Problem Statement Document

Purpose

The *Problem Statement* is the first handout given to the developers right after the project kickoff. It serves as a mutual understanding of the problems to be addressed. It is written by the client – often in collaboration or with the help of the instructor / project manager.

The problem statement describes the current situation, the requirements (functional and nonfunctional requirements) and the target environment in which the system will be deployed. It also defines the deliverables expected by the client, together with delivery dates and a set of acceptance criteria.

Audience

The audience for the *Problem Statement* includes the client, the project manager, and the developers who participate in the project.

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Document History

Rev.	Author	Date	Changes
0.1	Wagmarti	10.Okt.2012	Initial Document

1. The Problem

Several use cases are imaginable which need the detection of textual graphics. For each use case one and the same work need to be done. The framework should help the implementers of future project to implement an application in this domain.

2. Scenarios

Two bare sheets for the requirements of specific applications are added to this Problem Statement. A real scenario for a third example in the same problem domain must be defined during the practical course.

3. Requirements

The requirements will develop during the practical course. The aim is to develop a easy to use extensible framework gains value in several different scenarios.

- The framework should be able to read recognize patterns from:
    o The video stream of the device camera
    o A picture file handed over to the framework
    o A video file handed over to the framework
- The framework must run on all iOS-devices with cameras.

A real German car manufacturer defined the "number plate detection" requirements. Some more requirements may be injected from this side.

4. Nonfunctional Requirements

The framework shall fulfill the following nonfunctional requirements:
- **Extensibility:** The framework provides extension mechanisms like e.g. the creation of own Representations
- **Flexibility:** With the help of delegation and blocks the application is able to customize the behavior of the framework when it is useful
- **Performance:** Even large data can be sent over the network in a short time. The framework shall support compression and authentication
- **Reliability:** Network transfer shall be as reliable as possible
- **Usability:** It should be easy to develop an application with the framework. This includes well design interfaces that can easily be understood and hiding complex details from the application's developer.

5. Target Environment
The framework must run on all iOS 6 devices.

6. Deliverables
- RAD, Requirements analysis document (with the given template)
- The non-compiled source code (commented in Doxygen style)
- A compiled library with all necessary h-Files of the framework
- Sample applications showing the usage of the framework
- At least one sample application per scenario using the library.
- Developer Documentation incl. a tutorial how to use the framework

7. Schedule
- Thu, October 11th 2012:   Kickoff Meeting
- Mid of December   Design Review
- End of semester: Client Acceptance Presentation