Enemy AI in Conflicts

Key Information

Mechanic Name:	Mechanic Type:
Enemy AI in conflicts	

Design Last Updated:	Designer Info:
Jul 1, 2025	Jacob (sleebyweeby)

Status:

Implementing

Description

This doc is a proposal for enemy AI design in conflict as well as some detailed descriptions about how they might work. None of what is written in this document is set in stone by any means. I'd like feedback on what I've proposed. Please put all feedback in the Enemy Behavior Thread in #design-discussion in Discord

Disclaimers: I am heavily biased towards the way different enemy AI works in *Fire Emblem* as it is the franchise I have the most experience with when it comes to trpgs. I also hope to draw some inspiration from BG3 as it's the other game I have experience with that best matches Unchained's style of navigation/movement.

Before reading, please see this document: Systems Refactor Specs. I assume this is up to date as of writing this. There is a section called "Modular Behavior Tree Code" that I think could work, though I have little experience with implementation…

Overview

It is my firm belief that conflict in any trpg should be primarily about the player's ability to position their controllable characters in a way that grants them an advantage. As designers we can set up scenarios where the enemies start in advantageous positions, but if the AI does not try and make use of 'smart' positioning they'll feel bland and simple, which will clash with Unchained's idea that each 'enemy' is their own person that has their own

feelings, values, etc. Their AI should promote the fact that the player isn't fighting a robot, but a person (unless there's a case where the enemy is a literal zombie or something).

That being said however, above all else, the AI **must follow some set of rules to be 'predictable' and or consistent.** This is important because it is the basis for how players come up with different strategies to overcome challenges that are thrown at them.

Being too predictable can be a problem though as I think this will also clash with the previously mentioned robot comment. To conflict this I think a good thing to do is to provide different unit types their own AI, each with many different rules depending on the situation.

Below are features/rules that enemy AI will need have in order to create fun and challenging conflicts.

Toggleable AI Features

Enemies contain a set of rules in their AI that can be toggled on and off. These rules should be independent from their own AI type (unless specified otherwise). These are:

- **Linked/Group AI:** When I am aggroed, do I aggro other enemies? What specific units are they if so?
- **Stationary:** Am I allowed to move? (Ex. Knights choking a point/ Archers on castle walls)
    - This unit can make attacks provided they stay on the same coordinate they started on
- **Designated target:** Open Waze app to find best route to my destination (targetable unit, position, or object)
    - If there are no possible routes to destination act as stationary unit
- **Healing/Retreat Threshold:** Do I have an HP threshold at which I prioritize healing if I'm able to? What threshold is that (percentage)?
    - Can I heal myself with an ability?
    - Is there terrain nearby that will heal me?
    - Is there an allied unit (enemy) on the map that can heal me?
- **Resolve Threshold:** Do I have a Resolve threshold at which I prioritize something?
- ***Aggroed vs. Not Aggroed Condition:** Should I enable the rest of my AI tree, or am I stationary and taking no actions? What conditions cause me to aggro?

- Do I aggro on a turn number?
- Do I aggro if I am in range?
- Do I aggro when attacked?
- Do I aggro based on a distance measurement from the player?
- Do I aggro if a player unit reaches/surpasses a particular coordinate value?

- **Leashed:** Allows unit to be leashed to a position the designer can determine
  - If unit moves X distance from the leash point, its AI will prioritize moving back to the 'leash' position
  - Deactivates AI tree when it returns to leash point.
  - AI tree is reactivated if its Aggro condition is met again

Universal AI Features

Enemies contain a set of rules in their AI that is always active. These rules should apply to all AI types (unless specified otherwise). These are:

- **Am I in range:** Do I have a means of attack that can reach a player unit this turn?

- **Shortest path to target:** Move towards closest targetable unit if the unit can move
  - If there are no possible routes to destination act as stationary unit

- **Target Eval:** Are there multiple units I can make an attack against?
  - **Down Unit:** Of the targets available, can I down any of them?
  - **Damage:** Of the targets I can attack, which unit takes the most damage?
    - Do I deal 0 damage to my target? If no, move to the next closest unit
    - An exception could be made if enemies can apply status effects
  - **Cover:** Can I attack this target while also standing in/behind beneficial terrain/cover

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AI Types

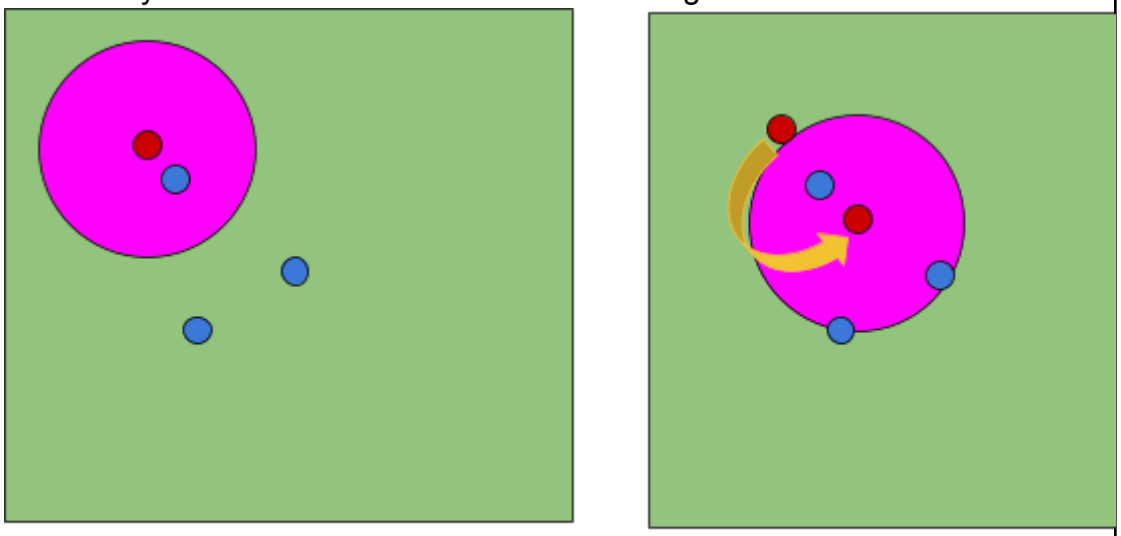
These AI features are usually correlated to the class of the enemy unit (soldier, mystic, etc.). **All AI types should inherit features mentioned in the above sections.** (unless specified otherwise). However they may have features that override the Universal AI decision making.t

- **Universal AI:** Only active when aggroed. Same AI as the features in the above section. Other AI types inherit same rules as Universal AI unless stated

- **Support AI:** When aggroed, AI uses buff ability on units if it can. Acts as default AI if it can't buff anyone that turn or if units in range are already buffed.

- **Healing AI:** When aggroed, AI heals units if it can. Positions itself on the opposite side of allied units with Universal AI relative to player units position. Acts as default AI if there are no allies present within a set distance
    - Prioritizes healing itself if it reaches its heal threshold
    - Units that are in their healing threshold will move towards this unit if they have no other means to heal themselves

- **Soldier AI:** Targets a unit that doesn't have a soldier within their attack range.
    - Doesn't count itself for this check
    - If unit is able, and is in range of a target already, will move to a position to where they can attack said unit while also moving closer to other units



Before

After

    - Otherwise uses Universal AI

AI Difficulty Brainstorm

The features listed below are more of a brainstorm for more complex AI that I'd consider using for higher difficulties (if we want it and that feature and get there). Doesn't mean they can't be used for our 'normal' difficulty either though.

Active player abilities:
I think it'd be neat if the enemy reacts to abilities players have used on the field (e.g. all player units are within a Smokescreen AOE)

- **Smokescreen:**
  - If all player units are within the smokescreen, enemies will prioritize buffing themselves or healing if they are able (e.g. Archers using aim)
  - If a unit is outside the smokescreen and in range, the enemy will switch their target to this one. Blacklist the Soldier AI

- **Nurture:**
  - Upon Enra healing another character, enemies will have a higher priority to attack her for one turn if they can reach her

Map Navigation:
In the case of enemy pathfinding being interrupted, AI may want to react differently

- **Chokepoints:**
  - For example, if Xochi stands in a doorway and the enemies can't get past her to reach Enra, they may want to prioritize taking a different roundabout path to ignore Xochi if they are able to.
- **High Ground:**
  - If the shortest route to attack a player unit involves having the enemy shoot from low ground, they'll want to do that, but additionally pathfind to a place where they no longer have low ground penalties

Engineer Info

Last Updated in Engine:	**Engineer Info:**
N/A	Zach (zachtier)