raw material with which to start a new generation of programming projects!

Imagine now seems to be planning a new move, into the more lucrative (and more competitive) business software market. This was not so much a planned move as Apple actually made the first contact. Although at first surprised by this initiative, Imagine was quick to realise the direction in which Apple was pointing its software, with easy-to-use screen presentation and pictorial images such as 'windows' and 'icons' linked with the mouse input device, closely paralleled much games software, where graphic action and non-keyboard input are key factors.

Imagine had a thorough grounding in Apple's eight-bit technology, because it had used Apple IIe computers for writing programs from the outset. It was, therefore, ideally placed to take advantage of this contact. Also, as part of a retooling exercise, Imagine invested in several Sage IV machines. The object in this was to increase speed and computing power. Dave Lawson has written some original software, which is, in turn, used to write games programs, which are then cross-compiled (compiled on one machine for use in another) for the 'target' home computer. The Sage IV has a high-capacity RAM disk, which is invaluable when writing assembler. It is more economical of programmers' time to spend money on a machine like the Sage, rather than have programmers sitting around waiting for compiled programs. Supplied with the Sage is the UCSD (University of California at San Diego) p-System, a PASCAL implementation that enables it to mimic Apple's Lisa and Mackintosh, which both use PASCAL in the background. The terms 'background' and 'foreground' refer to machines that can run more than one program at a time. The foreground program always takes priority, but whenever an opportunity occurs, the background program will be run.

Imagine That
The strength of any software house relies on the relative input of the program design team. Brought together specifically to create the games Psyclapse and Bandersnatch, they are from left to right: Ian Weatherburn, Mike Glover, John Gibson and Eugene Evans

COURTESY OF IMAGINE

Like many software houses, Imagine has been investigating the most concisely named computer language — C. This is one of the most versatile and, more importantly, portable languages available for microcomputers. Its modular structure makes it ideal for developing systems software.

At present there are not many people around with experience of both C and the Sage microcomputer. As a result, Imagine is currently trawling colleges and other software houses in the hope of finding more expertise in this field.

THE WINNING FORMULA

What is it that makes a piece of software a hit? A lot of it has to do with 'gut feeling'. In the beginning, when Mark Butler and Dave Lawson joined forces to launch Imagine, they already had a good idea of what their former employers, Bug-Byte, were successfully marketing. They would sit down to 'brainstorming' sessions — trying to think themselves into the mind of the games fanatic. This is vital. Considerations such as 'If this were my first computer, which I'd had for a month, or six months, what would I want from this game? Why should I play it? How long would I play it? Would I like the various sound effects or a graphics flash at this point in the play?' are all part of the developmental process. In effect, the games designer has to think himself down to the age of the intended customer.

Imagine is now too big for two people alone to devise all the games ideas, and it now has a team of eight graphics designers working up animations and storyboarding new plays. These are then tested by in-house staff — not the programmers. At this point in development you don't need the 'clutter' of technical considerations.

Unhappily for the software houses, one technique that all too many non-technical people have learnt is how to avoid paying for software. Illegal duplication is a very real problem. It has been estimated that for every cassette game sold over the counter, seven illegal copies are made, the vast majority by the simple expedient of audio (tape-to-tape) transfer. Preventative measures can be taken to eliminate or, at least, reduce this practice, but they are expensive — and this extra cost would have to be passed on to the consumer. Imagine is, no doubt, losing revenue this way, but it is still selling a great many cassettes, and for the moment is keeping its options open.

The cassette may not last too much longer before the cartridge and the disk replace it completely. Wholly new methods of software distribution may even take over, where program code is sent from a central, or host, computer and loaded into the home computer via the telephone lines that will service cable television. A software house that intends to grow in the present decade needs to be aware of such changes, and in this respect Imagine's Mark Butler is keeping his wits about him, hinting at new games possibilities using speech synthesis and keeping abreast of innovations in technology, such as the laser disk.