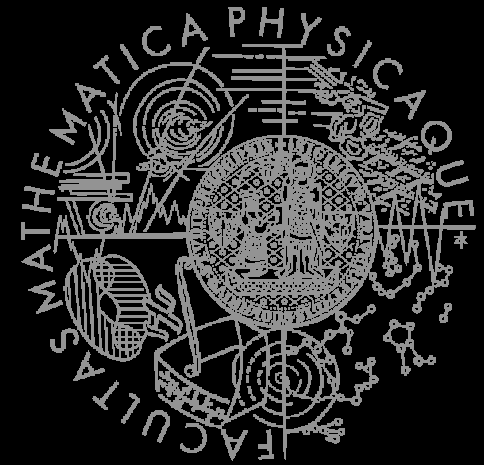Faculty of mathematics and physics
Charles University at Prague
10th March 2010
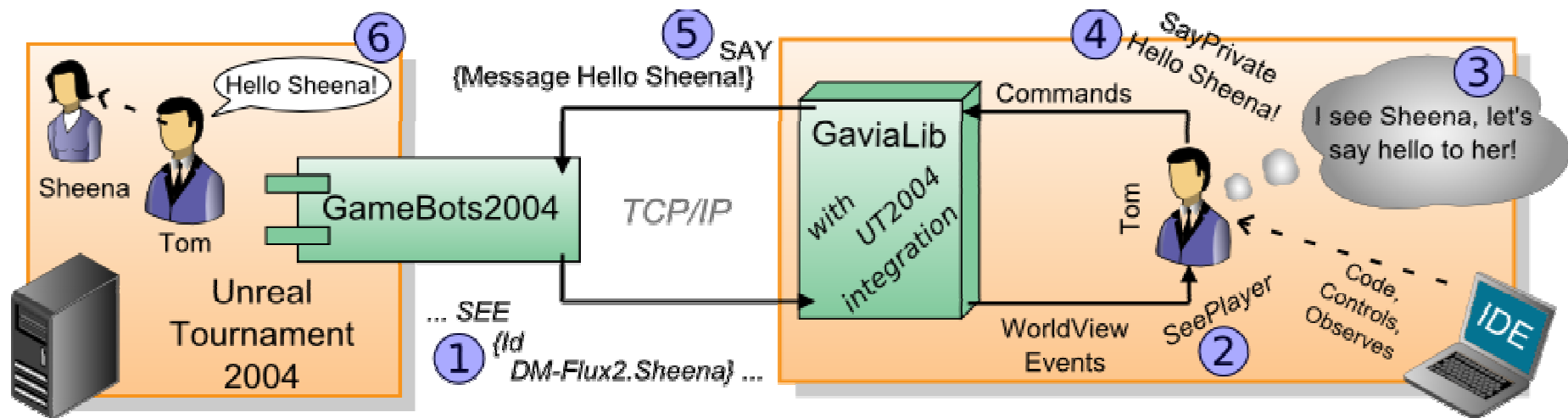
UT2004 bots made easy!

Pogamut 3

Lecture 3 – Senso/Motoric modules

Pogamut 3's agent

ItemPicker

How many of you have tried? ☺

http://diana.ms.mff.cuni.cz/pogamut-devel

There is going to be an example of ItemPicker…

Let's check it through! And extended its functionality to do the 3rd homework…

Modules – Sensoric / Utility

- **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);`

Modules – Path planning/executing

- **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
- *Good starting point – samples 02-NavigationBot*

Modules - Commands

- Commands
  - CompleteBotCommandsWrapper
    - `new CompleteBotCommandsWrapper(bot, getLog());`
    - Contains many submodules
    - You will need `module.getCommunication()`
    - And `module.getSimpleShooting()`
    - For the homework

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 shout 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!