

Human Machine System: An Overview

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EDITORIAL

A human-machine device combines the functions of a human operator (or a group of operators) with those of a machine. This concept can also be used to emphasize that such a structure is treated as a single entity that communicates with its surroundings.

A manual system is made up of hand tools and other supports, as well as a human operator who manages the procedure. The power source for such systems is the operators' own physical energy [citation needed]. A individual with a hammer to a person with a super-strength exoskeleton may be part of the scheme.

Human machine system engineering varies from more general fields such as human-computer interaction and sociotechnical engineering in that it focuses on complex, dynamic control systems that are often partially automated (such as flying an airplane). It also explores human problem-solving in naturalistic and high-fidelity simulation environments.

The field of human-machine choreography has yet to be fully studied. How computer mechanisms can expand body structure hints at how the body can perform beyond its biological shape and functions, as well as beyond the local space it occupies. How human action is transformed into computer motion and then articulated and expanded into virtual performance on the web promises to be fascinating.

Integrating virtual camera views of the performing human-machine device, for example, improves the choreography and heightens the creative result.

Psychology, sociology, engineering, biomechanics, industrial design, physiology, anthropometry, interaction design, graphic design, user experience, and user interface design are all part of the sector. Human factors research uses the empirical method to analyses human behavior in order to adapt the findings to the four primary objectives. It is the study of designing equipment, devices, and processes that are compatible with the human body and cognitive abilities. The terms "human factors" and "ergonomics" are virtually interchangeable. Ergonomics (or human factors) is a scientific discipline concerned with the study of human-system interactions, as well as a career that applies theory, concepts, data, and methods to design in order to enhance human well-being and overall system efficiency. Human factors are used to accomplish the objectives of workplace health and safety as well as efficiency. It's important in the design of things like safe furniture and simple machine and equipment interfaces. Repetitive strain injuries and other musculoskeletal conditions, which can evolve over time and lead to long-term disability, require careful ergonomic design. Human factors and ergonomics are concerned with the "fit" of a consumer, equipment, and climate, or "fitting a person to a task. It takes into account the user's abilities and limitations in order to ensure that activities, functions, knowledge, and the environment are suitable for the user.

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