A Call to Action: Uniting Tech Innovators, Policy Leaders, and Businesses to Safeguard Digital Privacy (AI and Digital Privacy Paradox)

Kent Lambert

- **Former Colorado State Senator/State Representative**
- **COO, BlockFrame, Inc.**
- **Doctor of Engineering Candidate, Colorado State**
- **Colonel, USAF (Ret)**

IEEE Digital Privacy

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IEEE Future Directions > IEEE Digital Privacy Initiative > IEEE Digital Privacy Initiative Policy & Legislation Subgroup
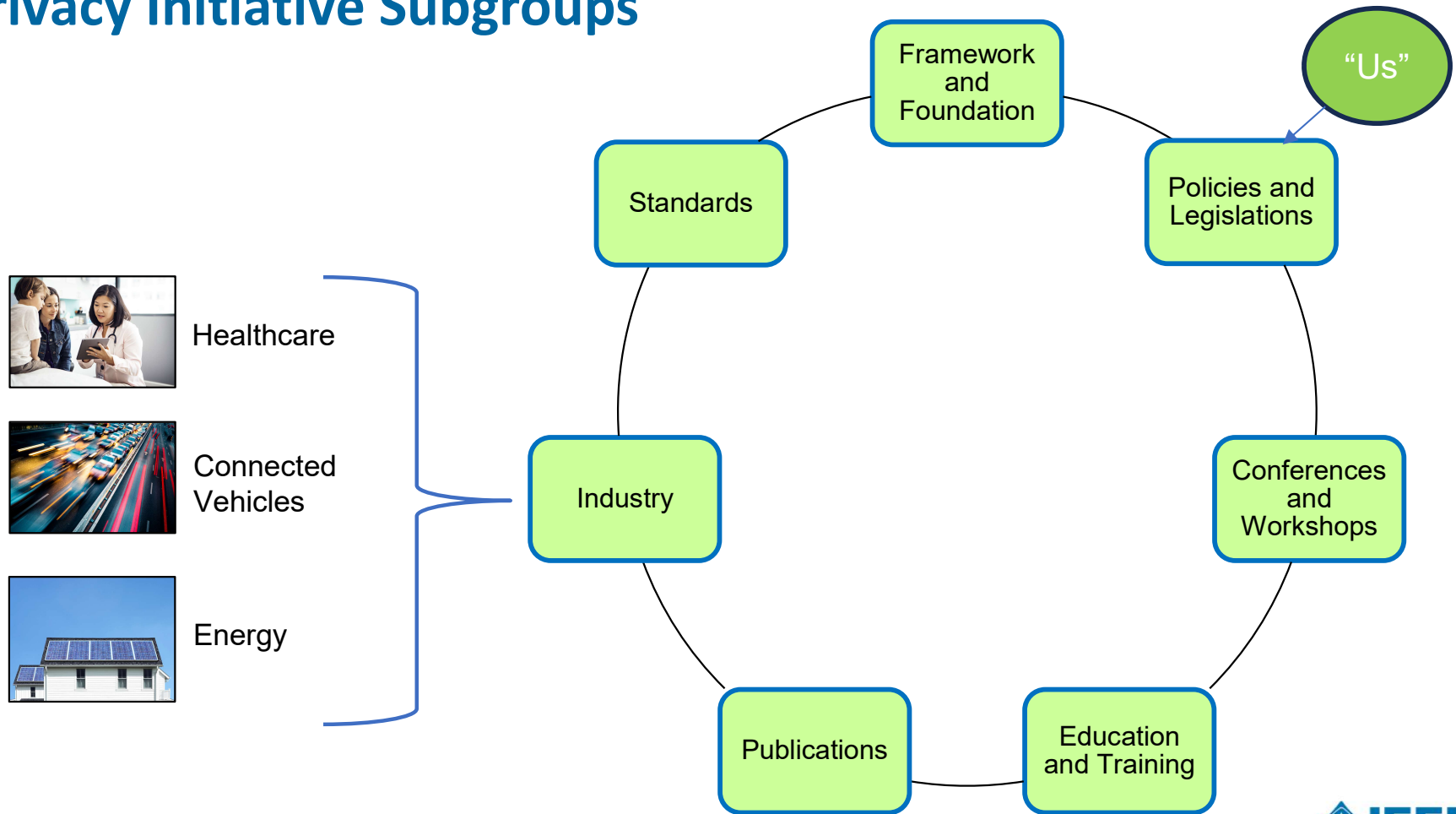
Chair: Kent Lambert, IEEE Volunteer*

* This briefing does not represent any official or coordinated positions of IEEE, IEEE-USA, or the IEEE Digital Privacy Initiative

IEEE Digital Privacy Initiative

➢ An IEEE-wide effort focusing on the digital privacy needs of *individuals*, rather than the security of data/products/organization

  ➢ Envision a future in which the capability exists to enable any individual around the world to privately maintain presence, data, identity, and dignity online

➢ To help achieve this vision, the DP Initiative seeks the following goals:

  ➢ Bring the *voice of technologists* to the digital privacy conversation, incorporating a *holistic approach* to address privacy that also includes economic, legal, and social perspectives

  ➢ Facilitate cross-disciplinary collaboration to advance research, promote standardization and best practices, and create capabilities and tools to support the privacy needs of individuals, and

  ➢ Coordinate efforts across and beyond IEEE with a multicultural lens that are working on different dimensions of digital privacy

Learn more at digitalprivacy.ieee.org

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Digital Privacy Initiative Subgroups

Framework and Foundation

"Us"

Standards

Policies and Legislations

Healthcare

Connected Vehicles

Energy

Industry

Conferences and Workshops

Publications

Education and Training

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Uniting Tech Innovators, Policy Leaders, and Businesses to Safeguard Digital Privacy (AI and Digital Privacy Paradox)

Looking for a Uniform Approach to Digital Privacy

▶ Technology and privacy professionals need simple and effective ways to represent individuals' expectations of privacy within any environment

▶ Can we envision a high-level ***descriptive*** view of digital privacy that can include most major viewpoints?

▶ Can we orient this around the viewpoint of ***individuals***?

▶ Can a Digital Privacy Model help define, compare, and analyze various and sometimes conflicting viewpoints?

  ▪ Are Digital Privacy solutions and expectations split along the lines of the engineers vs the lawyers?

  ▪ Is Digital Privacy the "Little Guys" (individuals) vs the "Big Guys" (Big Tech, Big Business, Big Government)?

  ▪ Is Artificial Intelligence a tool to protect Digital Privacy, or to potentially destroy it?

  ▪ "Amidst the data explosion and AI advancements, privacy has surged to the forefront of global discourse. Yet, the narrative has often been dominated by legal perspectives, relegating technologists to the sidelines. In today's intricate IT landscape, it's crucial to elevate technologists' voices in privacy discussions. Without their active involvement, privacy legislation risks feasibility challenges." -- Comment by one IEEE member

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IEEE Digital Privacy Model

Achieving Privacy Expectations in the Digital World

- IEEE Digital Privacy Initiative constructed the IEEE Digital Privacy Model, "Achieving Privacy Expectations in the Digital World; Understanding expectations and influences on privacy"
  - https://digitalprivacy.ieee.org/about/digital-privacy-model
  - Descriptive, not proscriptive: "an evolving, easy-to-understand visual representation that covers the broad and dynamic aspects of digital privacy"
  - The DP Model focuses attention on **individuals** and their **expectations** of privacy, and brings together the factors that influence digital privacy in any physical or virtual environment
  - Contributions from Sreedhar Rao and Kent Lambert
- An explanatory article is published in IEEE-USA Insight, "Bridging the Technologist/Policymaker Divide in Digital Privacy," by Kent Lambert, February 26, 2024
  - https://insight.ieeeusa.org/articles/bridging-the-technologist-policymaker-divide-in-digital-privacy/

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Expectations of Privacy

The **IEEE Digital Privacy Model** depicts individuals' expectations of privacy as a set of six characteristics that collectively represent digital privacy for individuals. The data and meta-data that reflect the six characteristics of expectations of privacy are:

Identities: Any identifiers uniquely associated with individuals
Behaviors: Patterns of behaviors by individuals in social or economic settings
Inferences: Inferences attributed to individuals by human or AI/ML algorithms (profiling or abstract representations)
Transactions: Transactions by individuals in any social or economic context within physical or virtual environments
Confidentiality and Integrity: Confidentiality and integrity of individuals' identities, behaviors, inferences, and transactions
Access and Observability: Access to and observability of their identities, behaviors, inferences, and transactions by individuals

Influences on Privacy

Each influence provides a unique vantage point to achieve privacy

REGULATORY
ECONOMIC
LEGISLATIVE
TECHNICAL
LEGAL
SOCIETAL & CULTURAL
INDIVIDUAL

The IEEE Digital Privacy Model identifies seven environmental influences on the actions of various actors to achieve digital privacy and manage individuals' expectations of privacy.

Technical influences form the basis to establish technical standards and industry best practices for solutions that support expectations of privacy.

Regulatory influences drive rules for industries, government oversight, and enforcement of privacy regulations.

Economic influences shape organizational and individuals' decisions to achieve appropriate digital privacy outcomes.

Legislative influences help recognize issues and codify laws that affect expectations of privacy.

Legal influences set up legal standards for checks and balances to protect expectations of privacy.

Individual influences create privacy boundaries with individuals as the primary subject of data and metadata in any digital ecosystem.

Societal and Cultural influences represent the values that recognize and shape individuals expectations of privacy.

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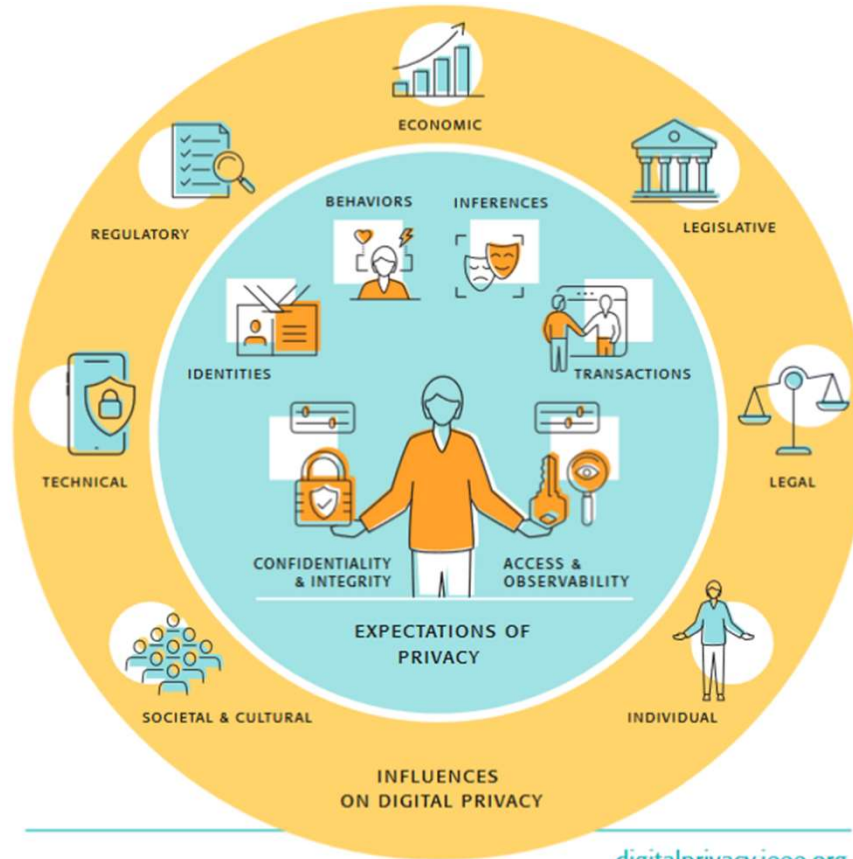
IEEE Digital Privacy Model

IEEE Digital Privacy Model

▶ **The IEEE Digital Privacy Model** is a work in progress that combines the six characteristics of **individuals' expectations of privacy**—identities, behaviors, inferences, transactions, confidentiality & integrity, access & observability, and **seven primary influences**—technical, regulatory, economic, legislative, legal, individual, and societal & cultural that impact the implementation of a robust digital privacy infrastructure. It is industry- and country-agnostic and recasts digital privacy as expressions of individuals' expectations of privacy

▶ Using the **IEEE Digital Privacy Model**, businesses, government organizations, or other stakeholder entities can systematically map the gaps in their people, process, and technology capabilities to implement solutions that support individuals' expectations of privacy. The model *encourages cross-functional exchange of ideas among environmental influences while ensuring a common understanding of individuals' expectations of privacy among all the actors engaged in building a digital privacy ecosystem*

▶ As a *professional* engineering organization, how should IEEE advocate for ethical and effective digital privacy policies? The solutions are probably not, "us verses them," but how can we work with *all* of the Influences of Privacy to "advance technology for humanity"?

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Next Steps

▶ The loss of privacy is often caused in technical **breaches** where personally identifiable information (PII) or other sensitive information such as industrial data is gathered illegally or unethically and used for something other than its intended purposes. It is very difficult to safeguard digital privacy unless features and functionality have been predesigned into systems across a generally unsecured architecture like the internet.

▶ **Privacy** does not equal **security**, but they are closely related.

  ▪ **What technical solutions for security might also have a positive effect on privacy?**

▶ One thing that the IEEE Digital Privacy Model does *not* attempt to do is explore, study, or discuss the technological solutions to problems that have occurred in digital privacy breaches globally. Indeed, while there may be many different methods to address those issues, the DP Model is intentionally not meant to be prescriptive.

▶ Rather, the important next step is for both technology- and policy-oriented readers of the model to consider its implications that are the most important and relevant within their contexts. For example, what might be the most likely obstructions to achieve the **expectations** of privacy in a given environment? Which of the model's documented **influences** most prominently participate in that environment?

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Current Projects of DPI Policy/Legislative Subgroup

▶ The IEEE Digital Privacy Initiative is undertaking **surveys of international subject-matter experts** about what people in different regions realistically expect in terms of privacy. **Is privacy a universally-shared individual expectation?** It is already clear that there are widely-divergent public policies about what should and what should not be private

▶ Digital privacy is a topic of increasing scrutiny across global political, geographic and technological boundaries. The IEEE Digital Privacy Model has been designed to fuel a more informed, individual-centric conversation. The model is an intentionally generic, high-level, easy-to-understand visual representation that is easily downloadable in several languages and portable for any venue. To learn more about how you can engage in the work of the IEEE Digital Privacy Initiative and/or to keep apprised of future events such as the *Reframing Privacy in the Digital World* workshop, please visit https://digitalprivacy.ieee.org. **Watch for upcoming meetings, conferences, and papers!**

▶ Inclusion across industries, academia, security professionals, and international members is important

▶ Several new White House executive orders, new federal & state legislation attempts, and new international practices are expanding rapidly. DPI is researching the DP Model as a standard tool to study and compare some of those efforts to validate the DP Model (not to take sides!)

▶ Contributing to 2024 IEEE-USA Digital Privacy Policy Statement

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More Current Projects

▸ IEEE Digital Privacy Initiative volunteers continue to solicit feedback on the model itself, and planning to develop next-level details to help organizations and companies to operationalize digital privacy for individuals. As the first line of the document states, "The IEEE Digital Privacy Model is a work in progress" that you can use and improve!

▸ *What technologies and subject experts can be brought to bear to "fill the gaps" in privacy?*

▸ *What is your feedback?*

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Thank you!

https://digitalprivacy.ieee.org/
Feel free to contact/connect with us at digitalprivacyinfo@ieee.org

https://blockframetech.com/
klambert@blockframetech.com