

# Be the boss over your **STARCRAFT** teammate AI

Collaborate with the AI as you would with a human being, but you decide what to do! Communicate with it to gain more information about the game and to give it orders what to do.

## Why this topic?

- No work done on this topic testing.

### Why StarCraft?

- Is a fun and compelling game.
- Has been **balanced** for more than a decade.

## Research question

Would an AI teammate in RTS games, that you can communicate with, give orders to, and that acts more like a human team player, add more variety in skirmish and campaign games?

## Who are we?

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## Related Work

- McGee and Abraham (2010) presents a **clear gap in communication** between AI and player.
- Abraham and McGee (2010) mentions four teammate models.
  - The amount of player control over AI
  - The degree of free will of the bot.
- Work done on teammate player modeling bots: Tan and Cheng (2007), Jansen (2007), Houlette (2003).
- No article addresses if communication between player and bot would add more variety—that is our thesis topic.

## Conclusion

- Topic has been identified by McGee and Abraham (2010) as a knowledge gap.
- Almost no work in close topics.
- Increased variety in gameplay opening up new opportunities for game design.

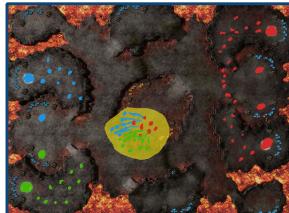
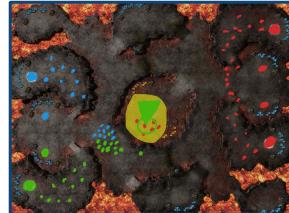
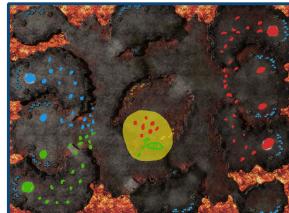
## Benefits

- Increase variety in campaign mode.
  - Another set of gameplay mechanics
  - Possibility to create a story where you actively collaborate with another team.
- Can be used in skirmish games.
- If developed further, it can replace disconnected players in a multiplayer game.

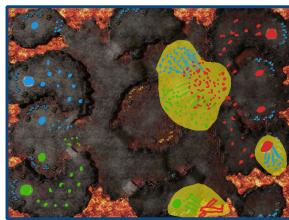
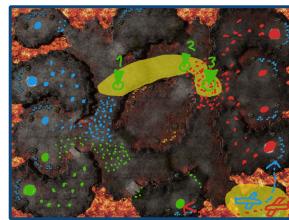
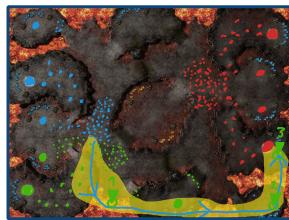
## Development and Testing

- Develop an extension to Johan Hagelbäck's BTH AI.
- Test the AI on a **few people**.
  - Gather results with interviews
- Test on **more people** with **various skill**.
  - Gather results with questionnaires

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Legend: Player AI Teammate Enemy Area of Interest

References: I. Abraham, Aswin Thomas, and Kevin McGee. 2010. AI for dynamic team-mate adaptation in games. In 2010 IEEE Symposium on Computational Intelligence and Games (CIG), 419-426. IEEE, August 18-. II., Houlette, Ryan. 2003. Player Modeling for Adaptive Games. In AI Game Programming Wisdom 2, 557-566. Charles River Media. III., Jansen, T.J.A. 2007. Player-Adaptive Cooperative Artificial Intelligence for RTS Games. Bsc. thesis, Universiteit Maastricht. IV., McGee, Kevin, and Aswin Thomas Abraham. 2010. Real-time team-mate AI in games: a definition, survey, & critique. In Proceedings of the Fifth International Conference on the Foundations of Digital Games, 124-131. FDG '10. New York, NY, USA: ACM. V., Tan, Chek Tien, and Ho-Lun Cheng. 2007. Personality-based Adaptation for Teamwork in Game Agents. In AIIDE'07, 37-42.

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