Intermediate Models

Three-headed Crane
(Theme: Technical folding; Preparation)

1. Petal-fold
2. Unfold completely.
3. Collapse using existing creases.
4. Inside reverse-fold.
5. Insute reverse-fold inside.
6. Inside reverse-fold.
7. Repeat steps 14-17.
8. Inside reverse-fold while folding the model in half.

Step 14 can be seen as a prepared square, with three points on one corner.
Basics of technical folding: “Molecule”

I have said that the length of a flap corresponds to the radius of the circle in technical folding. I also introduced circles inscribed in a triangle in Orizuru Transformation in Fundamental Models. Though it may be confusing, these two types of circle are different. They intersect with each other at a right angle, as shown on the right.

From a different point of view, the radius of the inscribed circle can be seen as the length of obtuse “flap,” or the “width” of the flap in the original orientation.

An area with a set of related creases, such as in the “rabbit ear fold of isosceles right triangle” on the right, is sometimes called molecule, term created by Toshiyuki Meguro who was inspired by my notion of atom, which is an area without creases, such as the triangles shown in Wild Boar.

Origami molecules can be polymerized just as in Chemistry. A unit molecule is called monomer, and a compound of small number (2-100) of monomers is called oligomer. “Oligo-,” as in oligosaccharide, means “a few.” Plastics is compound of more molecules and called polymer, as “poly-” means “many.”

If a rabbit ear fold were a monomer, a Bird base would be an oligomer because it consists of four monomers. Why don’t we call it oligami? Then, a super-complex model, such as Ryuujin or Eastern Dragon designed by Satoshi Kamiya with all its scales, would be called a polygami. Even though it consists of so many molecules, the model is still a developable combination of developable units. By the way, be careful to spell this pun correctly, as “polygamy” means plural marriage.