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Mini-Track: Understanding Knowledge Work

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Mini-Track: Understanding Knowledge Work

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Advances in information technology and other high-technology sectors have increased the number of people involved in the activities of knowledge creation and diffusion. These people, known as knowledge workers, form a special class that includes professionals, consultants, technicians, scientists, intellectuals and managers (Bell 1976; Wuthnow and Shrum 1983; Quinn 1992; Ruhleder 1994). Even though the definitions of knowledge work are varied and inconclusive, knowledge work has the following characteristics:

- it produces and reproduces information and knowledge (Machlup 1962; Stehr 1994);
- unlike physical blue-collar work, knowledge work is cerebral (Davis, Collins et al. 1991; Davis and Nauman 1997), and involves the manipulation of abstractions and symbols that both *represent the world* and are objects *in the world* (Fuller 1992);
- unlike *service work*, which is frequently scripted (Leidner 1993), knowledge work defies routinization and requires the use of creativity in order to produce idiosyncratic, esoteric knowledge (Drucker 1993; Ledford 1995; Sviokla 1996); and
- it requires a formal education, i.e., abstract, technical and theoretical knowledge (Starbuck 1992; Frenkel, Korczynski et al. 1995).

Defining knowledge work in more absolute terms is difficult because the concept of knowledge itself is ambiguous. However, there is general agreement in the management and information systems literatures that knowledge is closely related to action. For instance, Stehr (1994) defines knowledge as the capacity to act; Fuller (1992) sees knowledge as anything an agent needs to determine his/her market strategy; Davenport and his colleagues (De Long, Davenport et al. 1996; Davenport and Prusak 1998) view knowledge as the combination of human context and information that makes information actionable; and Drucker (1993: 210) maintains that knowledge "is always embodied in a person; carried by a person; taught and passed on by a person; used or misused by a person." It is for this reason that this mini-track focuses on the work practices, i.e., *actions*, of knowledge workers as they produce *information*.

Within the scope of this mini-track on knowledge work, there are several streams of research to consider. These include studies of work practice and technology, knowledge transfer across organizational and group boundaries, workplace research, computer supported

cooperative work, participatory design, and social studies of science and technology. Industry laboratories actively studying knowledge work include Xerox Palo Alto Research Center (PARC), Fuji-Xerox Palo Alto Laboratory and Intel Architecture Labs. Xerox PARC is one of the leading research institutions in the research of work practice. Fuji-Xerox Palo Alto Laboratory (FXPAL) focuses on the theme of collaborative work and digital information technology. One of their projects involves research on supporting the information needs of mobile knowledge workers. Intel Architecture Labs (IAL) sponsors research projects that consist of social scientists conducting ethnographic studies of how people live and work. From these projects they derive lessons for the design of new information technologies. Other research institutions active in this subject area include Microsoft Research, Lucent, Lotus, and IBM Thomas J. Watson Research Center. Their primary focus includes the issues of computer supported cooperative work, human computer interaction and knowledge management.

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