

COMPSCI 725 Practice Exam

October 19, 2016

Marking notes:

- I awarded 2 marks to a student who paraphrased the question inaccurately, in several important respects, and who didn't introduce any relevant information from Dinev (2014) or Avancha (2012) into their discussion. This student interpreted Dinev's tactics as being rank-ordered (with "anonymity" being the most private). Dinev's "anonymity" tactic was characterised as the release of completely false information. Dinev's "secrecy" tactic for privacy was confused with Lampson's security policy of "secrecy".
- I awarded 8 marks to a student who argued that a mHealth framework would require all consumers of mHealth devices and services to use Dinev's "confidentiality" tactic. This student did not persuade me that they had remembered anything from their reading of either Dinev (2014) or Avancha (2012), from their attendance at the student presentations on these articles, or from their review of the slideshows presented by students. However their answer did use standard security terminology accurately and appropriately, and their line of argument was persuasive – even though it is an inaccurate description of Avancha's framework. (Note: one of Avancha's ten principles is an "anonymity of presence", and this principle was discussed briefly after a student presentation on the "Friend or Foe" hacks on smartwatches.)
- I awarded 10 marks to a student whose answer characterised Avancha's framework as being derived from legal definitions of privacy in the US and Europe, and is therefore an accurate indication of the privacy expectations of users of mHealth devices and services. This is an accurate characterisation of Avancha's framework, but is not very relevant to the question being asked. I wasn't confident that this student understood Dinev's concept of a privacy tactic – as something a

user can do to (re)gain control over their identity. If the student had mentioned “patient consent” in their answer, they would have received higher marks.

- I awarded 12 marks to a student who mentioned “consent” in their answer, but who didn’t clearly link this (in their discussion) to a patient’s choice of tactics. This student discussed research uses of personal-health information (PHI) at significant length, suggesting that this use was a major consideration in Avancha’s framework. The student didn’t seem to realise that Avancha mentioned research uses of anonymised PHI only a few times – when discussing the complications of gaining informed consent from a hypothetical patient (Ravi), and when discussing the security risk that outsiders may be able to reidentify patients from an anonymised release of PHI.
- I awarded 15 marks to a student who wrote a few sentences which accurately and succinctly characterised Avancha’s framework as offering mHealth consumers the tactic of “confidentiality”. The student pointed out that the mHealth consumer was releasing accurate PHI, but not releasing information that wasn’t health-related, so this release falls in Dinev’s “confidentiality” quadrant (of high accuracy, low amount, externalisations of personal information). The student also mentioned that the consumer’s release of information was consensual, i.e. that this tactic was offered but not required. The student also mentioned that the mHealth consumer’s release of PHI was to a medical practitioner or hospital; this is an important element of a “restricted” release of information in Dinev’s definition.
- I had hoped that some student would mention that the informed-consent principle in Avancha’s framework allows mHealth consumers to choose between a “secrecy” tactic and a “confidentiality” tactic. If an mHealth consumer chooses “secrecy”, they’ll get no mHealth services, so it may seem a rather a forced decision rather than a freely-consenting decision – as discussed briefly after one of the student presentations this semester.
- Average marks on this question were approximately 8/15. A bit low, but then again most of you hadn’t revised for this exam, and a couple of you admitted that you hadn’t read either paper!