CLAIMS

1. A computer-implemented method, including:

accessing a set of sequencing images, wherein sequencing images in the set of sequencing images are arranged in a first order;

reordering the sequencing images in a reordered set of the sequencing images, wherein the sequencing images in the reordered set of the sequencing images are arranged in a second order, and wherein the first order is different than the second order; and

processing the reordered set of the sequencing images to generate at least one base call prediction.

2. The computer-implemented method of claim 1, wherein each sequencing image from the sequencing images are arranged at one of the following positions: a center position, one or more right flanking positions, or one or more left flanking positions.

3. The computer-implemented method of claim 2, wherein a particular sequencing image of the sequencing images is kept fixed at the center position between the first order and the second order.

4. The computer-implemented method of claim 2, wherein at least some of the sequencing images at the right flanking positions and the left flanking positions are permutated between the first order and the second order.

5. The computer-implemented method of claim 2, wherein at least some of the sequencing images at the right flanking positions and the left flanking positions are kept fixed between the first order and the second order.

6. The computer-implemented method of claim 1, wherein respective images of the sequencing images are generated for respective sequencing cycles of a sequencing run in the first order.

7. The computer-implemented method of claim 1, wherein respective images of the sequencing images are respective index images generated for respective index sequencing cycles of a sequencing run in the first order.

8. The computer-implemented method of claim 1, further including:

selecting a plurality of subsets of N sequencing images from a set of M sequencing images, wherein respective subsets in the plurality of subsets arrange the N sequencing images in respective sequences of the N sequencing images; and

wherein $M > N$.

9. The computer-implemented method of claim 8, wherein:

the respective sequences have different combinations of the N sequencing images; and

the combinations are one of combinations with either replacement or combinations without replacement.

10. The computer-implemented method of claim 8, wherein:

the respective sequences have different permutations of the N sequencing images; and

the permutations are one of permutations with repetition or permutations without repetition.

11. The computer-implemented method of claim 8, wherein the respective sequences arrange the N sequencing images in accordance with one of: consecutive sequencing cycles, non-consecutive sequencing cycles, or a combination of consecutive sequencing cycles and non-consecutive sequencing cycles.

12. The computer-implemented method of claim 8, wherein the N varies between the respective sequences.

13. The computer-implemented method of claim 8, wherein the respective sequences have overlapping sequencing images.

14. The computer-implemented method of claim 8, wherein the M sequencing images are generated for one of: consecutive sequencing cycles, non-consecutive sequencing cycles, or a combination of consecutive sequencing cycles and non-consecutive sequencing cycles.

15. A system, comprising:

at least one processor; and

a non-transitory computer readable medium comprising instructions that, when executed by the at least one processor, cause the system to:

access a set of sequencing images, wherein sequencing images in the set of sequencing images are arranged in a first order;

reorder the sequencing images in a reordered set of the sequencing images, wherein the sequencing images in the reordered set of the sequencing images are arranged in a second order, and wherein the first order is different than the second order; and

process the reordered set of the sequencing images to generate at least one base call prediction.

16. The system of claim 15, wherein each sequencing image from the sequencing images are arranged at one of the following positions: a center position, one or more right flanking positions, or one or more left flanking positions.

17. The system of claim 16, wherein:

at least some of the sequencing images at the right flanking positions and the left flanking positions are permutated between the first order and the second order; or

at least some of the sequencing images at the right flanking positions and the left flanking positions are kept fixed between the first order and the second order.

18. A non-transitory computer readable medium storing instructions that, when executed by at least a processor, cause a computing device to perform actions comprising:

access a set of sequencing images, wherein sequencing images in the set of sequencing images are arranged in a first order;

reorder the sequencing images in a reordered set of the sequencing images, wherein the sequencing images in the reordered set of the sequencing images are arranged in a second order, and wherein the first order is different than the second order; and

process the reordered set of the sequencing images to generate at least one base call prediction.

19. The non-transitory computer readable medium of claim 18, further comprising instructions that, when executed by the at least one processor, cause the computing device to further perform the actions comprising selecting a plurality of subsets of N sequencing images from a set of M sequencing images, wherein respective subsets in the plurality of subsets arrange the N sequencing images in respective sequences of the N sequencing images, and wherein M > N.

20. The non-transitory computer readable medium of claim 19, wherein the respective sequences arrange the N sequencing images in accordance with one of: consecutive sequencing cycles, non-consecutive sequencing cycles, or a combination of consecutive sequencing cycles and non-consecutive sequencing cycles.