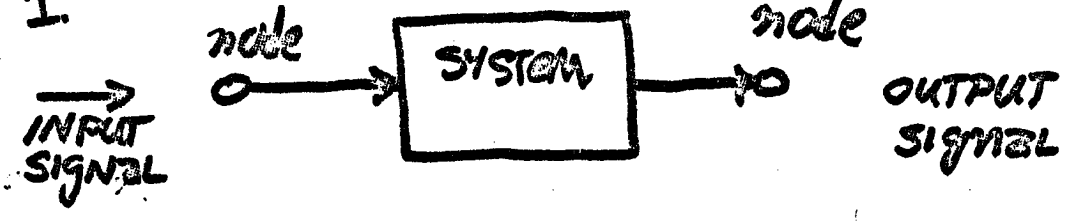
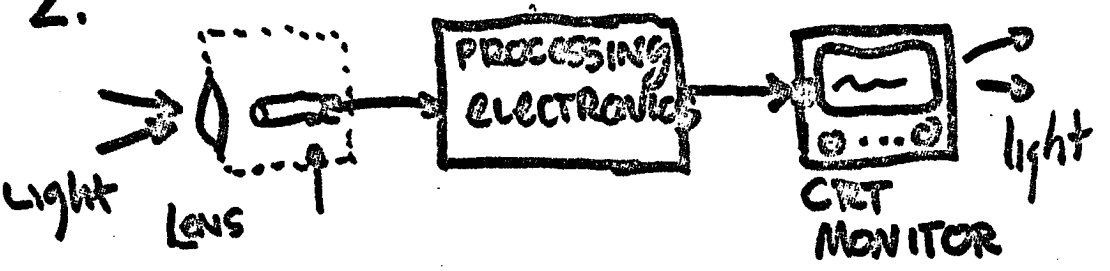
1. SYSTEM

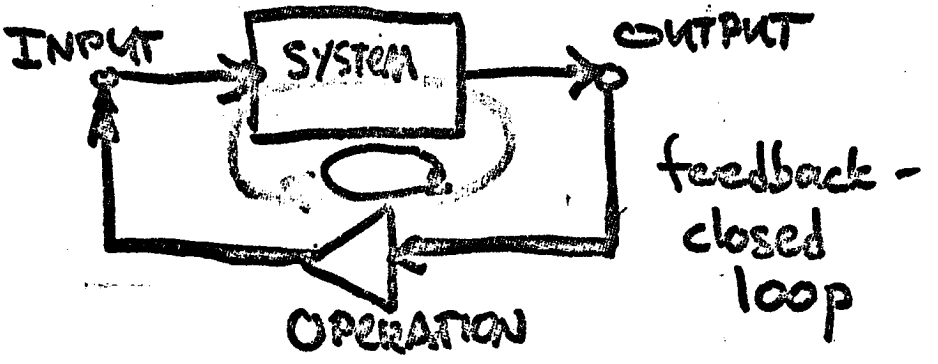


2. VIDEO SYSTEM



FEEDBACK SYSTEM

3.



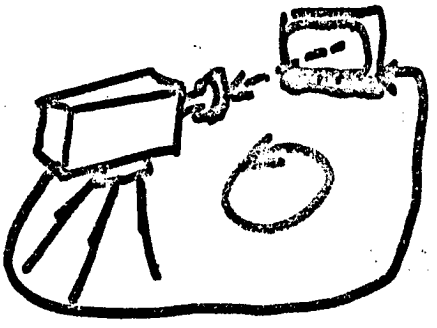
Bill — Stephen's name should appear at end of this.

Also, title: Video Feedback: A Systems Approach

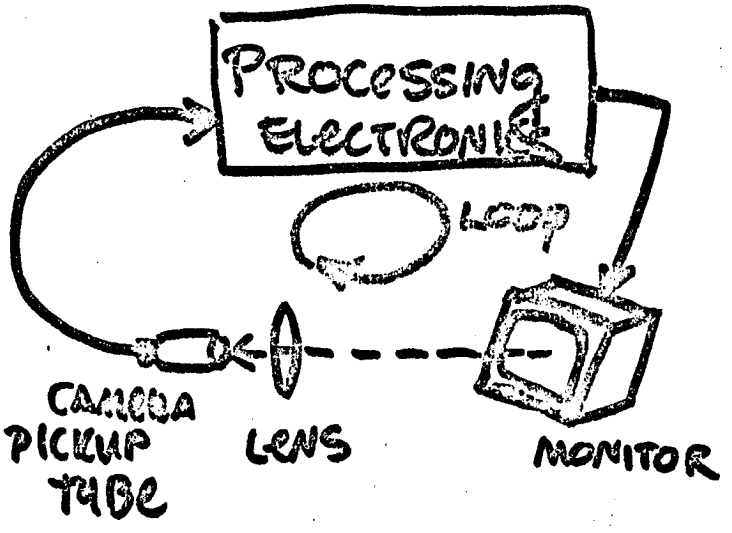
W

3.

4. VIDEO FEEDBACK



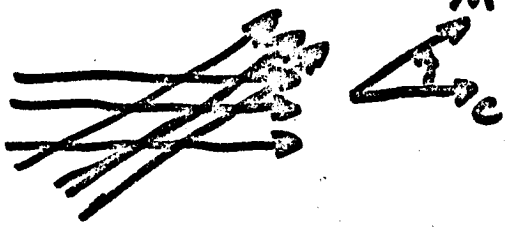
CLOSED LOOP



OPERATIONAL FEEDBACK CONTROL ELEMENTS

OPTICAL PATH

1. LENS FOCUS & FRAMING
2. CAMERA – MONITOR ORIENTATION
   (1) SCAN ANGLES
   (2) SCAN PLANE ANGLES



3. OPTICAL OBSTRUCTIONS, Reflections

ELECTRONIC PATH

1. MONITOR ADJUSTMENT
   BRIGHTNESS
   CONTRAST
2. PROCESSING ELECTRONICS; PICTURE LEVEL, POLARITY, NON-LINEAR EFFECTS .. "KEY", EDGE OUTLINE;
3. SIGNAL PATH TIME DELAYS;
4. USE OF COLOR.

NATURE of CLOSED-LOOP VIDEO FEEDBACK

CERTAIN CONDITIONS of FEEDBACK CONTROL ELEMENTS →

SELF-SUSTAINED OSCILLATIONS, LIGHT PATTERN OUTPUTS;

Differing CONDITIONS of ELEMENTS → Different modes of oscillation, ACCOUNTING for the different ~~shapes and mat~~ varieties of feedback forms.

QUESTION: HOW INTERESTING THAT THE TELEVISION SYSTEM HAS NATURAL, SELF-SUSTAINED OSCILLATIONS IN THE FORM THAT IT DOES; WHAT IS THE SIGNIFICANCE?

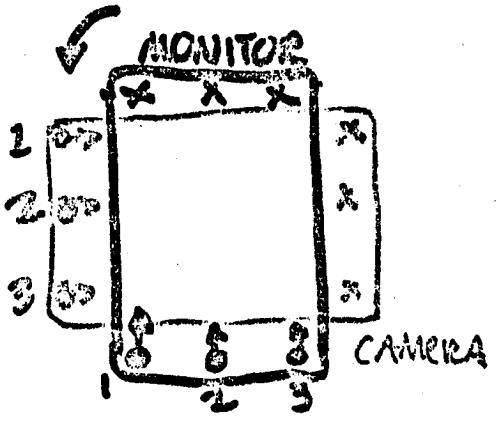
(i.e.; NATURAL RESPONSE of PENDULUM, PERIODIC, (gravity-mass) USED FOR "TIME".)

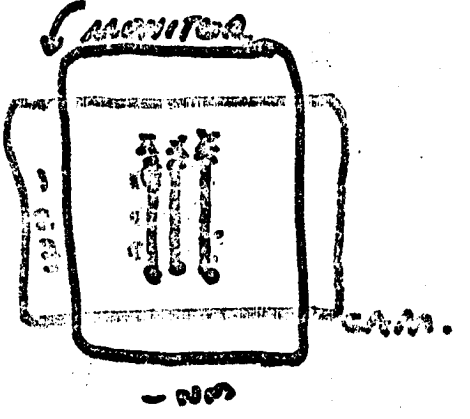
CASE of A PARTICULAR FEEDBACK

1. optical CAMERA - MONITOR ORIENTED 90° TO ONE another;
2. focusing and framing.

establish this relationship between the camera scan area and the monitor scan area imaged on it:

5.

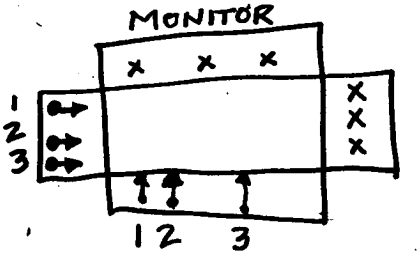




time apart

time now

combined effects of ~~delays~~, brightness, focusing and framing → camera produces an output when monitor is producing an output within a certain ~~distance~~ distance (which depends) of the camera scanning point.

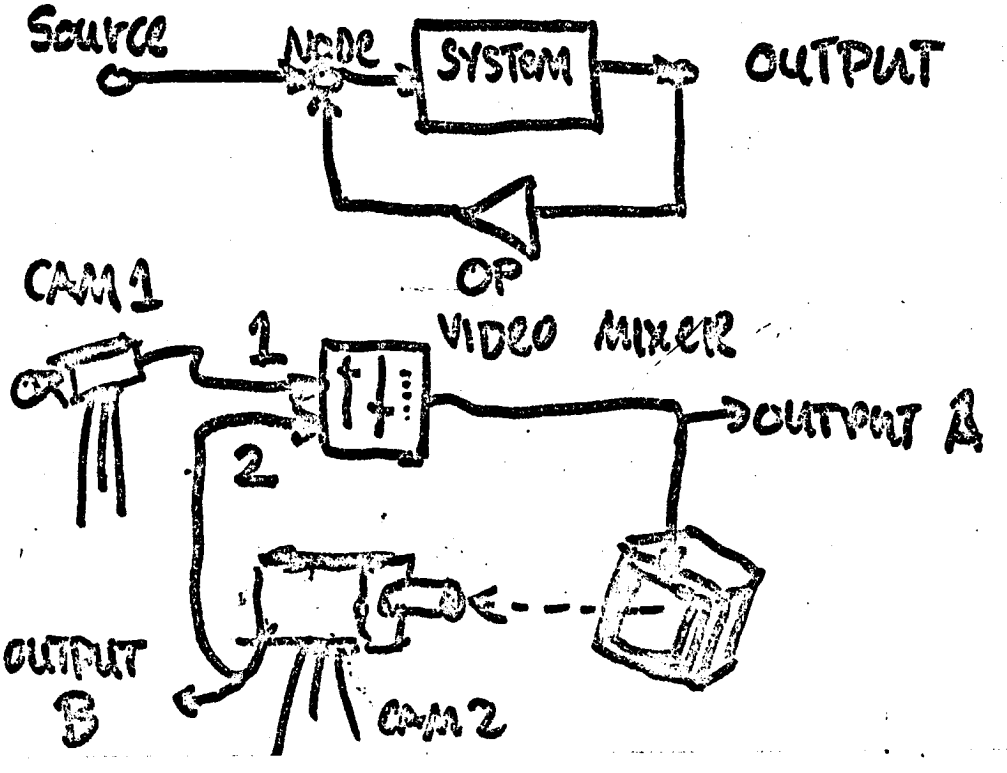


(of course the small distance is equivalent to a small time interval between camera and monitor scan points.

↳ circular motifs of feedback forms achieved with this technique.

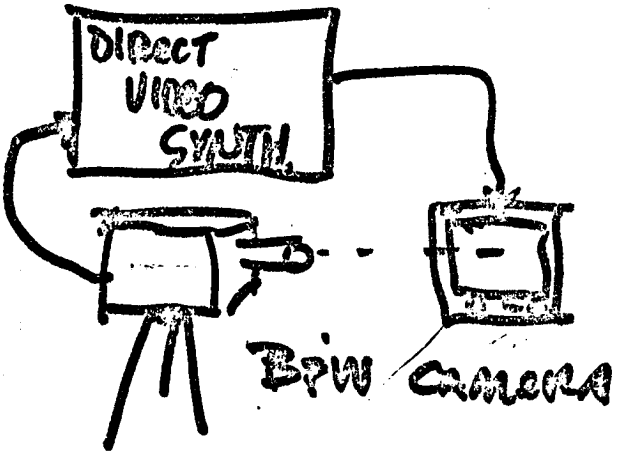
6.

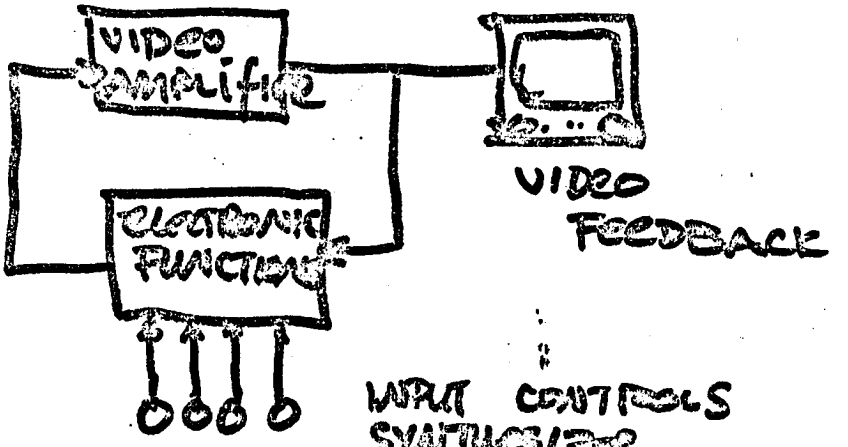
FEEDBACK SYSTEMS WITH EXTERNAL INPUTS



INPUT FROM C1 can act as a trigger to the feedback obtained from C_2. thus feedback forms may be selectively ~~and~~ placed in certain areas:

7. FEEDBACK WITH ELECTRONIC SOURCE INPUT



ELABORATE NON-LINEAR PROCESSING.
PRODUCTION of FEEDBACK "MASKS"

8. FEEDBACK SYSTEMS WITH NO CAMERAS: