‖‖‖

학술 강연회 초록

‖‖‖

※ 本稿는 1971년 10월 7일(목) 오후 2시 전기회관 강당에서 당학회 주최로 실시한 학술강연회의 초록이다.

高信賴電子 計算機에 관하여

(Recent Trends in Ultra Reliable Digital Computers)

當 麻 喜 弘 박사
(일본 동경공업대학 교수)

Change of Applications of Computers

1940's~1050's

Batch Processing——→On line, Real-Time Processing

(Scientific Computation) (Management and Control
of Large Scale Systems)

Military Use, Traffic Control Space
Mission, Banking Systems, Production
Line Control

↓

Demand of Ultra-Reliable Computers

Methods of Construction of Ultra-Reliable Computers

(i) Improvement of Quality of Components

(ii) Use of Redundancy——→Fault-Tolerant
Computers

(iii) Fail-Safe Realization (Improvement of
Reliability of Imformation)

Use of Redundancy

(i) Error Correcting Code——→Hamming Code for
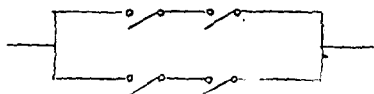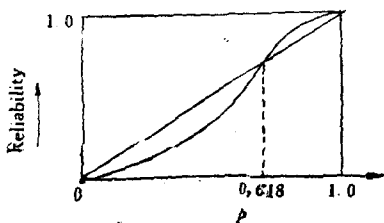Memory (IBM 360/85, DIPS)

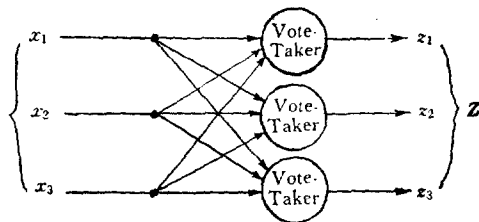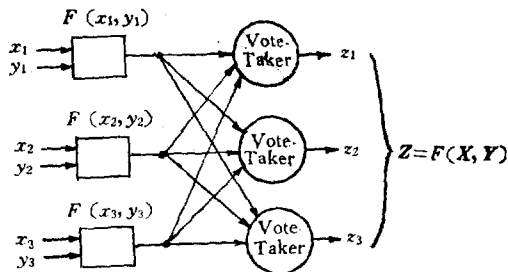(ii) Fault Masking Techiques

Fig. 1

Fig. 2

Fig. 3

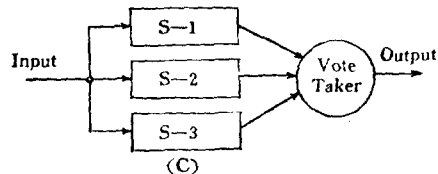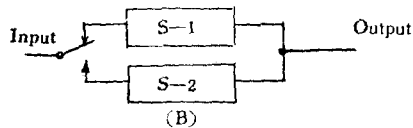**Fig. 4**

(iii) Back-Up Spare Systems
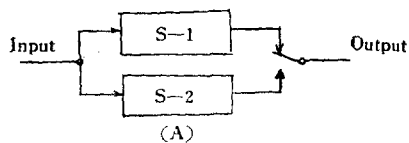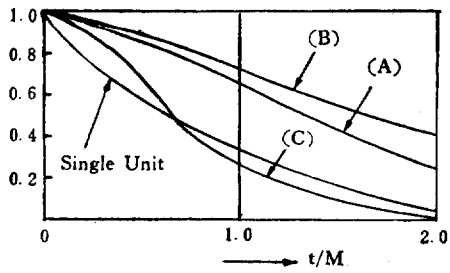

Fig. 5

Fig. 6

Fig. 7-3
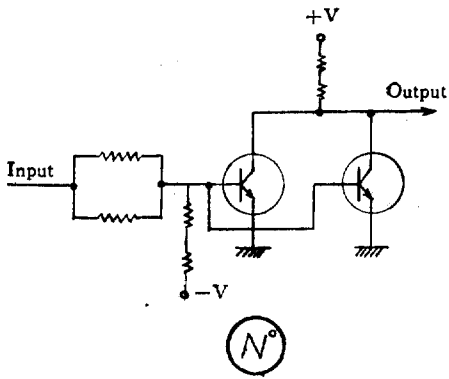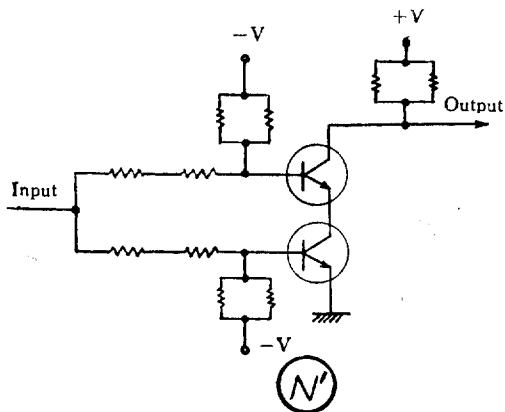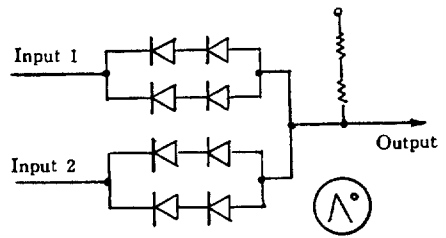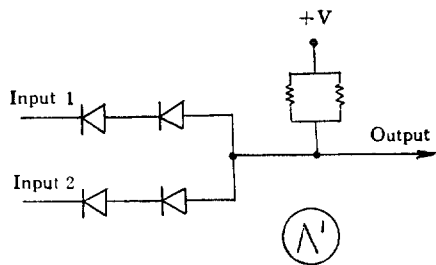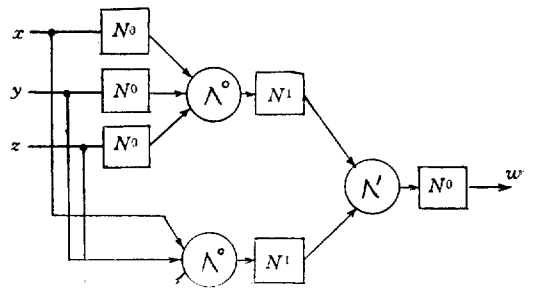
(iv) Retry-Software (IBM360/85, IBM370)

Fail-Safe Logic

Fig. 7-1

Fig. 7-4

$w=xyzv\bar{x}\bar{y}\bar{z}$

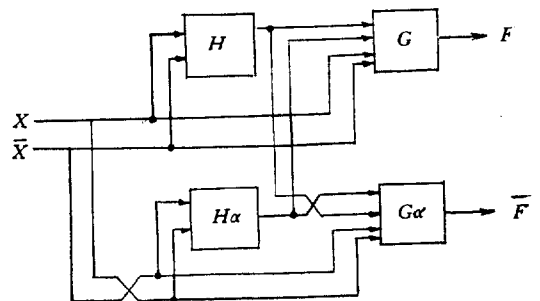Fig. 8

Fig. 7-2

Fig. 9