

Children and Computers

Saturday, September 8th, through Wednesday, September 12th, 1984
Kaufmännisches Vereinshaus.

In cooperation with ARGE-Computer Camp and the Linz City Ring

The project "Children and Computers" is dedicated to the programming language LOGO developed by the MIT

This language—considered to be a simple tool for the production of graphics and as a "children's toy" by many people—is a considerable advance in the field of microcomputers and is already regarded as the programming language of the future for home and personal computers by many experts.

The reason is that unknown to most people LOGO has been developed as a mighty "thinking tool" within the Artificial Intelligence Research. Not so much the logical function of the hardware is in the foreground (as with the languages now generally in use) but the logical configuration of the problem is important.

When working with LOGO, the most important thing is, that for every area of applications a set of tools (kit-system) can be developed, which helps to find simple solutions. In this context we talk about so-called MICROWORDS, completely to be made accessible by LOGO.

The range of use of this powerful instrument expands from simple graphic programs created by children, to "intelligent" programs capable of logical thinking and of a deducing application of knowledge.

LOGO has been used at Computer Camps in Austria for one year.

The experiences from these projects will be presented to the public within the setting of Ars Electronica in the following two projects:

PEEKING AT COMPUTERS (Saturday, Sept. 8th, 1984, 9:00 am.—5:00 p.m.)

(Sun., Mon., Tue., Wed., 1:00 p.m. through 5:00 p.m.) Adolescents and members of the Austrian Logo Project introduce adolescents (from 12 to 18 years of age) to the world of computers. Each performance has a duration of two hours. In discussions and development tasks at the computer the world of computers is disclosed. The best contributions to the topic "Computers and future society" will be awarded a prize. The teenagers shall explain how they assess the computer and its meaning for their future and how they cognitively master it now. Controllability and creative use of the computer shall be in the foreground.

WORKSHOPS (From 1:00 p.m. through 5:00 p.m. each)

WORKSHOP: Children discover the world of computers

About ten children between eight and ten years of age work with the "Turtle" developed at the Artificial Intelligence Department at the University of Edinburgh, a programmable drawing computer. Through work with this robot the children enter the world of geometrical

comprehension and learn to understand the use of computers as thinking instruments in a creative way.

WORKSHOP: LOGO and the disclosure of the computer

Here 12 to 15 years old learn to understand manifold applications of the computer and demonstrate some prototypes of applications.

WORKSHOP: Artificial Intelligence

16 to 18-year-old juniors demonstrate how to develop "intelligent" programs with LOGO. Starting from the ELIZA problem (by Weizenbaum) this workshop shall reveal that by the aid of LOGO deep insights are possible into the question "How intelligent are computers", and that thus an important contribution to the understanding of technology is made.

WORKSHOP: The computer as an instrument of a social chance

By the aid of LOGO deaf adolescents develop and test models designed to enlarge the cognitive competence of deaf people. As the access to learning with the computer is made with visual elements of design (Turtle-Graphics), LOGO complies very well with the structure of thinking of deaf persons. The acquisitions of familiarity with syntax and semantics of computer languages, the training of the ability to dialogue with the computer might open new ways for further development of verbal competence, so that consequently by the aid of special speech-programs, syntax and semantics of spoken and written language will be further experienced. This might allow a further integrative approach to the listening society.

Intermediary and final results of the workshop will be made accessible for the general public in additional presentations.