Technical Difficulty Summary – by Carol McNeil

Technical Difficulty 1 - WHITE - (M10B W10B)

For children aged 6 – 12 who may not be able to set the map, have to check the legend to know that the black dashes are paths, and may think the brown lines are roads.

Step System Skills:

- ✓ Understand map colours and commonly used symbols
- ✓ Orient the map using compass and terrain
- ✓ Orienteer along tracks and paths
- ✓ Make decisions at 'Decision Points' identified by a control site

Routes and Route Choice	Number of controls
Route all along tracks & paths No route choice No junctions to negotiate between controls	Controls reasonably close together (200m maximum) A control at every Decision Point. In spite of each other if not straight on
Control Sites	**Relocation & cost of errors**
Controls on distinct line features Paths, tracks-junctions, crossings & bends Features on paths e.g. bridges, gates, to give variety to the control descriptions The banner & punches at a control should be sited 2-5m in the direction of the next control.	Relocation should not be needed

- ➢ Pre-marked maps should be made for these orienteers.
- ➢ As far as practicable, start line, master maps and the first control should be in a straight line.
- ➢ Nothing should detract from producing a course that all competitors can complete successfully. The aim is confidence.
- ➢ A simplified map would be adequate or a full coloured large scale may be used.

Technical Difficulty 2 - YELLOW - (M10A W10A M12B W12B)

For children who understand the legend, can set the map, and realise they have to decide what to follow and in which direction.
For adults who have never orienteered before and are not familiar with maps

Step System Skills

- ✓ Orienteer along obvious line features (handrails)
- ✓ Make decisions at a 'Decision Point' without the assistance of a control to identify it as such.
- ✓ Leave a line feature to go to a visible control site near to it, then return to that line feature

Routes and Route Choice	**Number of controls**
Route all along obvious line features Such as tracks, paths, fences, walls, rivers, large ditches and very distinct vegetation boundaries. No route choice problems. Use a variety of line features to add interest	Controls fairly close together (350m maximum) Leg lengths should not vary greatly **A control is not needed at every Decision Point, but there should not be more than two D.P's per leg.** **No more than two junctions to negotiate between consecutive controls.**
Control Sites Distinct line features. On the line feature along which the competitor is travelling. Obvious other features close to, with the banner visible from the line feature e.g. knolls, boulders.	**Relocation and cost of errors** Relocation should not be needed

- ➢ Most areas can offer this standard, particularly if short sections of taped route are used.
- ➢ In technical areas or where points are too close together routes should be taped. The tape should start and finish on definite features. Make sure competitors know that they have to follow the tape (put up a large notice at the control where it starts AND state it on the control description sheet)
- ➢ Pre-marked maps should be supplied if at all possible (at registration)
- ➢ The challenge is in deciding WHAT to follow. If they decide correctly they are rewarded with a control very soon.
- ➢ The competitor will not necessarily recognise 'jargon' descriptions e.g. ride, knoll Use the descriptions sheets to explain the term e.g. knoll (= a small hill)

Technical Difficulty 3 - ORANGE/RED - (M12A W12A M14B W14B)

For:

- ❖ Confident Youngsters progressing from Yellow, age 9 upwards. They may still be very small.
- ❖ Older beginners with some knowledge of map reading and those progressing from Yellow.
- ❖ Family groups

Keep in mind that those just progressing from Yellow/TD2 will not have learnt how to use a compass or contours.
Precise distance judgement should NOT be necessary.

Step System Skills:

- ✓ Corner cutting
- ✓ Basic use of compass to allow shortcuts through the terrain between two line features.
- ✓ Navigate a short leg on a rough compass bearing to a control on or in front of a collecting feature.
- ✓ Simplification of legs with several Decision Points
- ✓ Make simple route choice decisions

Routes and Route Choice	Number of controls
For controls not on a line feature then a route along line features to an obvious attack point should be possible Simple route choice problems, with the quickest routes being direct through runnable terrain to good catching features; but slightly longer alternatives using line features must be available	Relatively frequent controls on short courses, less so on longer ones Legs of different length
Control Sites	**Relocation & cost of errors**
Any line feature Prominent point or contour features, but these should be easily found from an attack point on a line feature Sunken features adjacent to attack points	There should be a collecting feature close behind all controls that are not on a line feature.

- ➢ The navigational problems here are based on introducing route choice “Which way shall I go?” as well as “What shall I follow”
- ➢ The planner should encourage simple compass work – map orientation, the following of rough compass bearings from attack points or to cut between line features – without requiring accurate bearings or compass and pacing.
- ➢ Recognition of contour features is introduced by using them as control sites, but contours are not yet used for navigation between sites.
- ➢ Features on the map should be clear on the ground and the ground should be a good representation of the map (!) e.g. if a path junction is to be used for correct navigation there should not be a lot of other small paths that have not been mapped; similarly with ditches and streams.

Technical Difficulty 4 - LIGHT GREEN - (M14A W14A M16B W16B)

- For juniors and adults progressing from orange - learning how to use contours, compass, distance estimation and route choice techniques.
- Now the competitors should be able to read much of the information on the map, so the courses are teaching them the techniques of the sport - route choice, running direct to a catching feature instead of following line features, using rough compass for navigation.
- For competitors who are almost ready to navigate through anything. Navigation by contour information is a new and important skill: straightforward tests of it should be given frequently.

Step System Skills;

- ✓ Navigate long legs on a rough compass bearing to a collecting feature
- ✓ Fine orienteering on short legs using an accurate bearing
- ✓ Navigate for short distances using simple contour features - hills, ridges, large re-entrants and spurs.

Routes and Route Choice	Number of Controls
Significant route choice problems Course as a whole contains legs demanding a range of different techniques (e.g. long route choice legs, short map reading legs)	As few as necessary for good planning based on the length of the course legs of different lengths
Control Sites	**Relocation & Cost of Errors**
Any features provided that the map permits navigation into the control Any feature provided that complex map reading (particularly contour detail) is not required. Place controls on distinctive features	Collecting features behind all controls. Errors should not be expensive in terms of time lost.

- ➢ The courses should require full use of compass skills (i.e. compass and pacing as well as rough compass work). Planners should encourage the use of major contour features (picking off hills and valleys as they are crossed, running along ridges and re-entrants, contouring) for navigation over short distances e.g. from an attack point.
- ➢ Pay attention to runnability - bracken, brambles and brashings can become a jungle of fight for a W12 or less agile M60.
- ➢ Inexperienced juniors and seniors with failing eyesight find it difficult to pick out fine detail. The map picture must be easy to read. Place controls on distinctive features.

Technical Difficulty 5 and 5* - GREEN/BLUE/BROWN/BLACK
GREEN/BLUE - M16A W16A M18B W18B
BROWN/BLACK - M18A+ W18A+

Hard but fair – competitors should be pushed to the limits of navigational skill, not into the realms of chance (e.g. trying to find a pit on a compass bearing, the pit and marker being visible from 10m and the reliability of the bearing being 20m)

Step System Skills;

- ✓ Navigate for long distances using only major contour features (5)
- ✓ Read and interpret complex contours (5)
- ✓ Concentration over long distances (5*)
- ✓ Recognition of indistinct features (5*)
- ✓ Use all the different skills and adapt speed & technique to changes in the terrain and orienteering difficulty (5*)

Routes and Route Choice	**Number of Controls**
Significant route choices	As few as necessary for good planning
Course should force regular changes in technique e.g. long route choice followed by short intricate legs	Legs of different length
Test the ability to navigate by indistinct features – low contour detail such as features appearing on one contour in undulating terrain. Note that "indistinct" does not mean features that should **not** have been mapped in the first place.	

Control Sites	**Relocation & cost of errors**
Any feature, particularly those demanding careful map-reading to locate but the banner must not be hidden, nor the control excessively isolated (no Bingo controls)	Relocating features relatively near to all controls but not so close as to be used as 'optimum route' attack points (5) Errors should not be very expensive in terms of time lost. (5)

5* - Control sites far from obvious relocating features – line features, big hill summits, major valley bottoms, significant slope changes (5*)

The control will need to be found by either

Careful map reading all the way in from a relatively distant attack point or

Running roughly into the vicinity of the control, relocating using the available contour detail, then swinging into the control itself.

In either case, the ability to relate small-scale (5m high rather than 25m high) relief to contour detail on the map should be being tested. This obviously requires good contour mapping of undulating ground.

Errors can result in a large time loss because of the difficulty in relocating in complex terrain close to the control (and **not** simply because the thickness of vegetation or the roughness of ground make getting out to relocate a slow process) (5*)

5 – The higher quality orienteering areas in parts of GB allow most of a course to be planned at this level.
In other areas, small pockets of land allow one or two legs of this difficulty to be planned.
Open fell areas may demand level 5 TD but will not uphold 5* because of the visibility making it 'too easy'.
5* - there are not many areas in GB supporting this level of TD. Such areas support the planning of courses that properly test the full range of orienteering techniques at the highest level.

Green (M60+ W60+)
For competent and very competent orienteers who lack the physical fitness for the longer courses and rougher terrain.
Seniors with failing eyesight (M/W 45+) find it difficult to pick out fine detail. The map picture must be easy to read. Place controls on distinct features.
A leg that is acceptable to a fast runner may be boring to a competitor going much more slowly on a course. Consider controls found per 30minutes.