

Blackboard

Context

An immature domain in which no closed approach to a solution is known or feasible.

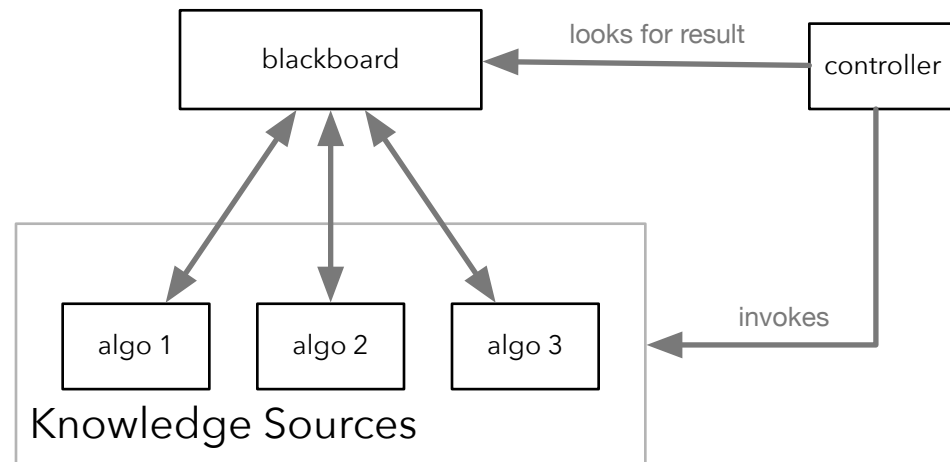
Solution

Independent programs cooperate indirectly by taking data from or placing data into a shared repository, called the *blackboard*. A program can start running once the input it needs appears on the blackboard. When it completes, it places its result onto the blackboard.

The processors work on data at different (usually increasing) levels of abstraction.

Forces

- Complete search of solution space is not feasible
- May need to experiment with different algorithms
- Different algorithms partially solve problems.
- Input, intermediate, and final results have different representations.
- An algorithm may use (but not consume) results of other algorithms.
- There exists potential for parallelism.



Question: In what other contexts would you apply the Blackboard pattern?