Haunt 2 Overview

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Human-level AI's Killer Application

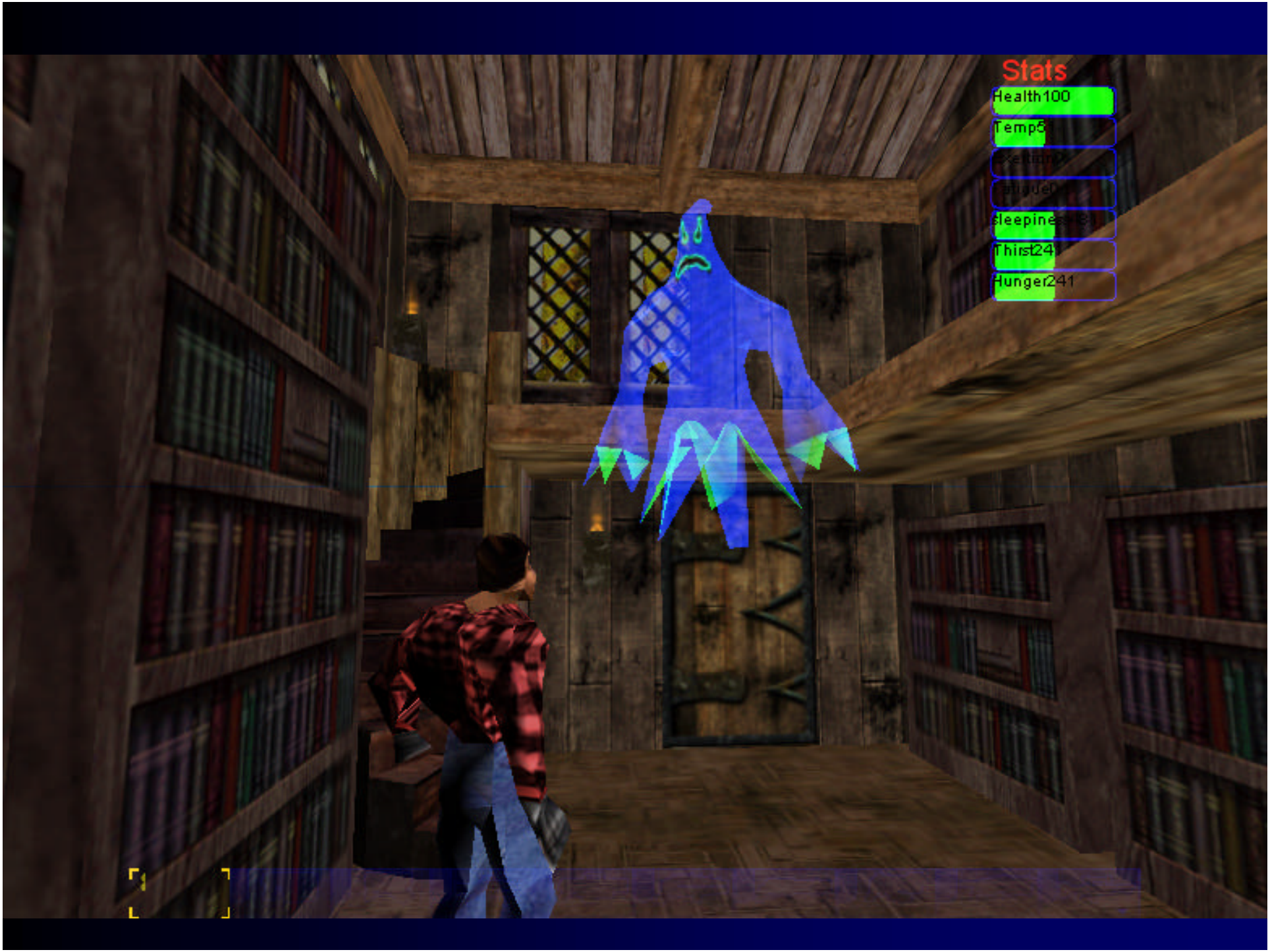
The thesis of this paper is that interactive computer games are the killer application for human-level AI. They are *the* application that will need human-level AI. Moreover, they can provide the environments for research on the right kinds of problems that lead to the type of the incremental and integrative research needed to achieve human-level AI. [Laird & van Lent, 2001]

Our Research

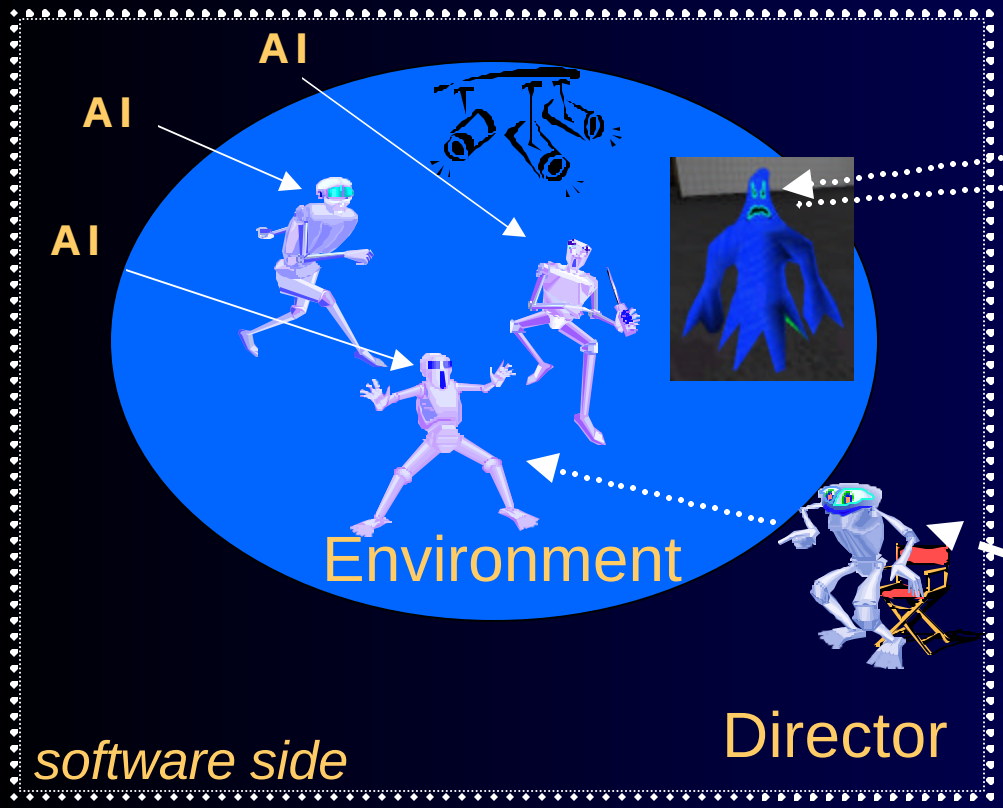
- Create new gaming experiences with good AI
  - First-person adventure game – interactive drama
  - Autonomous AI characters with drives, goals, and knowledge
  - Directing and directable characters

Our Story: Haunt 2

- Adventure/Interactive Fiction
- Human player is energy creature (ghost) in old house
  - Goals
    - Return home
    - Avoid being trapped
  - Problems
    - Can’t pickup dense objects
    - Can’t touch metal
    - Can’t communicate in English
  - Solutions
    - Must get help from AI “human” characters
    - Can “possess” humans for limited time
- AI characters create opportunities and conflicts
  - Lost hitchhiker
  - Evil Scientist
  - Cat


Stats
Health100
Temp5
Thirst241
Hunger241

Interactive Fiction Design



User

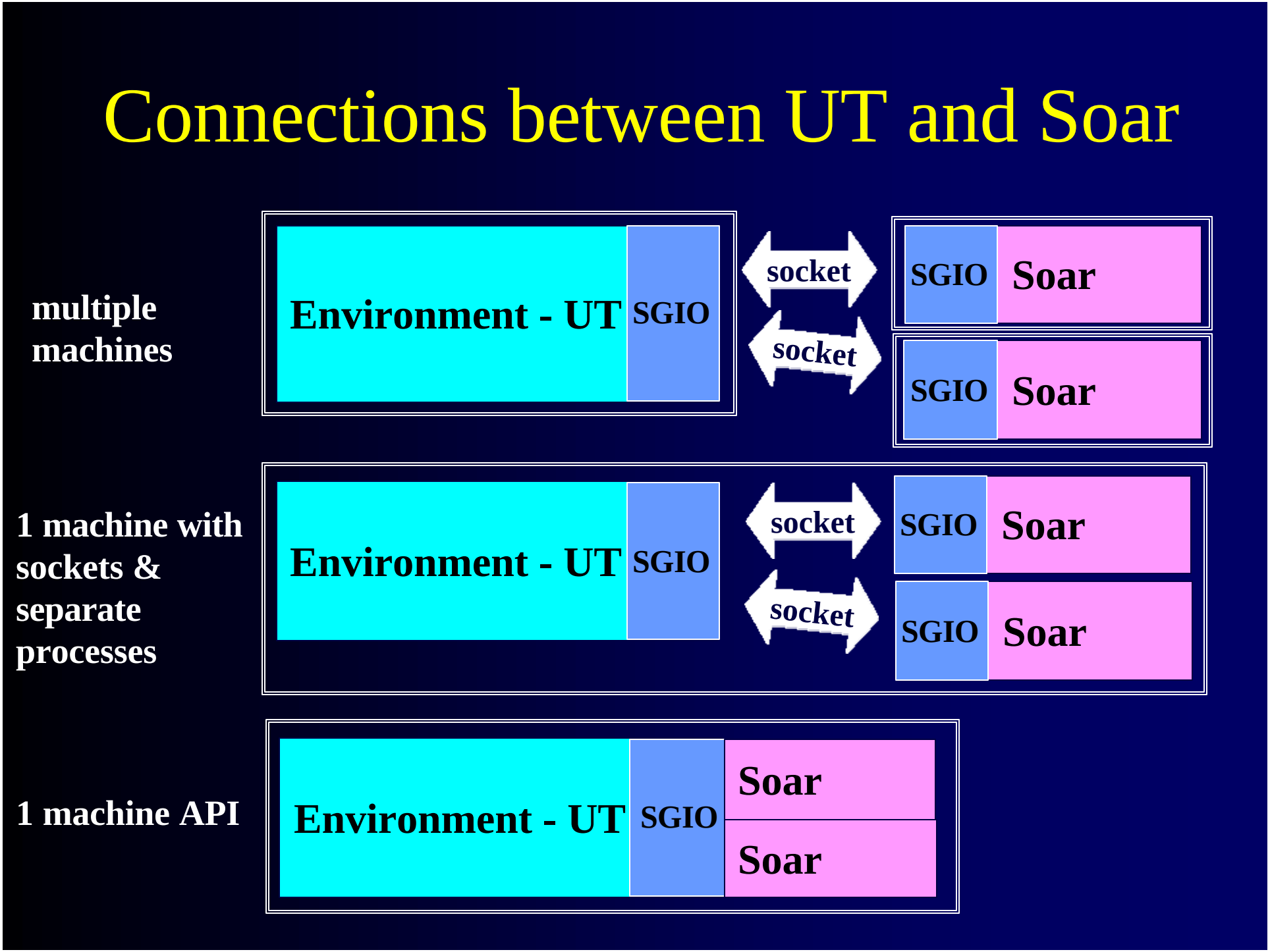
user actions

percepts

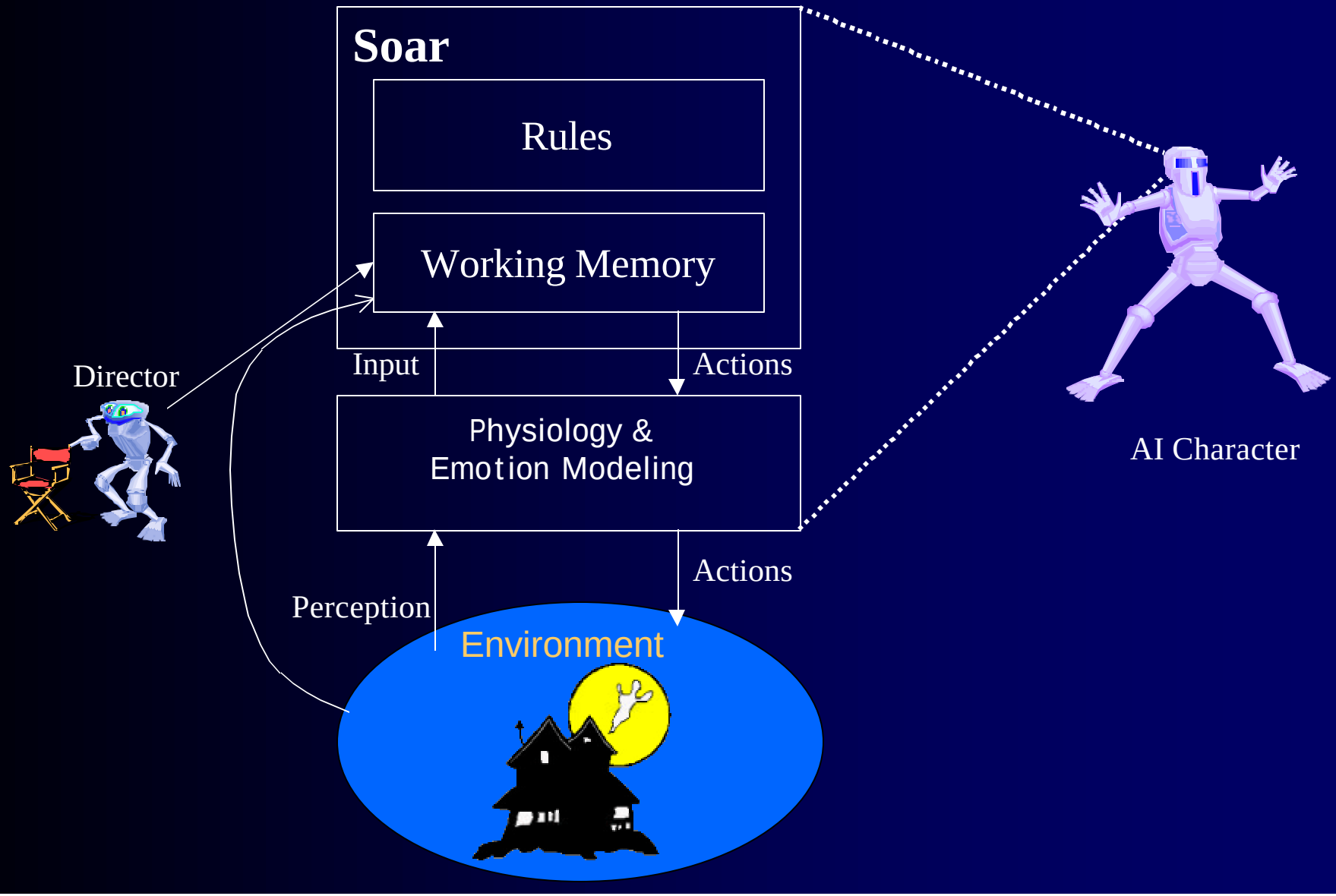
abstract plot

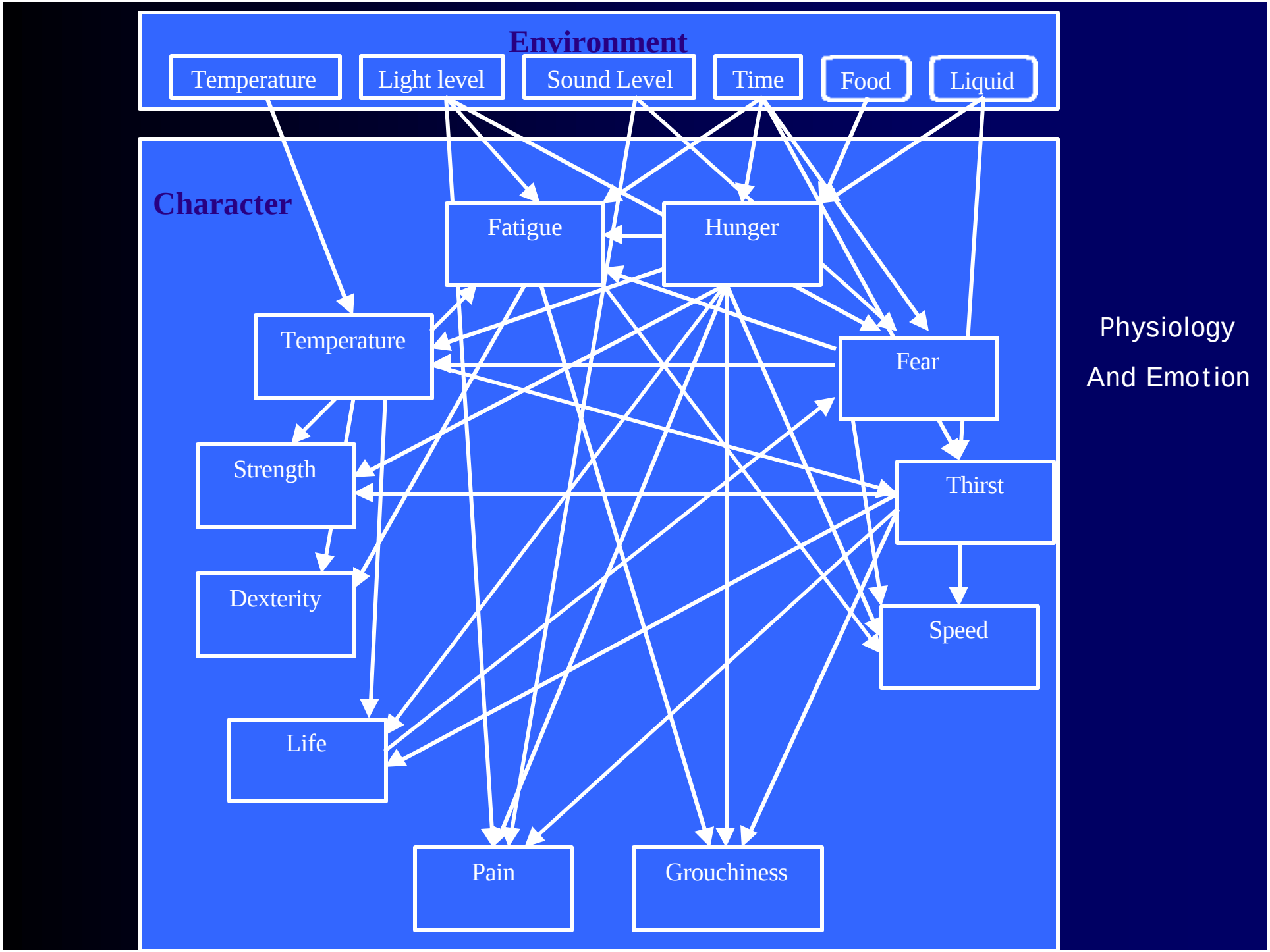
Designer

Connections between UT and Soar



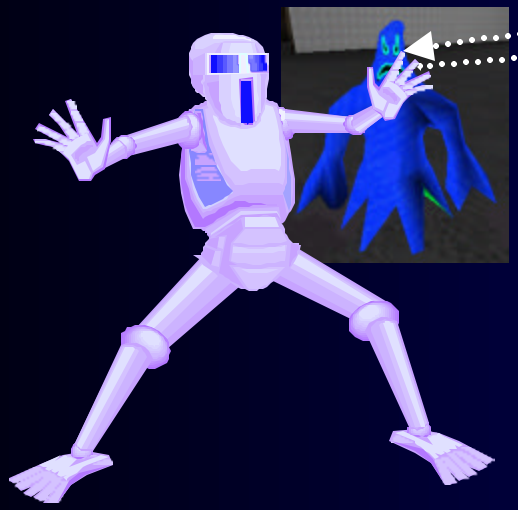
Character Design

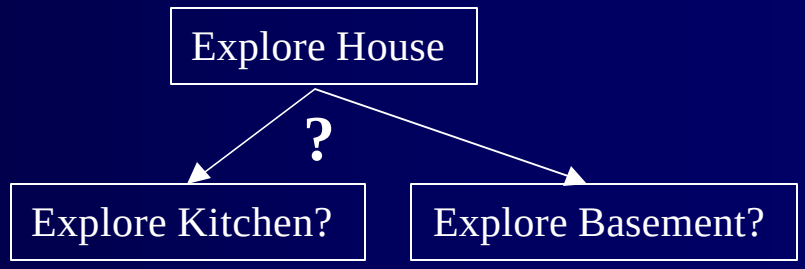



Environment
Temperature
Light level
Sound Level
Time
Food
Liquid
Character
Fatigue
Hunger
Temperature
Fear
Strength
Thirst
Dexterity
Speed
Life
Pain
Grouchiness
Physiology
And Emotion

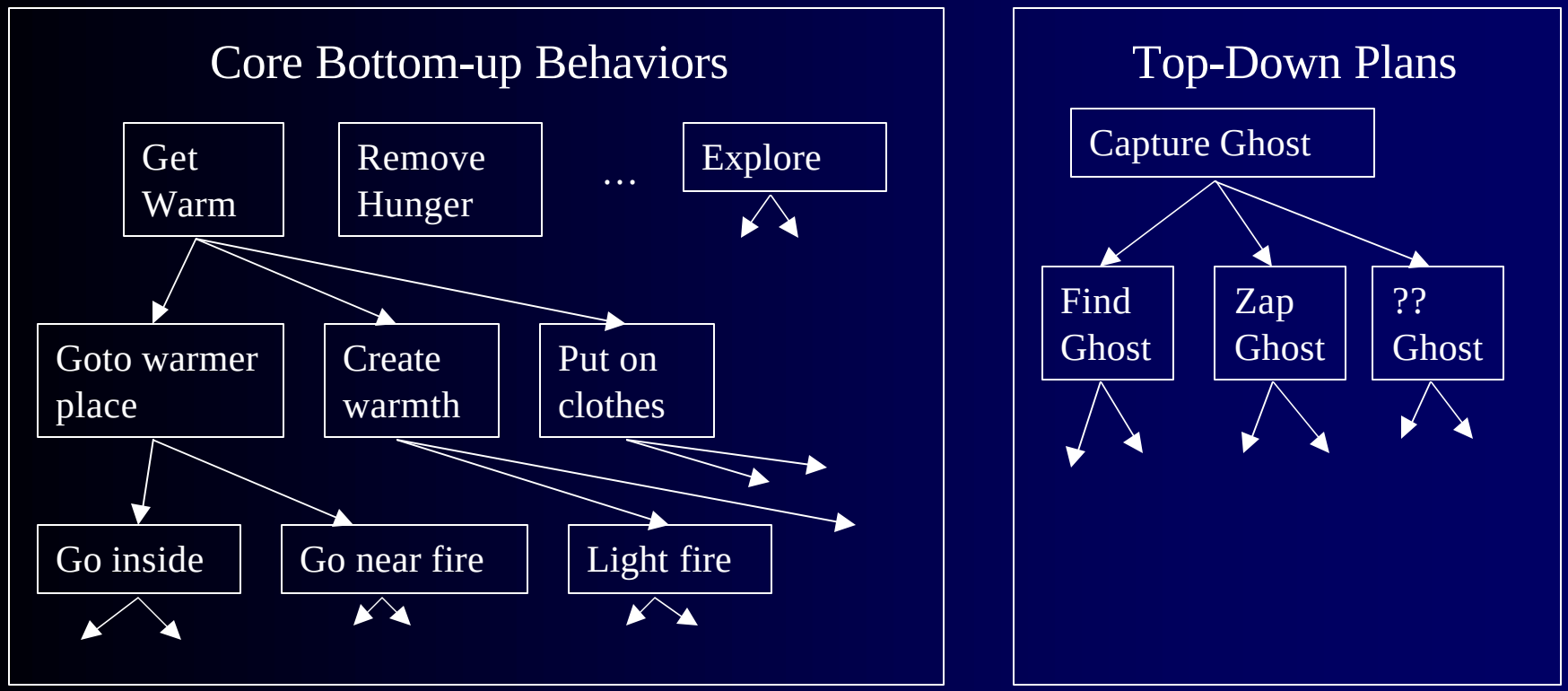
Possession

- Player's ghost can "possess" human AI character
  - AI character must have low fear
  - Player gets to see through AI character's eyes
    - Sees AI characters attributes
    - See AI character goals and actions
  - Player can influence AI character's decisions
    - Only those that are tenuous – operator ties
    - Cause AI character's fear level to increase



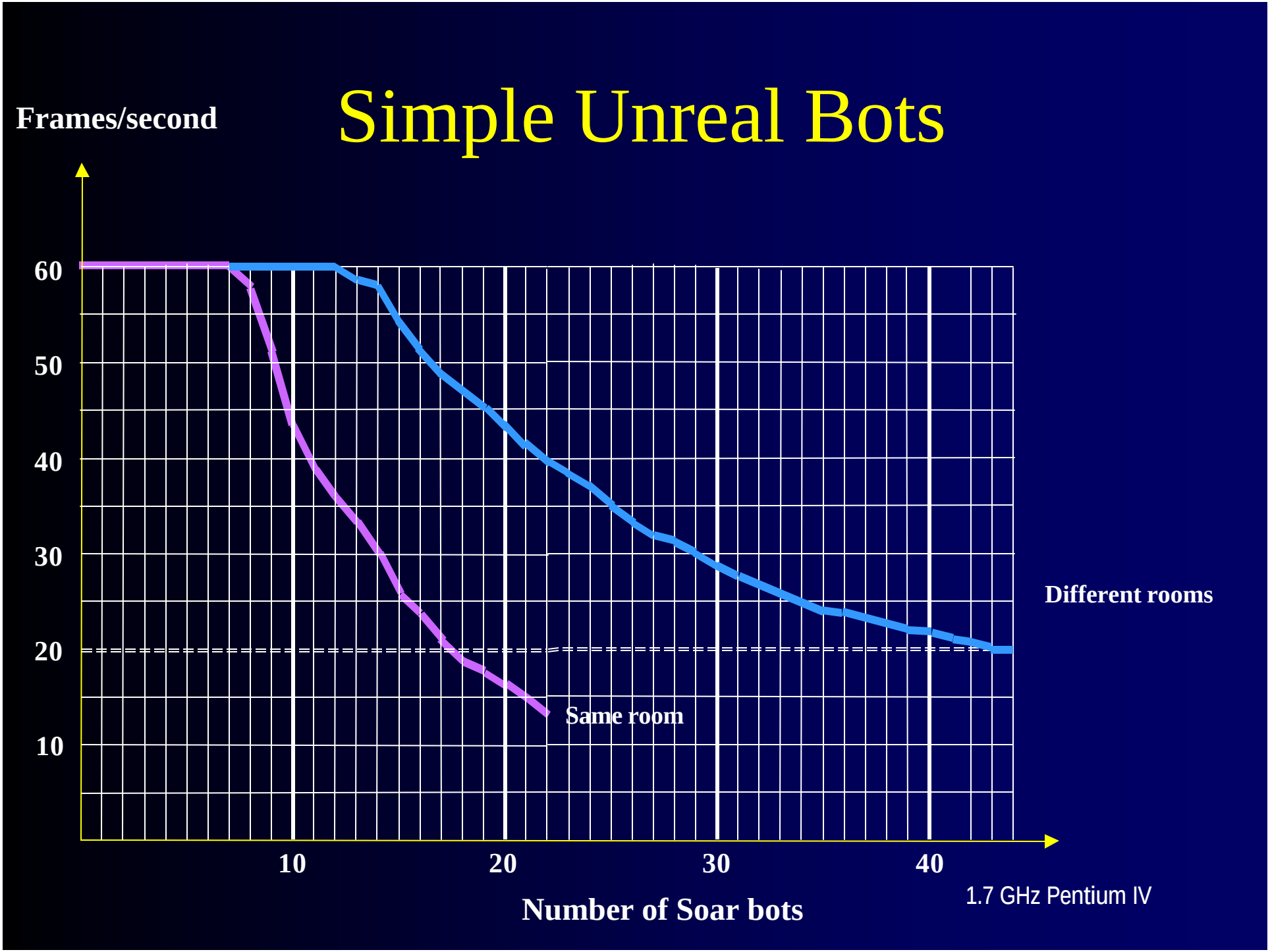


Knowledge Organization



Rule propose operators based on goals/drives and current situation

Simple Unreal Bots



Gold and Coal

- Gold
  - Have the infrastructure in place to do some cool stuff
- Coal
  - Haven’t done the cool stuff yet