COMPUTER SCIENCE TRIPOS Part IB – 2017 – Paper 4

7   Economics, Law and Ethics (RJA)

You are commissioned by a customer to design a toy robot that children will be able to control using a smartphone app. This app will also enable them to program the robot using a simple scripting language. To simplify the networking, all communications between the app and the robot flow over wifi via your server.

(*a*)   Discuss the ethical and legal implications.   [4 marks]

(*b*)   Your customer decides to incorporate a microphone so that the robot can also recognise spoken commands. To save battery life, the speech recognition will be done in the server. What effect does this have on the ethical and legal situation?
                                                                                          [4 marks]

(*c*)   What practical advice can you give your customer about mitigating the legal risks?   [4 marks]

(*d*)   Your customer now wants to include a camera so that the robot can recognise gestures as well. Does this create any further ethical or legal risks, and if so, what might be done about them?   [4 marks]

(*e*)   How might the situation be affected by Brexit?   [4 marks]