

Towards a POMDP-based Intelligent Assistant for Power Plants.

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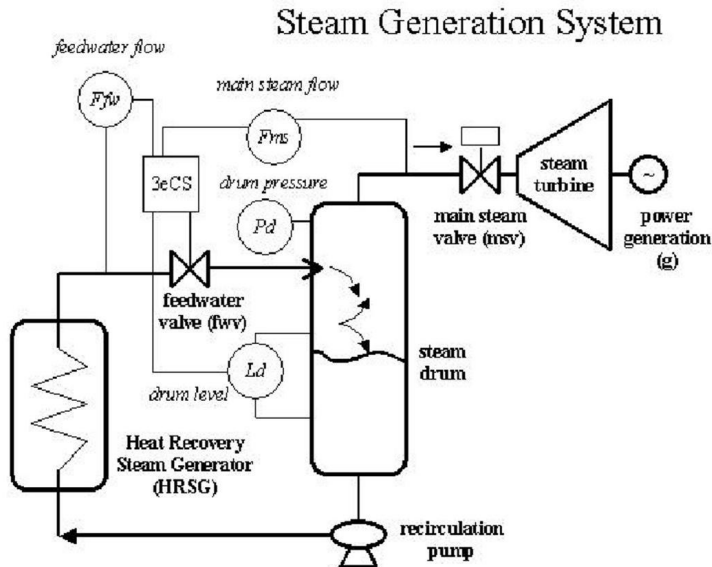


Fig1. Power plants are complex systems and their dynamics is not easy to model.

Under these conditions, can we build a POMDP-based intelligent assistant to provide optimal recommendations for plant operators?



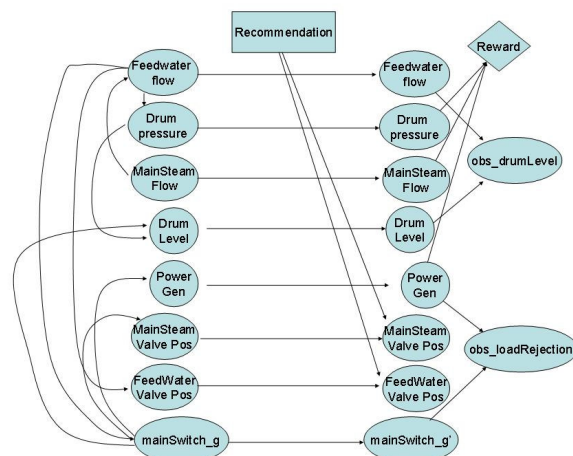
Fig2. Plant operator console

- It is difficult for plant operators to make good sequential decisions when facing with large amount of problems and uncertain information.

-Problems: unexpected events such as electrical load disconnections, suboptimal equipment/process operation.

- Uncertain information: noisy transducers, missing instruments, failures in command execution.

Simplified POMDP model



Open questions

- Could the operator mood be included in this model?

- Can we go towards a POMDP controller?