**CS2310 Project Milestone #1**

**by Guy Gadola**

**Title: *Low-Frequency Noise Manager***

**Description:**

This project is to prototype a low-frequency sound (e.g., the rumble of a freight train) management system. A fully-functional version of the system would do the following tasks to help companies and individuals comply with their own or external noise policies:

1. Identify the cause of the sound (e.g., train, exhaust fan, truck)
2. Record the sound in a database along with certain properties including:
   1. Timestamp
   2. Decibel level (appropriately weighted for low frequencies)
   3. Cause
   4. Whether or not the sound violates applicable noise policies/ordinances
   5. Location of noise source
3. If noise is beyond accepted thresholds, then recommended ways to mitigate noise



**Tools**

1. Developer's SIS Testbed in conjunction with Java
2. SQL Server Express (if time allows)
3. Java-compatible sound analysis library

**Deliverables by Demo**

1. A system that uses the “Developer's SIS Testbed to select and fine-tune its algorithm” to identify one or more low-frequency sounds (**Figure**)
2. An ontology written in the OWL language that describes a subset of
   1. Noise sources
   2. Noise ordinances
   3. Noise mitigation techniques

**Plan B, which are also the Dliverables by Milestone 2:**

Deliver only Deliverables 1 and a modified version of Deliverable 2. For Deliverable 2, the ontology may not necessarily use OWL, but may use another type of knowledge representation and may only contain information about noise sources.