PhotoCopain – Annotating Memories For Life

Motivation

▪ Manage the storm of images people currently create

▪ Identify easily accessible *image content* and *contextual* data in order to facilitate image annotation

▪ Intended as a contribution both to the Semantic Web and Memories for Life
  ▪ Facilitate the **meta-data** provision for large image data sets
  ▪ Enable the **diachronic** annotation of digital images which have long term **personal** and **historical** significance

PhotoCopain

▪ **INPUT:** As much information as possible from free or readily available sources:
  • 1. Image internal data:
    • A simple CIELab colour-map, Hue, Intensity, texture map (HIT), an Edge Direction Coherence Vector, EXIF, & a focus map
  • 2. Image external data
    • Calendar Information, GPS Information, Network Access Info, Email's, Multimedia Playlists, *etc*
▪ **PURPOSE**: To aid the user by
  ▪ maximising effective use of effort when annotating
  ▪ allow user to provide both isolated facts and to construct a narrative
▪ Integrates a number of heterogeneous data sources, to provide, contextual metadata (calendar, gps, internet activity,...) and content based metadata (portrait, landscape, artificial depiction,..)
▪ The semi-automatic nature of the service is stressed, identifying the need to allow the user to author any proposed annotation, highlighting the *"Gold standard"* of any manual annotations.

PhotoCopain architecture

▪ AKTive Media - *Frontend*
  ▪ Ontology based image annotation. Annotation of whole, part or set of images using existing or user defined ontologies
  ▪ Image Search facility (SPARQL based)
  ▪ Retrieve images with equivalent content
  ▪ Integration with web services
  ▪ Time line generation for image exploration
  ▪ RDF import and export facility
  ▪ Simultaneous multi-user annotation

▪ PhotoCopain – *Backend*
  ▪ Semantic Logger (*Context*) : Creating a SPARQL compliant autobiographical log to facilitate *context-based* services.
  ▪ Image analysis software (*Content*)
    ▪ Indoor/Outdoor detector
    ▪ Face detector - size and number of faces, protrait
    ▪ Focus Detector - feature vector for classification
    ▪ The tags presented by the content based services are based on images taken from flickr
    ▪ Clustering is performed on the image features to propose tags to the end user.
    ▪ Collation service - combines results and outputs RDF, which is then sent to AKTive Media for further annotation.
    ▪ mSpace faceted browser available to navigate annotations
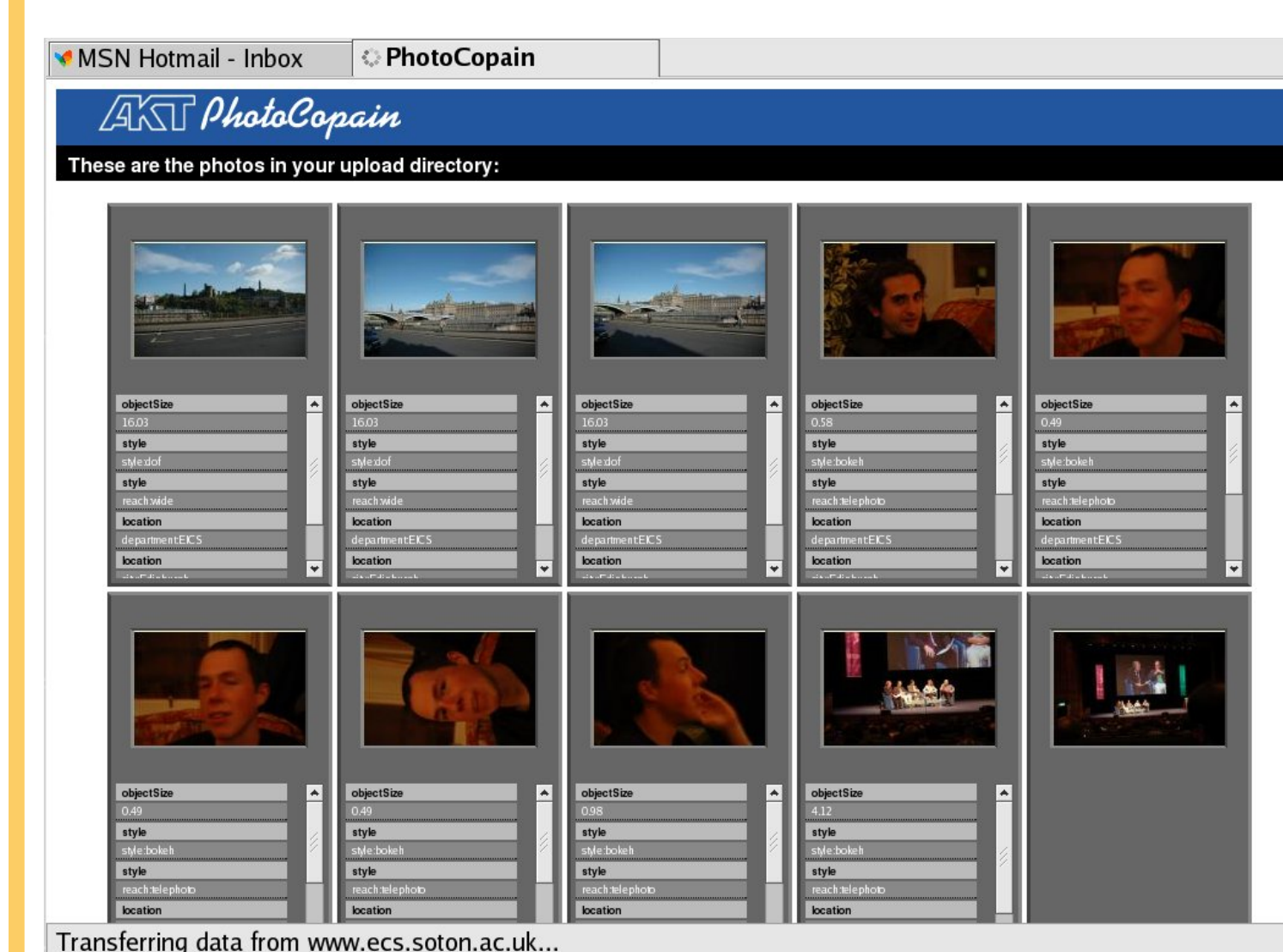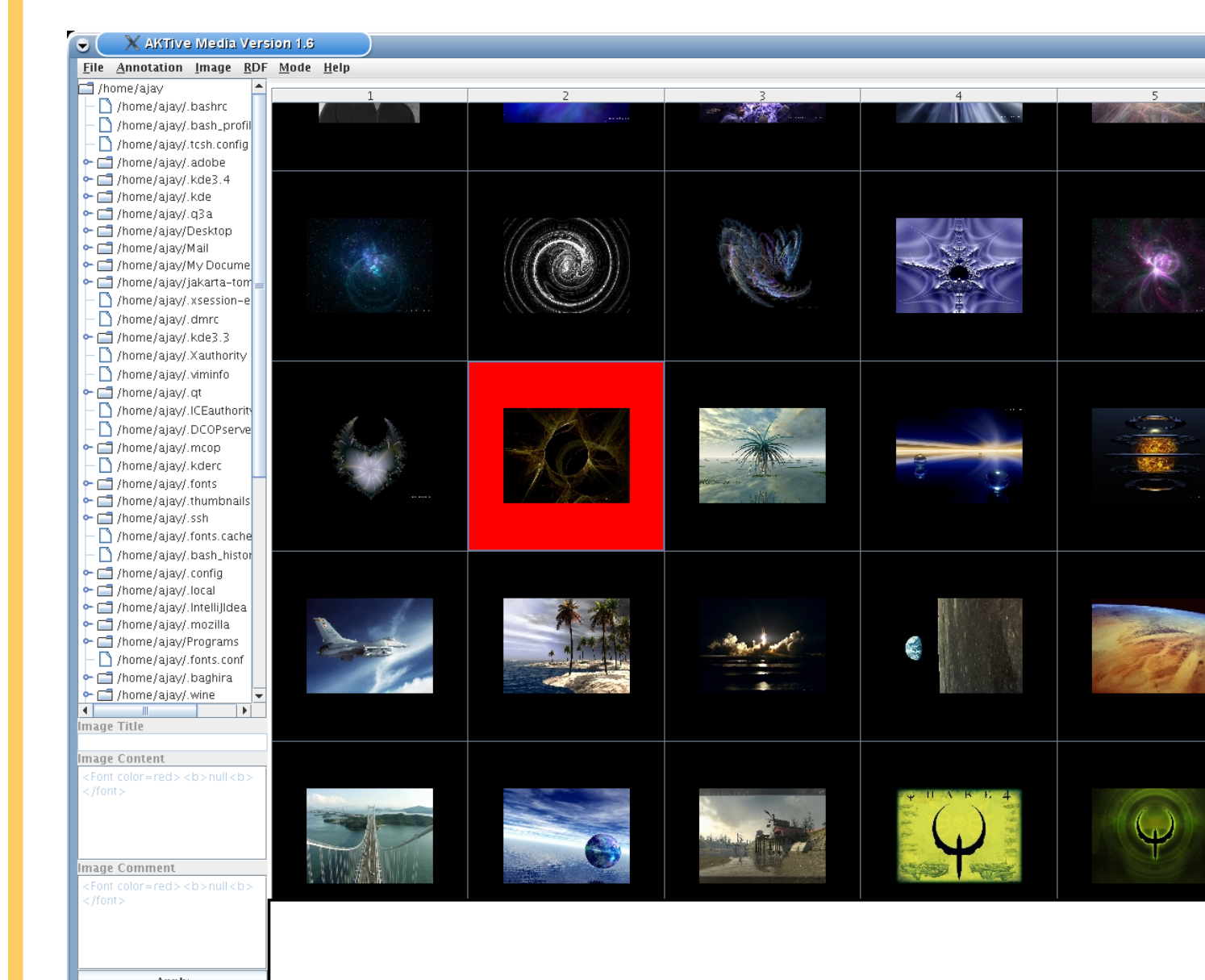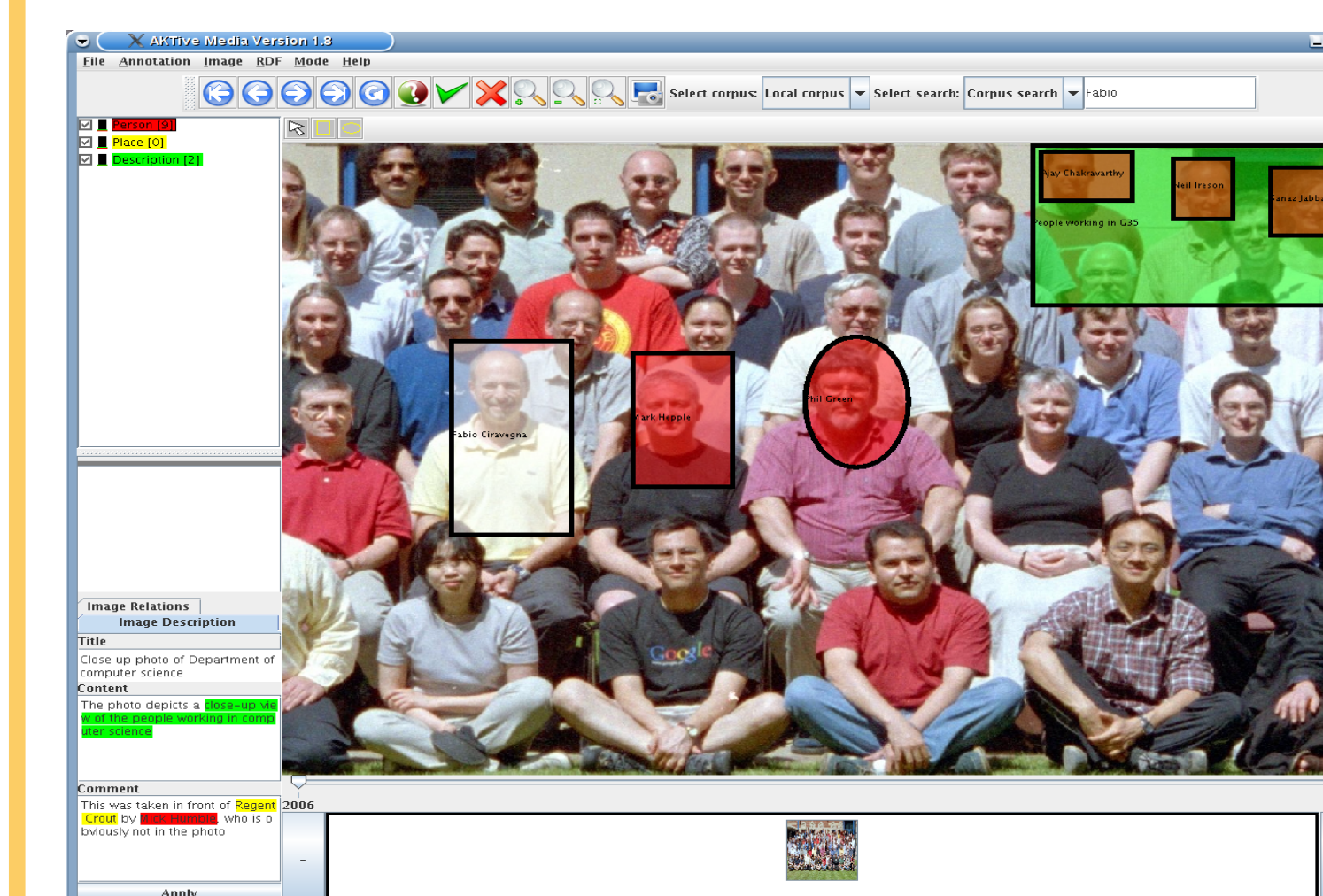
Further Information

• AKTive Media – Downloadable Fronted
• http://www.dcs.shef.ac.uk/~ajay/html/cresearch.html
• Semantic Logger & Photocopain – Personal Context log, and Image Annotator
• http://akt.ecs.soton.ac.uk:8080/

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