



## Center for Graphics and Geometric Computing

Lab Project 234326 proposal

Spring 2013/14

### OpenGL Screen Mirroring for Mobile Devices

#### **Description:**

Have you ever dreamed about having a super resolution big screen TV to play games directly from your mobile device? This project aim is to make this dream a reality.

Main challenge for high resolution screen mirroring is a vast amount of information that needs to be transferred between the device and then remote screen. Low bandwidth and limited mobile device resources make “full screen image transfer” approach unacceptable.

A better alternative will be to harness remote display GPU to render and rasterize the images and thus bring the amount of the transferred information to the minimum.

Goals:

- Design OpenGL wrapper to transfer operations and vector data from mobile device to a remote screen over the network
- Create sample 3D gfx application
- Implement prototype system capable of real-time mirroring of the sample app



#### **Prerequisites:**

- 234325 - Computer Graphics
- Advantage: Knowledge of OpenGL embedded (Android)
- Advantage: some background in communication

#### **Platform:**

- Android tablet (x2)

#### **Advisor:**

Dany Rybnikov [danyr@qualcomm.com](mailto:danyr@qualcomm.com) + TBD

#### **Number of students:**

2 students.