

## WORLD TRAIL ORIENTEERING CHAMPIONSHIPS 2015 - CROATIA



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## INTRODUCTION

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Dear orienteering friends,

On behalf of the Organizing Committee and executive organizer Orienteering Club “Vihor” we are pleased to give you “Organizers report of the World Trail Orienteering Championships 2015 in Croatia”.

Croatia hosted the World Trail Orienteering Championships in June 2015. We tried our best to make a fair competition with good and precise maps and fair competitive tasks for all participants. Terrains were challenging, providing opportunities to use different orienteering skills on different types of terrains. Our goal to attract more new nations to Trail Orienteering succeeded, so we had some new competitors from South East Europe participating at WTOC 2015.

Event took place in the Croatian capital town Zagreb and in the nearby town of Karlovac. Most events were held in the close vicinity of the Competition Center with driving distance less than 15 minutes. The longest distance to reach was about 45 minutes of driving from the Competition Center.

As never before, you had the opportunity to stay in a capital city what provided you large possibilities, not only for sport, but also for some tourist sightseeing, shopping and cultural activities. We believe that all of you who participated enjoyed food specialties and the unique atmosphere of Zagreb and Karlovac.

We wish all of you a lot of success and good preparations for future competitions and this report has been made to give you a good overview of what has been done, how was it done and what we suggest to do in the future. We hope that this report will give future organizers some guideline how to make some things better or what to improve, were to be careful or just to copy things which were good and improve the ones which were not so good. We hope that we managed to organize WTOC 2015 on highest possible level and that you were all satisfied.

Over 100 volunteers from Croatia, Finland, Belgium, Denmark, Italy. worked hard during the week of WTOC and we wish to express our gratitude to all of them as without their help we could not manage to do it. Thank you once more.

Ivana and Damir Gobec  
Map maker and Event Director



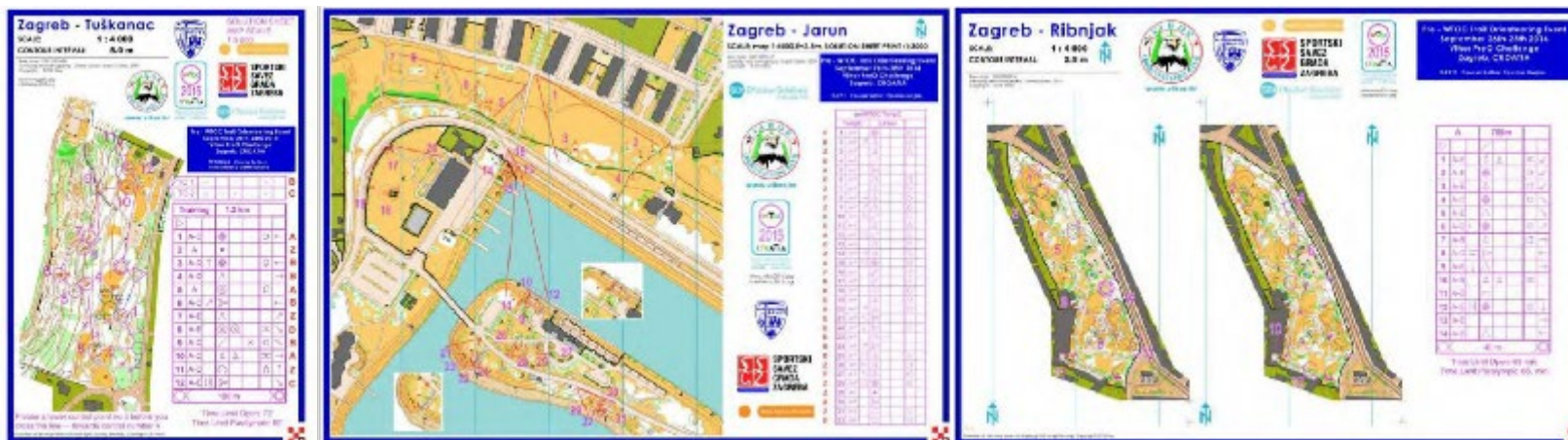
## Pre-WTOC Competition

Pre WTOC competition was organized 9 months prior the WTOC in Zagreb. Main idea was to check equipment, IT solutions and procedures along the competition and also to see difficulties which can occur during the competition.

Competition was organized in three days with model event on first day, TempO event on second day and PreO event on final day. For all three events we made new maps.

Model Event has been held in park forest Tuškanac in the city center. Map makers were Ivana and Damir Gobec, and course setters were Ivica Bertol and Damir Gobec. Competitions were held in the area of lake Jarun (TempO) and in the park area Ribnjak. Both maps were done by Ivana Gobec, official map maker for WTOC maps and all the courses were done by Zdenko Horjan, official course setter of WTOC.

Although competition was planned also well in advance and we got all the permits day before TempO competition we found out that on the same place there will be a large triathlon competition. Due to some overlapping in competition areas we had to cancel some stations and put new ones instead. As we were prepared for some unplanned problems it was not a problem to replace those stations with new ones. This situation confirmed our believe that every organizer should plan and have prepared few more stations which will be used as backup. Also in order to have fair competition it is always good to have at least one more station in the competition than it is suggested in the rules.





## Planning time / mapping time

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All terrains, finish and start areas were chosen well in advance before course setting begun. General Idea which organizers had two and a half year before event when Croatia got WTOC was just slightly changed due to heavy forestry work on terrain of PreO day one. Although all preparations were set well in advance some permits arrived even after the competition. Planning time involved a lot of paper work and meetings on different levels from local hunter clubs, forestry workers, to municipality administrators and majors. Most of the meeting involved also explaining what kind of the sport is going to happen. Karlovac was a good example of a smaller city in which you can solve most of the things on one few minor meetings with a great support of major. On the opposite side was Zagreb as a capitol where we spent a lot of time spending on the meetings with minor administrative personnel.

Note for future organizers: plan well in advance all your paper work and permits, so you get them all on time. It takes a lot of writing and meetings, so plan your organizing team so that you have one person who is doing only that administrative work (map makers and course setters should not be involved directly in this type of work. They should be involved in the manners of suggesting sites and place of venues to the operating person).

Having arenas on many different places makes work harder and demanding for organizers, but also it makes competition more interesting and more diverse so it is worth doing it on this way.

For all competition sites it was essential to have possibilities of parking, electricity facilities and good accessibility for vehicles in order to have fast transport of all equipment directly to competition sites. Saving some time when you have tight schedule is important.

In order to have a relaxed and good competition we proposed a change in the Event program so TempO qualifications and finals are on different days. This was approved by the IOF Council. On that way we got two really high level competitions on different terrain and we got a good opportunity to have separate ceremony for all finalist. Introducing TempO finalist and giving them a separate number for the finals made this event more challenging and media friendly. Numbers were given according to the placement in qualifications.

## Mapping time

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It was almost constant work by one mapper, Ivana Gobec, from October 2013 - June 2015, on 4 terrains. It took **much more** time than planned, but actual time spent was not recorded precisely.

- Blato map (golf course) was done smoothly, but had some major changes at last because of fast-growing vegetation, due to sudden lack of maintenance.
- Karlovac was done almost as planned, but with some changes (urban) and more time spent on contours, because there were no base map contour data
- The biggest problems were with map Divjača, and consequently, courses had 3 major changes. The area changed completely 3 times: first time due to a heavy storm which pulled down hundreds of trees. Competition area changed, then it were major legal and illegal cuttings, because the owner changed. Then the area changed to third position, and after course was finished, it had to have major changes happening within last two months, due to cuttings of the forest again.
- Maksimir park, which was also taken as a "backup" terrain, didn't go as planned, because of the same storm that ruined Divjača

## Courses planning time

Course planning started **before** any map making even begun! There was absolutely no time for course setter Zdenko Horjan to wait for maps to be finalized. Organizers had less than 2 years for everything. The main organizer, Damir Gobec, determined starting and finish arenas, parking possibilities, electricity facilities... Then course setter was first provided with scaled base maps and old maps were they existed, so an competition area could be defined. From that moment map making and course settings were done simultaneously, until the very last moment.

Except for Divjača terrain were courses changed 3 times, on other terrains courses didn't change much from the original idea. Tasks changed many times in micro-locations.

☑ Doing mapping and course planning simultaneously actually wasn't bad, because map maker showed to course setter the most interesting parts, and course setter and advisors could tell map maker what to change and how

## SEA / EA Visits

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Senior Event Advisor Vibeke Vogelius and Event Advisor Lauri Kontakannen have made a tremendous job together with course setter Zdenko Horjan, map maker Ivana Gobec and main organizer Damir Gobec. During two years there was a constant contact between all parties. Four visits before WTOC cleared all issues and with lot of analyzing, measuring and discussions we all together achieved to prepare WTOC on time and according to the rules.

SEA and EA were accommodated in hotel in Zagreb on all occasions of their visits. Every time full board was given. Breakfast was in hotel and lunch and dinner were provided on the terrain or in the restaurant in the city. During preliminary visits we used our cars for transport of Advisors, and during WTOC advisors had their own rental car provided by the organizer.

Although for the organizers every visit means also an additional cost it is essential to have close cooperation between Event advisors and organizers. Every step of organizers was approved also by the Advisors, so there were no surprises on the Event. This close cooperation made WTOC 2015 one of the best organized trail O competitions until now. During two years of joined cooperation we visited all terrains on many occasions, we checked all accommodation facilities, equipment and also map printing company. Before printing the maps every map was checked by the advisors directly in the printing company. After the printing was finished all maps were given to the SEA Vibeke Vogelius who checked them again and brought them on every competition.

**Note for future organizers:** Do not save your money on SEA and EA visits. Take opportunity to have them as many time as possible on the terrain with the map in their hands. Your organization will profit from the knowledge and advises you will get from them. Many mistakes can happen although you as organizer are trying your best but some other eyes can see things which you did not see.



Checking and correcting the map on the terrain



Checking compass bearings



Checking of the printing



## Maps - The Process of Map Making

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All maps for WTOC, except for TempO Qualifications in Karlovac were done entirely from scratch, although some older maps existed (see WTOC Bulletins). Older sprint map of Karlovac was taken as a base map, but there were so many changes that it may be also considered entirely new.

Zagreb - Blato, Zagreb - Divjača, Zagreb - Maksimir maps were done with Lidar Data (2012) and Ortophoto (2012) used as a base map, provided by GDi GISDATA only for this purpose. Consultant from GDi GISDATA was Ivan Lukić.

Consultants on Magnetic Declination were Dražen Tutić and Mario Brkić, University of Zagreb, Faculty of Geodesy, 2015. Some deviations in bearings were noticed by Event Advisor Lauri Kontkanen and Course Setter Zdenko Horjan , so all maps were checked again and adjusted for current Magnetic Declination exactly for time of WTOC.

Technical assistance considering various Software, GPS connection and outputs was done by Maja Cvitković , Josip Matijašić and Boško Opalić. All surveying and cartography was done by Ivana Gobec. Occasional assistant while mapping was Damir Gobec.

All maps were drawn according to the IOF International Specification for Sprint Orienteering Maps in scale 1:4000, with contour interval 2.0m or 2.5m

### Note1:

☑OK "Vihor" took over organizing WTOC only 2 years in advance. Upon SEA-s first arrival only Competition Areas were determined. There were only base maps and some old maps. Since there was no time to survey prior to SEA first visit, only particular **specific parts** of each terrain were mapped. This actually turned to be very good, because prior to long mapping process the **essential criteria for mapping was set** by Mapper, Course Setter and Senior Event Adviser.

### Note2:


☑Since all mapping process depended on one person, Ivana Gobec, entire backup was in secret kept by another person, Boško Opalić.




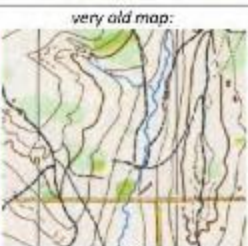

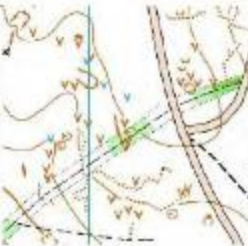


## Maps – First map report from Organizers to Senior Event Advisor - overview

WTOC 2015

MAP STATUS - DATE: Oktober 04, 2013

**Current status on this date!**

	Terrain no. 1	Terrain no. 2	Terrain no. 3	extra		
map name:	BLATO	SESVETE/DIVJACA	KARLOVAC	DOLJE	MAKSIMIR	BUNDEK
previous map exists	NO	YES	YES	YES	YES	YES
date of an old map	-	1980/90-ies	2011.	2011.	original 1999+corrections	2010.
quality of an old map	-	⊗ not usable	good	⊗	⊗ but usable	good
previous scale	-	1 : 10 000, e=5m	1:4000, e=5m	1:5000, e=5m	1:10000/1:5000, e=5m	1:4000, e=2,5m
previous standard	-	before ISOM	ISSOM	ISOM/ISSOM	ISSOM/ISOM	ISSOM
use of previous map planned?	-	not planned to use old map	needs update to new version <b>yes</b>	needs update to new version not planned to use old map	needs update to new version yes, but better if new could be done	needs update to new version <b>yes</b>
Previously used for trail-o	never used before	no	no	yes* (4 international competitions!)	yes	yes
also previously used for ...	never used before	foot-o* last was 15 years ago	foot-o (sprint only)	foot-o, mtb-o	foot-o, mtb-o	foot-o (sprint only)
WTOC 2015 will be used for:	<b>TEMPO FINALS &amp; DAY2 &amp; MODEL2 (for DAY2)</b>	<b>DAY1</b>	<b>TEMPO QUAL.</b>	<b>BACKUP TERRAIN</b>	<b>MODEL1 (for TEMPO &amp; DAY) ((RELAY))</b>	<b>possible for training or even MODEL2</b> (contours do not match Blato!)
level of priority	<b>HIGHEST !</b>	<b>HIGH</b>	<b>HIGH</b>	<b>important after other maps are finished</b>	<b>lower</b>	<b>low (already usable)</b>
Distance from Event Centre	5km	18,5 km	49 km	15km	11km	4,5km
Distance from Zagreb	0	0	49 km	0	0	0
... can be reached by public transport	no (5km distance)	yes	yes	yes	yes	yes
car parking	adjacent to the terrain, sufficient	on the Assembly Area, sufficient	on the Assembly Area, sufficient	sufficient if Police Academy parking is used, otherwise 2-3 parking areas, one on the terrain	adjacent to the terrain, sufficient	adjacent to the terrain, sufficient
planned map scale	1:4000	1:5000	1:4000			1:4000
planned E	2m	2,5m	5m (?)--> 2,5 possible			2,5 might be problem to switch to 2m if used as model for Blato
area km <sup>2</sup>						
type of terrain	golf course very rich hilly details, lakes, very few paths!	clear continental forrest typical mid-european terrain	urban park arboretum	clear urban forest memorial park	urban park and urban forrest, monument of park architecture: English (!) romantic garden	modern urban park
climb 	completely flat paths, some assistance needed if used off-road	steep parts assistance needed! course needs to be divided	completely flat	some climbing some assistance needed	almost flat steeper areas can be avoided	completely flat
planned standard for WTOC	ISSOM	ISSOM -?	ISSOM	ISSOM -?	ISSOM -?	ISSOM
possible questions for SEA/EA: special symbols, deviations	golf "green" carpet? possible contour distance deviation?	mapping rootstocks which are not turned over? ISSOM or ISOM?	smallest mapped vegetation features? isolated but small vegetation features; contour distance	special feature -> dug-out graves from excavations (hole+knoll always together)	ISSOM or ISOM? contour distance if used as model 2,5	forrest over paved area
basemap	LIDAR 2012 + ortophoto 2012 <input checked="" type="checkbox"/>	LIDAR 2012 + ortophoto 2012 <input checked="" type="checkbox"/>	previous map (ortophoto based) <input checked="" type="checkbox"/> no LIDAR data possible!	<b>no</b> possible LIDAR+ortophoto *old map is not planned to be a basemap!	<b>no</b> possible LIDAR+ortophoto *old map is not planned to be a basemap!	previous map (ortophoto based) <input checked="" type="checkbox"/>

basemap sample			-	-	-	-
map sample						
budget	<input checked="" type="checkbox"/> Vihor & ZŠS	<input checked="" type="checkbox"/> Vihor & ZŠS	<input checked="" type="checkbox"/> Vihor & ZŠS	<input checked="" type="checkbox"/> Vihor & ZŠS	<input checked="" type="checkbox"/> Vihor & ZŠS	<input checked="" type="checkbox"/> Vihor & ZŠS
data processing	done Boško Opalić + Ivana Gobec	done Boško Opalić + Ivana Gobec	not needed	not done	not done	not needed
map maker	Ivana Gobec, Damir Gobec	Ivana Gobec, Damir Gobec	Ivana Gobec, Damir Gobec	?	?	Ivana Gobec, Damir Gobec
map corrections by...				?	?	
field work	not done! planned for 2013/2014	not done! planned for 2013/2014	corrections needed - old map to be used -	not done!	not done!	corrections needed - old map to be used -
map corrections (for old map)	new map	new map	planned for 2013/2014	new map to be...	new map to be...	planned for 2013/2014
new computer drawing	in process*current work	in process*current work	not needed	no planned for 2014/2015	no planned for 2014/2015	not needed
Complete first draft available	planned: beginning of 2014	planned: beginning of 2014	?	-	-	-
Map finalised	-	-	-	-	-	-
Competition Area Determined	yes	yes	yes	yes	not decided	not decided
Arena Determined	yes	suggested	yes	-	-	-
Permissions to use terrain	yes	no (should not be a problem)	no (should not be a problem)	no (should not be a problem)	no (should not be a problem)	no (should not be a problem)
<b>CONTROLLING:</b>						
Controlling: SEA	-	-	-	-	-	-
Controlling: EA	-	-	-	-	-	-
National Controller 1 (organizing)	Ivana Gobec (for now)	Ivana Gobec (for now)	Ivana Gobec (for now)	-	-	-
National Controller 2 (mapping, courses)	Vladimir Tkalec (Orienteering club Medimurje)	Vladimir Tkalec (Orienteering club Medimurje)	Vladimir Tkalec (Orienteering club Medimurje)	-	-	-
<b>COURSES:</b>						
courses' route shema (start, direction, finish)	yes	yes	yes	one possible track	-	-



possible to plan control-set-up at this moment...	yes	no	yes	yes	yes	yes
courses status	-	-	location of controls suggested	-	-	-
course planner	Zdenko Horjan	Zdenko Horjan	Zdenko Horjan	-	-	-
POSSIBLE DIFFICULTIES* *all mentioned difficulties are not extreme, but should be considered	Very detailed terrain shapes Route marking • because very dark weather and the route is needed and the whole situation	Wt on the course: muddy paths in bad weather extra pushers in places darkness in very bad weather longer course needed	People passing by • because very dark weather could be forecast and therefore a caution	Arena further away distant start/finish pushers needed longer course needed	Too many people walking around, impossible to close the area	Too many people walking around, impossible to close the area
possible solution	consultation with SEA/EA! marking the route flood-> backup terrain (see: map Dolje)	course divided into 2 parts no very distant flags	extra control keeping flood-> backup terrain (see: map Dolje)	if it comes to this terrain there are no more possible solutions, it means that a little things went wrong already and it has to be like it is!	extra control guarding	extra control guarding
PRO-s	Great terrain! Good facilities.	a little bit unusual terrain for competitors from North	hard paths, beautiful park/town, challenging, no special need for pushers	always ready for back-up hard paths both temp-o and pre-o suitable	the most beautiful terrain variety of control set-up rich pathway network	no special need for pushers rich pathway network
map:	BLATO	SESVETE/DIVIACA	KARLOVAC	DOLJE	MAKSIMIR	BUNDEK

## Zagreb - Divjača, Zagreb - Maksimir

From GDi GISDATA Lidar data only contours generated on 0.5m were taken as useful. More precise contour lines were impossible to get from Lidar Data. Medium steep slopes were very decently covered by Lidar data (contours) and they needed very little corrections, meaning that only special features like ditches and pits had to be added precisely. Flat parts needed a lot of mapper's work. Area by the creek passing through whole map, and used for many tasks, was entirely mapped by hand.

With assistance of Dražen Tutić, Maja Cvitković and Josip Matijašić Professional Trimble 61000-00 GeoXH Handheld GPS was used to mark main junctions and some important other points. Handheld Garmin GPSMAP 60Cx GPS was used for rough paths survey, and also for rough vegetation boundaries, but data was adjusted to fit Trimble 61000-00 GeoXH Handheld GPS points.

Ortophoto was usefull only for the area of Rasadnik "Brestje" (nursery garden area), which was opened land used for last Timed controls.

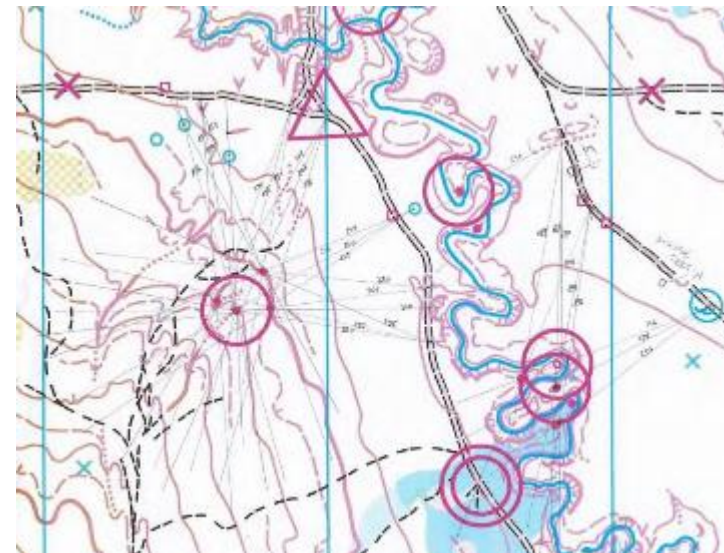
Basemap was prepared for hand drawing using AutoCad Map Software. On the terrain techniques varied from hand drawings to working on tablet PC (Samsung ATIV Smart PC - Win 8) connected with GPS. Final layout was done in Ocad 10.



a) hand drawing on Lidar data



b) map maker checking distances



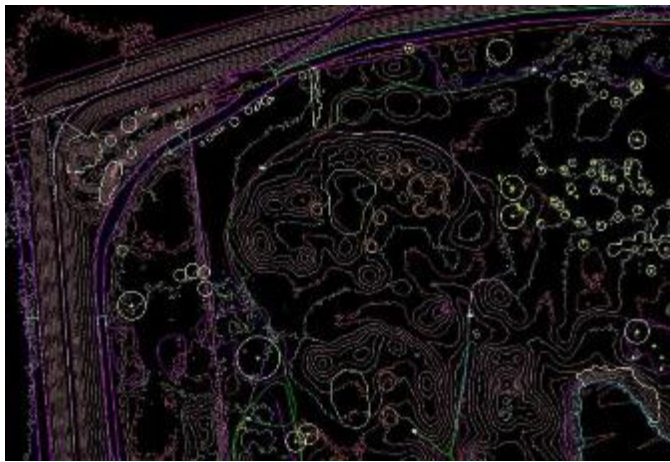
c) course setter checking compass bearings

## Zagreb - Blato

From GDi GISDATA Lidar data, Ortophoto, and surface data was used. In addition to that there was a housing project done in AutoCad, which covered all urban details. Contours generated on 0.5m were very precise, although a lot of "by the eye" interpretation was needed. GPS was used only for major vegetation boundaries, and it was reliable because the terrain is mostly opened land.

Base map was prepared for hand drawing, using AutoCad Map Software. The whole map was first surveyed on terrain by hand on paper with prepared data, mostly to solve contour lines, and major vegetation features. Final changes and final layout and was done in Ocad 10.

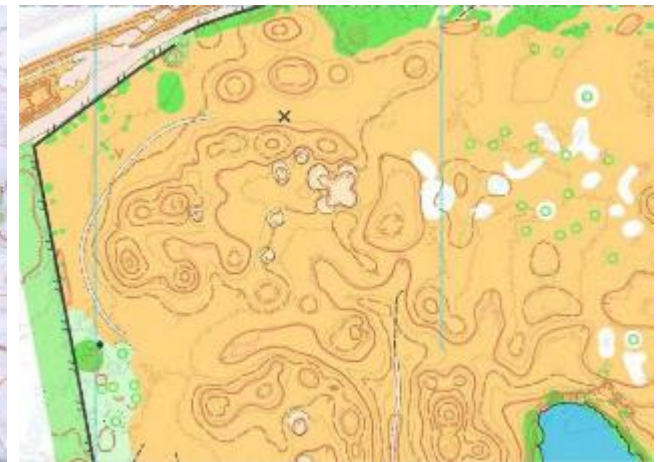
Fine adjustments for controls, involving precise compass bearings, lines and distances were done on the paper version again!



a) AutoCAD Map - preparations



b) hand drawing on paper



c) OCAD on Tablet PC



## Karlovac

Karlovac old Sprint Foot-O map (2010) was used as a base map. It used to be made almost entirely in AutoCad, because data was taken from some architectural planning projects, then it was switched to OCAD. Old map was used for Sprint Foot-O purposes.

Karlovac still doesn't have new and sophisticated base maps. Available "ortophoto" is just good aerial photo, and it was used to map some open areas, but it needed a lot of checking and changes. Contours data available are still miserable. Since there were no reliable contour data, contours were done by foot measuring and "by the eye". Since there are strong magnetic fields present, most of data (vegetation... ) was done by sighting lines.

Illustrations below: base maps



Illustrations below: old sprint map 2011, new TrailO map 2015



## Maps - Final Checking – “Fine Tuning”

After map is drawn, there **must be** another adjustment - from the competitors point of view.

Main reason for that is that symbols take much more space, than features in real life. A map maker has to separate symbols, so a map could be readable. (Good example - first picture below: tree beside the path. Path is 1m wide, but symbol shows almost 4m = 3m mistake already. Prominent tree is almost on the path, but it has to be moved beside, so it is another 2 meters mistake to a real-life situation). Therefore something is always wrong - either the distance, or some line, or a bearing. This must be corrected to the most possible level, to be logical and to fit from the competitors point of view. Each situation is different and, mostly point features, have to be moved to fit the task.

The easiest is to fit the map for TempO. Things get more complicated if a competitor can move around a lot, which happens on PreO, and if he can see a lot of features behind the control markers. The most difficult situation is if a competitor can go all the way around a control site.

Despite of all technical equipment like professional Trimble 61000-00 GeoXH Handheld GPS and various software on tablet PC, when it came to final adjustments for the tasks, map maker and course setter had to go back to the "paper version". Taking sight bearings, fine lines, and distances and transferring them precisely on digital version was time consuming, and not "handy" at all!

One of the banal problems was that the PC shouldn't be held in hands while taking precise compass bearing, because it turns magnetic needle. The other is - using grid is not precise enough for TrailO. (Ocad - in order to move something precisely, a line object must be drawn, then measured, then deleted)

Drawing on paper was much quicker, much more certain, and "helping" lines stay as a reminder on what was done.



final checking and corrections of bearings, lines and distances

## Maps - Final Print

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### Pre-O Preparations for final print

Courses were done with Course Setting option in OCAD, by Zdenko Horjan, the course setter. Final layouts were made by Ivana Gobec, map maker, constantly in close collaboration with course setter.

Printing was done by "Sport Spirit" printing office. Control Cards were printed on Agfa Synaps paper - same as maps, but thinner

### Course Setting

Course Setting was made separately from original maps. In course setting process there was always last version of a map used as a background for Course Setting in Ocad.

Course Setting files contained usual course setting controls, but also many additional things:

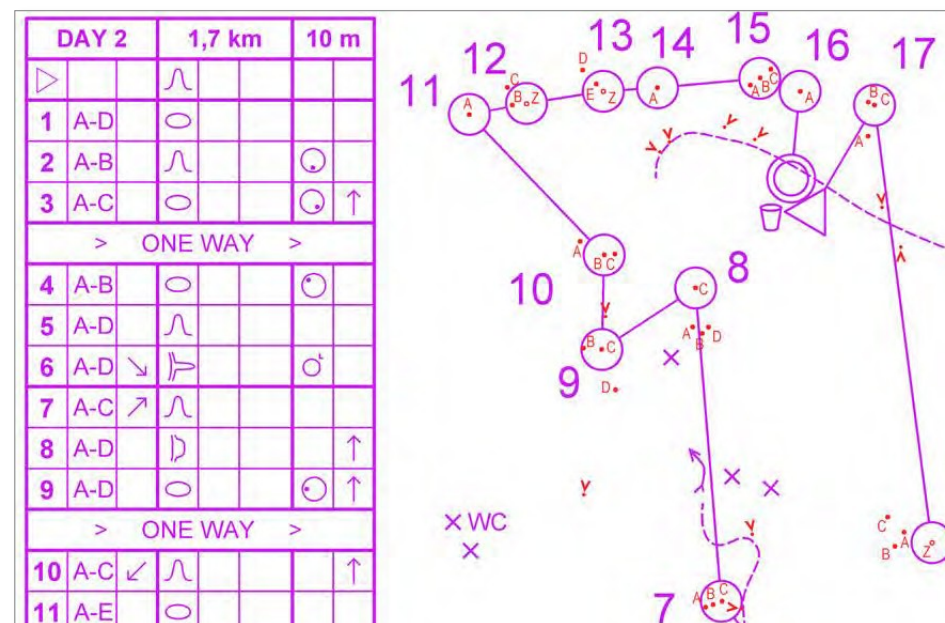
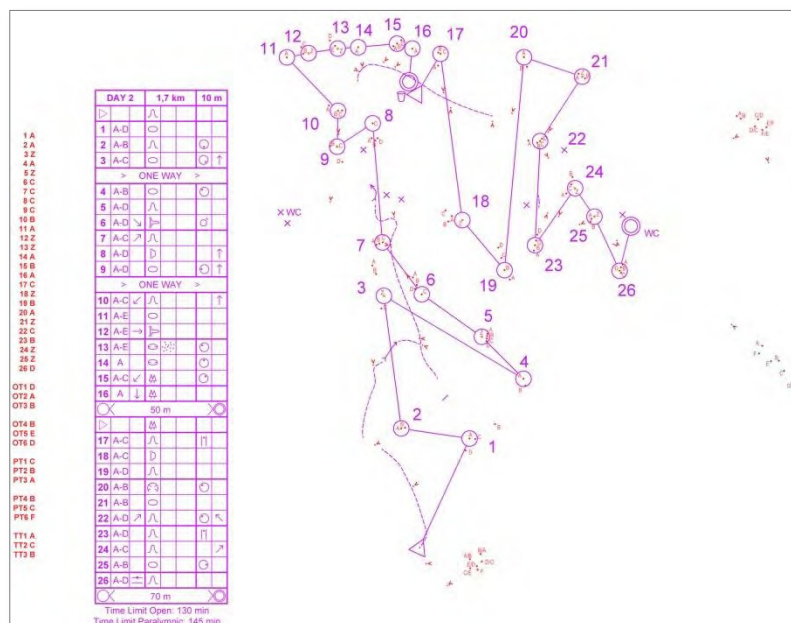
- control circles, lines, numbers and descriptions (standard)
- all flags markings and "zero" positions (A, B, C... Z)\*\*\*
- decision points positions\*\*\*
- mandatory route dashed lines
- ONE WAY markings in control descriptions
- ONE WAY arrows on map, included in mandatory route
- exact positions of toilet facilities (WC) ! and refreshment
- "x" markings on forbidden paths
- "I" markings for walking end-points on a path

\*\*\*\*\*

Note:

- On the day of competition some competitors were unfamiliar with difference of purple "x" and "-" markings over paths on the map, and with "ONE WAY" corridors, despite of rules, previous experiences and the fact that everything was shown on Model Events.
- "x" , "-" and corridor issues were discussed on Team Leaders Meeting, but anyway, some competitors missed to punch (for example 9th control, and to use toilet on the second day) despite it was clearly marked (1) in control descriptions, (2) on mandatory route and (3) on the ground.





Each PreO day course was kept as whole, until the very end of planning. Then the course was divided into two courses named PART 1 and PART 2. Each part (Part 1, Part 2) was exported to be a separate file.

In separate final files, meaning Exported Course Maps (OCAD-Course-Export-Export Course Maps) :

- \*\*\* all flags markings and "zero" positions and decision points positions were erased completely, so no switch-on-off-printing mistakes were possible
- Data about course lengths and time limits were changed manually for each map
- Total course length and information about break was manually added
- Control circles and lines were cut for better reading of details at the very end, before printing.
- ONE WAY arrows were checked
- frame layout (described below) was used as a background

✓ Frames, logos, map data such as scale/contour interval, special symbols and **north lines (!)** were made as **separate OCAD files, used always as a background**, and remained like that even throughout printing process. Map files and backgrounds were never joined. Many possible mistakes were avoided this way. As background layout is kept away from the map, there is no danger of accidentally having wrong symbols or colors on the map, due to exporting/importing/copying/pasting. There's also no possibility to put on wrong scales, or other data, or for example to forget about switching on north lines just before printing.

This background layout can be done carefully in advance, as soon as used area is defined, so, by the end, there's much more time to concentrate on technical details of courses.



## Pre-O Printing

There was a lot of effort involving finding right paper in combination with a printer which would give high quality prints, satisfactory for WTOC. Going abroad, or sending maps via postal offices were out of question, mostly because things like that can last for weeks. Offset printing was also out of the question because of too small number of very different maps and very big prices, and long time waiting for print offices to do it.

In Zagreb there are many possibilities, but none of them fit our requests. Most of the offices worked just 8 hours per day, closing on weekends or on national holidays (there were two in week of WTOC). There was always long waiting time, and no will to cooperate on details like fine tuning of colors.

So after a while, we continued collaboration with printing office "Sport Spirit", from town of Križevci (1 hour driving from Zagreb). They were willing to do numerous samples, and finally, willing to move their professional printer, together with operators and additional equipment to the Event Center in hotel Aristos in Zagreb.

First prints that came out at Pre-WTOC competition were not satisfactory. Paper was excellent quality, print was not coming off, sharpness was fine, but colors were poor in tone. There was a lot of effort to find preferences that worked.

All maps were **printed in one day**, 5 days before WTOC, in presence of SEA and EA. Printing of maps alone took 5-6 hours, with everything prepared in advance.

 **Maps were printed continuously at once for one set of maps. Therefore all had same paper, printing preferences and colors for all competitors.**

Each set of maps were separately packed immediately in the printing office and handed over to SEA (Vibeke Vogelius). From that point on maps were kept safely by SEA until the very start of each event. Every single map was checked by SEA (Vibeke Vogelius) and National Controller (Tomislav Kaniški), but never out of a safe place.

Printing was made on Konica – Minolta bizhub C224e+ (=Develop Ineo+ 224e) professional laser printer, using standard manufacturer cartridge.

Printing was made on AGFA SYNAPS XM 135 Art. No 4MT9P, 135 gr/m<sup>2</sup>, 120 µm, size 32 x 45 cm, custom cut later.

SYNAPS is two-sided printable synthetic paper, based on a high grade white polyester substrate with a two-sided high performance opaque printable topcoat for use in dry toner electro photographic printing systems (digital presses, laser printers, copiers). SYNAPS is a PVC-free, wood-free and lamination-free synthetic print media. It combines the physical qualities of a voided polyester (PET) film with the look and feel of a luxury paper. It is suitable for outdoor use with high demands on durability, tear and water resistance, dimensional stability and writability.

☑ Maps were tested in advance by pouring water on them and then jumping on them on gravel ground, then jamming and roughly scratching with compass. Print stayed perfect, and paper was not torn at all. This was very important. On Day 1 we had extremely weather conditions, with pouring rain combined with sticky mud. During the competition many maps ended up extremely muddy and wet. All the maps survived intact, were washed, dried and handed over to competitors.

Printing was done **directly from OCAD with using default ISSOM preset colors, but then adjusting color preferences on printer itself**, for each map separately. "White" map Divjača, had to be printed completely different from "yellow" map Blato, although starting preferences and OCAD files had same colors. The conclusion was that printer itself did some adjustments, depending on data sent to. Printer could not recognize slight changes in percentage of color change done in OCAD file.

Approximate Preferences: Paper Type - Thick 2; Pattern - Coarse; Resolution - 600 dpi; Edge Enhancement; Image Compression - Best Quality; Quality Adjustment - Color Matching - vivid; Other - Smoothing - medium. Attention must be also on overheating the paper, and speed of printing.

**Printing was done directly from OCAD after very big shock of finding mistakes from PDF files printing!**

Very important note!

☒ Printing maps using PDF export showed as very risky, and we would like to emphasize this for future organizers. We had mistakes on complicated curves, like some paths, and phantom lines showing, not on screen, but in print! Also we had case of **holes in area symbols not showing**. The data was lost somewhere in between PDF and printer.

This was specially well shown in Bulletin no. 4 which was exactly the same file printed as published on the web. On pages 18/19 printed version did not support white in yellow! In web version everything is fine.

☒ There was one issue, but just for first printed maps. As printer was printing very fast, it was overheating the plastic paper. Maps were very hot and backside of some maps which were printed last, "collected" some colors from maps beneath. It resulted in smallest green dots having white empty spot in the middle. It was seen with a magnifier glass on compasses.

After first set of maps we noticed the overheating, and separated all the maps that were printed later immediately after coming out of the printer.

Unfortunately, couple of those Model 1 maps ended up in hands of competitors without noticing. All other maps were checked again by SEA and the National Controller, but there was no more problems.

☒ It would be very useful if the IOF Mapping Committee had **printed version of how colors must look**. We are *not* talking about test printing sheets .pdf /.ocad/... formats published on web, we are talking about **a printed paper copy** that could officially be distributed among organizers - a copy that can be taken into hands and looked at, for comparison.





pdf. version of Bulletin which we gave to printing office had normal white color around the trees



in printed version of Bulletin 4 white color disappeared around the trees

## Temp-O Printing

Maps were printed A5 format, 21cm x 15cm in size. All were printed on ink-jet printer on thick ordinary paper, then laminated. There were always two sets of maps for each station, one bonded, and one loose. Competitors could choose which they want to use.

Used printer: HP Deskjet Ink Advantage 5525, Normal Mode, 600x600dpi  
 Used paper: Navigator Ultra Smooth Ultra Bright 120gm-2 for color documents  
 Laminating: Sigma LF480, Sigma laminating foils, 80µm\*, size 216x303mm custom cut  
 \* little thicker would be better

Note:

- **Software** (for organizing orienteering events) needs to be upgraded and **customized for making TempO map sets** urgently!

## Temp-O Preparations for final print

Sets of maps for Temp-O competition, as well as all other Timed controls on PreO (which were TempO style) were prepared by Zdenko Horjan, the course setter. This process is very time consuming, since 108 (!) different layouts had to be prepared.

From the beginning of planning WTOC the question was - *how to deal with enormous amount of work with map sets for TempO while original map itself can't be finished until the very end, due to constant changes on the terrain (specially in parks)?*

The solution were in Adobe InDesign Software which allows a single map to be visible on many spreadsheets in one file, scaled and rotated, but externally **linked only once**. By updating that one link (when there's a change on a map), all visible map-cuts update to current version of a map, without changing scale or rotation.

So, when we found that solution, it was possible for map to change until the last possible moment, but also plan layouts for all Timed controls.

For PreO there were always 3 tasks per station, for TempO Qualifications 4 tasks per station, and for TempO Finals 5 tasks per station. The map unit, or set of maps, always had cover sheet which included most important data for a competitor.

For clearer map reading north lines were always outside of circular map, on white background, with **N** sign pointing north.



Illustration: Blank template for Timed controls

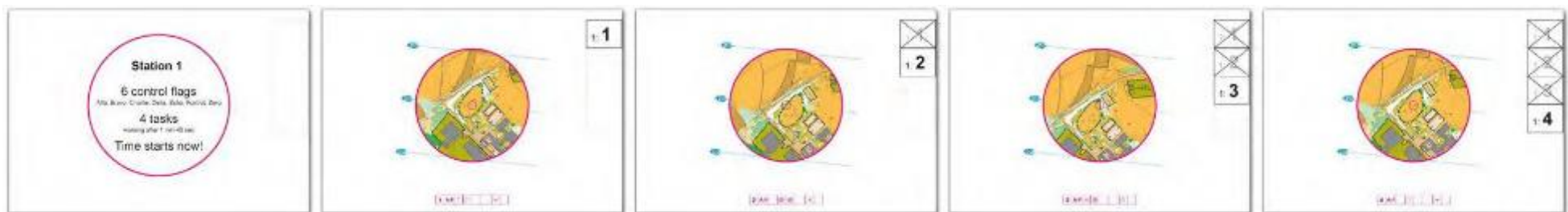


Illustration: Example of map set for a Timed Control

Total number of prepared TempO maps was:

Event		Stations	Tasks	Total number of maps
Model 1		1	3	3
Model 1 "self service"		1	3	3
Model TempO		2	4	8
Model TempO "self service"		2	4	8
Day 1		4	3	12
TempO Q		8	4	32
TempO F - model	4	1	5	20
TempO F		7	5	35
Model 2		1	3	3
Day 2		5	3	15

Total number of Timed control maps : **139**

Double sets : **278** maps in print!

\*Be aware of the costs if you are not printing and laminating on your own.



TempO maps ready for competition



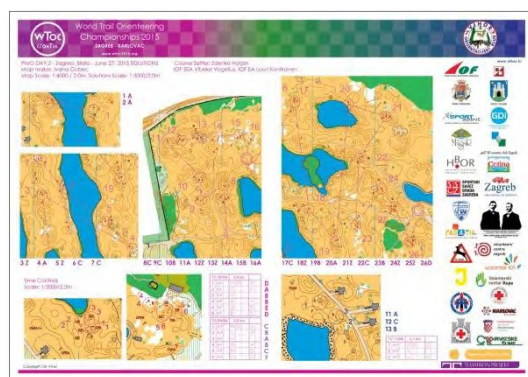
## Solution Sheets

Solutions were made by course setter Zdenko Horjan together with Course Setting in OCAD, solution maps and sheets were prepared for print by map maker Ivana Gobec. OCAD maps were exported to .PDF format, then linked to Adobe InDesign file. Logos and background were set in the "master page" in InDesign. Each competition had one A3 page printed on ordinary paper, on laser printer.

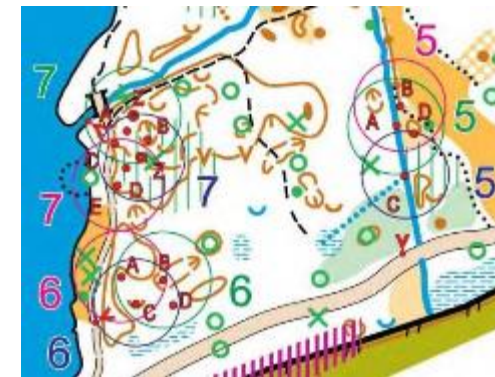
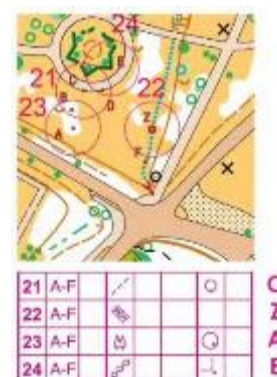
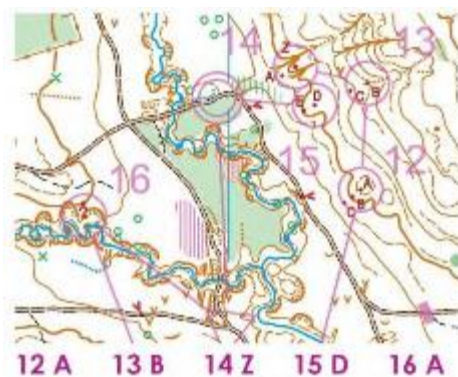
Solution maps were cut to partial maps, mostly enlarged to 1:3000 and 1:2000 for Timed Controls. Answer letters were added beside each partial map.

✔ Control circles, exactly as on printed maps, were included in solutions, as well as control descriptions for all Timed controls. Maps in the background of markers and letters had faded colors, for better readability.

✔ Relay had 3-colored solutions for 3 different courses, as well as whole map shown, and all 3 courses controls descriptions, so each competitor can compare all courses



Solution Sheet



Illustrations: solutions - partial map PreO, partial map Timed Control, partial map Relay

## Changes to original solutions - see also *Changes and Mistakes chapter, and SEA report*

Changes to original solutions, which were first handed to competitors:

1. Model 1, Model 2, Pre O Day 2 - No changes
2. Pre O Day 1 - position of decision point for 2nd Open Class Timed Control was slightly moved, so two markers switched places - answer changed from F to E /everything regular/
3. TempO Qualifications - station No. 8 (last station) cancelled, due to harsh sun/shade changes for competitors starting late /everything regular/
4. TempO Finals - station No. 3 had changed solutions, because it was set up differently in advance, for better visibility in high grass /everything regular/
5. Relay - controls No. 8 and No. 10 cancelled due to mistake in descriptions - wrong number of flags visible; course B wrong letter written for answer

Total amounts of printed Solution Sheets- 1240 pcs

## CONTROL CARDS

Control cards were made by Ivana Gobec in close collaboration with course setter Zdenko Horjan. Printing was done by "Sport Spirit" printing office. Control Cards were printed on waterproof synthetic paper - same as maps, but thinner for easier punching - [see Map Printing chapter](#)

Control cards for all competitions were customized for each event. Punching squares were 14 x 14 mm.

Background with punching squares was done in AutoCad (.dwg) and Corel (.cdr). Personal data was extracted from Excell (.xlsx) and doubled on the same control card were needed.

Printing was done simultaneously - background with all generated data.

- ✓ Each Control Card was printed with all personal data and starting time simultaneously, and on both sides, so that data mistakes were avoided.
- ✓ Nothing was manually changed for each competitor, so that data mistakes were avoided.

Model 1, Model 2, Model TempO control cards were given to teams upon arrival, the rest of control cards were given to team leaders in the evening prior to the competitions.




Model 1 PART 1 + 2																																																																																																																																																																																																																										
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## Temp-O

For Temp-O Control card was A5 format, double printed with same data on A4 format. One sheet with double print goes to one competitor. They were perforated transversely, so a copy could easily be torn and given to a competitor later.

Number of stations and number of tasks per station were customized for each event.

Start No. <b>31</b>	Group		 World Trail Orienteering Championships 2015 Zagreb - Karlovac	
Name: <b>Iva</b>				
Surname: <b>Lovrec</b>	Event: <b>TEMP-O QUALIFICATIONS</b>			
Country /Club: <b>Croatia (CRO)</b>	START TIME <b>76:00</b>	FINISH		

ST1	1.1	1.2	1.3	1.4	Timer 1	Timer 2
ST2	2.1	2.2	2.3	2.4	Timer 1	Timer 2
ST3	3.1	3.2	3.3	3.4	Timer 1	Timer 2
ST4	4.1	4.2	4.3	4.4	Timer 1	Timer 2
ST5	5.1	5.2	5.3	5.4	Timer 1	Timer 2
ST6	6.1	6.2	6.3	6.4	Timer 1	Timer 2
ST7	7.1	7.2	7.3	7.4	Timer 1	Timer 2
ST8	8.1	8.2	8.3	8.4	Timer 1	Timer 2

Illustration: printed sample for TempO Control Cards

Start No.	 World Trail Orienteering Championships 2015 Zagreb - Karlovac	
Name:		
Surname:	Event: <b>TEMP-O FINALS</b>	
Country /Club:	START TIME	FINISH

ST1	1.1	1.2	1.3	1.4	1.5	Timer 1	Timer 2
ST2	2.1	2.2	2.3	2.4	2.5	Timer 1	Timer 2
ST3	3.1	3.2	3.3	3.4	3.5	Timer 1	Timer 2
ST4	4.1	4.2	4.3	4.4	4.5	Timer 1	Timer 2
ST5	5.1	5.2	5.3	5.4	5.5	Timer 1	Timer 2
ST6	6.1	6.2	6.3	6.4	6.5	Timer 1	Timer 2
ST7	7.1	7.2	7.3	7.4	7.5	Timer 1	Timer 2

Illustration: Blank template for TempO Control Cards



## Pre-O

---

For PreO Control card was A4 (21,0 cm) or A3 (42,0 cm) format, but smaller in height (26,0 cm), double printed with same data on same looking back side.

Number of punching rows was customized for each event.

Punching squares were arranged so they could be reached from the top and from bottom, for easier punching, and each square was labeled an numbered for avoiding accidental miss punching. Other data was distributed throughout the middle of control card.

They were transversely and longitudinally perforated, so the first part of a control card could be taken away completely, and then copies from both parts could easily be given to a competitor later.

- Time from start list was printed as Pre-Start Time because before course there was 1st Timed control. That was a minute when a competitor was asked to enter competition from the Pre-Start Area.
- Real starting time - Start 1 - was not manually written on a control card, SI start unit was punched
- Real finishing time - Finish 1 - was not manually written on a control card, SI finish unit was punched, a competitor was given SI Card readout on paper, first part of control card was taken away from the competitor, both - front page and a back copy
- Real starting time - Start 2 - was not written manually on a control card, other data (SI number, name and start bib) was checked; SI start unit was punched (at any time, not full minute)
- Real finishing time - Finish 2 - was not manually recorded, SI finish unit was punched

*Empty spaces for manual recordings were put on control cards in case of electronic time keeping breakdown, but were not used, except field for Start 1, so a competitor could see his real starting time.*

*Manual time keeping was thoroughly done by 4 stopwatches, separately from Sport Ident time keeping. - see Start/Finish chapter*

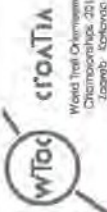
Timed controls answers were written manually on each station on control cards.

✘ It would be better if real starting time is manually written on a control card

✘ There were last-minute changes to SI chip numbers! Some competitors showed up with SI number not matching number on control card. Some of changes IT was aware of, but some just showed up with another SI chip. Because of previous experience, to avoid any last second actions, changes were manually written to control cards, and backup timing lists, and changed later. There were no problems, but there was a delay delivering results.

Warning for future organizers: Switched or changed SI chips may cause problems and delay delivering results. Be more strict about this.

 <b>Day 1 - PART 1</b>		Name: _____ Surname: _____ Country / Club: _____		Start No. _____ SI Number: _____ Class: _____		PRE-START START TIME 1 _____ FINISH TIME 1 _____	
A	B	C	D	E	Z	1	15
1	1	1	1	1	1	1	15
A	B	C	D	E	Z	2	14
2	2	2	2	2	2	2	14
A	B	C	D	E	Z	3	13
3	3	3	3	3	3	3	13
A	B	C	D	E	Z	4	12
4	4	4	4	4	4	4	12
A	B	C	D	E	Z	5	11
5	5	5	5	5	5	5	11
A	B	C	D	E	Z	6	10
6	6	6	6	6	6	6	10
A	B	C	D	E	Z	7	9
7	7	7	7	7	7	7	9
A	B	C	D	E	Z	8	8
8	8	8	8	8	8	8	8
A	B	C	D	E	Z	9	7
9	9	9	9	9	9	9	7
A	B	C	D	E	Z	10	6
10	10	10	10	10	10	10	6
A	B	C	D	E	Z	11	5
11	11	11	11	11	11	11	5
A	B	C	D	E	Z	12	4
12	12	12	12	12	12	12	4
A	B	C	D	E	Z	13	3
13	13	13	13	13	13	13	3
A	B	C	D	E	Z	14	2
14	14	14	14	14	14	14	2
A	B	C	D	E	Z	15	1
15	15	15	15	15	15	15	1

 <b>Day 1 PART 2</b>		Name: _____ Surname: _____ Country / Club: _____		Start No. _____ SI Number: _____ Class: _____		START TIME 2 _____ START TIME 3 _____ START TIME 4 _____		FINISH TIME 2 _____ FINISH TIME 3 _____ FINISH TIME 4 _____	
A	B	C	D	E	Z	16	15		
16	16	16	16	16	16	16	15		
A	B	C	D	E	Z	17	14		
17	17	17	17	17	17	17	14		
A	B	C	D	E	Z	18	13		
18	18	18	18	18	18	18	13		
A	B	C	D	E	Z	19	12		
19	19	19	19	19	19	19	12		
A	B	C	D	E	Z	20	11		
20	20	20	20	20	20	20	11		
A	B	C	D	E	Z	21	10		
21	21	21	21	21	21	21	10		
A	B	C	D	E	Z	22	9		
22	22	22	22	22	22	22	9		
A	B	C	D	E	Z	23	8		
23	23	23	23	23	23	23	8		
A	B	C	D	E	Z	24	7		
24	24	24	24	24	24	24	7		
A	B	C	D	E	Z	25	6		
25	25	25	25	25	25	25	6		
A	B	C	D	E	Z	26	5		
26	26	26	26	26	26	26	5		

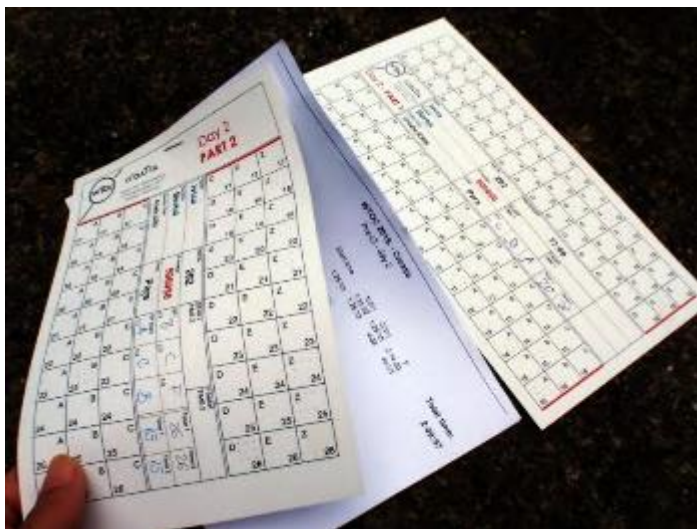


Illustration: Blank template for PreO Control Cards and control card after Event

Total amount of printed Control cards was over 500

Note for future organizers:

- ☹ data for control cards for Day 2 can't be generated until results from Day 1 are official and start lists are made
- ☹ data for control cards for TempO Finals can't be generated until results from TempO Qualifications are official and start list is made
- ☹ once controls are printed, every change to start list changes all control cards data
- ☹ once controls are printed, any change can be made only manually, both to the control card and to start/finish checkup lists or everything has to be printed again
- ☹ waterproof (must be), twice perforated and custom cut control cards are very expensive (more than maps!)
- ☺ once generated, if no changes, everything goes out of printing machine at once
- ☺ Model 1, Model 2, Model TempO control cards can be given to teams in advance, when they arrive

Other notes:

- Only one competitor had control card tied with a string to a hand, and therefore made a hole in data area of the card. It could happen and it would be good to plan that area to be on control card



## Timed Controls

### Equipment

Approximate equipment list for each Timed Control site:

- 6 poles and 6 flag markers
- 1 set of binded maps + 1 set of loose maps  
(in this case, brought on the competition by Event Adviser)
- holders, stabilizers + board with letters  
(be careful! - ABCDEF for PreO or ABCDEFZ for TempO)
- "Point or speak" sign
- moveable chair
- red-white tape, pegs
- 2 x stopwatches + 1 reserve
- 2 x writing board + 2 pencils per each - check if they write and stay on waterproof paper!
- list for answers recording (in order of start) + backup list  
(we had 10 by 10 competitors lists, so every once in a while, the lists were collected and brought by bikes to finish area for quicker results processing)
- a tent, with tent pegs and strings
- sign with number of station, stop sign, signalization tape,
- umbrella or two umbrellas / screen /
- for public Timed Control: "right"/"wrong" answer signalization
- optional: chairs for staff or a blanket, water, mosquito repellent, sun-screen lotion...



## Set Up



Illustration: Course Setter setting Timed Control



Checking from the competitors point of view

Setting up flag markers and sitting point was always in charge of Course Setter. He put flags, then pointing board with letters. After putting chair in right position, it was marked on the ground. Also, from that point the tapes were always set in front of a pointing board, showing an angle range from "A" to "F" flag.

Station staff then pulled up a tent.

The tent was always behind a competitor. It is important for two reasons:

- the color of a tent can influence colors on the map
- parts of a tent could block competitor's view

Also, staff has to have enough place to stand behind a competitors, and not beside a competitor!

Senior Event Advisor Vibeke Vogelius brought sets of maps and did checking with final instructions, and also Event Advisor Lauri Kontkanen. SEA was then mostly checking start/finish procedures, while EA was cruising the course (on a bike) to make sure everything was correct.





Illustration: Arranging "Stop Point"



Illustration: Advisors checking Timed Controls



## Procedure

The number of tasks per each station was 3 for PreO Timed controls, 4 for TempO Qualifications and 5 for TempO Finals. The number of flag markers was always always 6 - from A-F.

Before each Timed Control competitor had to stop by the "Stop" sign and wait there until the escort-person arrives. Upon a marshal call, an escort would lead the competitor, blocking his view with an umbrella. There was a tent behind each decision point chair, so the tent was additionally blocking competitor's view.

✅ Blocking view with umbrella is more fair than setting screens along the way, because height is adjusted for every competitor, and they have their view blocked all the time while approaching.







Marshal, together with two or three other people was standing in front of a chair and a pointing board. The competitor was led to a chair and seated.

Two sets of identical maps were presented to the competitor one with the maps bound together and one with the maps loose. He was asked whether he was going to have "Bonded or Separate?" set. The competitor was asked whether he was going to "Point or Speak?". After choosing maps, and choosing an answering option, station staff quickly moved behind him, and a marshal would show him the first "Alpha" marker, and last "Foxtrot" marker. At some stations each flag was appointed. Without any other waiting the order "Time starts now." was given.

Timing was done with two stopwatches. All used stopwatches were the same. Staff of every station was not changed throughout one whole competition. The ones holding stopwatches were not changed throughout one whole competition - **same people were at same job positions all the time.**

Each answer that competitor said or showed was **repeated** by a marshal. Before a competitor answered the last task, a marshal slightly raised one hand as a warning that stopwatches need to stop with the last answer.

When there was 20 seconds, the marshal said "Twenty seconds" warning to a competitor.

By the end of timing both timers said out their times in seconds, rounded down to a full second, and showed their watches.

Control Cards were **always** collected by organizers on last Timed Controls, both for PreO and for TempO! Competitors did not carry their Control Cards around once they completed the competition.



Point or speak?



TempO station set up



Control cards transport

\*\*\*\*\*

Note for future organizers:

- Test stopwatches, always have one additional stopwatch (three, instead of two at each station)
- Practice with people on previous competitions - train the staff very well. Put the ones with best concentration abilities to hold stopwatches. Choose calm and patient people
- Don't unblock competitor's view until it is clear that nothing unexpected is going on on the terrain (dogs, people walking....)
- Don't hurry too much with showing flags, but also don't delay "Time starts now." order, because some competitors tend to "buy time" by "not seeing all the flags". Try to do the same with all of them
- **It is very important that all the procedure is shown to exact detail on Model Events. It is the best that same people be on the stations on Model Events and on real competition!**
- Staff needs to move behind a competitors, not to stand beside a competitor, so a competitor has a clear view.
- Everything must be done in a complete silence. Staff must be quiet all the time. Talking with a competitor is not acceptable.



## Procedure - in pictures 1



Hiding the view with umbrella



Approaching the decision point



Blocking the view



Showing the control flags



Answering



Last answer



## Public Controls

✅ Last station on TempO Qualifications, and last two stations on TempO Finals were made as "public" controls.

On TempO Qualifications, public could approach very closely, while additional person, in this case Event Advisor, was showing only whether correct or incorrect answer was given. The same thing was arranged on TempO Finals, where the public was some 60 and 30 meters away from last two stations. A person flipping "right"/"wrong" sign turned his back to a competitor or stood behind him, and faced the public. Public had to be silent until the last answer was given.



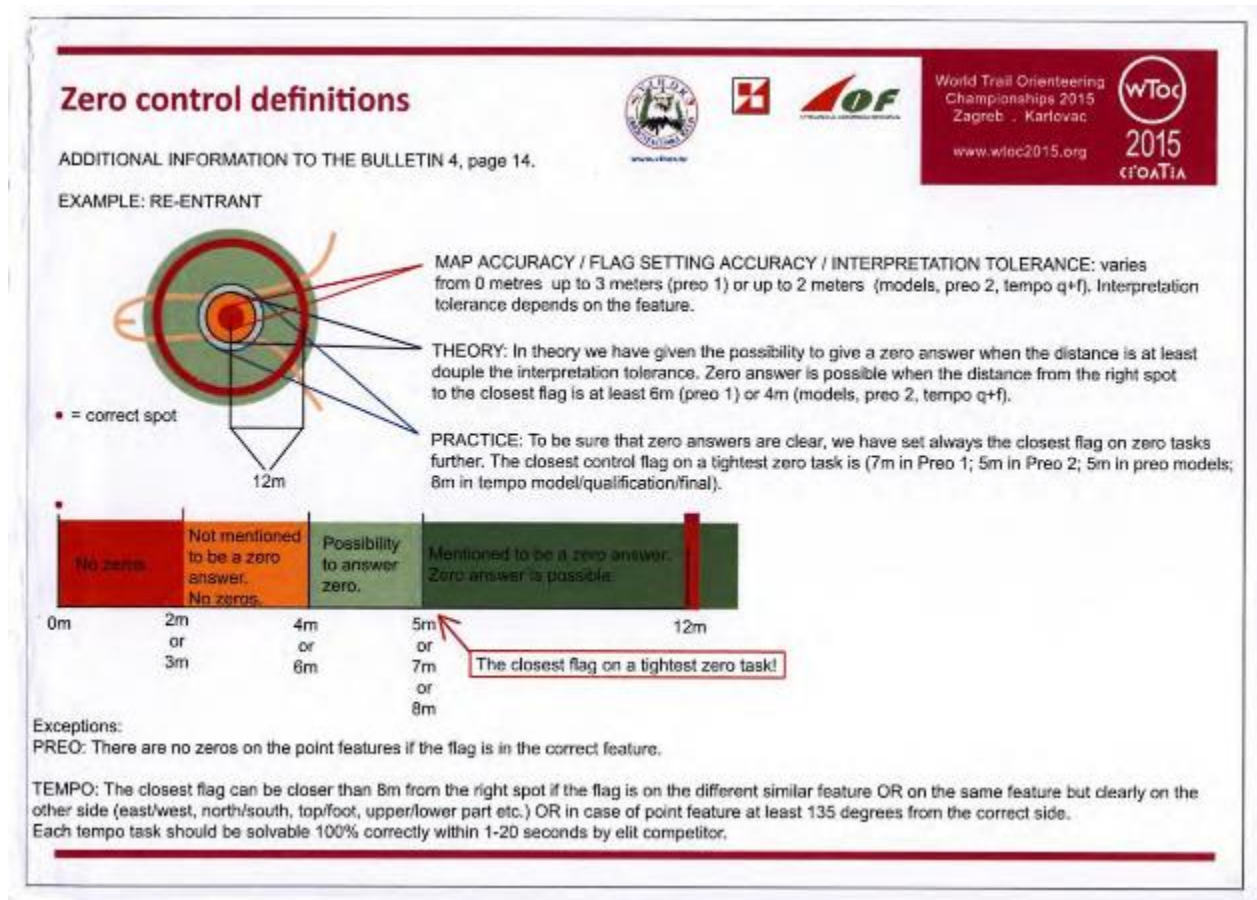
TempO – qualifications public control



TempO – finals public control with a judge showing correct answers

## Zero control definitions

In addition to the flag positioning accuracy described in Bulletin 4 course setter Zdenko Horjan and IOF Event Advisor Lauri Kontkannen introduced additional information to all competitors describing “Zero control”. This information gave all competitors clear picture what they can expect on the courses and we had not one complaint on any of the tasks during the WTOC. Clear “Zero” made WTOC competition fair and competitive to all.



## Timing Pre-O

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Official timing was made only by Sport Ident System owned by OK Vihor, and handled by Maja Cvitković.

Each PreO day courses were divided into two parts, so there were two STARTs and two FINISHes. Exact procedure was shown and tested at Model Event, with a course divided into two parts in a same way.

There was SI Clear and SI Check unit at each start, SI Finish unit at each finish, and SI readout printer at first finish (both PreO days).

On pre-start, on each(!) start and each finish there was a **digital display turned towards competitors** so they could see the time when approaching.

Despite Sport Ident System being very stable, all the competitions were timed manually, as a **backup**. There was a list at each start and finish. A competitor crossing the starting line was not disturbed in any way, but the time of "beep" sound of an SI unit was recorded **in real time** on a **synchronized watch**. In order to do so, **4 digital wrist watches** (Start 1, Finish 1, Start 2, Finish 2) had to be synchronized on exact real time as computers with Sport Ident System.

★ There were "Personal Timing Cards", on waterproof paper, provided to each competitor but they *did'n want to use them!* Competitors relied on their digital watches. Original idea was to provide competitors with Personal Timing Cards and a pencil (on a string) when going through Finish and Start, but it turned out to be unnecessary. Only a few people wanted to write down second start time, since they had SI readout on a piece of paper, and nothing to remember their second starting time by.

Notes:

- **The Sport Ident System was only taken as official timing.** *Empty spaces for manual recordings were put on control cards in case of electronic time keeping breakdown, but were not used. - see [Control Cards chapter](#)*
- It is very important to show the whole timing procedure on Model Event, and at the same time, to test the system one more time. Some competitors were very confused, mostly from countries new to TrailO, and we noticed more than a few wearing analog wrist watches, not only from "new" countries.
- Manual backup was actually used, when there was an objection from a competitor for being recorded "overtime". As timing was recorded manually, writings were checked, then SI chip was checked again and competitor was proven to be right.



## Manual Timing Pre-O

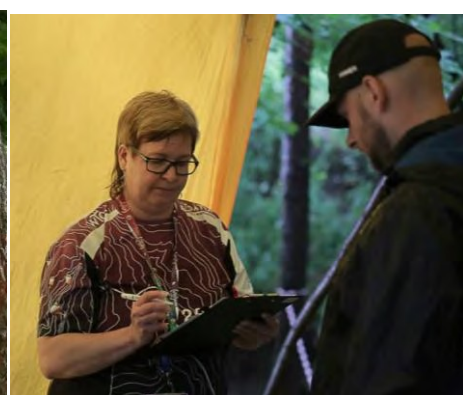
Manual timing has been done for all PreO Events as a double check method. Every list was collected after the Event and it was saved in the Competition center for later analysis and checking if needed by the organizer and competitor. this method was useful due to the fact that some competitors forgot to punch finish or start unit with their SI card. Usually it happened on the middle of the course where they had a break in the course.

Startlist: PreO Day 2 27.06.2015 10:00		
	Name	Finish
233	Anna Paula Marques	11:31.30
42	Estuani Ogilvie	11:17.40
238	Nobuyuki Takayama	11:36.08
66	Evelina Butman	11:17.50
207	Václav Rada	11:40.48
22	Shawn Crawford	11:34.44
239	Martina Jelen	12:01.35
43	Anton Goshkov	
239	Agata Lubuska	
14	Alexander Kabanov	
236	Jana Paterson	
53	Santiago Peral	
220	Fabio Bonfanti	
45	Alan Gattardo	
211	Pyeonggi Zancanaro	
15	Robertas Stankevicius	
224	Olga Petrochova	
49	Lars Ole Larsen	
234	Mauro Nardo	
56	Mika Laitinen	
212	Tadashi Sankovicius	
27	Iva Lovric	
232	Milan Lajovic	
25	Claudio Terezo	
227	Ricardo Pinto	
13	Phil Zalczyński	
217	Vladislav Lukashenko	
36	Marek Kozlowski	
225	Vladislav Puzosarsky	
54	Johanna Baring	
242	Peter Roberts	
25	Dmitry Dokuchaev	
226	Carla Riva	
24	Petar Degenov	
231	Kristi Ovesen	
61	Ferenc Farkas	
205	Nico Côté	
17	Tamara Varnica	
240	Andreas Rupp	
64	Clara Durand	
210	Martina Stankevicius	
33	Emil Kacin	
227	Borisa Cavallaro	
23	Chun-Ho Ho	

Finish
<u>11.31.30</u>
<u>11.17.40</u>
<u>11.36.08</u>
<u>11.17.50</u>
<u>11.40.48</u>
<u>11.34.44</u>
12 01.35

Startlist: PreO Day 2 27.06.2015 10:00		
	Name	Start
233	Anna Paula Marques	11:31.30
42	Estuani Ogilvie	11:17.40
238	Nobuyuki Takayama	11:36.08
66	Evelina Butman	11:17.50
207	Václav Rada	11:40.48
22	Shawn Crawford	11:34.44
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240	Andreas Rupp	
64	Clara Durand	
210	Martina Stankevicius	
33	Emil Kacin	
227	Borisa Cavallaro	
23	Chun-Ho Ho	

Pre-Start	Start minute
01:00	11:34:19
02:00	11:24:18
03:00	11:41:20
04:00	11:22:17
05:00	11:45:26
06:00	11:46:08
07:00	12:04:36
08:00	11:06:53



## Courses - Start and Finish procedures

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### PreO

#### Pre Start

Each PreO day start time that was on the start list was used only for **Pre-Start**, for competitors to go on Timed control Station. After they finished with Timed control station they were sent to go to the Start 1 immediately.

#### Start 1

Start list order was obeyed as much as competitors were arriving in pre-start order. Pre-Start order was not ultimate, especially the first day. Due to harsh weather conditions some competitors needed a little bit more time to arrive, and organizers wanted to avoid any queue.

☒ some delay occurred in the middle of the race due to harsh conditions and rain so during the whole race delay was approximately 20 minutes

- after time controls competitors started according to their arrival on start
- start list was in most occasions the same as at the pre-start. Only in few occasions some Para competitors needed little bit longer time to proceed from pre-start through time controls to the real start so then they started upon their arrival in first free minute.

There was an SI, start bib and Control Card visual checkup. Competitors were started on a full minute. SI punch time was only valid for results. Manual backup time was recorded by organizer on a separate list.

#### Finish 1

Finish 1 time was recorded by SI Finish unit and each competitor was provided by printed SI readout. Manual backup time was recorded by organizer on a separate list. On Finish 1 the first part of Control Card was taken away from a competitor completely, front and back side. Also on Day 1 first map was taken away. On Day 2 map was taken away, rolled, labeled by a bib number, and given not to a competitor, but to Start 2 staff.

## Start 2

It was decided by SEA that competitors could use any time to rest in amount they need between Finish 1 and Start 2. It was also decided they could "Punch and Go!" any time they wanted to leave. Some of competitors just punched and proceeded, but some of them wanted to start at exact minute visible on a display, which was respected by an organizer.

There was important second checkup for each competitor at **Start 2 - start bib, SI chip number, and second part of control card had to match**. A map was given to a competitor, and he was asked to "Punch and Go!". Manual backup time was recorded by organizer on a separate list.

## Finish2

Finish 2 time was recorded by SI Finish unit. Manual backup time was recorded by organizer on a separate list. On Finish 2 the second part of Control Card was not taken away from a competitor because they went to Timed controls. A map was taken away.

Special report:

- Due to a heavy sudden illness of a child one competitor was let to start at 0:00

Note:

- It is extremely important for organizer to clearly see and hear **SI punching** "beep" at each start and finish. One organizer has to sit right beside the unit. It is better to ask competitors to repeat, than for him to leave uncertain. Many times competitors were simply unaware that they have to punch! Forgetting?
- Organizers noticed a little "overuse" of the time in "middle quarantine" between Finish 1 and Start 2! It looked like some competitors, especially on Day2, had a tendency to wait for "stronger" competitors group

## TempO

Start list was obeyed and all competitors were starting strictly by the list.

- For TempO Qualifications two and a half minutes (2:30) between competitors was decided, and shown to be enough. There was no queue on stations. At the most there were 3-4 people waiting at the end, but most of the time competitors were just passing through. For a slower competitor it took around 45 minutes to pass through the course (8 stations x 2,5 minutes + 25 minutes walking), some completed around half an hour.



☑ There was a 20 minutes break in starting list, but only for Tempo Qualifications. This was done for 2 reasons:

- for stations' staff to go and use toilet and refreshments
- to clear any possible queues

- For Tempo Finals two and a half minutes (2:30) between competitors was decided, and shown to be enough. There was no queue on stations. At the most there were 3-4 people waiting at the end, but most of the time competitors were just passing through. For a competitor it took around 30 minutes to pass through the course (7 stations x 2 minutes + 15 minutes walking)

## Quarantines



Organizers tried as much as possible that competitors feel comfortable in quarantines, since some were there for a long period of time, up to 4 hours.

In each quarantine there were shelters, wheelchair accessible toilets, and refreshments - bottled and fresh tap water were possible. In Tempo quarantine, which lasted the most, late-start competitors had snacks, cookies and tee or coffee.

In Tempo quarantine there was also an indoor space (sports hall) to use.

Each day, warm cooked meals were served (upon prior request) in finish quarantines and finish areas.

## Quarantines



Quaranteen TempO qualifications start area



Quaranteen TempO qualifications start area



Quaranteen TempO final start area



Quaranteen PreO day1 start area



Quaranteen PreO day2 start area



Quaranteen PreO day2 course area



## Quarantine

---

Another interesting details from the quarantine areas in the middle of the course was the length of stay of competitors in that area. As we did not made any time limit some competitors took the opportunity to stay inside that area for more than 20 minutes. Shortest stay was 10 seconds and actually that competitor had a shortest time on the course at all. Average competitor took about 3-6 minutes. It was interesting to follow best competitors who had a little "mind battle" in that area waiting for the start of their opponents. Our proposal is to limit the stay of competitors in quarantine areas between two starts!

## Toilets

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All toilets used in Pre-Start Area, Finish area, on courses and in Quarantines were wheelchair accessible mobile toilets.

One toilet on the course, between Finish 1 and Start 2 was improvised in the forest, because there were no other possibilities.



Toilet on the course 1st day



Toilet on the course 1st day - place was not accessible with the track to bring Toi-Toi



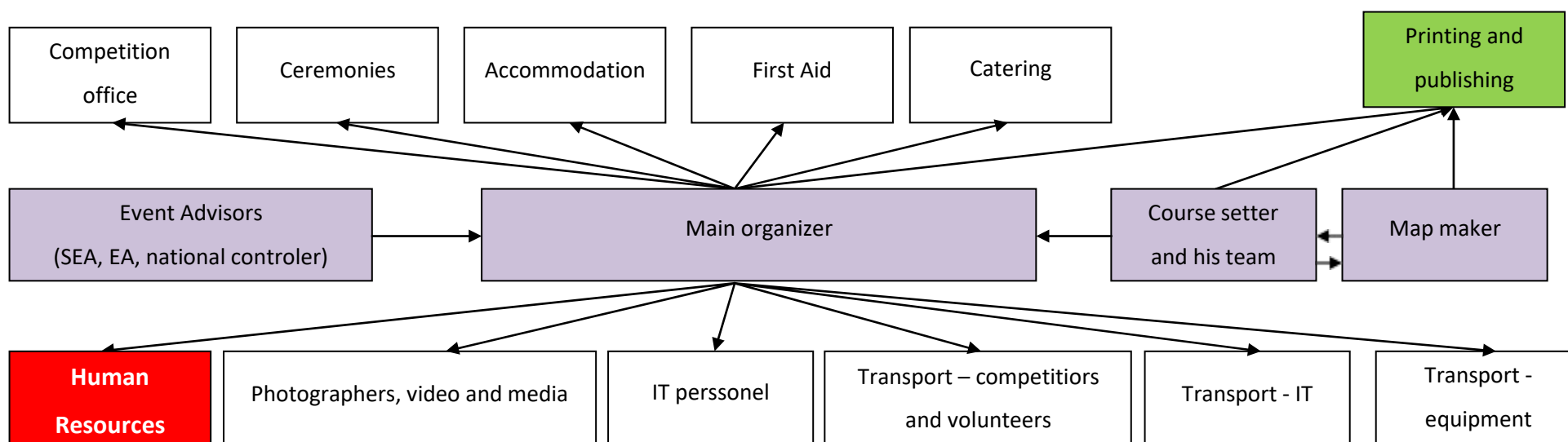
On TempO finals toilet was provided in start quarantine but competitors had to use "umbrella" man so that some stations could not be seen

☒ There was the objection from some Para Class competitors, but only after WTOC, that using toilet was included in course time, on Day 2.



## Working hierarchy

134 persons were involved directly in organization during the WTOC week. Some more were involved in catering and transportation, so the number succeeds almost 150 people. Lot of preparation were done prior the WTOC and every person had also a person in charge who was able to put volunteers on the right place. Whole organization was divided in few sectors. Main organizer, Event advisors, course setter and map maker were the main line and they were in charge of all what was happening. Close cooperation with other sectors and specially with Human resources were one person (Bernardica Stipić) was in charge of all volunteers was essential. Printing and publishing was given to the professional company, but all the preparations and checking's were done by the organizers (map maker, course setter, Event Advisors), so not one map could go out without crosschecking.



## Volunteers and Staff

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We took good care of staff and volunteers. They were crucial, and without them the functioning of competitions wouldn't have been possible. Although they are volunteering you need to provide them all with food, refreshment and transport so plan your costs accordingly. Many hours of preparations and meetings with all kind of volunteer organizations were needed in order to provide enough people to help on the day of event. Bad weather on the day of first Event was also preventing some volunteers to come to help so we have put all men power from the tasks which were not essential to be done at that time to the task which were crucial at that moment. Due to heavy rain we have put extra people on helping wheelchair users to go through the course. Consequently some delay in results checking happened.

practically 1:1 - organizers: competitors

### Notes:

Always leave some volunteers "doing nothing". The situation were they have to be involved will emerge by itself!

It was very important to have all Volunteers and staff on one list with all the working schedule for that day. If something unexpected accrued we were ready to assign persons to that extra work. We had also for every day time schedule with all working positions.



## Day schedule list – example for June 22<sup>nd</sup> – Model Event day and Opening Ceremony day

wloc raspored 22 02 2015.xlsx																		damirgobec@gmail.com	
Datoteka Uredi Prikaži Umetni Oblik Podaci Alati Programski dodaci Pomoć		Dokument je posljednji put uredio korisnik Maja Cvitković 2. lipnja 2015.																Komentari	Dijeli
Kn % .0 .00 123																			
	A	B	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1			Event Center	Logistic Transport	Logistic IT (computers)	WEB Lists & Results	Parking	main team	Course Set-up/Pick-up	Course Set-up/Pick-up TEAM2	Volunteers	EVENT	BUS	Competitors	Team Officials	VIP	PUBLIC	Catering	PRESS
42	TUESDAY																		
43	lipnja 23, 2015	5:00:00 AM																	
44	lipnja 23, 2015	5:30:00 AM																	
45	lipnja 23, 2015	6:00:00 AM																	
46	lipnja 23, 2015	6:30:00 AM																	
47	lipnja 23, 2015	7:00:00 AM												Breakfast					
48	lipnja 23, 2015	7:30:00 AM		CC→ M1							no bus			Breakfast					
49	lipnja 23, 2015	8:00:00 AM	work	CC→ M1				set-up	set-up		arrive			Breakfast	deadline				
50	lipnja 23, 2015	8:30:00 AM	work										bus "T"	Breakfast	for start				
51	lipnja 23, 2015	9:00:00 AM	work		set-up		Parking?	controlling	controlling				bus "Aristos"		groups?				
52	lipnja 23, 2015	9:30:00 AM	work	try-out							prepared								
53	lipnja 23, 2015	10:00:00 AM	work					be on TC				MODEL 1		MODEL 1	MODEL 1				
54	lipnja 23, 2015	10:30:00 AM	work		work			be on TC				first group							
55	lipnja 23, 2015	11:00:00 AM	work		work														
56	lipnja 23, 2015	11:30:00 AM	work		work														
57	lipnja 23, 2015	12:00:00 PM			work							second group							
58	lipnja 23, 2015	12:30:00 PM			work							LAST START							
59	lipnja 23, 2015	1:00:00 PM	work		work	start list							bus leave	LAST START	LAST START				
60	lipnja 23, 2015	1:30:00 PM	work			draw													
61	lipnja 23, 2015	2:00:00 PM	work									END							
62	lipnja 23, 2015	2:30:00 PM	work	transport							end				END	END			
63	lipnja 23, 2015	3:00:00 PM	work	everything					pick-up		leave				END				
64	lipnja 23, 2015	3:30:00 PM	work	to	set-up														
65	lipnja 23, 2015	4:00:00 PM		DAY1	set-up						arrive		bus "T"						
66	lipnja 23, 2015	4:30:00 PM		(rasadnik)	OPENING						prepared		bus "Aristos"					X	X
67	lipnja 23, 2015	5:00:00 PM			OPENING			OPENING				OPENING		OPENING	OPENING			X	X
68	lipnja 23, 2015	5:30:00 PM																X	X
69	lipnja 23, 2015	6:00:00 PM			close-up						end	END		END	END				
70	lipnja 23, 2015	6:30:00 PM									leave		bus leave	Dinner					
71	lipnja 23, 2015	7:00:00 PM	work											Dinner					
72	lipnja 23, 2015	7:30:00 PM	work			start lists								Dinner					
73	lipnja 23, 2015	8:00:00 PM	work		check-up			TOM						Dinner	TOM				
74	lipnja 23, 2015	8:30:00 PM	work		for														
75	lipnja 23, 2015	9:00:00 PM	work		tomorrow														
76	lipnja 23, 2015	9:30:00 PM	work																
77	lipnja 23, 2015	10:00:00 PM	work			start lists													

## Volunteers list and day schedule – example with names, working position, food, transport



	B	C	D	E	F	G	H	I	J	K	L	M
	prezime	ime		23.6. - Maksimir	24.6. - Sesvete	25.6. - Karlovac	26.6. - Blato	27.6. - Blato	28.6. - Maksimir	vege	prijevoz	utrika
Adameo	Dobriša	KA		x	x	asistent	x	x	x			
Antila	Kylikki	stranci - FINSKA		kišobran man	stoperica / voditelj stanice	stoperica / voditelj stanice	stoperica	stoperica	x			
Antila	Pauli	stranci - FINSKA		kišobran man / zapisničar	stoperica / voditelj stanice	stoperica / voditelj stanice	stoperica	stoperica	x			
Ban	Rene			sudac u terenu	asistent	zapisničar	zapisničar	zapisničar	x		da	
Bekic	Biljana	SGVH										
Besten	Miroslav	OK Jelen		x	x	stoperica	x	x	x			
Bogović	Marijan	KA		x	x	sudac u terenu	x	x	x			
Borisavljević	Karlo	OK Vihor		x	x	asistent	x	x	x			
Boždek	Stela	Crveni križ										
Brajak	Vesna	KA		x	x	stoperica	x	x	x			
Brezar	Velimir	Jastrebarsko		snimatelj	snimatelj	snimatelj	snimatelj	snimatelj	snimatelj			
Crnković	Matej	izviđač										
Crnković	Vlatko	izviđač										
Crnković	Zdravko	izviđač										
Cvitković	Maja	OK Vihor		IT	IT	IT	IT	IT	IT	vege		
Černjević	Anamarija	VC Kupa		x	x	kišobran man	x	x	x			
Dimić	Branka	PD Zagreb matica		fotograf	fotograf	fotograf	fotograf	fotograf	fotograf			
Dolenac	Ivana	OK Vihor		x	x	x	x	start	x			
Droa Briski	Vili	izviđač										
Dumić	Silvija	Crveni križ										
Faber	Ana			x	starter	x	x	x	x			
Filipčić	Petar	Crveni križ										
Flis	Mladen	PD Zagreb Matica		fotograf	fotograf	fotograf	fotograf	fotograf	fotograf			
Gergić	Adisa	OK Vihor		x	voditelj stanice	voditelj stanice	voditelj stanice	voditelj stanice	x			
Giovanni	Marco	stranci - SLOVENIJA		IT	IT	IT	IT	IT	IT			
Gobec	Damir	OK Vihor		glavni organizator	glavni organizator	glavni organizator	glavni organizator	glavni organizator	glavni organizator			
Gobec	Ivana	OK Vihor		karte	karte	karte	karte	karte	karte			
Gobec	Jan	OK Vihor		zastitar	primopreda stvari (S+F)	primopreda stvari (S)	primopreda stvari (S+F)	stoperica	stoperica			
Gobec	Karlo	OK Vihor		voditelj stanice	voditelj stanice	voditelj stanice	voditelj stanice	voditelj stanice	x			
Gobec	Marija	SGVH		x	osvježenje	osvježenje	osvježenje	osvježenje	osvježenje			
Gobec	Timo	OK Vihor		stoperica/zastitar	zapisničar	zapisničar	zapisničar	zapisničar	x			
Gobec	Željko	SGVH		x	osvježenje (S+F)	osvježenje	osvježenje	osvježenje	osvježenje			
Grazia	Maria Reali	stranci - ITALIJA		x	kišobran man	kišobran man	kišobran man	kišobran man	kišobran man			
Grizelj	Dino	Crveni križ										
Grmošek	Margareta	KA		x	x	starter	x	x	x			
Gros	Cedomil	Foto klub		fotograf	fotograf	fotograf	fotograf	fotograf	fotograf			
Gulta	Alex	OK Vihor		x	x	asistent	x	x	rezerva		da	
Horjan	Zdenko	OK Vihor		postavljač staze	postavljač staze	postavljač staze	postavljač staze	postavljač staze	postavljač staze			
Jakupović	Gordana			stoperica	starter	stoperica	zapisničar	stoperica	kišobran man		da	
Jelenić	Nikolina	Optičari		x	x	x	x	stoperica	starter		da	
Kanički	Tomislav	OK Maksimir		NC / voditelj stanice	NC / voditelj stanice	NC / voditelj stanice	NC / voditelj stanice	NC / voditelj stanice	x			da
Kaučić	Mislav	OK Bjelovar		x	x	asistent	x	x	x			
Knežević	Daria	optičari		x	x	x	x	uzima kartone	kišobran man		da	
Knjaz	Helena	optičari		x	x	x	x	dijeli kartone	osvježenje		da	
Kobasić	Zrinka	VCZ		x	x	zapisničar	sudac u terenu	sudac u terenu	x		da	
Kontkanen	Lauri	stranci - FINSKA		kontrolor staze	kontrolor staze	kontrolor staze	kontrolor staze	kontrolor staze	kontrolor staze			
Kosier	Sanja	Crveni križ										
Košćurić	Marko	OK Jelen		x	x	zapisničar	x	x	x			
Kričić	Ivana	VCZ		x	x	x	stoperica	stoperica	x		da	
Kubalek	Zlatko	izviđač										
Kužinec	Marija	OK Vihor		stoperica	parking / zapisničar	stoperica	stoperica	sudac u terenu	x		da	da
Kužinec	Tea	OK Vihor		stanica	stanica	stanica	stanica	stanica	x		da	da
Kuka	Mladen	CEIK			raspored WC-a u Karlovcu	kontakt za Karlovac						
Kukeo	Boris	OK Vihor		IT	IT	IT	IT	IT	IT			
Kukeo	Jura	OK Vihor		x	primopreda stvari (S+F)	primopreda stvari (F)	primopreda stvari (S+F)	primopreda stvari (S+F)	primopreda stvari (S+F)			
Kukeo	Marta	OK Vihor										
Kušć	Lidija			x	stoperica / voditelj stanice	stoperica / voditelj stanice	x	x	x		da	
Kušć	Maja	OK Vihor		postavljač / stanica	postavljač / stanica	postavljač	postavljač / stanica	postavljač / stanica	postavljač / stanica			
Kuzmić	Valentina	VCZ		x	x	x	x	stoperica	x		da	
Laškarin	Nives	izviđač										
Lazarin	Dario	VCZ		x	x	rezultati	stoperica	x	x			
Lendler Adameo	Vlasta	KA		x	x	asistent	x	x	x			
Leškovec	Dorothea	Optičari		x	x	x	x	stoperica	čili - upisuje vrijeme		da	

## Competitions - Organizational Scheme / Workflow

In order to better explain how the courses were organized, we here provide some graphic schemes.

☑ Graphic schemes were done on real maps, using specific custom made symbols for personnel, equipment and transport. Organizers made these schemes in order to better see what equipment they needed were, how many people will have to be in the terrain, where they have to be, and so on... Schemes were changing a lot through a period of planning, but at every point of time, they were very useful.

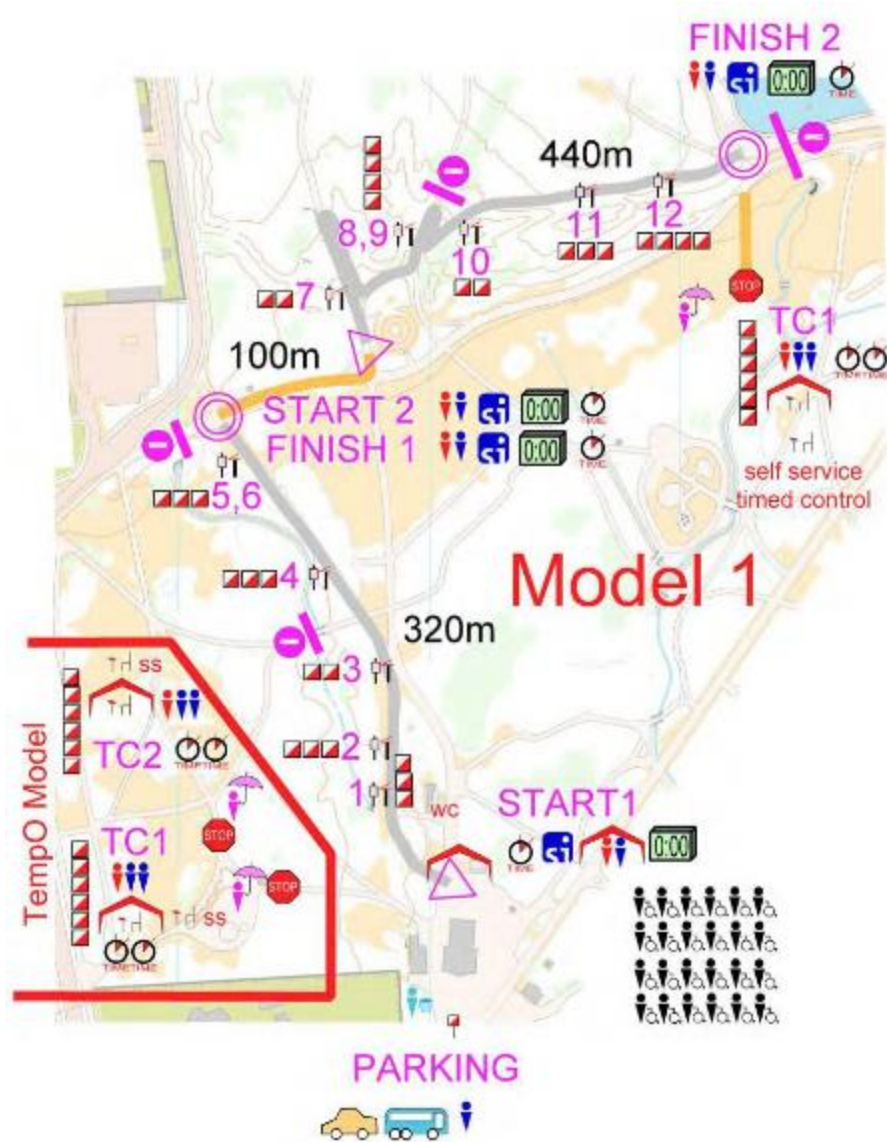
These schemes were not public prior to the event!!! They were kept secret among main team, and mainly used by **staff manager** and **transport manager**.

These schemes were done only for organization purposes, and they ***might slightly differ*** from what was set up on real competitions. They are not to be used for anything but illustrations how the things were approximately organized.

Key to symbols:

	START, FINISH, CONTROL NO.		DIGITAL DISPLAY, SI UNIT		BIKER MESSENGER, BIKER TRANSPORT
	TIMED ROUTE		HAND STOPWATCH AND TIMING		BRIDGE, FORBIDDEN ROUTE SIGN/TAPES/
	NOT-TIMED ROUTE		FLAG MARKER ON CONTROL SITE		TEXT REMARKS
	CORRIDOR /TAPES/		DECISION POINT MARKER, PUNCHER		TRAFFIC MARKERS
	"ONE WAY" CORRIDOR		STAFF OFFICIAL, VOLUNTEER, MARSHALL		DISEMBARKING: BUS, BAGGAGE, CARS
	TENT, BENCH		HELPER/"PUSHER"		FIRST AID
	SECURITY FENCE		"UMBRELLA" MAN, STOP SIGN		PUNCH CHECKING, PRESS POSITIONS
	CHAIR WITH BOARD ON TIMED CONTROLS		REFRESHMENT, WC		SCREEN
					CAR ROUTE

## PreO Model 1 / TempO Model - July 23, Zagreb - Maksimir



Model Event was in park Maksimir divided in few sections. At the assembly area there was also start area for PreO model. Few hundred meters on the east there was are with model event for TempO competition.

PreO model Event was divided in two parts as it was supposed to be on PreO day one course. On finish one Sport Ident station showing time keeping method was at the finish line. On the start two same procedure was showed as on start one.

After finish 2 competitors had one more time control on which they could choose between self service timed control and regularly manned time control.





TempO station - self service and ordinary manned



Decision point

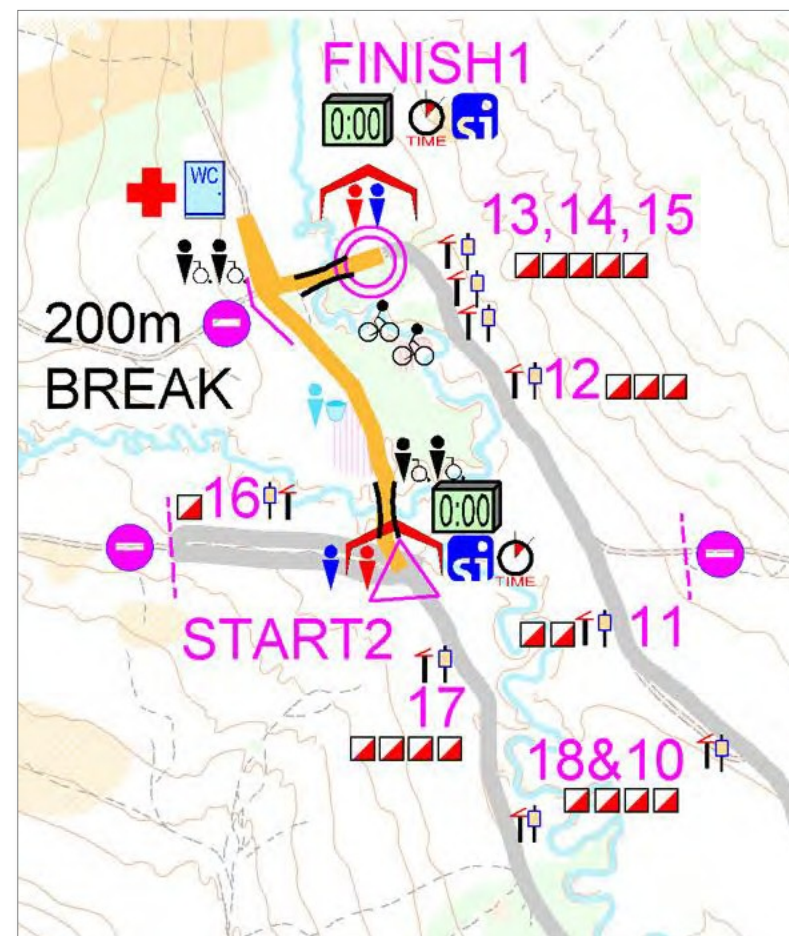


SI finish station



SI read out unit used for time check

## Day 1 PreO - July 24, Zagreb - Sesvete (Divjača)



Lot of planning on PreO day one course has been done as most of the course was not accessible by any means of transport. Most of the equipment has been carried on the hands and by bicycles. Except orienteering equipment in the days before Event whole course was leveled by tractors and by hands of club members. Also three solid bridges have been constructed along the course.



## OTHER ISSUES DAY ONE:

First day there was improvised tent toilet in forest, and refreshments after first Finish. Ordinary toilets and special toilets for disabled people were provided at pre-start area, at second finish and at a finish area.

Bigger marker flags were used for long distance controls

Bottled water was served for refreshment, just occasionally fresh tap water

There was a wheelchair approachable toilet and refreshments after Finish 2 before Timed controls.



## TempO Qualifications - July 25, Karlovac



Illustration on the left:  
Mandatory route handed to competitors on start.

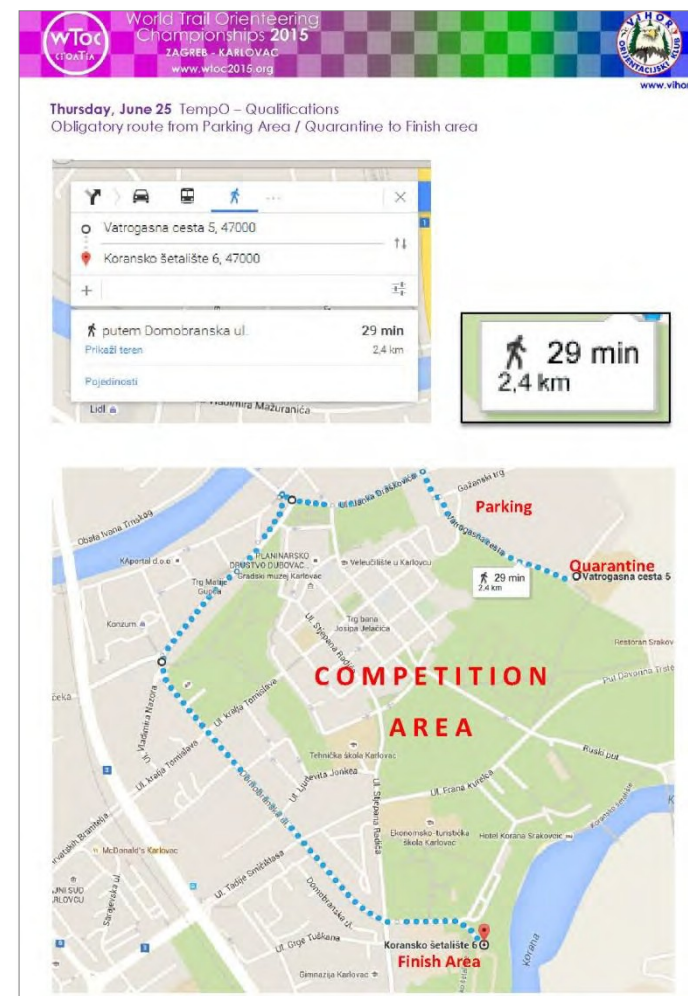
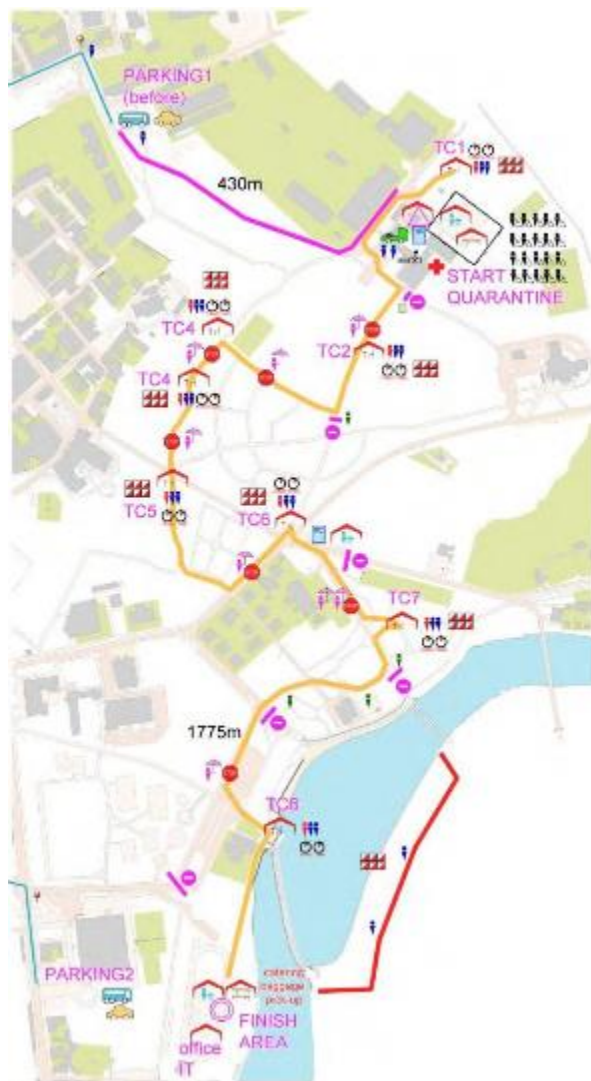


Illustration on the right:  
Walking/driving route from Parking to Finish area,  
handed to competitors and team members on Team  
Officials Meeting the day before

## TempO Qualifications - July 25, Karlovac

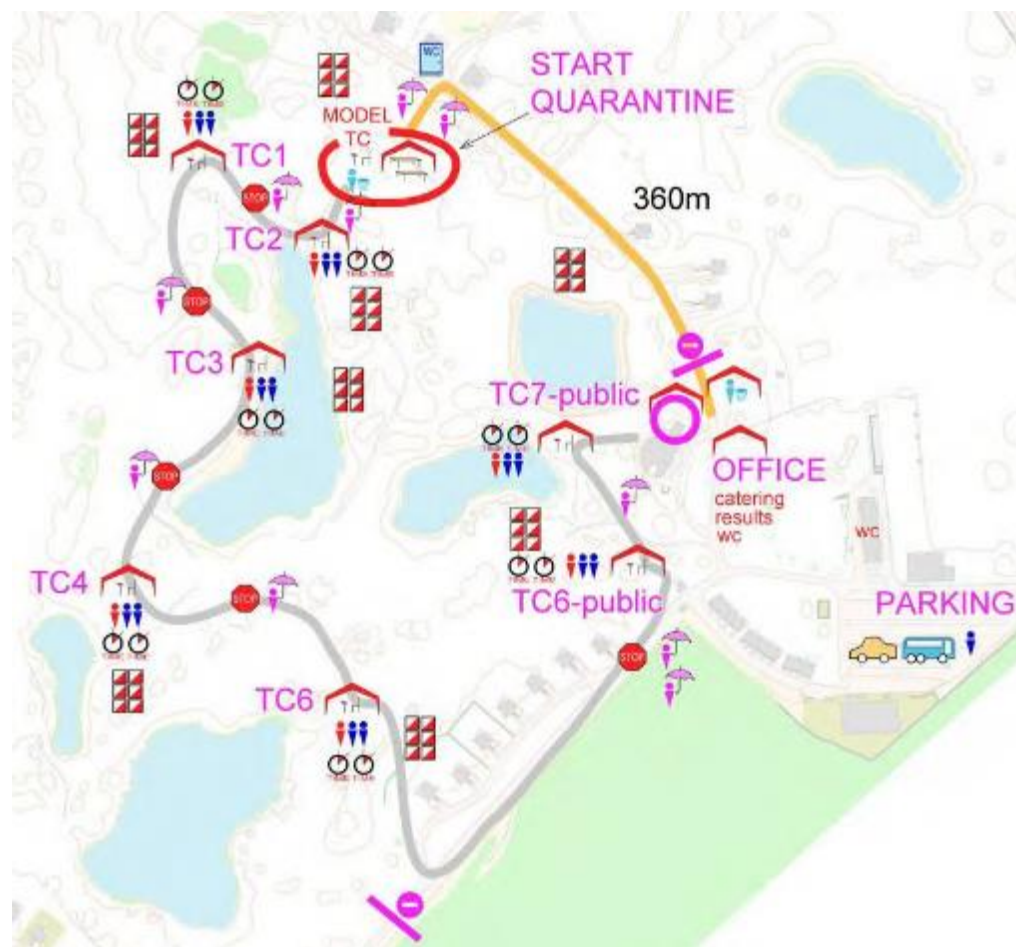


Only place during the week were we had parking place and finish place on remote areas was in Karlovac. From the parking place competitors first went to the start quarantine which was in Forestry school. Competitors went throughout the course to the finish visiting seven TempO stations

Finish area was at the athletic stadium near the river and Karlovac well known swimming area .

Same area was used for the finish area of sprint orienteering competition which was organized right after TempO Event.

## TempO Finals - July 26, Zagreb - Blato



## Model 2 - July 26, Zagreb - Blato





## Day 2 PreO - July 27, Zagreb - Blato



Blato competition area is a golf course area so it was isolated from the influence of other people and safe from any distractions on the course. Assembly area and quarantine area was slightly moved from the finish area so there was no contact between the competitors which started early and the ones starting late.

Transport of luggage was done by the bicycle and a van. Competitors had a area with refreshment after point 16 were was also relax area between first and second part of the course. Map has been taken at that area from the competitors and it has been given back at the new start. Timing has also been divided in two parts.

Restaurant was at the finish area so all food has been served there.

## Course Setting Equipment

---

Course Setters Equipment was separately packed and was always in the car with course setter team. In order to have course setter team more efficient they were team of their own. Starting early as 4 a.m they were first on the terrain followed by SEA, EA and national controller few hours later.

They carried with themselves following equipment:

Prior to the competition:


On the day of the competition:

- for Timed Control Equipment - *see chapter Timed Controls*

Approximate equipment list for setting up the course:



- poles and flag markers, (longer poles, bigger flags if needed for long distance controls)
- decision point poles with printed number of control
- punchers\*\* on strings, with poles
- red-white tape for ground, pegs or nails
- signalization signs /direction pointers, stop, start, finish, one way corridor, wc , numbers of control sites .../)
- garden shears, string/rope
- measuring tape
- map and solutions map
- blank control card - punch on each control!
- camera for taking a picture after control is set up
- master maps
- little flags for decision points,
- additional equipment: white paper, hammer, pen, felt (marker) pen, adhesive tape

\*\* punchers must be numbered same as control(s) they stand for! If one puncher is for two controls, it has to have double number on it. Then also, it is good to have two same labeled punchers, so the crowd is avoid

## Control Flags and Poles

Brand new set of 200 control flags with logo of the club has been made just for WTOC so all flags were in the same color. 140 poles in yellow color have also been bought so every control point was the same.

## Markings along the Way - Signalization

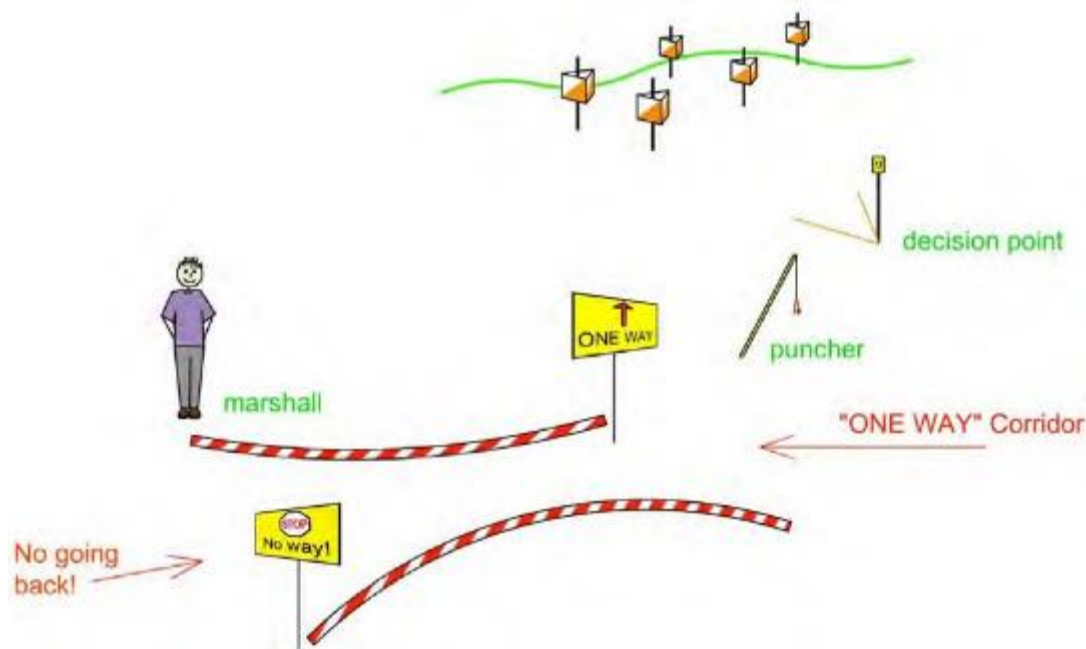
Over 200 signs have been made for the competition marking the way competitors should move through the course or to give them the right way to come to the competition arena and to move around. Also signs for notifications and different kind of facilities and areas have been put out. To avoid possible misunderstandings it is always good to put as many signs as you think it is needed to clear any doubt about the ongoing procedure or the way competitor should move around t





## "One Way" Corridor

The "One Way" Corridor was used to make competitors punch at some places, where the course setter didn't want them to move on further down the course. "One Way" Corridor is passable only once, in right direction. Once passed through, there is no going back for anything. It is good to have punching place near the entrance of the corridor, as a reminder to a competitor that he has to punch.



- ✓ This is good way to avoid taking time from competitors on the course, because there is no punch checkups by marshals.
- ✗ It was still misunderstood by some (not understanding English), that they had to punch the control previous to "one way" row in control descriptions. Also, despite it was said on Teams Officials' Meeting, some forgot to use toilet, which was clearly marked on the map.

In order to have fair set up of "One Way" Corridor, an organizer must do 4 things:

1. Mark the position of corridor clearly on the map



(we used an arrow, mandatory crossing point symbol might be used)

2. Put additional row saying >ONE WAY> on the right place in control descriptions

WORLD TRAIL ORIENTEERING CHAMPIONSHIPS 2015									
Control list: Zagreb Region									
DAY 2 1,7 km 10 m									
1	A-D	C							
2	A-B	A							
3	A-C	C							
ONE WAY									
4	A-B	C							
5	A-D	A							
6	A-D	A							
7	A-C	A							
8	A-D	D							
9	A-D	C							
ONE WAY									
10	A-C	A							
11	A-E	C							
12	A-E	A							
13	A-E	C							
14	A	C							
15	A-C	B							
16	A	B							
30 m									
17	A-C	A							
18	A-C	D							
19	A-D	A							
20	A-B	C							
21	A-B	C							
22	A-D	A							
23	A-D	A							
24	A-C	A							
25	A-C	C							
26	A-D	A							
30 m									
Time Limit Open: 130 min									
Time Limit Paralympic: 145 min									

(don't forget decision point position in the last column!)

3. Mark the corridor clearly **on the ground with tapes**, with additional **textual signs** - one sign says "ONE WAY", and the other sign on the other side of the corridor saying "NO WAY", facing the opposite direction



4. Put a marshal by the corridor. Marshall only watches out that nobody goes back.

## Changes and Mistakes

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### Day 1 PreO - July 24, Zagreb - Sesvete (Divjača)

On the day of the competition, on Timed Control Open Class, a decision point was moved slightly. Therefore, flag markeres E and F switched "names". This was only changed in results.

### TempO Qualifications - July 25, Karlovac

Station No. 8 was cancelled, because the organizer and advisors concluded that it was a big change in visibility from early morning until the afternoon. The sun was shining much more later, and because of that the visibility on long distance flags was poor for late-starters. To be fair to all, the whole station was cancelled. - *see SEA report for official explanation*


### Demo Relay - July 23, Zagreb - Maksimir


1. Controls no. 8 and no. 11 had a mistake in control descriptions.

- For control no. 8: A-B description was correct, but legs having course B and course C had A-C description, but one more flag was visible
- For control no. 8: A-E description was correct, but legs having course B and course C had A-D description, but one more flag was visible

Both controls were canceled for all legs/courses, in order to avoid unfair situation among teams

2. Control 1 on C course had A for an answer (not B as in solutions)

3.  Arriving of 1st leg competitors approximately at the same time, then arriving of 2nd leg competitors approximately at the same time resulted in **huge queuing** on Timed control, which was only one, and the same for all competitors/legs. Therefore, 3rd leg's timed control was canceled by the decision of Advisers, because when time limit was over, 2nd legs still didn't even answer the Timed control - *see Relay chapter for conclusions*

4.  Somebody at the very end end took somebody else's map. This was not noticed at all. The organizers didn't have spare map on the spot, to change it with right course for that leg in that short notice. Team did not noticed it also.



## TempO Finals - July 26, Zagreb - Blato



Illustration: Originally planned flag positions and solutions

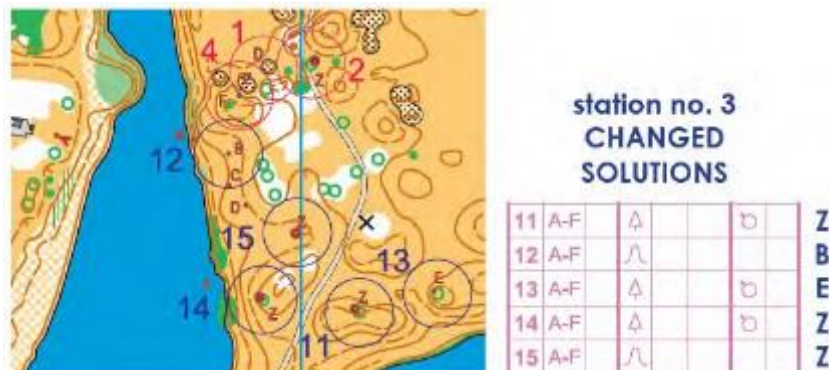


Illustration: Changed flag positions and solutions

While setting the course in the morning, it was noticed that, due to lack of terrain maintenance past few weeks, planned positions of flags were not visible (bush, grass), not in way that was planned.

The situation was resolved **before** competition started, and competitors couldn't have noticed anything out of ordinary.

Tasks and maps on the station stayed the same (see solutions), but flags were moved so that planned positions became "zero" answers. Flags were moved to places where they were easy to identify.

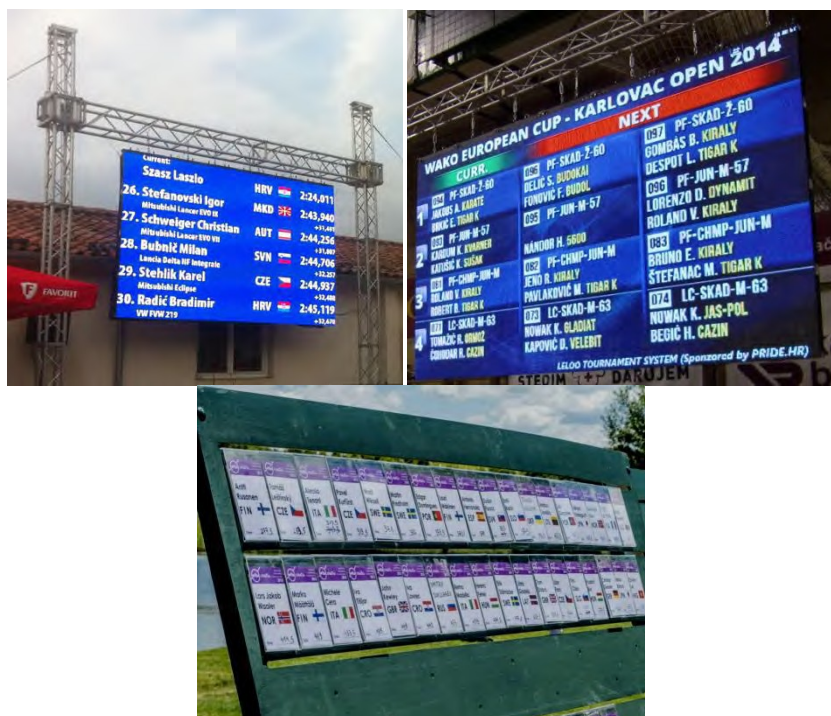
Later, only the solution sheets were changed. A note was written on results board, and new print of solutions were handed to competitors, as soon as they were printed.

✅ This is actually a very good example of early intervention, before fairness issues started.



## Display of results

General idea was to display results in the finish arena via big electronic screen but due to constant changes of finish arenas it would result in a lot of construction work every day. As the large screen should have been put in the finish arena day before the event and it should have been protected from the weather influence and possible theft we had to provide also a full night guard or security. Costs have been quite higher than expected due to those facts, so we decided not to go for large electronic screen. We decided to make a wooden construction with plastic plates in which we could insert labels with names which were prepared before the Event. On the day we just had to write the result on the label and put it in plastic plate. All wooden construction was done by our club member.



General idea and final look



Display of results



## Medical Care - Paramedics

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Competition was held in town of Zagreb and town of Karlovac, in close vicinity of several big hospitals reachable within a few minutes. Therefore, ambulance unit was not at the competition area due to complicated procedure and very high costs, and the fact that, by their rules, they do not enter the forest! Instead, we had a Paramedics service provided by a medical specialist, doctor Bojana Nikolić, who was on the course with all life-saving equipment **all the time**. Bojana Nikolić is long time member of the club, with many times experience in our sport events and wider.

There were also several members of Croatian Mountain Guides Association, in case of anything extraordinary happened.

Note:

- Fortunately, Paramedics doctor had just a minor intervention (among organizers), but members of Croatian Mountain Guides Association had to intervene - they pulled out their rope to help some wheelchairs on a small climb between Finish 1 and Start 2, because it was slippery for helpers



As there were no interventions there was opportunity for dr. Bojana Nikolić to try TempO





## Ceremonies

Big moments on every competition are different ceremonies. Every ceremony needs planning and a person who is responsible for the protocol. We provided for all ceremonies a big banner wall with logos of WTOC and logos of sponsors. Furthermore every organizer should provide at least one flag per nation, poles for the flags, stands for the poles, and a sound system. For the Opening ceremony there should also be signs with the names of participant nations.

### Opening ceremony

Opening ceremony was planned to take place in open amphitheatre at the lake Budek in Zagreb. Organizer prepared also a stage for the ceremony and plan was to have short march with all the teams from the gathering parking place to the stage. Due to heavy rain during the day we moved the whole ceremony to the big hall in hotel Aristos just besides the event center. Although it was a tough decision to make and it made additional work to our protocol manager Nino Stančić Vidrač he managed to move all the equipment and the opening ceremony started on time. Major of Zagreb Mr. Milan Bandić opened the competition and appropriate sport and cultural program was performed. Whole program was set by club members and their friends.



Opening by mayor of Zagreb Milan Bandić



Teams ready to enter the hall

### Allocation of start numbers for TempO Finals

After the TempO Qualifications in Karlovac there was a public allocation of start numbers for the TempO Finals. New ceremony was a big success and we hope that future organizers will keep the tradition.



TempO finalists



Starting numbers

### Starting numbers :

Every competitor got different colored start bib for every discipline he entered in the competition. TempO finalist got new set of numbers according to their qualification place (no.1 was given to the best in qualifications). World Champions from previous year got the golden number for the discipline in which they were World Champions.

### Flower ceremonies

Only one Flower ceremony was held and that was for discipline TempO. It took place immediately after the Finals on the competition terrain in Blato.



TempO flower ceremony - winners



TempO flower ceremony - first six competitors

### Prize giving ceremonies

Prize giving ceremonies for all disciplines and categories were held in Blato competition terrain after the PreO competition. Top six athletes were asked to assemble and approach the podium. Ceremony immediately after the competition was a good solution as previous years organizers had award ceremonies at the banquet and not all competitors and team were present at the ceremony. IOF provided medals for the winners and diplomas for the first six competitors in every category. We as organizers provided ribbons for medals and flowers. Also we provided podium stands for Open category.

Even when you have all results ready you have to print the names on diplomas, so keep in mind that you need some extra time for printing as there are diplomas for first six competitors in every category.

Keep in mind also to collect all national anthems and to check them if they are right as some nation changed the anthem in past years. Also keep in mind that some nations could have few competitors on the podium place, so you will need more than one flag from each nation (or at least from nations you expect podium places). We ordered more than 50 flags for this competition.





IOF medals with Croatia ribbon



OPEN class victory ceremony

It is necessary to have prize giving ceremonies on highest possible level as this is like a mirror of our sport. Those pictures are travelling throughout the world and if the ceremonies have been made in front of some tents, under the stairs or similar places we are ending the wrong pictures of our sport. Also writing diplomas by hand often looks very unprofessional so we should keep in mind that those papers are like a document which will be seen also by the people not directly involved in our sport.



Ready for the victory ceremony



Flowers in the colors of the Championships



Signing the "Champions" poster

## Disqualifications

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Three competitors were disqualified for having maps in Quarantine of TempO Qualifications. They disqualified themselves. See SEA Report.

*IOF Rule 15.6 On the day of the competition, the use of any map of the competition area by competitors or team officials is prohibited until permitted by the organiser*

One competitor was disqualified by SEA for having a camera in Quarantine of TempO Finals. See SEA Report.

*IOF Rule 22.5 Telecommunication equipment may not be used in the competition area, except in an emergency by marshals. Any other use of telecommunication equipment during the competition period may result in disqualification of the competitor and team.*

## Jury

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Jury members were: Bosse Sandström (Swe), Koji Chino (Jpn), Olgy Korchagina (Rus)

There was no need for jury.

## Organizers Tolerance

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### Not tolerating mistakes which involved rules

All problems involving any rules were agreed to be handled with utmost care and "in silence". All the organizers and volunteers got the instructions to take all problems in consideration, but to always proceed them to a "higher" lever, for a decision.

More serious problems that required immediate attention of marshals happened only in town of Karlovac. There was a possible violation (accidental) of a mandatory route by a competitor, which was prevented on time, by marshals on the route. Couple of competitors and team leaders were also noticed to have entered back into a competition area before the end of competition, in order to reach parking, but they were also escorted from that area, and asked to go around obeying the route previously given to them at TOM.

There were a couple of notices from competitors regarding overtime issues, and punching issues, which were immediately handled by IT operators.

Higher level requests were given to a main organizer Damir Gobec, then to SEA Vibeke Vogelius without any delay but there were no written complaints/protests.

## Tolerating Non-Essential Issues

In order to avoid any tensions or bad feelings, organizers tried to tolerate and solve all reasonable issues not having influence on regularity of competitions.

There are some examples:

- Some competitors threw away their bibs after first day because they didn't realize those were for second day, too. Organizers printed new ones.
- Organizers had spare blank bibs and control cards. Several blank bibs were used, because competitors lost theirs.
- Competitors switched SI chips. This was noted at Start, and corrected later in timing data.
- There was an early start at 0:00, approved by SEA, due to a sudden illness of competitor's child.
- A competitor in Para Class, a wheelchair user, accidentally pulled second part of Control Card together with first part of Control Card and handed them both together to a helper (organizer's volunteer). He had both parts folded together in a pocket in order to use his hands on wheels, and his hands were all muddy, so he couldn't feel the thickness of both Control Cards being stuck together. As second part of control card was smaller than the first part of control card, and got "inside" of the first part Control Card, a helper didn't see it. So, a helper (organizer's volunteer) punched through both parts of competitor's control card, "destroying" Control Card which was supposed to be used for the second part of the course. Without any discussions on who's mistake it was, under the supervision of EA Lauri Kontkanen, a competitor was provided with a blank Control Card for second part at Start2.
- There was people bringing wrong food-coupons, they were provided with food.

## Overall problems that might repeat in future:

- Many competitors and team members were entering the terrain, especially after Model, and even during the Model itself
- When it was said that Model Event lasts from 10.00 a.m. - 14.00 p.m. a lot of teams understood that they could start at 14.00p.m.
- Many competitors still have problems keeping track of time when having a course split in two. It is "their problem", but we have to work on awareness.
- Many competitors still had issues with cameras and mobile phones, despite of constant warnings. There was a discussion at TOM whether a switched mobile phone was/was not/ a telecommunication equipment!
- A competitor showed at second start commenting on how he didn't have a wrist watch because he "didn't know he couldn't wear a GPS watch".
- Many team members and even team leaders played "I didn't know" role, when warned not to enter TempO terrain during the competition
- Vertical signalization saying "stop" or "competition area" or "only for competitors" meant almost nothing, unless there was a tape on the ground!
- It was very hard to communicate with some teams, because nobody spoke English



- Despite of terrain description being "a forest", many competitors from both Open and Para class appeared not adequately equipped (shoes, clothing, wheels...)
- "x" over a path on map, is very loose in practical interpretation. For example: If there is a bridge in the middle of the path, and only one side of the path has "x"- can competitors be on the bridge or not? That was an issue on Model Event. Everything was taped later. ---> tapes on ground should be put **always** ---> clearance on this rule is needed: *18.2 All terrain off the tracks (trails) in the competition area is out-of-bounds unless otherwise indicated in the information, marked on the map and, where necessary, marked on the ground. Additionally, certain normally permitted routes and areas may be declared out of bounds, as described in the information and, where necessary, marked on the map and/or on the ground. Competitors who deliberately enter a forbidden area will be disqualified*

### Suggestions:

- Clearance in some rules and new guidelines involving the above issues
- introducing terms "Stop Point" for TempO stations, introducing following guiding procedure
- more care upon mandatory routes
- stricter about not using telecommunication equipment
- **there are big discussions over legibility for Paralympic class, reforming rules for Paralympic/Open class and treating Paralympics in Open class differently, and we urge the relevant IOF bodies to take these matters more seriously.**

Any complaint shall be made in writing to the organizer as soon as possible. A protest may be made against the organizer's decision about a complaint.

## Team Official Meetings (TOM)

All meetings were held in hotel Aristos in special congress room equipped with loud speakers, projectors and all necessities for having a meeting. All materials and issues were also presented via power point presentations. Meetings were lead by SEA Vibeke Vogelius. On all meetings representatives of organizers, course setters and map maker were present. Well prepared materials and Bulletin lead to short meetings with only few questions. During the meetings Event office was able to work normally

All materials, start lists and number bibs were given at the beginning of the meeting in team bags sponsored by Zagreb tourist board.

At the meeting also for the first time “Golden number” was introduced which was given to the reigning World Champions in PreO and TempO disciplines.



## Competition office



Competition Office was opened daily in the hotel Aristos from 08:00 until late hours in the evening. On the competition days and during model events Competition Office was present on all competition sights at the start or at the finish arena. Office was lead by Ivana Težak and Darinka Lovrec with the help of junior club members. At least two persons were all the time in the hotel and at the competition sights on disposal for competitors and their needs. All additional materials during the WTOC have been given to the national Teams through pigeon boxes. In the competition center you could also get tourist information, buy T-shirts, get maps and spare Bulletins, pay Entry fee... All girls working in the competition office have been uniformed in nice violet dresses which were made by the map maker :D, and all mail organizers had a violet tie.



Opening ceremony narrator



Competition office team



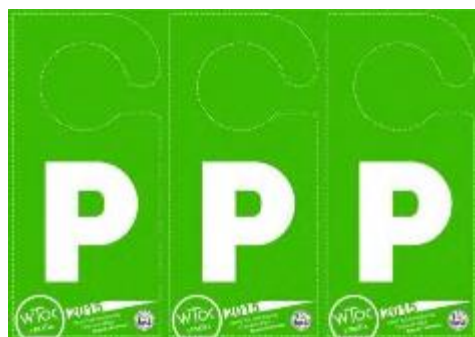
TOM - organizers and Event advisor



## WTOC visual identity

WTOC 2015 had a unique chance to have own visual identity due to the fact that it was organized separately from WOC. During the past (and future) Championships we were witnesses of neglecting WTOC as a part of the Championships and we have seen that WTOC was put a side. We took opportunity to make all materials, logos, numbers, flags, t-shirts, parking permits, baggage labels, results labels in bright and cheerful colors showing the World that we are here. Most of the visual identity was done by club member Boško Opalić assisted by the other members of the club. Logo was designed by Ivana Gobec.





Parking tickets



Lanyards



Bandana gift for all competitors



Accreditation



T-shirt



Meal tickets





Flags



Banquet invitations



Posters



Opening ceremony invitation



Signs for the course



Signs in the competition arena



## Photographers and video coverage

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It is hard to be media friendly in our sport as media is often visiting just start or finish area. In order to have a full coverage of the whole courses we set up a team of 4 photographers and one video camera man. Person in charge of this part of organization collected every day all pictures and most of them were promptly published on the Internet. Over 5.000 pictures have been published from almost every corner of the competition course.

Making a video took some time due too different technology but short video was released shortly after WTOC.

Few months after the Event photographers made nice exhibition choosing the best moments of WTOC to be displayed. On this Exhibition also video was introduced.

One of the tasks of the photographers was to make photos of every task before the competition started so we had also all tasks promptly on the photography if needed.

☑ Taking photos before competition starts!!!



## Photographers

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Čedomil Gros



Mladen Fliss



Senka Gross



Branka Dimić



Velimir Brezar (video)



Joaquim Margarido

Croatian team of five photographers strengthen by Portuguese and IOF orienteering reporter Joaquim Margarido made tremendous job. Every day they were on different spots of the Championships and capturing the moments through the lenses of their cameras. Team “captain” Čedomil Gros gathered every day all photos from that day and we published them on the web site. Now we have collection of more than 10 000 pictures and few hours of video material. Everything we could not see as organizers, we could feel and experience through those pictures and it is a great to see all those precious moments.

## Transportation

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### Transport of Volunteers and Staff

In the morning of competitions volunteers were picked up by a bus. Even if they could come by themselves, we preferred to pick them by bus, in order for everybody be on time and on right place. Bus was picking them on several "stations" throughout the city of Zagreb. In Karlovac we had additional volunteers who lived there.

### Transport of Teams

The same bus which picked volunteers mostly returned to the Event Center after dropping off volunteers, and picked up competitors and team members.

## Transport of Equipment

Bringing all equipment for competitions was very demanding, but solved in advance in a way that functioned very well. Equipment was divided in three main sections, functioning independently, with only a few things which were handled individually.

Main transport vehicles were:

### 1. Transport van

- FIAT DUCATO (borrowed by a club member )
- handled by Robert Težak, a club member, in charge of equipment
- Constructions equipment big tents, small tents, benches, chairs, water (!), power unit, ...

### 2. Techniques and "fine" equipment

- OPEL VIVARO (rented)- computers, printers, power cables
- handled by Boško Opalić, a club member, in charge of IT equipment

### 3. Course Setting - car

- OPEL ASTRA station wagon (rented)
- driven by Zdenko Horjan, Course Setter
- flags, decision points, marking tapes, signalization....



Very important things like maps, solutions, extra control cards, SI units, start lists, lists for results, lists for timed backup, etc..... were handled by SEA, map maker, Event Center manager, Staff Manager and IT Staff Manager.

## Transport in the Competition area

On most of the competition sites we used bikes for transport of all kind of equipment and also for transport of baggage, control cards, food for volunteers etc.

Specially designed trailer for bikes was also used.

### 1. bikes baggage

### 2. bikes people





## Vehicles at WTOC 2015

### Official Vehicles

	User	Name	before	June 23rd	June 24th	June 25th	June 26th	June 27th	June 28th	June 29th	June 30th	June 31st
1.	Opel Astra station wagon	Course Setters	Zdenko Horjan	x	x	x	x	x	x	x		
2.	Opel Astra	IOF Event Advisors	Knud Vogelius	x	x	x	x	x	x	x		
3.	Fiat Ducato	Transport of organizers things	Robert Težak	x	x	x	x	x	x	x	x	x
4.	Opel Vivaro	Transport of organizers things	Boško Opalić	x	x	x	x	x	x	x		
5.	Opel Adam	Map Maker / Printing	Ivana Gobec	x	x	x	x	x	x	x		
6.	Bus 'Vincek tours'	Volunteers	28+1			x						
7.	Bus 'Vincek tours'	Volunteers and Competitors	28v+23c+2 guides		x	x	x	x	x			
8.	ZET - Paralympic transport	Competitors and Team Officials	1+2	x	x	x	x	x	x			

### Private Vehicles

1.	Mazda 6 station wagon	Main Organizer	Damir Gobec	x	x	x	x	x	x	x	x	x
2.	Opel Vectra	Course Setters	Maja Kušt		x	x	x	x	x			
3.	Škoda Fabia station wagon	IT	Maja Cvitković		x	x	x	x	x			
4.	Peugeot 206 station wagon	IT	Boris Kukec			x	x	x	x			
5.	Suzuki Swift	Event office	Ivana Težak	x	x	x	x	x	x			
6.	Alfa Romeo 156	Refreshment	Željko Gobec			x	x	x	x			
7.	Lancia Phedra	Timed Control	Karlo Gobec		x	x	x	x	x			
8.	Fiat Tipo	Photographer	Čedomil Gros		x	x	x	x	x			
9.	Hyundai Tacuma	National Advisor and TC	Tomislav Kaniški		x	x	x	x				
10.	Vehicle no.10	National Advisor	Vladimir Tkalec				x	x				

## Teams Vehicles

### Bus Schedule

#### Volunteers

arrival/departure:			
June 24th	PreO 1	Sesvete	06:45 - 17:00
June 25th	TempO Q	Karlovac	07:00 - 17:30
June 26th	TempO F + Model 2	Blato	07:30 - 17:15
June 27th	PreO 2	Blato	07:30 - 17:15

#### Competitors

June 23rd	Model Event 1	Maksimir	09:00 - 13:00
June 24th	Opening Ceremony	Bundek	16:00 - 18:30
June 24th	PreO 1	Sesvete	08:30 - 16:00
June 25th	TempO Q	Karlovac	08:00 - 17:30
June 26th	TempO F + Model 2	Blato	08:30 - 13:00 13:30 - 16:30
June 27th	PreO 2	Blato	08:30 - 17:00
June 28th	Relay Demo Event	Maksimir	08:30 - 13:30

### Distances

#### Competition center to:

Park Maksimir (Relay, Model Event) – 11 km

Sesvete (PreO day one) – 22 km

Karlovac (TempO Qualifications) – 52 km

Blato (TempO finals & PreO day two) – 15 km

Country	Car	Minibus	on Bus	Transport Wheelchairs
Belgium		1		
Bulgaria	1			
Croatia	1			
Czech Republic	3	1		
Denmark		2		
Egypt				
Finland	1	1		
Germany	2			
Great Britain	3			
Hong Kong	1		3	
Hungary	2	1		
Ireland			1	
Italy	3			
Japan			10	
Latvia	3			
Lithuania	2			
Norway	4			
Poland	2			
Portugal	2			
Russia	3			
Slovakia	2			
Slovenia	2			
Spain	1		2	
Sweden	3			
Turkey			2	1+2
Ukraine	1		4	
United States	2			
Total	38	6	22	3

## WTOC Public Events

Open public event was held during WTOC on the WTOC courses, on the same days, after the official WTOC program. The whole event included 1 Tempo competition (WTOC Qualifications), 2 PreO competitions (WTOC Day 1 + Day 2) and 2 model events. Limited number of late entries were also accepted on site, while there were available maps. First starting times in the Program were provisional. All public events started as soon as possible after the official competition. There were no starting order. Start was open at least for 1 hour. Announcements were given by official speakers. Entry fee for public events was as low as possible and juniors had specially low fee so we could attract some extra people on the event.

After the Tempo Qualifications on June 25, starting from 15:00, at the same place in Karlovac there was a FootO Sprint competition (counted for Croatian Sprint Cup). Competition was open for all. WTOC competitors were welcome and allowed to participate and there was a special course for Paralympic competitors too. Also, at the same place there was a Kid's race (age 0-12), starting from 13:00.

## MEDIA

Although we tried our best to get some extra media coverage we can say that WTOC in Croatian media was not recognized as something important. Best media coverage we got was in Karlovac where local media - radio, newspaper, web pages and TV were publishing and covering most of the preparations and the WTOC on the days of Event. In the city of Zagreb opening ceremony was covered by the television and the newspapers but other than that it was hard to get some significant media coverage.





## Media coverage – press clips and advertisements

World Trail Orienteering Championships was presented on several occasions on PRESS conferences in Zagreb-Blato, Karlovac and on WTOC 2014 in Italy. We were guests on radio and TV stations in Karlovac



PRESS conference Karlovac



Meeting with mayor of town Karlovac Mr. Jelić



Meeting with mayor of town Zagreb Mr. Bandić



Radio Karlovac



PRESS conference Blato with Croatian minister of tourism



WTOC 2014 presentation of WTOC 2015

## WTOC Banquet

WTOC Banquet was organized in hotel Aristos in big banquet hall. Entry costs for the Gala evening were really low as possible, so every team could afford their presents at the evening. Organizer provided five course meal with soft drinks, short drinks and vines for every table. Program included official speeches of IOF representatives and organizers, some giving of awards for World champions and interesting program with magician performance. Special part of the evening was music part with a special live domestic band who played traditional and modern music for everybody so there was a lot of dancing.



Awards for PreO Champions



Awards for organizers



Magician performance



Banquet



Dance

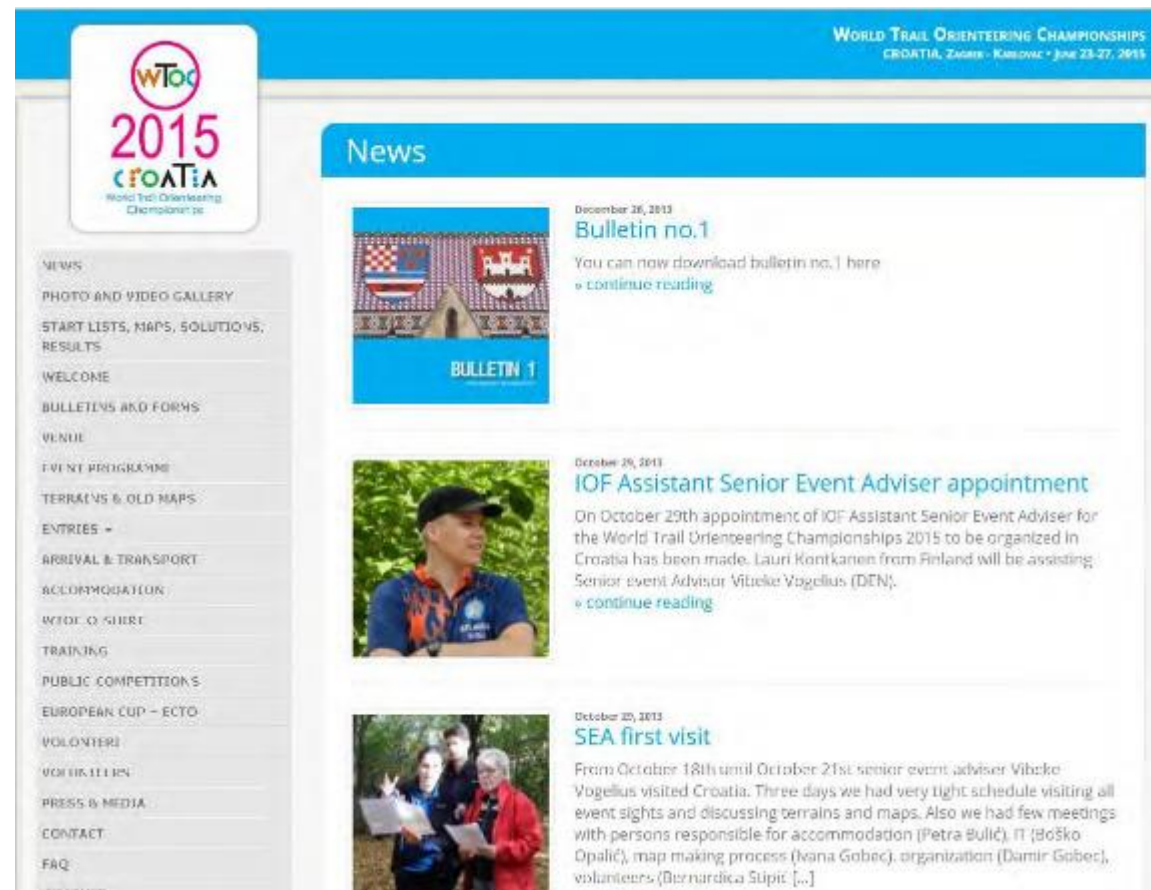


Giving IOF flag to future organizer from Sweden



## WTOC WEB and FACEBOOK

WTOC Web, Twitter and FaceBook page was managed and designed by Zdenko Horjan and Damir Gobec. During WTOC two more persons were involved with putting news, results and necessary data to the pages.



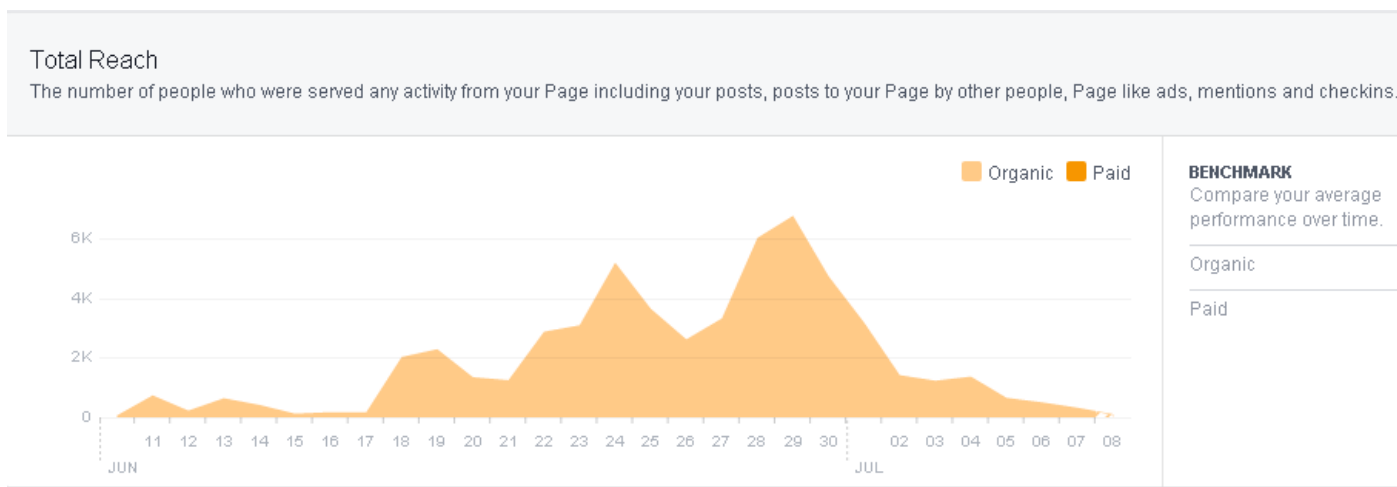


# FACEBOOK PAGE STATISTICS

<https://www.facebook.com/wtoc2015>

WTOC FACE BOOK PAGE	Page Visits	Weekly Total Reach	People Engaged	Total Page Likes
Two weeks after WTOC	615	8,847	909	420
Week after WTOC	3,381	18,213	2,141	396
<b>WTOC week WTOC</b>	<b>3,381</b>	<b>15,900</b>	<b>1,895</b>	<b>396</b>
Week before WTOC	342	5,244	421	307

## Overview of total reach during June



888.6% was the increase of page visits during the WTOC week, 29.0% was the increased number of total Page Likes, 350.1% more people engaged. Highest peak was on June 29<sup>th</sup> 2015. day after WTOC. Most likes on WTOC FB page came from Croatia what is expected but the second country is little bit more surprising and it is Portugal followed by Italy, Turkey, Denmark. Comparing web page statistics and Facebook statistics we can conclude that there is a difference in following the

news from country to country and the best way is to have two or even more types of publishing news and important information from the Championships. 62% of followers were man and 37% women. Regarding age most of the users are between 35 and 44 years old.

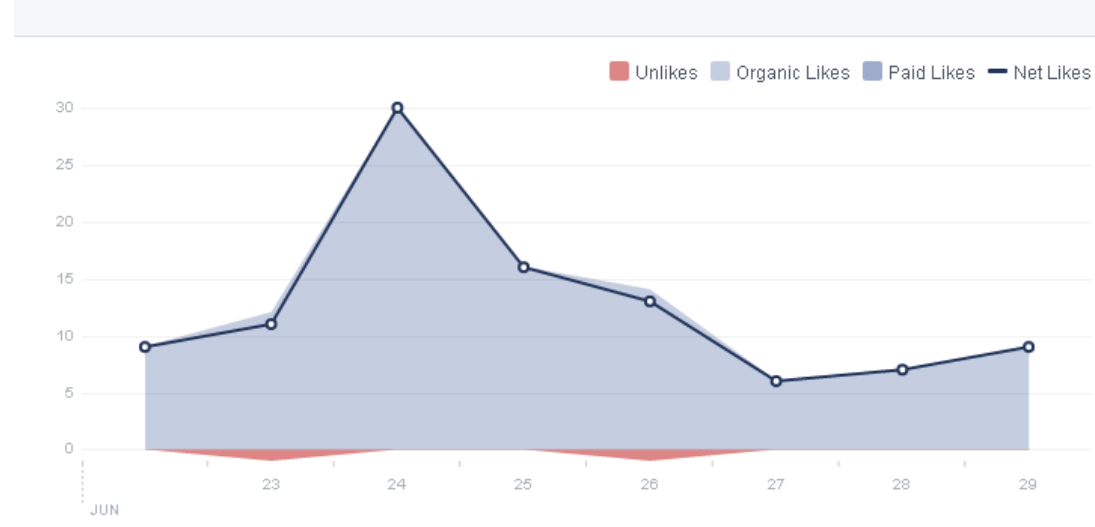
Most visited posts are the ones published on June 28<sup>th</sup> and both are photo galleries. Both galleries reached more than 1.1 and 1.8 thousand people.



Following Facebook page intensively grew up on first day of Event.



Net likes shows the number of new likes minus the number of unlikes.



## WEB PAGE STATISTICS

[www.wtoc2015.org](http://www.wtoc2015.org)



During June WTOC page had 10.173 sessions with 3.920 users and they have entered 33.204 pages. On average session every user was looking at 3.26 pages usually for 3'58" . Over 65% of users came back to the pages for more times (6610). Top was reached on June 25th after TempO qualifications with 1463 sessions in one day. 3563 sessions ended up with one visit to the pages but they looked over 10.452 pages. On the bottom there are 20 sessions which came back for more than 100 times and they looked at 58 pages.



## USAGE OF TIME WHILE BROWSING THE PAGES:

Over 4000 sessions were less than 10 seconds long which visitors used to look at 6.179 pages. Interesting is that we can find 269 sessions which lasted more than 30 minutes (1801+ sec) which visitors used for visiting 3355 pages. Zagreb as a host town had most visits with over 23,52% of overall visits to the web page but surprisingly on the second place was Hong Kong and on the third Kharkiv from Ukraine followed by Helsinki and Riga (2,60%), Oslo (2,26%)... Map of the world is showing also dispersion of entries divided by the cities. All together we have 903 cities on the list.



LANGUAGE STATISTICS:

As we can see from Statistics most used language for browsing the web pages was American English followed by Finnish and British English and Russian.



COUNTRY STATISTICS

As expected most of the visits came from Croatia as host of WTOC followed by Scandinavian countries Finland, Sweden and Norway. All together we had visits from 75 countries around the World. On the bottom are countries like Uganda, Thailand, Peru, Qatar, Nigeria, Mexico, Macau, Martinique. On the map of the World we showed with blue color countries which at least visited once the official web page of WTOC. Darker blue are countries with most visits.

## "Mud Day" - WTOC Day 1 PreO - clearance on the story

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Organizers experienced extreme weather change on first day of PreO.

Terrain Divjača (Sesvete, Zagreb) is natural forest terrain, flat, with one main circular path taken for competition. Controllers, SEA and EA, were on the course past 2 years more than 5 times, and organizers many more times, on regular bases. In winter it was wet and muddy on some particular places, mostly because forest workers clogged the drains. Damage done by forestry works was repaired with a lot of effort from organizers, in advance. Most of the time through the year those paths are concrete solid. The bumps were cleared by a tractor, two times, all branches were manually removed. Knowing it might be wet, the organizers had more than 10 long carpets prepared for critical parts. Organizers built 3 solid bridges over creeks.

The odds for having such weather in this part of year in Croatia are were very small, almost none. There are some rain showers, but not extreme. But, the weather went wild. The sudden weather change started in the afternoon prior to Day 1 PreO. The entire Opening Ceremony was moved from the open area of Lake Budek to indoor space in Hotel Aristos. The storm was so sudden that we got a warning from our airport connection that we have to urgently leave the Model Event at 14.30 p.m.

It was raining heavily during the night, but it was very hard to estimate how much. Tents, toilets and equipment were already on the competition area from the day before. Early checkup of the entire course was done as soon as there was enough light, from 4-5 o'clock a.m. Paths, that were usually usable during 2-5 rainy days without being too muddy or sticky seemed to be wet, little muddy, but all right.

So, with everybody's assumption, the paths were acceptable for the competition. Due to wet conditions, 30 more minutes was given to Para Class, and to wheelchair users in Open Class by the decision of SEA and EA.

When it was already decided that competition goes on, the rain continued. It was extreme amount of rain, as never recorded before. Later it was said that it was 100 liters of water per 1m<sup>2</sup>. The rain suddenly stopped around 11 a.m. and late competitors even had a sunny day.

Nobody could have guessed that after only a few first wheel chairs the conditions will get extreme. Mud was never very deep, but it was very sticky and very slippery. It was already too late to change anything considering time-limits in the middle of the competition. There was never any danger to competitors, since the terrain was flat, so the decision was to continue with the competition.

On first signs of problems the main organizer put alarm on all other organizers and volunteers and mobilized every possible person. Everybody was moved to help "pushers" or help on critical parts of the path. The number of helpers was sufficient. There were even 2-3 people helping one wheelchair user. It was some more pulling and pushing, but that was in between two parts of the course, when time was stopped for competitors.

Due to everybody being in the forest for help, which was declared a priority, there was no speakers working in the finish arena, and results were running late. All other aspect of the competition, like Timed control, Starts, Finishes, baggage transport, tents, toilets, food, washing pipes... were working perfectly.

There were later questions if this competition should have been canceled. Organizers don't agree for many reasons.

First, the competition was tough, but regular. There was no technical mistakes or irregularities throughout the course. Not in any moment happened than someone got stuck. There was absolutely no security issues of any kind, like it for eg. could have happened on a golf course if there was a thunderstorm. There were neither informal objections, nor formal protests/complaints/ on the days of WTOC.

The organizers did everything possible to help everybody proceed through the course, and there were enough people. Also, nobody could have changed time limits in the middle of the competition.

**For organizers to move entire competition to a backup terrain the decision has to be made at least in the morning a day prior\* to the competition**, because in the afternoon of the previous day the organizers start to build up constructions, bring mobile toilets, set up the course.... The organizers had a "backup competition" prepared considering maps and courses (Park Maksimir, new part of the map), but it should have been a different situation - for eg. flood like we had twice in Karlovac and Blato previous years, or canceling a private terrain like golf course, or storm pulling down big trees, but that would have had to happen a few days in advance.

\*Around noon time the day before it was no sure signs that 100L/m2 will fall down in early morning of the day of the competition. The situation was checked with airport prognosis, but at the time for the decision, rainy clouds should have passed much more north from Zagreb.

There was later talking over social networks. Most don't put in consideration that this situation was extreme, and that it could happen after years of checkups. Also there is no understanding that a competition can't be easily moved do another terrain just like that in two-three hours. But, days after the competition most reactions sent to the organizers were positive, especially on maps and courses and organizational efforts to do the best out of extreme weather situation. **But also, due to this "Mud Day", there are big discussions over legibility for Paralympic class, reforming rules for Paralympic/Open class and treating Paralympics in Open class differently, and we urge the relevant IOF bodies to take these matters more seriously.**



\*\*\*\*\*

There was an interesting situation that we had, after the winning ceremony Day2. We had our connection from the airport saying to immediately evacuate tents, because in 15 minutes the storm will struck, but we didn't take it so seriously. We started to dissemble the equipment, but too slowly. I cost us a lot now - one main tent, out of two, is completely ruined by the storm.



Bringing material for bridges in the forest



Building bridges



Building bridges



Cutting grass at start area and time controls



"Club working unit"



Few weeks before WTOC heavy forestry work

## Relay

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### Description of Unofficial Relay - WTOC 2015

After many ideas of how Relay should look, course setter Zdenko Horjan decided that it would be simple A, B, C courses with 11 tasks, but "score" format. After each leg competitor went to a Timed control - only one, same for everybody. The idea was to simply add up points from the course and times from Timed control for each team.

Altogether 47 teams participated.

This format was decided for following reasons:

- it had to be very short, not to be deadly boring for everybody
- if 47 people went all on same control, there would be 47 people on one control at the same time.
- this was only acceptable amount of work on map maker/course setter - making 3 more different courses/maps/solutions
- this was only acceptable amount of controlling on SEA/EA - it is almost like controlling 3 more events!

Anyway these problems emerged:

- there was a crowd in the middle of each leg, because all courses were circular. Although some competitors went one, and some the other direction, they met in the middle.
- all one leg's competitors arrived approximately at the same time (manual time keeping!)
- all control cards arrived at IT desk at once for one leg!
- arriving at same time resulted in huge queuing on Timed control, too
- last leg's timed control was canceled by the decision of Advisers, because half teams' 2nd legs still didn't even answer the Timed control
- everybody went away before the Winning Ceremony
- extreme rushing (mostly in last leg) was too much for helpers in Para category/"pushers". There was an unfair difference for people with stronger or weaker "pushers".

## Relay - Current Issues

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### Format still not clear

#### Para? Open?

#### One team per class? One or two teams per country?

There are still no rules of how exactly shall planning and format look like. Even ETOC 2016 which had Relay as official discipline showed that Relay format still needs a lot of adjustments.

### Facts

- In any format teams tend to split overall time limit on three equally long times. That means that each leg competitors will arrive approximately at the same time. This can not be solved if each leg has different Timed control. It could be only solved by dividing each leg to A, B and C competitor, and each being sent on different Timed control. This could be done by starting number, but it is very complicated for organizer.
- If there is only 10 best (of any leg, or just last leg?) go on Timed controls, how can we say who the best are **during the competition**? In PreO and in TempoO results are valid only after solutions are handed, and complaint/protest time has passed!
- Taking "the best" group means also that results must be almost immediately calculated, which is impossible while using manual punches and waiting for Timed control. It would be even worse if courses had forking. / In this WTOC 2015 example, around 40 (forty!) 2nd legs arrived at the same time, and there were less than 40 minutes to calculate results and add both legs. Even though calculating was fairly fast, **it was not possible**, because 2nd leg was still standing in queue for Timed control! /
- **Queuing in any format will occur if course of one leg takes shorter time than number of competitors in one leg multiplied by time spent on Timed control!** (for eg. 47competitor x 2minutes -> it takes 94 minutes for one leg to complete answering a Timed control!)



## Additional Cost on Teams

Considering the fact that very small amount of countries will have relay teams, there is a question who will stay for that final day, and wait for Prize Giving Ceremony and Closing Banquet.

Watching current numbers around 1/3 of competitors will want to leave.

Teams on low budgets will certainly leave.

## Exhaustion of Organizers - overall statement

Relay Teams applications change until last minute.

## Exhaustion of Organizers - example WTOC 2015

Relay Teams applications were made much too late for organization to go smoothly on time. All the work was to be done on final day of PreO, followed by Prize Giving Ceremony and Closing Banquet. Of course it wasn't possible, so work with control cards and preparation was done during the night. Also all event tents and equipment had to be transferred to another location for 5th time in 6 days.

If you just look at organizing aspect it was a little bit too much for already exhausted organizers. We had many people working from 4 a.m. (1) until late evening, and others working up to 2a.m. (night), so this was just a day over everybody's limits.

We had almost no volunteers after 6 full days of work. It was too much for them. Work was almost entirely done by OK "Vihor" members. TrailO runs on very low budget, meaning everywhere. Lack of volunteers is main reason of countries not willing to organize WTOCs.

By taking the decision that Relay is added to other WTOC's events it has to be kept in mind that organizing TrailO is much more complicated than Foot-O competitions! If there were plenty countries applying to organize WTOC it would be fine, but making it even more complicated and expensive nobody will want to apply any more. There will be only few countries that will be able to pull this through.

## Relay staying unofficial

This format of unofficial relay made everybody very satisfied. Apart from the fact that 3rd leg's Timed control was cancelled due impossible queue, everybody had a chance to participate, from competitors to accompanied persons and some organizers. It was also a chance for organizers to earn some money, and refund a little for too high expenses of organizing WTOC.

## Conclusion

Format is not ready to be implicated on World Trail Orienteering Championship.

It is not clearly defined, it has **not once** (out of 2 times on WTOC and once on ETOC 2016) been put through without problems.

Team Competition on Day 2 PreO does not bring huge extra effort on organizers, Relay does!

There will be only few countries that will be able to pull this through, there will be less and less interest in organizing future WTOCs.

Relay as official discipline could be involved as separate discipline but also existing format of team Event could stay.

## Marketing and costs

World Trail Orienteering Championships due to limited number of participants is hard to organize without sponsors and support of local municipality. Entry fee is hardly covering basic costs and if you want to have the Championships on the highest possible level with good maps and everything what goes with a proper organization of the event it is necessary to have extra income to your budget. WTOC 2015 had different kind of sponsors, mostly they gave some products or some kind of work free of charge or with lower prices. Idea when we took the Championships was to level the income and outcome. Finally we managed to to this and to provide some extra profit but that would not be possible if we did not have many people volunteering and not charging their time and work.



# COSTS WTOC 2015

## INCOME

City government  
Sponsors  
Entry fee  
Tourist office  
Own resources

## COSTS

### Printing (maps, materials, solution sheets, control cards...)

60.000,00 kn

### SEA and EA costs (without WTOC week)

16.968,00 kn

Food

Accommodation – one month before WTOC

2.880,00 kn

Accommodation – eight months before WTOC

864,00 kn

Accommodation – one year before WTOC

1.726,28 kn

Rent-a-car - PSC Opel

3.000,00 kn

## VOLUNTEERS



Lunch package		20.253,27 kn
Bus		13.500,00 kn

## IOF TUITION FEE

WTOC tuition fee and insurance	600 €	4.560,00 kn
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## OTHER COSTS

flowers		2.240,00 kn
Organizing team equipment, t-shirts	1.308,00 €	9.940,80 kn
Food - competitors		11.924,28 kn
Organizing equipment		16.279,19 kn
Compass		584,36 kn
t-shirts		3.724,59 kn
t-shirts		2.883,00 kn
Tents - Amazon		772,82 kn
Tents - Amazon		843,20 kn
Tents - Amazon		323,71 kn
Stop watches - PAYPALL		308,62 kn
Office paper and equipment		1.525,94 kn
tapes		567,00 kn
Construction equipment for building bridges		716,00 kn
TempO station equipment wooden stands - Bauhaus		1.030,08 kn
Battery printer		2.617,18 kn
Toll - Zagreb-Karlovac-Zagreb	26x19	494,00 kn
Toll - Zagreb-Karlovac-Zagreb – van x 2	4x34	136,00 kn
Toll - Sveta Helena	1x10	10,00 kn
Construction equipment for building bridges - Pevec		159,98 kn

Radio stations - Chipoteka		1.472,50 kn
Taxes for permits		14,50 kn
Rope - Karlovac		27,50 kn
Fuell		7.964,04 kn
Keyboard		255,00 kn
WEB site server		855,00 kn
Mouse		99,00 kn
Envelopes - Narodne Novine		14,50 kn
Administrartion taxes - Inovine		20,00 kn
Satenska traka za hostese - NAMA		31,29 kn
Flag poles		800,00 kn
klinovi za označavanje staze - PEVEC		79,00 kn
Rent – copy machine		1.000,00 kn
Results board - ELGRAD		423,37 kn
Promotional banners		843,13 kn
Costums tax on equipment		1.071,56 kn
Costums tax on equipment		1.394,54 kn
Costums tax on equipment		998,71 kn
Costums tax on equipment		211,60 kn
Mosquito repelents, bags... - DM		237,50 kn
Fuell organizers		2.193,72 kn
USB stick for data - Muller		49,90 kn
Ties for organizers	91,90 €	698,44 kn
Safety pins for numbers		74,00 kn
Food for start quarantine Karlovac - Kraš		119,21 kn
Rain cover for volunteers		97,50 kn
Wedges for Blato course tapes - PEVEC		108,90 kn
Rope - Kudelja		132,16 kn

Hotel Aristos – extra costs		5.878,00 kn
Poles for control flags (kites)	331,70 €	2.520,92 kn
Closing ceremony band - Harmonija		6.000,00 kn
Control flags (kites) - Kanpas China	526,40 USD	3.562,07 kn

#### TOI TOI - toilets

5.000,00 kn

#### COMPETITION OFFICE, HOTEL costs and ACCOMMODATION for organizers and SEA, EA

34.850,00 kn

#### RENT-a-car

Rent-a-car with special discount

2.400,00 kn

## FINAL COSTS

EXPENCES:

262.329,86 kn

7.5kn is approximately 1€



**After WTOC competitors answered Trail O athletes commission survey and here is the summary of 57 answers from 19 countries**

**„WTOC 2015 was one of the best thus far“**

**Thank you for being a part of the WTOC 2015**

**Organizers**

**Report made by: Ivana Gobec and Damir Gobec**