



INTERNATIONAL SPECIFICATION FOR MOUNTAIN BIKE ORIENTEERING MAPS



Jukka Liikari, 2010





DEFINITION

In MTB-O the course shall be completed by the competitor by riding, carrying or pushing his/her mountain bike.



DEFINITION

The event area must contain a comprehensive network of tracks and paths of differing qualities.





EQUIPMENT

- mountain bike (roadworthy)
- map holder
- protective headgear
- start number bib
- electronic punch card must be connected to the cycle
- competitors may carry tools and spare parts



DEFINITION

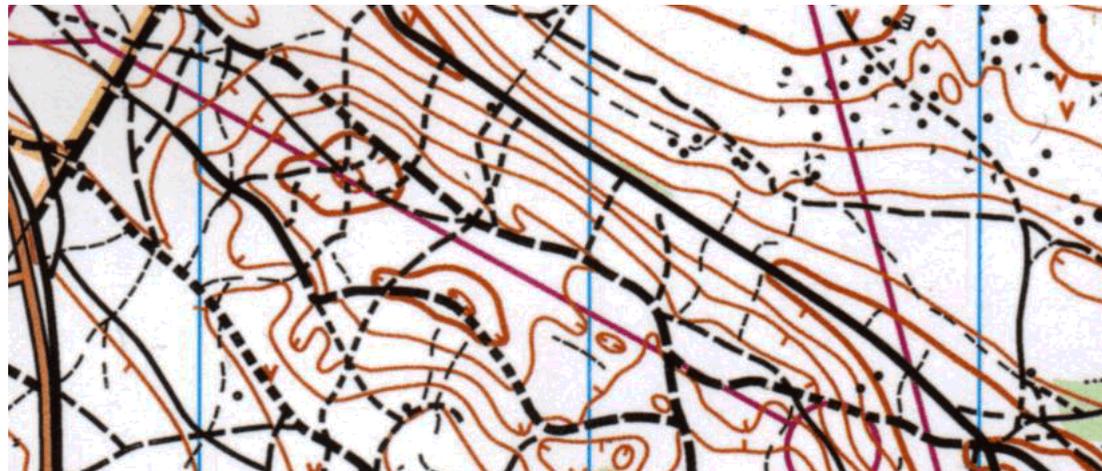


Riding off the track or trail is normally not allowed unless specifically agreed by the organiser and IOF Event Advisor.



DEFINITION

Maps, course markings and additional overprintings shall be drawn and printed according to the international specification



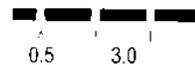
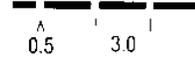


ISOM 2000

- The first official specification
- Riding classification:
 - Easy, slow, difficult
- Width classification:
 - Track: more than 1.5 m wide
 - Path: less than 1.5 m wide

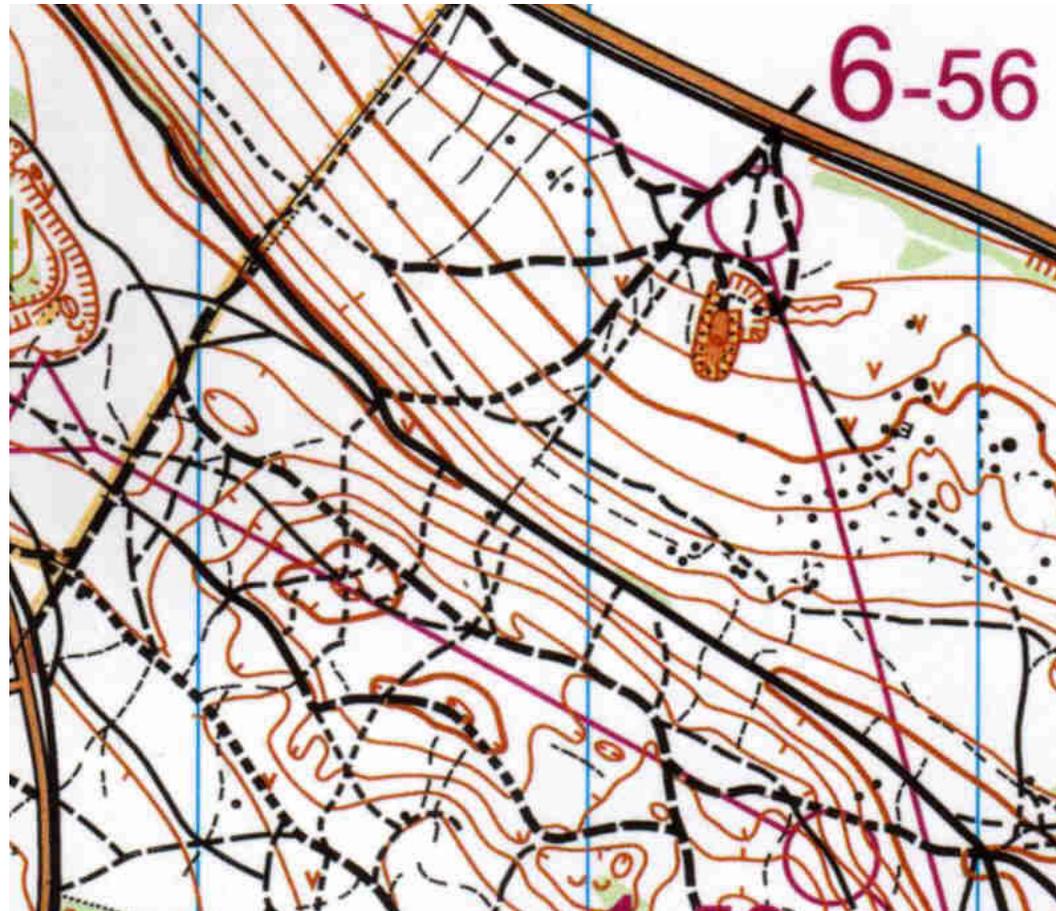
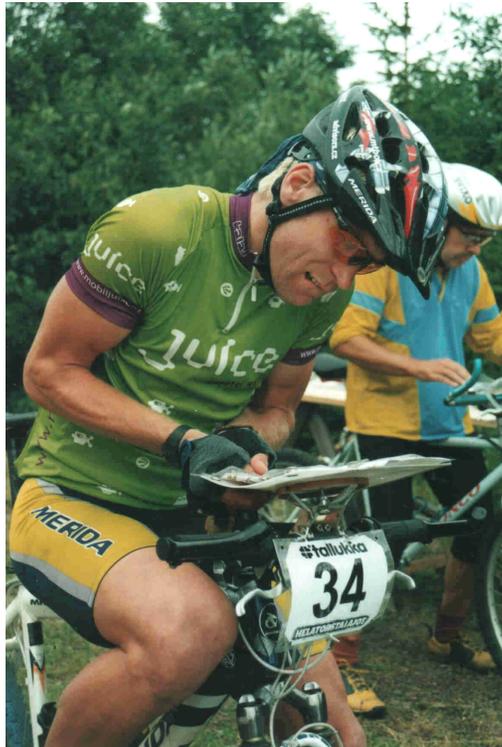


ISOM 2000

	0.6	<p>811 Track: easy riding A track with stabilised surface at least 1.5 m wide. Forest road or well maintained track with no obstacles. Colour: black.</p>
	0.35	<p>812 Path: easy riding Well maintained path narrower than 1.5 m. Smooth, clean path with no erosion or obstacles. Colour: black.</p>
	0.6	<p>813 Track: slow riding A track at least 1.5 m wide. Infrequently used, with ruts, grassy, wet, muddy or sandy. Possibility of rocky surfaces. Pedalling is more difficult, riding is slowed. Colour: black.</p>
	0.35	<p>814 Path: slow riding Path narrower than 1.5 m, through difficult terrain, with rocky or banked surface. Other characteristics as in 813. Colour: black.</p>
	0.6	<p>815 Track: difficult to ride Rarely used track at least 1.5 m wide, with obstacles such as roots or rocky steps. Many obstacles, stones, rocks, erosion, mud, lad slides or sand. Very slow or impossible riding. Could necessitate to carry bike. Colour: black.</p>
	0.35	<p>816 Path: difficult to ride Path narrower than 1.5 m, through very difficult terrain. Mountain paths with many obstacles. Other characteristics as in 815. Colour: black.</p>



World Cup 2001 (Finland)





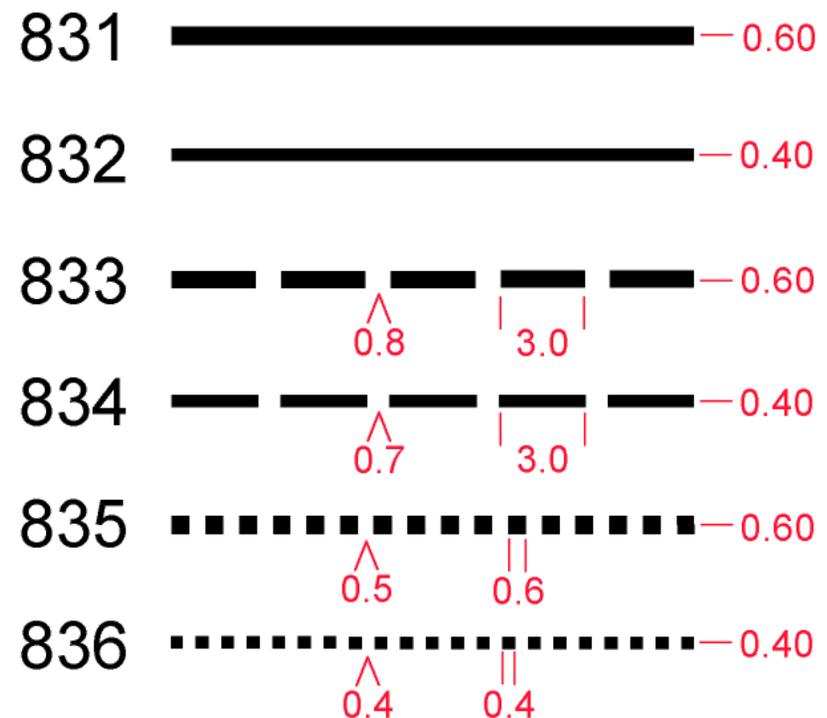
The first World Championships in 2002 in Fontainebleau, France

- the proposal to modify track symbols came from organisers in January 2002
- IOF MTB-O Commission and Map Commission made decisions in February 2002
- modified symbols used in all competition maps
- well received by competitors



ISMTBOM 2002

- Two line widths for track width classification
- Three line types for riding classification: easy, slow, difficult



World Championships 2004 in Australia

- the proposal from organisers in January 2003

	riding surface		
	good	medium	poor
road/major track	————	—— ———
minor track	————	—— ———
path	————	—— ———
indistinct track/path		—— ———
bitumen road		=====	

- IOF made some minor changes, but not to the track and path symbols

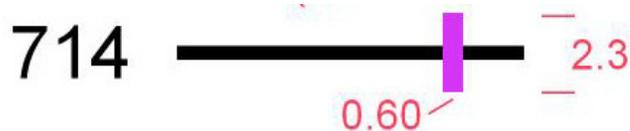


NEW SYMBOLS 2004



Forbidden route **(Changed in 2010)**

A route which is out-of-bounds is shown with crosses.



Dangerous object across tracks or paths **(Changed in 2010)**

These barriers must be highly visible on the map and should be overprinted in purple. Crossable barrier as a short dash. Uncrossable barrier or out of bounds a cross or series of crosses (711).



NEW SYMBOLS 2004

301 

304 

309 

A blue line surrounds the symbols Lake (301),
Uncrossable river (304) and Uncrossable marsh (309).
Colour: blue 100 %, line width 0.25 mm

Other proposals 2005-2006...



ISM TBOM 2007

- unofficial (never approved by the Council), but in use in 2008-2009
- testing
- comments from athletes
- discussions between MTBO Commission, Athletes' Commission and Map Commission



CHANGES TO THE SEASON 2007

100 % black is used
only with track symbols.

The colour of the other
symbols, which are 100
% black in orienteering
maps, is 70 % black in
MTB-O maps.





ISMTBOM 2010

- The 5th specification during the 11 years' period
- four official ones (2000, 2002, 2004, 2010) and an unofficial (2007) one
- Approved by the IOF Council in May 2010
- Valid from May 15, 2010
- Published finally in July, 2010





ISMTBOM 2010

Scales and symbol sizes

1:20000 for long distance events

1:15000 for relay, middle and long distance events

1:10000 for relay, sprint and middle distance events

1:7500 and 1:5000 for sprint and sprint relay events

1:20000 as specified in ISMTBOM publication

1:15000 as specified in ISMTBOM publication

1:10000 enlargement 1,5x from 1:15000 map

1:7500 enlargement 1,5x from 1:15000 map

1:5000 enlargement 1,5x from 1:15000 map





ISMTBOM 2010

The order of the colours

- upper purple: all purple symbols except control points (circles) and lines between them
- black: track and path symbols
- lower purple: control points (circles) and lines between them
- black 70 %: symbols
- brown
- blue
- green
- yellow





ISMTBOM 2010

Tracks and paths

- The most important change in ISMTBOM 2010
- Still two line widths: tracks 0.60, paths 0.40

Riding speed on tracks and paths is divided into **four** categories according to possible cycling speed.

The following ratios apply:

Fast riding	75-100 %
Medium riding	50-75 %
Slow riding	25-50 %
Difficult to ride	max 25 %





ISMTBOM 2010

831 Track: fast riding

————— - 0.60

A track with stabilised surface, at least 1.5 m wide.
Forest road or well-maintained track with no obstacles.

832 Path: fast riding

————— - 0.40

Well-maintained path narrower than 1.5 m. Smooth,
clean path with no erosion or obstacles.





ISMTBOM 2010

833 Track: medium riding



A track at least 1.5 m wide with some reduction in speed with the possibility of small obstacles such as stones, rocks, ruts, grass, sand or mud.

834 Path: medium riding



A path narrower than 1.5 m wide with some reduction in speed with the possibility of small obstacles such as stones, rocks, ruts, grass, sand or mud.





ISM TBOM 2010

835 Track: slow riding  — 0.60

A track at least 1.5 m wide, with obstacles to require the riders to choose their way to avoid obstacles such as stones, rocks, ruts, grass, sand or mud. Possibility of rocky surfaces. Pedaling is more difficult, riding is slowed. Skilled/fit riders will pass. Less skilled/fit riders may have to dismount

836 Path: slow riding  — 0.40

A path narrower than 1.5 m wide, with sufficient obstacles to require the riders to choose their way to avoid obstacles such as stones, rocks, ruts, grass, sand or mud. Possibility of rocky surfaces. Pedaling is more difficult, riding is slowed. Skilled/fit riders will pass. Less skilled/fit riders may have to dismount



ISMTBOM 2010

837: Track: difficult to ride 

A track at least 1.5 m wide, with difficult obstacles such as roots, deep sand/mud, erosion or rocky steps. Very slow riding or impossible to ride. Skilled/fit riders may be required to dismount.

838: Path: difficult to ride 

A path less than 1.5 m wide, with difficult obstacles such as roots, deep sand/mud, erosion or rocky steps. Very slow riding or impossible riding. Skilled/fit riders may be required to dismount.



ISM TBOM 2010

New Symbols

509.1 Narrow ride



Non-ridable narrow forest rides should be represented

711 Forbidden route



A route which is out-of-bounds and forbidden to cross is shown with a zigzag. The zigzag line should be as continuous as possible. If there is a crossing point over the forbidden route, it shall be presented like a gate by two perpendicular lines over the forbidden route



ISMTBOM 2010



810 Control point and focus point

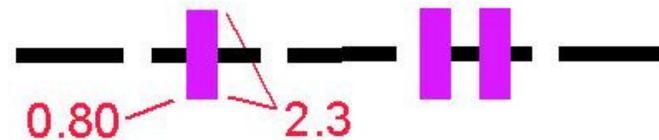
The focus point (i.e. the point in the centre of a control circle) can be used when it is necessary to clarify the exact position of a control for instance in a dense track network. The focus point shall be used in case of Necessity when the exact position of a control is not clear. A focus point helps to specify the exact track where a control is situated.

Colour: lower purple (circle), upper purple (focus point).

Diameter of control circles 5.5-6.0 mm (the same in all scales), width of line 0.60 mm, diameter of focus point 0.60 mm.

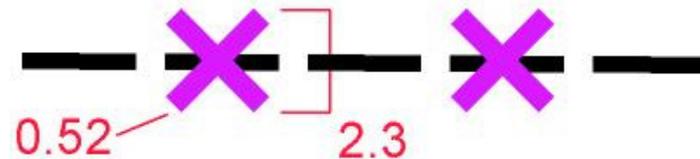


ISM TBOM 2010



843 Dangerous object across tracks or paths, stairs
These barriers must be highly visible on the map and should be overprinted in purple. The symbol should be used for all obstacles that are difficult to cross. For uncrossable barrier symbol 844 shall be used. This symbol can be used for stairs. There is no particular stair symbol.

ISM TBOM 2010



844 Uncrossable barrier / forbidden to cross

This symbol can be used for all spots that are forbidden or impossible to pass. e.g. uncrossable barriers; fences or walls that are forbidden or impossible to cross; short sections of roads, tracks or paths that are forbidden to use (for longer sections symbol 711 shall be used). In spots where two tracks or paths almost meet, but the situation is not obvious on the map, this symbol can be used to indicate that crossing is forbidden.



ISM TBOM 2010

839 Area where off-track riding is allowed and possible
This symbol describes an off-track area which may be ridden on in a terrain where off-track riding is normally forbidden. The symbol can also be used for small areas with path networks that are too dense to be mapped properly.

Black dots/Black pattern/Orange/Yellow ?

This symbol will be tested by IOF MTBO Commission in the international MTBO competitions during 2010-2011.
The aim is that it will be officially approved by IOF in 2012





Specification for MTBO maps in Internet

The official IOF web site:

<http://www.orienteering.org/>

-> Rules and Guidelines

-> Mapping Standards

or directly at:

<http://lazarus.elte.hu/mc/>



