Not quite computing - almost art

JOHN LANSDOWN

I will wear a little white gardenia

Have you ever thought how useful it would be if you possessed a device which was able to sense and signal the moods of yourself and others before the feelings took more obvious forms? If, for example, you were chairman of a delicately poised meeting, the ability to pre-sense the minutely changing feelings of boredom or antagonism would allow you to take steps to liven up or cool down proceedings, in order to maintain discussion at a fruitful level before tempers became frayed or yawning set in. Would you like a computer peripheral — nice looking yet inconspicuous — to help you do this? Well, that doesn't seem to be completely out of the question.

John Lifton, a computer artist with a number of exciting works to his credit, has been working for some time on the small electrical signals that plants send out and which seem, in some way, to be related to the surrounding 'emotional' atmosphere. He has made a device, called 'Green Music', which picks up these very tiny signals by means of electrodes attached to the stems of Begonias, rubber plants or Antirrhinums, amplifies and integrates them and uses the ensuing voltages to control an electronic music synthesiser. The resulting sound is an ethereal, tinkling music which varies in pitch and rhythm according to the proximity of spectators.

The original puzzling experiments on plants which gave rise to his work were made in the 'sixties by Clive Bakster of New York who used a lie detector to measure the electrical response of plants to the random dropping of shrimps into boiling water. (Don't ask me why this bizarre stimulus was employed.) There was, of course, no electrical connection between the shrimp-dropping part of the experiment and the plants yet there was a high correlation between the polygraph traces and the stimuli. Since then, a number of workers have reproduced similar results and a lot of stories, many perhaps apocryphal, have grown up about the remarkable ability of plants to sense hostility. It is even suggested that plants are already being used as detectors for some burglar alarms in New York. I know from personal experience of Lifton's experiments that *something* happens when one approaches plants wired up to detectors and that that something varies from person to person, and from time to time with the same person.

For some inexplicable reason, I produce very little reaction in the plants even when I touch the leaves, whereas friends produce marked, even violent, responses when as far as four feet away. Certainly the different nature of the responses are such as to allow one (after the first time round) often to distinguish and identify different people simply from watching a voltmeter. Were the device connected to a computer, even greater discrimination would surely be possible. Lifton is working on some computer-like learning circuits which would exploit further the potential of this phenomenon.

It seems to me to be a subject worthy of more study by those who have the money to look into such matters; Lifton's work has been largely self-financed with a little help from electronic equipment manufacturers, the Arts Council and Computer Arts Society. Who else is working on emotional input to computers?

Switch that light off!

I recently completed a very large computer designed mural (Fig 1) in a shopping centre in Nottingham. This came to the notice of an architectural newspaper which scathingly dismissed it as a waste of electricity! Now, as the amount of electricity consumed by my time sharing terminal in devising the work was probably a great deal less than that used by the newspaper in typesetting and printing the criticism and accompanying photograph, I was rather puzzled by this remark until it dawned on me that I had been honoured by the first *ecological* criticism of art. I realise that new art forms require new modes of criticism and that these reflect the problems and pre-occupations of the day but, until now, it had not occurred to me that energy conservation could be used as a basis for aesthetic criticism. New fields are surely opened up by this breakthrough and we will print the best (short) examples you invent of ecological criticism of any well-known art works.

Graphic art

With reference to the work of I. Gumowski and C. Mita (Computer Bulletin, September 1974), a photograph of one of their designs appears opposite by courtesy of CERN, Geneva and LAAS Toulouse

Is that you, Jack?

When in Stockholm for the recent IFIP Congress, I visited the Speech Transmission Laboratory which, among other things, is doing a great deal of work on speech synthesis and recognition by computer. One of the items shown was a TV screen game rather like those in public houses where a white spot representing a ball moves across the screen controlled by electronic 'bats' which one positions by moving knobs. In the laboratory version of the game, one manoeuvres the bats by speaking the Swedish numbers for one to ten into a microphone. The words are recognised by a computer which moves the bats to the appropriate position, the number one being the position at the top of the screen and ten at the bottom. If you were quick enough to call the correct numbers you could bounce the ball back and forth across the screen. It was a very impressive demonstration of the speed with which the computer could recognise the words; and it did so correctly most of the time.

Computers, I was told, could already do better than people in distinguishing between different voices, a point which I found difficult to believe until reading a recent news item. Apparently Seattle Radio had organised a competition for the best imitation of Jack Benny and listeners were invited to send in their taped attempts. Jack Benny himself sent his tape . . . and came in third!

Figure 1