

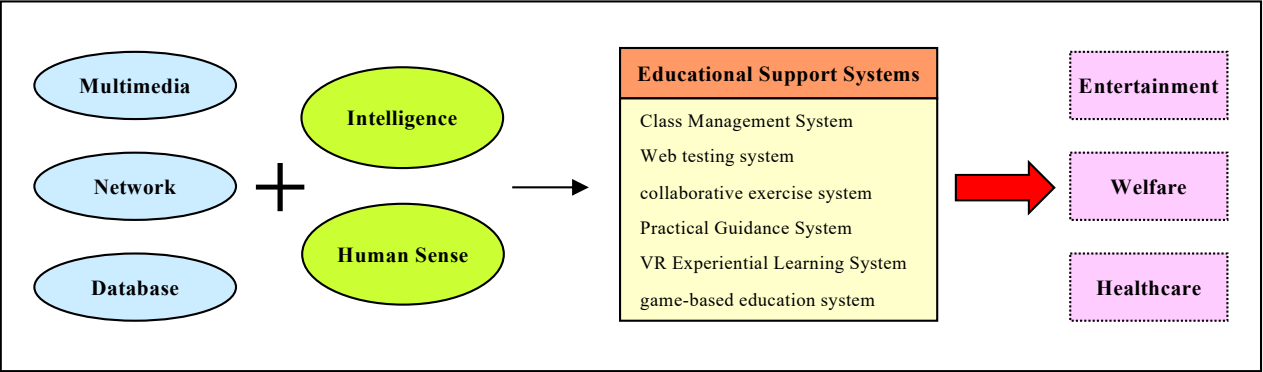
Research of Educational Support Systems and Multimedia

We are researching and developing a variety of educational support systems through combination of basic technologies such as **multimedia**, **network** and **database** with engineering methods related to **intelligence** and **human sense**.


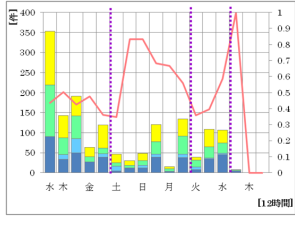
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Hiroyuki Tominaga (Associate Professor)

In addition, we also aim to **integrate education and entertainment (edutainment)** and apply it to **healthcare and welfare applications**.



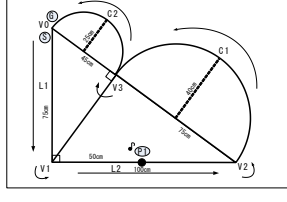
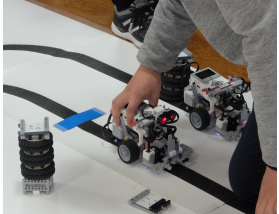
Programming Exercise

We propose **tProgrEss**, **WinT**, and **WinG**, which are **contest-style** introductory and applied programming exercise support systems that incorporate **competitive learning**.

These systems stimulate competitive motivation by providing students with **immediate notification of understanding levels** and **make their rankings public**. This attracts students' active engagement in the exercises.

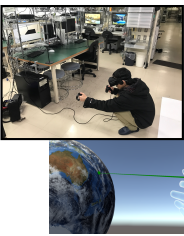
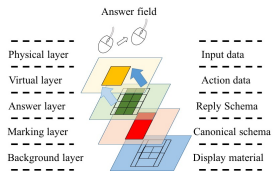
Robot Control Programming Exercise

Recently, the importance of embedded control technology in IT industries has been increasing, especially in **IoT** and **automated driving**.

Therefore, we are developing an exercise framework that utilizes **LEGO Mindstorm** as an exercise of **effective control programming with low education cost**. We provide familiar **robot control** and **game tasks** and propose exercises that motivate students.

Educational Support by VR and HI Devices

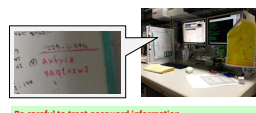



We are developing **iMuLS**, an experiential learning system focusing on **Virtual Reality (VR)** and **Human Interface (HI)** devices.

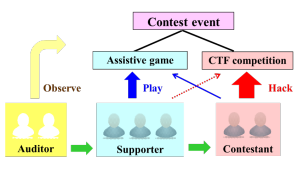
We are researching methods of educational support to arouse the interest of learners and help them to understand through reference of questions that express characteristics and meaning of VR and deformed expressions.

Security Education with CTF and Entertainment Game

The photo shows a desk of a system admin
Get a login ID and password of a master system



Be careful to treat password information
Don't write the password around your desk !!!



The hacking competition CTF has attracted a lot of attention. In this competition, the attacker and the defender compete for the flag by using hidden information on the server as a flag.

We have proposed **BeeCon**, a competition event by **CTF for beginners**, to educate the students about information literacy and security. We have developed a support system for the event, and we aim to make the event inclusive of spectators through **competitions** and **entertainment games**.