

OA Tech Newsletter

Edition 2/2008

Welcome to another edition of Tech News – the first edition be produced on time for over 2 years!

I'd like to start with a short rant on a topic which is always contentious. Day 1 of this years Australian 3-Days was marred by the cancellation of several of the elite courses. This is always frustrating for the organising team – particularly on this occasion, since it was a mistake by the organisers of a later day that lead to the cancellation. This issue was caused by some day 3 controls (with no SI units) being placed between 600m to 1.4km from day 1 controls with identical numbers. Several elite competitors were thrown by unexpectedly finding a control with a number from their course – and some lost over 10 minutes.

An error like this is unfortunate for the competitors involved, and some (at least 5 or 6) were significantly disadvantaged. However, despite the problems, the results were a good reflection of the days racing. Why, then, should the courses be cancelled, and everybody's day spoiled? After all, in many other sports, decisions by referees which are blatantly unfair are allowed to persist, even though television replays show the error clearly. Ask yourself – have you ever seen a cricket test cancelled because of a single unfair refereeing decision?

Juries have three options in responding to a protest like this – the obvious two are to either dismiss the protest, or uphold it and void the course. The middle ground is to agree that a problem exists, but to find that it is not sufficient to warrant voiding courses.

I would suggest that this middle ground is used too rarely. Voiding courses should be a last resort, to be used only when the results no longer reflect the competition. A handful people losing a few minutes each should not constitute a voided race. In this instance the jury relied on a petition signed by a number of elite competitors, many of whom did not actually lose time but felt sympathy for the runners who did!

I am canvassing the possibility of tightening the guidelines for voiding courses along the lines suggested above. Feedback on this issue would be appreciated.

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Stop Press: Controller Accreditation

OA has just appointed a new manager for coach & officiating accreditation: Dave Meyer.

This is an area which OA has really struggled to maintain over the last two years – partly because ASC appear to have lost some

of our records, and because we haven't been able to find someone to take on the large task of sorting out all of these records. Dave's job will be to sort this all out. It may not all occur at once, so please be patient. Dave can be contacted at:

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— Andy Hogg

Technical News

MOUNTAIN BIKE ORIENTEERING RULES

OA has revised its competition rules for MTBO, from April 2008, and these can be found on the technical pages of the OA website (Orienteering Australia Operational Manual 5.3).

These Rules and Guidelines for the conduct of MTBO events in Australia have three sections:

Protocols which will apply to all events.

Guidelines for the conduct of State-standard or local events. These may be adapted as appropriate to the local circumstances.

Competition Rules which will apply to MTBO Championship events held in Australia and used as a model for State MTBO events. Now that there is a national ranking series of MTBO events, these rules apply to such events as well as state and national MTBO championships.

All competitors, event advisers, and those connected with the organisation of the event are accountable for compliance with the Protocols and Competition Rules. It is considered acceptable for a foot-O accredited controller to be an event advisor for MTBO provided they are familiar with the protocol and competition rules for MTBO.

Events conducted in Australia under the auspices of the International Orienteering Federation (eg World Championships in MTBO)

are covered by the Competition Rules for IOF World Championship and World Cup MTBO Events.

The IOF has recently published new rules for mountain bike orienteering, current at July 1st, 2008 and available from the IOF website. These take into account the recent addition of Junior World MTBO Championships.

LEVEL 1 CONTROLLERS

In order to become a level 1 controller it is necessary to complete the Level 1 Officiating General Principles course, offered through the Australian Sports Commission (ASC) and to attend a sport-specific day organised by your state's technical officer.

The Level 1 Officiating General Principles course can now be done online at the ASC Learning Portal at <https://learning.ausport.gov.au>, at no cost to the individual. Some states' sport and recreation offices may still offer a day-workshop to be done in person, but this is becoming less popular.

The course is aimed at beginner level officials, and covers three modules of training; Self Management, Managing the Competition Environment and People Management. The course takes approximately four hours to complete, and there is assessment included within the course. The online course is available free of charge and you have 6 months to complete it once you have registered with ASC. They will then send you a record of your accreditation.

It is not necessary to complete the Level 1 Officiating General Principles course before attending the sport-specific workshop!

Rewriting level 1 controllers' curriculum

Technically, this needs to be re-written every 4 years, and submitted to ASC, which has changed their proforma since this was last reviewed. This revision will be underway shortly.

In addition, OA aims to make a national resource for educating level 1 controllers, so that each state doesn't have to reinvent the on-the-ground component. Most states have their own resource materials for the sport-specific component at level 1, though there is a national set of resources for Level 2 controllers' workshops (the level 2 curriculum is due for review shortly also). I will pool resources for the sport-specific component based on SA's prior workshops. If anyone has recommendations on what should be included, or useful sections of their state's resources, please send these to me; eventually a combined resource will be produced for all states to use.

LEVEL 3 CONTROLLERS

Potential level 3 controllers needed to attend workshop over Easter 2009 in Tasmania!

These are national workshops and the next one is likely to be run during the week after Easter 2009 in Tasmania during April 10th-

18th. It will take place in Launceston, probably on Friday April 17th. Any event which is a national championship or a NOL race (group A events) requires a Level 3 controller. For any Australian championships carnival, where there are championship races in sprint, middle, long and relay, at least 4 Level 3 controllers could be required. Some states do not have this many accredited controllers actively involved in orienteering; or their controllers may not be familiar with the running of elite races. (If not, you can go to the National League Guidelines, which are available from the technical pages of the OA website.)

So, if you are a Level 2 controller and have experience with setting or organising an event as part of a National Carnival, which many current Level 2 controllers have already done successfully, then the next step is to attend a Level 3 workshop.

Please let me know whether you would be interested in attending the Level 3 controllers' workshop – even if the Tasmania dates don't suit you – because OA needs all the Level 3 controllers we can get!

— Jenny Casanova
Chair, OA Technical Committee
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Water on courses

A recent article in the Australian Orienteer promoted a decision by Bayside Kangaroos to ask competitors to carry their own water around the course.

I wanted to take the time to clarify OA's position on the provision of water on courses. Our competition rules, as they have always done, include a clause requiring water to be provided every 25 minutes for courses longer than 30 mins (these times are the estimated speed of the winner). Moreover, OA rules require the water to be at a control or a compulsory crossing point. (The IOF has similar rules, except that they do not require the water to be at a control or compulsory crossing point.)

People often ask me why we can't relax the rules on provision of water. My answer is al-

ways the same – it is because provision of water is designed to ensure competitors do not become dehydrated. Thus, it's a safety issue, and is a greater concern in a warm climate, such as Australia, than it is in most countries. We had a close shave several years ago when a competitor became seriously ill following dehydration; I'm determined to protect event organisers from similar occurrences in the future, which is why I have never considered compromising on the provision of water.

The rules above apply at all national events – badge events and above. State or club level events are governed by different rules, but I recommend in the strongest possible terms that guidelines for these events should include similar provisions for water on courses to those in the OA rules.

— Andy Hogg

Mapping News

MAP COLOURS

When digitally printing maps it is important that all the colours match as close as possible to the IOF mapping specifications ie ISOM 2000, ISSOM 2007 or the ISMBOM.

In this regard the OA "Standard Orienteering Colour Swatch for Checking Offset and Digital Printing Colours" colour swatch produced in 2004 can be used to check colours. Paper copies of the colour swatch can be obtained from OA's Executive Officer.

To assist in the comparison of colours it is useful to print colour blocks at the side of the map as per example on the right, and then compare directly to the colour blocks of the OA swatch.

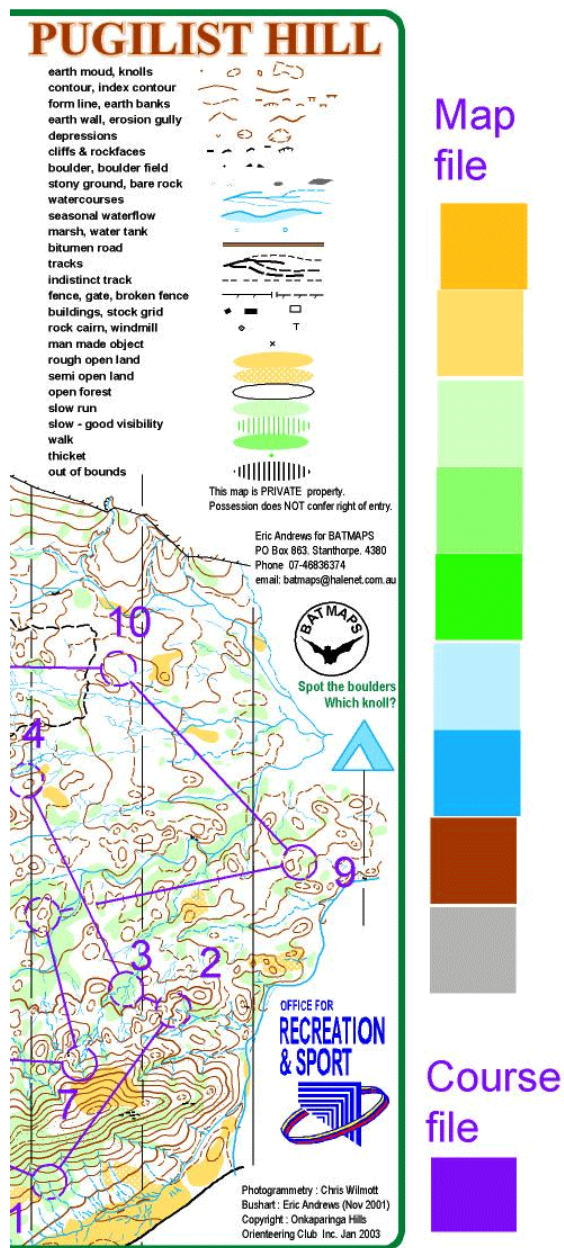
In the same way as above the course marking colour can also be printed as a block colour at the side of the map. When using OCAD the default setting for course marking is 100% Magenta which results in a pinker colour. The colour setting therefore needs to be changed to the official Purple setting. To assist planners and controllers the suggested OCAD setting for the colour Purple is 43% Cyan, 91% Magenta, 0% Yellow and 0% Black (K), while another useful setting is 30%C, 100%M, 15%Y, 0%K.

As colour output varies from printer to printer, particularly from inkjet printers to laser printers, colour settings may need to be varied for each printer so as to achieve the best result. In all cases it is necessary to do trial print runs of the course map and check colours against the colour swatch, and make adjustments as appropriate.

WATERPROOF PAPER

The use of waterproof paper for orienteering maps is nothing new particularly for offset printed maps. The challenge now is to find suitable waterproof paper for use with digital laser printers. At present there are a variety of waterproof papers that appear to be suitable for orienteering maps with some of these papers distributed at the OA Mapping Meet-

ing in March 2007. Waterproof papers viewed included Teslin, Never Tear and Sihl Picofilm.



The real test with any waterproof paper is how well it is received by the orienteer. Factors to consider include:

- Paper weight (gsm) or thickness (microns)
- Flaking of print particularly at folds
- Durability and tear resistance
- Mud and blood resistance and ease of cleaning

- Stability of paper (thin paper less stable as it crinkles & flaps around more)
- Whiteness of paper
- Colour reproduction
- Ease of folding & unfolding, springiness
- Route marking by pencil or biro, and no smudging of ink
- Texture ie coarse or smooth, is it slippery
- No sharp edges or corners to the paper particularly when folded
- Cost
- Appearance ie shiny or dull (night orienteering?)
- Sticking together of damp or wet paper when in the start box (hard to pick up one map at a time)

At the recent SA Middle Distance Championships waterproof paper was trialled being the Xerox product Never Tear. Two paper thicknesses, 120 microns (155gsm) and 95 microns (125gsm), were used. The paper has a smooth feel and stood up well to the rigors of orienteering. On balance the 120 micron paper would be recommended as the best option. Indicative costing is about 80-90 cents per sheet of A4 waterproof paper.

In addition to maps, waterproof paper could also be used for control descriptions.

If you or your club have experiences with waterproof paper, please advise the details of the paper, its pros & cons and indicative cost.

— Adrian Uppill
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Laser Scanning: New Technique Revolutionising Map Making

The following article was published in *Skogsport NR2 2008* (translated from Swedish by Hugh Moore)

Now it is time to take laser techniques seriously in relation to the future of orienteering mapping. The old approach of using base material from stereo analogue photographs is on the way out and instead it is laser scanning that will be the way of the future.

Mapping stands at a new development phase. A significantly more detailed ground material than previously available is produced when using laser scanning of the terrain. The big difference is that the base contours become significantly more detailed and accurate, says Jan Wingstedt, mapping chief for Jönköping Kommun and mapping consultant to Smland OF. (Is the name Wingstedt familiar? Yes, Jan is father of world champion Emil.)

In Sweden the first mapping project for orienteering use is under way using the new tech-

nique. In Switzerland it has already been in use for longer. In Switzerland the whole country has been scanned and orienteering clubs can get to use the material at a low cost, says Jan Wingstedt. A number of maps have already been produced with the help of ground material from laser scanning, including maps which were used for the World Cup final last year.

Fine Combing with Laser Signalling

Laser scanning is carried out by a plane flying at 2000 meters height, finely combing the area by sending out laser signals which are then reflected from the ground. By this means an exact profile of the ground with all its different levels is received and registered. The plane's exact position during the flight is established by GPS.

The accuracy of the result is determined by the density of the laser signals sent out. In Switzerland signaling has been sent out at two meter intervals and this gives a ground level accuracy of 50 cm.

Ten Centimetres Accuracy

Laser scanning with significantly denser signalling can be chosen and then ground level differences over 10 -15 cm can be obtained, says Wingstedt, who, in his work as mapping chief in Jönköping Kommun, uses this kind of map for areas that are being considered for development.

Forest Users Can See Every Tree

Commercially there are many large areas for use of the new technique. Not least for forest use. Laser scanning can indicate every tree with more than 10 cm diameter in the trunk and additionally give information if it is pine, spruce or deciduous. That changes work with forest valuation radically. One such project, the first in the world for training, is happening in Dalarna, where for Avdalens and Srna-ldre forests, economic planning is presently in full progress, utilising forest use plans with every tree shown.

Nationally, planning is underway to laser scan the whole of Sweden so as to be able to use contour maps with one metre accuracy. These can then be used in work in relation to natural disasters providing estimations of the effect of for example flooding.

Such scanning of the whole of Sweden is estimated to cost around 200 million kronor and who will cover the cost, either the state or external financiers, is not yet clear.

More Expensive than Traditional Base Material

The cost for laser scanning for orienteering maps is, in today's current circumstances, higher than the cost for traditional base material. A normal price for base material from flown analogue pictures costs today around 5,000 kronor per square kilometre. For a special flight with laser scanning over a large area, the corresponding cost is around 10,000 kronor per square kilometre, but then you get access to a whole extra amount of contour picture information about the terrain, says Wingstedt. If national laser scanning is carried out and

for example the state pays, that can mean a wholly different possibility for obtaining material at a significantly lower cost.

Good Competitive Situation

Today there are a number of companies who have the techniques for laser scanning and as a result there is a favourably competitive situation, believes Wingstedt. If in addition we are forward-looking in relation to the areas we want to have laser scanned the company can carry out the work in connection with other assignments thus leading to significantly lower costs.

The time period for analogue flown photography every year is very limited, between snow melt and leaf burst. Laser scanning is not dependent on such timing. The only requirement is that it is not raining and of course it is obviously unsuitable to carry out the work when the ground is covered with snow. On the other hand work can occur during night time.

Generalising the Big Challenge

A problem with the old technique, with analog photographs, is being able to see the ground under the tree crowns. The angle of the photography with analogue pictures is up to 45 degrees, which means that with high vegetation it is difficult to see the ground detail.

Laser scanning occurs at angles of 0 to 15 degrees for the signals being sent out, meaning that you can measure the ground between the trees in a completely different way.

The big challenge for mappers in the future is to be able to generalise to a sufficient extent. After laser scanning you get a simple contour map with one metre contour intervals. Then you need to dare to sort it out while retaining the readability of the map, says Wingstedt.

The result of laser scanning can be presented in many different ways and in Switzerland it has been the case that mappers have adapted themselves individually as to how they want to work.

Find Your Own Technique

It is possible to use a contour map with one metre intervals and with index contours at five metre intervals, or chose to use only contours at five metre intervals. You can also create terrain relief shaded pictures which can be a great help, and likewise ortho-photos which make it easier to see the feature boundaries. Several

mappers have also chosen to use old orienteering maps of the area and then put them under the new contour picture.

The ideal use can certainly be to put the terrain scanning on a digital screen and then switch between the different views so as to use all the information optimally, believes Wingstedt.

— Olaf Gustafson

IT News

Orienteering Australia Results System

Feature Summary

OA is maintaining event results on its web site and which can be accessed at

<http://results.orienteering.asn.au/>

This system is to be used for all events on the National Calendar of events and states may also use to upload all state event results in the required format (all events from "Sport Software" are compatible – see below).

BACKGROUND

The system was developed for first use in 2007 for uploading national Calendar event results. The system was funded by OA out of its general funds, and hence all states have contributed to its development via their State Registration Fee and Event Levies.

OA wishes to implement the use of this system in 2008 so that

1. All National Calendar events are uploaded by the responsible organising state
2. Other state events are uploaded, initially those based on Sport Software events

The reasons for this are as follows:

1. States have contributed financially to the system
2. Orienteers will become accustomed to the standard location for viewing event results

3. Events will be available for the longer term. Where they are associated with an event specific web site, they will eventually become inaccessible

4. Features currently being developed will permit the following:

- calculation of participating statistics for states and OA
- export of competitor data for Sport Software archives
- support for ranking calculation (Elite and non-elite)

RESULTS SYSTEM OVERVIEW

The descriptions below are the current features and functionality of the site which is still undergoing development.

National Event Results

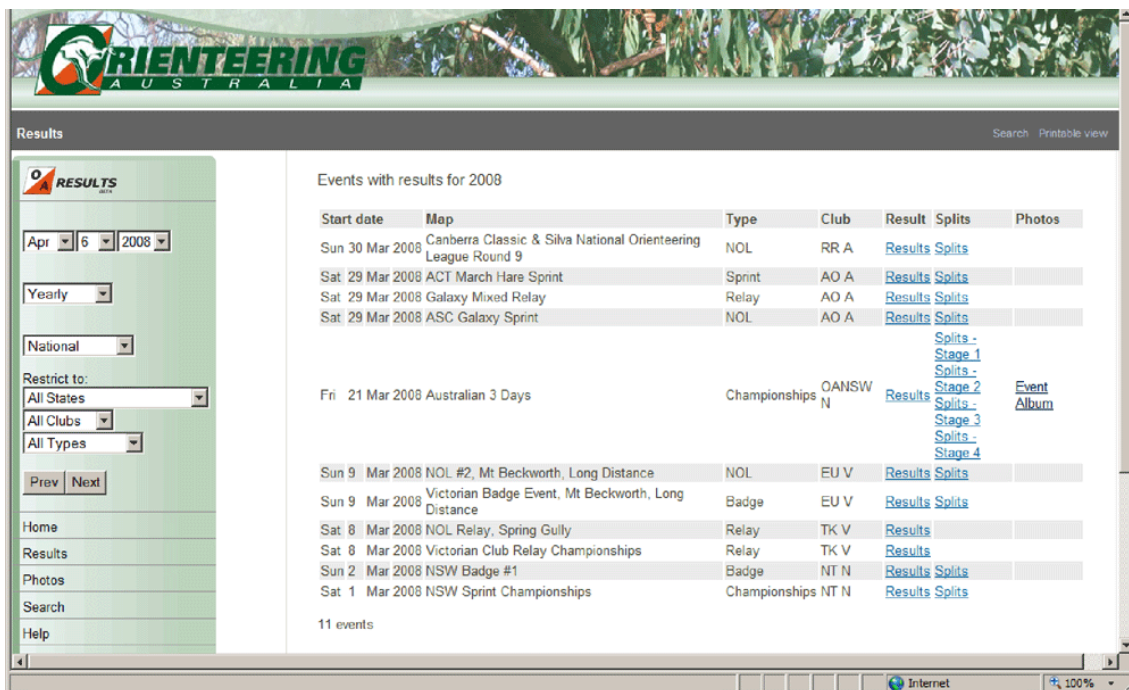
Selecting the Results menu from the Results Home page, defaults to a list of results available for National events – see figure over page.

Choosing options at the left can be used to filter for other results, for example

- Change the year to 2007 to view 2007 results
- Change the time period e.g. Yearly to Monthly
- Change National to State and then select a State to view results for any state

State Based Results

States are encouraged to upload any event for which the results can be collated in the correct format. Currently QLD is uploading all their



events, and link the Results menu on the OQ home page to this site:

<http://results.orienteering.asn.au/qldindex.php?pg=results>

Any state can add a link to a similar page, or a link to a particular result set from their state, club or event web site e.g. the SA specific link is:

<http://results.orienteering.asn.au/saindex.php?pg=results>

Similar links have been created for other states.

Links to results in news items on the OA home page, should be to results on this system.

The display of results includes the following

- Display of single day, multi-day, relays
- Display by class or course (requires upload data in appropriate format)
- Results are displayed as overall results and splits where these are available (tabular format only).
- For badge events, badge cut-offs can be calculated and displayed
- Comments about the event as provided by the organiser during upload of results

Results Features

Other Features

1. Searching Competitor Results
Using the Search function allows a competitor name to be entered. All recorded results are listed with Date, Event Name, Class/Course, Placing, Badge Credits where applicable
2. Photo Album
The system permits photos to be uploaded to an album; these can be linked to an event and will then be listed against that event on the Results page. Photos can be viewed as thumbnails or full size.

EVENT TEMPLATES AND CLUB LIST

The SPORTIdent page on the OA web site at: <http://www.orienteering.asn.au/technical/SPORTidentInfo/>

Has the following to assist users of OE software

1. Updated club list in an Excel spreadsheet
2. OE template for 5 year age classes with all Australian clubs

3. OE template for 10 year age classes with all Australian clubs

These have various AS and B classes which can be modified as required.

ON LINE ENTRIES

The following outlines the development of on-line entry systems supplied by Transition Zone. Note that other systems are also in use e.g. developed in Queensland for the 2008 Australian Championships Carnival.

Transition Zone have provided online entry systems for 2 recent ACT event groups (March NOL and April ACT Championships weekend), the 2008 Australian Three Days, and 2007 Australian Championships Carnival and recently for the QBIII (ACT and NSW events)

Entry data can be supplied to organisers in a format compatible with Sport Software. An important requirement is to give Transition Zone the correct club list, and the classes as you want them in Sport Software for your event. The data from Transition Zone can be imported into a blank OE event. If you have already created an event, which is probable for

events in a major carnival, making sure the clubs and classes and their IDs match those supplied to Transition Zone, will help avoid errors. If mismatch occurs, a bit of processing in Excel to get correct IDs would assist cleaning up prior to importing data.

Entrants are required to select a club, and classes and event fees valid for the event. Many errors occur on paper forms, so permitting selections of only valid clubs, classes and fees for selection will reduce these. To account for non-members and non-Australian clubs, options for these will be included (e.g. NONE AUS for Australian non-members).

The entries can be downloaded from the system by organisers as often as required, enabling organisers to track entries. The system can also be used by organisers to enter entries that are received on paper forms; hence a dedicated entry system may not be required. For these entries bypassing of payment is permitted. Currently payment is only by credit card, and Transition Zone take a percentage.

Contact details for Transition Zone can be provided.

— Robin Uppill
OA Director, Special Projects
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IOF Competition Rules

As you will probably have seen, the IOF has made amendments to the Competition Rules for IOF Foot O Events. And also to the 2004 Rules for MTBO events. While these specifically apply to IOF events – and the only ones of those likely to affect us directly in the near future are World Ranking Events, Oceania Champs and WMOC 2009 – we would usually update the Orienteering Australia Competition Rules to bring them into line.

The changes are marked in the margins with a vertical line but note that in the Foot O Rules, the 2007 changes are still marked. The 2008 amendments are shown with a double vertical line.

There appear to be only two Foot O changes that are likely to affect our events:

- Clarification that requests to deviate

from these rules and norms for World Ranking Events organised by Australia will be determined by Orienteering Australia.

and the one that has got the publicity

- There is a new clause 24.15 applicable to all IOF events which states: The results must be based on competitors' times for the whole course. No changes may be made to these times on the basis of split times.

There has been some discussion about what this means. I checked with Barry McCrae who is a member of the IOF Rules Commission. He explained that the intent of this rule is to prevent organisers from effectively changing the course after the event. So a leg cannot be removed if, for example, there is a dispute about

the placement of a control. In such a case, another solution must be found that is within the rules (which might mean that the course would have to be cancelled or the results voided for the affected class).

However it IS OK to have an un-timed a leg – e.g. at a road or rail crossing – provided that this is known to all competitors in advance.

One rule that organisers and controllers might not have caught up with in 2007 is 24.14: results shall be published on the internet and electronically submitted to the IOF on the day of the race.

Note that the rules will no longer be published by the IOF in booklet form, but will only be available via the internet. The IOF website is www.iof.org

If you hadn't caught up with the fact that the Oceania Champs are now covered by the IOF rules or with the other 2007 changes, I suggest you check out the Foot O rules in detail.

There are more changes to the MTBO rules which were last updated in 2004. In many re-

spects they mirror the Foot O rules (including the rules noted above). The main other differences are:

- Closer specification of the map scale for various disciplines (15.2)
- Requirement that the course lengths shall be given as the direct route AND the shortest sensible route (16.3)
- Changes to start procedures (22.2, 22.7) including confirmation that in an interval start, competitors will be given the map 1 minute before the start time.
- Bringing the Fair Play section into line with Foot O: maintaining secrecy about the competition area and terrain until they are published (26.5) and voiding the competition if circumstances arise which make the competition unfair or dangerous (26.13).

— Kathy Liley
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Control Descriptions and Placement

A guide for all levels of event

When you go out into the forest to check/tape control sites, it's important to check that what's on the ground matches what's on the map. It's not enough to simply find the correct logpile or tree root mound – you also need to be sure that extras haven't formed since the map was made.

If the map and the ground don't match exactly, or if the map is open to interpretation, it may be better not to use that control site. It's true that many of our pine-forest maps are somewhat featureless, but it is probably better to use a contour or watercourse feature which doesn't move or change, than a forest feature. Clearings and vegetation boundaries can be open to interpretation.

Many older maps have been drawn using non-standard features, especially in pine for-

est, where there can be symbols on the map for: dead tree, stump, tree root mound, log, logpile. The International Specification for Orienteering Maps (ISOM) 2000 has three applicable map symbols; a green ×, a green ○, and a green ●, all "special small vegetation features" to be defined in the legend.

The IOF control descriptions, however, offer only the crossed circle, ⊗, which can be used to mean either a root stock or a tree stump. Therefore there are no IOF control descriptions for a log or logpile, and it would be better to use the "special item" symbols; × or ○, and define them at event registration.

The "special item" symbols can also be used for man made objects (black x or o on the map, to be defined in the legend). We have commonly used the special item symbol to mean towers and power pylons, but these do actually have their own control description symbols!

Rock features: the difference between a boulder on the map and the control descriptions is that on the map, a boulder is a ●, while

on the control descriptions, it is a ▲. This is made more confusing by the fact that on the map, a boulder cluster is a ▲, while on the control descriptions it's ▲.

Boulder fields and rocky ground are ideally not used as control sites, because their perimeters are open to interpretation.

You may remember two control description symbols for a rockface; there is now only one IOF symbol, with 4 teeth, regardless of the size and shape of the rockface and how it's drawn on the map. The rockface without teeth is not used as a control description any more, but older software may still have this symbol.

Contour features: When is a knoll not a knoll? When it's a high point. Here, the control descriptions do match the map symbols. A brown dot on the map, ●, is a "high point"; a mound which could be made of earth or rock, and which is shown on the control descriptions as a black ●. So a high point is not always an earth mound; in fact a bare rock slab can contain a high point. A knoll, which is shown on the map as a small circle/oval in the contour or formline, is shown on the control descriptions as an ○.

Likewise big and small depressions. The small depression, which is drawn on the map as a U, is the same on the control descriptions. The large depression, which is a contour or formline in the shape of a circle/oval but with inward pointing tags, is shown on the control descriptions as an oval on its side, also with inward-pointing tags.

A brown × on the map is a "special land form feature" to be defined in the legend. Most commonly in Australia, we use this to

indicate a termite mound, the control description symbol for which is an asterisk *. However, if the brown x denotes something else on a particular map, then it may again be better to use the "special feature" symbol on the control descriptions.

Water features: Confused about which watercourse is major or minor? A major watercourse does not have any lines alongside its squiggle. A minor watercourse has broken lines alongside its squiggle. There is no longer a symbol with a solid line on either side of the squiggle, for any sort of watercourse, but there is also an IOF control description for a "narrow marsh"; a line of dots. These dots would be blue when drawn on the map, but you may also find a line of brown dots on the map, defined as a small erosion gully (we used to call this a dry ditch). On the control descriptions this line of dots would have unbroken lines on either side.

OCAD 8 control descriptions may not have caught up with the latest (2004) changes in international symbols, but OCAD 9 should have done so. For example, a distinct tree's control description now uses a tree-shaped symbol, rather than a triangle with a cross in it. If you are using Condes or some other programme for writing control descriptions, be sure that it uses the 2004 version of IOF control descriptions. This is the most recent version available and can be downloaded from the Orienteering Australia website.

— Jenny Casanova
Chair,
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Environmental Impact Assessment of the 2007 Oceania Championships

Note: The following is an abridged version of a report which is available on the OA website at:

www.orienteering.asn.au/environment/science/

Introduction

This report documents the impact on the local environment of a major Australian orienteering competition (around 500 competitors) held in Namadji National Park, ACT in October 2007. It focuses on the impact on the environment immediately adjacent to five control marker sites visited by significant numbers of competitors. These sites were chosen as they were some of the most frequently visited con-

trol sites during the competition. Portable water containers placed temporarily at the sites provided competitors with the opportunity to stop and get a drink of water. The information in the report is intended to assist land owners and managers to understand the likely impact on the terrain of an orienteering competition.

Impact Assessment

The environmental impact after an event in the finish/assembly area is easy to assess as it is clearly visible and concentrated in a relatively small area. It is not so easy to assess the impact of competitors in the terrain, as this will occur throughout an area of many square kilometres, often in areas that are not easy to access. This report provides documentation which will assist land owners and managers to understand the likely impact orienteering competitors will have on the terrain away from the assembly area.

Methodology

Five control sites were chosen, these being water control sites, where the largest number of competitors would be visiting. The sites were photographed the day before the competition. They were photographed again, from the same position, on the day of the competition, immediately after the competitors had visited them. Finally, the area was revisited 6 and a half weeks after the competition and photographs were again taken.

Report on Control Sites

Most of the control sites showed little visible impact. One example (that with maximal impact) is shown here, in control 102, which was visited by 131 competitors. The control is sited in a grassy area, between two boulders which funnelled competitors along a single path:



Immediately after the event, the signs of impact we some slight compaction of grass and vegetation evident close to the control:



The same control sites were visited six and a half weeks after the competition:



By this time there is no longer any visible sign of impact by orienteers, either in the bush, or at the finish, start or assembly areas. Without prior knowledge it would not be possible to know the area had hosted a major orienteering competition.

Conclusion

There is likely to be little impact from orienteering competitors on the terrain in which an orienteering event is held. Even in areas where most activity is concentrated, such as control sites, the initial impact is slight and full recovery can be expected within a short time frame. The impact of local animals, such as

wombats and kangaroos is likely to be more significant. In order of magnitude the activities of orienteers and the local fauna are at the very bottom of the scale in comparison with more significant environmental impact events, such as bushfires and the damage caused by feral animals, particularly pigs.

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