Request for Information (RFI) on Implementing the Initial Findings and Recommendations of the National Artificial Intelligence Research Resource Task Force: Response

ACT | The App Association

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June 30, 2022

Attn: Jeri Hessman
National Coordination Office for Networking and Information Technology Research and Development
Office of Science and Technology Policy
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RE: Comments of ACT | The App Association to the Office of Science and Technology Policy on its Request for Implementing Initial Findings and Recommendations of the National Artificial Intelligence Research Resource Task Force

ACT | The App Association (App Association) appreciates the opportunity to submit views to the Office of Science and Technology Policy (OSTP) on implementing findings and recommendations of the National Artificial Intelligence Research Resource (NAIRR) Task Force, which provides guidance to federal agencies to inform the development of regulatory and non-regulatory approaches regarding technologies and industrial sectors empowered or enabled by artificial intelligence (AI) and ways for agencies to reduce barriers to the development and adoption of AI technologies.1 The App Association generally supports the implementation of NAIRR Task Force’s findings to support and facilitate AI research and infrastructure development by prioritizing and providing sufficient funding, while ensuring adequate incentives (e.g., streamlined availability of data to developers, tax credits) are in place to encourage private and non-profit sector research. Transparency research should be a priority and involve collaboration among all affected stakeholders who must responsibly address the ethical, social, economic, and legal implications that may result from AI applications.

The App Association represents thousands of small business software application development companies and technology firms that create the technologies that drive internet of things (IoT) use cases across consumer and enterprise contexts. Today, the ecosystem the App Association represents—which we call the app economy—is valued at approximately $1.7 trillion and is responsible for 5.9 million American jobs. Alongside the world’s rapid embrace of mobile technology, our members create the innovative solutions that power IoT across modalities and segments of the economy. The NAIRR Task Force’s findings, and the efforts of numerous agencies with respect to AI policy and regulation, directly impact the app economy. We support the Administration’s goal of ensuring the United States leads the world in technologies that are critical to our economic prosperity and national security, and to maintain the core values behind

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1 https://www.federalregister.gov/documents/2022/05/25/2022-11223/request-for-information-rfi-on-implementing-initial-findings-and-recommendations-of-the-national-
America’s scientific leadership, including openness, transparency, honesty, equity, fair competition, objectivity, and democratic values.\(^2\)

AI is an evolving constellation of technologies that enable computers to simulate elements of human thinking – learning and reasoning among them. An encompassing term, AI entails a range of approaches and technologies, such as Machine Learning (ML) and deep learning, where an algorithm based on the way neurons and synapses in the brain change due to exposure to new inputs, allowing independent or assisted decision making. AI-driven algorithmic decision tools and predictive analytics are having, and will continue to have, substantial direct and indirect effects on Americans. Some forms of AI are already in use to improve American consumers’ lives today – for example, AI is used to detect financial and identity theft and to protect the communications networks upon which Americans rely against cybersecurity threats.

Moving forward, across use cases and sectors, AI has incredible potential to improve American consumers’ lives through faster and better-informed decision making, enabled by cutting-edge distributed cloud computing. As an example, healthcare treatments and patient outcomes stand poised to improve disease prevention and conditions, as well as efficiently and effectively treat diseases through automated analysis of x-rays and other medical imaging. AI will also play an essential role in self-driving vehicles and could drastically reduce roadway deaths and injuries. From a governance perspective, AI solutions will derive greater insights from infrastructure and support efficient budgeting decisions. An estimate states AI technological breakthroughs will represent a $126 billion market by 2025.\(^3\)

Today, Americans encounter AI in their lives incrementally through the improvements they have seen in computer-based services they use, typically in the form of streamlined processes, image analysis, and voice recognition (we urge consideration of these forms of AI as “narrow” AI). The App Association notes that this narrow AI already provides great societal benefit. For example, AI-driven software products and services revolutionized the ability of countless Americans with disabilities to achieve experiences in their lives far closer to the experiences of those without disabilities.

Nonetheless, AI also has the potential to raise a variety of unique considerations for policymakers. The App Association appreciates the efforts to develop a policy approach to AI that will bring its benefits to all, balanced with necessary safeguards to protect consumers.

\(^2\) Id.

To assist the Administration, the App Association offers a comprehensive set of AI policy principles below for consideration that we strongly encourage alignment in the implementation of the initial findings and recommendations:

1. **AI Strategy:** Many of the policy issues raised below involve significant work and changes that will impact a range of stakeholders. The cultural, workforce training and education, data access, and technology-related changes associated with AI will require strong guidance and coordination. An AI strategy incorporating guidance on the issues below will be vital to achieving the promise that AI offers to consumers and our economies. We believe it is critical to take this opportunity to encourage civil society organizations and private sector stakeholders to begin similar work. The NAIRR Task Force’s findings should remain a key part of the United States’ overall strategy for global leadership in this critical area of technology.

2. **Research:** The implementation of NAIRR Task Force’s report should support and facilitate research and development of AI by prioritizing and providing sufficient funding while also ensuring adequate incentives (e.g., streamlined availability of data to developers, tax credits) are in place to encourage private and non-profit sector research. Transparency research should be a priority and involve collaboration among all affected stakeholders who must responsibly address the ethical, social, economic, and legal implications that may result from AI applications.

3. **Quality Assurance and Oversight:** The implementation of NAIRR Task Force’s findings and the U.S. approach to AI generally, should advance risk-based approaches to ensure that the use of AI aligns with the recognized standards of safety, efficacy, and equity. Providers, technology developers and vendors, and other stakeholders all benefit from understanding the distribution of risk and liability in building, testing, and using AI tools. Policy frameworks addressing liability should ensure the appropriate distribution and mitigation of risk and liability. Specifically, those in the value chain with the ability to minimize risks based on their knowledge and ability to mitigate should have appropriate incentives to do so. Some recommended guidelines include:
   - Ensuring AI is safe, efficacious, and equitable.
   - Supporting the creation of algorithms, datasets, and decisions that are auditable.
   - Encouraging AI developers to consistently utilize rigorous procedures and enabling them to document their methods and results.
   - Requiring those developing, offering, or testing AI systems to provide truthful and easy-to-understand representations regarding intended use and risks that would be reasonably understood by those intended, as well as expected, to use the AI solution.
   - Ensuring that adverse events are timely reported to relevant oversight bodies for appropriate investigation and action.
4. **Thoughtful Design:** The implementation of NAIRR Task Force’s report, and the U.S. approach to AI generally, should strongly encourage the design of AI systems that are informed by real-world workflows, human-centered design and usability principles, and end-user needs. AI systems solutions should facilitate a transition to changes in the delivery of goods and services that benefit consumers and businesses. The design, development, and success of AI should leverage collaboration and dialogue among users, AI technology developers, and other stakeholders to have all perspectives reflected in AI solutions.

5. **Access and Affordability:** The implementation of NAIRR Task Force’s report, and the U.S. approach to AI generally, should ensure AI systems are accessible and affordable. Significant resources may be required to scale systems and policymakers should take steps to remedy the uneven distribution of resources and access. Policies must be put in place that incent investment in building infrastructure, preparing personnel and training, as well as developing, validating, and maintaining AI systems with an eye toward ensuring value.

6. **Ethics:** AI will only succeed if it is used ethically. It will be critical to promote many of the existing and emerging ethical norms for broader adherence by AI technologists, innovators, computer scientists, and those who use such systems. The implementation of NAIRR Task Force’s report, and the U.S. approach to AI generally, should:
   - Ensure that AI solutions align with all relevant ethical obligations, from design to development to use.
   - Encourage the development of new ethical guidelines to address emerging issues with the use of AI, as needed.
   - Maintain consistency with international conventions on human rights.
   - Ensure that AI is inclusive such that AI solutions beneficial to consumers are developed across socioeconomic, age, gender, geographic origin, and other groupings.
   - Reflect that AI tools may reveal extremely sensitive and private information about a user and ensure that laws protect such information from being used to discriminate against certain consumers.

7. **Modernized Privacy and Security Frameworks:** While the types of data items analyzed by AI and other technologies are not new, this analysis will provide greater potential utility of those data items to other individuals, entities, and machines. Thus, there are many new uses for, and ways to analyze, the collected data. This raises privacy issues and questions surrounding consent to use data in a particular way (e.g., research, commercial product/service development). It also offers the potential for more powerful and granular access controls for consumers. Accordingly, the implementation of NAIRR Task Force’s report, and the U.S. approach to AI generally, should address the topics of privacy, consent, and modern technological capabilities as a part of the policy development process. Risk management policy frameworks must be scalable and assure that an individual’s data is properly protected, while also allowing the
flow of information and responsible evolution of AI. This information is necessary to provide and promote high-quality AI applications. Finally, with proper protections in place, policy frameworks should also promote data access, including open access to appropriate machine-readable public data, development of a culture of securely sharing data with external partners, and explicit communication of allowable use with periodic review of informed consent.

8. **Collaboration and Interoperability:** The implementation of NAIRR Task Force’s report, and the U.S. approach to AI generally, should enable eased data access and use through creating a culture of cooperation, trust, and openness among policymakers, AI technology developers and users, and the public.

9. **Bias:** The bias inherent in all data, as well as errors, will remain one of the more pressing issues with AI systems that utilize machine learning techniques in particular. Addressing data provenance and bias issues is a must in developing and using AI solutions. The implementation of NAIRR Task Force’s report, and the U.S. approach to AI generally, should:
   - Require the identification, disclosure, and mitigation of bias while encouraging access to databases and promoting inclusion and diversity.
   - Ensure that data bias does not cause harm to users or consumers.

10. **Education:** The implementation of NAIRR Task Force’s report, and the U.S. approach to AI generally, should support education for the advancement of AI, promote examples that demonstrate the success of AI, and encourage stakeholder engagements to keep frameworks responsive to emerging opportunities and challenges.
   - Consumers should be educated as to the use of AI in the service they are using.
   - Academic education should include curriculum that will advance the understanding of and ability to use AI solutions.

The policy issues raised by the NAIRR Task Force involve significant work and changes that will impact a range of stakeholders. The cultural, workforce training and education, data access, and technology-related changes associated with AI will require strong guidance and coordination across U.S. federal agencies. The App Association supports the development of national AI strategies for federal agencies, which will be vital to achieving the promise that AI offers to consumers and entire economies.

Noting our general support for the current findings and recommendations of NAIRR Task Force’s report, we offer the following suggested revisions:

- **Alignment with Other Leading Federal Policies for AI:** The implementation of NAIRR Task Force’s report should align with other federal efforts to develop AI policy, such as the National Institute of Standards and Technology’s (NIST) Artificial Intelligence Risk Management Framework, a policy being developed in close collaboration with the private sector, academia, and others for voluntary use with the goal of improving the ability to incorporate trustworthiness.
considerations into the design, development, use, and evaluation of AI products, services, and systems.4

- **Require Agencies to Advance Thoughtful Design Principles Across AI Use Cases:** The implementation of NAIRR Task Force’s report should require design of AI systems informed by real-world workflows, human-centered design and usability principles, and end-user needs. AI systems solutions should facilitate a transition to changes in the delivery of goods and services that benefit consumers and businesses. The design, development, and success of AI should leverage collaboration and dialogue among users, AI technology developers, and other stakeholders in order to have all perspectives reflected in AI solutions. As this concept must run across sectors and AI use cases, the NAIRR Task Force should continue to incorporate guidance for agencies to advance thoughtful design principles through their approaches and actions related to AI.

- **Require Agencies to Advance Ethics in AI’s Development and Use:** The success of AI depends on ethical use. An agency’s approach will need to promote many of the existing and emerging ethical norms for broader adherence by AI technologists, innovators, computer scientists, and those who use such systems. The implementation of NAIRR Task Force’s report should:
  
  o Ensure that AI solutions align with all relevant ethical obligations, from design to development to use.

  o Encourage the development of new ethical guidelines to address emerging issues with the use of AI, as needed.

  o Maintain consistency with international conventions on human rights.

  o Ensure that AI is inclusive such that AI solutions beneficial to consumers develop across socioeconomic, age, gender, geographic origin, and other groupings.

  o Reflect that AI tools may reveal extremely sensitive and private information about a user and ensure that laws protect such information from being used to discriminate against certain consumers.

- **Augment the Requirement on Federal Agencies for Disclosure and Transparency:** The Administration should consider further prioritizing disclosure and trust priorities when implementing NAIRR Task Force’s findings. Providers, technology developers, and vendors, and other stakeholders will all benefit from understanding the distribution of risk and liability in building, testing, and using AI tools. The implementation of NAIRR Task Force’s report should therefore clearly address liability so as to ensure the appropriate distribution and mitigation of risk and liability (i.e., those in the value chain with the ability to minimize risks based on their knowledge and ability to mitigate should have appropriate incentives to

Further, the NAIRR Task Force should clearly require that AI policies prioritize that those developing, offering, or testing AI systems provide truthful and easy to understand representations regarding intended use and risks that would be reasonably understood by those intended, as well as expected, to use the AI solution.

- **Support the Development of, and Access to, Open Standards Needed to Drive U.S. Leadership in AI:** The implementation of NAIRR Task Force’s report should support the developer and use of voluntary consensus standards that concern AI application. The App Association strongly encourages updating the NAIRR Task Force’s plan to support public-private collaboration on AI through standardization by encouraging key U.S.-based standard-setting organizations (SSOs) such as IEEE to grow and thrive. The U.S. government can support such organizations through pro-innovation policies that encourage private sector research and development of AI innovations and the development of related standards.

It is critical that the United States should ensure that such standards are accessible to innovators by promoting a balanced approach to standard-essential patent (SEP) licensing. AI technical standards, built on contributions through an open and consensus-based process, bring immense value to consumers by promoting interoperability while enabling healthy competition between innovators; and often include patented technology. When an innovator gives its patented technology to a standard, this can represent a clear path to reward in the form of royalties from a market that likely would not have existed without the standard being widely adopted. To balance this potential with the need for access to the patents that underlie the standard, many SSOs require holders of patents on standardized technologies to license their patents on fair, reasonable, and non-discriminatory (FRAND) terms. FRAND commitments prevent the owners of patents used to implement the standard from exploiting the unearned market power that they otherwise would gain due to the broad adoption of a standard. Once patented technologies incorporate into standards, it compels manufacturers to use them to maintain product compatibility. In exchange for making a voluntary FRAND commitment with an SSO, SEP holders gain the ability to obtain reasonable royalties from numerous standard implementers that might not have existed absent the standard. Without the constraint of a FRAND commitment, SEP holders would have the same power as a monopolist that faces no competition.

Unfortunately, several owners of FRAND-committed SEPs are flagrantly abusing their unique position by reneging on those promises with unfair, unreasonable, or discriminatory licensing practices. These practices, under close examination by antitrust and other regulators in many jurisdictions, not only threaten healthy competition and unbalance the standards system but also impact the viability of
new markets such as AI. This amplifies the negative impacts on small businesses because they can neither afford years of litigation to fight for reasonable royalties nor risk facing an injunction if they refuse a license that is not FRAND compliant.

Patent policies developed by SSOs today will directly impact the way we work, live, and play for decades to come. SSOs vary widely in terms of their memberships, the industries, and products they cover, and the procedures for establishing standards. In part due to the convergence associated with the rise of IoT, each SSO will need the ability to tailor its intellectual property policy for its particular requirements and membership. The App Association believes that some variation in patent policies among SSOs is necessary and that the U.S. government should not prescribe detailed requirements that all SSOs must implement. At the same time, however, as evidenced by the judicial cases and regulatory guidance, basic principles underlie the FRAND commitment and serve to ensure that standard setting is pro-competitive, and the terms of SEP licenses are in fact reasonable. Ideally, an SSO’s intellectual property rights policy that requires SEP owners to make a FRAND commitment would include the following principles that prevent patent “hold up” and anti-competitive conduct:

- **Fair and Reasonable to All** – A holder of a SEP subject to a FRAND license such SEP on fair, reasonable, and nondiscriminatory terms to all companies, organizations, and individuals who implement or wish to implement the standard.

- **Injunctions Available Only in Limited Circumstances** – SEP holders should not seek injunctions and other exclusionary remedies nor allowed these remedies except in limited circumstances. The implementer or licensee is always entitled to assert claims and defenses.

- **FRAND Promise Extends if Transferred** – If there is a transfer of a FRAND-encumbered SEP, the FRAND commitments follow the SEP in that and all subsequent transfers.

- **No Forced Licensing** – While some licensees may wish to get broader patent holder should not require implementers to take or grant licenses to a FRAND-encumbered SEP that is invalid, unenforceable, or not infringed, or a patent that is not essential to the standard.

- **FRAND Royalties** – A reasonable rate for a valid, infringed, and enforceable FRAND-encumbered SEP should be based on several factors, including the value of the actual patented invention apart from its inclusion in the standard, and cannot be assessed in a vacuum that ignores the portion in which the SEP is substantially practiced or royalty rates from other SEPs required to implement the standard.
We also note that several SSO intellectual property rights policies require SSO participants to disclose patents or patent applications that are or may be essential to a standard under development. Reasonable disclosure policies can help SSO participants evaluate whether technologies considered for standardization are covered by patents. Disclosure policies should not, however, require participants to search their patent portfolios as such requirements can be overly burdensome and expensive, effectively deterring participation in an SSO. In addition, FRAND policies that do not necessarily require disclosure, but specify requirements for licensing commitments for contributed technology, can accomplish many, if not all, of the purposes of disclosure requirements.

The U.S. Department of Justice (DOJ) already encouraged SSOs to define FRAND more clearly. For example, DOJ’s former assistant attorney general Christine Varney explained that “clearer rules will allow for more informed participation and will enable participants to make more knowledgeable decisions regarding implementation of the standard. Clarity alone does not eliminate the possibility of hold-up…but it is a step in the right direction.” As another example, Renata Hesse, a previous head of the DOJ’s Antitrust Division, provided important suggestions for SSOs to guard against SEP abuses that included at least three of the aforementioned principles. The implementation of NAIRR Task Force’s recommendations should be updated to advance open standards, consistent with OMB-A119 (“Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities”), open standards and access to open standards with respect to SEPs.

The App Association appreciates OSTP’s consideration of the above views. We urge OSTP to contact the undersigned with any questions or ways that we can assist moving forward.

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Sincerely,

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