



FOC 1 – 13 / Item 3 / 17 January 2012

Determining the WOC finals starting orders

The Foot Orienteering Commission, in conjunction with a Reference Group appointed by Council, has been tasked to develop a proposal for WOC qualification and starting order once qualification races are abolished for the middle and long distance (in 2014).

The Foot Orienteering Commission has prepared a separate document proposing a qualification model and this document is proposing how to determine the WOC finals starting orders.

With the removal of WOC qualification races, an alternative method will need to be found to determine the starting order in the middle and long distance finals. Major priorities in determining a starting order are:

- Competitors likely to be candidates for medals should, as far as possible, experience conditions as similar as is feasible (with respect to tracking, weather etc.).
- Competitors likely to be candidates for medals should start close to the end of the starting sequence, to allow broadcasters to fit the key parts of the competition into a limited time window. This is also incorporated in the guidance from Council.

These priorities point to the simplest model for the WOC starting order being simply the reverse of the competitors' individual World Ranking positions as of the start of WOC, and this would indeed be a feasible model. However, there are some other factors which should be considered before finally determining the starting model.

This paper should be read in conjunction with the companion paper on WOC qualification models. Based on the proposals put forward in that paper, and recent experience of the number of countries represented at WOC, it is assumed that the field size in each event will be approximately 70 for women and 80 for men.

Considerations in a World Ranking based start order

There are a few factors which may prevent a reverse World Ranking start list fully achieving the objectives above, or raising other issues of fairness. There are also some points of detail which would need to be finalised. These include:

1. Competitors with unrepresentative rankings

Some competitors in a WOC final are likely to have World Rankings which are not representative of their ability. This usually involves people whose World Ranking score is worse than their ability suggests – most often because they do not have a full set of World Ranking scores because of injury, illness or pregnancy. (It is rarer for WOC runners to have a ranking score which is unrepresentatively good – possible scenarios for this are a competitor who has an outstanding domestic record but is much weaker in terrain outside his/her home country, or a sprint specialist who has obtained all their ranking points in sprint events).

The reason this is potentially an issue is because it introduces a risk that a potential medallist will start early in the start sequence – and possibly be missed altogether by a TV broadcast covering, say, only the final 20 starters. This is illustrated by the WOC 2012 results (see tables following) – had the starting order being determined by reverse World Rankings, men's middle distance gold medallist Edgars Bertuks would have started 17th in a field of 45. (It is also worth noting that Simone Niggli's World Ranking fell to 481st in early 2012, and was still 140th as of the start of the 2012 European Championships).

It is difficult to find an obvious solution to this issue and we will need to accept that sometimes a medallist will come from the early starters. Three partial, but complex, solutions might be:

- (a) Introduce the concept of a 'protected' ranking, where someone who has been absent for an extended period can use their pre-absence ranking for competition entry purposes for a certain period after their return. This has been used in tennis (although we are not sure if it still is).
- (b) Link the starting order to the ranking of nations in some way – for example, it would be possible to introduce a provision that all competitors from Division 1 nations start in the last 40, or that no-one from a Division 1 or 2 country could start in the first 10. The logic here would be that someone who is good enough to be selected by a Division 1 or 2 country is likely to be good enough to justify a later position in the start order, even if their individual World Ranking is weak.
- (c) The inclusion of a small number of 'wild card' places in a Red Start Group (or equivalent) which could be allocated by FOC (or Council, or another responsible body), under clearly defined criteria (e.g. a competitor who has achieved at least one WOC podium position in the relevant distance in the last three years).

These provisions would be complex, (a) would be difficult to administer, and (c), unless framed very carefully, could face accusations of lack of objectivity. They would also not help with the situation where someone performs much better at WOC than their previous record suggested. Returning to the example of Edgars Bertuks in 2012, prior to WOC 2012 he had never been ranked higher than 33rd (he was 61st on 30 June 2012), and had not placed in the first 30 in any individual WOC race in either 2010 or 2011.

It should be noted that the 2012 case is unusual. Out of a possible 61 middle and long distance medals in the 2008-2012 period (including a tie for bronze in 2010), only five have been won by an athlete who was ranked outside the top 30 – which roughly equates to a starting position in the last 15, as only about half the top 30 normally contest any individual race - before the start of WOC (two by Bertuks, plus Emma Claesson (2010 long distance bronze, ranked 56th), Vroni König-Salmi (2008 middle distance silver, ranked 39th) and Judith Wyder (2011 middle distance bronze, ranked 31st).

By way of comparison, three medallists in that time have started outside the last 15 (outside top 5 in their qualifying heat) when qualification races are used to determine the start order – Ida Bobach (2011 middle distance silver, qualified 10th), Minna Kauppi (2008 middle distance gold, qualified 8th) and Radka Brozkova (2008 middle distance bronze, qualified 11th). For interest, 27 of the 61 medallists (including 9 of 20 gold medallists) won their qualifying race, but only 4 gold medallists were ranked 1st in the World Ranking prior to WOC.

It should also be anticipated that once the World Ranking is used to determine the WOC starting order, it is possible that leading competitors will give a higher priority to World Ranking Events in the lead-up to WOC, reducing the risk of unrepresentative rankings at WOC.

2. Should ranking points for all events be used?

In principle, it is possible for a sprint specialist to obtain a high World Ranking using only points from sprint events, although this appears to happen to only a limited extent.

An option would be to develop separate ranking lists for the middle and long distance, or alternatively (since middle and long distance results tend to be more closely related than either are to sprint), a combined middle/long rankings list. Council has laid the groundwork for this by suggesting the development of a separate sprint ranking.

A disadvantage of this approach is that a distance-based ranking would necessarily be based on a smaller number of events than the full World Ranking (since only relatively few competitors would run four events at the same distance in the same years), and would therefore be more prone to anomalous individual results. Depending on the number of events required, there could also be more competitors with incomplete ranking scores, or none at all.

At present this is a relatively minor issue since international orienteering has not developed many 'pure' sprint specialists (the best sprinters are generally at least competitive in the forest events). However, it should be monitored in the future.

3. Is it a problem if the same starting order is used in both middle and long distance?

If the starting order is the reverse World Ranking as of a date prior to the start of WOC, then the starting order will be the same in both middle and long distance, except where competitors are entered for only one of the two distances (noting that with the removal of qualification races, the best competitors are more likely to enter both middle and long distance than is currently the case). This means that competitors will have the same people before or after them in both races.

If this is seen as being a problem, then two possible approaches which would still achieve the main strategic objectives would be:

- Recalculate the rankings between the middle and long distance, so there will be some change in ranking order (probably modest) between the two races.
- Instead of using exact reverse ranking order, use a 'red start group' approach where the 10 best-ranked competitors start in random order at the end of the start list (a more complex approach would involve all starters being divided into groups, say of 10 people, based on their rankings and for each group to be randomly drawn).

The 'red start group' approach has the advantage of changing the starting order between middle and long distance. However, it is likely to reduce the chance that the last starter is an eventual medallist (or at least a strong candidate for a medal), which may not be a desirable outcome for broadcasters. Whilst, in theory, a 'red start group' approach still leaves all competitors outside the best 10 in the same sequence, this is less likely to be an issue, mainly because the gaps in World Ranking points between consecutively ranked competitors are generally smaller outside the top 10 than within the top 10, and hence the results of the middle final will cause more reordering outside the top 10 than within the top 10.

4. Timing of rankings

The date as of which rankings are calculated would need to be determined. If feasible, it would be best to use a ranking list calculated as close as possible to the event – preferably on the day before the event, after any preceding WOC races. This would also allow the ranking order to change between the middle and long distance (see point (3) above).

A separate timing issue may arise because, under the current system, ranking points from the previous WOC will be included in some years, but not in others, depending on whether the current WOC is later or earlier in the year than the previous one. (For example, WOC 2011 points were still in the World Ranking as of the start of WOC 2012, but WOC 2015 will be more than 12 months after WOC 2014 so WOC 2014 points, under the current system, will not be available for use). As many competitors get their best event rankings scores at WOC (and many from outside the strongest orienteering countries rely on WOC points to get a complete ranking score), there may be a higher risk of competitors with unrepresentative rankings (see point (1) above) in a late-season WOC. This issue would be addressed with changes to the World Ranking (e.g. an extension of the ranking period beyond 12 months, or a provision that the most recent WOC could still be counted in the World Ranking even if it was more than 12 months ago), but that is beyond the scope of this paper.

5. *Resolving of ties*

A rule will need to be developed to deal with the situation where two competitors have an equal number of ranking points; it is also likely that a number of competitors will have zero ranking points. It is suggested that in these cases, the starting order of the tied competitors be randomly drawn.

6. *Competitors from same country*

It will need to be determined whether competitors from the same country can start consecutively, or whether the procedure currently specified in rule 12.9 should remain.

Start interval and mixing of races

Guidance from Council is to consider a start interval of 2 minutes for the long distance and 1.30 for the middle distance. Given the anticipated field sizes, this equates to start windows of the following length:

Long distance – 2.40 for men, 2.20 for women (total race time from first start to last finish – 4.20 for men, 3.40 for women). The window from the 15th last start to the last finish would be about 2.10 for men, 1.50 for women.

Middle distance – 2.00 for men, 1.45 for women (total race time – 2.35 for men, 2.20 for women). The window from the 15th last start to the last finish would be about 1 hour for both races.

There are three broad options for mixing the races:

- (a) Run the races simultaneously, with the leaders from both men and women finishing at about the same time.
- (b) Run the races with an overlap, so that the later stages of the men's race overlaps with the early stages of the women's (or vice versa).
- (c) Completely separate the two races, with one starting after the other has finished. (This is only realistically practical for the middle distance).

All three models have been used for WOC races in recent years. It may be best not to be overly prescriptive as to which is the best model to follow, as circumstances will vary for each WOC (for example, in some cases the host broadcaster may want to separate the best men and the best women, whereas in others it may be desired for the main action to occur in as small a time window as possible).

FOC's proposal for determining the WOC finals starting orders

The Foot Orienteering Commission proposes the following model for determining the WOC finals starting orders:

- That, subject to any other specific provisions that may be made, that the 10 highest-ranked competitors, according to the competitors' current World Ranking, calculated as of the day before the competition, should have the 10 last places in the starting sequence, with their order to be randomly drawn (a "Red Start Group"). All remaining competitors should start in the reverse order order of their World Ranking, with any ties to be resolved by a random draw.
- That, in the event of a separate ranking for middle distance and long distance (or for middle and long distance combined) being developed, consideration being given to using this ranking in place of the 'full' World Ranking.
- That further investigation be carried out as to the feasibility of using a 'protected' ranking or other similar mechanism for formerly highly-ranked competitors with poor World Rankings as of the start of WOC.
- That rule 12.9 no longer be applied to the WOC long or middle distance final. (We do not see a strong argument for it applying to the sprint final either, but that is outside our current mandate).
- That the question of whether the men's and women's races are run simultaneously, overlapping or separately be determined by the WOC organiser, with the approval of the SEA and consultation with broadcasters and with the IOF Sports Director.

Starting order based on World Rankings (as of 30 June 2012) – WOC 2012 men long distance

Start position	Name	Country	Ranking as of 30/6/2012	WOC 2012 final place
1	Pawlak	POL	538	26
2	Tambasov	BLR	213	11
3	Beliunas	LTU	209	21
4	Michiels	BEL	191	36
5	Miguel	POR	177	33
6	Simonin	IRL	165	39
7	Djurhuus	DEN	140	23
8	Panchenko	UKR	137	37
9	Alekseyonok	BLR	122	35
10	Pihl	EST	112	38
11	Mihailovs	LAT	100	16
12	Portin	FIN	98	14
13	Kovacs	HUN	94	22
14	Dent	AUS	82	30
15	Aleliunas	LTU	78	25
16	Hansen	DEN	73=	24
17	Tenani	ITA	70	34
18	Kowalski	POL	64	-
19	Bertuks	LAT	61	3
20	Bergman	SWE	59	-
21	Tervo	FIN	57	31
22	Omdal	NOR	53	17
23	Nikolov	BUL	52	6
24	Rost	SWE	51	28
25	Sild	EST	50	-
26	Mamleev	ITA	43	13
27	Sedivy	CZE	42	12
28	Kodeda	CZE	41	32
29	Khramov	RUS	39	-
30	Dlabaja	CZE	38	18
31	Tranchand	FRA	33	8
32	Fraser	GBR	28=	20
33	Ushkvarok	UKR	28=	27
34	Hertner	SUI	27	-
35	Tsvetkov	RUS	24	7
36	Zinca	ROM	22	24
37	Kyburz	SUI	21	19
38	Lassen	DEN	18	9
39	Nordberg	NOR	16	10
40	Kerschbaumer	AUT	15	15
41	Holmberg	SWE	14	5
42	Merz	SUI	12	2
43	V.Novikov	RUS	10=	-
44	Lundanes	NOR	8	1
45	Adamski	FRA	5	4

Starting order based on World Rankings (as of 30 June 2012) – WOC 2012 men middle distance

Start position	Name	Country	Ranking as of 30/6/2012	WOC 2012 final place
1	Airila	FIN	282	11=
2	Stanfel	CRO	227	27=
3	Tambasov	BLR	213	42
4	Krajcik	SVK	173	34=
5	L.Novikov	RUS	151	19
6	Kamenarov	BUL	123	41
7	Alekseyonok	BLR	122	37
8	Friedrichs	GER	120	40
9	Bobach	DEN	115	-
10	Mihailovs	LAT	100	13
11	Kral	CZE	97	31
12	Pasquasy	BEL	96	43
13	Morrison	NZL	91	32
14	Daehli	NOR	69	7
15	Basset	FRA	66	24
16	Huovila	FIN	65	34=
17	Bertuks	LAT	61	1
18	Bergman	SWE	59	8
19	Sild	EST	50	16
20	Runesson	SWE	49	18
21	Karner	EST	45	27=
22	Mamleev	ITA	43	30
23	Lenkei	HUN	40	32
24	Prochazka	CZE	37	10
25	Gvildys	LAT	35	29
26	Merl	AUT	34	26
27	Sirmais	LAT	32	21
28	Krepsta	LTU	30	33
29	Ushkvarok	UKR	28=	23
30	Hertner	SUI	27	3
31	Gristwood	GBR	23	36
32	Zinca	ROM	22	38
33	Lauenstein	SUI	19=	9
34	Lassen	DEN	18	25
35	Kaas	NOR	17	22
36	Kerschbaumer	AUT	15	20
37	Gonon	FRA	10=	5
38	V.Novikov	RUS	10=	2
39	Kratov	UKR	9	11=
40	Lundanes	NOR	8	14
41	Ikonen	FIN	6	17
42	Adamski	FRA	5	15
43	Rollier	SUI	4	-
44	Oberg	SWE	3	6
45	Gueorgiou	FRA	1	4

Starting order based on World Rankings (as of 30 June 2012) – WOC 2012 women long distance

Start position	Name	Country	Ranking as of 30/6/2012	WOC 2012 final place
1	Geypen	BEL	746	41
2	Gyurko	HUN	372	15
3	Grigorova-Burgova	BUL	368	44
4	Klechova	CZE	315	17
5	Rihma	EST	196	24
6	Sluta	UKR	171	31
7	Elstner	AUT	155	43
8	Prendergast	AUS	149	35
9	Bridle	GBR	128	36
10	Kutkaite	LTU	124	27
11	Saegar	USA	123	40
12	Rybakovaite	LTU	122	30
13	Rebane	EST	117	42
14	Lajn	POL	116	23
15	Arques	ESP	110	39
16	Szerencsi	HUN	107	28
17	Klinting	DEN	98	20
18	Kazlauskaite	LTU	93=	38
19	Oram	CAN	89	33
20	Kadan	AUT	78	22
21	Mironova	RUS	71	13
22	Vercelotti	FRA	65	34
23	Fabre	BEL	63	32
24	Ward	GBR	61	25
25	Tikhonova	RUS	55	26
26	Rollins	GBR	51	37
27	Dambe	LAT	47	21
28	Dodin	FRA	45	16
29	Hausken Nordberg	NOR	35	5
30	Volynska	UKR	34	29
31	Fasting	NOR	32	14
32	Niemi	FIN	30	10
33	Riabkina	RUS	24	4
34	Wigemyr	NOR	22	18
35	Bobach	DEN	21	8
36	Brodmann	SUI	20	9
37	Strand	SWE	19	12
38	Luscher	SUI	18	11
39	Jurenikova	CZE	11	6
40	Eliasson	SWE	9	-
41	Niggli	SUI	8	1
42	Rantanen	FIN	7	7
43	Kauppi	FIN	4	2
44	Brozkova	CZE	3	19
45	Billstam	SWE	2	3

**Starting order based on World Rankings (as of 30 June 2012) – WOC 2012
women middle distance**

Start position	Name	Country	Ranking as of 30/6/2012	WOC 2012 final place
1	Arbter	AUT	396	36
2	Gyurko	HUN	372	14
3	Hao	CHN	276	37
4	Trosse	GER	191	45
5	Kirchlechner	ITA	156	43
6	Elstner	AUT	155	33=
7	Johanson	EST	144	42
8	Rybakovaite	LTU	122	12=
9	Rebane	EST	117	35
10	Trubkina	RUS	111	15
11	Arques	ESP	110	33=
12	Perramon	ESP	104	40
13	Razaityte	LTU	99	25
14	Klinting	DEN	98	22=
15	Palmer	GBR	93=	26
16	Kazlauskaite	LTU	93=	27
17	Round	AUS	90	31
18	Oram	CAN	89	41
19	Kadan	AUT	78	32
20	Ward	GBR	61	22=
21	Rothman	GBR	59	21
22	Wisniewska	POL	48=	38
23	Shandurkova	BUL	48=	44
24	Dambe	LAT	47	9
25	Bjorgul	NOR	36	30
26	Volynska	UKR	34	16
27	Kinni	FIN	33	10
28	Fasting	NOR	32	29
29	Duchova	CZE	30	19
30	Skrastina	LAT	28	24
31	Ingham	NZL	25	39
32	Riabkina	RUS	24	3
33	Bobach	DEN	21	4
34	Strand	SWE	19	12
35	Luscher	SUI	18	7
36	Bagstevold	NOR	17	17
37	Chataing	FRA	16	18
38	Wyder	SUI	14	20
39	Alm	DEN	10	28
40	Niggli	SUI	8	5
41	Rantanen	FIN	7	8
42	Alexandersson	SWE	6	2
43	Kauppi	FIN	4	1
44	Brozkova	CZE	3	12=
45	Billstam	SWE	2	6