WSN SOUND TREE SIDEWALK WILL BE DISPLAYED DURING TKU'S 60ITH ANNIVERSARY CELEBRATION

Collaborated with Dr. Su-chu Hsu, professor of Taipei National University of the Arts, Dr. Chang Chih-Yung and Dr. Shih Kuei-ping of Dept. Computer Science and Information Engineering, TKU, apply the Wireless Sensor Networks (WSN) technology to the public art and create the first interactive WSN Sound Tree Sidewalk. Right now they are trying to get the US patent, and will exhibit their joint creation during TKU's 60ith anniversary celebration in November.

Dr. Chang explains that WSN Sound Tree Sidewalk is actually a group of mushroom plastic shape platform that consists of multimedia sensing nodes and environment sensing nodes. Each "mushroom" houses several sensors to collect environmental information including temperature, humidity, light and wind power, and then an interactive algorithm allows each "mushroom" to play different music or sounds in response to environmental conditions. In addition, it can also be used as lighting at night.

WSN Sound Tree Sidewalk has two modes. In the "Interactive Music Mode," when a person is firstly close to any of these "mushroom," it will begin to play the theme melody of a symphony. Later, if more and more people come into the WSN Sound Tree Sidewalk, they will initiate other musical instrument sounds to join the theme melody. Furthermore, if you slap the "mushroom," it will shout, "It hurts! Don't slap me!"

In the "Interactive Twitter Mode," the platform will use different holidays and social issues as key words to search for the related information on Twitter, and then transform the words into digital voice. When people walk by one of the "mushroom," it will be initiated and play the digital voice found from Twitter so that people can know the current events when taking a walk.

Wireless Sensor Networks have been applied in many applications, but mostly on national defense and medical technologies. Therefore, as a

public artwork combined with WSN, wireless communication technology, interactive technology, as well as digital art and music, the practicability and its future potential of WSN Sound Tree Sidewalk is highly noticed by National Science Council.

Dr. Chang indicates that the reason why they chose mushroom as the shape to create their Sound Tree Sidewalk is not only that the cap of mushroom can resist the damage from water and wind, but also that it can be immerged into natural environment scenery more easily. Moreover, apart from the mushroom model, their product can also be made in the shape of other things to accommodate different features of each company and school. “The purpose of our design is to increase the interaction between human and technology. We hope that people can feel the technology in their everyday life via the combination of the installation art and WSN,” said Chang.

WSN Sound Tree Sidewalk is going to be displayed in the Tamsui Campus during TKU’s 60ith anniversary celebration. It might be put in the school or other public areas permanently. Chen I-chang, a junior of Dept. of Banking and Finance, expresses that if this kind of installation artwork is set up in the campus, it will create not only a more beautiful surrounding, but also a more interesting school life. (~Shu-chun Yen)

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