



TenStep Supplemental Paper

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Wearable Computer

For the first time recent advances in IT are making the development of systems that directly support the real needs of HR departments and a mobile workforce possible. Gloria Gery coined the term Electronic Performance Support System (EPSS) to describe systems that provide task specific information, training, and assistance at the worksite when most needed, i.e. while completing a task.

Embedded in this process of support is a new paradigm for learning, whereby the focus is shifted from training/teaching to supporting/enabling individuals to learn while they complete their work. The power of an EPSS rests in the integration of the many existing support technologies into one unified system directly tied into the tools used in performing the job. In a factory setting, this concept is coined Factory Automation Support Technology (FAST).

The basic FAST hardware, which is undergoing a fourth generation change of design, includes:

- A credit card-sized computer and wireless communication system worn on the belt allowing portability and transmission of data in real time to other computer systems
- A visor worn like safety glasses to display computer information to the user via a miniaturized display
- Earphones for listening to auditory information provided by the computer
- A microphone to allow voice-activated, hands-free operation of the computer
- Flexible 8-hour battery packs worn on the belt

FAST aims to provide employees with the right information, in the right quantity and detail, at the right time. The system allows less proficient employees to perform as more experienced employees by providing them appropriate knowledge.

The wearable computer system allows the wearer to send video and audio messages to a person remotely located. Thus, two workers can work together even though they are physically far apart. The user can point the head-mounted camera at a broken piece of equipment and send the video nearly instantly to an expert in another location. The expert can watch what the user is doing and send auditory instructions to help the user repair the broken equipment.