

# KIOXIA

## Press Release

### KIOXIA Unveils Series of AI-Designed Manga Drawings

*Company's digital expertise helps bring work of Osamu Tezuka back to life*



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**Düsseldorf, Germany, 9 June 2020** – KIOXIA Europe announced today that an English version of “PHAEDO,” a new manga created and designed by AI and human collaboration, inspired by the artistic style of manga legend Osamu Tezuka, was released on June 3 as part of TEZUKA 2020, the first phase of KIOXIA’s #FutureMemories brand campaign. Tezuka was responsible for starting the global manga phenomenon. His work is still today highly regarded and serves as a core reference for the manga creator scene. During his long and successful career, he produced more than 150,000 pages of drawings. PHAEDO, which debuted in February in Japanese comic magazine “Morning,” is made available now for English-language audiences on KIOXIA’s [TEZUKA 2020](#) website. PHAEDO is the world’s first international manga created through human collaboration, high-speed and large-capacity memory and advanced AI technologies.

The process of developing PHAEDO involved using AI technology to generate the story and create the characters. As a first step, to learn the essence of Tezuka's work and his characteristics as a writer, AI analyzed 130 manga episodes, written and drawn by Osamu Tezuka, including globally famous titles such as "Astro Boy" and "Black Jack". Based on this analysis, the AI then generated 129 candidate storylines. As a next step, the AI studied 6000 images and applied transfer learning to generate visuals for the characters.

By analyzing Tezuka's works, AI was able to generate the physical characteristics of new characters, outlines of new stories, after which illustrators hand-drew clothing and other Tezuka inspired details and writers added dialogue. The project team consisted of engineers from KIOXIA, illustrators and writers from Tezuka Productions Co., and AI researchers from Keio University and Future University Hakodate. KIOXIA's engineers specifically assisted academic researchers in generating character images using AI technology and KIOXIA enterprise storage servers.

PHAEDO is the story of a homeless philosopher and his robot bird, Apollo, who try to solve crimes in Tokyo in 2030. This marks the first time Tezuka's work has been recreated in 30 years.

KIOXIA launched its #FutureMemories campaign last October to commemorate the company's rebranding. PHAEDO is one of the many ways KIOXIA intends to change the world by pursuing the potential of memory to create new value with never-before-seen experiences.

For details about PHAEDO, including videos and interviews, please visit [TEZUKA 2020](#) website.

#### **About KIOXIA Europe**

KIOXIA Europe GmbH (formerly Toshiba Memory Europe GmbH) is the European based subsidiary of KIOXIA Corporation, a leading worldwide supplier of flash memory and solid-state drives (SSDs). From the invention of flash memory to today's breakthrough BiCS FLASH, KIOXIA continues to pioneer cutting-edge memory solutions and services that enrich people's lives and expand society's horizons. The company's innovative 3D flash memory technology, BiCS FLASH, is shaping the future of storage in high-density applications, including advanced smartphones, PCs, SSDs, automotive and data centers.

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