E-PreS: Monitoring and Evaluation of Natural Hazard Preparedness at School Environments

Spacial Subsystem

Objective

× To extract spacial information of a building based on digital files such as AutoCad output files (.dwg, .dxf).

× To merge this information with the rest of the software that will be developed for the efficient design and implementation of an evacuation plan exercise.

× To offer a clean and user-friendly interface for the quick modification of the exercise parameters.

Primary building information

× Buildings can be too complicated for efficient local inspection.

× A lot of information is only accessible by the building blueprint.
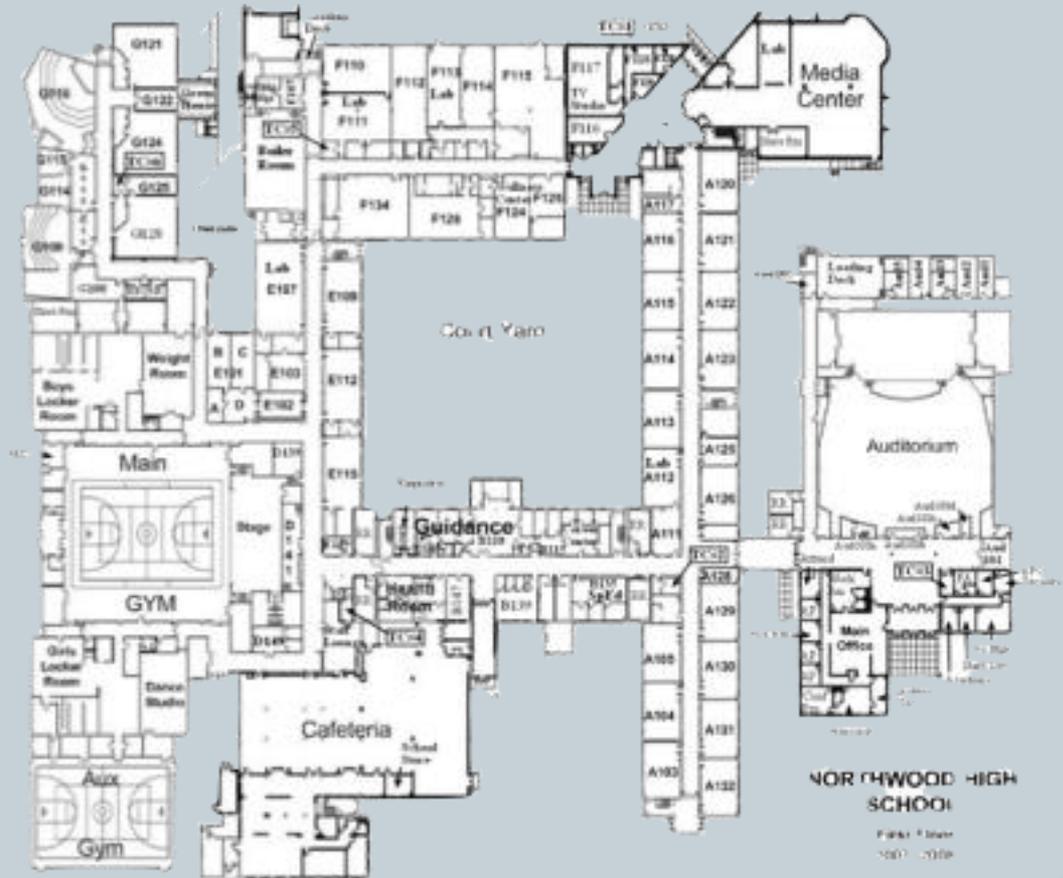
Primary building information

- Vital building information:
  - Number of floors
  - Positioning and number of doors
  - Corridor placement and length
  - Staircase positioning and length
  - Emergency exits
  - Elevators
- The information needed is "hidden" in a CAD file.

Application development

- We will develop a Java application which will:
  - Automate the procedure of extracting building information to use in the design of the evacuation exercise.
  - Will provide a user friendly interface to the designer of the exercise and help him/her optimally position the RFID readers.
  - Eliminate the necessity of a local inspection of the premises prior to the design of the exercise.
  - Have the capability to manually insert the needed information in case of lack of a .dxf file