

Presentation Project:

Engineers are often required to design a product to specification, then present the design to a client for adaptation or approval; i.e., sometimes engineers are salesmen. This project requires each team to carry out this research/design/presentation activity. A design competition to be delivered to this class as a fifteen minute oral presentation. The object is to come up with a practical design for the assigned project and convince the audience that your solution is better than those offered by other groups (i.e., win the job!).

Considerations of cost, practicality, and implementation are crucial. Sketches or drawings are encouraged. Since this classroom is computer-equipped, PowerPoint presentations could be an option. You are selling your ideas, and trying to win the project. Present what you think is necessary to do just that!

MONDAY 2 DEC: KINETIC SCULPTURE

Representing the Sculptor: 3: Dan, Christine, John

Abbreviated Request For Proposal: A sculptor has been commissioned by a city government to create a piece of kinetic sculpture. He wants to produce a piece that carries out its movement only very rarely. In fact, he wants his sculpture to perform at random times on average only once a year. He believes that the rarity of motion will increase interest; people who happen to pass as it performs will feel especially rewarded. The problem is, he needs a device that will close a switch at random times with an average time between closings of one per year. Each point in time should be equally likely to produce the event. Electricity is available. But he does not want any apparatus that involves a computer. Design a practical mechanism that can meet his needs. If necessary, your device may be manually reset after each event.

Companies with Proposals:

Company 5*: Joe, Keith, Jessica

Company 6*: Maya, Ben

The Sculptor's decision will be rendered at the conclusion of class.

WEDNESDAY 4 DEC: FRENCH TRAFFIC ENFORCEMENT

Representing the Government of France: 4: Eric, Jessica, Daniel

Abbreviated Request for Proposal: France has an extensive system of high-speed (120km/hr) toll roads called "autoroutes". These autoroutes are very effective in getting travelers around France. Unfortunately, they're somewhat dangerous because motorists often ignore the speed limits, which change depending on whether the roads are wet or dry. Speed traps are only partially effective, because radar detectors and straight roads let drivers know exactly where to slow down. Once passed, the drivers return to their excessive speed. Design a system or protocol that will address this problem. Your design should include some practical way of detecting and identifying speeders and/or ensuring that maximum speed limits are not exceeded. Of course, cost and effectiveness are both important.

Companies with Proposals:

Company 1*: Emily, Allan, Safi

Company 2*: Mary, Wei, Annand

The Government of France's decision will be rendered at the conclusion of class

* rename your company as you see fit for the presentation.