Advanced AI Version 2

Preview

Advanced AI Version 1- History

- Released in October 2023

- Taught the AI multiple tactics not seen in Tiberian Sun and Red Alert 2 or their modding communities before:
  - Expanding base dynamically to conquer new Tiberium fields
  - Building defenses to face its primary enemy instead of building defenses all over the base perimiter with RNG
  - Building multiple factories to dynamically increase production based on economic strength

- More intelligent base building allowed the AI to perform much better while having fewer cheats

Promotion screenshot from 2023

DAWN OF THE TIBERIUM AGE

Advanced AI
Base Expanding

Advanced AI Version 1 - Trailer

- https://www.youtube.com/watch?v=MMWXxVVWnCs

Advanced AI Version 2

- While we've changed the AI's base-building, its unit production is still handled by original game logic...

- Original game logic has multiple faults:
  - Little scaling based on economy – AI has fixed team sizes, no matter whether the economy is powered by 1 harvester or 20 harvesters
  - Only one condition available for building teams – cannot properly counter one-sided enemy compositions, for example tank + artillery spam
  - AI does not respect prerequisites, often leading into AI building T3 units right at the start of the game, giving an unfair experience
  - AI does not properly respect build limits of epic units

Advanced AI Version 2

- Advanced AI Version 2 reworks the AI's unit production logic to fix aforementioned issues

- AI looks at the composition of its enemy's army and dynamically builds units to counter the player's units
  - Example 1: player builds lots of tanks -> AI counters by building rocket infantry
  - Example 2: player builds lots of base defenses -> AI counters with artillery

- AI also respects tech limitations and epic unit build limits

Advanced AI Version 2

- Also improves the AI's micromanagement

Advanced AI Version 2

- Overall goal: make the AI build smarter unit compositions and micromanage better, allowing us to keep it challenging with reduced cheats, resulting in a fairer and more PvP-like skirmish experience

- AI should feel like a human player (a skilled one on high difficulties) instead of a dumb, obviously cheat-powered opponent

- Advanced AI Version 1 already required fewer cheats than original Tiberian Sun / Red Alert 2 AI engine to be challenging
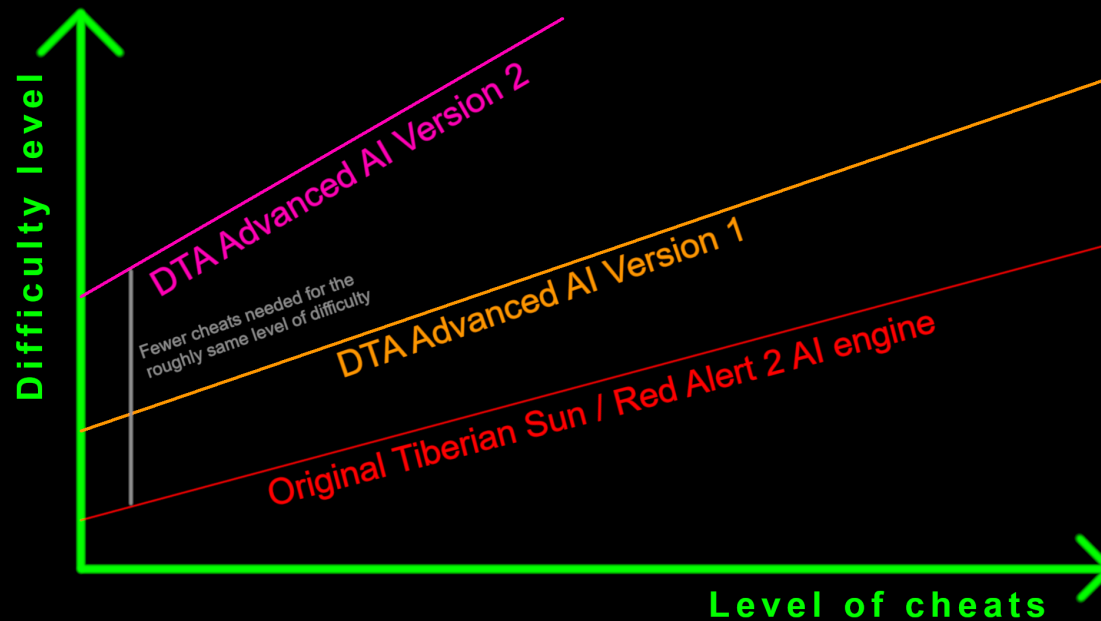
- Version 2 will further reduce the need for cheats

Advanced AI Version 2

Advanced AI Version 2

AdvAI v1 would be impossible to beat with the level of cheats original TS/RA2 required for challenging top-level human players

AdvAI v2 would be impossible to beat with the level of cheats that AdvAI v1 requires to challenge top-level human players

Cheat Level Comparison

Game	AI Bonus Starting Money	AI Discount %	AI Build Speed Bonus %	AI Armor Bonus %	AI Rate of Fire Bonus %
Tiberian Sun Hard AI	250%	0%	25%	20%	25%
DTA Hard AI pre-AdvAI	400%	80%	0%	0%	0%
DTA Hard AdvAI Version 1	150%	40%	-5%	0%	0%
DTA Hard AdvAI Version 2	50%	20%	0%	0%	0%
Mental Omega 3.3.0 Hard AI (without Boost)	3600%	92%	67%	0%	0%

Benefits of reduced cheats – fun factor

- Most TS/RA2 mods rely on heavy cheats to make the AI challenging
  - Infinite money, or extremely heavy discounts

- Heavy money cheats make some tactics unviable against AI
  - Common issue: attacking harvesters or refineries is not worth it due to infinite money
  - Flank attacks, sneak attacks with Commando/Tanya type units are impossible to pull off due to AI building almost-free defenses everywhere

- Making AI cheat less and play better makes skirmish and comp-stomp games more interesting by enabling all typically viable PvP tactics to be viable against the AI

DAWN OF THE TIBERIUM AGE

Advanced AI Version 2

Thanks for listening!