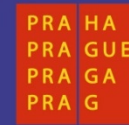




OPERAČNÍ PROGRAM PRAHA
ADAPTABILITA



EVROPSKÝ SOCIÁLNÍ FOND

Pogamut 3 Promo

PRAHA & EU
INVESTUJEME DO VAŠÍ BUDOUCNOSTI

Faculty of Mathematics and Physics
Charles University in Prague
18th February 2014



UT2004 bots made easy!

Pogamut 3 – NAILo68 Practice

Lecture Zero – Promo



Practice Lessons

Outline

1. Themes
2. Concrete Topics
3. Challenges
4. When/Where/Terms



Practice Lessons

(1/4) Themes



Practice Lessons

(1/4) Themes - Real Virtual Worlds



Practice Lessons

(1/4) Themes – UT2004



Practice Lessons

(1/4) Themes – UT2004



Practice Lessons

(1/4) Themes - UDK



Practice Lessons

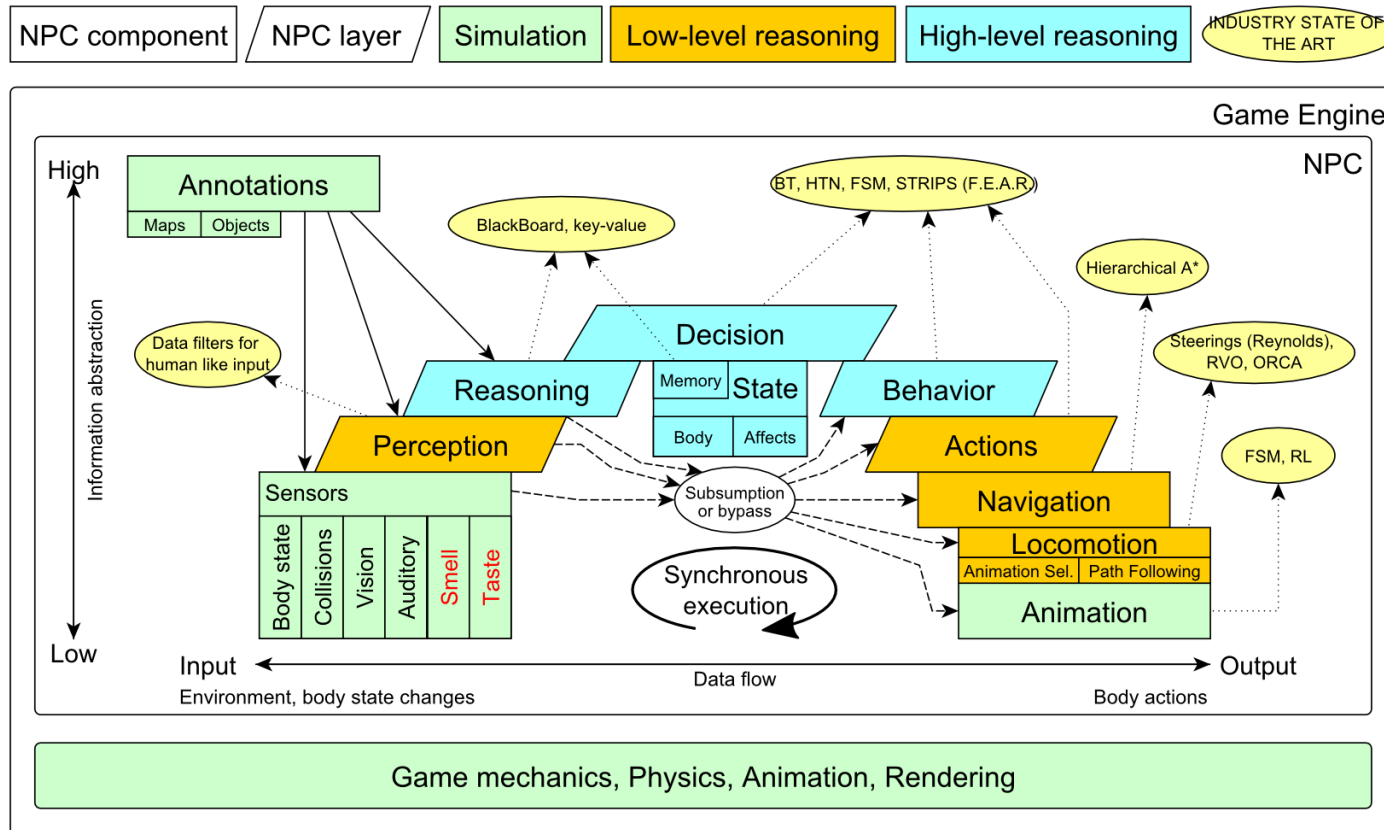
(2/4) Topics



Practice Lessons

(2/4) Topics – GameAI as SoftEng

1. Virtual Mind / Body / World



Practice Lessons

(2/4) Topics – Decision making

2. If-then / FSM / Behavior tree

The image displays a game engine interface with two main panels. The left panel shows a state machine diagram with various states and actions. The right panel shows a code editor with Java code for a `RunMedkits` class.

State Machine Diagram (Left Panel):

- fail** (green bar)
- stay** (orange bar) → **health** (green bar)
- Action** (grey bar) → **doNothing** (blue bar)
- hit-wall** (orange bar) → **hit** (green bar)
- Action** (grey bar) → **jump** (blue bar)
- run-healths** (orange bar) → **succeed** (green bar)
- Action** (grey bar) → **runMedkits** (blue bar)

Code Editor (Right Panel):

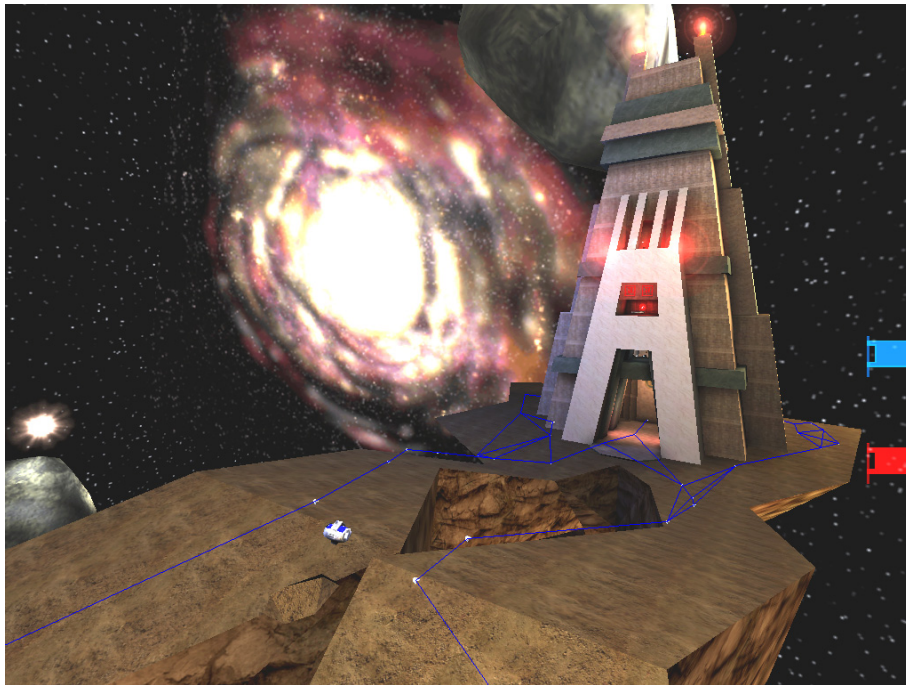
```
Source History [Icons]
RunMedkits.java
17 @PrimitiveInfo(name = "runMedkits", description = "Run around
18 public class RunMedkits extends StateAction<UT2004Context> {
19
20     @Override
21     public ActionResult run(VariableContext params) {
22         //if (true) return true;
23
24         Item item = ctx.getFwMap().getNearestItem(
25             ctx.getItems().getSpawnedItems(ItemType.Category.
26             ctx.getInfo().getNearestNavPoint()
27         );
28
29         if (item == null) {
30             ctx.getLog().severe("No known spawned pickup!");
31             ctx.getNavigation().stopNavigation();
32             return ActionResult.FAILED;
33         }

```

Practice Lessons

(2/4) Topics – Navigation

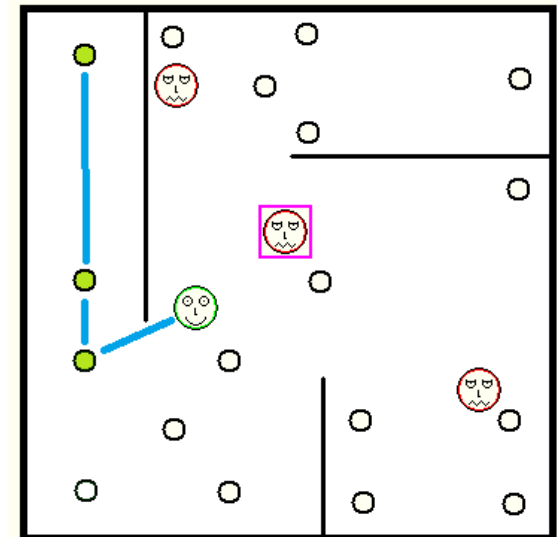
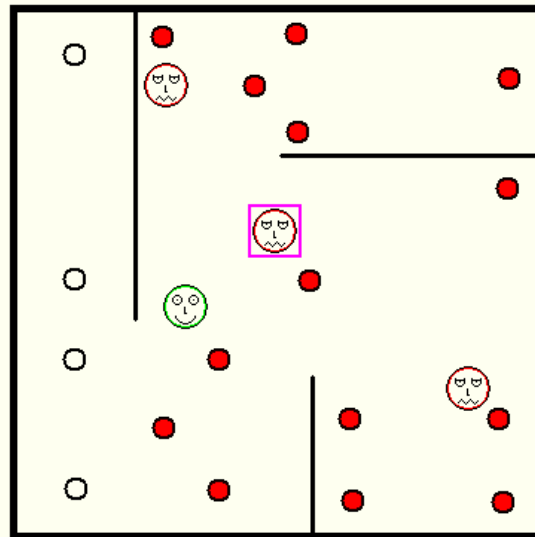
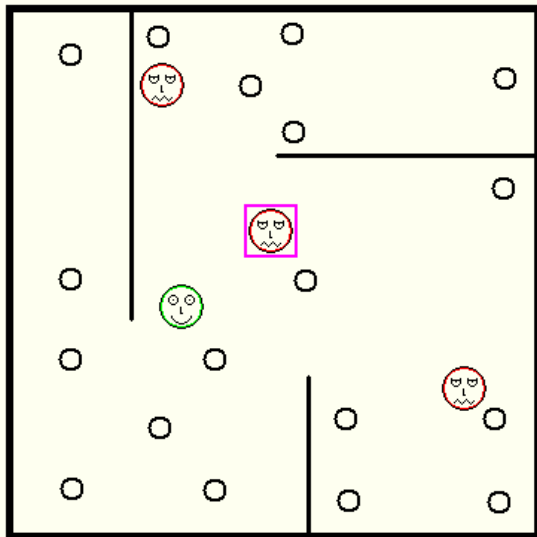
3. Path Finding / Following / Steering



Practice Lessons

(2/4) Topics – Smart Path Finding

4. Advanced A* use



Practice Lessons

(2/4) Topics – 1+1+1 < 3

5. Single agent / Team





Practice Lessons

(2/4) Topics – Some extra?

6. ???

Practice Lessons

(2/4) Topics – Some extra!

6. PogamutCup 2014, 14k prize money, 28.6.2014
www.pogamutcup.com

Home
Jak se zúčastnit?
Kontakt
O turnaji
Pravidla turnaje
Pro účastníky
Předběžná přihláška
Tým
▼ Výsledky [!]
Battles
Bots
Bots - Sources
Replays
Tabulka
Turnaj

Turnaj je za námi, zvítězil tým Gauner and Frei ze ZČU Plzeň. Více viz [Výsledky](#)

Děkujeme všem zúčastněným a s nadějí vyhlížíme na budoucnost a opakování této akce.

Pogamut Cup je turnaj počítačem ovládaných agentů (botů) v prostředí [Unreal Tournament 2004](#) v módu [deathmatch](#). Turnaj pořádá Informatická sekce Matematicko-fyzikální fakulty Univerzity Karlovy v Praze přesněji výzkumná skupina [AMIS](#). Vlastní soupeření proběhne 29. 11. 2012 v rámci dne otevřených dveří MFF-UK v sídle inforatické sekce na [Malostranském](#)



Practice Lessons

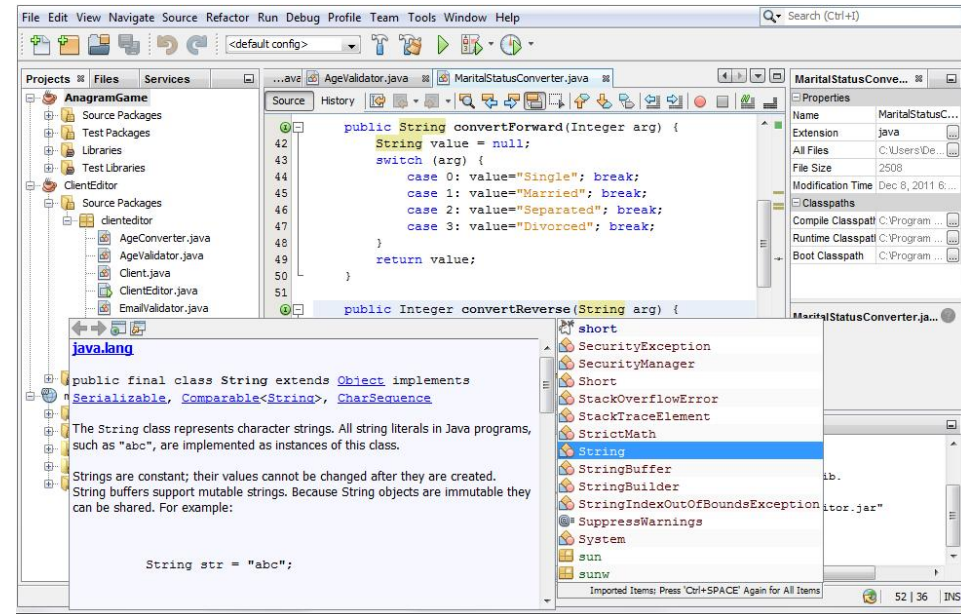
(3/4) Challenges



Practice Lessons

(3/4) Challenges

1. Java (+NetBeans/Eclipse, SVN, Maven)



Practice Lessons

(3/4) Challenges

2. Different programming



Practice Lessons

(3/4) Challenges

2. Different programming



...more thinking, less writing, more trying, brain teasing debugging.



Practice Lessons

(3/4) Challenges

3. PogamutUT2004 - Big complex fishy alien Java library that has roots in stinky UnrealScript



Practice Lessons

(3/4) Challenges

3. PogamutUT2004 - Big complex fishy alien Java library that has roots in stinky UnrealScript

*When you'll be looking at
PogamutUT2004 API...*

Practice Lessons

(3/4) Challenges

3. PogamutUT2004 - Big complex fishy alien Java library that has roots in stinky UnrealScript

*When you'll be looking at
PogamutUT2004 API...*





Practice Lessons

(3/4) Challenges

3. PogamutUT2004 - Big complex fishy alien Java library that has roots in stinky UnrealScript

*... feeling from the
debugging of UT2004
bots.*

Practice Lessons

(3/4) Challenges

3. PogamutUT2004 - Big complex fishy alien Java library that has roots in stinky UnrealScript

... feeling from the debugging of UT2004 bots.



Practice Lessons

(3/4) Challenges

4. Tournaments!



Practice Lessons

(4/4) Where, When, Terms

1. Umělé bytosti 2/2
2. Cvičení: SW1, Po 1400-1530, Út 900-1030
 - Začínáme příští týden v pondělí!
3. Pondělky – Michal Bída
 - Michal.bida@gmail.comÚterky – Jakub Gemrot
 - jakub.gemrot@gmail.com
 - Zápočet
 - Během semestru nasbírat 200 bodů
 - Prezence, testíky, domácí úkoly, turnaje
 - Udělat zápočtový test (2 hodiny kódění)

Practice Lessons

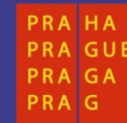
Hope to see >YOUR< bots soon!



<http://pogamut.cuni.cz>



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DĚKUJI ZA POZORNOST



Evropský sociální fond
Praha & EU: Investujeme do vaší budoucnosti