COURSE SETTING
DEGREES OF DIFFICULTY & COURSE FORMAT

This paper is primarily designed to assist course setters and controllers for NSW State League events.

The text in this paper is mostly copied from Orienteering Australia's Foot Competition Rules, which forms part 2.1 of OA's Operational Manual. *Italics* indicate text that is relevant for international or national competition, but less so in NSW for State, local or club events. [Times New Roman text] in square brackets has been added by ONSW.

Courses – degrees of navigational difficulty

This section is based on paragraph 3.1 of Appendix 1 to the "Competition Rules for Orienteering Australia Foot Orienteering Events".

The degrees of navigational difficulty are defined as follows:

Very Easy Course must follow drawn linear features (tracks, fences, etc.). A control site is needed at every turning point and all control markers must be visible on the approach side. Large obvious features, visible from and close (<25m) to the linear feature may also be used as control sites.

Easy Control sites must be on or near drawn linear features [eg track, fence, creek] but preferably not at turning points. This gives the opportunity to follow handrails or to cut across country. Short distances along large linear features that are not drawn (such as large gullies or well-defined spurs) may be included in the course but then catching features are essential. Control markers should be visible from the approach side by any reasonable route.

Moderate Course should have route choice with big attack points near control sites and catching features less than 100m behind. Control sites may be fairly small point features and the control markers need not necessarily be visible from the attack point.

Hard Navigation should be as difficult as possible with small contour and point features as the preferred control sites; there should be no handrails and no large attack points nearby. Route choice should be an important element of most legs.

Course Format

With the exception of the next paragraph, this section is based on Appendix 8 to the "Competition Rules for Orienteering Australia Foot Orienteering Events". The OA Appendix is largely drawn from the IOF's Competition Rules for IOF Foot Orienteering Events.

[Non-formatted courses

ONSW Manual on Course Standards says: "There may be areas where good courses can be set, but it is difficult to set good courses in a particular format. Controllers should consult with the Technical Director if they believe this is the situation and want to allow non-formatted courses." In such cases, the course setter would aim to set courses that are the best possible courses on the area.]

1 Sprint

1.1 The Profile

The Sprint profile is high speed. It tests the athlete's ability to read and translate the map in complex environments, and to plan and carry out route choices running at high speed. The course must be planned so that the element of speed is maintained throughout the race. The course may require climbing but steepness forcing the competitors to walk should be avoided. Finding the controls should not be the challenge: rather the ability to choose and complete the best route to them. For example, the most obvious way out from a control should not necessarily be the most favourable one. The course should be set to require the athletes' full concentration throughout the race. An environment which cannot provide this challenge is not appropriate for the Sprint.

1.2 Course planning considerations

In Sprint spectators are allowed along the course. *The course planning shall consider this, and it may be necessary for controls to be manned. It may also be necessary to have guards at critical passages alerting spectators of approaching competitors and making sure the competitors are not hindered. The start should be at the Assembly Area and spectator sites may be arranged along the course. The spectator value could be enhanced by building temporary stands and having an on-course announcer. Both spectator sites and sites for media/photographers shall be announced at the Assembly Area.* The course must be planned to avoid tempting competitors to take shortcuts through private property and other out-of-bounds areas. If there is such a risk, a referee should be at such locations to prevent possible attempts [the referee should wear high vis gear and this should be announced beforehand]. Areas so complex that it is doubtful whether a competitor can interpret the map at high speed should be avoided (e.g. when there are complex three-dimensional structures).

As urban sprint maps contain significant un-crossable areas (buildings etc), general practice is to measure sprint courses as the straight line distance for these maps. As this is not strictly in agreement with Rule 16.3 which was designed for courses in a forest setting, the organiser should advise in the event information how the course distance is measured. The course planner should however calculate the expected actual running distance to ensure that the courses will meet expected winning times.

[I suspect all controls at IOF events, eg World Championships, need to be manned for security reasons. NSW clubs do not have the resources to man all controls. If security is an issue, controls might need to be secured by a chain and padlock to a fixture.]

1.3 The map

The ISSOM specification shall be followed. The map scale is 1:4000 or 1:5000. It is crucial that the map is correct and possible to interpret at high speed, and that the mapping of features that affect route choice and speed are accurate. In non-urban areas, the correct mapping of conditions reducing running speed, both to degree and extent, is important. In urban areas, barriers hindering passage must be correctly represented and drawn to size.

1.4 Winning time, start interval and timing

The winning time, for both women and men, shall be 12-15 minutes, preferably in the lower part of the interval. The start interval is not less than 1 minute and a time-trial, individual format is used. Timing is to at least 1 second using electronic means. *The competitor must have actually started*

before having access to the map. [In State League events, it is OK for a competitor to pick up a map, not look at it and then punch a start control.]

2. Middle Distance

2.1 The profile

The Middle distance profile is technical. It takes place in a non-urban (mostly forested) environment with an emphasis on detailed navigation and where finding the controls constitutes a challenge. It requires constant concentration on map reading with occasional shifts in running direction out from controls. The element of route choice is essential but should not be at the expense of technically demanding orienteering. The route in itself shall involve demanding navigation. The course shall require speed-shifts, e.g. with legs through different types of vegetation.

2.2 Course planning considerations

The course should be set to allow competitors to be seen by spectators during the course of the race as well as when finishing. The start should be at the Assembly Area and the course should preferably make runners pass the Assembly during the competition. The demand on [selection] *of the Assembly Area is subsequently high, providing both suitable terrain and the opportunity to make runners visible to spectators.* Spectators are not allowed along the course except for parts passing the Assembly (including controls in the Assembly Area).

2.3 The Map

The standard ISOM specification shall be followed. The preferred map scale is 1:10000. The terrain shall be mapped for 1:15000 and then be strictly enlarged as specified by ISOM.

2.4 Winning time, start interval and timing

The winning times are as specified in [the ONSW Manual]. The start interval is not less than 2 minutes and a time-trial, individual format is used. [Starts can be at 1 minute intervals if a queueing start, with no allocated start times, is used.] Timing is to 1 second, by electronic means. *The competitor shall have actually started before receiving the map.*

3 Long Distance

3.1 The profile

The Long distance profile is physical endurance. It takes place in a non-urban (mostly forested) environment, and aims at testing the athlete's ability to make efficient route choices, to read and interpret the map and plan the race for endurance during a long and physically demanding exercise. The format emphasises route choices and navigation in rough, demanding terrain, preferably hilly. The control is the end-point of a long leg with demanding route choice, and is not necessarily in itself difficult to find. The Long distance may in parts include elements characteristic of the Middle distance, with the course suddenly breaking the pattern of route choice orienteering to introduce a section with more technically demanding legs.

3.2 Course planning considerations

The course should be set to allow competitors to be seen by spectators during the course of the race as well as when finishing. Preferably, the start should be at the Assembly Area and the course should make competitors pass the Assembly during the competition.

A special element of the Long distance is the long legs, considerably longer than the average leg length. These longer legs may be from 1.5 to 3.5 km, depending on the type of terrain. [Legs this long can be hard to set on a computer screen, it's best to print the map and plan the legs on paper!] The course should [include] two or more of such long legs, (still requiring full concentration on map reading along the route chosen).

Another important element of the Long distance is the use of course setting techniques which break up any grouping of runners, *such as the use of butterflies* and routing the course through technical or low visibility terrain. Spectators are not allowed along the course except for sections passing through the Assembly (including controls in the Assembly Area).

3.3 The map

The standard ISOM specification shall be followed. *The map scale is as defined in Rules 15.2 and 15.3.* [At NSW state events, the controller can make the call on scale. 1:15,000 is better if the map is not particularly detailed and/or if the courses have very long legs - a 2km leg is 20cm long on a 1:10,000 map; making it difficult to study route choices on the run.]

[If a mix of 1:15,000 and 1:10,000 maps is used, Hard 1-3 would usually have 1:15,000 maps. Condes is the only course setting program that allows more than one scale to be used from the one course file. If you have two course files, please specifically check that controls on both the 1:15,000 and 1:10,000 maps are on the same feature.]

3.4 Winning time, start interval and timing

The winning times are given in [the ONSW Manual]. The start interval is 2 minutes and a time-trial, individual format is used. [Starts can be at 1 minute intervals if a queueing start, with no allocated start times, is used.] Timing shall be to 1 second using electronic means. *The competitor shall have actually started before having access to the map.*

Andrew Lumsden
ONSW Technical Director

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