OA Tech Newsletter

Edition 2/2005

Thanks to all those who responded so positively to the inaugural edition of Tech News, and to those who have contributed articles to this edition. The plan from here is to release this newsletter twice per year – a winter and a summer edition. Judging by the number of contributions received over the last few months we should have enough material to make an interesting read twice a year. For most people, the newsletter is a pdf document distributed via email – and an archive is kept under the technical pages of the OA website. For those who prefer hard copies, I'm more than happy to mail out printed copies on request.

Hope to see many of you at the Level 3 controller course in Hobart in September.

— Andy Hogg

In This Edition . . .

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Closing date for next issue:

1st January 2006

Level 3 Controllers Workshop

Monday 26th September
9:00am - 4:30pm
Hobart Botanic Gardens

This will be the first level 3 workshop held since the introduction of OA's new ASC-approved Controllers Accreditation Scheme. This workshop is designed both for existing Level 3 Controllers who want to update their accreditation, and for Level 2 Controllers who want to move up to Level 3.
The workshop will comprise a mix of presentations and discussions covering topics such as major event organisation, elite expectations, jury decisions, electronic punching, digital printing and Sprint/Middle Distance events.

Please contact Andy Hogg as soon as possible if you may like to attend. (Latest date for registration is 11th Sept. 2005.)

There is no cost for attending. Morning & Afternoon tea will be provided.

Mapping News

ISSOM 2005

The IOF-approved version of the International Specifications for Sprint Orienteering Maps (ISSOM 2005) is now available for download.

A pdf of the manual, and OCAD 6, 7 and 8 versions of a start-up file have now been placed on the mapping section of the OA website. Note that some symbols are allowed a range of properties, so the one given in the OCAD file may not be the optimum for your purpose. If necessary, edit the symbol within the allowed range of specifications. Also, it is not possible to simply convert a 1:15,000 or 1:10,000 ISOM map to a 1,5000 or 1,4000 ISSOM by enlarging and changing symbols. Many symbols are different, or not used, contour intervals are smaller and some remapping of detail may be required. We're all learning on this one!

Digital mapping

The idea of digital mapping in the field has been around for some time and about 5 years ago, after the US switched off selective availability for GPS signals and thus increasing their positional accuracy for civilian use to about 5 m, the possibility of digital mapping in the bush has been tantalising close. Hardware has been a major limiting factor.

We have recently conducted a field trial using a rugged (waterproof, shockproof, dustproof, sunlight readable) tablet PC with an integrated GPS unit and using OCAD 8 software. The trial used geo-referenced templates of colour aerial photos, photogrammetry and a previous version of the map. The trial was very successful, with point features a dream to map, many tracks and other linear features simply mapped from the photo (at home and checked in the field), and other linear and area features mapped in the field.

Perhaps the biggest bonus, apart from the elimination of the requirement digitalise the fieldwork at night, is that the map is drawn as you go with features plotted at their correct size thus reducing the risk of over-mapping. No more sharpening the pencil to try and cram too much into the field plate! The main limitations are the need for extra batteries (or an auxiliary battery pack) and cost. There will be a fully report of the trial in the Dec edition of the Australian Orienteer, as well as a report posted on the mapping pages of the OA website in August.

— Noel Schoknecht
Chair,
OA Mapping Committee

Controller Accreditation

At time of writing, orienteering controller registrations under the National Officiating Accreditation Scheme (NOAS) outnumber coach registrations under the National Coaching Accreditation Scheme (NCAS) 218 to 190. Thats a first! However, I know that WA is re-accrediting a number of coaches whose accreditations have lapsed, so the lead might change hands once again ...

There are now 168 male controllers accredited, and 50 females. That imbalance is food for thought. The count by State is ACT 25, NSW 55, Qld 26, SA 14, Tassie 17, Vic 40, and WA 41. There are 39 Level 3 controllers, of which only five are female. A full list of accredited controllers of all levels has been placed on the OA website – see `www.orienteering.asn.au/accredcont`. Please notify me of any omissions or errors.

The most significant challenge facing orienteering coaching and controlling accreditation is the recent decision by the ASC to stop funding orienteering development. Development includes controller accreditation, education and development – amongst many other functions that orienteering must maintain from other funding. There is a big danger that the accreditation scheme for orienteering will suffer now. Its crunch time for controller accreditation in orienteering.

— Neville Bleakely
OA Manager,
Coaching & Officiating

High-Tech Update

Some of you will have noticed the new Orienteering Australia website which has been developed over the last 3 months – if not, look at `www.orienteering.asn.au`. The new website provides us with an opportunity on several fronts. Firstly, the new system includes a content management system which allows a number of editors to easily modify the site. Furthermore, members of the site (who have registered and logged in) will shortly be able to submit news articles and bulletins. These articles will be "reviewed" and approved for publication (or rejected and discarded) by the site editors. With luck, and a small amount of effort from a large number of volunteers, we will a vibrant and dynamic website

Secondly, the next development of the website will include an interactive event calendar. When it's operational the calendar will allow users to search for events Australia-wide.

Thirdly, in the near future the website will be opened up to State Associations – allowing each state to make use of the same tools. This has the added advantage that new technical developments – such as online event entry, a nationwide results database and discussion groups – can be used by all states. Details will be sent to state secretaries when the system is ready for states to come on board.

Access All Areas

Orienteering is highly dependent on the goodwill of landholders to hold most of our events. Furthermore, most states rely upon a couple of major landholders – National Parks and State Forests (or their equivalent) – for many orienteering areas. It's becoming apparent that orienteering may lose access to key areas in some states. For example, in NSW, access to Nature Parks is generally not granted – for environmental reasons – although some exceptions have been negotiated. SA faces similar problems with land managers and it appears that access to the classic Kaiserstuhl map may be lost. Nobody objects to minimising access to areas which truly are environmentally sensitive, but it appears that some restrictions may be due to a lack of understanding of the nature of orienteering and orienteers, or to prejudice on the part of individual land managers or policy makers, rather than objective science.

In many cases, when orienteering loses access to a single area, we shrug our shoulders and let it pass. After all, it's only one area, and there are many areas to choose from. However, if we lose areas due to perceived environmental issues (as opposed to scientifically demonstrable environmental risks) this reinforces the prejudice: and land manager will continue to think that people running off paths is bad for the environment.

Even if we decide to tackle this problem, a nationwide approach may not solve the problem – in many cases negotiation with individual land managers is required. Nonetheless, if all states are facing similar problems, then we can at least begin by pooling resources and experiences to help each state cope with the problem.

Problems with land access are not confined to Australia, and the IOF Environment Commission has prepared several reports on the issue, including a review of the extensive scientific studies conducted mainly in Europe, which indicate the low impact nature of orienteering. Some of the environmental concerns, however, vary in different parts of the world and it is desirable for Australian orienteering bodies to be able to debate the issue based on an understanding of the local situation.

The first task here is to determine the extent of the access problem. I would like to hear from each state as to how much this problem affects orienteering in their state, and whether the problem is on the increase. Alternatively, is the greatest risk to accessing areas posed by other issues such as public liability or subdividing? In particular, statistics of areas lost or threatened would be appreciated. Furthermore, I would also like to hear from orienteers with experience in environmental management who have undertaken any local studies of potential orienteering impacts, or who have advice which may help other states in managing perceived environmental problems.

If there is general agreement that we are losing areas at an unacceptable rate, then we need to put our heads together and begin looking for solutions.

— Andy Hogg

Orienteering Safety

In the last edition of Tech News I wrote a piece on how controllers need to prioritise objectives according to constraints. In response I received a query from Jenny Atkinson (Tas), asking about the role of the controller in overseeing the safety issues for events. Naturally safety is absolutely number one priority for all controllers and course setters. Jenny gave two good examples of very important safety issues: road crossings and cliffs. Obviously crossings of busy roads should be completely avoided (particularly for junior courses). If the event is in a suburban area and it includes crossing quiet suburban streets, there are a number of options I can think of:

1. A leg that crosses a road is not angled at 90 degrees to the road. Set the leg so that it almost runs parallel to the road, and hence gives runners plenty of time to cross and plenty of time to check for cars, without losing time. The worst scenario would be where runners come down a steep hill (running fast) and immediately cross a street at right angles, and there is very little visibilibility to the left or right.

2. Put a control just before the road at the best spot to cross. This forces runners to slow down (they must punch the control just before crossing the road) and with careful placement of the cotnrol, ensures that they cross at the safest place.

3. "Beware of runners" signs at each end of the road

4. Warnings to all competitors at the start.

5. Have officials supervising the road crossing.

The issue with cliffs is also very important. I know a number of orienteers who have injured themselves falling of cliffs (or walls). In each case, there was a control at the top rather than the bottom. As a controller I never allow controls to be placed at the top of cliffs. At Easter, for instance, we insisted that one control be moved away from the top of a cliff. This was non-negotiable. Jenny also suggests the possibility of reversing the course so that people are running up the hill past the cliff rather than down the hill (and potentially over the cliff!). As a controller, it is important to consider the safety of legs that force runners to traverse steep rock slopes or slabs (especially if it is wet).

Another issue of safety which I would like to raise (following some recent incidents) relates to orienteers who become irretrievably lost and fail to return to the finish. Some of my suggestions for improving safety, and it is just a first pass to get some discussion going, is:

1. Provide maps with well defined boundaries (whenever possible!).

2. In the middle of winter (when it gets dark at 5pm) hold all events in the morning, so that if there is a problem there's enough light in the afternoon to search for at least a few hours. Possibly also have some good headlamps available.

3. Have a procedure where car horns are honked loudly, perhaps ten minutes after official event closure time (to allow anyone who is lost the chance to locate where the finish is).

4. Encourage orienteers to wear a thermal or raincoat around their waists if it is cold or wet in winter.

5. Whistles carried by everyone when orienteering in remote areas.

6. Make certain you have keys to any locked gates, and a 4 wheel drive available.

7. Have topographic map of the wider area. Make certain you know the grid reference or latitude and longitude of your assembly area.

8. Have phone numbers of local hospital, and know its location.

9. For big events, make certain there is St John's ambulance present.

An organiser would not have to do each of these things at every event. The organiser could judge which are appropriate to his event. Do other states have a risk management policy? Do organisers read it? (Most of us don't get time to read big documents, so perhaps it needs to be a one pager that is sent to all organisers of events in remote areas.)

— Anthony Scott
OACT

Soapbox

Front to Back?

OA Competition Rule 18.3 of January 2005 states in part The control descriptions, shall be fixed to or printed on the front side of the map. Most of us fold our maps, so that it is difficult to see such control descriptions while running, whether they are on the front or reverse sides. However, descriptions on the reverse of a map, when it is lying face down at the start, allow to check that we have the correct course map and also see that there are no discrepancies between that definitive version of the descriptions and the loose copy that we will most likely use on the run.

For now it is OK to use the reverse side of the map if a variation to rule 18.3 has been requested more than six months before the event, approved by OA Tech Chair and advertised in advance of the event (rule 2.10), but wouldnt it be simpler to delete the words the front side offrom 18.3 and allow the organisers the discretion to put control descriptions on either side of the map. I know it costs more to print both sides, and it could confuse organisers with rules that are different for IOF events but, rightly or wrongly, it is actually done quite a bit at our National events.

What do You think?

— Ken Brownlie
OAWA

Straight Lines

At the recent Xmas 5-days the issue of 2 consecutive legs set in a near to straight line came up. Normally these don't present much of a problem, however on 2 consecutive days this caused problems – on one day controlled by me. The problem was that the middle circle (control) was in very detailed granite and simply got lost amongst the detail on the map especially in contrast to the following circle which stood out clearly. In addition the control number had to be printed off about 1cm in a whiter area so was not on the line of the 2 successive legs. My mistake on this course cost 4 runners a lot of time because by the time they had got to the 2nd flag and realised their mistake they had gone a cross a river. I did the same thing running the previous day's course but blissfully was ignorant until the finish.

— Eric Baker
OANSW

P.S. I agree with last edition's soapbox comments that a lot of championship courses are set too long. I would run/train more than

most in my class but I am still not sufficiently fit enough to be able to last the times/distances being set in our class recently and I know it's a turnoff to a lot of average orienteers, especially those trying to come up the junior classes.

Technical Snippets

Here I've listed a number of complaints/comments collected from National events in the past twelve months:

The start triangle: In accordance with OA Rule 22.7, the point where orienteering begins shall be . . . marked in the terrain by a control flag but no marking device.

Comment: I think all national level events run by states should use a control flag to mark the Start, in accordance with the Rules. We should start to phase out the use of triangles. However, where a triangle is used it should be at least 700–1000mm on all sides and be placed so that it is very visible.

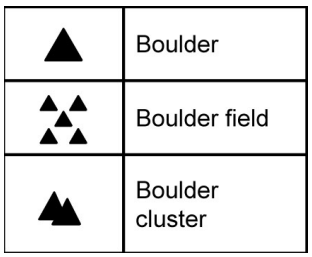
The start position: An event was allowed to go ahead with the start triangle marked on the map in the wrong location. To make matters worse, the next day, the same start triangle was again used.

Comment: When a mistake like this occurs, it must be corrected, particularly for the next day. Either the start flag must be shifted on the ground, or all maps must be corrected by hand and re-bagged, if alternative printing is not available.

Distinctive tree: In a recent national event, a small blob of white on a yellow background was described as a distinctive tree and used on medium and hard navigation courses.

Comment: There is a basic rule in orienteering that a feature MUST be described as the mapper showed it. There is a symbol for a distinctive tree to be shown on a map. What the course planner used was an area of white, which may or may not have represented one, or several trees. To be correct, the course planner needed to suggest to the mapper, with the approval of the controller, to change the symbol on the map from a blob of white to a green circle.

Mis-use of boulder field symbol: There has been an increasing use of individual boulder field symbols as control sites, described as boulder clusters.



Comment: From a mappers point of view, a boulder field is an entirely different rock feature than a boulder cluster. The ISOM decrees that a boulder cluster is a small group of boulders so closely clustered together that they cannot be marked individually. Most mappers also require that a boulder cluster stand on its own as a discreet group of rocks, such that a control flag could be placed on any side. Where a boulder cluster is over four metres in height, it maybe drawn as a large boulder, simply because of its size.

In contrast, a boulder field loses the discreetness. It is just a jumble of rock, sometimes including perfectly suitable boulders, that cannot be mapped individually. Boulder fields are also used by mappers in areas of rocky ground, to indicate, that there are also larger rocks in the area. Boulder fields can be used to generalise an area, so that room can be made for the next group of features. Finally, on most granite maps there are more suitable sites for controls than boulder fields, be they small or large in area.

Poor choice of colours used on maps:

Comment: Whatever system is being used for course planning the colours have to be set in the OCAD map. Where the map is being digitally printed then it is essential that a trial print be organised well ahead of time, in order to avoid last minute concerns. If the printer you plan to use has already printed orienteering maps, then they will know the settings required to produce a certain result. Ask the printer what colour settings you should use. Every printer is different, and changes can occur if the paper is of a different thickness or

coating. Two different brand printers given the same job, using the same paper, will give a different result. This should not be the cause of dispair, but rather a reminder that all of these problems can be overcome by planning well ahead.

— Eric Andrews
QOA

Sprint distance – 30 m rule

Taken from a recent post of O-Net, Stephen Gilmore asks:

"Does the 30m rule ('19.4 Controls shall not be sited within 30 m of each other') apply to street/sprint events?

At the Swiss 5day the first leg was in the town of Bellinzona. My son H12 mispunched on the very first control (and it looks like several others in his class did the same) as 2 controls on very similar features (i.e. inside corner of a building) were within approx 17m of each other.

I had presumed that there must be separate rules for sprint/street events, but I can't find any reference on the IOF website."

This reply came from David May:

"As the Technical Director of the recent World Cup first round in GBR, I had exactly the same question regarding the Sprint races where I actively wanted to have some controls closer togather than 30 metres. The current IOF Rules apply to all IOF races so, despite applying for a deviation from the Rules, we were unable to plan for the smaller separation.

However, IOF Rules don't necessarily apply to non-IOF events and it is quite possible that the Swiss 5-day Sprint race was planned to different criteria."

There's some food for thought here. Of course, the 30m rule applies to OA events – it's rule 19.4 for us as well. This means that rule is binding for all group A and B events (Badge events and above), and should be used as a template for other events.