

□ The Interdisciplinary Study

The department pursues to realize high-performance joint cognitive systems that comprise both the human and the information network, designing high bandwidth knowledge connection between them. To enhance human decision making with computer aids and information, interdisciplinary research based on two pillars is called for: cognitive engineering on human side and intelligent knowledge processing on computer side (Figure). In the human-cognitive pillar, one needs to understand cognitive science and human decision characteristics, while knowledge modeling and processing, data mining, and Altechnologies have to be mastered in the computing intelligence pillar. These diverse basic disciplines are integrated through human-computer interaction design and system engineering principles. Thus, the education and research of the department can be categorized into five fields: Human cognition and decision making, Computing intelligence, Human-system interaction, Knowledge-based systems engineering, and contemporary paradigms of Knowledge service systems.

□ Application Areas

Albeit new in academia, Knowledge Service already signifies one of the most prospective new trends in economy. OECD defines Knowledge Intensive Business Services (KIBS) as “services which rely heavily upon professional knowledge, and either supply products which are themselves primarily sources of information and knowledge to their users, or use their knowledge to produce services which are intermediate inputs to their clients’ own knowledge generating and information processing activities, having other businesses as their main clients.” One may well take this as defining the application areas of the department. Korean government also defined Knowledge Service Industry analogously and included it among the seven new growth power industries. It embraces financial services, marketing and advertizing, education and training, health care services, consultancy services, technical engineering services, smart logistic services, as well as IT and contents services. These are all immediate target areas of knowledge service engineering.

□ Current Status

As of September 2014, the department personnel includes six full-time faculty members, one research professor, five joint-appointment professors, about sixty master and doctoral students, and department office staff members. Courses have been offered since 2009, and all course lectures are provided in English. The department currently offers master and doctoral programs.

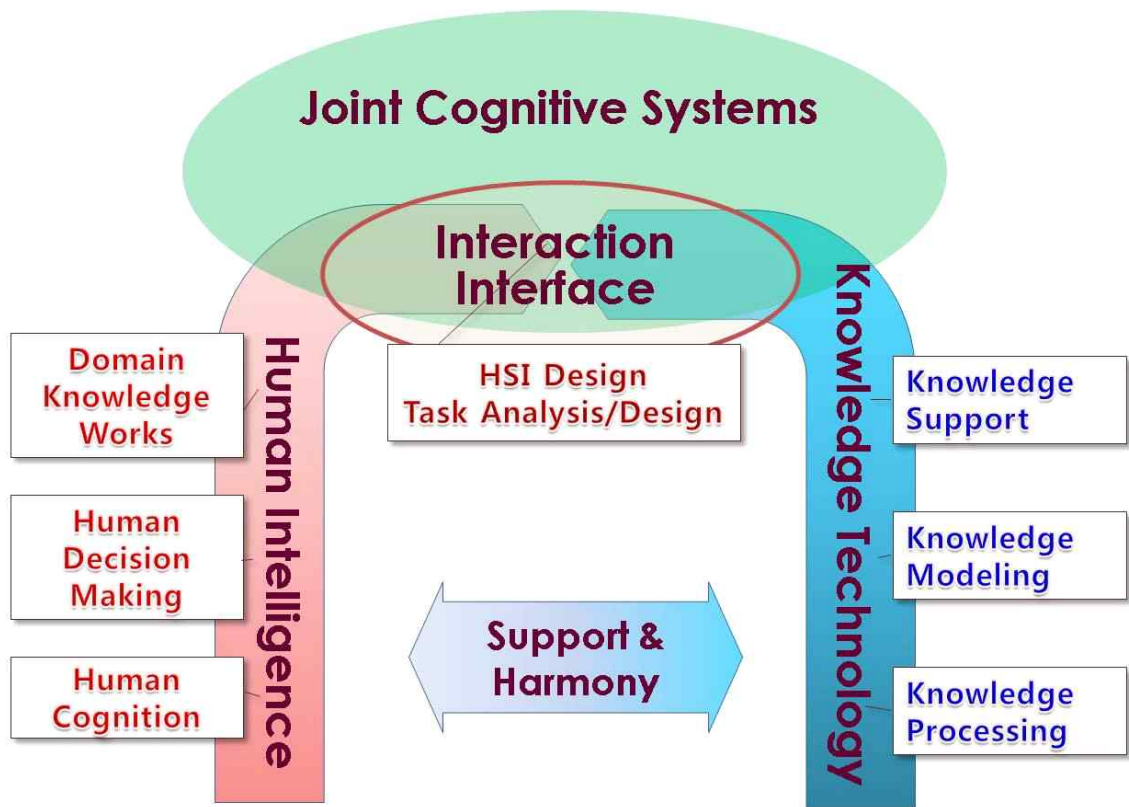


Figure. The Interdisciplinary study of Knowledge Service Engineering