Increasing Computer Awareness in High Schools and Colleges
Statement of the Problem

- Debunking myths and misconceptions
  - CS = ”Hacking”
  - CS is not important
  - CS is all about programming
- Lack of interest in CS
- Theorized causes of decline
  - Lower minority and female enrollment
  - Non-existing CS curricula in Chicago schools
- Social implications - globalization
The Team

**Curricula**
- Sergio Aguilar
- William Foret
- Christos Mitillos
- Jianqi Xing

**Research**
- Sergio Aguilar
- Saad Ahsan
- Qiaoqiao Chen
- Jason Chin

**Outreach**
- Saad Ahsan
- Jason Chin
- Qiaoqiao Chen
- Herbert Edwards
- Eddie Martinez
Objectives/Goals

- Produce simple curricula that can be easily incorporated with a variety of academic disciplines.
- Market the idea to educators.
- Market the idea to students.
Progress Toward Goals

- Defining CS
- Curricula
  - Checkers
  - Mp3
  - Traffic lights
- Outreach
- Research
  - Problems and solutions
Major Obstacles

- Clearly identifying the problem
- Identifying which method is most effective
- Broad variations in existing CS curricula
- Ethical
  - Students
    - ACM
    - IRB
  - Research References
Challenges That Lie Ahead

- Organizing a universal CS curriculum
  - Easy incorporation
  - Teacher friendly
- Establishing a connection with schools
- Setting up an effective outreach program
  - Contagious
Questions or Suggestions
References - Trends

- Computer and Internet use by children and adolescents in 2001, Statistical Analysis Report
- A timeline of teens and technology
- Research into Computer-related Programs in Chicagoland Highschools
References - AI

- Checkers is solved
- DeepBlue chess
- Computational thinking skills-preparing our students...
- Animations to assist learning some key computer science topics
References

- [http://arstechnica.com/old/content/2008/12/acm-wants-computer-science-in-on-obamas-k-12-education-plan.ars](http://arstechnica.com/old/content/2008/12/acm-wants-computer-science-in-on-obamas-k-12-education-plan.ars)

- Outreach examples
References

- Center for computational thinking: [http://www.cs.cmu.edu/~CompThink/probes.html](http://www.cs.cmu.edu/~CompThink/probes.html)