

Coordinating Airplane Cleaning

Problem

Always when an airplane lands at an airport, it must be **cleaned quickly** before the next flight. **Delays are not acceptable.**

A cleaning company will have lots of cleaners doing airplane cleaning. The cleaners work **24/7** in teams of 4 or more persons. On an airport like Helsinki-Vantaa, there can be some **10-20 cleaning teams** working concurrently.

The teams are commanded by a *coordinator*, who is in contact with the teams via radiophone. The coordinator needs to keep track of (1) which planes have been cleaned, (2) which planes must be cleaned next, and (3) where each team is right now.

The plane has landed. There is **less than 15 minutes time** to clean it. During those 15 minutes **10 more planes** will land.



Business Case

The cleaning company must keep track of their work. Using just paper notes produces human errors, and a computer application with poor usability produces high expenses.

The cleaning companies around the world are willing to pay for a **high-quality computer-based solution with excellent usability**, because it will let the coordinator to do his work **more effectively** with **better decision-making** and **avoid delaying the flights**.

Solution

PlaneSweep is a product for the above mentioned use case. It helps the coordinator to *keep track* of what the teams are doing, and *produces reports* of the completed work.

The product was developed by Advoca Group Oy (<http://www.advoca.fi>) and has served since 2003, but is now being *re-designed* in order to *smoothly integrate flight schedules* into the system, to further *improve its usability*. The new UI is about 70% designed, but its implementation has not yet been started. Also its architecture will be renewed.

For students this project will have *multiple interesting challenges*: working in a **real-life project**, implementing a **highly complex web UI**, building a **domain model** (Domain-Driven Design), building infrastructure for **database refactoring** etc.

Part of the paper prototype for the new UI which was designed using GUIDE+GDD

