Reservation system for dog agility training ground

Agility is a fun dog sport, in which a handler directs a dog through obstacle course. The handler can control the dog only by voice and various body signals, requiring exceptional training of the animal and coordination of the handler. There are many dog agility practitioners worldwide and international championships have been held since 1996.

In spring 2014 Tartu Agility Arenguselts opened a new agility training ground in Lohkva, few kilometers away from Tartu. It was built from donations of agility lovers and has been actively used since then. Actually so actively, that there is desperate need for a web-based reservation system.

The reservation system should have three main modules:

1. **Web based system for making reservations** for three different training grounds (A, B and C). The system should allow you to also make payment for reservation using Pangalink. Preferred implementation would be in Python Flask, but PHP is an option as well.

2. **Security module to control the gate of training grounds.** Every user has their own PIN code and they can enter the training grounds only when they have made reservation for that time slot. Preferred implementation would be using Raspberry Pi and Python. We have specifications how to interact with the gate controller (simple UDP based protocol).

3. **Synchronization module, that transfers reservations from web system to security module and authentication logs in opposite direction.** This is needed because security module must be able to function offline, without internet connection. So it must have its own database.

The system can be implemented in stages, depending on the size of team. For example modules 2 and 3 can be left for future work. Currently reservations are handled through Google Spreadsheet, which can give some ideas how web interface might look like: [https://docs.google.com/spreadsheets/d/1HIyYVLKt4nKLKz64EnjV7J6CdylkHd6es-WXx957oSv0/edit#gid=4](https://docs.google.com/spreadsheets/d/1HIyYVLKt4nKLKz64EnjV7J6CdylkHd6es-WXx957oSv0/edit#gid=4)

**Technical contact:** Tambet Matiisen, tambet.matiisen@gmail.com, mobile 5286457
**Administrative contact:** Jaanika Lillenberg, agility.arenguselts@gmail.com, mobile 5271414
**Homepage:** [http://www.taas.ee/](http://www.taas.ee/)