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"anything is possible"

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# 0000 organization of this manual

(vol,part,chapter,section)

1000 volume: system description

1100: definitions

1200: summary

1300: requirements

2000 volume: operation

2100: principles of operation

2200: operating procedures

2300: operating instructions

# 1000 system description

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## 

## 1100 definitions

**change:** variance undergone by a system variable

**direction of change:** change with respect to time

**change coefficient:** factor by which a given system variable varies over a given unit of time

**change product:** the product of all involved variables' change coefficients for a given process

**great change:** condition existing in a variable or set of variables when the product of all involved change coefficients is greater than one

**compatibility:** factor representing a given system variable’s ability to undergo a given change

**direction of compatibility:** compatibility with respect to time

**motivation:** factor representing a given system variable's intent to change

**direction of motivation:** motivation with respect to time

**relation:** the way in which one variable affects another

**direction of relation:** the relation between two variables with respect to time

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## 1200 summary

the product of a compatibility and a motivation for a given variable is one factor that can result in change.

### 1210 supervisor

#### 1211 supervisor responsibility

the supervisor is responsible for managing the state of all variables in its authority. in general, this is accomplished by controlling the rate at which change is able to occur. this is done in two ways.

1. control of time itself.
2. governing a variable’s direction of change; e.g. imposing limits on the maximum magnitude amount of change a variable can undergo per unit time.

in addition, the supervisor is able to indirectly control the amount of change taking place by affecting a variable’s factors for change; e.g. compatibility and motivation.

the supervisor displays important information to the user.

### 1220 variable

#### 1221 variable responsibility

### 1230 relationship

variables can be linked to another, thereby affecting one another.

#### 1231 types of relationships

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## 1300 requirements

### 1310 supervisor

### 1320 variable

#### fields:

id, function / auto-subscribe, value / notify, change / notify, change product / notify, color, name, tags, auto

#### behavior:

1. when notified of change, a variable will:
   1. evaluate its function
   2. update value
   3. update change
   4. update change product
   5. if change product is not equal to 1, notify subscribers
2. when auto-subscribe is selected, add own id to referenced variables’ notification list.
3. function reference syntax:
   1. %XXX references XXX’s change product
   2. #XXX references XXX’s value
   3. @XXX references XXX’s change
4. function special syntax:
   1. boolean logic
      1. > greater than
      2. < less than
      3. == equals
5. auto allows user to specify a time interval in milliseconds to be updated.

### 1330 display device

a special variable which has a square display box, and two function fields (e.g. ‘x’ and ‘y’ respectively).

### 1340 input device

a special variable which updates itself in response to keyboard or mouse input.

### 1350 user interface

* a vertical list of variables displaying id and name on left. right side contains two thin line graphs displaying value and change product over time.
* when selected, all fields are displayed below the name and can be manipulated.
* variables can be organized into folders to represent constructs.
* switch between folder/category and alphabetical views.

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# 2000 operation

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## 2100 principles of operation

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## 2200 operating procedures

### 2210 calculating change product

#### 2211 precautions and limitations

#### 2212 standard operating procedure

for the given period of time, calculate the product of all change factors.

#### 2213 abnormal conditions

dividing by zero

### 2220 blessing in a variable

### 2230 forming a relationship

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## 2300 operating instructions