Lifelog Task at NTCIR-12

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Lifelogging: Externalising life experience using sensors and software

This task: To evaluate different methods of retrieval and access.

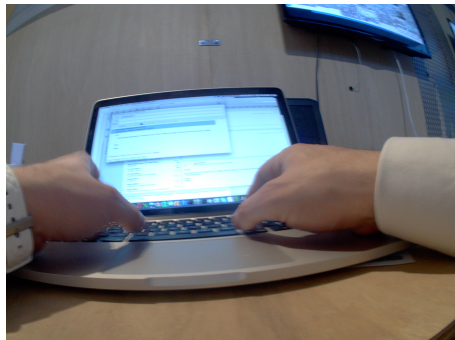# Lifelogging Generates Massive Multimodal Data Archives

Multimodal Data Collection

Images from wearable cameras

Semantic Locations

Activities

Other Sensor outputs

Lifelog Pilot Task

- A task designed to encourage research advances in organising and retrieving from lifelog data:
  - Huge personal data archives with a significant semantic gap between the user and data
- Query dependent unit of retrieval
- Huge multidisciplinary potential
- A challenging area with many diverse types of information need
  - Hence we employ two tasks in this pilot year

Two Tasks

LSAT – Lifelog Semantic Access Task
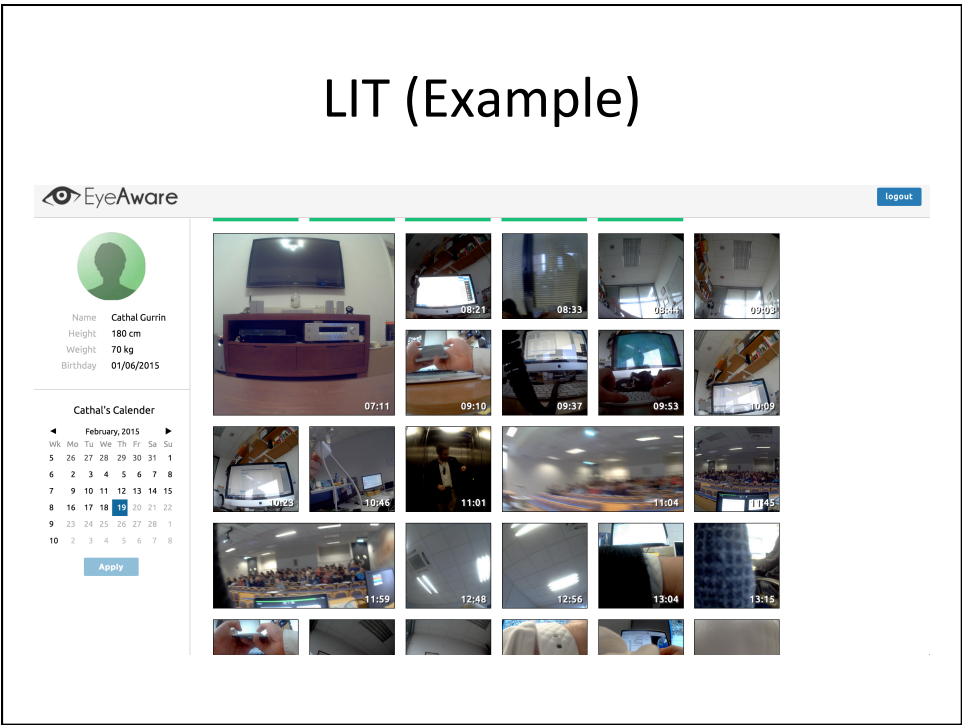
LIT – Lifelog Insights Task
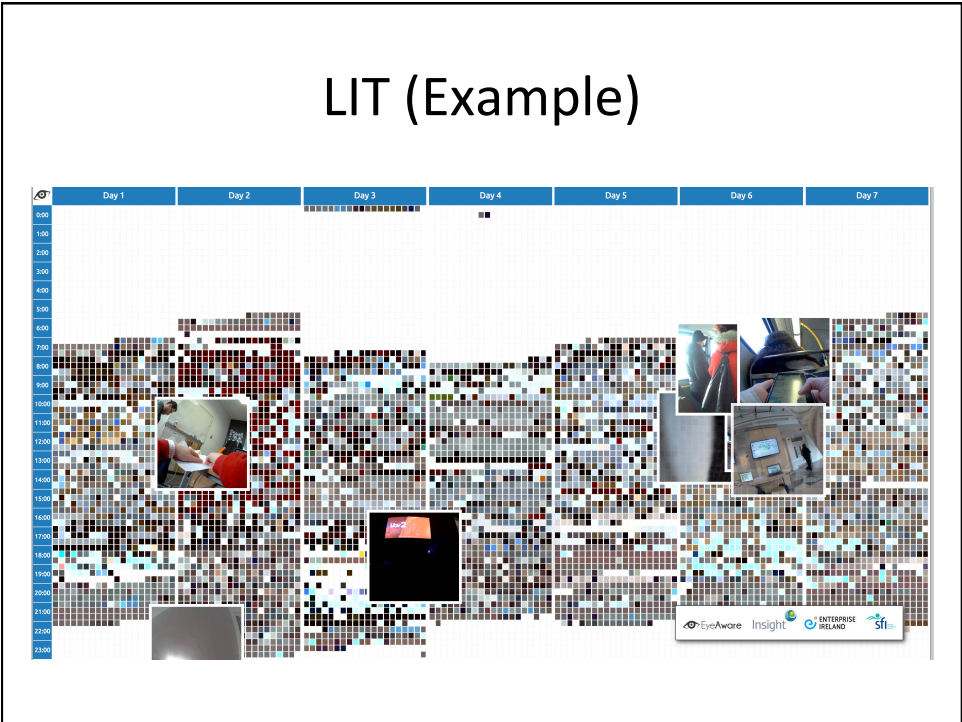
LSAT (Task 1)
Lifelog Semantic Access Task

- Known-item task:
  - Models the RETRIEVAL need from lifelogs
  - Retrieve *N* segments that match information need
- Interactive or Automatic participation
- **Interactive**: Time limit for fair and comparative evaluation in an interactive system with users
- **Automatic**: Fully-automatic retrieval system. Automated query processing
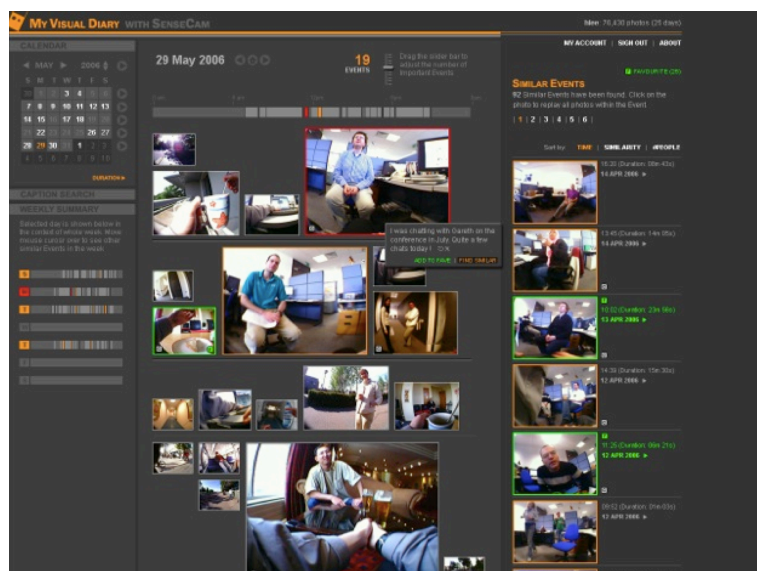
LIT (Task 2)
Lifelog Insight Task

- Models the need for REFLECTION over lifelog data
- Exploratory task, the aim is to:
  - encourage broad participation
  - novel methods to visualise and explore lifelogs
- Same data as LSAT task
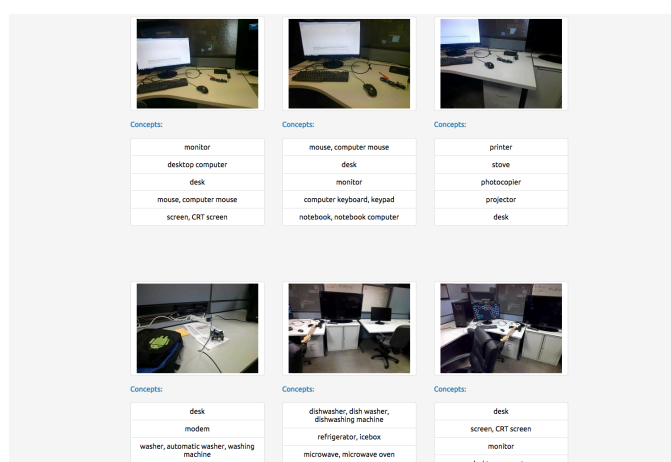- Presented via demo/poster.

LIT (Example)

LIT (Example)

LIT (Example)

Dataset

- Data from a number of lifeloggers for two weeks each (About 100,000 images)
- Multimodal dataset with information needs
  - Per Day / Per Lifelogger
    - 1,500 images from chest-mounted wearable cameras (5MP, 136 degree)
    - Semantic enrichment from wearable sensors: location, activity, temperature, others…
    - Image Features: output of 1,000 concept Caffe classifier, low-level image features
  - Data processed pre-release (removal of personal content; face blurring, translation of concepts)
- Detailed user queries and judgments generated by the lifelogging data gatherers
  - Queries for interesting known-item events
- Data for download from DCU – 50GB download.

Sample CAFFE outputs

Important Dates

April 2015: Draft task guideline released
June 2015: final task guideline released
June 2015: Release of the training and test dataset and the topics for automatic LSAT task
September 2015: Topics for interactive LSAT task released
November 2015: Results submission due
December 2015: Evaluation results returned
February 2016: Paper submission due
April 2016: Camera-ready submission due
June 2016: NTCIR-12 Conference