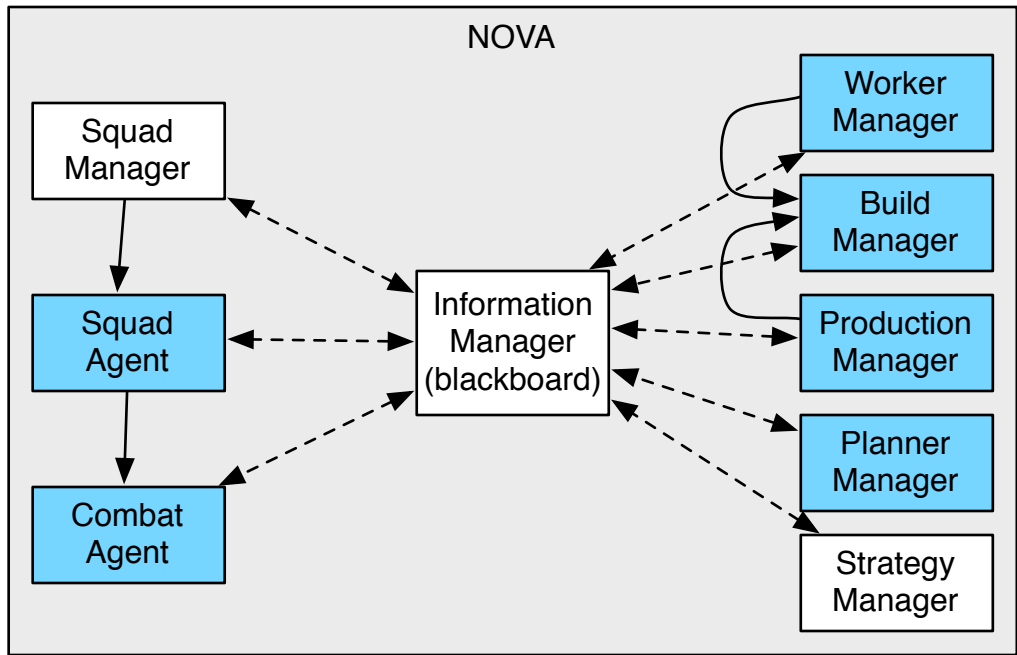
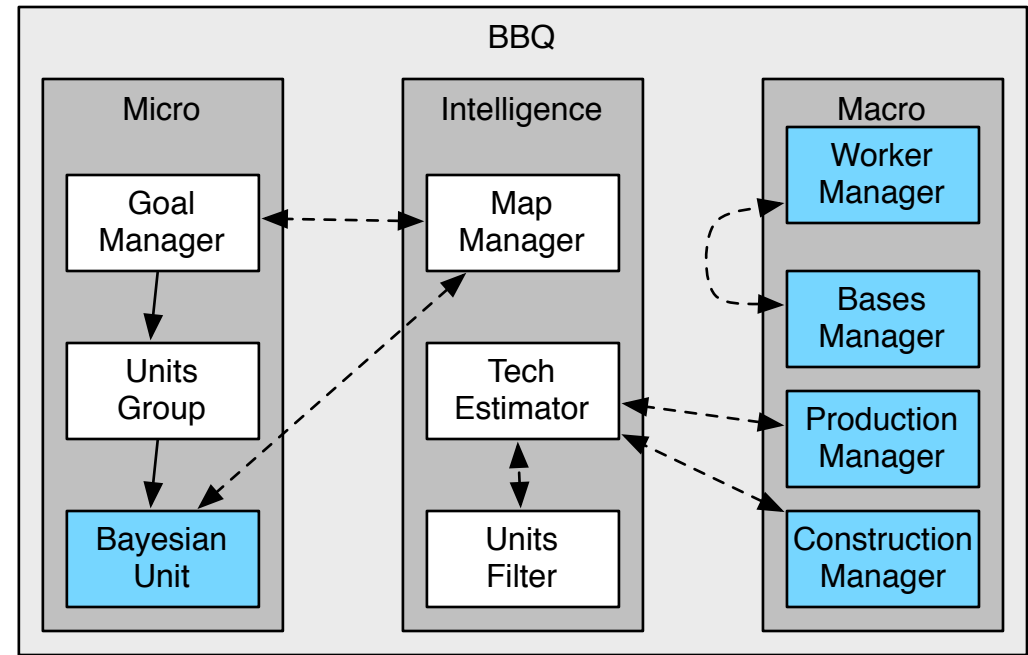


I marked in blue those modules that can issue commands to units



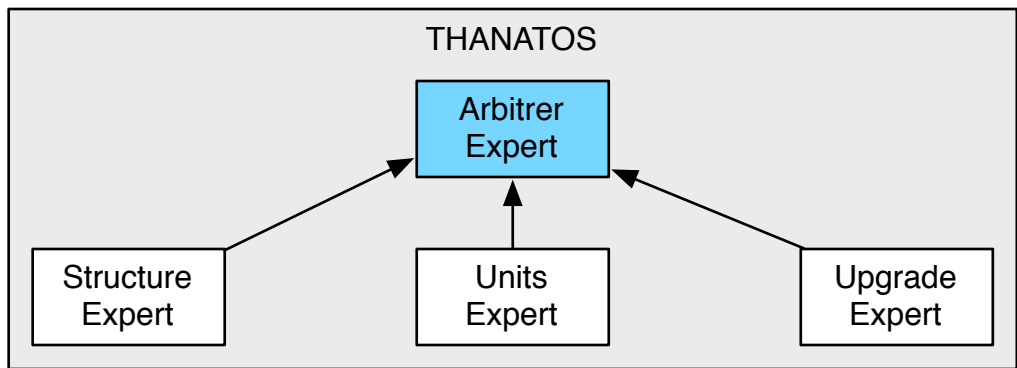
Nova coordination happens at 2 levels:

- all information communication in the blackboard (except for some direct requests to the build manager to find proper building locations)
- MICRO has a hierarchical control, where the squad manager controls squad agents, which control combat agents (individual units)



BBQ coordinations happens at 2 levels:

- MACRO modules are coordinated through a bidding process
- MICRO modules have hierarchical control (goal manager assigns goals to unit groups, which control bayesian units)



Thanatos coordination happens through a central arbitrer, that learns which requests to execute by using Q-learning.

Comments:

- When modules do not use common resources they can operate without too much coordination, e.g. MICRO modules do not need to interact with the modules that decide the build order (some minimal cooperation is still required, for producing the buildings needed to generate the units that MICRO needs, etc.)
- When modules share resources (gas/mineral/buildings), an "arbitrer" or coordinator is needed:
 - NOVA has the "planner manager", that distributes tasks amongst buildings, and the "production manager", that distributes resources amongst tasks
 - BBQ has the bidding mechanism for the same purpose
 - THANATOS has the arbitrer module for exact the same purpose.