

(For immediate release)

## A Digital Twin of a Kabuki actor, Nakamura Shido Created with NTT's Another Me Technology Debuts at "Cho Kabuki 2022 Powered by NTT"

Tokyo – Aug. 3, 2022 –[NTT Corporation](#) (President: Akira Shimada, “NTT”) and [Shochiku Co., Ltd.](#) (President & CEO: Jay Sakomoto) have announced "Cho Kabuki 2022 Powered by NTT" presented by Shochiku, with the first act starring Nakamura Shido's digital twin, “Shido Twin.” The debut of Shido Twin showcases NTT's research and development of a computer that reproduces people as digital twins and is the first step in the social implementation of this new technology.

We hope you will come and witness the birth of Nakamura Shido reproduced as a digital twin.



Nakamura Shido Twin



Sawamura Kuniya, Shido Twin, and Nakamura Choshi  
at Hakata-za Theater stage

*At Hakata-za Theater stage photograph, “Cho Kabuki no Mikata” (Cho Kabuki 2022 Powered by NTT)*

NTT has proposed the Digital Twin Computing (DTC) concept as one of the pillars of the IOWN (Innovative Optical & Wireless Network) concept<sup>1</sup>, which constructs real-world twins on digital platforms, and is promoting affiliated research and development. The DTC concept creates highly accurate digital representations (digital twins) from data collected on various physical objects in the real world, such as people, cities, and the environment. NTT aims to use DTC to achieve large-scale, highly accurate future predictions and advanced

communications that go beyond the limits of conventional ICT <sup>2</sup>.

Another Me is a technology born out of the DTC concept. With Another Me, we aim to allow individuals to create an “alternative self” in the digital space, dramatically increasing the opportunities to flourish and grow by transcending the constraints of the real world, to play an active role in society, and to share the results of their own experiences with others (Figure 1).

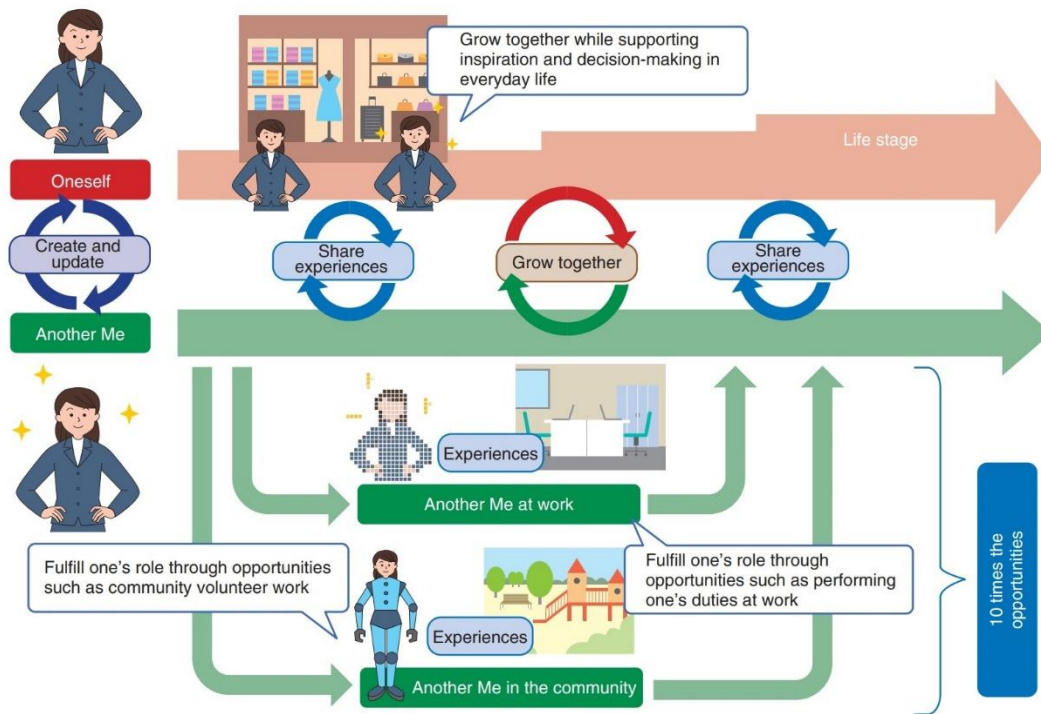


Figure 1. Another Me Concept

Created in collaboration with Shochiku Co., Ltd., the Shido Twin autonomously reproduces the gestures of Nakamura Shido, who performs the leading role in Cho Kabuki, using the body motion generation technology of Another Me.

“[Cho Kabuki](#)” has been co-produced by Shochiku Co., Ltd. and [Dwango Co., Ltd.](#) since 2016 and held annually as part of the [Niconico Chokaigi](#) festival. Cho Kabuki is a brand-new kabuki experience that combines kabuki—a traditional Japanese theatre form with a 400-year history—and NTT’s cutting-edge ICT technology. This year’s performance incorporates the latest ICT technology, including the “Telephone Shop”<sup>3</sup> NTT’s “Kirari!”, and the experiment has gained acclaim for expanding the possibilities of theater. Shido Twin’s performance is representative of Cho Kabuki’s appeal.



## "Cho Kabuki 2022 Powered by NTT" Performance Schedule

<https://chokabuki.jp/2022theatre/>

Produced by Shochiku, NTT, and Dwango

Thursday, Aug. 4—Sunday, Aug. 7	Hakataza Theater, Fukuoka
Saturday, Aug. 13—Tuesday, Aug. 16	Misonoza Theatre, Nagoya
Sunday, Aug. 21—Saturday, Sept. 3	Shinbashi Enbujo Theatre, Tokyo
Thursday, Sept. 8—Sunday, Sept. 25	Minamiza Theatre, Kyoto

**“NTT has developed ‘Shido Twin,’ which learns my speech and mannerisms to behave and gesture like me, and it will debut in one act of the Cho Kabuki performance starting tomorrow. I believe that this cutting-edge technology will further expand the possibilities of the Cho Kabuki production. We will do our best so that our audiences can enjoy our Cho Kabuki stages.” — Nakamura Shido**

### How Another Me Technology Works

Another Me is a body motion generation technology that learns someone’s personality from their audio and video data, automatically generating human movement in response to the person’s speech. Technically, a deep learning technique called Generative Adversarial Networks (GAN) builds a model that generates actions from speech (Figure 2). To reproduce a wide range of movements that capture even the minute mannerisms of a person, we have devised a mechanism that processes data at the time of learning, achieving the world’s highest performance in capturing the personality and naturalness of a person.

NTT has also developed cutting-edge speech synthesis technology, enabling the learning of the expressive power unique to a voice, such as individual inflection and intonation, from a small amount of speech. In the past, speech synthesis technology produced flat speech, but now it can generate expressive speech. In this demonstration experiment, we could reproduce Nakamura Shido’s characteristic intonation and emotive speech using only a few minutes-long recording of his voice. For the Cho Kabuki performance, we will also try to reproduce the dynamic movements and gestures of Nakamura Shido.

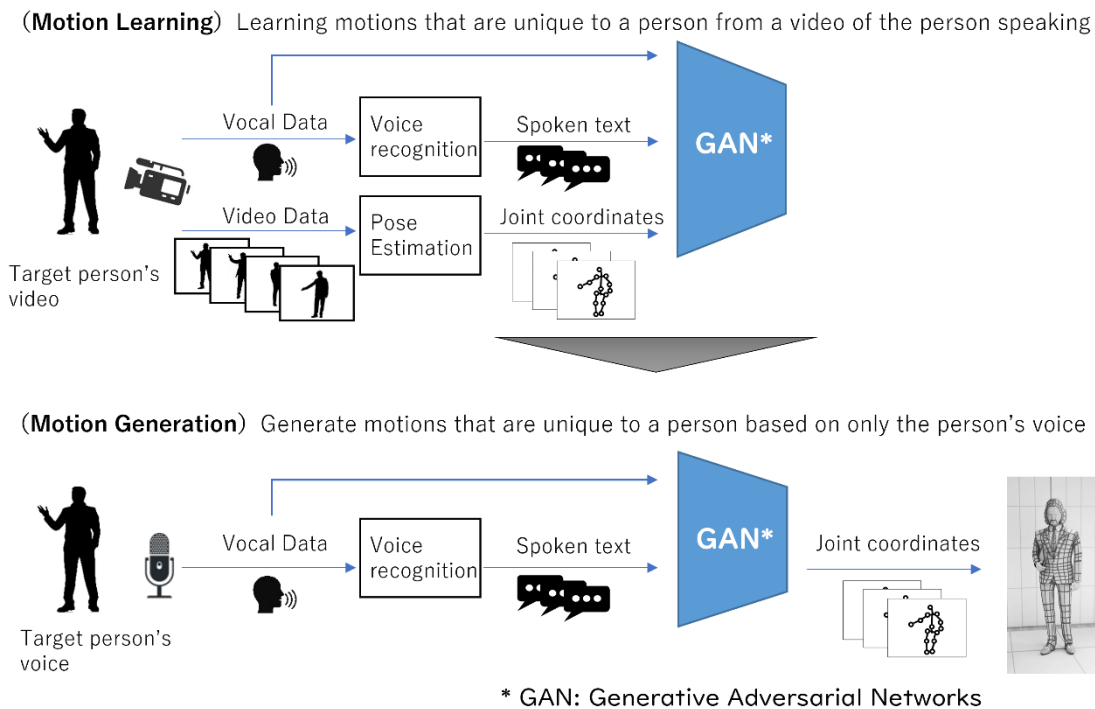


Figure 2. Overview of Body Motion Generation Technology

At NTT, we are taking on the challenge of developing Another Me technology, which reproduces not only the external appearance and gestures of a person but also the essence of their individuality. In the future, we will try to model a person's inner life by learning their personality and how they would speak and physically express themselves in different settings. As a result, Another Me will be able to reproduce your work and lifestyle, personality, how you interact with people, values, and your unique forms of expression and creation. We aim to realize a society where each individual can shine and gain fulfillment through expanding their opportunities to play an active role and grow their self-concept beyond physical constraints.

We hope you will look forward to the future research and development of Another Me technology and the future advancement of the new Shido Twin.

<sup>1</sup>IOWN (Innovative Optical and Wireless Network): A future communication infrastructure that utilizes cutting-edge optical and information processing technologies to realize a smart world. ("What is the IOWN initiative?"

<https://www.rd.ntt/iown/0001.html>)

<sup>2</sup>"What is Digital Twin Computing?"(<https://www.rd.ntt/iown/0003.html>)

<sup>3</sup>Telephone Shop: NTT's "stage name" created by the Cho Kabuki Audience



**Media contact:**

Research Planning Department, Production Division

NTT

[nttrd-pr@ml.ntt.com](mailto:nttrd-pr@ml.ntt.com)

Planning Development Department

Shochiku Co., Ltd.

[sh\\_kaihatsukikaku@shochiku.co.jp](mailto:sh_kaihatsukikaku@shochiku.co.jp)