

## MAP N&V

We now have a new date for the postponed SE mapping conference. The details are:-

From: Erik Peckett Chairman BOF Map Group  
Subject: South East Mapping Conference 2004  
Date: Wednesday, December 3<sup>rd</sup> 2003

You are invited to attend the SE Mapping Conference to be held at St. Paul's School, Hammersmith, London on 24<sup>th</sup> January 2004 1000 - 1600.

This replaces the conference that was to be held in November and cancelled because of a clash with the SE Technical Conference.

Lunch will be provided for all participants. We would hope that your Clubs will help you by paying your travel expenses

### Programme

The Conference will be led by Erik Peckett Chairman BOF Map Group, Alan Goodall former BOF Development Officer and Peter Roberts former Chairman of BOF Map Group.

The main topics will be the "Mapping School Sites" and "Map Assessment". Both of these will have a practical element. Other topics can and we hope will be suggested by the participants.

All participants will be asked to bring at least two maps that they have recently produced. They will also need to have survey equipment and suitable clothing.

Details including travel directions will be sent to all participants during the week of 19<sup>th</sup> January 2004

Applications should be sent to [mapgroup@britishorienteering.org.uk](mailto:mapgroup@britishorienteering.org.uk) by Monday 5<sup>th</sup> January 2004 or to BOF Office Riversdale, Dale Road North, Darley Dale, Matlock DE4 2HX as soon as possible.

Please use the attached application form and return if possible electronically. Just cut the application and paste it into an e-mail - fill in the details and return as soon as possible.

### PICOVER

Tony Pennick and Don Scarrott have produced PICOVER Mk 11 and I have attached the details. Further details are available from Tony Pennick at [tonyandjudy.pennick@btinternet.com](mailto:tonyandjudy.pennick@btinternet.com) I have tried the program and it has removed a great deal of the tedious repetitious operations that were required in the earlier versions. However, it still needs that tricky addition of a zero to the all controls map. Still it is a great step forward and Tony and Don must be congratulated. Don is now looking into means of locking OCAD files and has some ideas that are being assessed by the map group.

### REQUEST FOR MAPS

To enable the returns to be made to the OS for all maps produced for orienteering, Could mappers please send two copies of any map they have produced in the last two years which has not all

ready been sent in to the BOF office. This includes school and other small area maps. As maps tend to be produced for single events, a couple of inkjet copies will suffice.

A general reminder that any mapping queries can be directed at the map group via the BOF office and specific queries on OCAD can go straight to Bruce Bryant at <bruce.bryant@virgin.net>

Date: Sat, 13 Dec 2003 18:05:02 +0000  
To: CCS  
From: Colin Spears <colin.spears@bigfoot.com>  
Subject: MapN&V  
Bcc: BOFmappers2



# PREPARING PICTORIAL DESCRIPTIONS and OVERPRINTS

## AN OVERVIEW of the PICOVER SYSTEM

Tony Pennick and Don Scarrott, WCOC



### INTRODUCTION

The **PICOVER** system has been written by **DON SCARROTT** and **TONY PENNICK** to assist Planners, Mappers and Controllers in their task of planning and preparing the courses for an Orienteering Event. As the name suggests it mainly concerns the preparation of Pictorial Description Sheets and Overprints for each Course, but the Height Climb can also be estimated (now on the optimum route), Course Height Profiles prepared and there are a number of other programs available for the Planner and Controller. The Mk II Version also contains an interactive Planning Option so that the whole process can virtually be paperless.

*The system works in conjunction with the OCAD Mapping package (Versions 6, 7 or 8) that is used for the planning and to draw both the Pictorial Description Sheets and the Overprints and it is essential that Users of this system purchase their own copy of OCAD (from Hans Steinegger, Chriesimatt 23, CH-6340 Baar/ Switzerland). OCAD runs in the current Windows environments and PICOVER has been developed to work with all these environments. (Note that OCAD6 is available free). The system is also compatible with the ISOM 2000 Mapping Symbols and the changes to pictorial symbols in the 2003 BOF Rules Revision.*

PICOVER handles both Individual Events and Relays and is capable of tackling events using one or two different map scales. It can even work with non-OCAD maps. The outputs are mainly in the form of OCAD maps and these can be printed by conventional means using the options within OCAD. With the advent of digital printing, individual overprints can be generated and combined with the competition map so that both can be printed together.

It can easily be used in conjunction with events using SportIdent<sup>®</sup> Electronic Controls, although there are a few restrictions that must be observed. There is an option to extract the relevant data from PICOVER in a format that they can be merged into the SportIdent<sup>®</sup> files. Outputs compatible with the EMIT punching system can also be prepared.

PICOVER uses a common set of Data Files to derive outputs to ensure consistency and minimise errors. These consist of :-

- The "Tag Data" file for the Control Site details. When entering the pictorial description data, there is a "look-up" option which displays the map in the vicinity of the control circle - so that questions of "numbers of similar features" in the circle can immediately be sorted out.
- The "Event Data" file which contains the data that customises an individual event.
- The "Course Data" files which list the Controls in the order visited by the Competitors. These Course files are flexible enough to cope with Map Exchanges, Crossing Points, etc. and are used by all the Output programs which generate Course-specific data.

In addition, to generate overprints, an OCAD map is required where all the control sites, crossing points etc. have been added. This is the "Planning" map. When this is used, the Tag and Course files are automatically built up as planning proceeds. To make editing easier, all the tool symbols on the map are "protected", except those needed for the planning process. This means they can't be inadvertently picked up and edited. An "Update Output Files" option ensures that if any of the input data is altered at the last minute, the relevant outputs can all be updated in one operation without affecting the remainder. From the input data, a number of other Facilities programs produce summaries, lists, maps and layouts for checking purposes. The limits of the system are also summarised. In addition there is a Map substitution program to enable the Planner to start using PICOVER on a draft map, without having to wait for the final map. The various tasks are

achieved from a series of pull-down menus, each of which are linked to the on-line Help System where details of the requirements are set out. There is also a Tool-bar for the main options.

### **INTERACTIVE COURSE PLANNING FACILITIES**

Previous versions of PICOVER assumed the Planner prepared the courses on a paper map, then copied the controls and their tag names into an "All-Controls map", listed the controls around each course in a "Course" file, and generated a "Tag Data" file for the descriptions. Once the Planner has decided on the approximate course "shape" and the parts of the competition area it will visit, those ideas can be converted into "legs", with control sites at either end - and the information can be stored and is capable of being "refined", "rationalised" or "edited" at a later date.

With the advent of more powerful and faster computers, it became practical to make this more interactive. In this version of PICOVER, the Planner can plan a course on the OCAD "Planning" map using a (special) line, and add the controls where needed. On exit, the computer gives any new controls a "default label", and prepares the CRS file for that course. When the Planning map is next presented, all the existing controls are shown, complete with their new labels, and new courses can be planned using either existing or new controls or a combination of both.

The Planner can replace the "default labels" with individual "Tag Names" if desired - which could eventually become the "control codes". The "Tag Names" also get stored automatically in the "Tag Data" file. If Pictorial Descriptions are required, the Planner will have to complete a description for each control site. From within this program, there is now a facility which can show the selected control in the middle of a small section of the map, so that it is easy sort out any queries.

The new options automatically provide most of the basic information that goes to make up the "All-Controls" map, the "Tag Data" file and the "Course" files, which are required for the generation of Descriptions and Overprints. The previous options have been retained, so now PICOVER gives the Planner the choice of an "electronic planning option" using the computer for virtually the whole of the process, or the more conventional "paper planning option", where the draft courses are prepared on paper copies of the map before the details are "computerised".

### **PICTORIAL DESCRIPTION SHEETS**

These are generated for each Course from a file of Tag Data. It contains the Text Description for each tagged control site and the corresponding Pictorial version. These are displayed in a library of symbols on the screen, rather like the OCAD symbol tool-box. This has been updated to include the changes in the BOF 2003 Rules. Selecting the symbols automatically generates the text description as well. If there is any doubt over the description, there is an option which displays the map in the vicinity of the control circle - so that questions of "numbers of similar features" in the circle can immediately be sorted out. The position of the circle can be altered if not correct. PICOVER also covers the situation where the same control site has a different description depending on the map scale.

Additional input requirements, which can be entered later, include the Control Codes, Punch Symbols, number of Punches and Area code. Check lists of both the Pictorial and the Text Input Data can be prepared for the Controller prior to preparing the final descriptions either individually or in a single operation for all courses. The final versions are prepared as OCAD files which can be viewed, combined and printed out using the standard OCAD facilities.

### **OVERPRINTS**

The overprints use the Planner's information extracted from the "Planning" map that displays the precise location of each Control Site, together with Start(s) and Finish. This is normally an OCAD map (a copy of the blank map with the "mapping" symbols protected, and with a set of "planning" symbols added.), but it is possible to use this part of the system with a non-OCAD map (e.g. a scanned image of an O-Map). The "Generate" program uses the corresponding

course files to build up each overprint which is then stored in a separate file, either as a simple "purple-only" version or combined with the blank map, depending on the option selected.

The same "Planning" map is used for items like Crossing Points, Out-of-Bounds areas, Marked Routes etc. that are common to all overprints. If some of the circles obscure important mapped items, they can be marked for cutting on this map. If a course change is required after this has been completed, the work is not lost, because the programs only update the "changes" and leave the rest alone.

Pictorial Description and Overprint files can be merged together if required. Both options can be done on an individual course basis, in a single operation for all courses or on a specified set of courses. Again the results are prepared as OCAD files and can be prepared for the printer in the same way as the OCAD map.

**For digital or laser printing, combined files with the map, course and description sheet can be prepared.** If the course only occupies part of the map, there is more scope to merge the course and the description sheet and blank off an unused portion of the map behind the latter. Text Descriptions can be merged in a similar manner.

#### **HEIGHT CLIMB DETERMINATION and PROFILES**

To determine the Height Climb and Course Height Profile for each Course requires a special "HYT" map containing just the contour data. This is generated from the OCAD Map. Then it is necessary to label all the contours with their height in metres, which is largely done automatically by the computer. The programs make this easier by going to some trouble to link together the various parts of a long contour line and to show up labelled and unlabelled contours in different colours so that they are easily identified and any errors or anomalies corrected.

A recent addition to PICOVER now allows the User to generate "optimum route" height climbs on a "course-by-course" basis in accordance with the current BOF Rules. The corresponding height climb profile can also be displayed on the screen and climbs and course lengths for each course are determined and can automatically be inserted into the corresponding descriptions.

*Extract from BOF Rules 2003 : Height climb is measured as defined in rule 6.1.3, and quoted to  $\pm 5m$ . That is, it is measured "along the shortest sensible route", which may well be longer than the route used for measuring the course length. This is not necessarily the "optimum route", nor is it necessarily the route which the planner would take: it is simply the course length route extended to avoid those hills/valleys etc which all competitors will also avoid. The intention is to give a figure which is representative of the climb which a competitor could actually undertake. As a rule of thumb, if a competitor will go over it, count it in; if you're not sure whether they'll go over it, count it in - only discount it if you are certain that all the competitors will go around it.*

(Although BOF make a distinction between the "shortest sensible route" and the "optimum route", within PICOVER, the latter term is used, since it is up to the User to decide how far a route deviates from the straight-line.)

A quick method for estimating "straight-line\*" climbs that does not involve the labelling is also available, but this is unlikely to be sufficiently accurate for maps with complex contours. A comparison of these computer methods and the reasons why the results differ from manual estimations is included in the Technical Help file.

\* This is not quite as defined in the BOF Rules, but can be a useful starting point for calculating height climbs on some maps.

#### **DUAL-SCALE EVENTS**

A Dual-scale event has two versions of the same map at different scales, referred to as A and B. The two scales are treated as separate "events". Each event has its own map, and set of courses,

but shares the tag data file. Limited changes in descriptions as a result of the two scales are allowed. Facilities exist to expand one of the "Planning" maps to the other scale, if this is required.

The choice has to be made when the event is first created, so that the interlocking set of files and sub-directories can be set up. These use names like MAP1A, MAP1B etc. where MAP is the event identifier set by the User.

### THE UPDATE SYSTEM

This is designed to ensure that if any change is made to the input data once some or all of the output data has been produced, the necessary updates are made to **ALL** the relevant **output** files without the User having to take any action other than to remember to run the option after a change has been made. When any input information is entered or altered, the date of that action is recorded in the input data files. Similarly when any outputs are generated, the dates at which they are prepared are recorded. The "Update Output Files" option compares the two sets of dates and automatically decides which output files need to be re-generated. The program prepares a "Set" of files which need to be updated and runs the necessary "generator" programs to achieve this.

### OTHER FACILITIES

There are a series of Programs for the Planner and Controller that use the Input data as follows :-

A Summary of all the information in the "Event Data", "Tag Data" and "Course files" can be prepared for checking purposes. Controls used on both scales of a dual-scale event can quickly be identified and if necessary allocated a slightly different description if the number of similar features in the circle require this.

A Control Usage Program calculates the number of Competitors visiting each Control and prepares a diagram of the directions of approach and exit for each course. Other programs show route loadings between controls and list the courses and tags and the order in which they are visited.

Master Punch Check Cards can be prepared for each course if conventional needle punches are being used, with each punch symbol in its correct box. These again come from a library of symbols supplied with the programs.

The Controls in the "Tag Data" file can be split up into convenient Areas and lists of codes, punches, descriptions etc. prepared for each area as an aid to putting out controls.

Lists of allocated Control Codes and Punch Totals can be prepared for checking against what is actually available.

Course lengths and height climbs can be listed, as can the BOF classes allocated to each course.

A "Layout" map showing the location of each Control with the Tag Name replaced by the Control Code or Punch Symbol can be prepared - to confirm that similar codes or symbols have not been allocated to adjacent controls.

Control circles that have been marked to be cut on the "Planning" map, because they obscure detail, can be displayed in their cut form on a copy of the blank map.

### PICOVER for RELAYS

The PICOVER System has been adapted to cope with the complexities of most of the Relay Systems and there is little difference in the input requirements. Both overprints and descriptions can be prepared as "Full Courses" or "Part Courses". In the former, each variant is completed as a separate course, so for the Vannas System, 9 plates are required (RAX, RBY, RCZ, RAY, RBZ, etc.). In the latter, 6 separate sections are each prepared (e.g. RA, RB, RC, RX, RY, RZ) and it is the Printer who creates the complete course by over-printing each map twice.

With recent developments in digital printing, it is likely that "Full Courses" each on a copy of the competition map will be required, which are easily prepared, but will dramatically increase the storage requirements ! The "Planning Facilities" were **not** specifically designed for Relay

planning but with a little bit of preparation they can easily be used to plan the standard type of relay systems. Extensive "trials" are strongly advised for more complex systems.

## **TECHNICAL DETAILS**

The PICOVER SYSTEM runs on IBM PCs and true compatibles and the latest version benefits from a reasonably fast computer. It is used in conjunction with the OCAD Mapping packages and needs similar hardware. It comes on a CD Rom and consists of a suite of about 35 main programs, a Windows style "on-line" help system and an Example illustrating the facilities. It needs about 8 Mb of hard disk space. A comprehensive User's Guide is also available that explains in detail the operation of the system, although this has largely been replaced by the on-line help files.

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### **HOW TO OBTAIN A COPY**

The PICOVER SYSTEM is supplied on a CD Rom. It will run in Windows 98 and later. It will run with OCAD6, OCAD7 or OCAD8.

The System costs £139.00 (Individual Licence) or £199.00 (Club Licence - allowing up to 3 copies).

The User's Guide costs £4.95 extra. All Prices include postage and packing.

Upgrade costs for Existing Users depend on their current version - contact Tony Pennick for details.

Orders from recognised orienteering clubs will be accepted prior to payment (Invoice sent to Club Treasurer when programs are dispatched).

*For more information, contact*

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*or e-mail [tonyandjudy.pennick@btinternet.com](mailto:tonyandjudy.pennick@btinternet.com)*