Home Automation and Human Factor

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1. Home automation outlook

(1) System situation.

It is said that D.S. Harder has originated the word 'automation' in late 1946. At the present time, automatic manufacturing is called “Factory Automation (FA)”, and unmanned factory appeared. Office automation (OA) is processing multiple data fast.

Home automation (HA) is labor saving system with the information processing system and the automatic operating system. HA is assisted by the creative action system also.

(2) System image.

1) House keeping
   ① Home security Door phone, fire proof sensor, stealing sensor.
   ② Home control
      Light, electric equipment on/off control.

These are controlled through telephone service, CATV and ISDN etc. from outside.

2) Home management, domestic data base
2. HA assisted apparatus and equipment

(1) Home bus.
Home bus is the information outlet acting as the electric outlet used in the electric appliance.

(2) Food life.
Electric rice cooker, home bakery, electric range and gas oven combination system, dish washer etc.

(3) Clothing life.
Micro processor controlled sewing machine, full automatic washing machine.

(4) Housing life.
Room air conditioner, electric vacuum cleaner (self-working type), multi-functional bed, gas-, smoke-, stealing- sensor.

(5) Data processing unit
Personal computer and its peripheral apparatus (involve INS terminal).

3. Reliability as a system

(1) High reliability.
(2) Operational easiness.
(3) Fail safe.
(4) Compact and low price.
(5) Standardization.

4. Change of life pattern

(1) House keeping labor saving.
(2) Leisure time increases.
(3) Home work system. (Work at home)
(4) Women employment rate increases.

5. Human factor of HA

(1) Free combination and extension possibility as using purposes.
(2) System assisted creative action (writing, art, music, invention etc.).
(3) Selectivity of input-output type.
(4) Countermeasure on control system trouble or stoppage of electric current.
(5) House keeping ability without HA.

6. Abilities to deal with HA.

(1) Setting the program timer.
(2) Checking the initial condition.
(3) Using the manual.
(4) Coping with accidents.
(5) Controlling action patterns of family together.

7. For using HA

(1) Having a life purpose, self-perfection.
(2) Understanding ability on motion of HA.
(3) Selecting ability in HA.
(4) Studing ability of home management.
(5) Living basic life technique.

Reference

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