# 5. Associated Services and Infrastructure

## 5.1. Introduction and Overview

The key functionality and architecture of the UCLA Orientation App are outlined in sections 3 and 4 of this report. In this section, we present the suite of associated information services that the app will depend upon. These services are necessary for providing centralized management of the essential data assets used by the app and for supporting robust and consistent image processing across the range of mobile devices that we expect to support. UCLA will be responsible for maintaining these services for the duration of its support of the UCLA Orientation App. While some of these services are already built and in use, the app's core functionality will depend upon systems that do not presently exist.

### 5.1.1. The UCLA Campus Movie Database (CMDB)

The CMDB is the core information service associated with the UCLA Orientation App. It directly handles requests from mobile devices and it provides a centralized point for managing the data assets required by the app. In addition, it is used by the image compositing service (discussed below) for storing and accessing the photo filter settings and compositing elements used by the Campus Camera (see section 3.3). All Campus Camera assets are stored in the CMDB with references to the appropriate movie scene and that scene's geolocation. The design of the CMDB is discussed in greater detail in section 5.2., however, to summarize, the CMDB's core functions are to:

Respond to Campus Map search requests with campus location data
Respond to Campus Map direction requests with campus route data
Respond to Campus Camera requests for available movie scene filters (based on location)
Respond to ICS requests with appropriate photo filter settings and composite elements
Provide a centralized point for managing these assets

### 5.1.2. Image Compositing Service (ICS)

The ICS provides server-side processing for the app's Campus Camera feature. Server-side processing ensures consistent results across a wide range of mobile platforms and it reduces the costs associated with developing the app itself. The ICS receives image processing requests from camera-equipped mobile phones. The processing requests include the geolocation of the photograph, which the ICS uses, in-turn, to retrieve filter options and compositing elements from the CMDB. The ICS performs the compositing and filtering as requested by the user and sends the resulting image back to the user's device.