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CIG 2011 StarCraft competition: final round

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General setup

o loosely related to the AIIDE StarCraft Competition by Michael Buro and David Churchill

o they implemented a nice software, but it came too late for us (automated round-robin)

o same rules, but we did not publish map choice

o we cannot do full round robin (manually!)

o 10 submissions (none related to organizers)

o 2 brackets of 5, qualifying round

o 4 best bots go to final round (round-robin on 5 new maps)

Submissions

Track A:

Botname	Race	Contributor	
Nova	Terran	Alberto Uriarte	IIIA-Spanish Nat. Res. Council
Skynet	Protoss	Andrew Smith	none
LSAI	Zerg	Douglas Patti	Lafayette College
AIUR	Protoss	Florian Richoux	University of Tokyo
BroodwarBotQ	Protoss	Gabriel Synnaeve	University of Grenoble
Xelnaga	Protoss	Ho-Chul Cho	Sejong University
BTHAI	Zerg	Johan Hagelbäck	Blekinge Institute of Technology
EvoBot	Terran	Yujing Hu	University of Nanjing
Protoss Beast Jelly	Protoss	Joshua Dong	Westwood High School
UalbertaBot	Protoss	David Churchill	University of Alberta

Track B cancelled, only one submission (Johan Hagelbäck)

Basic rules

o 5 new maps for this round:

iCCup lost temple 2.4, iCCup rush hour 3.1,
iCCup swordinthemoon2.1, iCCup yellow 1.1, La_Mancha1.1

o crashing results in an instant win for the opponent

o the two bots with most wins (in each bracket) qualify for the final

o if we have equal numbers, direct encounters count

o manual game stop if deadlocked, StarCraft point system determines winner

Final round

o bots qualified for final round: UAB, Skynet, BotQ,
   Xelnaga (all play Protoss race)
o we play full round-robin on 5 maps
   (30 games per bot)
o bots are ordered according to number of wins

BroodwarBotQ (BotQ or BBQ, Protoss)
Gabriel Synnaeve, E-Motion team at INRIA Rhône-Alpes (LIG) / University of Grenoble, France:

BroodwarBotQ uses probabilistic techniques both for micro management and strategy. A Bayesian model learned from high skill player is used to determine the opponent's strategy and a Bayesian sensory motor fusion model is used for micro-management.

final round wins: 1

Xelnaga (Protoss)
Ho-Chul Cho and Kyung-Joong Kim,
Sejong University, Seoul, Korea:

The bot is determined to achieve the goal and the programming code is simple. It generally uses a rule base from artificial intelligence and is an expanded version of Aiurbot (old version) based on BWSAL.

final round wins: 11

UAlbertaBot (Protoss)
David Churchill, University of Alberta, Canada:

A Protoss bot which uses early and constant pressure to contain or outright kill its enemy. Build orders are planned and implemented in real-time via depth-first branch & bound heuristic search.

final round wins: 22

Skynet
Andrew Smith, freelancer:

Skynets main features include:
o A fast custom terrain analyser.
o An advanced building placer that creates tight but (mostly) non blocking bases.
o A task based macro system that continually plans and fully understands all requirements.

Final round wins: 26

Final results table

crashes	games	bot	wins
	30	Skynet	26
	30	UAB	22
3	30	Xelnaga	11
2	30	BotQ	1

Some observations

o many crashes

o bots often get stuck, especially when something unexpected happens

o zealot rush often played

o most bots specialized on race (except BTHAI)

o but there seem to be different strategies against different races

o interesting tactics played with workers (e.g. BotQ opponent mining)

o some bots have problems finishing an opponent off

Summary

o most bots currently do not have a chance against the 3 best ones, huge quality differences
o bots have difficulties if they don't know the terrain,
o comparison to AIIDE results difficult (not all bots the same, different tournament mode)
o but general tendency the same
o best 4 bots were all Protoss race, but next best (BTHAI) is Zerg, potential of other races not used yet
o this was big fun, but next time with automated game recording, please (cooperation with Alberta people)