

OVERVIEW OF CYANIDE

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Overview

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Our Mission

- Produce a Terran bot that can win against the current Terran competition
- Improve UAlbertaBot in a general way
- Increase UAlbertaBot's ability to be played as a random bot

Generic Support Units

- ⦿ Very general
 - Action `getBestAction(allies, enemies);`
 - `void takeAction(action);`
- ⦿ General implementation
 - Defend closest unit
- ⦿ Specific implementation for each unit type
 - Medics can heal
 - Comsat can scan undetected units
- ⦿ Very extendable

Video of Medics After



Video of Comsat



Base Layout

- ⦿ Don't build buildings where add-ons can go
- ⦿ Leave more room between buildings to prevent trapping SCVs
- ⦿ Place Bunkers and Missile Turrets in front of the base
- ⦿ Don't expand to already taken bases

SCV Improvements

- ⦿ SCVs continue construction if an SCV dies during construction of a building
 - Prevents build order deadlock
- ⦿ SCVs repair damaged Bunkers and Missile Turrets

Base Layout and Bunker Repair



Siege Tanks

- Had to add support for building add-ons
- Added a strategy including Siege Tanks
- Added support in the RangedManager for Sieging Siege Tanks

Siege Tanks



Test Results

	Bot vs. Bot Results - (Row,Col) = Row Wins vs. Col									
	Win %	UAlbe	Skyne	Xelna	Cyani	Aiur	Ximp	ICES	Nova	BTHAI
UAlbertaBot	89.29	-	12	12	11	13	14	14	10	14
Skynet	71.05	2	-	9	14	12	12	9	8	15
Xelnaga	58.04	2	5	-	6	10	7	10	13	12
Cyanide	52.59	3	0	8	-	5	9	13	11	12
Aiur	51.28	1	3	4	10	-	6	9	12	15
Ximp	45.54	0	2	7	5	8	-	9	7	13
ICES	43.97	0	5	4	2	6	5	-	15	14
Nova	34.48	4	6	1	4	3	7	0	-	15
BTHAI	5.98	0	0	2	3	0	1	1	0	-

Advantages and Disadvantages

⦿ Advantages of our approach

- Maintain simplicity
- General improvements we've made should lead to improvements in the other races

⦿ Disadvantages of our approach

- Cyanide is not prepared for late game
- Improvement wasn't focused on Terran

Obstacles We Faced

- ◎ StarcraftData seems to break after too many units
 - Found one bug and fixed it but there must be another
 - Couldn't use all the units we wanted to
- ◎ Made improvements on an old code base
 - When switching to the new one, lots of these were obsolete

Future Work

- ⦿ Better Siege Tank Micro
- ⦿ Add Support Unit class for Science Vessel
- ⦿ More late game strategies
 - Fix StarcraftData
- ⦿ Add in-game Adaptive Strategy
- ⦿ Better kiting for ranged units

Questions?