Let try the “BRANDA” combined event competition

(Preamble)

We have to admit that there is not a combined event, which would satisfy each and every sports veteran. Perhaps its existence is even impossible? Let’s look at throwers pentathlon – there are two hammer throwing events, therefore the hammer throwers are favoured, like in shockorama discus throwers are in front of others. The Edwin Kollmar’s decathlon seems to be too cumbersome.

And although, it is obvious, that Edvin Kollmar‘s decathlon is the most universal combined event, because, firstly, it unites classic and non-classic throwing events the setting of the events everybody equal opportunities to win – from shot put sportsmen to disk, spear or hammer throwers. ,r to win this competition has to be strong, fast, coordinated and tough. It can even be said, that the winner of Edwin Kollmar’s decathlon can be fairly called the king of the competition. But this decathlon itself is still really overloaded. To arrange competition properly 30 sports implements (14 out of them don’t have a standard), 6 sectors and special tables for results calculations are needed. In addition, competition is very long and tiring.

Shotorama, shockorama, speerorama are becoming more and more attractive to sportsmen and due to its popularity it can be called classic among the class of non-classic combined events. Sportsman who wins triathlon (shotorama + shockorama + speerorama) can be fairly called the prince of the competition. But then again, this triathlon is too long and too tiring among the other disadvantages. For these competitions to be optimum, the whole sports event take place at least for a few days, which in nowadays seems to be not the most popular choice for the organizers and participants of the sports events. For example even Polish championship is organized for only a one day. As a result we propose new combined event.

Its design on the grounds of Lithuanian combined events, which do not lose its popularity for over 20 years.

Several principals were taken into account:

1) Only tools of the optimal weight for sports veterans in their fifties are used.
2) Minimized requirements for competition set up: one sector and field of 50m length and 25m width are needed.
3) For results calculation the simple algorithm related to event coefficients (not to the point tables) are used.
4) All the actions (throwing) are performed from the spot (without pre-jump, without pre-turn, without run).
5) The winners are determined fairly according to the age coefficients.

These principals were adopted for popular LSW combined events: shotorama, shockorama and speerorama. This is how the “Branda” combined event was born.

The main idea here is to use only one shot for each event of the competition, because statistics shows, that if, for example, the sportsman the best results in shotorama, then he at the same level using all other shots of five different weights. As a result we argue that it is absolutely enough to use only one weight for shots in all three parts of competition – shotorama, shockorama and speerorama.

For all three events of “Branda” combined event first weightfor implements was chosen. As a result the weight of the shot for shot putters is 5 kg, the weight of shot for discus throwers is 3 kg and the weight of shot for javelin throwers is 2 kg in men’s category. In women’s category weight of shots are 3 kg, 2 kg and 1,5 kg accordingly. The final result depends on event coefficient. For example, the shot put event coefficient is 1,8, like shot-discus event coefficient is 1. It means, that if sportsman’s shot put result is equal to 12,00 m and shot-discus throw result is equal to 21,60 m, he is equally strong in both events.

As mentioned above event coefficients were determined by performing statistical analysis of the results of the most important/popular competitions (in which shotorama, shockorama and speerorama were incuded). Below we provide the list of these competitions:

1) LSW & WTC World Special Throw’s Championships (Tata 2007, 2009, 2011);
2) LSW & WTC Europe Special Throw’s Championships (Wels 2004, Juterbog 2006, 2008, 2010);
3) Polish Special Throw’s Championships (Sopot 2010, 2011);
4) Competitions in Lithuania (Druskininkai 2009, Vilnius 2011, Juodagalviai 2011);
5) Other competitions (Potsdam 2010, Neckargartach 2011, Bad Lauterberg 2011).

Age coefficients were determined according to the results of the most popular combined event in Lithuania - Country hexathlon. The competition of this combined event place for already 16 years; therefore a lot of statistical data is available. Country hexathlon consists of such events: shot put without pre-jump, discus throw without pre-turn, javelin throw without run (from the spot), hammer throw without pre-turns, shot throw from below with two hands (throw directed forward), shot throw over the head with two hands (throw directed backwards). When the two last events are executed, overstepping is permitted after the throw. First four events of this hexathlon are dedicated for athletics throwers, the last two events – for the strong sports veterans. Due to the strong logics used to determine these coefficients, they are universal.

After the establishment of “Branda” triathlon regulations we understood that hammer throwers were not taken into account, therefore the IGMAND hammer throwing event was included into combined event (8 kg men, 5 kg women).

“Branda” combined event is universal and is not long in time. So, it is good combined event for one day competition.

Site “Branda” undertakes to administer the statistics of combined event proposed.

Dr. Kęstutis Vislavičius

"BRANDA" COMBINED EVENT REGULATION

1. EVENTS

1.1. Shot put without pre-jump.
1.2. Shot throw like discus without pre-turn.
1.3. Shot throw like javelin without run.
1.4. IGMANDI hammer throw.

Note. No other restrictions

2. MASS OF IMPLEMENTS AND EVENTS COEFFICIENTS

Event	Men		Women	
	Mass of the implement	Event coefficient	Mass of the implement	Event coefficient
1. Shot put	5 kg	1,8	3 kg	1,8
2. Shot throw like discus	3 kg	1,0	2 kg	1,0
3. Shot throw like javelin	2 kg	1,0	1,5 kg	1,1
4. IGMANDI hammer throw	8 kg	1,0	5 kg	0,9

3. CONDITIONS OF THE COMPETITION

3.1. The main requirement for a sector is the following: the sector must be convenient for the athletes to throw. It may be a shot put or a disk throw sector, a folding platform or a sector marked on the asphalt pavement or on the other hard and plane surface. The boundary in the field is assumed to be like a discus throw (the angle is equal to 40^0).

3.2. All competitors have the right to one test attempt in each event.

3.3. Three register throws must be executed one at a time. By way of exception the head referee can allow the competitors to execute all three register throws at a time.

4. ESTABLISHMENT OF WINNERS

4.1. The winner is the competitor, whose sum of evaluated results of four events (in metres) is the largest. The evaluated result of each event is equal to the achieved result multiplied by an event coefficient and multiplied by a yearly age coefficient. If the sum of two or more competitors' results is the same, the priority is given to senior competitors.

4.2. The organiser of the competition can establish the winner in each classic "five years" age group (not in common register). In this way the achieved result must be multiplied only by an event coefficient.

4.4. In a team register the winner and prize-winners are established according to the regulations of the competition organiser.

5. YEARLY AGES COEFFICIENTS

5.1. Yearly age coefficients are determined using the exponential function.

$$k = e^{(-0,068)+0,0000138\,m^{2,5}},$$

where m – age of the athlete (in years) at the time of sport event (it is calculated by deducting athlete's birth day from the first day of the competition)

5.2. Yearly age coefficients are presented in the table. Their meanings are rounded to four significant numbers. These rounded meanings should be used on computer programs; otherwise the results calculated using the formula given and results presented in the table will slightly differ.

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Yearly age coefficients

YAC	Age
1.000	30
1.006	31
1.012	32
1.018	33
1.025	34
1.033	35
1.040	36
1.048	37
1.056	38
1.065	39
1.074	40
1.084	41
1.094	42
1.104	43
1.115	44
1.127	45
1.139	46
1.151	47
1.164	48
1.178	49
1.192	50
1.207	51
1.223	52
1.239	53
1.256	54
1.273	55
1.292	56
1.311	57
1.330	58
1.351	59
1.373	60
1.395	61
1.419	62
1.443	63
1.468	64
1.495	65
1.523	66
1.551	67
1.581	68
1.612	69
1.645	70
1.679	71
1.714	72
1.751	73
1.790	74
1.830	75
1.872	76
1.915	77
1.961	78
2.009	79
2.058	80
2.110	81
2.165	82
2.221	83
2.281	84
2.343	85
2.407	86
2.475	87
2.546	88
2.620	89
2.698	90