

# PRACTICAL GAME PROGRAMMING

In a Nutshell:

- 6 evenings + project
- 5 cr
- Prereq: some kind of programming  
(c, c++, java, actionscript,  $\mu$ C assembly...)
- All course material will appear at:

**<http://iki.fi/sol/gpc/>**

# WHO AM I?

- Jari Komppa, B. Eng, EVTEK, 2008
- A decade or so game industry experience.
- A couple decades or so programming as a hobby.
- According to mobygames, 9 commercial titles.
- A bunch of freeware games.
- Demoscene background.
- <http://www.imdb.com/name/nm3657691/> =)

# WHO ARE YOU?

- Made any games?
  - Commercial?
- Programmed outside school?
  - For money?
- Play games?
  - Don't play games?

# COURSE STRUCTURE

- 6 evenings
  - Various topics, but feel free to ask about anything
- Some homework
- No exam
- Project: everyone does a game
  - Solo or in small teams
- Valuation: 75% project, 25% homework
- Must do the project to pass.

# GOALS

- Game programming mentality.
- Some tricks of the trade.
- Terminology.
- Springboard for further exploration.

# WHAT IS GAME PROGRAMMING

- Possibly the most difficult field of programming out there.
  - Lots of ground to cover..
  - ..but nobody's life is at stake.
- But also one of the most rewarding!
- Game programming mentality will help in other fields too.

# WHAT IS GAME PROGRAMMING

AI, Audio, Databases, Documentation, Gameplay, Graphics, Localization, Logic, Networking, Optimization, Physics, Polishing, Portability, Scripting, Systems programming, Resource management, Tools...

(Animation, Asset management, Cutscenes, Design, Modelling, Motion capture, Music, Outsourcing, Promotion, Rigging, Sound effects, Storyboarding, Storyline, Testing, Texturing, UI design, Voice acting...)

# WHAT IS A GAME?

- Example: the simplest game imaginable;

Indian Lots



# WHAT IS A GAME?

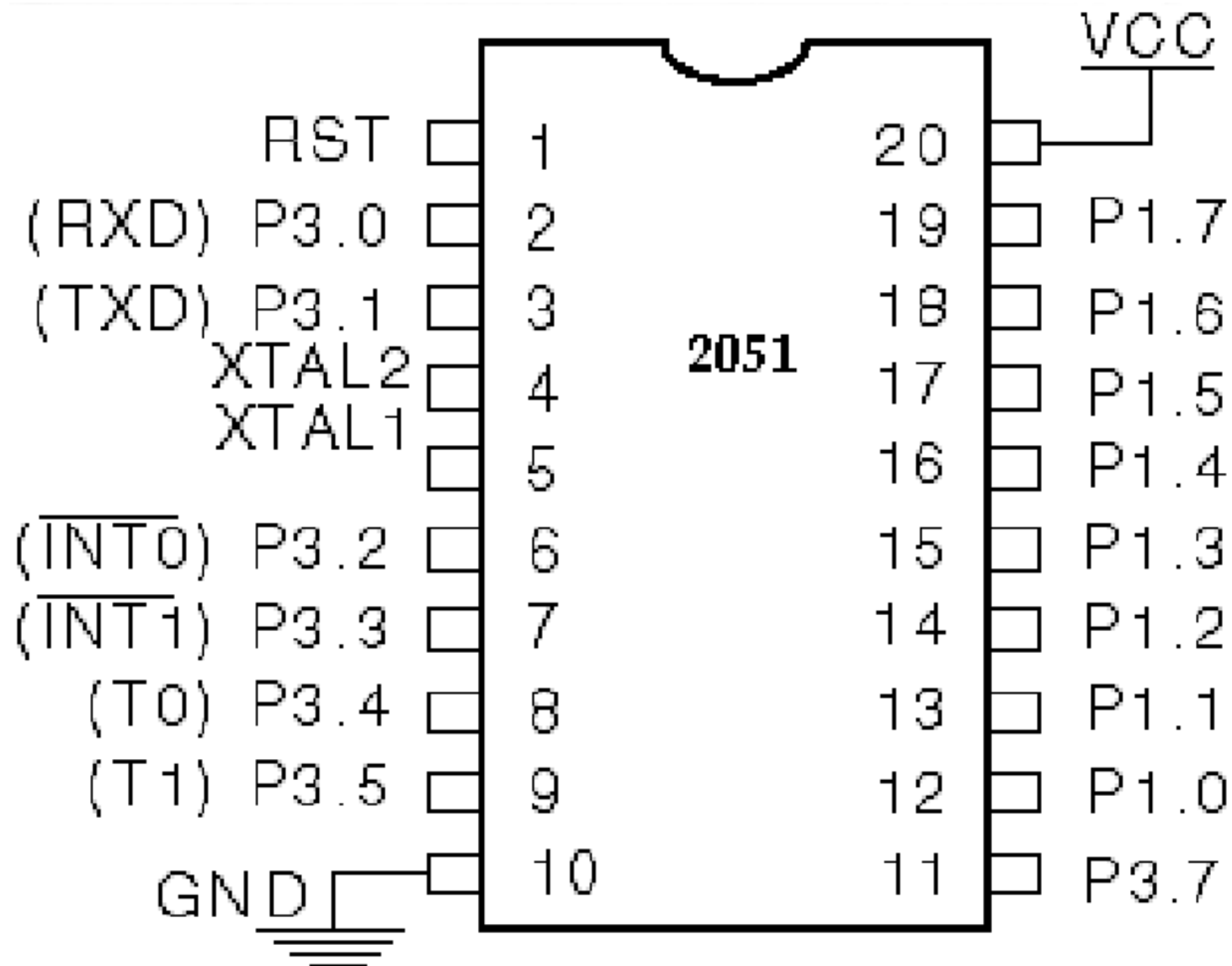
- In a purely technical perspective, game is:
  - Input
  - Time
  - Output
  - (possibly, repeat)
- ..which turns vending machines into games too.
- So what is a game?

# WHAT IS A GAME?

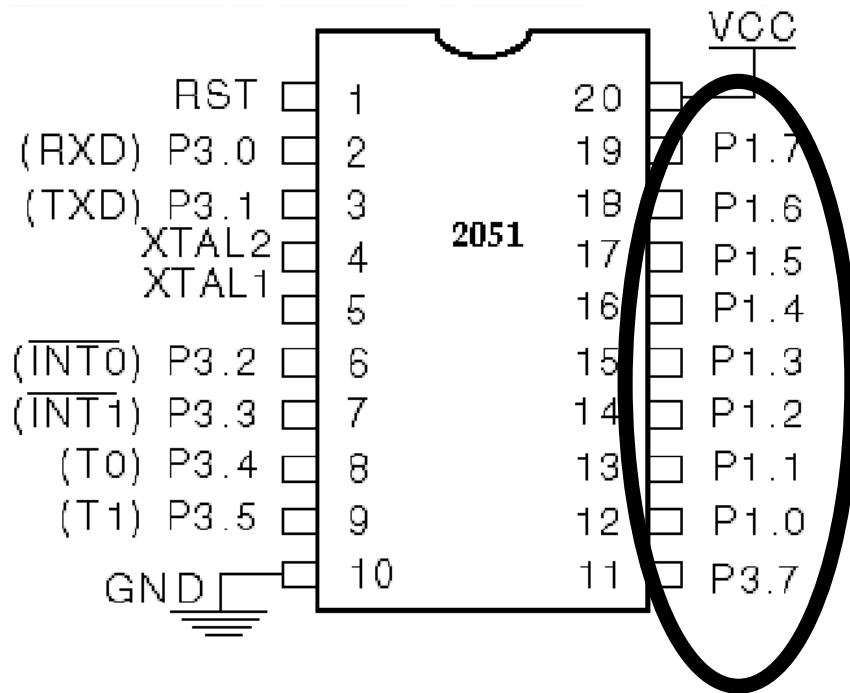
According to Wikipedia:

- A game is a structured activity, usually undertaken for enjoyment and sometimes used as an educational tool.
- Games are distinct from work, which is usually carried out for remuneration, and from art, which is more concerned with the expression of ideas. However, the distinction is not clear-cut, and many games are also considered to be work or art.

# INPUT, TIME, OUTPUT



# INPUT, TIME, OUTPUT



In practise, 9 free pins for either input or output.

4 leds, 4 buttons?  
1 pin for audio..

# INPUT, TIME, OUTPUT

