

# Context Aware Vision using Image-based Active Recognition

## CAVIAR Behaviour Labeling Schema Summary

June 6, 2005

### 1 Overview

#### 1.1 Plaza Observation Setting

This presents the contexts, situations, roles and activity levels for the contexts expected in the INRIA plaza demonstration.

The models are currently expressed as finite state automata, with the states as individual situations.

The possible contexts are: Browse, Idleness, Drop-Dead, Walk, Fight, Meet, Leave-Object.

Solid ovals are individual situations, dashed ovals are group situations. Vertical bars are when two situations need to start or end at the same time.

For each situation, there is a set of situations. Each situation has listed the the allowable Roles (e.g. "Browser") and allowable Movements (e.g. "Inactive").

#### 1.2 Shopping Centre Observation Setting

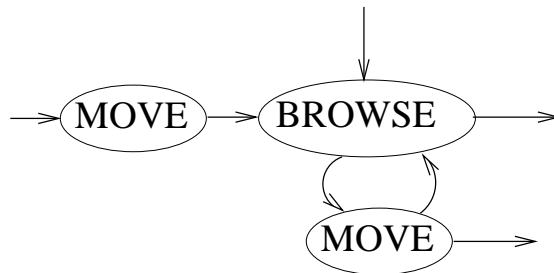
This presents the contexts, situations, roles and activity levels for the contexts expected in the shopping demonstration.

The possible contexts are: (from before) Browse, Idleness, Walk, Interact plus some new ones: simple-enter, window-shop, exit, reenter

## 2 The Schemas

### 2.1 Browse Context

Actually looking at some information display or in a shop window:

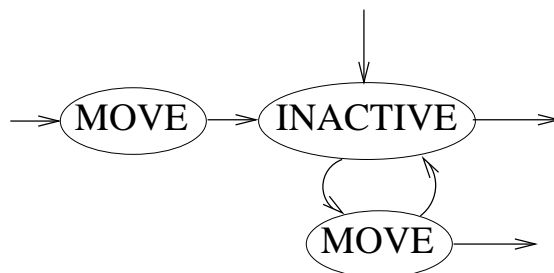


MOVE: Walker/Walking

BROWSE: Browser/{Active,Inactive}

### 2.2 Idleness Context

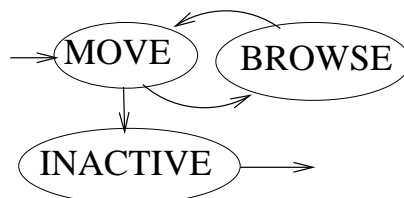
Just standing around, ie. loitering:



MOVE: Walker/Walking

INACTIVE: Walker/{Active,Inactive}

### 2.3 Drop Dead Context



MOVE: Walker/Walking

INACTIVE: Walker/{Active,Inactive}

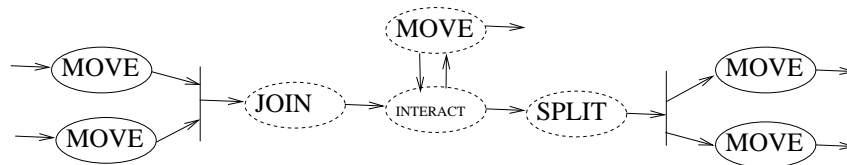
BROWSE: Browser/{Active,Inactive}

## 2.4 Walk Context



MOVE: Walker/Walking,Running

## 2.5 Meeting/Interaction Context



MOVE (individual): Walker/Walking

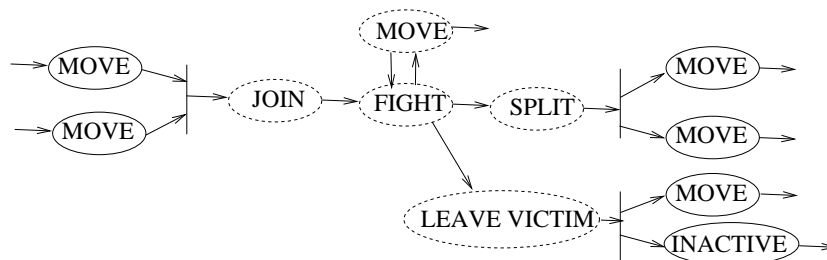
MOVE (group): Walkers/Movement

JOIN: Meeters/Movement

INTERACT: Meeters/{Active,Inactive}

SPLIT: Meeters/Movement

## 2.6 Fight Context



MOVE (individual): Walker/Walking

MOVE (group): Walkers/Movement

JOIN: {Fighters,Meeters}/Movement

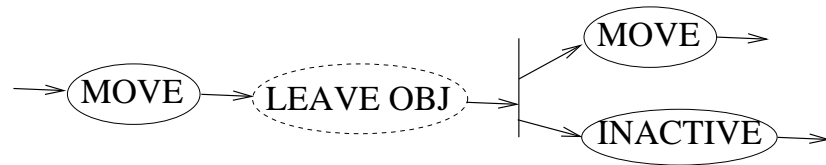
FIGHT: Fighters/{Active,Inactive}

SPLIT: Fighters/Movement

LEAVE VICTIM: Left-victim/{Active,Inactive}

INACTIVE: {Fighters,Walker}/{Active,Inactive}

## 2.7 Leave-Object Context



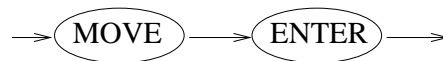
MOVE: Walker/Walking

INACTIVE: Left Object/{Active,Inactive}

LEAVE OBJECT: Walker/{Active,Inactive}

## 2.8 Simple-enter Context

Walking and then entering a shop.

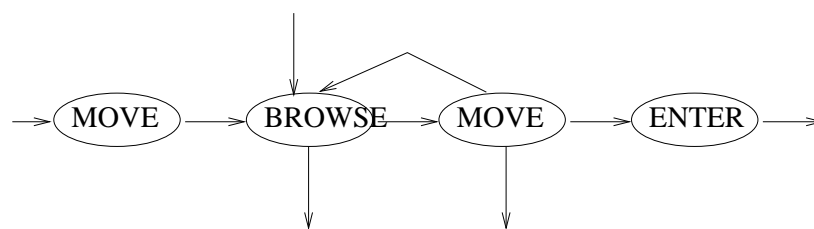


MOVE: Walker/Walking

ENTER: Walker/Walking

## 2.9 Window-shop Context

Walking past a shop window at various places and then entering shop (or walking away).



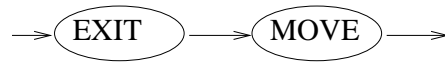
MOVE: Walker/Walking

ENTER: Walker/Walking

BROWSING: Browser/{Active,Inactive}

## 2.10 Exit Context

Exiting a shop and walking away.



EXIT: Walker/Walking

MOVE: Walker/Walking

## 2.11 Re-enter Context

Exiting a shop and then reentering it.



EXIT: Walker/Walking

MOVE: Walker/Walking

ENTER: Walker/Walking