

# Sistemas de Computação Móvel e Ubíqua

2015/2016

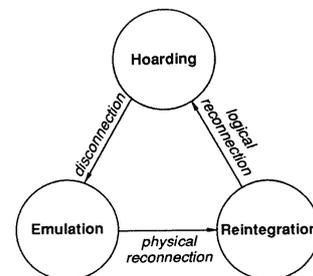
First test: 23/04/2016

Duration: 2h

Closed book

1. Enumerate, justifying, the issues/challenges that distinguish Mobile Computing from Distributed Computing in general.
2. Wireless networks may be classified according to the number of hops required for inter-node communication and to the use (or no use) of infrastructure. Describe each of these combinations. Complement your description with examples.
3. Explain the *Hidden terminal* and the *Fading over distance* problems and how they are solved by the Carrier Sense Multiple Access (CSMA) protocol.
4. Why is *Data caching* central to mobile applications, and which are the challenges it raises in this context?

5. Explain the behaviour associated to each of the three states a Coda client may assume, and the transitions between such states. Illustrative figure on the right.



6. Why are conflict-free data types conflict-free?
7. Is *Cyber Foraging* always a good solution for mobile computing? Support your argumentation with examples.
8. Cloudlets are small-scale cloud service infrastructures placed at the edge of the Internet, for instance in an *access point*. Can these infrastructures be used for data and/or functionality adaptation? How?