

November 27, 2023

## Toward Improving Trust in the Use of Artificial Intelligence (AI) Technology in Digital Cameras

Recent developments in AI technologies have been remarkable. Especially the rapid progress of highly sophisticated generative AI technologies has the potential to bring about significant changes in the way society works. On the other hand, such a period of rapid evolution often brings both positive and negative effects, and there are both high expectations and risks in the use of AI technology.

In digital cameras manufactured by companies participating in CIPA, AI technologies are already being used in various situations, such as subject recognition and shooting scene analysis, and are contributing to the generation of the final captured image (photograph). In addition, recent generative AI technologies are also capable of generating new images that could never exist in real life with the same level of detail as real photographs by learning and analyzing a large number of existing images, and are expected to further expand the possibility of image applications in society in the future.

On the other hand, the use of AI technology in such image processing may lead to a possibility that the photographer may not be aware of whether the captured image is a direct representation of a situation that actually existed or whether it has been generated with some AI processing. In addition, while the problem of fake images and videos has already become a social issue worldwide, the development of AI technology has made it easier to generate visual contents that have been deliberately falsified, making it even more difficult to distinguish them from those that have actually been taken, and there is a growing demand to ensure the trustworthiness of captured images and videos.

It is clear that the use of AI technology will further expand the potential of digital cameras, as they directly generate captured images. Therefore, while maximizing the potential of AI technology, CIPA recognizes the need to take responsible actions to improve the trust of the content produced by digital cameras from the perspective of addressing the potential risks it entails.

Therefore, as an organization in which the majority of the world's digital camera manufacturers participate, CIPA will actively promote, as its responsibility, the studies to ensure transparency in the use of AI technology in cameras, as well as the studies on technical and institutional mechanisms to guarantee the authenticity of images captured with cameras.

Contact: CIPA Secretariat e-mail: ai_info@cipa.jp
---