## Unsquare Dance

The instructions can be shown to occur in the following order:

1. Evens septuplex. Odds triplex. On each side, the partner whose name comes earlier alphabetically should write the 103rd letter of their name (wrapping around from the last letter to the first) on the ground.
2. $\varepsilon$ corner swap. E partner swap. $\varepsilon$ corner swap. Circle left 3 . Take a snapshot.
3. $\beta$ and $\varepsilon$ wedge swap. All partner swap. On each side, the partners together should take the vowel that comes last alphabetically in either of their names and write it on the ground.
4. $\alpha$ wedge swap. All corner swap. Take a snapshot.
5. $\gamma$ and $\varepsilon$ wedge swap. All triplex. On each side, each of the evens should write the $n$th letter of their corner's name on the ground, where $n$ is the alphanumeric value ( $\mathrm{A}=1, \mathrm{~B}=2$, etc.) of the side that their partner started on.

To obtain this order, it helps to work backwards from the snapshots using the instructions that end with a snapshot, and forward from the start and each snapshot using the other instructions, and see which pairs give the same intermediate position.

At the end of the dance, the following letters are written on each side, in chronological order:
A. B, I, G
B. $\mathrm{R}, \mathrm{A}, \mathrm{M}$
C. $\mathrm{S}, \mathrm{I}, \mathrm{N}$
D. C, $\mathrm{O}, \mathrm{M}$
E. $\mathrm{M}, \mathrm{O}, \mathrm{N}$

These letters, taken in this order, spell BIGRAMS IN COMMON. In the final arrangement, the two dancers on each side share a single two-letter string in both of their names: IM (Karim and Simone), PR (April and Pranav), ES (Miles and Esteban), AR (Martha and Karen), and IO (Violet and Ignacio), spelling the answer, IMPRESARIO.

