

Department of Computer Science
Graduate Comprehensive Exam
in
Communication
Spring 2019

- Answer the question on the paper supplied.
- Please use a DARK PEN instead of a light pencil. You will be responsible if words are not recognizable.
- Write on only one side of the paper.
- Write your SIX-DIGIT Texas State ID in the top right corner of each page of your answer. Do NOT put your name anywhere on the answers.
- If the answer is written on more than one page, number the pages consecutively.

Because your opinions are called for, there are no right or wrong answers. Your responses should include justifications for your views, and your analysis should be thorough and communicated clearly.

Small, high-resolution video cameras are now affordable and quickly becoming ubiquitous. They are used to record what is happening on streets, inside public buildings and private businesses, as well as around people's homes. Recently, a company filed a patent for a product that would allow the company to partner with law-enforcement agencies to use facial-recognition software in real-time to identify suspicious individuals in such videos and immediately alert authorities. For example, a home-owner with a doorbell camera could use the software to mark whoever visited the home's front porch as "suspicious", and the visitor's image would be sent to the government, even if no crime has been committed.

1. What benefits to society could such systems provide? What would be some reasons for not allowing the government and large companies to have access to such data?
2. It could be argued that private home or business owners have the right to record whatever they like on their property (except for areas such as bathrooms) and share the videos however they like, and those who object can choose not to visit such homes or businesses. Explain why you think this is a good or bad argument?
3. Would your answer to question 2 change if the situation involved cameras in places where people have no choice about visiting (like children who by law must attend school) or places where information that is legally private can be easily inferred from the video that was shared (for example, a person in the waiting room of a medical specialist's office)? Explain why or why not?