

## **Research and Creation**

The Labs in CT are divided as follows.

### **❑ Visual Media Lab**

The purpose of visual media lab is to develop visual effects and computer graphics technology and apply them to content production such as computer animation, movies, games and etc. Ultimately, it will be impossible to distinguish between the digital actors and digital world from the real counter parts. Specific research topics include simulation of natural phenomena, facial animation, character animation, and intuitive sketching interface.

### **❑ Experience Lab**

Conventionally, HCI mainly dealt with technological, social, and philosophical problems arising in interactions between virtual environments and human. However, due to the evolution toward ubiquitous computing environment, HCI expands its focus on more general and macroscopic areas. The research in the EXP lab includes interaction between ever-evolving digital space and human, new application of digital media, and presentation exploiting digital technology. The area consists of computer game, wearable computing, and application of virtual reality. The projects are research on cognition process in the digital space based on interactive media art, media art theory, and systematic planning of scientific exhibition.

### **❑ Digital Media and Contents Lab**

Culture connects people through communication. Digital media as a communication tool and contents as communication medium are vital factors in culture industry. The goal is to produce quality contents, develop technologies in digital media and ubiquitous/online environments, and provide various business models. Research includes media interaction/interface design, coupling of contents and products for future services, designs in the field of web, animation, and games. The specific fields consist of media interaction design, digital entertainment, culture content specialization, animation, contents design, and business model.

### **❑ Digital Storytelling and Cognition Lab**

The story and storytelling technology are applied in various areas in entertainment and business with the progress in digital technology. The story and storytelling technology requires integral research beyond media boundaries. It is essential to constantly provide high quality story and there is need for a systematic research on various communication activities in cyber space. The research includes story source mining, story developing system, language, communication, storytelling related to human computer interactions. Main topics consist of story modeling, story design, new storytelling media, story developing & valuation system, language & text analysis, and digital communication.

### **❑ Cultural Management and Policy Lab**

The purpose is to develop creative business models to increase the market share of new culture contents through the analysis and forecast of government policy regarding culture industry. Also through the analysis of culture industry market, students find ways to improve, invest and introduce culture technology content to the investors and help find business strategies. The lab will be complimentary to other six labs by performing feasibility test on the contents developed by other labs and providing business solutions. The research includes CT business model development, CT consumer research, CT market research & simulation, CT industry policy and regulation analysis, economics of culture and culture industry.

### **❑ Creative Physical Interaction Lab**

The research includes basic technology for robot behavior, personality and appearance design, basic vision technology, voice recognition, cognitive intelligence, emotion generation, robot intention, emotion and expression, sound, and motion creation. As the paradigm regarding robots shifts from factory automation tools to companions in life, human and robot interaction becomes crucial in CT. In order for robots and humans to coexist it is essential to study cognitive mutual interaction technology, emotional mutual interaction technology

and user friendly and practical design as well as performance and cultural event planning using robots. The goal is to make digital contents by creating physical interface device for dancing robot performance and stage automation enabling digital interaction.