Problem: The problem of Kyogi 2009 is a mini game. A square map of MxN cells, each has a color, is given to Kyogy teams. Teams rotate squares of even length size inside the map by 90, 180 or 270 degrees in order to form color clusters.

Algorithms: Rotating squares in order to form color clusters in the Kyogi contest 2009 is a hard problem. It is unlikely that there exists an exact and fast algorithm to solve the problem completely. We approach the problem by heuristic algorithms. Particularly, we apply the Hill climbing algorithm to drive the current map closer and closer to a perfect solution. Experiments show that our algorithm works well on small tests. However, it might not seek the perfect solution for lager tests. In these cases, our experience will be incorporated into the rotating process.

Programming language: Algorithms are implemented using C++ and deployed in Windows platform.