

## Taxonomy of Human Communications

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### Abstract

With the development of information and communication technologies, a wide spectrum of social and personal systems for supporting and enhancing human communications have been developed: telecommunication and mobile communication systems for human-to-human communication, interactive information navigator and robot communication systems for human-to-machine communication.

In this paper, we first categorize types of human communications from such viewpoints of (1) who and how many agents are involved in communication events (e.g. human-to-human or human-to-machine, two or multi party communications, with or without a leader or chairperson), (2) for what purposes communications are conducted (e.g. social or personal, consulting, chatting, discussion, or planning), (3) in what environments communications are conducted (e.g. telecommunication or face-to-face communication, round-table or facing table arrangements), (4) what types of communication media are employed for exchanging messages (verbal or nonverbal communications), (5) in what ways interactive dynamics are controlled (e.g. delayed, synchronized, reactive, or proactive).

Then, we give an overview of our ongoing research activities on human communication, which are mainly conducted to model interactive dynamics in human communications and to develop such information systems that can communicate with human naturally.