GIST unveils barrier-free media technology that crosses the boundaries of vision and hearing

- Professor Eunsung Song and undergraduate students from the School of Integrated Technology will participate in the 2nd Buan Borderless Festival Flying (F.L.I) starting October 19... Operating an exhibition booth to enhance accessibility to culture and arts

- Visualizing users' voices in real time and expressing user-drawn pictures directly into music... "I want to provide opportunities for communication between the disabled and the non-disabled and realize borderless culture and arts"



▲ (Clockwise from the left on the top row) School of Electrical Engineering and Computer Science students Ye-hoon Kim, Minsuk Yun, Heon-hyo Lee, and Eun-young Kim, and School of Integrated Technology Professor Eunsung Song

The Gwangju Institute of Science and Technology (GIST, President Kichul Lim) announced that Professor Eunsung Song of the School of Integrated Technology (advisor) and undergraduate students in the School of Electrical Engineering and Computer Science (Heon-hyo Lee, Ye-hoon Kim, Eun-young Kim, Minsuk Yun, and Yong-hwan Jo) will participate in the '2nd Buan Boundary-free Festival Fly (F.L.I) Rock Festival: A Place for Culture and Arts for the Disabled and Non-Disabled.'

GIST plans to operate a barrier-free cultural arts experience program that increases accessibility to culture and arts by exhibiting \blacktriangle 'Interactive Voice Dynamic Visualization System'* and \blacktriangle 'Visual Art-Based Automatic Music Generation* System' in two interactive art experience booths.

* automatic music generation: This refers to the process of generating music without human intervention through a specific algorithm or process, and it is combined with visual art to create new music created in real time.

The 'Interactive Voice Dynamic Visualization System', which visually represents the voices of two users, detects the voices of two users in real time and generates visual graphics according to changes in volume, thereby visually expanding the auditory experience and providing an immersive, multi-sensory experience.

It is an interactive media^{*} work that provides a dynamic experience by exploring new artistic possibilities that can be enjoyed together through competitive interaction between users.

* interactive media: This refers to media art in which the audience can directly participate and experience the work. It is a form in which the work is transformed or provides a new experience depending on the audience's input or actions.

The 'Visual Art*-based Automatic Music Generation System'* automatically converts drawings or photos into music when the user draws a picture or inputs a photo, allowing anyone to easily express their creativity aurally.

Professor Eunsung Song said, "Through this festival, we aim to provide an opportunity for people with disabilities and non-disabled people to communicate together beyond the boundaries of sight and hearing, and to realize the borderless nature of culture and art so that everyone can understand and enjoy each other through art."

The team leader, Heon-hyo Lee, said, "I feel rewarded to participate in this meaningful event of new artistic experiences that can be enjoyed by everyone regardless of disability, and I hope that it will become a place of inspiration and communication for all the audience."



▲ The 2nd Buan Borderless Festival Fly (F.L.I) Poster

Meanwhile, the 2nd Buan Borderless Festival F.L.I., held on October 19th, hosted by Buan Cultural Foundation and sponsored by Buan County, the Ministry of Culture, Sports and Tourism, and the Korea Disabled Arts and Culture Institute, has added audio commentary services for the visually impaired and a touch tour before the performance, and the rock festival will provide real-time sign language interpretation, active subtitles, and wheelchair-accessible seats to provide a more immersive environment for the performance.

