ISAF Kiteboarding Format Trials

Santander, Spain, March 21-25

Technical Report

Executive Summary

In May 2011 ISAF Council selected Windsurfing and/or Kiteboarding as a possible event for the 2016 Olympic Sailing Competition.

In November 2011 ISAF Council agreed that a specialist evaluation team be appointed to look at the format and event management implications for Kiteboarding.

The evaluation team has been selected for their in depth Kiteboarding knowledge and is made up of representatives from both ISAF and the IKA:

- Kamen Fillyov - Chairman of the ISAF Windsurfing & Kiteboarding Committee
- Bruno de Wannemaeker - ISAF Equipment Committee
- Michael Gebhardt - Olympic Windsurfer and professional Kiteboarder
- Markus Schwendtner - Executive Secretary, International Kiteboarding Association

ISAF has also appointed a panel of windsurfing, Kiteboarding and race management experts to prepare a final report for the ISAF Mid-Year meeting:

- Tomasz Chamera - ISAF Events Committee
- Ilker Bayindir - ISAF Windsurfing & Kiteboarding Committee
- Bruno de Wannemaeker - ISAF Equipment Committee

The result of this evaluation can be summarized as follows:

- There are no race management or event organization issues. Kiteboarding could be immediately included in major ISAF events and the Olympic Sailing Regatta.

- The rules are well developed and follow the standard Racing Rules of Sailing with some discipline specific changes. No rule 42.

- Racing is close to the shore with an easy to follow competition format.
  Kiteboarding is colorful, attractive to spectators and media and especially appealing to youth.

- Equipment is readily available with worldwide distribution channels, production controlled and at a low price (cheapest entry into Olympic Sailing for emerging nations).

- The class is growing fast. App. 60000 persons start kiteboarding every year. App. 180000 kites and 75000 hulls are sold every year with a yearly growth of 10%.

- Currently 14 builders are producing hulls and 19 builders produce kites. This competition between builders guarantees high quality at a low prize.

- Equipment is high-performance over a wide wind range (5 till 18 knots during the test event using one hull and one kite only).

- Equipment has a wide weight band – competitors from 55 to 90 kg used the same hulls in the test event and chose the kite size by body weight.

- Biggest growth rates are currently in Asia. Emerging nations can reach international competition level within a few months.

- Flexibility: Equipment is light weight (hull, kite and rigging less than 12 kg) and can be taken as standard luggage on planes. During the test event, the complete equipment of 17 competitors fit into one mini bus to shuttle to a nearby beach.

- Storage: Equipment Storage is minimized, complete equipment of 17 competitors easily fits into 50sqm with no additional requirements for storage facilities. Kiteboards are completely rigged and de-rigged every day (it takes 5 minutes to pump up the kite).

- Kiteboards are physically and technically challenging to sail, but not destructive to the body (no pumping, always trapezing).

- Youth Pathway: youth and junior competitors use the same hulls and only smaller kite sizes depending on the body weight.

- The competition format developed during the test event allows for short event duration, head to head competition and the winner of the final medal race winning the first place. Races are between 12 minutes (fleet race) and 4 minutes (medal race elimination)

- Identification of Sailors needs to be improved, e.g. by adding nationality flags to the kites

- There have been safety issues in the past which have been overcome since app. eight years. Safety standards are constantly improved in cooperation between class and national governments

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Race Management and event organization issues

Race management follows to 100% ISAF race management policies, every ISAF IRO is immediately able to run all tested kiteboarding formats. Mark laying, starting systems, jury procedures and all event documents are following standard ISAF procedures.

There is no difference to standard sailing regattas in respect of number of boats, marks etc, no additional resources or facilities are needed.

Equipment storage requires very little space. 20 competitors and more can easily store their equipment on 5x10 m storage area.

Flexibility – equipment of 17 sailors fits into one minibus for a quick shuttle to a suitable launch area.

Kiteboards can be launched of every beach – in full offshore conditions this sometimes might be difficult, but sailors can be shuttled to a nearby beach or launch off coach boats without any further support directly in the competition area. This also allows racing areas further offshore.

For major events floating platforms could be used if racing areas are difficult to reach.

Kiteboards are always planing and therefore do not need to pump. Rule 42 is not used.

Equipment

The current IKA class rules allow one hull and three kites to be registered per event. Equipment is limited in size and series production controlled. All equipment is readily available from the shelf. Equipment dimensions are limited by a box rule. Width and length dimensions are fully used by the builders, while there is no approach to achieve the minimum required weight.

As far as the three kite limitation is concerned, during the test event sailors covered the full wind range (5-18 knots average measured from a drifting boat) with only one kite, which means that equipment costs can be potentially further reduced.

Currently 14 builders are producing hulls while currently 19 builders are producing kites. The kite brands are mainly owned by sailing and windsurfing companies (Neil Pryde, North, Roberto Ricchi)

Only hulls and kites are production registered, there are no spare part issues as fins and footstraps are not regulated. The class rules and the construction of hull and kite guarantee minimized spare part issues.

The weight of a complete ready to sail kiteboard (board, fins, bar, kite) is app. 12 kg. The dimensions of max. 190x70 cm allow to take the equipment on a plane as standard luggage.

Equipment measurement is comparibly easy and fast.

All tested event formats have been sailed with the same type of equipment (registered course racing equipment).

Prizes vary between 900 and 1600 Euro for a hull and 1000 to 1800 Euro for a kite including rigging.

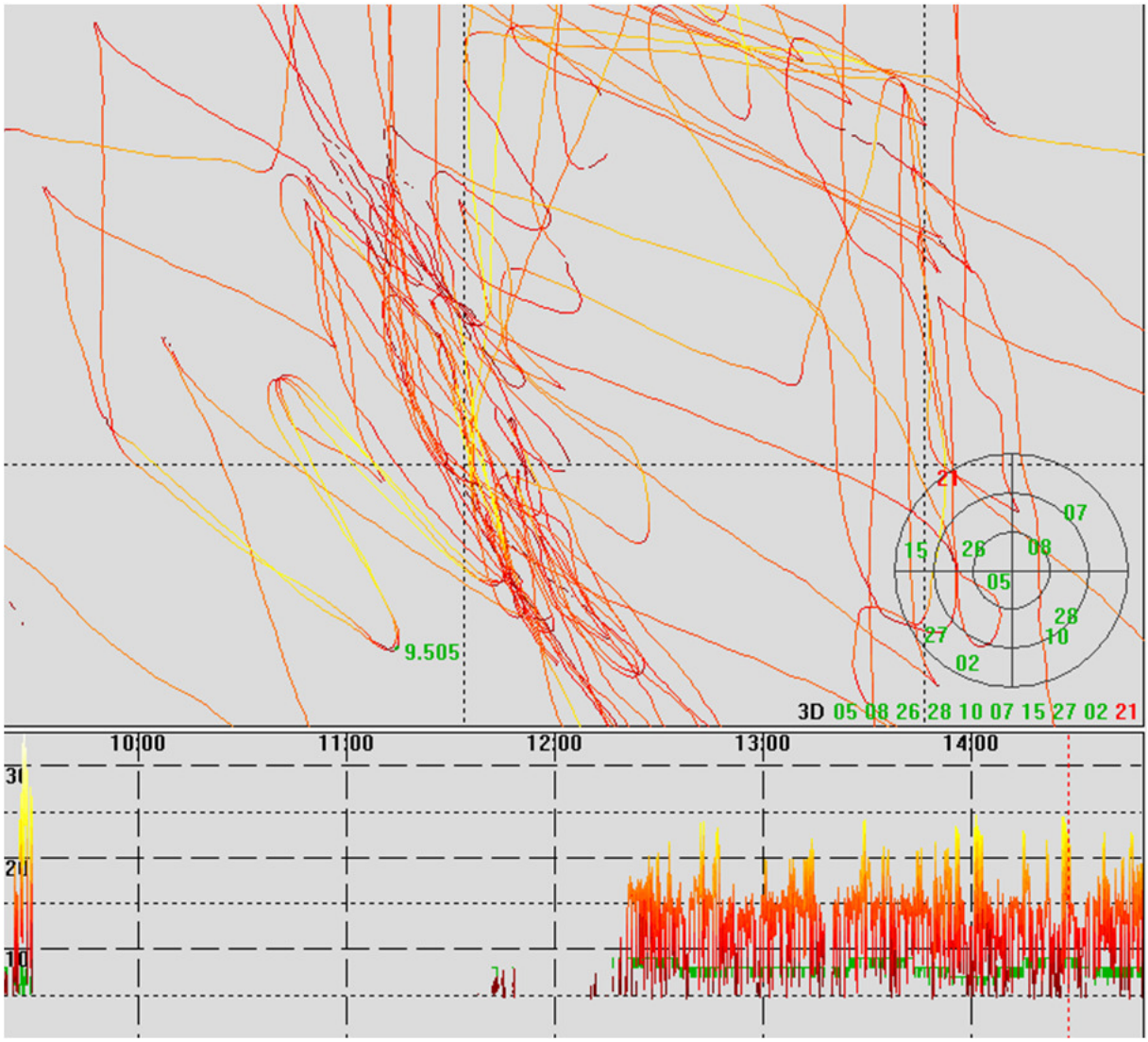
Kiteboarding would be the least expensive of all Olympic Classes. All equipment is readily available in shops world wide with extended distribution networks.

Performance

Equipment can be launched in app. 3-4 knots of wind, depending on current, wind variety and surf.

Kiteboards can sail and be immediately on the plan from 4-5 knots.

GPS analysis showed the following speeds and angles in 6-9 knots:



Speed on the Beat: 15 knots 8 ½ minutes / nm	Speed on the Run: 23 knots 4 minutes / nm	Speed on the Reach: 26 knots 3 ¼ minutes / nm

The class polars show that kiteboarding is one of the most performant of all sailing classes, including the AC 45 and Extreme 40s

SAILING COURSE TIMES
Kiteboarding Men

BOX COURSE

Target Time 12 minutes

Wind Range		5 - 7 Knots					8 - 10 Knots					11 - 14 Knots					15+ Knots				
Upwind Speed		10 mins/mile			Up Time (mins)	Down Time (mins)	8 mins/mile			Up Time (mins)	Down Time (mins)	7 mins/mile			Up Time (mins)	Down Time (mins)	6 mins/mile			Up Time (mins)	Down Time (mins)
Downwind Speed		5,0 mins/mile					4,0 mins/mile					3,5 mins/mile					3,0 mins/mile				
Reach Speed		5,0 mins/mile					4,0 mins/mile					3,5 mins/mile					3,0 mins/mile				
Leg Length Nautical Miles	Leg Length Kilometers	1 lap	2 laps	3 laps			1 lap	2 laps	3 laps			1 lap	2 laps	3 laps			1 lap	2 laps	3 laps		
0,30	0,56	5,4	10,7	16,1	3	2,4	4,3	8,6	12,8	2,4	1,9	3,7	7,5	11,2	2,1	1,6	3,2	6,4	9,6	1,8	1,4
0,40	0,74	6,9	13,7	20,6	4	2,9	5,5	11,0	16,4	3,2	2,3	4,8	9,6	14,4	2,8	2,0	4,1	8,2	12,3	2,4	1,7
0,50	0,93	8,4	16,7	25,1	5,0	3,4	6,7	13,4	20,0	4,0	2,7	5,8	11,7	17,5	3,5	2,3	5,0	10,0	15,0	3,0	2,0
0,60	1,11	9,9	19,7	29,6	6,0	3,9	7,9	15,8	23,6	4,8	3,1	6,9	13,8	20,7	4,2	2,7	5,9	11,8	17,7	3,6	2,3
0,70	1,30	11,4	22,7	34,1	7,0	4,4	9,1	18,2	27,2	5,6	3,5	7,9	15,9	23,8	4,9	3,0	6,8	13,6	20,4	4,2	2,6
0,80	1,48	12,9	25,7	38,6	8,0	4,9	10,3	20,6	30,8	6,4	3,9	9,0	18,0	27,0	5,6	3,4	7,7	15,4	23,1	4,8	2,9
0,90	1,67	14,4	28,7	43,1	9,0	5,4	11,5	23,0	34,4	7,2	4,3	10,0	20,1	30,1	6,3	3,7	8,6	17,2	25,8	5,4	3,2
1,00	1,85	15,9	31,7	47,6	10,0	5,9	12,7	25,4	38,0	8,0	4,7	11,1	22,2	33,3	7,0	4,1	9,5	19,0	28,5	6,0	3,5
1,10	2,04	17,4	34,7	52,1	11,0	6,4	13,9	27,8	41,6	8,8	5,1	12,1	24,3	36,4	7,7	4,4	10,4	20,8	31,2	6,6	3,8
1,20	2,22	18,9	37,7	56,6	12,0	6,9	15,1	30,2	45,2	9,6	5,5	13,2	26,4	39,6	8,4	4,8	11,3	22,6	33,9	7,2	4,1
1,30	2,41	20,4	40,7	61,1	13,0	7,4	16,3	32,6	48,8	10,4	5,9	14,2	28,5	42,7	9,1	5,1	12,2	24,4	36,6	7,8	4,4

SAILING COURSE TIMES
Kiteboarding Men

BOX SLALOM COURSE

Target Time 12 minutes

Wind Range		5 - 7 Knots					8 - 10 Knots					11 - 14 Knots					15+ Knots				
Upwind Speed		10 mins/mile			Up Time (mins)	Down Time (mins)	8 mins/mile			Up Time (mins)	Down Time (mins)	7 mins/mile			Up Time (mins)	Down Time (mins)	6 mins/mile			Up Time (mins)	Down Time (mins)
Downwind Speed		5,0 mins/mile					4,0 mins/mile					3,5 mins/mile					3,0 mins/mile				
Reach Speed		5,0 mins/mile					4,0 mins/mile					3,5 mins/mile					3,0 mins/mile				
Leg Length Nautical Miles	Leg Length Kilometers	1 lap	2 laps	3 laps			1 lap	2 laps	3 laps			1 lap	2 laps	3 laps			1 lap	2 laps	3 laps		
0,30	0,56	6,2	12,4	18,5	3	3,2	4,9	9,9	14,8	2,4	2,5	4,3	8,6	13,0	2,1	2,2	3,7	7,4	11,1	1,8	1,9
0,40	0,74	7,7	15,4	23,0	4	3,7	6,1	12,3	18,4	3,2	2,9	5,4	10,7	16,1	2,8	2,6	4,6	9,2	13,8	2,4	2,2
0,50	0,93	9,2	18,4	27,5	5,0	4,2	7,3	14,7	22,0	4,0	3,3	6,4	12,8	19,3	3,5	2,9	5,5	11,0	16,5	3,0	2,5
0,60	1,11	10,7	21,4	32,0	6,0	4,7	8,5	17,1	25,6	4,8	3,7	7,5	14,9	22,4	4,2	3,3	6,4	12,8	19,2	3,6	2,8
0,70	1,30	12,2	24,4	36,5	7,0	5,2	9,7	19,5	29,2	5,6	4,1	8,5	17,0	25,6	4,9	3,6	7,3	14,6	21,9	4,2	3,1
0,80	1,48	13,7	27,4	41,0	8,0	5,7	10,9	21,9	32,8	6,4	4,5	9,6	19,1	28,7	5,6	4,0	8,2	16,4	24,6	4,8	3,4
0,90	1,67	15,2	30,4	45,5	9,0	6,2	12,1	24,3	36,4	7,2	4,9	10,6	21,2	31,9	6,3	4,3	9,1	18,2	27,3	5,4	3,7
1,00	1,85	16,7	33,4	50,0	10,0	6,7	13,3	26,7	40,0	8,0	5,3	11,7	23,3	35,0	7,0	4,7	10,0	20,0	30,0	6,0	4,0
1,10	2,04	18,2	36,4	54,5	11,0	7,2	14,5	29,1	43,6	8,8	5,7	12,7	25,4	38,2	7,7	5,0	10,9	21,8	32,7	6,6	4,3
1,20	2,22	19,7	39,4	59,0	12,0	7,7	15,7	31,5	47,2	9,6	6,1	13,8	27,5	41,3	8,4	5,4	11,8	23,6	35,4	7,2	4,6
1,30	2,41	21,2	42,4	63,5	13,0	8,2	16,9	33,9	50,8	10,4	6,5	14,8	29,6	44,5	9,1	5,7	12,7	25,4	38,1	7,8	4,9

SAILING COURSE TIMES
Kiteboarding Men

SHORT TRACK COURSE

Target Time 4 minutes

Wind Range		5 - 7 Knots					8 - 10 Knots					11 - 14 Knots					15+ Knots				
Upwind Speed		10 mins/mile			Up Time (mins)	Down Time (mins)	8 mins/mile			Up Time (mins)	Down Time (mins)	7 mins/mile			Up Time (mins)	Down Time (mins)	6 mins/mile			Up Time (mins)	Down Time (mins)
Downwind Speed		5,0 mins/mile					4,0 mins/mile					3,5 mins/mile					3,0 mins/mile				
Reach Speed		5,0 mins/mile					4,0 mins/mile					3,5 mins/mile					3,0 mins/mile				
Leg Length Nautical Miles	Leg Length Kilometers	1.5 laps	2 laps	2.5 laps			1.5 laps	2 laps	2.5 laps			1.5 laps	2 laps	2.5 laps			1.5 laps	2 laps	2.5 laps		
0,05	0,09	2,0	2,5	2,8	0,5	0,3	1,6	2,0	2,2	0,4	0,2	1,4	1,8	1,9	0,4	0,2	1,2	1,5	1,7	0,3	0,2
0,08	0,15	2,6	3,4	3,8	0,8	0,4	2,1	2,7	3,0	0,6	0,3	1,8	2,4	2,7	0,6	0,3	1,6	2,0	2,3	0,5	0,2
0,10	0,19	3,0	4,0	4,5	1,0	0,5	2,4	3,2	3,6	0,8	0,4	2,1	2,8	3,2	0,7	0,4	1,8	2,4	2,7	0,6	0,3
0,13	0,24	3,6	4,9	5,6	1,3	0,7	2,9	3,9	4,4	1,0	0,5	2,5	3,4	3,9	0,9	0,5	2,2	2,9	3,3	0,8	0,4
0,15	0,28	4,0	5,5	6,3	1,5	0,8	3,2	4,4	5,0	1,2	0,6	2,8	3,9	4,4	1,1	0,5	2,4	3,3	3,8	0,9	0,5
0,18	0,33	4,6	6,4	7,3	1,8	0,9	3,7	5,1	5,8	1,4	0,7	3,2	4,5	5,1	1,3	0,6	2,8	3,8	4,4	1,1	0,5
0,20	0,37	5,0	7,0	8,0	2,0	1,0	4,0	5,6	6,4	1,6	0,8	3,5	4,9	5,6	1,4	0,7	3,0	4,2	4,8	1,2	0,6
0,23	0,43	5,6	7,9	9,1	2,3	1,2	4,5	6,3	7,2	1,8	0,9	3,9	5,5	6,3	1,6	0,8	3,4	4,7	5,4	1,4	0,7
0,25	0,46	6,0	8,5	9,8	2,5	1,3	4,8	6,8	7,8	2,0	1,0	4,2	6,0	6,8	1,8	0,9	3,6	5,1	5,9	1,5	0,8
0,28	0,52	6,6	9,4	10,8	2,8	1,4	5,3	7,5	8,6	2,2	1,1	4,6	6,6	7,6	2,0	1,0	4,0	5,6	6,5	1,7	0,8
0,30	0,56	7,0	10,0	11,5	3,0	1,5	5,6	8,0	9,2	2,4	1,2	4,9	7,0	8,1	2,1	1,1	4,2	6,0	6,9	1,8	0,9

Media and Spectator appeal

Kites can be equipped with all modern tracking devices. The kite itself provides possibilites to attach cameras for a "helicopter view". Sailors are used to sail with cameras on their boards, in their kites, and on helmets.

Races are short and fast and ideally set close to the beach for maximum spectator and media appeal. Already the kites in the air are "eyecatching" – colorful, bright, attractive.

Kiteboarding events usually attract lots of spectators as they are run "festival style". The 2011 World Championship on Sylt island, Germany, at 110000 Spectators over 6 event days.

On the media side, kiteboarding is regularly shown on mainstream TV. Appendix A shows distribution and viewing figures from a one-time news flash on German mainstream TV and worldwide distribution from a major kiteboarding event.

Universality and Sponsorship

Number of national kite associations affiliated to IKA: 39 (4 other in affiliation process)
Active fleets world wide: min. 71 (increased by 100% from 35 in 2008)
Number of sailors organized in national kite association: varies between 50 and 10000 (per MNA)

Examples:
Active registered sailors in France: > 10000
Active registered sailors in Italy: > 6000
Participants regional regatta China 2011: 94
Participation regional regatta Vietnam 2011: 115
Participants regional regatta Philippines 2012: 98
Participation regional regatta Thailand 2012: 79
Participants Worlds 2011: 76 (21 countries, 4 continents)

The Kiteboarding Industry estimates the following numbers:

Kites sold world wide in 2011: 180000
Kiteboards sold world wide in 2011: 75000 (80% twin tips, 20% directionals – wave and course race boards)
The market is estimated to grow with 10% per year (based on the numbers from the past 3 years)

Teaching organizations like VDWS and IKO as well as national class associations report having tought app. 60000 students in 2011, with an increase of 100% compared to figures from the year 2006 and a constant growth. Total numbers of kiteboarders world wide are estimated at 1.5 million persons.

Emerging nations have kiteboarding on almost every beach. Not always competitive racing, but great potential. Example: On a small Philippine island (8x1 km) app. 30 kiteschools share a beach of 2 km length.

Looking at participation numbers in regional competitions in emerging nations, kiteboarding is able to bring more new people into the sport of sailing than all other Olympic classes together.

All higher level sailors are at least partially sponsored by the kiteboarding brands but also from third party sponsors which reduces Olympic Campaign costs for MNAs. Sailors that compete in higher graded events get equipment usually provided for free.

Kiteboarding is the quickest sailing sport to learn – sailing is possible already after a couple of ours training on the beach, and competitive level can be reached within a few months.

Beach in Mui Ne, Vietnam

Beach in Adicora, Venezuela

Beach in Walvis Bay, Namibia

Beach in Anse la Raie, Mauritius

Sailor Profile, Fitness and Health

Kiteboarding is weight insensitive. Sailors at the evaluation event ranged from 63 to 90 kg for men and 56 to 69 kg for women. Surely skill made the difference in perfomance and success rather than weight. This allows sailors from all parts of the world to compete on equal chances.

Men, Women and Youth use the same hulls. The kite size is chosen depending on the body weight. Equipment investment is therefore reduced. The pathway for use sailors is especially easy as no other equipment is needed.

Kiteboard racing requires a lot of balance and body strength especially in legs and core. Sailors are always trapezing therefore the pressure on the spine is reduced and health risks minimized in comparison to disciplines that require pumping action.

Worldwide Competition

Plenty of racing is taking place around the world, in addition to the national championships of the national class associations, a total of 26 international open events were held in 2011.

The 2012 class world championship will be hosted by Yacht Cup Cagliari, the North American Championship will be hosted by St. Francis Yacht Club (John Craig has been one of the main driving forces behind the development of Kite racing).
The European Championship is planned to be held within Weymouth "Sail for Gold", the South American Championship is planned in cooperation with Buzios Vela Clube in Brasil, the Asian Championships are intended to be hosted witin the Phuket Kings Cup (the longest running Asian Sailing Regatta), and finally for Oceania the continentals are planned during Sail Melbourne or in cooperation with the 2011 ISAF sailing world championship organizers in Perth.

New Competition Format

The proposed kiteboarding competition format for ISAF major events and possibly the Olympic Games are the result of the 2012 ISAF kiteboarding format trials.

During these trials, a total of seven different courses and course variations have been tested (See Appendix E for drawings)

Windward/Leeward (with leeward gate)
Downwind Slalom
Enduro
Enduro with offset tack mark
Square box
Windward/Leeward on a short course with windward and leeward gate
Short Track with reaching start and finish legs

<u>Standard Windward/Leeward</u>
This is the course configuration mainly used at the moment in kiteboard racing events. It provides a tactical start and allows for tactical sailing on the upwind and downwind legs. However, it is difficult to follow for a non-sailing audience.

<u>Downwind Slalom</u>
Downwind Slalom is the currently most successful windsurfing format and also commonly used in kiteboarding regattas. The focus is on equipment handling rather than on tactical sailing. Starts are on a reach. It is easy to follow for the audience as all sailors are lined up one after each other and position changes become clearly visible.

Enduro

The Enduro course combines a standard upwind start with a short tactical upwind leg, a short reaching leg, and a downwind slalom. A jump may be optional added on the final reaching leg to the finish.

Enduro with offset tack mark

As above, but with an additional offset tack mark in the second lap. This offset tack mark is on a slight upwind course after the downwind slalom of the first leg and condeses the fleet so that spectators can better understand who is leading. However it takes away a lot of the tactical options in the second lap.

Square box

This course is basically a windward/leeward couse with a spacing between the upwind and the downwind leg. Upwind and downwind leg are space through two short reaching legs, that allow the spectator to get an understand of who is leading twice per lap. The two reaching legs also provide some highspeed component in addition to the tactical upwind and downwind legs.

Windward/Leeward on a short course with windward and leeward gate

This course provides the most tactical options for the sailors due to the two gates, however it is almost impossible for spectators to follow who is in the lead. The finish line in this configuration would be a downwind finish between the signal boat and the pin end.

Short Track with reaching start and finish legs

This course format can only be run in heats of 4-8 sailors. The start is on a reach, followed by a downwind leg and then some windward/leeward racing with two gates. In contrary to the course above it is easy to follow for spectators due to the limited number of sailors on the water. The start and finish leg as well as the first downwind are spectacular and add a high speed component to the tactical sailing on the upwind and downwind legs.
An optional jump can be added on the finish leg.
Due to the short time limit (4-5 minutes) and the reduced number of sailors umpiring is recommended. In case of capsize caused by a break of a rule of part 2, the race is abandoned and restarted without the offending sailor (this is a similar procedure to elimination races in other sports)

Conclusion

The optimal courses for fleet racing are the square box course and the square box course with a slalom component ("box slalom course"). This allows a big number of sailors to attend ISAF kiteboarding race events.

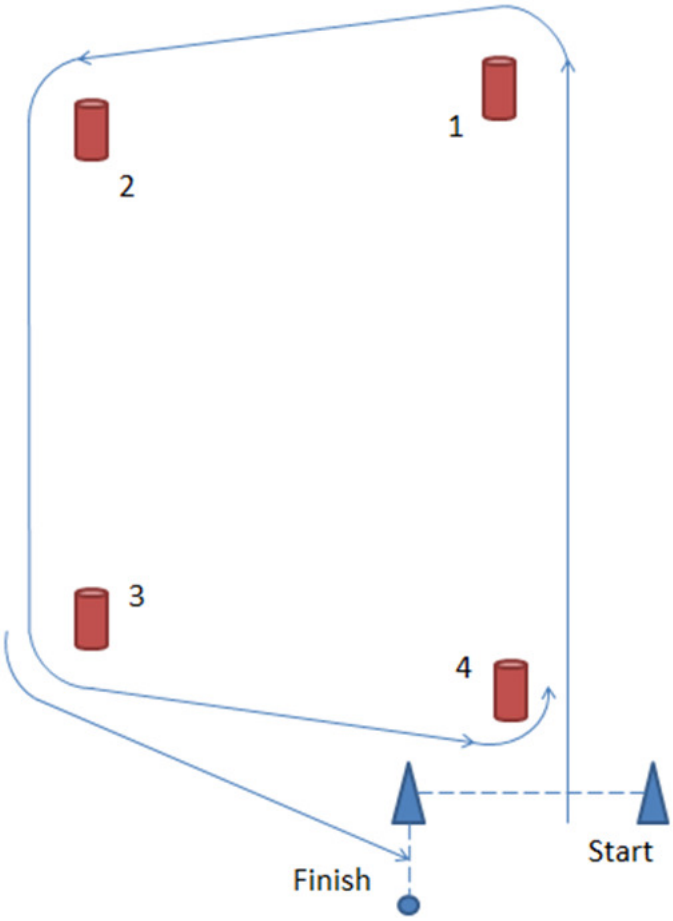
Instead of a medal race it is proposed to race a "medal race series" on the short track course with provides the best combination of high speed legs which test equipment control and a very tactical upwind/downwind component. This medal race series is to be run in a single elimination system which for the first time allows to add "drama" and to build up to the climax – the winner of the final race takes gold (compared to the normal medal races where this is not necessarily the case)

Races are rather short – 4-5 minutes in the medal race series and 12 minutes in the qualifying and final series. This allows to shorten an event to 3-4 racing days.

Day 1-2 – Qualification Series

Fleet Racing on a Box Course. The quota is 64 Sailors (or may be adopted depending on competition and venue), racing is done in flights of 32 sailors each.

6 races shall be sailed for each sailor with the worst score to be discarded:
Group A vs Group B
Group C vs Group D
Group A vs Group C
Group B vs Group D
Group A vs Group D
Group B vs Group C
These flights will be repeated on day 2 with the groups being re-seeded from the results of day 1.



Start – 1 – 2 – 3 – 4 – 1 – 2 – 3 – Finish

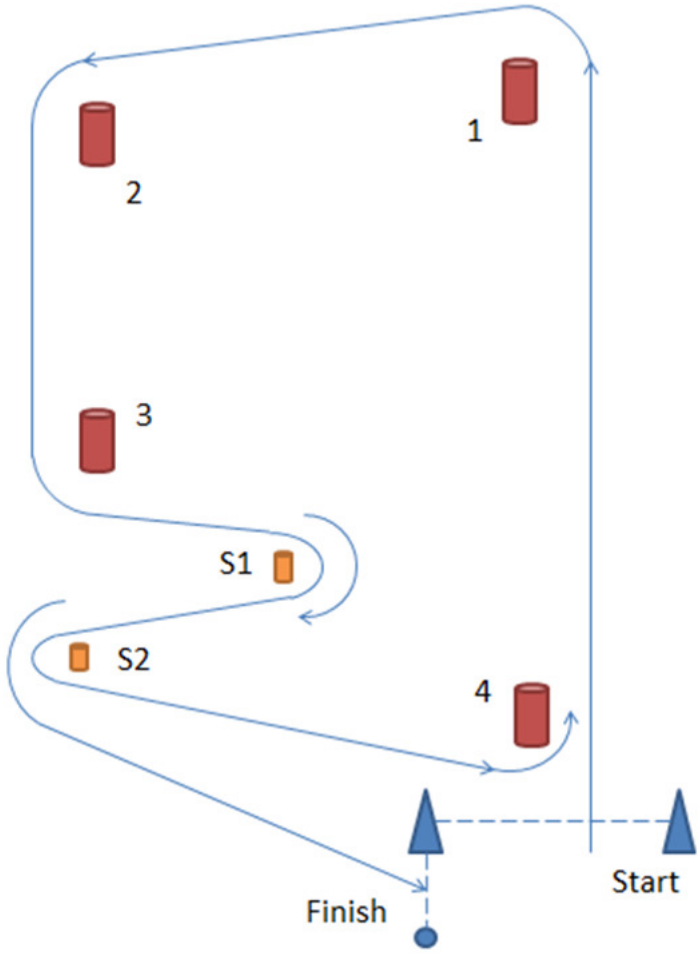
Target Time:	12 minutes
Distance Mark 1 – Mark 4:	0.3 – 0.6 nm depending on wind strength (as per class polar)
Distance Mark 1 – Mark 2:	200m
Angle Mark 1- Mark 2:	10° off the wind
Angle Mark 3 – Mark 4	10° off the wind
Distance start line – Mark 4:	50m

Day 3 – Final Series

Fleet racing on a Box-Slalom course.

The fleet is splitted into Gold and Silver fleet of 32 sailors each.

The results from the qualifying stage are carried forward as race 1. An additional 3 races shall be sailed per fleet for a total of 4 races. The worst score will be discarded (which includes the possibility to discard the score carried forward)



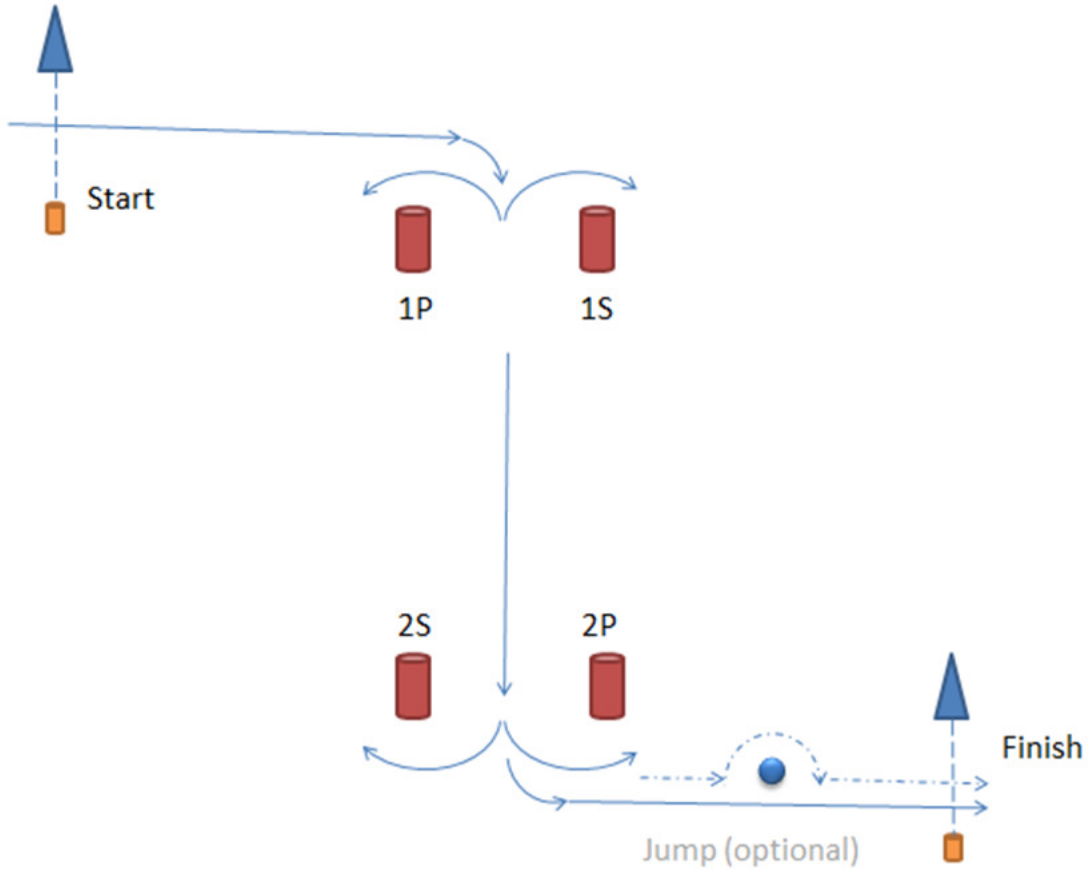
Start – 1 – 2 – 3 – S1 – S2 – 4 – 1 – 2 – 3 – S1 – S2 – Finish

Target Time:	12 minutes
Distance Mark 1 – Mark 4:	0.3 – 0.6 nm depending on wind strength (as per class polar)
Distance Mark 1 – Mark 2:	200m
Angle Mark 1- Mark 2:	10° off the wind
Distance Mark 3 – S1: and S1 – S2	100m
Angle Mark 3 – S1: and S1 – S2	15° off the wind
Distance start line – Mark 4:	50m

Day 4 – Medal Race Series

Single Elimination of the Top 16 sailors on a short track course

The top 16 from the gold fleet are seeded in 4 heats based on the results after the final series.



Start – 1P/1S – 2S/2P – 1P/1S – 2S/2P – 1P/1S – 2S/2P - Finish

Target Time:	5 minutes	
Distance Start – Mark 1:	200m	
Distance Mark 1 – Mark 2:	6-8 knots:	200m
	9-12 knots:	250m
	13-18 knots:	300m
	18+ knots:	350m
Distance Mark 2 – Finish:	200m	

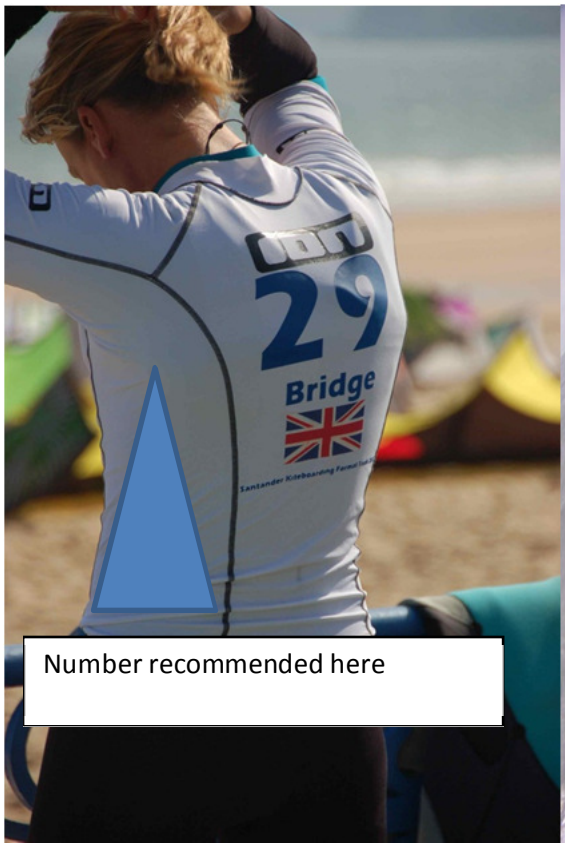
The course includes an optional jumping obstacle in direct line from Mark 2 to the finish line.

<u>Optional:</u>
Finish upwind using the startling line, reducing the requirements for boats.

Nationality Branding

Kites are perfectly brandable and can be equipped with large size national flags. Class rules might be needed to be amended in this point.

Rash vests are used for identification – in addition to the currently used numbers on the back it is recommended to add numbers under the sleeve.



Examples for nationality flags on kites and board.

Kiteboarding history and safety overview

When kiteboarding first got started about 15 years ago it was an extreme sport, dangerous, questioned by many and only practiced by a handful of fringe athletes. It was through some watermen looking for the next incarnation of surfing and windsurfing that kiteboarding was first invented. Their focus was fun, excitement and thrill but certainly not safety. In these early stages, kiteboarding was a dangerous sport and as in many other sports the safety issues were overlooked until a dramatic accident in 2002 sent shockwaves through the industry.

During an international competition the female vice-world champion Silke Gorldt died – a dramatic blow for every kiteboarder, a real tragedy for her friends and family and a drastic wake up call for the kiteboarding industry that was on the verge of rapid growth.

Overnight the first solutions were being implemented, namely sailing shackles, linked between the harness and the kite so that the rider could detach from the kite when needed – almost no kiteboarder was willing to kite without a safety system anymore.

When the next kites hit the market at the beginning of 2003, a true transformation had taken place. Not a single manufacturer released kite equipment without a specifically developed safety system. Individual manufacturers developed an array of different systems and a competition for the safest of the systems was also implemented. The first pressure and release tests were developed and from one year to the next kiteboarding and its safety systems consistently got safer and safer.

But “quick release systems” are not the only developments that made kiteboarding safer over the years and with the new awareness of the industry other measures were taken and the kite equipment as such has made a huge safety leap forward due to:

a) the development of “de-power systems” with which kites are sheeted in and out, making it possible for the sailor to change the kite’s angle of attack to the wind with an easy movement of the control bar.
b) the introduction of so called “bow” and “hybrid” kites that have a flatter arc, much larger wind-range and that give the sailor the ability to de-power the kite to almost 100% when changing the angle of attack with the “de-power system”.
c) the development of a “second safety” in which a “safety leash” is used for the sailor to stay connected with his kite even when the “quick release” is pulled and the kite is released, preventing the kite from endangering others and making it a no-brainer for sailors to pull the “quick release” when needed as the kite won’t be lost when doing so but will “flag out” completely, fall down to the water and have no more power whatsoever.
d) other safety measures introduced to kiteboarding equipment, like hook knives in kiteboarding harnesses, self recue handles on kites and more.

Safety systems are currently controlled by a French national norm which all manufacturers comply with (“AFNOR”) – this norm includes forces for automatic release of the quick release and forces needed for manual execution etc., tested dry, sanded, in salty water…

But kiteboarding has not only become an established sport when it comes to gear development, it has also developed as a sport as such in its structure that make the sport safer yet again due to:

a) National and International Associations supervising local and global beaches in cooperation with local and national governments
b) Instructional guidelines and institutions supplying a safe and easy structure for everyone that wants to learn how to kiteboard.
c) Guidelines for self-rescue procedures, like using the kite as a “rescue boat” and taking advantage of the buoyancy of the board
d) Guidelines for vessel-assistance during launching and capsizing procedures.
e) Safety Guidelines for different spots and conditions and for every sailor to follow.

One of many examples for national regulations and activities

All the steps taken above have truly made kiteboarding a safe sport and are obvious to any sailor as well as those working closely with the sport. Some numbers genuinely provided by the St. Francis Yacht Club read as follows:

- Approximately 97 official race days since 2005, broken down as follows:
- 6 seasons of Thursday Nights (2005-2011): 78 days
- 1 Kite Jump Competition (2006): 2 days
- 2 Kiteboard Course Racing Nationals (2007, 2008) : 12 days
- 1 Kite Worlds (2009): 5 days
- average of 3 races per day, approximately 300 official races since 2005
- In 10% of the times above, vessel assists have been necessary due to capsized kiteboards. Note: this mainly includes assist to relaunch kites or bringing them back to the beach after unrecoverable tangles – a situation comparable to assisting recovery after capsize.
- Not aware of any injuries. No deaths, and no injuries requiring urgent medical attention.

Although kiteboarding accidents still happen, they are rare and usually limited to people overestimating themselves and their skills or underestimating weather and wind conditions. Kiteboarding does carry a certain risk in itself in the learning stages without proper instruction. Just like sailing, kiteboarding needs to be learned in a certified school and by a qualified instructor so that safety systems and the basics of the sport can be fully understood. If these steps are taken and kiteboarding is approached with a logical understanding of the equipment and elements, it is no more dangerous than any other sport.

The international class in cooperation with the national kite class associations and the industry is constantly working on improving the safety standards even further.

Appendices

Appendix A – Media Distribution examples

RTL

03.10.2011 - 20:00 Main News
980000 viewers

FUERTEVENTURA 2010 - MEDIA - INTERMEDIATE REPORT

Format	Details	Spectators / Readers	For comparison Spectators / Readers from 2009
TV			
Custom Made Tillmanns + Tillmanns Sat Feed (15 min. daily)	Europe **	90.295.100 spectators	76.232.000
	Worldwide	30.171.400 spectators	39.363.000
	Subtotal Confirmed*	**120.466.500 spectators**	**115.595.000**
Tillmanns Sat Feed (15 min. daily)	Agencies (EBU / REUTERS / SNTV) estimated	500.000.000 spectators	500.000.000
		620.466.500 spectators	**615.595.000**
	* where no absolute verifyable about values were availabe, under estimated values have been used instead. **Numbers of some worldwide operating channels have been inserted Europe as those numbers cannot be divided		
Print			
Custom Made Tillmanns	**German language (!)**	16.120.929 readers	11.224.485
Worldwide	Estimate	8.000.000 readers	8.000.000
Agencies & Redistribution	Estimate	10.000.000 readers	10.000.000
	Total Custom Made + Agencies	**34.120.929**	**29.224.485**
Internet & Web-TV			
Custom Made Tillmanns	Estimate / yearly readers & viewers	25.000.000 readers / viewers	25.000.000
Agencies & Redistribution	Estimate	10.000.000 readers / viewers	10.000.000
	Total Custom Made + Agencies	**35.000.000**	35.000.000

Appendix B – Performance


pro center
René Egli
01
04

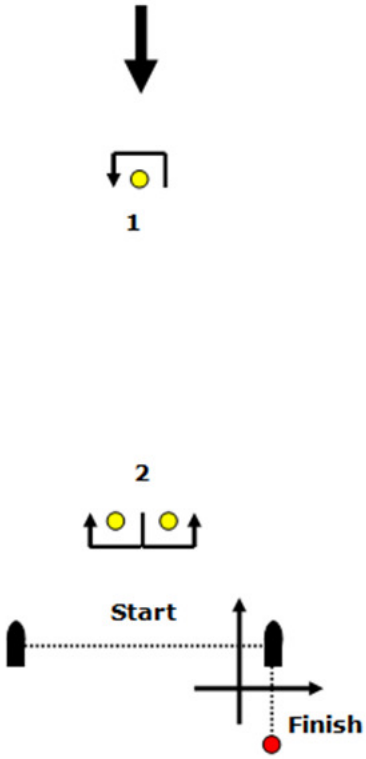
Appendix C – Lifestyle and youth/spectator appeal


Palmolive
PENTAX CAMERAS
PENTAX CAMERAS
PENTAX CAMERAS
Red Bull
ENJOY THE MUSIC
BOSS
UGO BOSS
QUIKSILVER

Appendix D –Hospitality

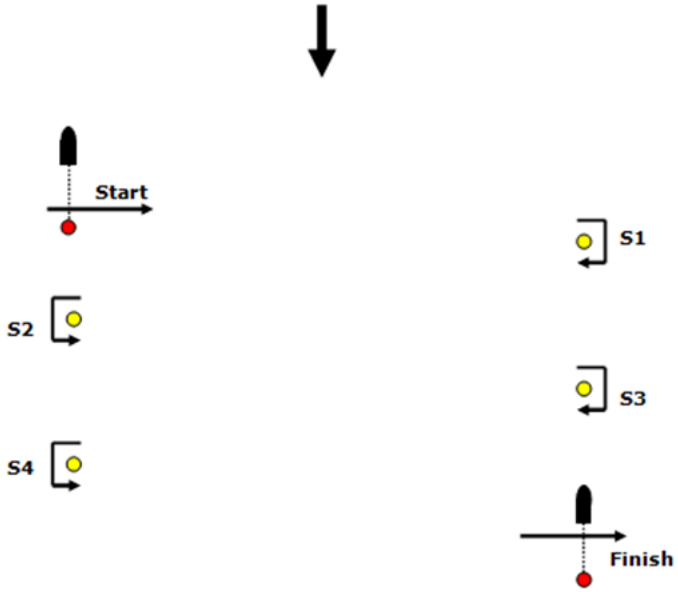

SEAT
SEAT
SEAT
77

Appendix E – Course Drawings



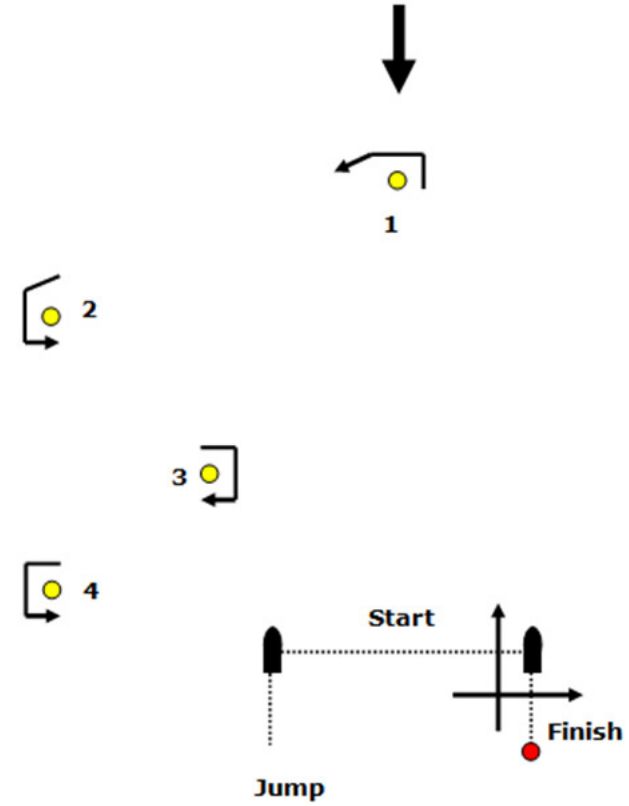
COURSE: START – 1 – 2 – 1 - FINISH

Windward/Leeward (with leeward gate)



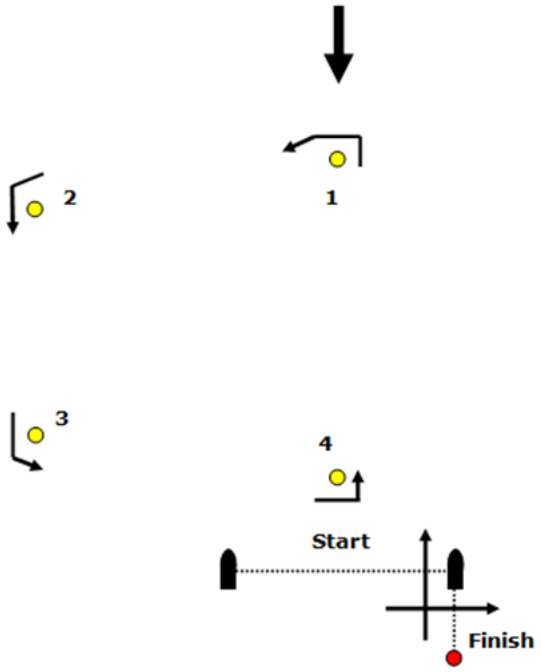
COURSE: START – S1 – S2 – S3 – S4 – FINISH

Downwind Slalom



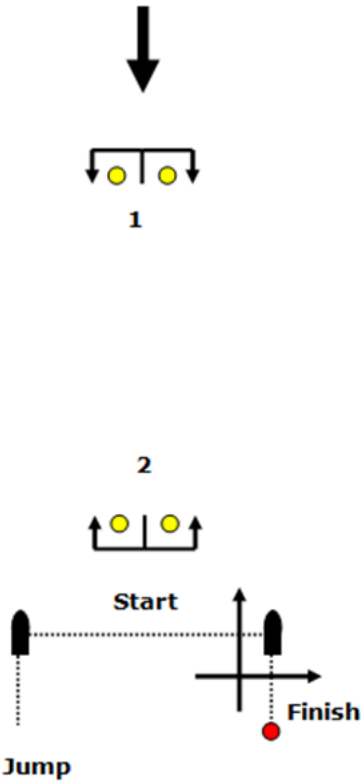
COURSE: START – 1 – 2 – 3 – Jump – 1 – 2 – 3 - Jump - FINISH

Enduro (2 options – second one with offset mark on the right to pass after the jump)



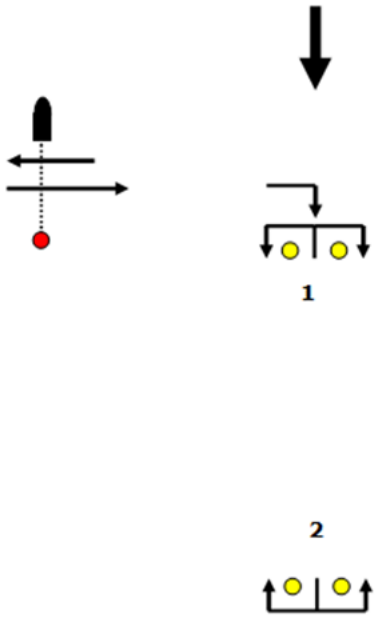
COURSE: START – 1 – 2 – 3 – 4 – 1 – 2 – 3 - FINISH

Box Course



COURSE: START – 1S/1P – 2S/2P – 1S/1P - FINISH

Double Gate Windward/Leeward



COURSE: START – 1S/1P – 2S/2P – 1S/1P – 2S/2P – 1S/1P - FINISH

Short Track Course