CAVIAR SURVEILLANCE GROUND-TRUTH DATA SETS

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DATA SETS

GROUND TRUTH MODEL

XML ENCODING

ISSUES

TYPICAL LOBBY FRAME

INDIVIDUALS, GROUP

TYPICAL SHOPPING FRAMES

SYNCHRONIZED PAIRS: WIDE BASELINE
STEREO, MULTI-CAMERA TRACKING

THE DATA SETS

PUBLIC SPACE SURVEILLANCE: INRIA JULY 2003

 SEQUENCES: 28

 FRAMES: 26419

 SCRIPTED ACTIVITIES: WALKING, BROWSING,
  COLLAPSE, LEAVING OBJECT, MEETING,
  FIGHTING

 2+ SEQUENCES PER EACH ACTIVITY TYPE

SHOPPING SURVEILLANCE: LISBON JANUARY 2004

 SEQUENCES: 26*2

 FRAMES: 72518

 SCRIPTED ACTIVITIES: WALKING, MEETING,
  WINDOW SHOPPING, SHOP ENTER, SHOP EXIT

 2+ SEQUENCES PER EACH ACTIVITY TYPE

ACTIVITY DESCRIPTION MODEL 1

A HIERARCHY OF DESCRIPTIONS (CROWLEY ET AL)

TARGETS:
  MOVING INDIVIDUALS AND GROUPS OF INDIVIDUALS

TARGET DESCRIPTION:
  BOUNDING BOX ID, CENTRE COORDINATES, WIDTH,
  HEIGHT, ORIENTATION OF MAIN AXIS

MOVEMENT LEVEL LABEL:
  INACTIVE, ACTIVE, WALKING, RUNNING

SITUATION LABEL:
  INSTANTANEOUS SITUATION DESCRIPTION,
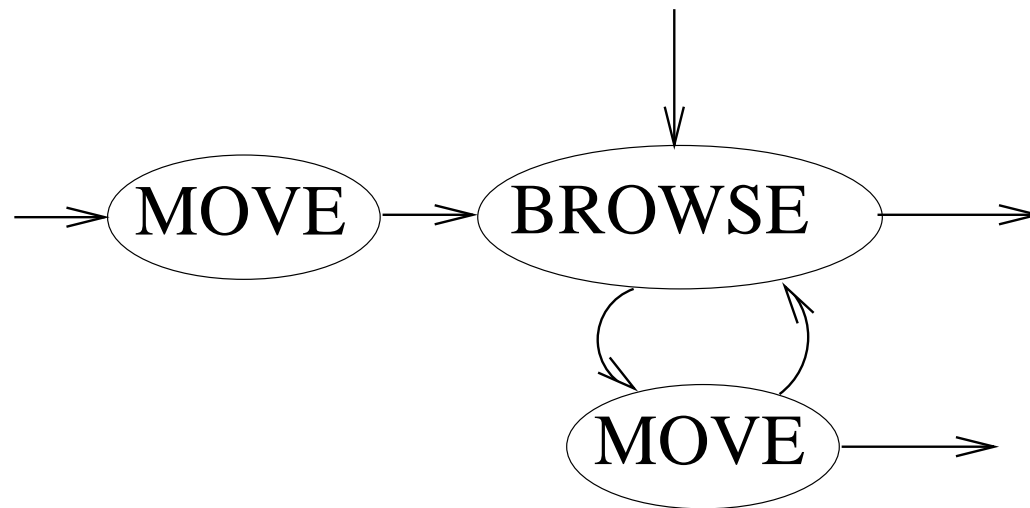 EG. BROWSING, IDLE, JOINING A GROUP

ROLE LABEL:

    WHAT ROLE THE TARGET HAS IN THE SITUATION,

    EG. LEFT OBJECT

CONTEXT LABEL:

    WHAT THE TARGET IS DOING IN THE WHOLE

    SEQUENCE: EG. WINDOW SHOPPING

ACTIVITY DESCRIPTION MODEL 2

BROWSE CONTEXT: A SEQUENCE OF "MOVE" AND
"BROWSE" SITUATIONS

SITUATION	ALLOWED ROLES	ALLOWED ACTIVITY
MOVE	WALKER,BROWSER	WALKING
BROWSE	BROWSER	ACTIVE,INACTIVE

XML ENCODING

```
<dataset name="LeftBag">  ...  <frame number="517">
    <objectlist>    <object id="2">
        <orientation>10</orientation>
        <box xc="210" yc="247" w="55" h="39" />
        <appearance>visible</appearance>
        <hypothesislist>
          <hypothesis id="1" prev="1" evaluation="1.0">
            <movement evaluation="1.0">walking</movement>
            <role evaluation="1.0">walker</role>
            <context evaluation="1.0">immobile</context>
            <situation evaluation="1.0">moving</situation>
          </hypothesis>
        </hypothesislist>
      </object>    </objectlist>
  </frame>  ... </dataset>
```
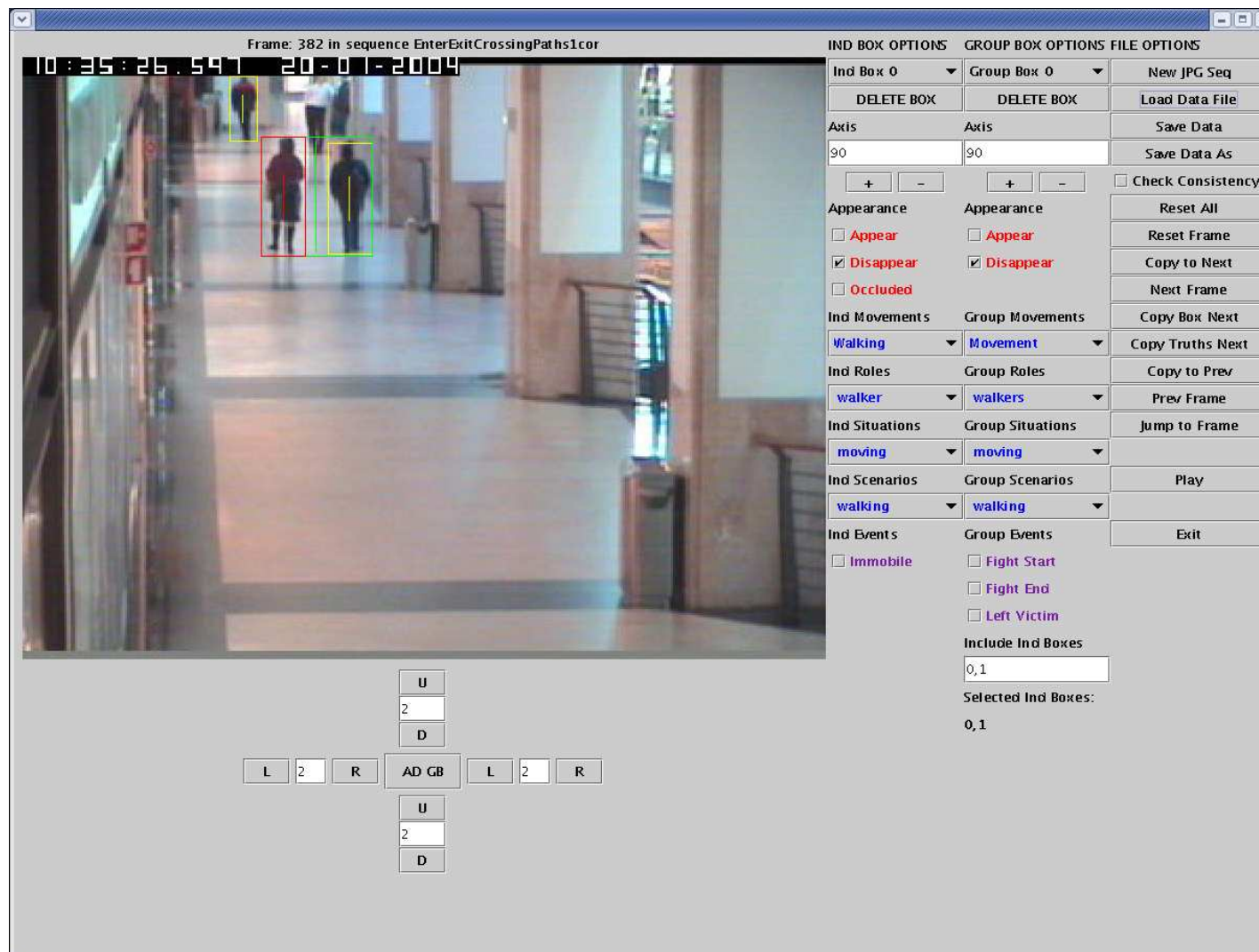
LABELLING PROCEDURE

10 LABELLERS

JAVA LABELLING TOOL

AUTOMATIC SYMBOLIC LABEL
VALIDATION

HUMAN CHECKERS (RBF, JB)

1 SEQUENCE WITH 3 LABELLINGS FOR
COMPARISON

JAVA LABELLING TOOL

ACCESS

`http://homepages.inf.ed.ac.uk/...`
        `rbf/CAVIARDATA1/`

1462 DOWNLOADS SINCE MARCH 2005
(MANY BEFORE BUT NO COUNTER)

ALL FRAMES + MPG

School of Informatics, University of Edinburgh

ISSUES

- GROUND TRUTH VARIABILITY

- OMNISCIENT BEHAVIOUR LABELING

- CONCATENATED CONTEXTS

- WHAT IS A GROUP?

- MULTIPLE *VERSUS* UNIQUE LABELS

- BOUNDING BOX *VERSUS* TARGET OUTLINE

CAVIAR ground truth

Fisher slide 12