Research and Development Center for
Digital Nature

R&D Center for Digital Nature

Since June 1st, 2020

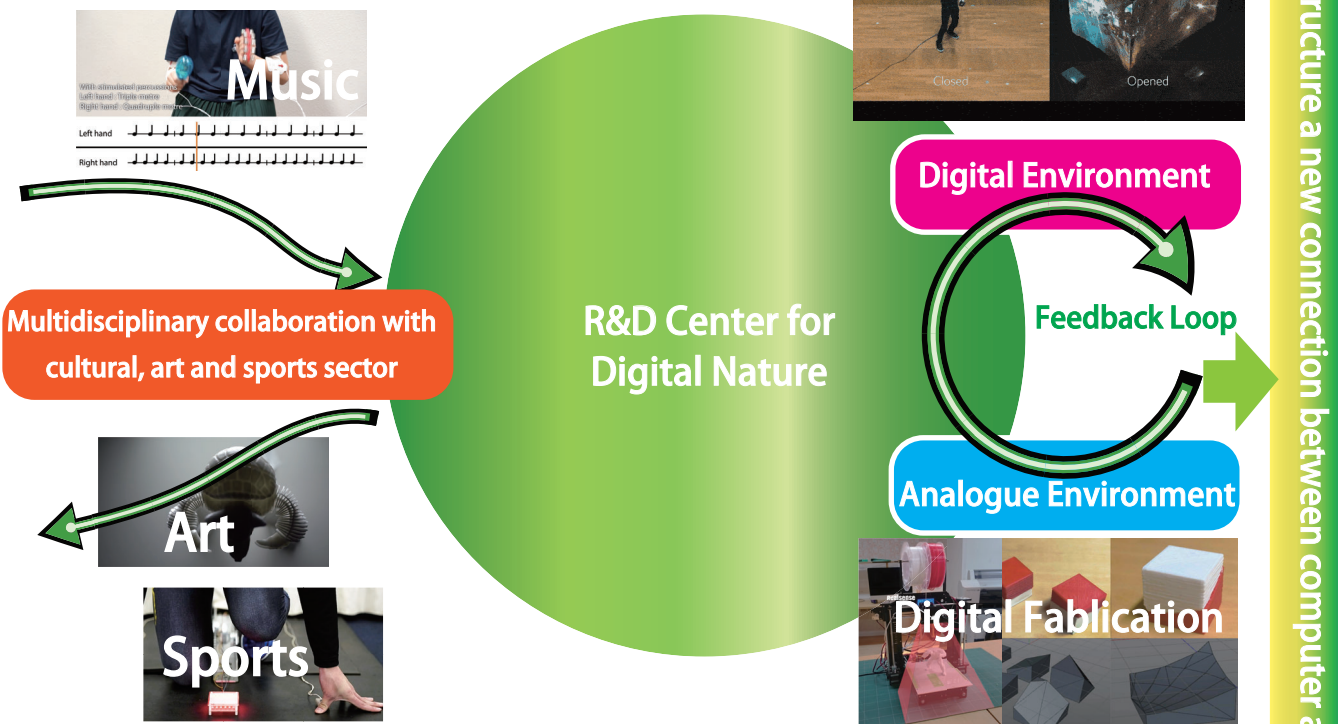## Investigating new relationships between computers and nature

The recent developments in computational platforms for ubiquitous computing, Internet of Things (IoT), and cyber physical systems are enabling a 'new nature' – the generation of artificial objects that are indistinguishable from the natural objects. For example, sound and light can be computationally manipulated to render realistic graphics (such as a butterfly) in mid-air or manufacture realistic object (such as material) using a printer. We describe such environment where the environment is restructured through the interaction of natural and computationally generated artificial objects, as the digital nature. Digital nature can be achieved through various methods such as digital fabrication method using 3D printer or through augmented reality (AR) / virtual reality (VR). The interaction of artificial object with the natural environment feeds back as data and will be utilized in a feedback loop to further infuse the artificial object into the natural world. This R&D center researches the information media devices and co-creation environment with humans in such a feedback loop and develop building blocks towards social implementation of digital nature through the promotion of researches associated with digital nature. In addition, we will endeavor to develop novel media devices and its services via multidisciplinary collaboration with cultural, art and sports sectors.

(c)Rie Goto

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Mission

AR/VR

Music

Structure a new connection between computer and nature

Digital Environment

Feedback Loop

Multidisciplinary collaboration with cultural, art and sports sector

R&D Center for Digital Nature

Analogue Environment

Art

Digital Fablication

Sports

「Based on the vision towards 'digital nature', collaborate multidisciplinary with cultural, art, and sports sectors, and investigate the coexistence relationship between computers, nature, and humans.