

TRANSIT Online Registration System

Author: Craig Feuerherdt

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System summary

Orienteering Victoria (OV) is seeking to implement an online registration and event management system which is uniform across all disciplines of orienteering and suitable for all event types from local through to championship carnivals. The key purpose of the system is to centralise the management of membership information and accept event entries.

Background

A review of potential vendors was undertaken from June through to August 2011. From the broad range of online entry/membership systems available, the final list of systems reviewed included Register Now, Transition Zone, Fabian4, SI Entries and Eventor. These systems were chosen because they had been/are used for organising orienteering events in Australia or they have been specifically developed for orienteering events elsewhere.

Information about Register Now, Transition Zone and SI entries is readily available on their respective web sites and the information collated below is based on that information. These three systems are solely focussed on event registration with no linkage to or ability to accommodate a membership system.

The Request for Proposal document was set to the developers of Fabian4 and Eventor with subsequent discussions held via Skype and/or email. More detailed information was provided to these two vendors on the basis that they either incorporated a membership database or linked to an existing membership database.

Vendor review

An overview of each vendor is provided in the following sections.

Register Now

Register Now is an Australian company focussed on online registration and payment for a wide variety of events. The system is customisable and allows for the collection of additional information from the entrant. Becoming a member of a club is possible however this information is not validated when entering an event. Payment is accepted using Visa or Mastercard.

The entry form is hosted by Register Now but embedded in the customers web site. Registrant (entrant) information can be exported as a CSV along with payment summary information. Users do not have to be registered/authenticated on the web site to enter an event and this leaves it open to malicious use.

Transition Zone

Transition Zone is a popular online entry site for orienteering in Australia and has been used for several major carnivals – the most recent being the 2011 Australian Championship carnival. Like Register Now, the entry form is hosted on Transition Zone servers but embedded in the customers web site and once again this leaves it open to malicious entries.

They utilise SecurePay as their payment merchant and therefore accept payment by Visa and Mastercard (not certain about EFT). Entrant information can be provided in “any” format.

SI entries

SI entries is an online entry and membership system developed by SPORTident UK. It is a flexible system which accommodates a multitude of event types (including teams) and allows a user to enter another user. The charge for using ht system is 5% of the entry fee with the system using HSBC as the merchant and payment can be made in any currency (subject to exchange fees) using VISA or Mastercard. It does not accept EFT payments.

The web site is well structures and the process to enter an event is clear and simple. While it is possible to become a member of a club using the system, whether this can be used to alter the entry fee has not been fully tested in this review.

Fabian4

Fabian 4 has been developed and maintained by Adrian Moir and predominantly used in the UK. While it does not include a membership system, Fabian 4 gets a regular import of membership data from the British Orienteering Federation (BOF). In recent correspondence with Adrian he indicated that he has another enquiry to support membership and, if the VOA was to select Fabian 4, he'd be able to implement it by April 2012.

A full list of features are available from <http://www.fabian4.co.uk/features.aspx> which were augmented with functionality experienced when using the system (Adrian created a test event providing the opportunity to enter and then view the event from an administrators perspective) have been transposed into the table in Appendix 1.

Eventor

Eventor is being actively developed by the Swedish Orienteering Federation (SOF). It's origins are in the online entry system for the O'Ringen however it has expanded to accommodate any scale of orienteering event.

The Norwegian Orienteering Federation has recently entered into a Service Agreement (SA) with the SOF to use Eventor. Under the SA, SOF will host and maintain the system on a dedicated server. Any enhancements developed by SOF during that period are also included.

The current system functionality was discussed with Mats Troeng via Skype with subsequent discussions focussing on the ability to extend the system capabilities to meet the requirements specified by the VOA. The proposal put forward by the SOF would see an instance of the Eventor system co-hosted on the same server currently being used by the Norwegians, resulting in reduced hosting costs for both us and Norway. Any customisation required by the VOA would be included in Eventor for all existing/future users. The VOA would also benefit from development undertaken by SOF or Norway.

System functionality

The table in Appendix 1 summarises the functionality of the systems reviewed. This table has been compiled based on both physical assessments (ie using the system) and discussions with relevant developers where possible. (For the purpose of the discussion below “event” means both an event and a membership registration/renewal).

Of the systems reviewed all but one (Transition Zone) provides the organisation with the ability to create and administer events. With Transition Zone, all the event details need to be provided so they can create the event which has the benefit of not only minimising the need to learn a new system but also freeing up time for the event organiser.

As one would expect, the functionality of the various systems is similar however the design and process of entering an event varies considerably. Register Now, Transition Zone and Fabian 4 have a simple design and feel a little more “clunky” to operate. SI entries and Eventor on the other hand are visually appealing and provide more flexibility to the user.

The main concern with Transition Zone and Register Now is the ability of a user to register for an event without having to register (authenticate themselves). While this “simplifies” the entry process it does leave both systems open to malicious entries. SI entries and Fabian 4 require each user to register on the main site first and while this may be somewhat onerous, it does expedite the entry process as the vast majority of the required information is already entered.

Eventor (with some customisation) goes one step further by allowing users to authenticate using OAuth. This means a user can choose to login to the system using their Google, Facebook, Twitter etc account reducing the need for “yet another” password. In addition, Eventor also provides for different levels of authorisation meaning different users can have different responsibilities (ie create an event but not publish it) allowing for auditability (should it be required).

All but two of the systems have no linkage between club membership and entry. At this stage Eventor is the only system that includes a membership system that is fully integrated with the entry system. While Fabian4 currently includes membership information from the British Orienteering Federation (BOF), the ability to record other membership information is missing however the developer has indicated that there have been several requests for this functionality and he is looking at implementing it in the first half of 2012.

Reporting from each of the systems is limited, with Eventor providing the most comprehensive (and customisable) reports available. Both Fabian4 and Eventor have been developed by orienteers and therefore export entry information in a format which is compatible with current orienteering software. SI entries may also have this capability however it is not stated on their web site. Register Now and Transition Zone can provide entrant information in CSV which can then be imported into most orienteering software.

Eventor is the only system that accommodates results. Results are linked to individual competitors and they can be analysed over time.

System cost

The tables in Appendix 2 compare the costs associated with implementing and operating the reviewed systems. The numbers in the table (and discussed in the following sections) are based on the assumption that the average entry fee is \$5 per event, there are on average 10,000 entrants using the system each year and the systems have a shelf life of 5 years. A simple variance analysis is showing in the final section to show the changes under various fee/entrant scenarios.

Development costs

Development costs are one-off costs incurred to develop the system to the required specification. These only apply to Eventor as the other systems come “as is”.

While Eventor is operating in Sweden and Norway, the requirements the VOA has requested additional functionality/flexibility and these improvements will be included into the base system for future users. As shown in the table in Appendix 2, these costs have been estimated at \$22k (based on the exchange rate at the time of writing) on the assumption of approximately 120 hours of development time. A detailed quote will be requested should the system be selected as the preferred option.

Operational cost

Operational costs are the costs associated with the ongoing operation of the system and for the purpose of this report any processing/merchant fees incurred for using the particular system.

Register Now, Transition Zone, SI entries and Fabian 4 are existing publicly accessible systems and have a simple fee structure based on a percentage of the event entry fee. Under the modelled scenario the operational costs range from \$0.20 per entrant for Transition Zone up to \$1.57 per entrant for SI entries.

The VOA have been provided with 2 pricing structures for using the Eventor system, both of which include annual hosting costs of approximately \$2800. The first, Eventor (a), is based on a once off licence fee of \$7400 and then an ongoing annual fee of \$7400. Eventor (b) is based on a per entrant fee of \$0.50 with a minimum annual charge of \$4400. Under the modelled scenario option (b) is the most cost effective for the VOA however if entrant numbers were to increase option (a) is cheaper. Further discussion on this is undertaken in the variance section below.

In addition to the licencing/entry fees, merchant fees have been included. For the purpose of simplicity it has been assumed that half the payments are made by credit card (using eWay) and the other half are made through direct debit (using PoLI). For further information refer to the next section.

The overall total costs on a per entrant basis based on the modelled scenario range from \$0.20 for Transition Zone up to \$1.95 for Eventor (a).

Merchants

A merchant provides banking authentication services to 3rd parties. All but one of the systems requires a merchant as they are hosted services. Eventor would require the selection of a merchant to handle the payments. Most online merchants handle credit card

payments (Visa and Mastercard). The cost of their service varies depending on the volume of transactions. In addition, PoLI which provides the facility to do EFT payments direct from internet banking web site, was also included.

The table in Appendix 3 shows PoLI and the 2 credit card merchants – Google Checkout and eWay. It would be interesting to approach Westpac (the VOAs bank) to see if they could provide a competitive merchant service. As stated above, the costs vary depending on the volume and value of transactions and are included in the costs listed in Appendix 2.

Variance analysis

In order to better assess the various systems, various scenarios were tested as shown in

Appendix 4. The colour coding represents the costs with green indicating the lowest costs and red indicating the highest costs. It was assumed that the system had a life of 5 years (this affects the costs for Eventor).

As you would expect with the hosted systems (all but Eventor) the costs are relatively stable regardless of the scenario. Two pricing options have been provided by the developers of Eventor;

- a) Fixed pricing comprised of an initial licence of ~\$7400 plus an annual ongoing licences of ~\$7400, and
- b) A per entry fee of ~\$0.50 with minimum annual fee of ~\$4400.

Based on entry fees being \$10 per event option b) is cheaper if there are less than approximately 18,000 entrants per annum. Consequently, if the number of entrants is over 18,000 per annum option a) presents better value for money.

Recommendation

The information contained in this document provides a summary of 5 online entry (and in some cases integrated membership) systems which are currently used by orienteers. Two of the systems are not specifically targeted at the orienteering/navigation sports (Register Now and Transition Zone).

As with any computer system there are “must haves” and “nice to haves” and separating the two is sometimes difficult. Given the funding for the project was based on the VOA investing in an online entry and membership system, these are the must haves.

All of the reviewed systems can accommodate online entries and online payments (credit/debit card only) however **Eventor is the only system reviewed which includes (an integrated) membership system**. Fabian4 is looking at developing membership functionality in the future but whether it will be flexible enough to accommodate the requirements of the VOA is not yet known.

It is the authors opinion that while the costs of implementation are high, Eventor will deliver a vastly superior solution. For the purpose of the financial analysis, the full development costs were included it would however be quite feasible that the development be staged and therefore the costs be distributed over coming months/years. It must also be noted that the hours quoted by Eventor are only (worst case scenario) estimates and therefore the development costs may be considerably lower.

There are some additional elements which need to be considered, including;

- How much is the VOA (and ultimately competitors) willing to pay for this service? Fees and charges are a perennial point of conjecture within the Australian orienteering fraternity. The discussion/debate/angst surrounding levies is a case in point and the ongoing costs of offering/maintaining an online entry/membership system will need to be borne by the entrants. The discussion on costs can be broken into two parts, the first being the membership part of the system and the second being the online entry portion of the system. It is the opinion of the author that the (proportional) costs associated with the membership should be borne by the VOA and ultimately collected through levies while the entry costs should be directly charged to the organising club and therefore

included in the event fee. Depending on the system patronage, this should result in additional entrant costs less than \$1.50 per event (refer to Appendix 4).

The VOA board needs to make a decision on how the costs are going to be apportioned and whether they are apportioned directly to clubs or through levies.

- What level of involvement/expertise is required to maintain the system and who will be responsible?

This is a serious consideration given the limited human resource available in an organisation comprised of volunteers. Three of the four systems (Register Now, Transition Zone and Fabian4) are all administered by the web site owner. The responsibility of creating and maintaining information in SI entries and Eventor lies with the users and consequently additional training would be required. In either case, end users (entrants) would need some level of training/familiarisation in order to feel comfortable with using the system.

As part of the system implementation process the VOA board needs to give due consideration to the selection and training of not only system administrators but also end users of the system.

- What is the uptake of the system going to be?

This is the great unknown! There have been increasing calls for a “better” online entry system for the last couple of years fuelled by the (sometimes perceived) lack of functionality available in the “unofficial” entry system (with the predominant sticking point being the desire for accepting online payments). And even though these issues have existed, over 50% of entries are done online for State Series events (~800 entrants). While this is a reasonable number, in order to make Eventor viable there needs to be a 10-20 fold increase in numbers using the system and this will only occur if the system is used at local event level and, more importantly, Street-O. Given the ongoing debate regarding the need to “keep costs low”, it would appear the implementation of an online entry system would be counterintuitive at this stage.

The VOA needs to work with local clubs and the Street-O fraternity to implement strategies for increasing the usage of the system for low cost, high patronage events.

Appendix 1

Functionality	Register Now	Transition Zone	SI entries	Fabian4	Eventor
General					
Web-based and compliant to modern web standards	●	●	●	●	●
OAuth/OpenID authentication	-	-	-	-	○
Granular authorisation	-	-	-	-	○
Auditable transactions	-	-	-	-	●
System administration					
Administer users	-	-	-	○ ⁱ	●
Ability to create an event or set of events (e.g. a carnival) and all associated information (ie classes, categories, products/services available etc)	●	○ ⁱⁱ	●	●	●
Ability to copy an existing event – ie use an existing event as a template for another	-	-	-	?	○
Ability to delete/or ignore unconfirmed entries	-	-	-	●	●
Ability to OPEN/CLOSE entries	●	-	●	●	●
Ability to impose a charge for LATE ENTRY (ie just up the price at initial close date)	?	?	●	?	○
Ability to limit total quantity of items/places available (eg Social functions)	●	●	●	●	●
Event entry					
Authenticated users can enter an event	- ⁱⁱⁱ	- ⁱⁱⁱ	●	● ^{iv}	●
Entry fee is determined by membership	-	-	?	○ ^{iv}	○
Supports postal entries	●	-	●	●	●
Entry can be amended	●	○	●	○ ^v	●
Membership					
Authenticated users can become a member	-	-	●	-	●
Unauthenticated users can register	○	○	●	-	●
Entry by membership secretary	-	-	●	-	●
Payments					
System calculates/displays total cost entry etc	●	●	●	●	●
Entry is not confirmed until payment is received	●	●	●	●	●

The system will support electronic payment	●	●	●	●	●
The system will display advice on payment options available	●	●	●	●	●
System to send confirmation email with entry details	●	●	●	●	●
Reporting					
Entry lists	○	○ ^{vi}	●	●	●
Electronic version (PDF) of each entry	-	-	-	-	○
Membership summaries by club	-	-	-	-	●
Entrant summaries	○	○ ^{vi}	●	●	●
Service/product/merchandise summary	○	○	●	○ ^{vii}	●
Export					
Export event information	○	○	- ^{viii}	● ^{ix}	●
Event results					
Upload	-	-	-	-	●
Slicing	-	-	-	-	●
Reporting of results	-	-	-	-	●
Result visualisation	-	-	-	-	○
Ranking & League standings	-	-	-	-	●

Appendix 2

Entry fee	\$5.00
Entries per annum	2500
System life	5

Development costs

	System						
	Register Now	Transition Zone	SI entries	Fabian 4	Eventor (a)	Eventor (b)	NOTES
Development							
\$/hr					\$180.00	\$180.00	
est hrs					100	100	
Total					\$18,000.00	\$18,000.00	
Merchant integration							
\$/hr					\$180.00	\$180.00	
est hrs					20	20	<i>Assumes integrating 2 merchants</i>
Total					\$3,600.00	\$3,600.00	
TOTAL	\$0.00	\$0.00	\$0.00	\$0.00	\$21,600.00	\$21,600.00	

Operational costs

	System					
	Register Now	Transition Zone	SI entries	Fabian 4	Eventor (a)	Eventor (b)
Hosting					\$2,760.00	\$2,760.00
Licence fee						
Initial licence					\$7,400.00	
Annual licence					\$7,400.00	
Entry fee						

Fee per entry	\$1.10					\$0.50
Minimum fee			\$1.54			\$4,400.00
Processing fee	2.2%	4.0%	5.0%	7.2%		
\$/entrant	\$0.11	\$0.20	\$1.54	\$0.36		
Exchange fee			2%	2%		
\$/entrant			\$0.03	\$0.01		
Merchant Fees *					\$0.41	\$0.41
Total						
\$/entrant	\$1.21	\$0.20	\$1.57	\$0.37	\$5.06	\$3.27

TZ-excludes setup costs for "complex" events of \$150-350

TOTAL

	System					
	Register Now	Transition Zone	SI entries	Fabian 4	Eventor (a)	Eventor (b)
Development					\$1.73	\$1.73
Operation	\$1.21	\$0.20	\$1.57	\$0.37	\$5.06	\$3.27
TOTAL	\$1.21	\$0.20	\$1.57	\$0.37	\$6.79	\$5.00

Appendix 3

Merchants

	System			
	PoLI	Google Checkout	eWay	Westpac
Setup	\$0.00	\$0.00	\$350.00	
Base fee	\$0.05	\$0.30	\$0.50	
Premium	2.50%	2.90%	0%	
Example				
Total cost	\$3,000.00	\$5,900.00	\$5,350.00	
Cost per entrant	\$0.30	\$0.59	\$0.54	
% of entry	3.0%	5.9%	5.4%	

Appendix 4

	Entry fee	Entries	Total \$	Register Now	Transition Zone	SI entries	Fabian 4	Eventor (a)	Eventor (b)
Scenario 1	5	5000	\$25,000.00	\$1.21	\$0.20	\$1.57	\$0.37	\$3.56	\$2.67
Scenario 2	5	10000	\$50,000.00	\$1.21	\$0.20	\$1.57	\$0.37	\$1.95	\$1.56
Scenario 3	10	5000	\$50,000.00	\$1.32	\$0.40	\$1.57	\$0.73	\$3.63	\$2.73
Scenario 4	10	10000	\$100,000.00	\$1.32	\$0.40	\$1.57	\$0.73	\$2.01	\$1.63
Scenario 5	10	20000	\$200,000.00	\$1.32	\$0.40	\$1.57	\$0.73	\$1.21	\$1.26
Scenario 6	10	30000	\$300,000.00	\$1.32	\$0.40	\$1.57	\$0.73	\$0.94	\$1.14

Appendix 5

There are 3 levels of membership in Victoria;

- Casual member – A casual member is any competitor who is not a member of a club or VOA. If a competitor is a member of Club A but competes in an event by Club B they are classed as a casual member of Club B.
- Club member – A competitor who has paid their membership for a specific club or clubs. A competitor can be a paid member of 1 or more clubs.
- VOA member – A competitor who has paid their membership to VOA. It is possible for a competitor to be a member of the VOA and NOT a club member. If a competitor enters a State Series (VOA) event and is not a member of the VOA then they are classed as a casual member.

Entry fees to some events are different depending on the membership of the entrant. The ability to distinguish the membership of the entrant and therefore determine the appropriate entry fee is essential.

Endnotes

- ⁱ Administer entries, there is no other authentication in Fabian 4
- ⁱⁱ Events are created and administered by Transition Zone staff
- ⁱⁱⁱ Users don't have to be authenticated to enter
- ^{iv} This will be implemented if VOA select the system
- ^v Only by administrator
- ^{vi} This could be created from file provided by Transition Zone – not automatic
- ^{vii} I assume this is possible, the test event did not include any merchandise
- ^{viii} There is no mention of export on https://www.sientries.co.uk/new_event.php
- ^{ix} Refer to <http://www.fabian4.co.uk/support/ImportExport.aspx> for further information