

Week 21 presentation in DD2438

Group 4:3

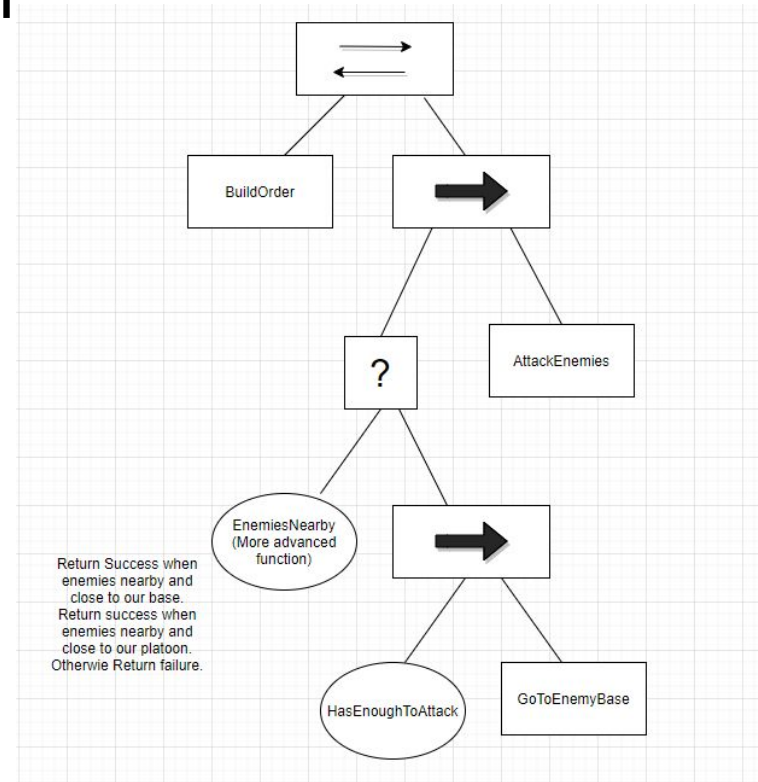
Marco Schouten and Justin Salér

High Level strategy :Parallel BT

Components:

We used Behaviour trees for our entire solution

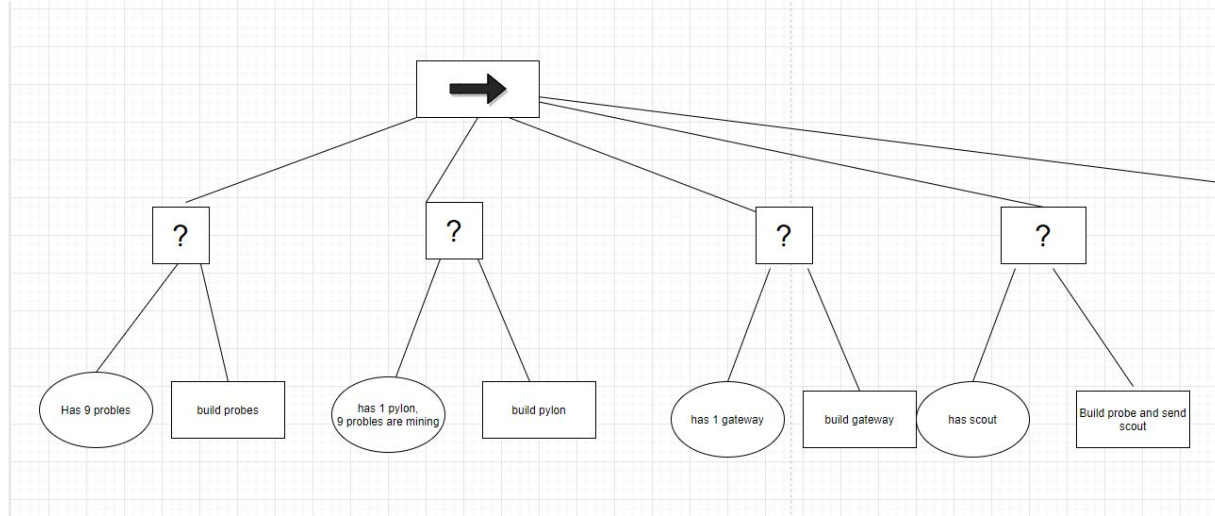
- At the root of the tree we had a parallel with an attack BT and build order BT
- Information Manager (Singleton Class) used to store data



Build Order

Overall Logic of the Build Order inside the BT.

Used Backchaining to dynamically create the tree (required buildings and units, gather minerals when needed)



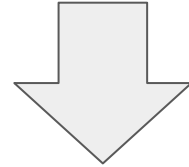
Detailed Build Order (approved by DragOn[NaS] SC pro)

first number is the step in the sequence, whereas the second number refers to the amount of used supply that a player will have before issuing the command

- | | | | | | |
|----|-------------------|-----|-----------------------|-----|--------------------|
| 1. | build 4 probes | 10. | build 1 probe | 21. | 26 - Range Upgrade |
| 2. | 8 - build 1 Pylon | 11. | 16 - Gas | 22. | build 1 probe |
| 3. | build 2 probes | 12. | build 1 probe | 23. | 27 - Dragoon |
| 4. | 10 - Gateway | 13. | 17 - Cybernetics Core | 24. | 2x Gateways |
| 5. | build 2 probes | 14. | build 1 probe | 25. | 31 - Dragoon |
| 6. | 12 - Pylon | 15. | 18 - 1 Zealot | 26. | 33 - Pylon |
| 7. | send scout | 16. | build 2 probes | 27. | 33 - 4x Dragoons |
| 8. | build 1 probe | 17. | 22 - Pylon | 28. | 41 - Pylon |
| 9. | 13 - Zealot | 18. | build 1 probe | 29. | 41 - 4x Dragoons |
| | | 19. | 23 - Dragoon | | |
| | | 20. | build 1 probe | | |

Queuing

- To better work with BTs, queueing was required. When queueing units, the BT could move to the next step in the build order.
- A system was created so that everytime a new building was built, the unit queue was spread between the buildings.

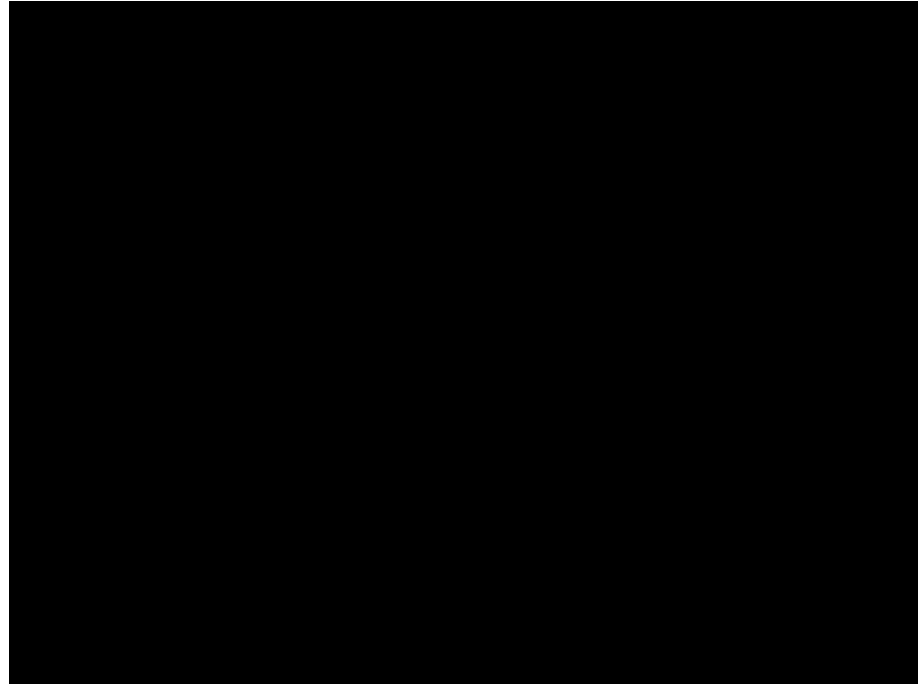


Scouting Demo

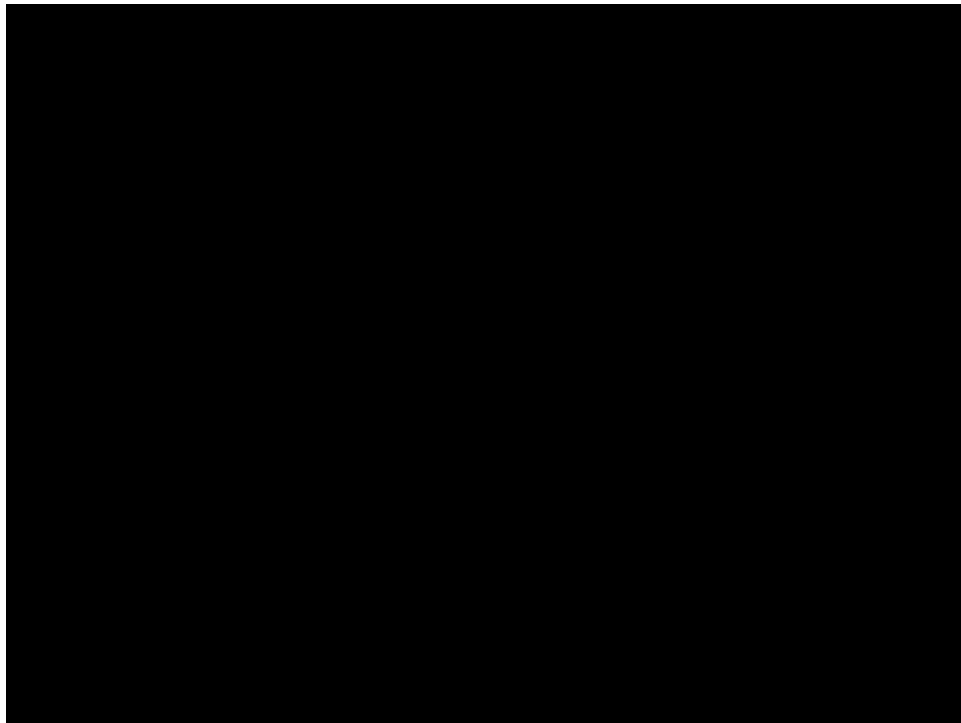
is an important feature to counteract enemy strategy.

Interface: ToScout (UnitType, Location<Tile>)

- takes advantage of BWAPI
- checks for unexplored Areas
- searches for an Idle Unit of a given UnitType (e.g. worker), and sends it to the desired location



Pre-final Match against group 10



Our Strengths

- Using behaviour tree is very dynamic (Can easily change to other build orders) and also adapt to the situation.
- Very good single-targeting focus fire.
- Good Scouting.

Future Improvements

- Add Logic to better Counter React to enemy Moves
- Improve combat manager (adding kiting and better Grouping)
- Adding Expansion



Progress Status Week 21

- Comment to customer paying 200 000kr for the report:
 - Going well
- Planned Time spent: 60%
 - (Out of the combined 200h)
- Actual Time spent: 60%
 - Out of the combined 200h
- Actual Progress: 60%
 - (estimate progress towards completing assignment)
- Risk of not completing assignment: 5%

Include this slide, but do not spend time discussing it at the presentation. Remember to also fill in the Progress Report Google Sheet

