DATAFEED

1. The scenario is a DECISION ROOM in which information is called up in various forms. The DATAFEED equipment is one part of this room.

2. Datafeed consists of one control screen and three data screens, on which information is cast by back-projection. A general view is shown in Figure 1. The seating is for ten people.

3. The control screen is fed by one projector holding 80 slides.

4. Each data screen is fed by three such projectors, and their layout is shown in Figure 2.

5. There are 3x3x80 = 720 slides of data. The control problem is to screen any one of these slides on an appropriate screen. Note: the whole batch of 720 slides may be changed to represent another situation.

6. It is ergonomically desirable that everyone in the room should have a direct and simple method of controlling the data screens.

7. Figure 3 shows such a control panel, which would be shared by two people (therefore five such panels, ganged together).

8. Each data screen is supplied by 240 slides. The selection system is twofold. First select a class (say 1 of 20 classes) then a subclass (say 1 of 12 subclasses). Redundancy is supplied to permit flexibility. Thus there are 32 possible classes and 32 possible subclasses in each class - apparently 2464 alternatives. In fact, there are only 240 alternatives, and the classes and subclasses must be chosen accordingly.

9. Any control panel commands first the control screen, permitting these selections, and secondly the appropriate data screen. The switching specification is given in Table 1; it specifies a mini-computer.

10. At Figure 4 is a visual representation in support of Table 1.

QUESTIONS:

1. Can the optical set-up be achieved?
2. What is the optimal size of screen? (Note: up to 32 lines on Control.)
3. Figure 2: then what are the dimensions x and y?
4. What is the cost of the optical set-up?
5. Is there any known method for the control set-up?
6. If not, can the control set-up proposed be achieved?
7. At what cost?

All these questions have since been satisfactorily answered.

Stafford Beer

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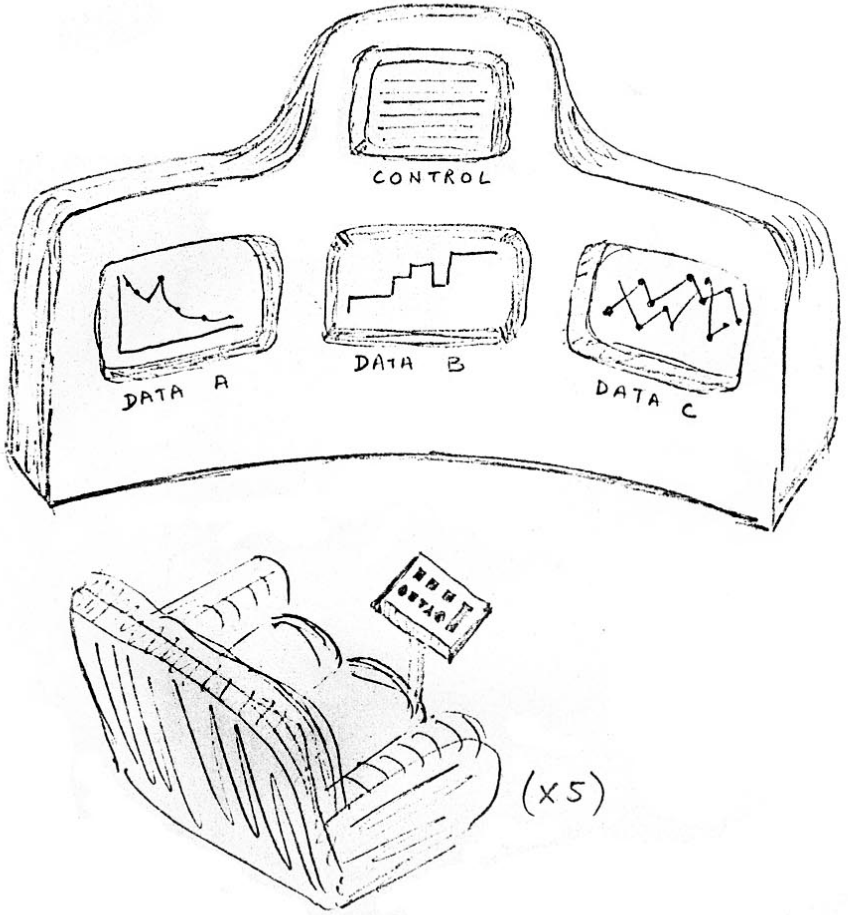
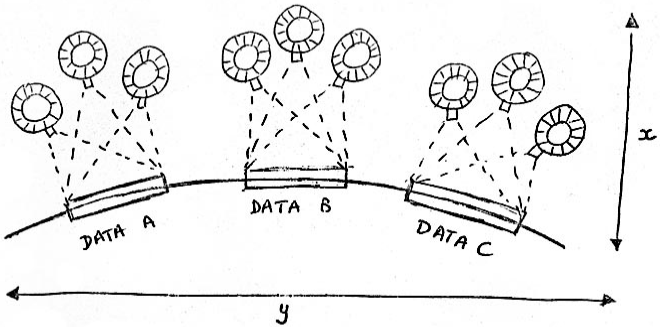


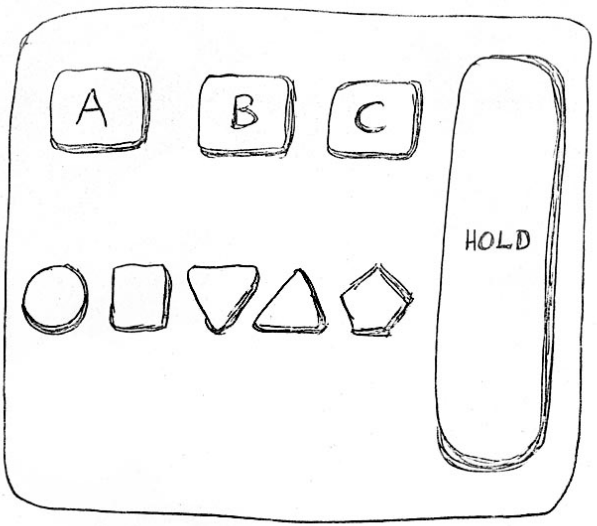
LAYOUT

FIGURE 1



BACK - PROJECTOR LAYOUT

FIGURE 2



HALF ACTUAL SIZE

CONTROL PANEL FIGURE 3

TABLE 1 : SWITCHING SYSTEM

No.	ACTION	and if required	CONTROL Screen	No. of slides	Constraint	DATA Screen	Other Action
1.	Press A or B or C		shows classification for this screen	3	$\not>$ 32 classes each plus CODE 1		selects screen assembly
2.	Punch CODE 1		shows relevant sub-classification	$\not>$ 32	$\not>$ 32 subclasses each plus CODE 2 (3x32+3 = 99) $\not>$ 80		Hold control screen Set up data screen
2a.		Punch another CODE 1	shows another sub-classification	$\not>$ 32	(32x32 = 1024) $\not>$ 240		Hold control screen Set up data screen
3.	Punch CODE 2		Hold sub-class			show slide	
3a.		Punch another CODE 2	Hold sub-class			show slide	
4.	Press HOLD		Blank			hold slide	screen button returns

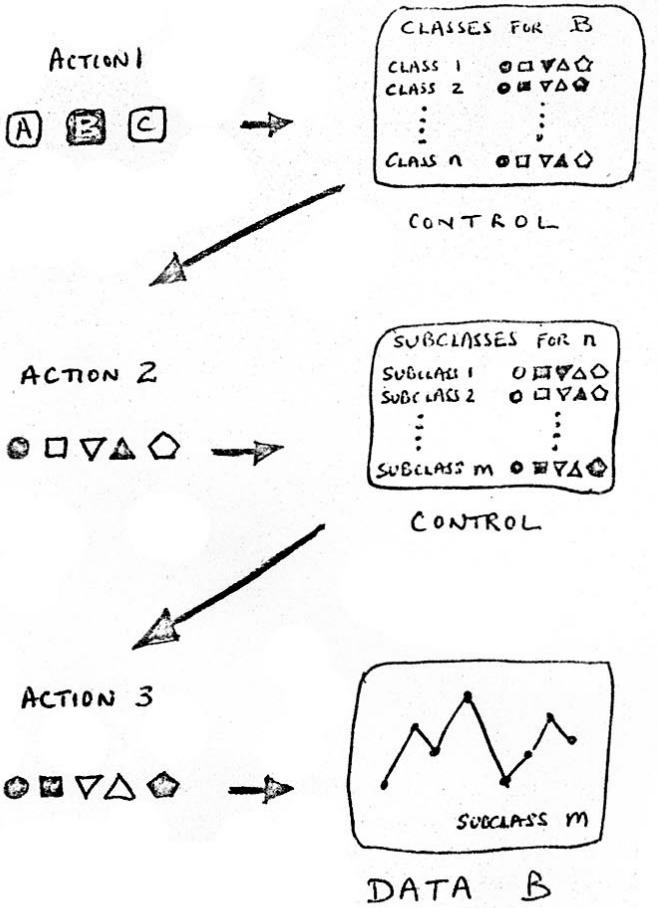

ACTION 1
A
B
C
CLASSES FOR B
CLASS 1
CLASS 2
CLASS n
CONTROL
ACTION 2
SUBCLASSES FOR n
SUBCLASS 1
SUBCLASS 2
SUBCLASS m
CONTROL
ACTION 3
SUBCLASS m
DATA B

FIGURE 4