

## New Trends and Future Directions

### Intelligent System

An intelligent system is a machine with an embedded, Internet-connected computer that has the capacity to gather and analyze data and communicate with other systems.

Intelligent systems exist all around us in point-of-sale (POS) terminals, digital televisions, traffic lights, smart meters, automobiles, digital signage and airplane controls, among a great number of other possibilities. As this ongoing trend continues, many foresee a scenario known as the Internet of Things (IoT), in which objects, animals and people can all be provided with unique identifiers and the ability to automatically transfer data over a network without requiring human-to-human or human-to-computer interaction.

### Artificial Intelligence

Artificial intelligence is the branch of computer science concerned with making computers behave like humans. And is also the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

### Kansei Systems

Kansei Engineering is a method for translating feelings and impressions into product parameters. It parametrically links the customer's emotional responses (i.e. physical and psychological) to the properties and characteristics of a product or service. In consequence, products can be designed to bring forward the intended feeling.

### Man Machine Coexistence

The development of ICT should be sustainable that machine shall not take the place of the man. Machines shall always be a tool for man, no other way. (Living together).

# Fundamentals of Agent Technology

## Software Agents

are applications that perform repetitive tasks, without being managed by a human. The agents are also referred to as “robots”, “bots”, “crawlers” and “worms”. A popular use for the software is shopping. Shopping bots automatically check web-sites for the best prices. Then alert the user through email about the best price. Also, another popular use for agents are from websites such as Monster. At Monster, the bots automatically check the job posts weekly. After the bots or agent finds a post that matches a description from the job seeker, the program alerts the user through email. This prevents the job seeker from check continuously. The agent saves the use a large amount of time.

## Multi-Agent Systems

A multi-agent system (M.A.S.) is a computerized system composed of multiple interacting intelligent agents within an environment. Multi-agent systems can be used to solve problems that are difficult or impossible for an individual agent or a monolithic system to solve.

## Applications of Agent Systems

Multi-agent systems are applied in the real world to graphical applications such as computer games. Agent systems have been used in films. They are also used for coordinated defence systems. Other applications include transportation, logistics, graphics, GIS as well as in many other fields. It is widely being advocated for use in networking and mobile technologies, to achieve automatic and dynamic load balancing, high scalability, and self-healing networks.

