Topographer:
A mapping package from

Reviewed by Mike Williams

S ince I first had an opportunity to see Topographer in action last year, I have been eagerly awaiting its release. Now that I have had a chance to use it in earnest, I have to report that after some initial disappointment, I found myself very much warming to the package, but I still have some

Figure 1.
Selecting
features for a
map

serious reservations.

Topographer is a package for the creation and editing of maps, with the style and flavour of Ordnance Survey maps very much in evidence. However, unlike a conventional map, Topographer can also create a 3D view from a map, thus providing a more realistic impression of the environment. At least that is the aim.

The software is supplied on two discs as two separate applications (Topo2D and Topo3D) together with an A5 size manual of 54 pages. The whole package is presented in what for

Figure 2.
At the beginning - contours and rivers

Clares is a new style box, and the manual is fortunately quite separate, and not glued into the packaging as in Clares previous style.

The manual is divided into essentially three sections: a short initial tutorial using three example files on disc, twenty pages describing the features of the map editor, and a further section on generating 3D views. The manual is, in my opinion, much too terse in style, and I was too often left wondering how a certain feature might work even when I had read the relevant section. There are too many items which are not described at all (text for example), and while there are many

Figure 3.
Adding the roads

illustrations of appropriate menus and dialogue boxes, I would like to have seen more examples of maps to show more clearly how the various features worked.

In fact, feature has a particular meaning within Topographer. Maps are constructed from one of four so-called features: Symbol, Line, Area, and Contour. All of these can be selected from a menu, or more conveniently from a separate Features window (see figure 1). All the symbols and other forms of representation correspond to those used on the 1:50,000 Ordnance Survey
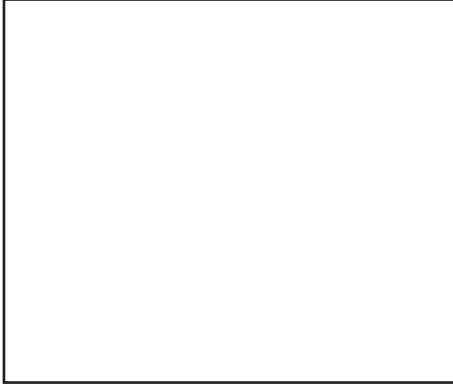

Figure 4.
Adding the remaining symbols - note individual houses for urban areas

maps. Choose a different scale, say 1:25,000, and the same symbols are used and not the Ordnance Survey ones appropriate to that scale. Those looking for precise fidelity in this respect will be disappointed in the lack of detail, but broadly speaking Topographer does a good job.

To test Topographer's capabilities I set out to create a 1:50,000 map of a small area familiar to me, and with some interesting features. The

Figure 5.
Lettering completes the map

sequence that I followed is illustrated in figures 2 to 5. The first job was to select the scale, size and origin for my map area so that it corresponded to the O.S. map from which I was working. Some trial and error was needed before I got things quite right, but these choices are largely

Figure 6. Selecting a viewpoint and extent of view

straightforward, though familiarity with map scales and the National Grid system helps.

Figure 7.
The 3D view corresponding to the map of figure 6

I decided to deal with the main natural features first, the contour lines and rivers. Both can be created by stepping from one point to the next, or by freehand drawing. I found editing lines once drawn very fiddly, if not impossible. While they are shown with control points (as in Draw), the control points cannot be manipulated to change the path. The manual was not helpful, and I can imagine children, in particular,

becoming easily frustrated at the way what you are trying to achieve seems thwarted by the software.

Contours may be either closed, forming a continuous closed path, or open, starting and finishing at the edges of a map. Contours presented a number of problems, snapping unexpectedly (when not required) to the edge of the map area, and with Topographer telling me that I had crossed two contour lines when visually this was clearly not the case. However, perseverance eventually paid off, and I then moved on to stage two, adding roads.

The type of road is chosen from the Features window. Topographer also allows you to choose the width of road. This is confusing as most objects on conventional maps are portrayed at a fixed size in relation to the scale, but I presume this information may be used when creating 3D views (and is relevant for very large scale maps). To me it is an example of Topographer offering too much detail. While cuttings and embankments can be included, my attempts to model a bypass raised on an embankment and passing over a slip road were to no avail, the eventual 3D view showing a hump-backed bridge and no embankments.

Once the roads had been completed, I then added all the symbols needed to complete the map. Most of this is straightforward enough, and a symbol once placed on the map can be readily moved and repositioned. Areas of woodland, or similar, are created by choosing the appropriate feature, and then drawing the bounding line. The most difficult part is the creation of urban areas. On an O.S. map, areas of housing are coloured in a pale beige. In Topographer, such areas can only be created by positioning individual house symbols, which look very crowded, and don t really work as required (see figure 4), but no doubt this works fine at larger scales.

My last task was to add lettering to the map. Topographer allows just two styles, which are not really that different, plus road numbering. Again, this works well enough for most purposes, if not to the standard of traditional O.S. maps.

CREATING 3D VIEWS

Once a map has been created, you can start generating 3D views. You select a viewpoint, and a direction and extent of your view, as shown in figure 6. To do this, the previously created map is first transferred to Topo3D. Then, selecting Make view from the menu starts the generation process. This was often lengthy (half an hour or more) and not always successful - on several occasions I ended with no 3D image at all. On other occasions the viewpoint chosen resulted in a very bland and uninteresting display. The result (see figure 7) is a little crude, but pleasing nevertheless to see a map come to life in this way.

DISCUSSION

Topographer is without doubt an innovative product for the Acorn market, but it is not without its flaws. As it stands, it takes some mastering to achieve good results, and as my experience shows there is no guarantee that the 3D view facility will work correctly even then. As a package it feels over-elaborate for what it sets out to achieve, and I cannot but help feel that there must be simpler ways of doing some of the things that Topographer does. In other areas it seems that Topographer is too ambitious for its own good. I suspect that some of the problems stem from inherent conflicts between the needs of a relatively stylised 2D mapping package and those of a 3D view generator, which needs more information than a conventional map provides.

Anyone buying Topographer today should be aware of its problems and limitations, and be prepared to provide ample feedback to Clares on their

experiences with the package, and on how it works in the classroom, which is surely the biggest market of all for such a package. Potential users should also note that despite Clares claims (no doubt true) that Topographer will run on a 1Mb machine, both Topo2D and Topo3D (with my example) grew to over 800K each, and I had problems at times running in a 4Mb machine. Screen refresh ideally needs to be faster, and the time to generate a 3D view from a complex map (like my example) can literally run into hours.

caption

For all that, I very much came to like Topographer. It attacks a new and exciting subject area with vigour, and I very much hope that it will not be too long before Clares release a new improved version. I hope they rewrite the manual at the same time - to achieve its full potential Topographer deserves better than the current meagre pages. Don t expect the quality of a professional and expensive O.S. map, but take it for what it is, and despite some obvious limitations, applaud Clares for what they have achieved.