**Problem**

Students at RIT obtain co-ops around the entire country. They often do not know anyone in the new city and may also have trouble finding housing with short-term leases.

**Solution**

Team HAL’s Co-op Housing Portal allows students to search for roommates and housing around the country. Students can easily find other co-ops to live with and short-term leased housing.

**Other Uses**

RIT’s Co-op Office can track and analyze where co-op students are living while on the job.

**Process**

An Incremental approach is used for development of the system.

**System Architecture**

HAL’s Co-op Housing portal uses a Model-View-Controller pattern.

- **View (web UI)**
  - HTML markup and PHP scripts
  - User enters input and drives application
  - Requests passed to Controller

- **Controller**
  - Manages business logic
  - Updates view

- **Model**
  - Accesses and queries database
  - Returns data to controller

**Software and Web Design**

- Usable to students of all years and majors
- Extensible for use by other universities

**System Features**

- **Normal User (Student)**
  - Create profile and housing listings
  - Add roommate and housing preferences
  - Search for roommates and houses

- **Housing Provider**
  - Need Administrator approval
  - Post housing listings and accept/deny requests

- **Administrator**
  - Search system for active/blacked users and houses
  - Grant Administrator and Housing Provider rights
  - Add/edit/block user and housing listings

**Technologies**

- CakePHP
- Google Maps
- MySQL
- OpenLDAP
- Apache

**Future Work**

- Other (non-RIT) front-end development
- Google Maps feature to view housing locations