|  |  |  |  |
| --- | --- | --- | --- |
| ID | Requirement | Test Method | Target |
|  | The system shall represent the relationships and dependencies between units, buildings, upgrades, and research trees |  |  |
|  | The system shall, given a resource, determine what must be true and what could be true relative to other units, buildings, upgrades, and research trees |  |  |
|  | The system shall, given multiple of a resource, adjust the probability of possible strategies |  |  |
|  | The system shall, given ground truth and a predicted strategy, update the probabilities for the strategy based on resource overlap |  |  |
|  |  |  |  |

Test methods:

For each unit type, generate research trees and validate

For each building type, generate research trees and validate

For each upgrade type, generate research trees and validate

For each pair of unit and building, generate research trees and validate

Functional Components:

Game Interface (BWAPI + NOVA)

Rules Engine

Inference Engine

Tree Builder

Admin

Test Driver

Target Metrics:

1000 Matches with and without inference engine

Compare win/loss ratio of base NOVA and inference NOVA

Split AI into each strategy and generate W/L ratio on a per-strategy basis