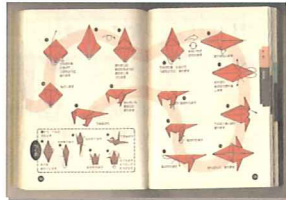


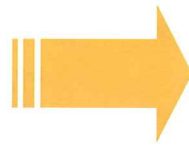
# Origami World

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## Understanding Origami Drill Book



A page image of origami drill book

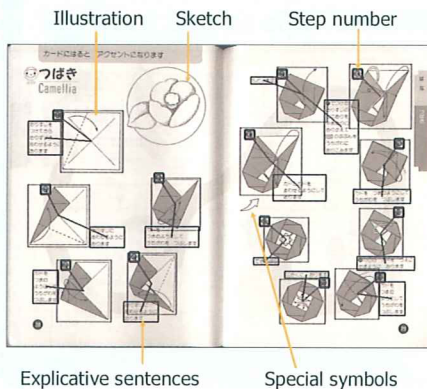


3-D animation

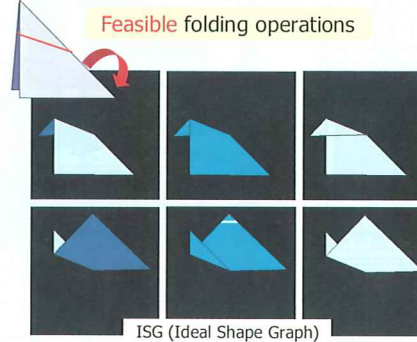
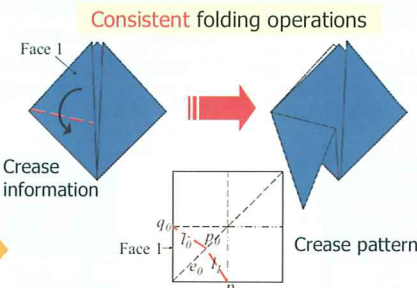
Improvement of convenience and user-friendliness in origami education

### Extraction of folding elements

1. Different elements are detected and classified.
2. The related component elements are grouped into clusters based on a Voronoi expression schema and some heuristics.
3. A contiguous network is constructed based on a Delaunay diagram.
4. Crease information which includes the positions and directions of folding operations is obtained.

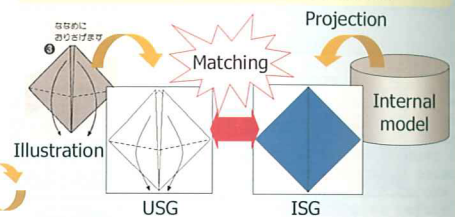


### Calculating of folding operations



### Recognition of folding process

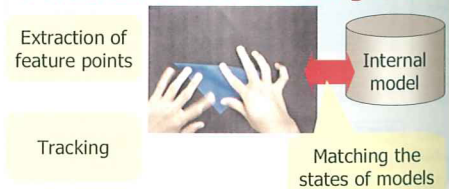
The most likely folding operation is found out from the feasible candidates.



A solution to the combinatorial optimization problem that finds out feature points of USG corresponding to the points of ISG

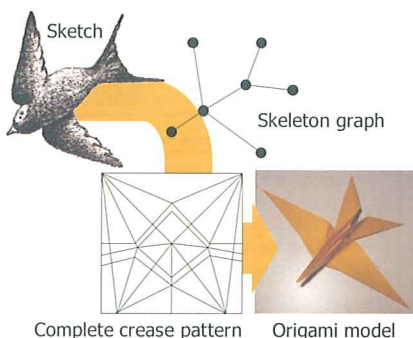
→ Apply SA or GA

### Detection of user's folding state

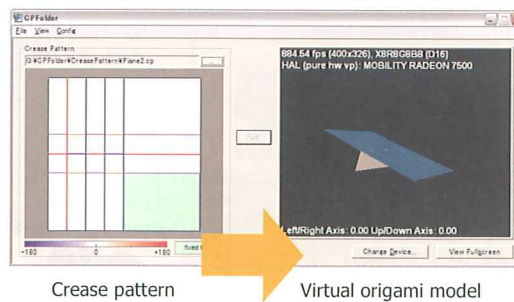


## Support for Origami Design

### Automatic design from sketches



### Construction of virtual models from fold-able crease patterns



Origami design/creation is facilitated.

### Stepwise manipulation based on crease information

Specify the position of a crease

