

Striking challenge competition

One of the enhancements introduced in the September 2014 release of Abel is a suite of improved striking analysis tools. At Isle of Dogs we have sensors on all eight bells, so we can record a band ringing a touch on any number of bells (up to 8), and play the sound back afterwards, with a graphic display on the large screen at the same time. We can also import the file into 'Hawkear' the CAS Striking Analysis software used by the National 12 Bell Striking Competition, and mark the faults.

We were keen to get more visitors to come to our Isle of Dogs practice, so throughout 2015 we challenged any local Sunday service band in either the Lewisham District of the Kent Association; the Northern District of the Surrey Association, The North and East District of the Middlesex CA & London DG and the South West District of the Essex Association to enter a new and innovative competition. The prize was a cup and a bottle of Champagne. The rules were quite simple:

- It was open to any regular Sunday service band in the four districts (no 'manufactured' bands). The competition was on six bells, with at least 120 rows of rounds, call changes, kaleidoscope or any method, plus at least 10 whole pulls of rounds before and after.
- The band must come one Wednesday evening to our practice at Isle of Dogs between 8.00 and 9.30pm and will be given two chances to ring a test piece.
- One band a week, so bands need to book beforehand. Results will be published on a website, so that we could build up a 'league' table.
- Bands can come as often as they like, so even if they slipped down the league, they were able to try again in order to regain 1st place.
- The band with the lowest number of faults/highest percentage score by Wednesday before Christmas will receive the bottle of Champagne, and the cup to hold for a year.

Three teams came along and practiced with us, which was not as many as we were hoping for, but we will be repeating the competition in 2016. The results of the 2015 competition were:

Tower	Faults (120 Changes)	%
Kingston 1	28	96%
Kingston 2	41	94%
Erith 1	109	83%
Erith 2	123	81%
Bermondsey/Rotherhithe 2	127	80%
Bermondsey/Rotherhithe 1	141	78%

We also offered bands the opportunity to come and practice on their own. In May the North & East District of the Middlesex CA & London DG held their annual six bell competition at Isle of Dogs, marked by Hawkear. The results were:

Position	Tower	Faults (240 Changes)	%
1 st	Aldgate A	75	92%
2 nd	St Vedast, Foster Lane A	82	91%
3 rd	Stepney	84	91%
4 th	Islington (Prebend St.)	155	84%
5 th	St Vedast, Foster Lane B	178	81%
6 th	Hackney	302	67%
7 th	Isle of Dogs	371	61%
8 th	Aldgate B	438	55%

Average error and standard deviation

We sent each team an analysis of the results, including a printout of their test piece and a .stk file so that they could play it back in Abel. With the Hawkear CAS analysis software you can analyse each bell and establish on average over the duration of the touch how much that bell is either late or early at each stroke. We did not find that any ringers were always noticeably quick or slow at a particular stroke, although leaving an open handstroke lead was a problem for some. The problem was more one of variability.

In statistics 'Standard Deviation' is used as a measure of variability. The ringers in the best bands had a standard deviation of less than 40 milliseconds. Quite a few ringers in the novice section had standard deviations of over 100 milliseconds, which is about a third of the gap between each bell. Having watched the ringers practice, we suspect that the ringers who had these high standard deviations were struggling more with their bell-handling, rather than having difficulty in hearing their bell, so that is probably the area that ought to be worked on first. It also tends to suggest that coaching of individuals to help them measure and improve their consistency is an area worth future development.

However we achieved our objective in that the competitions helped bring other ringers to our tower, provoked a lot of useful discussion about striking, and helped improve many people's understanding of striking. We were also particularly proud that despite being relative novices our new ringers at Isle of Dogs were keen to join in the District competition, and did not come last!

1st - Team 4 Aldgate A

Bell	Ave milliseconds late			Standard deviation	
	Whole row	Hand	Back	Hand	Back
1	12	-13	38	51	38
2	8	1	14	44	31
3	-19	-42	3	39	35
4	16	12	20	31	27
5	-10	-32	10	46	44
6	-6	-34	20	34	28

5th - Team 8 St Vedast B

Bell	Ave milliseconds late		Standard deviation	
	Hand	Back	Hand	Back
1	45	6	79	83
2	27	32	85	78
3	50	-12	53	58
4	9	19	68	82
5	17	0	44	42
6	-45	-11	63	49

8th - Team 2 Aldgate B

Bell	Ave milliseconds late			Standard deviation	
	Whole row	Hand	Back	Hand	Back
1	28	28	27	127	145
2	47	57	33	119	113
3	43	50	36	102	111
4	-6	1	13	110	104
5	-2	-9	4	103	112
6	-110	-189	-33	105	98

