Q & A

?   Q. Quite often rowers and coaches ask: What are the ratios of the boat speed in various boat types? Evaluation of the performance in the events of a rowing program is important for selection of the squad and combination of the crews.

✓ A: The common practice is developing "prognostic times" or "Gold Standards" for every boat type. The performance of each crew can be evaluated as a percentage of the "prognostic speed".

The most obvious solution is using the World records (www.worldrowing.com) as "prognostics" However, the best times can be achieved only with the combination of very fast weather conditions and very good athletes in perfect shape, which is very rare. These single data points do not necessarily correlate with the whole population of rowers and distribution of the speed in various boat types can be skewed.

If we need a larger sample, we can use an average time of the winners over the years. The second row in the Table 1 represents filtered average times of the Worlds' and Olympics' champions between 1993-2004 (the best and worst times rejected).

Table 1. "Prognostic" times in the boat types: 1st row is the World best times, 2nd row is the winners' average of WCh and OG, 3rd row is the average trend for 2008, 4th row is the best case trend for 2008, 5th row is Australian "prognostic times"

W1x	M1x	W2-	M2-	W2x	M2x	M4-
7:07.7	6:36.3	6:53.8	6:14.3	6:38.8	6:04.4	5:41.3
7:22.5	6:45.2	7:05.3	6:24.6	6:51.2	6:14.3	5:54.4
7:13.2	6:38.3	6:58.8	6:19.4	6:43.3	6:09.4	5:44.1
7:09.8	6:31.5	6:51.7	6:15.9	6:40.7	6:03.3	5:38.8
7:08.0	6:31.0	6:51.0	6:13.0	6:37.0	6:00.0	5:41.0

| LW2x	LM2x	LM4-	W4x	M4x	W8+	M8+
6:49.9	6:10.8	5:45.6	6:10.8	5:37.7	5:56.6	5:19.9
7:04.5	6:23.0	6:02.5	6:25.1	5:51.6	6:17.6	5:38.6
6:56.6	6:15.2	5:55.5	6:20.7	5:47.8	6:10.5	5:33.6
6:53.3	6:09.3	5:46.6	6:14.6	5:39.4	6:02.6	5:25.9
6:43.0	6:06.0	5:45.0	6:05.0	5:33.0	5:53.0	5:19.0

Another approach is analysis of the trends in the boat speeds over the years. We already published them in RBN 9/2002. Since that time we have two more points on the graphs, but the trends are still quite unreliable owing to very high variation of the boat speed caused by various weather conditions. The data has to be filtered by means of rejecting certain number of slowest times. We have derived two values of the prognostic speed for 2008: the best case scenario and average of all linear trends based on 4-12 data points. The slope of the trend lines in the Table 2 (below) reflects the growth of the boat speed per year:

W1x	M1x	W2-	M2-	W2x	M2x	M4-
0.52%	0.55%	0.42%	0.25%	0.50%	0.26%	1.01%

LW2x	LM2x	LM4-	W4x	M4x	W8+	M8+
0.35%	0.50%	0.32%	-0.20%	-0.42%	-0.06%	-0.25%

Moreover, coaches develop their own "Gold standards" using their knowledge and expertise. Quite often they keep the methods "in house" and the only references were found on the Australian site www.rowingqld.asn.au/Documents/Prognostics, and the same data on the Irish site http://208.56.168.207.

If we take the winners' average speed as 100%, then the following chart reflects the speed of various boats in each "prognostic" system.
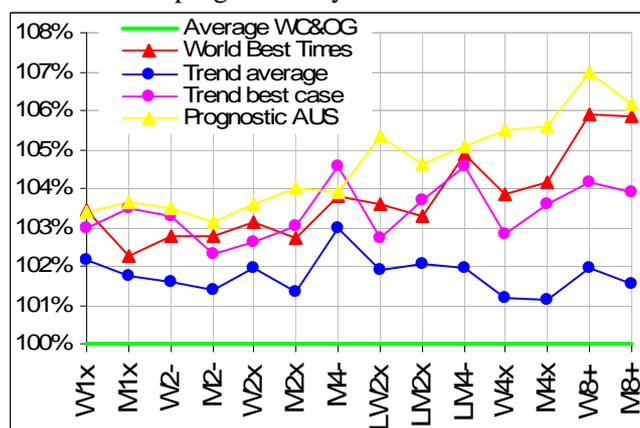

Australian standards look very close to the best case trend in small boats, and in LM4-. All "prognostics", except average trend, show significantly higher speeds in the bigger boats. This can be explained by less competition in big boats, which increases the gap between average winners' times and the best times.

What "prognostic times" do you use in your work? We would greatly appreciate your feedback with regards to this important matter.

News

The first stage of World Cup-2005 was conducted with great success on Dorney Lake near Eton, UK. The chart below represents evaluation of the winners' speed using different "prognostic" models:
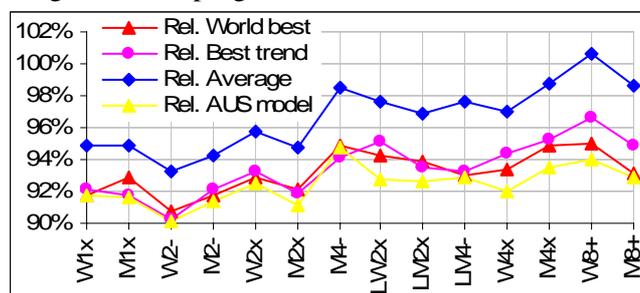
We can observe that the small boats were relatively slower, which can be related to a very strong side wind during the finals of the regatta.

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