Introduction

- Many vendors are working on wearable devices and analysts predict a sales boom on the horizon.
- Google Glass is a wearable computer with an optical head-mounted display. It is developed by Google with the mission of producing a mass-market ubiquitous computer.
- MediaQ is a novel online media management framework. There are clients for the iOS and Android smartphones but for no wearable device.

Motivation

- Variety of built-in sensors.
  - HD video capturing camera
  - Magnetometer / Gyroscope / Accelerometer
  - Microphone with noise cancellation
- Immersive experience.
  - Hands-free recording: The user does not need to hold an external device to record videos.
  - The viewer watches the videos from almost the exact point of view as the user generating the video.

System Architecture

- Geo-social mobile technologies
- Standard three-tiers application
- Participatory sensing (user data collection)

Client

- MediaQ for Google Glass

Server

- User API
- Uploading API
- Account Management
- Video Processing

Database

- Data stores

Related Research

- Participatory sensing/privacy: users share their image, location, trajectory
- Mobile geo-social technologies/applications
- Efficient real-time sensors data capturing
- Interface for wearable devices without conventional inputs (eg. Keyboards)

Capability

- Log-in using a QR code.
  - Due to the inability to enter a username and password, the user can just point the Glass to a QR code to login.
  - The user can generate this QR code from the MediaQ Android smartphone app or website.
- Recording of immersive videos with geospatial metadata.
  - Trajectory recording using the paired smartphone GPS sensor.
  - Orientation recording using the device built-in sensors.
  - HD video recording.
  - On-screen indicators about the quality of the captured metadata.
- On-device media management and GUI configuration.
  - Video playback / deletion.
  - Upload videos on the background.
  - On-screen indicators configuration.

Conclusion and Future Work

- Support for the spatial crowd sourcing part of MediaQ.
- Allowing the user to configure more aspects of the app (e.g. Video recording quality).