418.6™, Draft Standard for the Framework of Distributed Ledger Technology (DLT) Use in Healthcare and the Life and Social Sciences.]
- Certification of Ethical Framework for Agency on Blockchain: This workstream has become the Blockchain in Healthcare Global (BiHG)

COMMUNITY ENGAGEMENT AND RAISING AWARENESS

DIITA builds community and raises awareness of critical issues by holding events focusing on global, regional, and local issues relating to connecting communities to the online world and to empowering them to safely and securely act in that context.

The leading event for two years has been an open space technology workshop called InDIITA designed to engage the community on important topics surrounding digital inclusion, identity, trust, and agency, as well as to develop an outcome-based community that continues to address the challenges and provide solutions in the context of India and South Asia.

In Europe, the first EU-DIITA event was held in late 2019, and in Australia and the U.S., speakers have participated in other events to engage and grow the community.

Due to COVID-19, there is an increased focus on online engagement through our webinar series on relevant topics, and we will assess returning to events once the situation permits.

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APPENDIX

WORKSTREAM HIGHLIGHTS

AFFORDABILITY AND ACCESSIBILITY

According to the International Telecommunication Union (ITU), half of the world population is still unconnected. Four-fifths of this unconnected population is located in the Asia Pacific and Africa regions. On average, 69% of the African population and 55% of the Asian population do not have access to the internet due to living in the most remote and rural regions (GSMA Report, 2019¹). The internet continues to influence every aspect of life, from education and healthcare to business. It has transformed the world economic and social landscape. Internet penetration is increasing continuously, though, either through a mobile network, wireless access point, or fixed broadband and connection, giving individuals a gateway into an online experience that is expanding by the day. However, some 3.5 billion people in the world are without internet, and most of them are living in remote and rural regions (ITU Report, 2018).

In countries where the urban-rural digital gap is wide, efforts have been ongoing to narrow this gap by enabling connectivity to the unconnected remote rural villages. The remote rural areas are defined by a set criterion of which scanty population distribution along with rugged geographical terrain and low income levels are some amongst others. These criteria are also the reason why these areas are unserved and unreachable.

The telecommunications networks that are interconnected on a national, regional, and global basis, the quality of telecommunication services is also applied to any network. It also implies that the Quality of Service (QoS) can not only be applied at the national, regional, or international level, but it needs to be considered up to the last-mile user. The quality of service of any network also depends on the quality of last-mile user experience (QoE). Ensuring the quality of service of any network is measurable along with the quality of user experience.

However, there is hardly any specific standard or framework that can measure the QoS along with QoE of any rural network. Existing standards, developed by the International Telecommunication Union (ITU) and IEEE, are mostly technical. These standards define frequency bands, modulation techniques, power levels, and encryption. Ninety-two countries have established national broadband policies. However, broadband action plans are limited on the focus of spectrum, upload, and download speed. The definition of broadband speed in national plans and policies, especially minimum speed, is also incumbent on rural penetration. Capacity targets are based on coverage, penetration, and service speeds of broadband connections, without emphasis on quality of the service from the perspective of the end users. These users often face lags, delays, and latency dealing with compromised video and audio quality.

The workstream has an initial focus on India, but the work has relevance globally. The work has been divided into two focus areas.

¹ The GSMA report can be found at <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/07/GSMA-State-of-Mobile-Internet-Connectivity-Report-2019.pdf>

AFFORDABILITY

The affordability sub-workstream focuses on how rural broadband can be made cost effective and affordable. In this direction, the sub-workstream is working on various topics such as cost effectiveness of technologies to connect the unconnected, identification of parameters that can reduce the cost of enabling connectivity to the remote, rural villages of India, hybrid business models that aim toward sustainability of connectivity, and detailed cost benefit analysis of connectivity. The ongoing study bases itself on secondary as well as primary data. The secondary data will give preliminary information about the cost, which will be validated through primary data from various technology deployments. This analysis of various technologies will aim toward cost reduction of the network. In order to reduce the cost, planning and designing of the network plays an important role. The research contributions from this sub-workstream will also inform policy recommendations to the government of India and pave the way for sustainable rural broadband.

Key areas of focus are:

- Parameters that reduce cost of connectivity
- Cost benefit analysis of connectivity
- Hybrid business models that can make connectivity sustainable

ACCESSIBILITY

The accessibility sub-workstream focuses on studying how connectivity is being used by people who connectivity has reached in the remote rural villages of India. We focus our study on women, youth, and marginalized groups in these villages. It is widely believed that connectivity's penetration in the remote villages of India has not been successful because of the unawareness about connectivity and internet by the people. However, interaction with the people in field studies and in in-depth studies and discussions with them have led us to an understanding that it is not just about awareness. Various other factors play a key role such as accessibility issues, illiteracy, digital illiteracy, lack of smartphones, unavailability of the internet connectivity 24x7, etc. Thus, the sub-workstream is working on topics such as women and connectivity, where we focus on understanding why women use connectivity less than men, the barriers and constraints to avail connectivity, and low connectivity links to women's empowerment and enablement. We also focus on the need to seed the growth of community networks in the remote, rural villages of India. This would lead us to not only enable connectivity to the unconnected but also focus in greater detail on how connectivity can be enabled by communities and how connectivity is used by these communities. As part of seeding community networks, we also focus on developing community technologies relevant for the community and connectivity-based rural livelihood that treats connectivity's usage equally within the community.

Key areas of focus are:

- Women and connectivity
- Seeding growth of community networks for enabling and meaningful utilization of connectivity
- Developing community technologies for utilization of connectivity

OUTCOMES

This workstream has been very active in studying the target problems from the socio-economic angle as well as from the perspective of pragmatic technical solutions for the target communities, and identifying concrete solutions.

Deliverables of the workstream include identification of the need to standardize requirements for Quality of Service and Quality of Experience in the last mile. As there is related work in IEEE P2061™, Draft Standard for Architecture for Low Mobility Energy Efficient Network for Affordable Broadband Access, the aspects will be incorporated in that standards project. This will include identifying key performance indicators (KPIs) measuring the four critical parameters of connectivity: availability, affordability, accessibility, and acceptability (4As).

OTHER AREAS TO INVESTIGATE

Our work is ongoing, but we have uncovered several areas that warrant further investigation, including:

- The need for clarity about the nature of the problem.
- The importance of diversity, and considerations of diversity, when creating standards-related solutions. The challenges of defining universal rules for what and when to constitute of transforming QoS and QoE as a standard.

DIGNITY AND AGENCY THROUGH AI

Charter (Mission): Protect, develop, and promote dignity through digital agency.

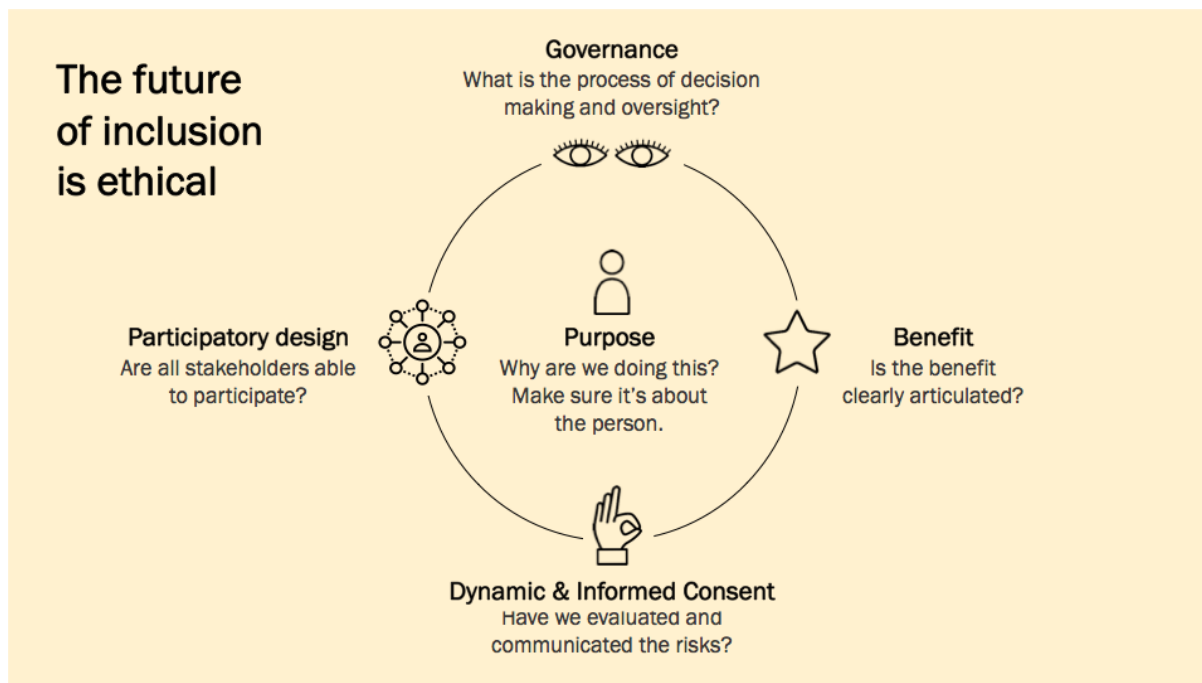
Project:

- Phase 1: Study use of AI on vulnerable individuals. How AI can be used to enhance capabilities of individuals with decision impairment.
- Phase 2: Develop principles that can drive an ethical framework for the use of the AI technology in this use case.
- Phase 3: Identify mechanisms to protect, develop, and promote dignity when using AI technology in this use case.

As part of the DIITA Program, Dignity and Agency workstream phase 1, IEEE Society of Social Implications of Technology experts attended a roundtable to develop an ethical framework to use AI technology and share data in order to support decision making and augment autonomy for people with a decision impairment.

Together, the experts discussed the first steps of what an ethical approach looks like. The result of these discussions is illustrated below.

FIGURE 1: AN ETHICAL APPROACH TO AI TECHNOLOGY



1. Identifying purpose and benefits to the individuals is key to the development of an ethical framework

The questions that first arose were:

Should the purpose and benefits be identified at the outset of the project? Or can the purpose and benefits of the project be derived from the data insights provided by the AI solution?

Experts identified the following key problems, which if solved, would significantly benefit individuals with decision impairment:

1. It is difficult to identify and recognize if an individual is in pain;
2. Choice is not often provided to the individual, especially in relation to the living arrangement; and
3. The level of care is fluctuating. There is a need in particular to reduce the turnover of caregivers and to enhance their capabilities.

The position adopted was that it is imperative that both purpose and benefits are defined at the outset. The rationale being that introducing AI in a community where perceptions are different and consent cannot necessarily be expressed constitutes a significant risk, and that risk must be addressed by articulating a clear purpose and benefits to the individuals.

On the other hand, some experts argued that as AI technology provides insight to the data by correlation, AI can reveal key problems and offer solutions and benefits that were not previously visible. Once these are revealed, the purpose of the project could then be specified.

The following concepts were also discussed:

2. Is it legal—above the legal benchmark?

The experts noted that the data collected in this project is health data, which is sensitive data, and that individuals with decision impairment are more vulnerable. Accordingly, the experts considered whether in this case a higher legal standard, such as the one set by the GDPR in Europe, should be adopted.

They considered the concept of dynamic consent, and whether it is possible to ensure the engagement of the individual by renewing consent throughout the project (either directly or via the appointed tutor).

3. What is fair?

The predominant question was how to determine what is reasonable.

To answer this question, the experts adopted a risk/benefit approach and considered how to determine the benefit to different stakeholders (e.g., individuals with a decision impairment, visitors, staff, families) and whether these benefits are compatible.

Experts acknowledged the need for:

1. Feedback throughout the project from the different stakeholders;
2. A clear statement defining what the data should not be used for; and
3. A risk assessment process to identify potential unintended consequences.

Some experts argued that not using AI technology to inform how to improve the wellbeing of the individuals was a considerable opportunity risk.

4. What could go wrong: vulnerability and surveillance

Using AI to better understand and enhance the capabilities of individuals with decision impairment requires

data to be acquired on these individuals, and effectively an increased monitoring of their daily activities and interactions with other individuals (e.g., caregivers, families, etc.).

Increased monitoring is always contentious in society, and more so when vulnerable individuals are involved. The question becomes why the need for monitoring, to obtain insights to enhance the capabilities of these vulnerable individuals.

Experts considered the following key questions:

- Is the promise rather than the guarantee of improvements/benefits sufficient? Why?
- How do you determine and measure improvements/benefits?
- How do you prevent any potential abuse from occurring/misuse of the data and AI insights?
- How do you re-contextualize the AI insights?

5. Aligning the human and technology perspective: A participatory design

Experts considered how the wellbeing of the individuals can be maintained, supported, and enhanced during and after the project. The first step to achieve this goal is through a participatory design of the project with all relevant stakeholders.

PRIVACY BY DESIGN

This workstream focuses on informing policy makers about considerations when formulating opinions and legislation on privacy and closely related security matters. We expect this will be equally applicable for leaders across the public and private sectors since the fundamental intent is to raise awareness and provide digestible information. Our hope is that interpretation and internalization could lead to more people in the private sector working to improve privacy and security productions without the need for further regulatory pressure. The group also is evaluating existing and nascent standards for privacy considerations and aims to inform about the importance of privacy by design concept where needed, or identify standards gaps where this needs to be developed.

Key areas to be addressed:

- Analyze whether current standards projects sufficiently address privacy and security measures, or whether there may be gaps that need to be addressed.
- Communicate the importance of data privacy and security as it affects every individual and organization.
- Express some of the major risks associated with lax privacy and security around sensitive data.
- Transparency in tracking review of common tracking methods and purposes, with the goal of encouraging transparency to help end users make informed decisions about what to accept.
- Increasing complexity of regulatory landscape, without a coherent federal policy to express our point of view on these matters, creating friction in commerce.

DIGNITY AND INCLUSION IN GAMING FOR ALL

WHAT IT IS ABOUT

This workstream seeks to achieve two goals.

1. The creation of a set of guidelines to help game developers enable healthy in-game interactions and build positive and inclusive communities.
2. The establishment of the viability of a framework for a platform-agnostic technical standard that would give users (gamers) the right and the ability to protect themselves and other gamers from harassment and abuse while in a social/online gaming environment.

To this end, we have formed a panel of video game industry experts representing a broad array of game industry stakeholders. These include avid gamers, software developers, and executives drawn from independent studios, large AAA studios (responsible for developing massive game franchises), and software toolkit developers.

Key areas to be addressed:

1. Discuss the nature of reasonable ethical and competitive behavior in a gaming environment, including:
 - a. Impact of context;
 - b. Social implications of reporting incidents;
 - c. Issues for victims (including perception of themselves);
 - d. Issues pertaining to group activity (e.g., downvote mafia, group shaming, etc.)
2. Develop best practices on what consists of ethical and competitive behavior in a gaming environment.
3. Develop a taxonomy to help consistently describe, categorize, and rank different behaviors.
4. Develop a list of core features that should form part of the standard, including but not limited to:
 - a. Mechanisms for blocking and reporting;
 - b. Enforcement;
 - c. User privacy;
 - d. Mechanisms for system updates and/or expansion.
5. Propose the core elements of a standard that meets the user's needs and incorporates best practices for user behavior.

WHY IT IS IMPORTANT

This In the past decade, playing video games has evolved from a niche hobby to a broad societal norm. Driven in no small part by mobile gaming, the industry has grown to billions of players and more than \$100B in annual revenue, with ~\$70B generated by free-to-play (F2P) games.

In the U.S. alone, approximately 66% of people age 13+ consider themselves to be gamers, and almost half of all gamers regularly play online multiplayer games (Nielsen, 2018). Social interactions in online multiplayer games

can lead to many positive outcomes, such as players feeling more comfortable to “be themselves” and enabling the formation of intimate friendships (Cole and Griffiths, 2007).

However, harassment, trolling, and other disruptive behaviors are a common online experience, especially for members of under-represented and minority groups. Fully 65% of 18 to 29-year-old internet users have been targets of online harassment, with one in five victims left “scared to leave my house” (Duggan, 2016).

Disruptive behavior is especially prominent in online social gaming environments (Ballard and Welch, 2017; Fox, Gilbert, and Tang, 2018). These behaviors range from mildly annoying, such as mic spamming (continuously making noise or playing music to render a game’s chat system useless), to outright hostile behaviors, such as cyber bullying and SWATing (tricking local law enforcement into sending armed response teams to someone’s home).

A 2017 study conducted by anti-bullying charity Ditch the Label concluded that more than half of players age 12 to 25 have been bullied in an online game (Ditch the Label, 2017).

Furthermore, massively multiplayer online games (MMOGs) are often competitive environments where social status is highly valued, resulting in increased reinforcement of relational aggression (Ballard and Welch, 2017; Cillessen and Mayeux, 2004; Schmierbach, 2010). Plagued by “toxic masculinity,” MMOG environments have been characterized as misogynistic and homophobic, which disproportionately affects the experience of women and the LGBT community. Cisgender men have also reported that these negative social interactions dissuade them from wanting to participate in such gaming environments (Fox, Gilbert, and Tang, 2018; Paassen, Morgen Roth, and Stratemeyer, 2016).

As the gaming industry continues to grow, so does the scale of this problem.

In addition to the societal challenges presented by disruptive behavior, there is also a clear and negative business impact.

When the video game industry was much smaller, before F2P became so dominant, it operated very similarly to the Hollywood movie system. Large publishers took on the role of the Hollywood studio, financing production and managing the release of a game. Like a movie release, most of the focus was on opening weekend sales. If a game seemed unlikely to be successful, publishers would over-promote it in hopes of selling more product in the first few days, before the audience realized the game was not good.

In the era of F2P, this kind of market manipulation is no longer possible.

Approximately 70% of game industry revenue comes from F2P games. Although these games are given away free, they generate revenue from in-game purchases and in-game advertising. F2P has proven incredibly popular with consumers, but its financial success relies on the ability of the developer to engage players for an extended period of time.

Multiple studies have shown that disruptive behavior negatively impacts player retention, and therefore, revenue. A landmark 2014 study of “League of Legends” (one of the most popular games in the world) concluded that “interactions with toxic players decrease the retention rates of new players” (Shores et al, 2014).

In other words, game developers must keep players playing in order to monetize their games, but disruptive

behavior makes that extremely difficult. And \$70B is at stake.

Some gaming platforms are now joining together to mitigate these disruptive behaviors through mutual agreements on what behaviors are considered appropriate or inappropriate in an attempt to normalize what is acceptable (Grayson, 2018), but to date, technical solutions for this problem have either failed or are limited to a narrow subset of censorship measures and rules of conduct. Furthermore, it seems clear that any approach based primarily on censorship cannot be successful in the games industry as it would be rejected by both developers and players alike.

We believe everyone should be able to enjoy online/social gaming, regardless of age, race, gender identity, sexual orientation, physical or intellectual ability, socio-economic background, or any other label.

Our fundamental assertion is that negative online behavior can be significantly reduced through a two-pronged approach of informed community design (based on guidelines) and new personal security and privacy tools. To that end, we hope to develop both a set of best practices and a framework that can significantly reduce the occurrence and impact of disruptive behavior, restoring personal security and dignity to online/social gaming.

Our investigation is ongoing, but we have uncovered several areas that warrant further investigation to more fully address the challenge and to supplement our framework, including:

- The need for clarity about the nature of the problem, especially when talking to executive stakeholders.
- The importance of diversity, and considerations of diversity, when creating such a standard.
- The challenges of defining universal rules for what constitutes reasonable behavior and the corresponding importance of “signposting” expectations by developers (i.e., clearly setting expectations for the nature of the experience a player will have).

GOVERNANCE IN IDENTITY

The purpose of this workstream is to clarify the requirements for governance (responsibilities and accountabilities) for digital identity in standards development.

Work in trust and digital issues generally focuses on the requirements for trust to be generated and maintained, but less on the formal accountability and processes required to define individual and organizational roles in achieving this. Governance issues will play a major role in achieving whatever recommendations other workstreams identify as necessary.

In each digital domain, there are a number of people who are actively concerned with these governance aspects, achieving and institutionalizing activities to enhance and maintain digital trust. Digital identity plays a critical role as it is the most useful and at the same time the most vulnerable component. Achieving both a respectful and an inclusive approach to digital identity is a difficult but important goal.

One of the key operational aspects in governance is the manner in which individuals respond to and respect its intentions. The best organizational structures and accountability standards, procedures, and principles can fail unless these are understanding and respect from the people affected. This places a special focus on individual ethical understanding, not as box ticking formal procedures for compliance, but in terms of personal self-respect for living the good life (to quote a popular Virtue Ethics framing).

Effective governance requires a wider understanding to enable formal governance procedures and standards to actually work in practice. The chain of steps from, for example, algorithm designer to affected target citizen, or even the intermediate managerial decision makers for deployment, is far too long for purely formal processes to work.

The visible endorsement of the importance of both formal and personal ethical responsibilities by relevant professional bodies is a step that needs to be taken to communicate not only to the members but also to the public that both aspects are regarded seriously and important by these bodies and thus (hopefully) their members.

An initial step has been the co-sponsorship of a seminar with the Australian Computer Society Professional Ethics Committee in 2019 hosted by the Australian Institute of Computer Ethics Conference. DIITA provided two keynote speakers to this seminar.

OUR PLATFORM: THE IEEE SA INDUSTRY CONNECTIONS (IC) PROGRAM

DIITA is under the auspices of the IEEE SA Industry Connections (IC) program. This program helps incubate new standards and related products and services by facilitating collaboration among organizations and individuals as they hone and refine their thinking on rapidly changing technologies.

The IC program offers an efficient, economical environment for building consensus and producing shared results. Industry Connections empowers groups with a customizable menu of IEEE and IEEE SA resources to produce fast-track content and deliverables such as:

- Proposals for standards
- White papers
- Peer reviewed guides and position papers
- Conferences, workshops, and other events
- Databases and registration services
- Software, tools, and web services
- Other jointly-developed results

Industry Connections Activities do not develop standards. Industry Connections Activities may propose a new standard by developing proposals for new standards, and once those proposals are approved, the formal standardization process applies to the development activity.

RAISING THE WORLD'S STANDARDS



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