

sandsail2

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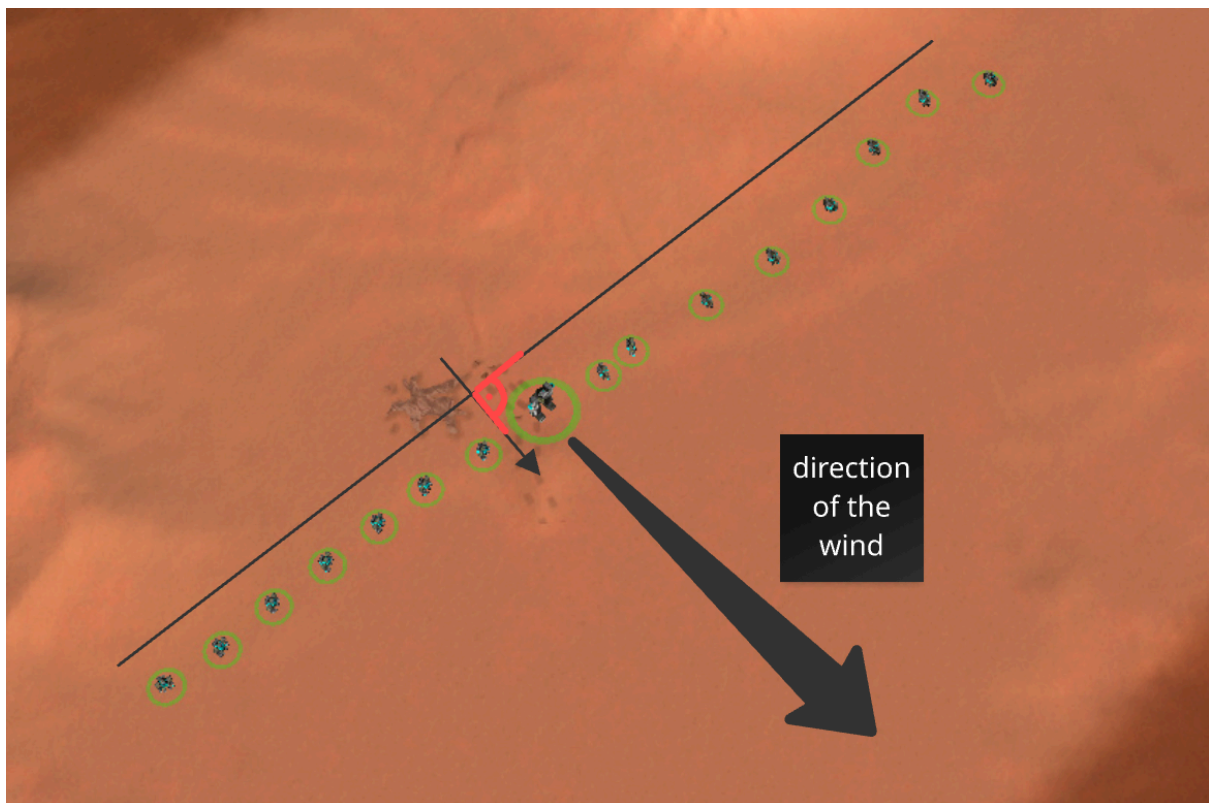
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Story

- Our hero Maverick is trapped in the desert. The desert under control of our enemy so Mav has to secretly move around. To keep low profile from the scanning devices of the non-military weather satellites on the orbit (used by our enemies) it is suggested to move around the desert always in the direction of the actually blowing wind. This way the sensors of the enemies are tricked.
- In case we would like increase the capability of commander's survival, all units sent for his defense should get close to him at any time and follow him in a formation also respecting the blowing wind direction.



Shows

- First AI project ready to be delivered to player
 - “first vertical slice”
 - connecting components together
 - publishing behavior
- In bonus solution observe different levels of quality delivered by optimal and suboptimal nodes.

Setup & Hints

- Read BETS doc topics
 - [Player guide](#)
 - [Basic development](#)
 - [Troubleshooting](#)
 - [Behavior Trees](#)
 - [Node definitions](#)
 - [Lua environment](#)
- [Follow steps of making first behavior](#) (esp. making first tree, making first sensor, exposing order to the user)
 - Do not miss the part where you should [host specific mission/scenario](#) you need to download. Mission spawns all units for you on proper map and location so you do not need to do it manually or struggle with wrong map.
 - Do not miss the chapter which shows you [how to display your order icon in orders menu](#).
- Useful Spring API (just recap, can be found through [highlighted informaiton sources](#))
 - [Reading game facts](#)
 - [Unit instance informations](#)
 - [Reading unit definitions "UnitDefs"](#)
- **!** repeating issue: [name of project = URL](#)
- Check [trello board](#) with hints
 - Hints with specific value for this task are marked by label “task: sandsail” (use trello “filter cards” feature)
- Specifically read next cards
 - [How to “disengage” unit from current behaviors based on condition running in parallel](#) (three methods of doing the same thing)

Acceptance criteria

- Player can select **behavior in orders menu**.
 - = behavior assignment through BTController is not acceptable
 - Behavior has to have **representative icon**, which reflects what is behavior about.
- Behavior moves **only battle commander** `armmav` based on wind direction
 -

- Project is **committed on public repository** and link to the repository is sent to Petr Mácha via Discord
- Reusing existing behaviors and projects is not forbidden, you are encouraged to do that!
- Other units **will follow Maverick** in relative positions around him as shown on the image above.
 - This has to be robust on groups up to at least 20 “other” units.
 - For example units are never stuck on each other (thats why `Common.relativeMove` or `Common.move` are not enough)
 - It is suggested that we give one “order” to Commander and “other” units together, not to each role separately.
 - Other units selected with commander once giving the order should follow in line formation shown on the screenshot. Mirroring commanders move (= using `Common.relativeMove` or `Common.move` on all units) is **not acceptable**.
 - Behavior has to be robust on wind direction change.
- Respect [Ultimate failure conditions](#)
- Generally any point from [ultimate bonus criteria](#).
- **Suggested delivery for the consultation: 15th April**
- **Deadline for a bonus solution points: 22th April 2025 23:59**

Optional

(no direct impact on the course evaluation, but comfortable for you ;)

- You don't need to create new project for every homework, one project for all homeworks is enough.
- [Debugging drawing widget](#) showing direction of the wind or some other useful information for debug (delivered as attachment to the e-mail) can
 - be reason to give you another extra points
 - help you to prove the behavior works correctly