

IEEE ProComm Professional Guidance on Artificial Intelligence in Professional Communication

This document offers professional guidance on priorities associated with AI and ProComm's fields of practice and scholarship; it is a product of the ongoing work of the ProComm AI Working Group. This statement was approved by the IEEE ProComm Board of Governors in December 2025.

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Members of the AI Working Group

Aravindhan Anbazhagan, *Consultant*
Pam Estes Brewer, *Mercer University*
Guiseppe Getto, *Mercer University*
Mary Glavan, *Rice University*
Alia Hall, *Daytona State College*
Jennifer Jackson, *Mercer University*
Suzanne T. Lane, *Cornell University*
Bob Lyons, Jr., *Consultant*
Andrew Mara, *Arizona State University*

Pacificah Moraa, *The University of Texas at Arlington*
Aneet Narendranath, *Michigan Tech*
Traci Nathans-Kelly, *Cornell University*
Leslie Seawright, *Missouri State University*
Krista Speicher Sarraf, *California Polytechnic State University, San Luis Obispo*
Darina Slattery, *University of Limerick*
Bremen Vance, *Mercer University*
Clay Walker, *University of Michigan*

Introduction

The IEEE Professional Communication Society (ProComm) recognizes the profound and accelerating impact of Artificial Intelligence (AI), particularly generative AI, on professional communication practices, including the labor of educators and communicators, across technical, engineering, and professional domains. As stewards of ethical, effective communication, we affirm that AI is not only a technological phenomenon but an integral part of evolving technical information systems that are inherently human, social, and ethical.

The guidance in this document, developed by the ProComm AI Working Group, outlines the need, scope, and areas of work for the responsible integration of AI into professional communication, technical education, and practice. It offers direction, not final answers, and reflects ongoing discussions within the ProComm community about the intersection of AI and the priorities of our field. The ideas within will continue to be examined, discussed, and refined as our community develops more resources and guidance for researchers, educators, and practitioners navigating this transformative landscape.

Defining AI and the Need for Scholarship, Training, and Awareness

Artificial intelligence (AI) refers broadly to the development of computer systems capable of performing tasks that typically require human intelligence, such as understanding language, recognizing patterns, solving problems, and making decisions. Fundamentally, AI systems are about automating and scaling valuable information processing and knowledge activities. Despite the prominence of generative AI in public discourse, AI encompasses a broad category of many rapidly developing technologies and has been a thriving area of research and practice for decades in the ProComm community.

While this definition serves as a general orientation, it is important to acknowledge that there is no singular or universally accepted definition of AI. The field encompasses a wide range of techniques and systems, from rule-based logic and expert systems to neural networks and generative models, each with its own history, technical affordances, and societal implications. The term “AI” functions more as a conceptual umbrella than a precise descriptor, covering diverse technologies that may not all share the same design goals or operational characteristics. As such, this document does not attempt to define AI exhaustively or limit its scope to any particular subset of technologies.

The recent, rapid advancement and widespread deployment of AI technologies, including (but not limited to) large language models and machine learning systems, demand that professional communicators develop a strong foundation of AI literacy. This mandate is particularly important given recent advancements in generative AI (GenAI), the subset of AI technologies that focuses on creating new content (text, images, audio, video, or code) based on learned patterns and training data. Moreover, developing these literacies is crucial for ensuring that human-centered values drive decision making, so that efficiency gains from AI strengthen rather than undermine the dignity and value of communication work.

Understanding how AI systems are trained, validated, and deployed, and recognizing their capabilities and limitations, is critical for effective, ethical practice. This understanding will enable professional communicators and scholars to recognize, harness, and critique the capabilities and limitations of AI tools that are increasingly shaping how we communicate.

The ProComm AI Working Group asserts that professional communicators and scholars should continue discussing AI usage through scholarship, targeted training, case studies, and ongoing critical awareness in support of our broader mission to:

- Navigate the complex and evolving landscape of AI tools.
- Understand how these tools and underlying technologies shift the workplace, commercial, and social ecologies that professional communicators work and live in.
- Strengthen the role of professional communicators as stewards of ethical technology use.
- Integrate AI literacy into communication design, technical education, and professional practice.
- Foster critical thinking and problem-solving skills that adapt to emerging technologies.
- Promote user-centered design principles within AI-mediated environments.
- Engage in responsible development, deployment, and management of AI technologies.

Professional communicators must position themselves as informed, capable, resourceful, and ethical stewards within AI-mediated environments, prepared to lead conversations on the possibilities of these transformative technologies in their current and future implementations. As the field of AI continues to evolve, so too must our understanding of what it entails. We must work to remain flexible, multidisciplinary, and critically informed, rather than bound by static definitions and incomplete or distorting metaphors.

AI as an Integral Component of Technical Information Systems

Generative AI is fundamentally reshaping technical information systems by contributing to content generation, organization, and retrieval. Professional communicators have long engaged with digital information systems, including word processors, databases, content management systems, websites, applications, analytics tools, search engines, and cloud technologies.

Within these ecosystems, professional communicators are often responsible for understanding the functionality of complex systems, making sense of user needs, anticipating the priorities and challenges of diverse audiences, clients, and partners, and ensuring that information flows efficiently and ethically.

Moreover, professional communicators play a critical role in optimizing the use of digital systems: using them more intelligently, aligning them with user goals, and critically evaluating their design and implementation. This stewardship role includes explaining the dangers and costs associated with the improper use of technologies or the deployment of poorly designed systems. As generative AI becomes increasingly embedded in technical information

environments, communicators must extend this expertise—maintaining rigorous standards for usability, clarity, ethics, and accountability.

Professional communication scholarship must maintain an active awareness of the historical development and wide variety of AI systems, from expert systems and rule-based engines to today's large language models and retrieval-augmented generation (RAG) frameworks. Understanding AI's technological underpinnings—including training, validation, testing, and deployment—is essential to responsibly integrate these tools into communication workflows.

Ethical, Legal, and Social Responsibilities

Professional communicators must advocate for end users, especially in high-risk areas like AI-assisted hiring, where regulatory frameworks lag behind technological implementation. Communication professionals should play an active role in identifying stakeholders and shaping ethical standards, regulatory policy, and user protections.

Codifying Standards

As a professional society, we are all responsible for shaping and committing to responsible practices. To guide ethical practice, the ProComm AI Working Group suggests a layered system, ordered from the most immediate and agile to the most formal and binding, so we start with individual judgement moving outwards to formalized laws. We support discussion at and across each layer:

Personal Ethics and Values: Individual responsibility and integrity.

Cultural Conventions: Broader societal expectations and norms emerge as users become more comfortable and confident. Workflows and techniques emerge from discussions about the technologies and how people are using them.

Disciplinary and Professional Values: Principles established within the field of professional communication.

Organizational Policies: Institutional rules and expectations. Sectors, companies, and institutions of all types are navigating the implications of new technologies.

Emerging Standards: Evolving norms and guidelines related to AI and technology use. Standards typically begin as informal, negotiated agreements and often form the basis for formalized policies and laws.

Legal Frameworks: Regulatory requirements and protections.

An effective ethical approach must navigate these interconnected systems, balancing personal ethics, immediate professional duties, and broader societal obligations. Recurring and high-priority topics include transparency and labor in the AI supply chain, environmental

sustainability, intellectual property, data-privacy and security, accessibility and inclusion, misinformation, and content traceability.

Priorities for Professional Communication

Regardless of technological change, professional communicators remain committed to the enduring values of effective communication. We advocate for communication practices that facilitate the sharing of information and the creation of value by enabling the storage, access, shaping, and distribution of knowledge.

As AI systems permeate professional, public, and private life, ProComm emphasizes the urgent and ongoing need to address social, legal, and ethical challenges, including the following:

Accuracy: Ensuring AI-generated content maintains factual correctness.

Bias: Recognizing and mitigating biases embedded in training data and model outputs.

Plain Language: Preserving clarity and accessibility against the syntactic patterns AI models may prefer.

Transparency: Promoting understanding of how AI systems are developed, trained, and validated.

Subject Matter Expertise: Distinguishing between authentic expertise and algorithmically generated content.

Labor: Emphasizing the importance of human professional communication labor for the effective use of AI systems and for compensating the contributions to data sets and efficiency gains that flow into and from these systems.

While advocating for high-quality, human-centered communication practices, we also recognize the complexity and profound impact of emerging information systems. Professional communicators must maintain critical awareness and develop practices that uphold humanistic ideals, including the preservation of linguistic diversity and the cultivation of inclusive, meaningful communication. We must also codify the challenges and risks created by information systems. Such risks include harm to people, organizations, and ecosystems.

Advice for Educational and Professional Practice

The rapid integration of AI into educational, professional, and technical contexts demands proactive, principled guidance.

For the Classroom

To support ethical and effective practice, ProComm offers the following recommendations:

Teach Critical AI Literacy

Educators and trainers should equip students and practitioners with the knowledge and skills needed to understand AI capabilities, recognize system limitations, critically evaluate AI outputs, and make ethical judgements. Instruction should include transparency about how models are trained, how biases emerge, how AI integrates into information systems, how users engage with AI, and how the use of AI is governed.

Model Responsible Use of AI Tools

Faculty and practitioners should demonstrate how AI tools can support drafting, revision, ideation, and exploration, while affirming the primacy of human authorship, subject matter expertise, and ethical judgment.

Develop Heuristics for AI Use

Professional communicators should articulate decision-making frameworks that help determine when AI tools are appropriate and when human-driven communication is essential. Heuristics should prioritize audience needs, task complexity, ethical risks, and the goals of the communication act.

Embed Communication Values into AI-Mediated Practices

Regardless of the tools used, communicators must emphasize clarity, accuracy, user-centeredness, and rhetorical awareness as non-negotiable pillars of effective communication.

Guide Developmentally Appropriate Use of AI in Education

Domain experts should help guide the implementation of AI systems, determining if and how AI can be used to support students' ability to develop expertise, critical thinking, and creative problem-solving skills. When used, AI systems should support, not replace, these fundamental and developmental cognitive processes.

For Professional and Technical Practice

As engineering and technological fields increasingly intersect with AI-driven tools and workflows, communication remains a critical enabler of technical accuracy, ethical awareness, and responsible innovation. We recommend the following:

Emphasize Collaboration between Technical and Communication Expertise

Engineering education and practice must integrate communication strategies alongside technical problem-solving, ensuring that AI-generated content is critically reviewed, validated, and adapted to user needs.

Train for Validation and Expert Oversight

Engineers and technical professionals must be trained to question, validate, and verify AI outputs, recognizing that automated tools do not substitute for domain-specific expertise or ethical considerations.

Foster Anticipatory and Adaptive Mindsets

Engineering and professional education must encourage a forward-looking perspective that anticipates emerging AI capabilities, addresses systemic risks, and adapts communication strategies to new contexts without losing sight of foundational communication principles.

Commitments to the ProComm Community

To help our community navigate this evolving terrain, ProComm proposes three paths:

Research Repository: Curate a living repository of research on AI in technical and professional communication, drawing from arXiv preprints, peer-reviewed journals, and emerging scholarly and popular discourse. AI tools will be used judiciously to support real-time topic identification and horizon scanning.

Futures and Foresight: Proactively build resources (frameworks, bibliographies, and guides), distinguishing between rapidly obsolescing trends and foundational shifts.

Ethics Document: Develop a foundational ethics guide, inspired by the former Society for Technical Communication (STC) code, offering heuristics for understanding ethical AI use.

Conclusion

The IEEE Professional Communication Society affirms that AI is reshaping the landscape of professional communication. As scholars, educators, practitioners, and advocates, we must engage critically, ethically, and proactively to ensure that AI serves the human-centered goals of technical and professional communication. Our craft, our values, and our collective voice are crucial to shaping the future of communication in an AI-mediated world.