Hardware Simulator Based on Natural Causes and Effection Behavior of Cat-Mice in an Ecosystem

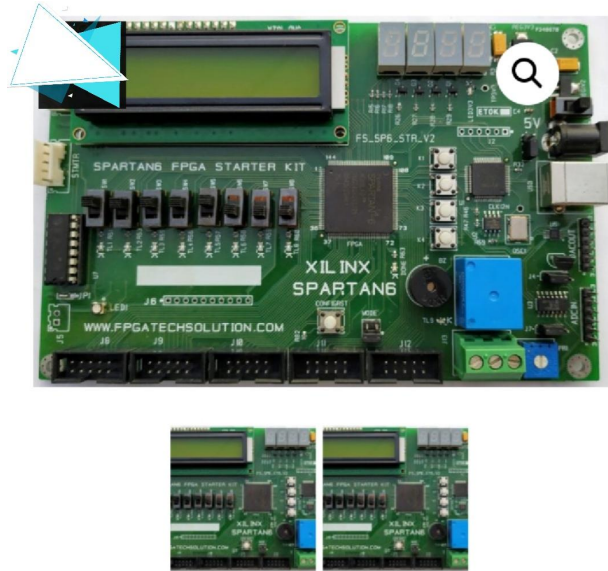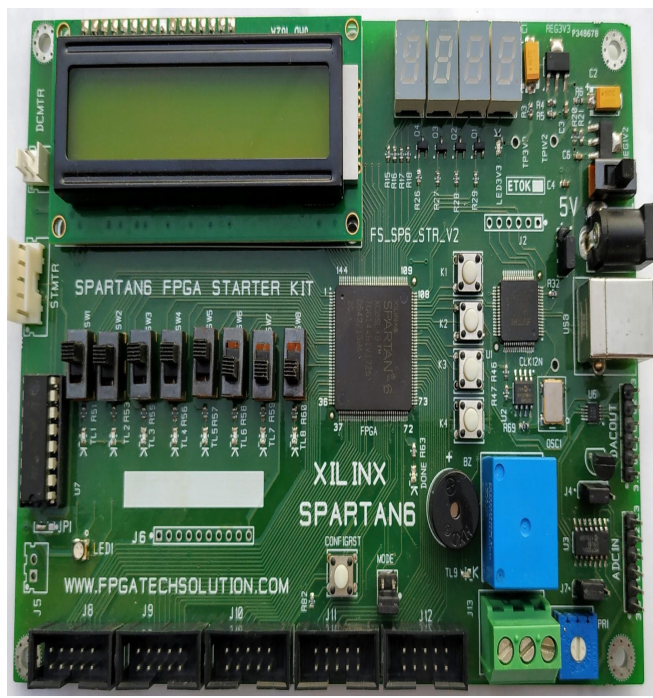Frank Appiah

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CatphySim - Research Plan

HARDWARE SIMULATOR BASED ON NATURAL CAUSES AND EFFECTION BEHAVIOR OF CAT-MICE IN AN ECOSYSTEM.

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This work is based on early career fellowship since 2019/20 hosted by HR Department.

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Overview

In this novel project (CatceSim), a thorough discussion to the elements of simulation model of a cat control knowledge is made as a cause-effect hardware simulator with Very High Description Language (Vhdl). The philosophical, psychological and physical views of the cat design are treated. The organizational behaviour of a cat that makes it intelligent and interact is also implemented based on behavioral architecture. Very High Hardware Description Language(Vhdl) Programming of case-2-case technique, if then reasoning and branch reasoning are look at.

Goals

1. Look at the natural simulation of cat and mice interaction due to their regulatory body in cybernetics manner.

2. Implementation of simulator in the causation and Effection of animal information due to their intelligent design.

3. Build a hardware simulator in training the epistemic knowledge of cat control.

4. A psychological point on research process and as such develop experiments on subject matter expertise in animal communications.

5. Create cat cause-effect interaction with control terminal display for educational purposes.

6. Create a vhdl programming tutorial for Student relations on digital hardware.

Specifications

A cause-effect relationship demonstrates interaction among real-world systems among their sub-systems. In simulations, cause-effect relationships link together elements in behavioural relationship. It can be used to organize activities cohesively.

Cat Control Ecosystem

1. Cat on the ceiling creates a hole into the ceiling via secreting urine to the compress paper sheets.

2. Cat chased out of the room.

3. Cat attacks human on the chase.

4. Cat -Human room fighting is dis-entangled.

5. Cat escapes via a hole created on the net behind the window -glasses.

6. Cat finally leaves the room.
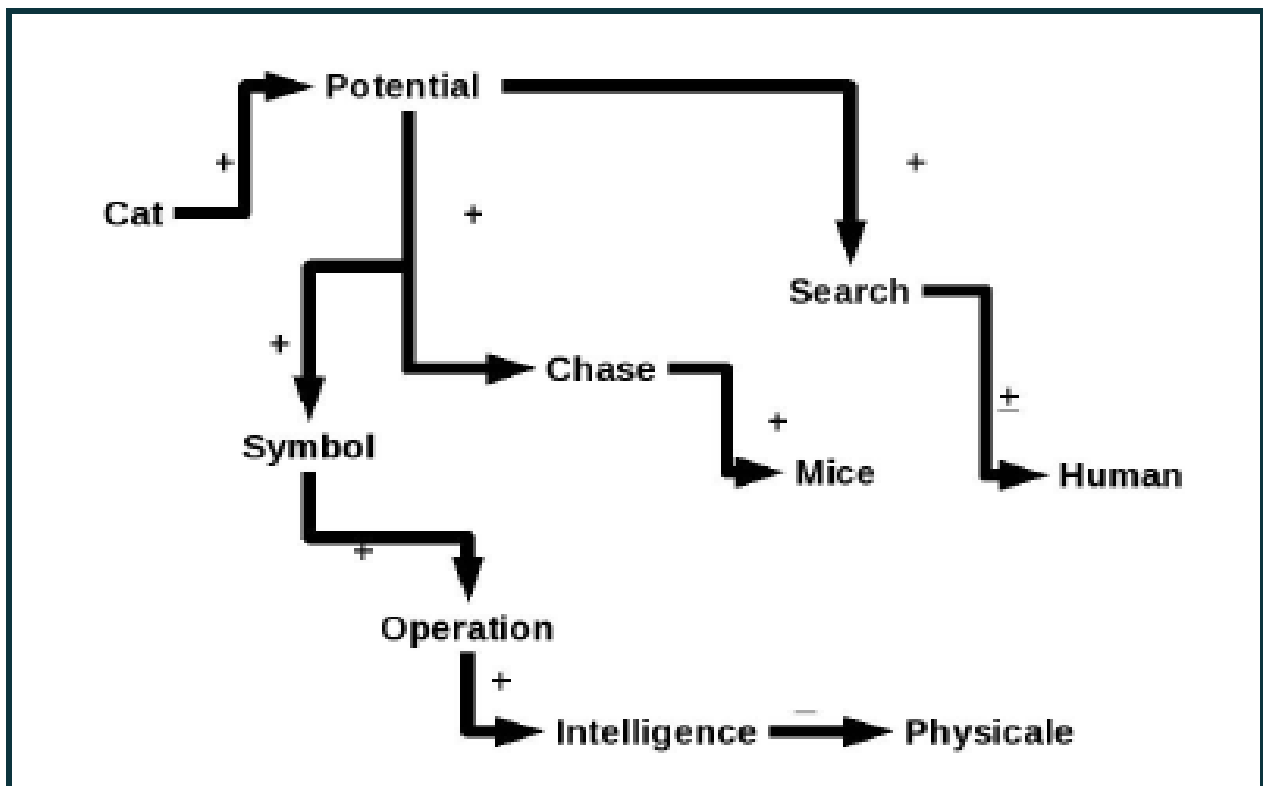
Items on Methodology :

1. CASE TECHNIQUE
2. (META)/CASE REASONING
3. SIMULATION BEHAVIOUR (REQUIREMENT ANLAYSIS)
4. SIMULATION RELATIONSHIPS

VHDL CODING : Uses text Io library in implementation of text display on FPGA board. FPGA is the shorthand for field programmable gate array. This is the technology to be used in the implementation of hardware simulator.

Milestones

I. Vhdl Codes

II. A Simulator based FPGA technology.

Reference

1 Presentation on Simulation, Easychair.org, 2020.
https://easychair.org/my/slide_download.cgi?version=9230;file=pdf.