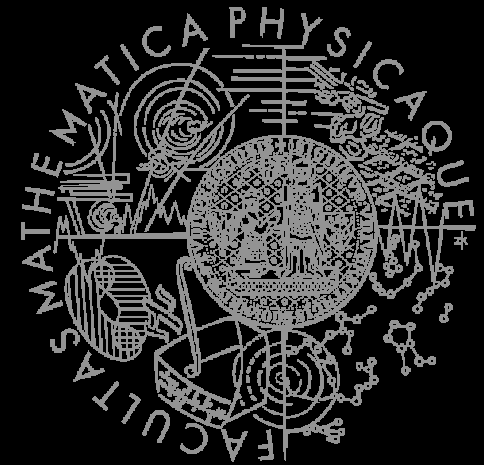Faculty of mathematics and physics
Charles University at Prague
10th March 2010

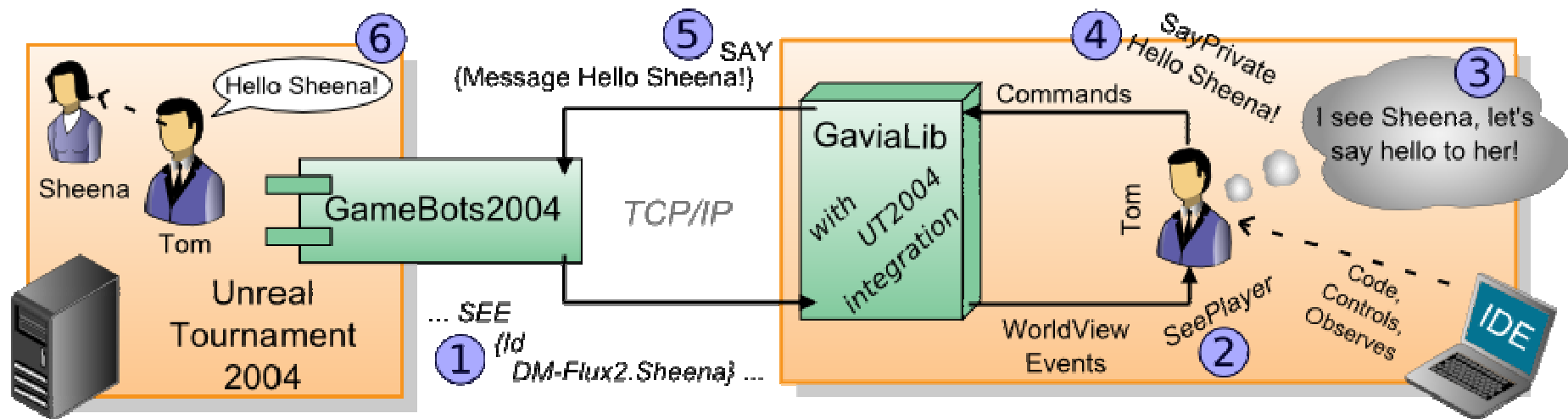UT2004 bots made easy!

Pogamut 3

Lecture 4 – Senso/Motoric modules revisited

Pogamut 3's agent

Modules

- **Sensoric**
  - Game `new Game(bot);`
  - AgentInfo `new AgentInfo(bot, game);`
  - Players `new Players(bot, agent);`
  - Senses `new Senses(bot, agent, players);`
  - Items `new Items(bot, agent);`
  - AdvancedItems *... more complicated ...*
- **Utility**
  - TabuSet `new TabuSet<Item>(bot);`
    - Will be renamed to `TabooSet`... soon...

Modules

- Path planning
  - `PathPlanner<ILocated, ILocated>`
  - UTAstar
    - `new UTAstar(bot);`
  - FloydWarshallPathPlanner
    - `new FloydWarshallPathPlanner(bot)`
- Path executing
  - `SimplePathExecutor<ILocated, ILocated>`
  - UTPathExecutor
    - `new UTPathExecutor(bot);`
    - Path event model

Modules

- Motoric
  - Game   `new Game(bot);`
  - AgentInfo   `new AgentInfo(bot, game);`
  - Players   `new Players(bot, agent);`
  - Senses   `new Senses(bot, agent, players);`
  - Items   `new Items(bot, agent);`
  - AdvancedItems   *... more complicated ...*
- Utility
  - TabuSet   `new TabuSet<Item>(bot);`

Homework 4 – Simple CTF

- Create simple CTF bot (really simple!)
1. Check out FlagInfo object
2. Check out Initialize command for team-balancing
3. CTF rules
   1. You scores by stealing the flag
   2. You can't score if your flag is stolen
4. Play 2v2 or 3v3 (otherwise GB2004 might be unstable)

Homework 3 – Retaliator bot

- Create a combination of item-picker + follow bot + simple retaliation with shooting
1. bot is trying to pick all weapons in the map
2. if it sees a player, it runs to him, stops around 200 units before him and than says "Hello <name>!"
3. if the player shoot him, it will freak out and retaliate for 3-4 ticks of the logic
4. if the player is not moving for 2 secs, it will says "Good bye!" and return to item picking
5. if bot's health is low (<50) it will search for health packs

Homework 2 - ItemPicker

- Create Item picker
- Ignore the knowledge of items
  - getWorldView().getAll(Item.class)
- Use getWorldView() and use getAllVisible(Item.class)
- Try to run around the whole level and discover (almost) all items
- How to know that your bot has visited almost everything?

Homework 1 – PathFollower

- Install Pogamut3
- Create a simple bot that is able to run randomly around navpoints
- You have to read about
    - command GetPath()
    - Class Path()
- Listeners
    - Weak references! Store pointers!