

21.05.2025 - Status Report

It's been a while since the last changelog - time to give you a proper update on what's going on behind the scenes.

Some of this has already been mentioned in Twitch chat and on Discord, but since not everyone sees that, we're putting everything together here in one place.

What's coming - and what's already done?

Currently, we're working on three major areas:

1. Pathfinding & Waypoints

Since the early days of CTD, enemy movement has gone through a lot of changes. Originally, it was a simple waypoint system: enemies moved from one coordinate to the next.

Later, we switched to a pathfinding system. That made the maps more dynamic, but also introduced new challenges - especially with intersections or tight paths.

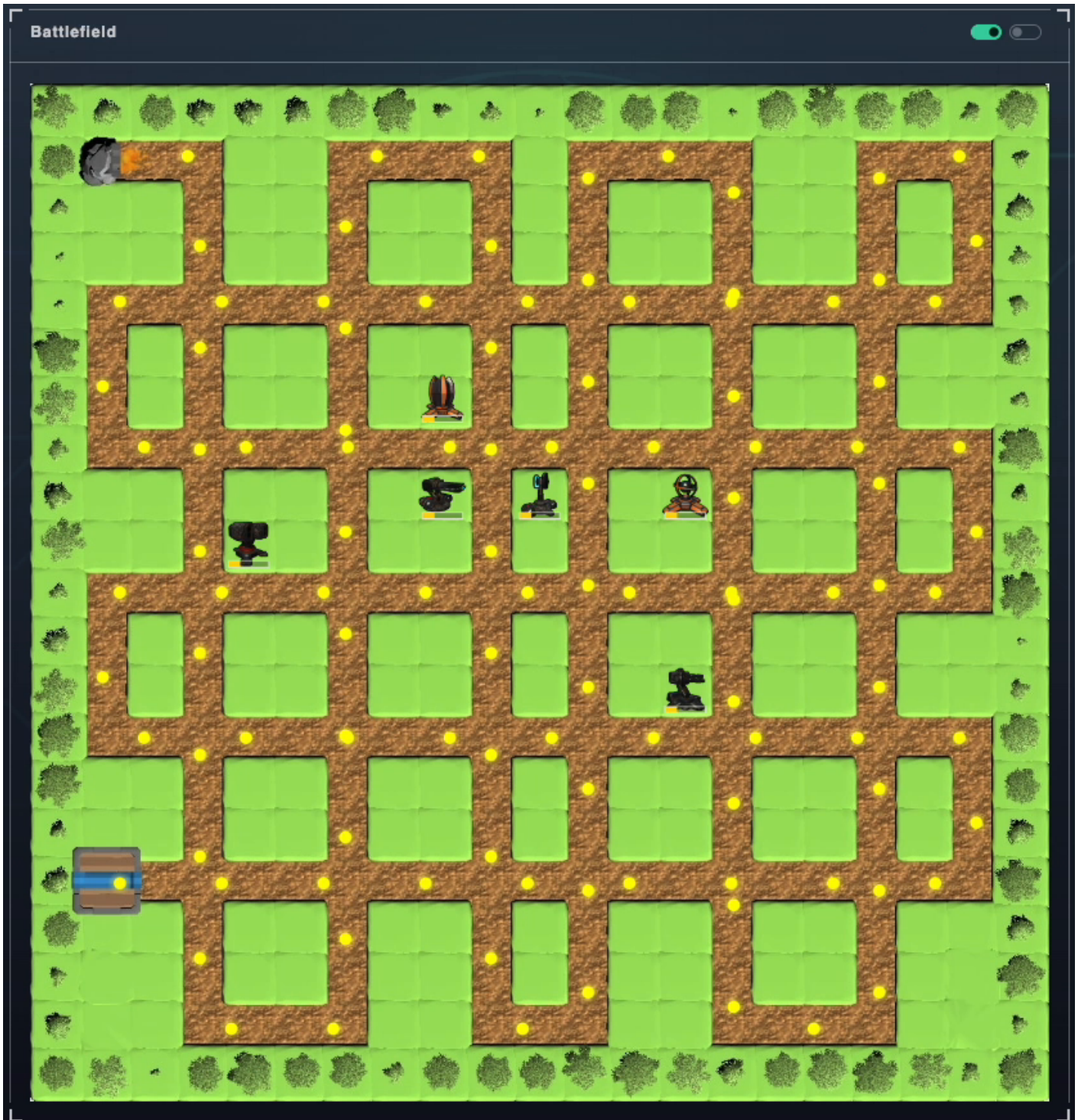
The upcoming update will support both systems: classic waypoints **and** dynamic pathfinding - even with the ability to switch during an active round.

While the implementation was quick, there's more behind it:

- Integration into the map editor
- Support in the web interface
- Sync with the management server
- Connection to the central API

The goal: Make enemy paths visible on the website - super helpful especially for new players.

In-game (WebInterface), a visual path preview will be shown for all players by default - but can be disabled in the settings.



(Complex path example. WIP)

2. Turret System Overhaul

The old turret system has grown over time - and not always in the cleanest way. Some of it was literally quick test code from the early days of CTD.

This update completely rebuilds the core turret systems:

- Modular shooting logic

- Support for different damage types and effects
- Reworked status effects (burn, bleed, etc.)
- Unified upgrade and buff logic
- Better balancing options

Previously, everything was hardcoded – e.g. “this turret deals 100 damage every 2 seconds with 30% crit chance”.

Now, we use a skill-based system: the server sends instructions, and the turret handles all effects based on that.

This makes the system much more flexible and easier to maintain.

However, it also means a lot more data – up to **208 parameters** per turret and per damage type.

We’ve spent what feels like an eternity in spreadsheets just to bring some balance into the chaos.

3. New Calculation Logic

Previously, many bonuses and effects were calculated directly in code, which made balancing difficult.

Now, everything is based on the turret’s base value. External effects are applied as additive or multiplicative bonuses – much easier to track and tweak.

Example: Gatling Turret

- Base damage: 200
- Upgrades: +50%
- Team bonus: +30%
- Skill tree: +20%
- Boost card: +20%
- Items: +10%
- Support buff: +20%

Result: $200 + 150\% = 500$ damage per shot

This logic also applies to things like crit chance, bleed chance, burn duration, and so on – all bonuses are just added together.

Simple, transparent, and predictable.

So, when is the update coming?

That's the big question – and not one we can answer precisely yet.

Because so many systems are involved, the update has to go live all at once. Partial releases won't work here.

The good news: Most of the technical foundation is already done, including server support. What's still missing is testing, fine-tuning, and some integration with the web interface.

We're aiming for a 2-week window at the end of June or early July – fingers crossed that everything's ready by then.

Thanks for all the support!

Last but not least: a huge thank-you to everyone supporting CTD – whether with feedback, donations, bug reports, or just being part of the community.

This project wouldn't exist without you – so thank you!

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