

BEEBUG

FOR
THE

BBC

MICRO

3D Surfaces

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BRITAIN'S LARGEST COMPUTER USER GROUP
MEMBERSHIP EXCEEDS 25,000

COMPUTER GAMES FOR THE BLIND

by David Calderwood

David Calderwood, himself blind, describes how he has adapted a variety of computer games so that they may be played by the blind on the BBC micro.

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But why stop at text games? Backgammon and Chess are played by the blind using tactile boards; surely something could be done in this field. Using "Talking Basic" I set about doctoring "Beeb Gammon" so that it read out the written moves with the addition of a review command which simply read out the players' positions on the board. The game is simply played on the tactile Backgammon board available from the Royal National Institute for The Blind. So far I have not been able to find a Chess program that can be suitably modified. Software houses are not that keen on lending out programs for such trials by the most minor of computer minority groups! The advent of "Microspeak" firmware has, however, made the possibility of Blind Monopoly come about, and in a version that can be played by either blind or sighted players, or both together.

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had to leave a little longer time for the nudge option but apart from that it's identical to a visual game. Pinball was more of a challenge. "The Who" sang of a deaf, dumb and blind boy who was a pinball wizard. How could I make this possible for the blind? I started by a table layout based on a two dimensional array BOARD%(X,Y). This was then filled with a 1, 2 or 3 etc. The "ball" then rolled down the board and reacted to the number it saw on the matrix, e.g. if 1 stood for a bumper then PROCBUMPER was called up thereby producing a bumper type sound, the speaking of the word "bump" and the direction in which the ball continues its downward movement (left, right or up for a second bump).

Other numbers stood for other goodies like rollers, flippers, spots etc. Little extras like bonus scores when buzzers sound made all the difference between a boring and an addictive game. The ball position on the X axis could be manipulated by the initial firing of the ball and by left (Z) or right (/) nudges. Too many nudges brings up the "tilt warning" message.

The success of pinball and its popularity drove me on to write a blind version of Pacman and Asteroids, Noughts and Crosses, and various card games. The limitation is that of "band width" - getting as much information over to the player as possible in the shortest possible time. Subtle use of speech and sonics are important and the use of a second speech output would make possible even faster games, i.e. one voice giving your position and the other giving the position of the monsters - listening to two voices at once is not difficult. Alas this stereo information has not been tried; Acorn were not impressed with the idea of using their speech chip as the second information source.

I do hope that this article has stimulated a few ideas in readers' minds and banished the idea that Simon is the only computer game that a blind person can cope with. The Votrax will speak any PRINT statement and screen layout is immaterial. If you think that you may have any programs that would be of particular interest to blind people, then send me anything you may write on cassette, or 40 or 80 track disc. You won't make a penny out of it but you will shed a little light in a dark world.

[David Calderwood organises a user group for blind users of the BBC micro,

and distributes to members a quarterly magazine called 'Computer Talk' on an audio cassette, complete with computer programs on the reverse side. The Votrax 'Type and Talk' system with 'Talking Basic' is available from John Tilitich of Sensory Information Systems, 2B England's Lane, London NW3 4TG. talking Basic was developed by Dr Tom Vincent at the Open University, Milton Keynes, and 'Micro Speak' is the latest version of this in EPROM. Anyone wanting more information, or interested in helping in any way (by reading BEEBUG aloud for example) can contact David Calderwood at Hafan, Minfordd, Penrhyndeudraeth, Gwynydd LL48 6HP.-Ed]



TUBE COMPATIBILITY OF ROM SOFTWARE

List compiled by Benjamin Rietti

With 6502 second processors now becoming more widely available, we thought it would be helpful to members to list the ROMs that do, or don't work with a 6502 second processor active. Fortunately, Benjamin Rietti, of Viewfax Tubelink (*258216#) fame, has already compiled a very extensive list,

and he has given us permission to reproduce this list here. The information refers to the current version or the stated version of the ROMs listed. If you know of any ROMs not mentioned, then please let either us or Benjamin know so that the information can be of use to others.

TABLE OF ROM SOFTWARE

ACORN MONITOR	C	DATAGEM	I	HELP	C	STARBASE	P
ADDCOMM	I	DATASTORE	C	ISO PASCAL	C	STARMON	C
ADE	P	DECCE TERMINAL	I	LISP (ACORN)	C	STARSTICK	C
AID	P	DFS UPGRADE	I	MACH1	I	TERMI	P
AIDS	P	DISC DOC. 1.0B	C	MICRONET ROM	I	TOOLKIT (BEEBUG)	I
AMCOM DFS	P	DISC SERVANT	P	M'TEST FONT ROM	C	TOOLKIT (D-WARE)	I
BCPL	C	DMON 1.03	C	MULTI-FORTH 83	I	TOOLSTAR	P
BEEBASE-1	I	DYKASAY	I	MUROM	P	ULTRACALC (NEW)	C
BEEBCALC	I	EDWORD	I	PASCAL-T HCCS	C	UROM	P
BEEBFONT	I	EPSON FX80	C	PRESTEL 4.80n	P	VIEW 1.4/2.1	C
BEEBMON	I	EXMON	P	PRINTER MON.	C	VIEWSHEET	C
BEEBPEN	P	FORTH HCCS	C	PRINTMASTER	C	WATFORD DDFS	C
BUFFER/BACKUP	P	GDUMP 2.01	C	ROM MANAGER	C	WAT. DFS 1.40	C
CARETAKER	I	GDUMP 3.00	C	SCDUMP	C	WORDWISE	I
COMMUNICATOR	P	GRAPH. EXTN.	P	SLEUTH	I	WORDWISE+	C
COMMUNICATOR 2.1C	C	GREMLIN	P	SPELLCHECK II	C	WORKSTATION 1.4	C
COMMSTAR	P	HEBREW 1.00	C	SPY2	P	XCAL	P

The coding system:

C- Completely Compatible

P- Partially Compatible

I- Incompatible in all respects

List courtesy of Viewfax and Tubelink (258216).



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