

**PROJECT**

Powermonger

**PUBLISHER**

Electronic Arts

**AUTHOR**

Bullfrog

Peter Molyneux

(Design, Amiga &amp; PC

Programming)

Glenn Corpes

(Graphics, ST

Programming)

Simon Hunter

(Graphics)

Charles Collet

(Sound)

**INITIATED**

January '89

**RELEASE**

AMIGA

Late September

ATARI ST

Late September

IBM PC AND  
COMPATIBLES

Late September



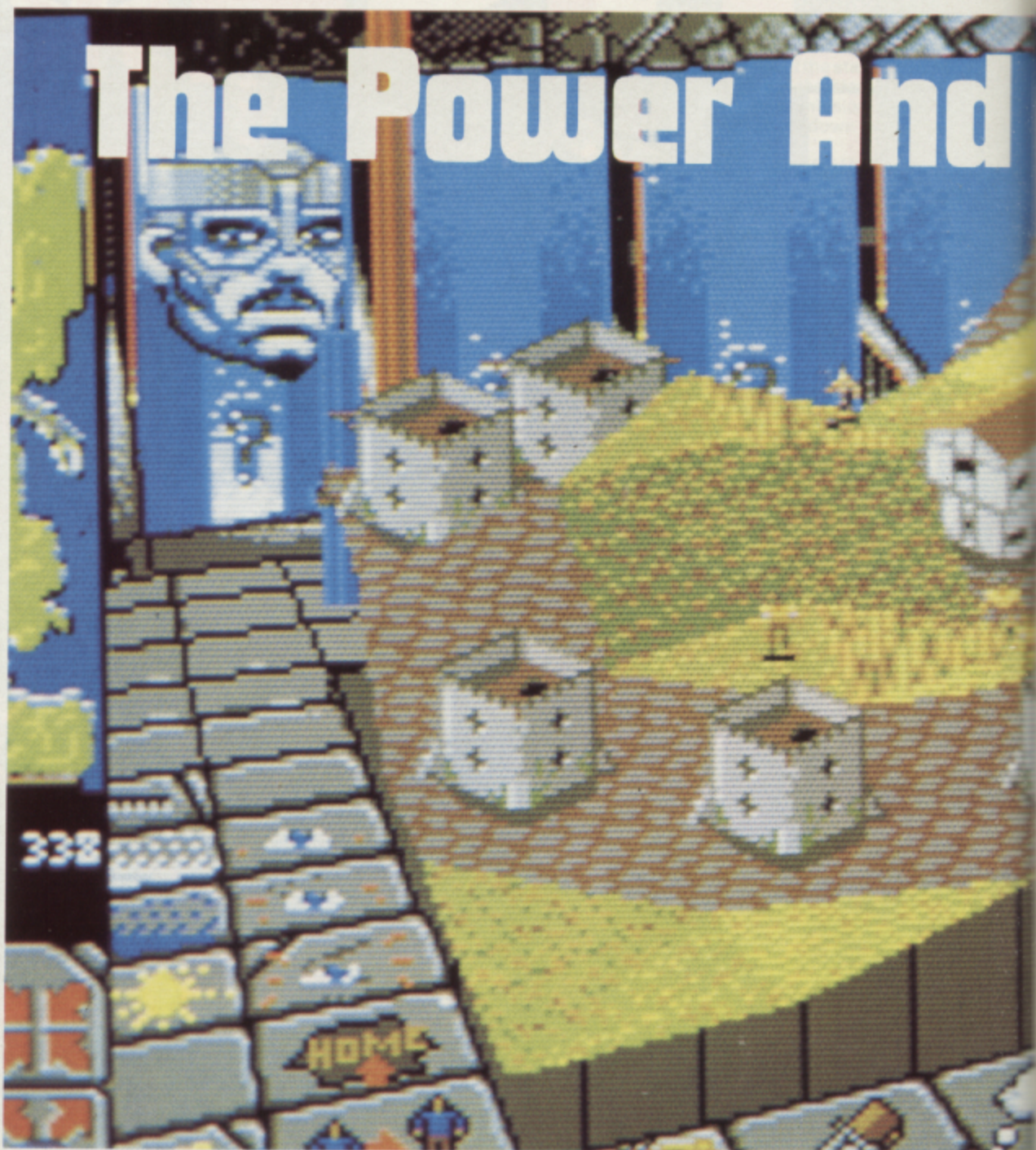
WITH the real world theme, a lot depends on elements that are simply beyond your control — like the weather. Seasons change — it rains, it snows, and this has a direct effect on your performance. When snow covers the ground, farming becomes more difficult and less food is produced. To counter this, it might be worth investing in a few fishing villages early on, as fishing continues right through the year, regardless of the weather.

BULLFROG'S *Populous* is, without doubt, one of the most successful games ever. It has over 300,000 sales to its credit and more awards from the software industry (nine at the last count) than almost any other game. And now, nearly 18 months since its release, it's about to get a new lease of life in Japan with conversions to the Sega MegaDrive and Fujitsu FM Towns.

First mentioned in Issue Seven, and revealed in more detail in Issue Twelve, *Powermonger* is the latest from the Programmers Of The Year. In the nine months since that piece, the game's close to completion in the hands of Bullfrog's main man and co-designer of *Populous*, Peter Molyneux, who takes up the story...

"What we wanted to do after *Populous* is... well, we knew that we could get more — and better — games out of this sort of world view idea that we had developed. That's not to say that we wanted to do a *Populous* rip-off, but we wanted to have another game where you view the world by looking down on it, as we feel that format still has plenty of potential. But the problem with the *Populous* view, and indeed the way in which *Populous* is written as a whole, is that it's very restricted in terms of its mechanics — it's only made of blocks after all, so you can't produce any very varied shapes."

The team set about looking at more



flexible ways of producing and presenting a landscape, and the idea of a vector-driven approach was soon hit upon — partly because ST programmer Glenn Corpes had been playing around with them for a while anyway. "The graphics system that we have developed for *Powermonger* is basically a mixture of vectors and bitmaps (sprites). If you want the full term it would be light-source-shaded filled vector polygons — it's not a million miles away from the graphics system used in *Midwinter*," Molyneux reveals. "What we've come up with is a trade-off. In *Populous* the graphics are very quick to generate, but the view is limited. In *Powermonger*, you have the opposite. Because polygons are used you have more freedom, but for the same reason it takes longer for the computer to draw them."

One major plus of polygons is that the landscapes are calculated rather than 'drawn', and so a lot of memory is saved. In *Powermonger*'s case at least, this is essential — over 50% of the memory is taken up by game logic alone.

"I'm really pleased to see games coming out now, like *Midwinter* and *3D Tennis*, that use vectors for something other than flying a plane. We've tried to put them to a new use as well — vectors are so flexible, and you can get an incredible amount of detail out of them. In *Populous* we had hills, houses and rivers. Thanks to this new system, we're able to generate

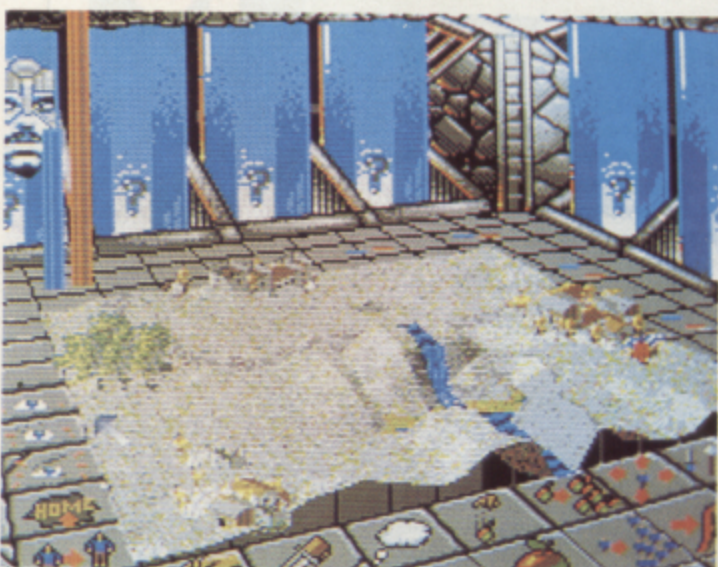
waterfalls, cliffs, valleys, mountains, proper towns, road networks, forests... It's a real world!"

Despite *Populous* overtones, *Powermonger* is really the first game of its type. If you had to pigeonhole it, you could call it a strategy-cum-wargame — although Molyneux isn't too happy about that: "When you try to pigeonhole something like *Populous* or *Powermonger* and say 'wargame', everybody immediately assumes it's all about moving tanks around, making one choice every game hour and pressing hundreds of keys, which is precisely the sort of game we didn't want. Yes, we wanted a game with strategy in it, but also a game that you didn't have to work it all out on paper first and so on. *Powermonger* is strategy-orientated, but it is NOT a wargame — it's a simulation of a kingdom."

Which brings us onto the game itself. The original specification hasn't changed a great deal during the 18 month development period. Obviously new features and gameplay elements have been added along the way, but the gist is much the same.

The player is cast as a renegade adventurer — a person who for whatever reason has been cast out from his own country and sent packing in a boat with a band of 20 followers. The game starts when you and your men land on the coast of a new, undiscovered world, and you decide to set up home there — with yourself

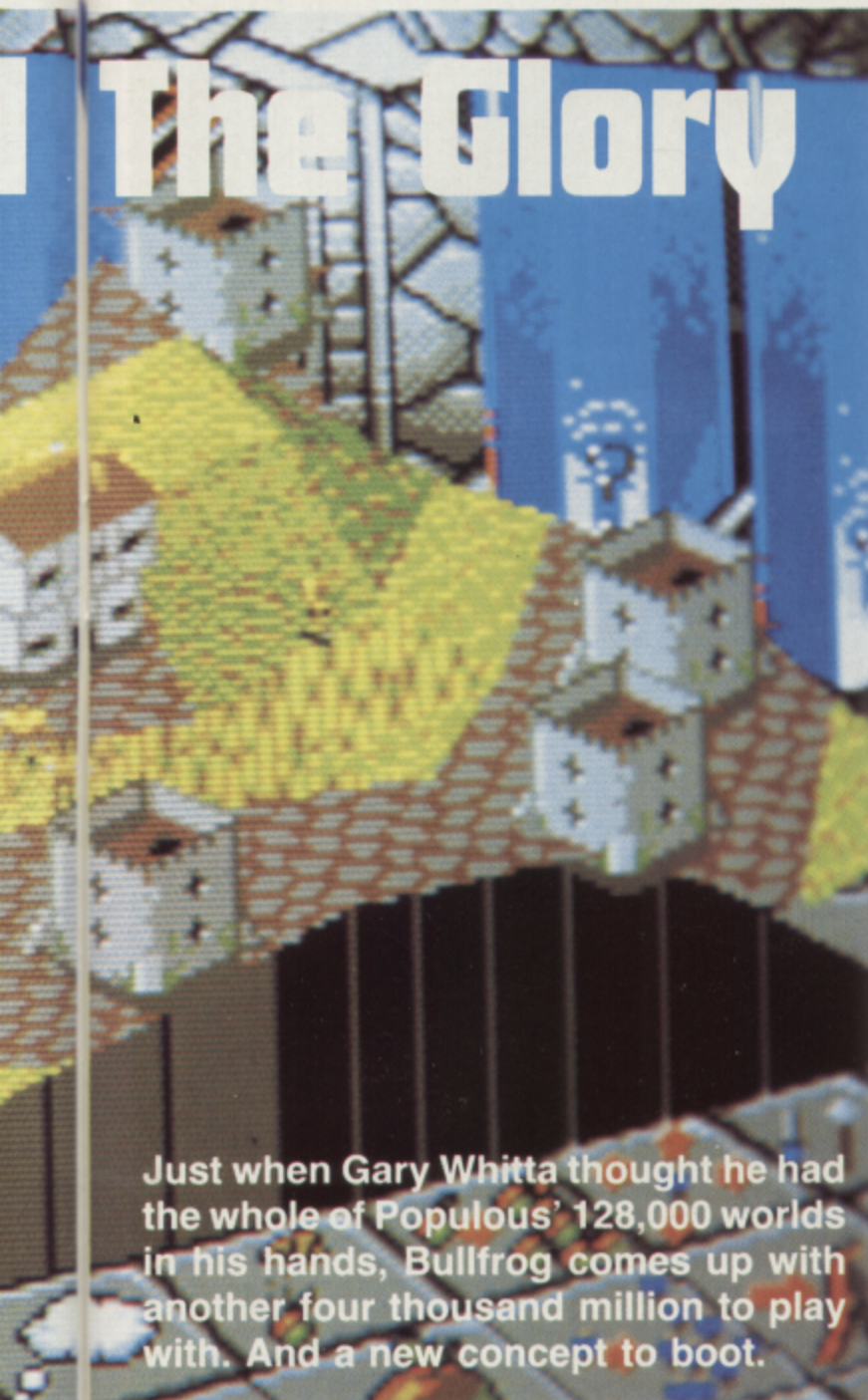
"Thanks to this new system, we're able to generate waterfalls, cliffs, valleys, mountains, proper towns, road networks, forests... It's a real world!"



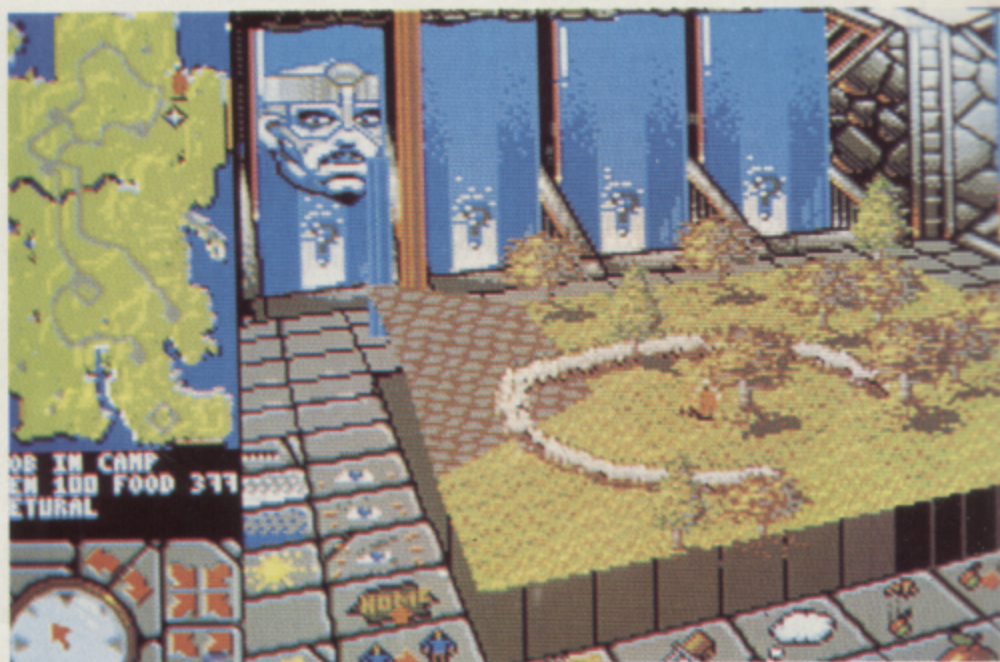
AT THIS early stage in the game, no Captains have been recruited — that's why the only face in the 'hall of mirrors' behind the landscape is your own. As captains are recruited, their ugly mugs are placed in the mirrors in order of rank from left to right. It's worth noting that each captain has a different personality, ranging from placid to downright psychotic. This emotional makeup is important, as it determines how a captain interprets your orders to him — and if he is not happy in his work, there's a chance that he may defect to another tribe.







THE LEVEL of detail aside, the greatest boon when it comes to using vector graphics is their flexibility. The landscape in Populous was completely sprite-based, restricting it to just the one view. With Powermonger, due to the wonder of mathematics, the whole landscape can be tilted, rotated, expanded and shrunk, allowing any part to be seen from any angle and at any distance. And considering that a landscape can be built from up to an incredible 2096 polygons with a possible 100 sprites on screen, it moves at a remarkable pace.



YOUR MEN don't just stand around waiting for an order – they make themselves comfortable. Here, for example, after a pretty hefty battle, your men have set up camp, and it won't be long before the marshmallow toasting fork comes out.

Just when Gary Whitta thought he had the whole of Populous' 128,000 worlds in his hands, Bullfrog comes up with another four thousand million to play with. And a new concept to boot.



THE FIVE Captains at the top of the screen will appear in the finished game. Below them stand the rather weedier-looking ones who were scrapped to make room. Note the changing expressions, which will help determine how that Captain is currently faring.



WHEN your armies are on the march (above) or preparing for battle (below), they are ranked in file as a proper garrison should be – a feature that can be exploited to gain the upper hand in battles. Sticklers for realism should have a field say here as many of the formations have been copied directly from those throughout military history!

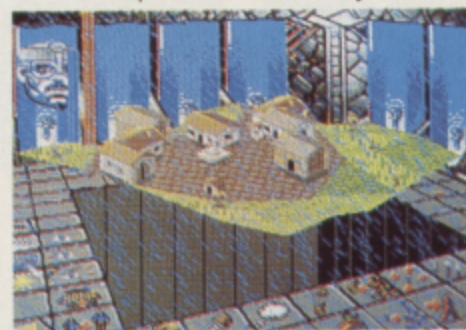
as ultimate ruler. Unfortunately the natives of this world aren't too sure about the idea of a new pecking order, and to make them come round to the idea, you may have to be – well, firm-handed to say the least.

Something that can't be stressed too much here is the concept of the real world. The team strongly believes that the more realistic the game environment, the more involved you become with it and subsequently the more fun you have. For this reason Bullfrog has gone to great pains to make everything in Powermonger as realistic as possible by creating worlds with a real social and economic infrastructure – right down to the people themselves. "Every inhabitant of every world in Powermonger has a name, a home and a job to do," Molyneux explains. "In Populous you just had people and that was that, but here there are farmers, fishermen, shepherds, merchants, cattle ranchers, thieves and so on, and this creates a 'real' society. The most important aspect is food – all the towns and villages produce it in one way or form, and this depends partly on where that village is based. A coastal town, for example, will have lots of fishing activity, while a village where there's lots of flat land would be a farm and hilly land would be a good place for a shepherd and so on."

This is, more or less, where you come in. Your empire is expanded by conquering villages, and this in turn is achieved by beating in battle the occupants of that

village. The village and the remaining population are then yours to command – they can go on producing food, or you can press-gang people into your army and so on.

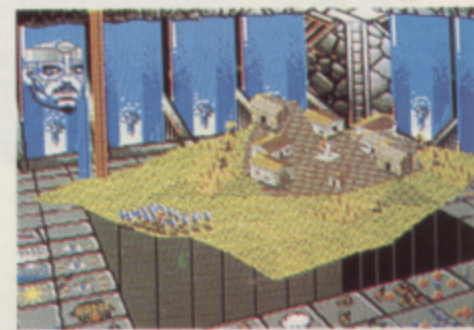
But for every action there's a reaction. "Your villagers and your armies must have enough to eat, and if they don't they die out," Molyneux reveals. "Now if, for example, you press-gang hundreds of farmers into your army for a large attack, their villages are going to stop producing food and when you run out they'll be no more to replace it." Obviously there's a



PERSUADE a village to perform more useful tasks than simply farming or attacking other villages by simply getting your Captain to make them invent something. These people aren't as stupid as they look, and it's a good bet that, given enough time, they can come up with something very handy. Once again, the surrounding terrain determines the outcome. A village can come up with anything from a mace to a plough – depending also on the level of the Captain's aggression.

need for a careful balance if you are to expand your empire and stay alive at the same time – but that's not even half the story.

There's more than one megalomaniac on this world. Powermonger is a multi-player game that will eventually support up to four human players via a serial link (but not six as originally reported) and possibly even more computer-controlled opponents. Each powermonger is just like you – out to get everyone else and claim as much property as possible – and herein lies a whole world of strategy and



REMEMBER the disorganised brawls that took place in Populous? Here, combat is organised with military precision, thanks to the Captains. Like the old Norman and Roundhead battles, the opposing forces get in file and face off before brutally murdering each other. While many factors influence the outcome of a scrap, the most important is perhaps the size of your army. Fortunately, reinforcements are at hand if a pasting looms.





## WHAT'S IN A NAME?

Powermonger was, from the very beginning, called Warmonger (that was Project W in the Work In Progress in Issue Twelve). And indeed, up until quite recently, that's was the name intended for the packaging. Problems, however, arose when Electronic Arts decided that the name Warmonger would not sell too well in Germany (due to certain events some 50 years ago), and that the title could also be misconstrued in the USA as an out-and-out wargame. Since that name has been scrapped, a race has been on to title the game, and suggestions have come thick and fast – and most have been dropped...

EXODUS  
(Already Copyrighted)  
OVERLORD  
(Already Copyrighted)  
FOOD  
(Not Good)  
RULING FORCE  
(Ditto)  
RIGHT TO RULE  
(Ditto)  
DOMINATOR  
(Already Copyrighted)  
CONQUEROR  
(Already Copyrighted)

Powermonger was a compromise between Bullfrog and Electronic Arts. Bullfrog liked Warmonger too much to drop the title completely – and Electronic Arts didn't like the 'War' bit. Thus the remaining part of the word was meshed with something a little less risque to come up with Powermonger, which has the necessary 'hard' quality without the possibility of being deemed 'offensive'.

counter-strategy. The only way your success is assured in by ensuring the failure of others. Before long the situation escalates into an all-out war. Villages are attacked en masse, armies meet and clash – it's hell out there.

However, none of this all out death and destruction would be possible without the Captains – as Molyneux is quick to explain: "When you start the game the world you're out to conquer is occupied by five Captains – one for each of the five largest settlements on that world. Each Captain controls that village and its occupants, and when you defeat a Captain's village, he is immediately put under your control. The more Captains you control, the more you can do as you can have up to six armies on the move at once – even if you have a group of people under your command, you can't tell them to do anything unless you or one of your captains is with them."

Thus, a chain of command is created. You make a decision, pass it onto your Captain and he has his men carry it out. Problems arise in the multi-player game when you have four players vying for control of as many of the five Captains as they can before anyone else 'recruits' them. Captains mean power – the more you have, the more formidable a force you are.

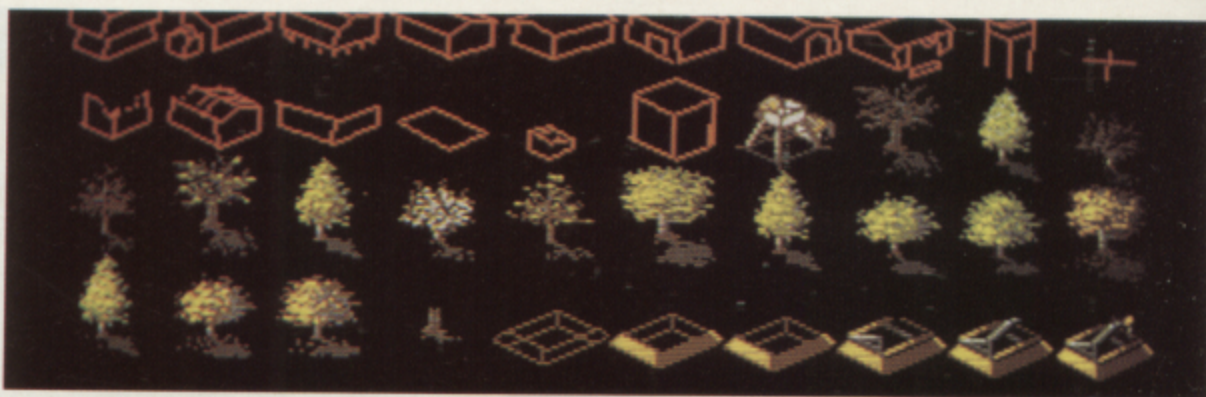
All this makes the logic behind the game sound very complex – your fingers have to be in several pies at once if you are to expand your empire AND defend it from



WHILE the vector-based landscape itself turns, the houses and other fixed scenery don't – and that's because they are drawn as two-dimensional sprites. It might sound strange to have the landscape rotating around the houses, but in practice it's not noticeable.



THIS WORKING screen shows three of the Captains installed in their alcoves and ready to go – now all they need is a landscape to conquer!



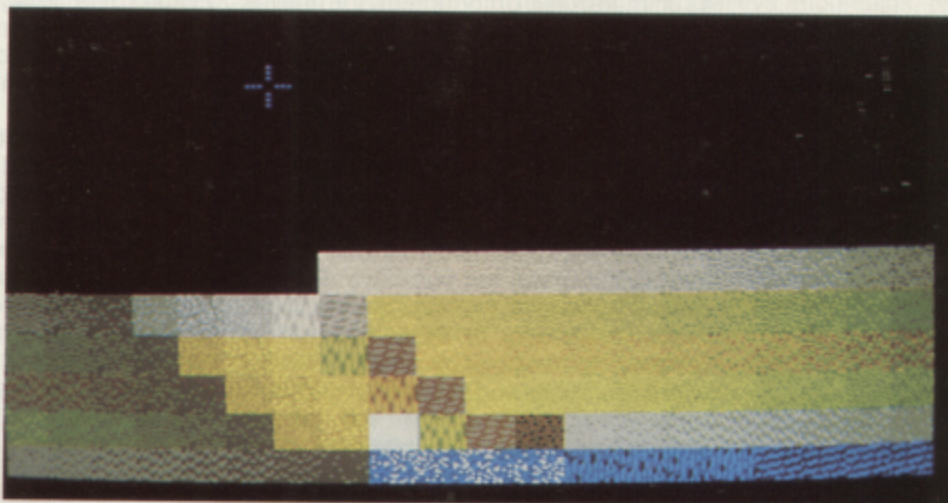
the clutches of rival tribes. But complicated is a word that Peter is not keen on when describing the game.

"Powermonger's strength," Molyneux feels, "is while it has complex strategy elements, the game is designed so that a lot of the legwork is done for you, and all you have to do is make the necessary decisions. All the options and actions available are executed from one simple bank of icons, with no key-presses of pull-down menus to cope with. It may look over-complicated, but it's very similar to Populous in the respect that when you first see that you think it's all too much to think about, and yet within a couple of hours it becomes second nature, and that's all down to the simplicity of the execution.

Powermonger is scheduled to be released in September, and if that date is to be hit, the team really needs to put its foot down – especially Peter, who, as designer, still has a few gameplay elements (such as sieging and spying) to work out. It's not yet decided how many preset worlds there will be to conquer (although the landscape program can generate approximately four thousand million, so that shouldn't be a problem!), and he's still not sure exactly what is required of you before you can be said to have won a kingdom and go on to the next one. With that, the mandatory bug-testing and the PC version still to program, it's uphill all the way...



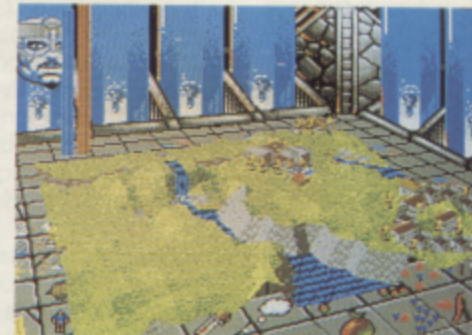
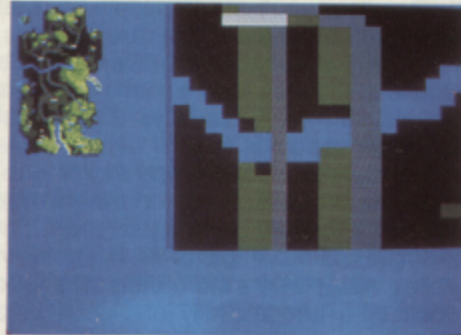
THE SPRITES, such as the people, houses and trees, were designed and drawn by Simon Hunter. He first got an idea of the general outline for each house (left) before touching them up to produce the finished article (centre). Unfortunately for Simon he's had to draw all these sprites in different sizes, so that they get bigger and smaller in relation to the landscape when it's zoomed in and out. The people (right) remain the same size no matter what the magnification.



THE TERRAIN is entirely light-source shaded, with the artificial sun hanging constantly in the top-left hand corner of the screen. To produce the effect, this texture map was created, and a program written to place the relevant sections of terrain depending on the lie of the land.



MEET the strength behind Powermonger. From left to right: Simon Hunter, Andy Tidy, Peter Molyneux, Les Edgar, Sean Cooper, Glenn Corpes, and Kevin Donkin.



CREATING a land was child's play for Bullfrog. First, a 2D landscape similar to the overall map view that you see in the game is created on Deluxe Paint (left). Shades of green are used to determine contours – dark green is low land and light green is high land. In addition, the grey is a road and the blue is water. This 'map' is then fed into a program which takes the colour data and converts it into a real landscape (right).