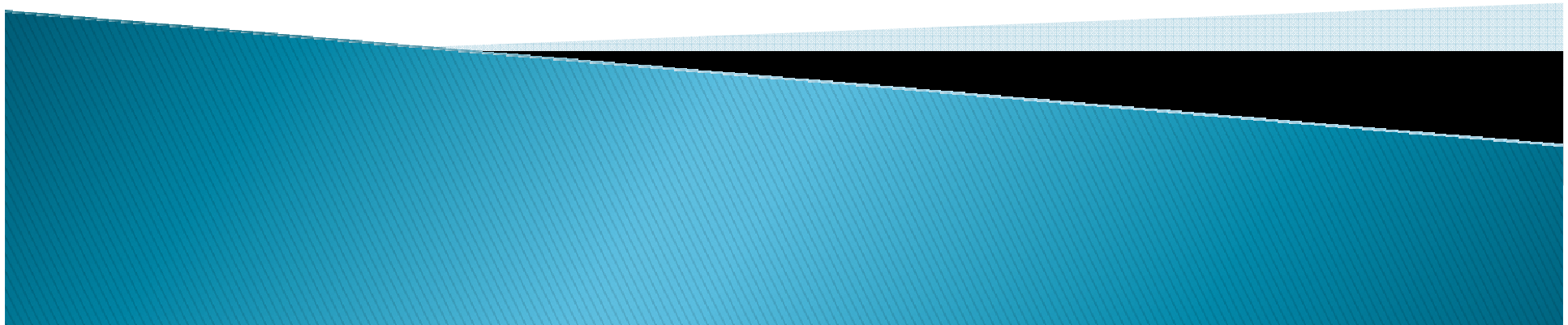




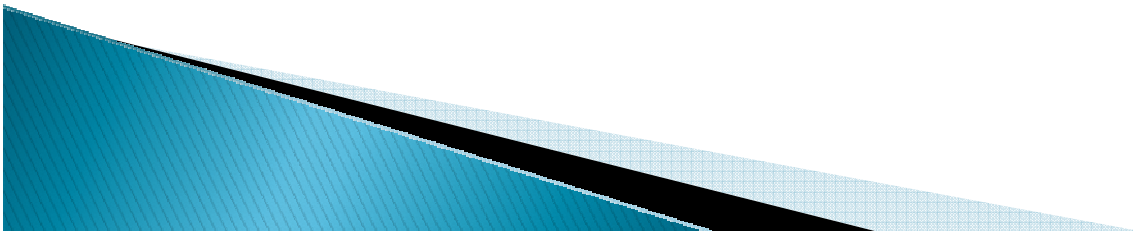
WL FRUCT LAB
UNN

OpenCV Performance on MAEMO



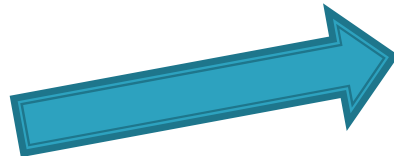
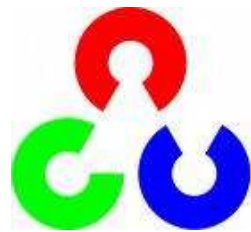
Introduction

- ▶ What is OpenCV
- ▶ How it helps MAEMO



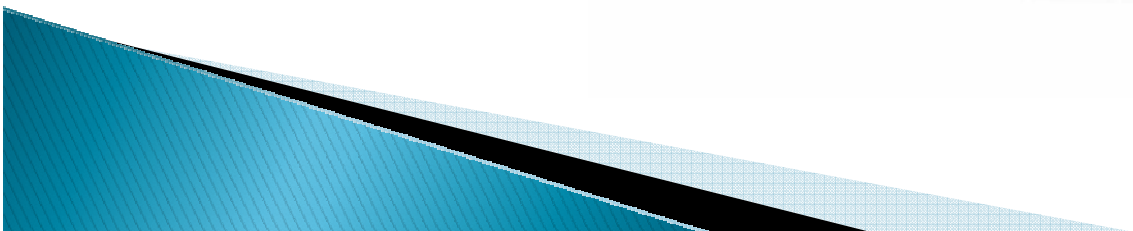
Goals of the project

- ▶ Cross-compilation to ARM
- ▶ Portable library for MAEMO
- ▶ Performance on MAEMO



Motivation

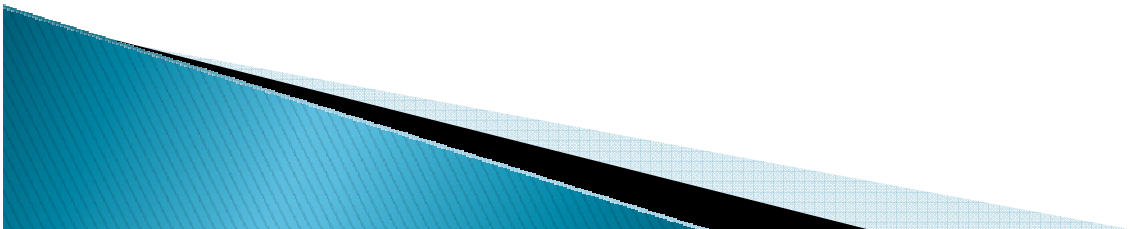
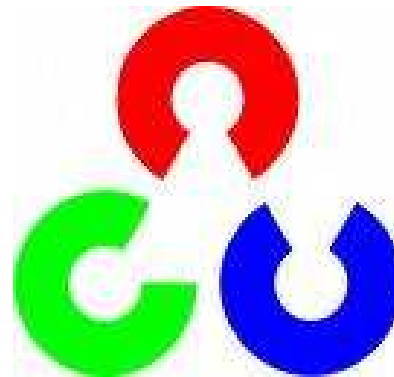
- ▶ Better user experience
- ▶ More interesting content for user
- ▶ Smart device VS PC



Introduction to OpenCV

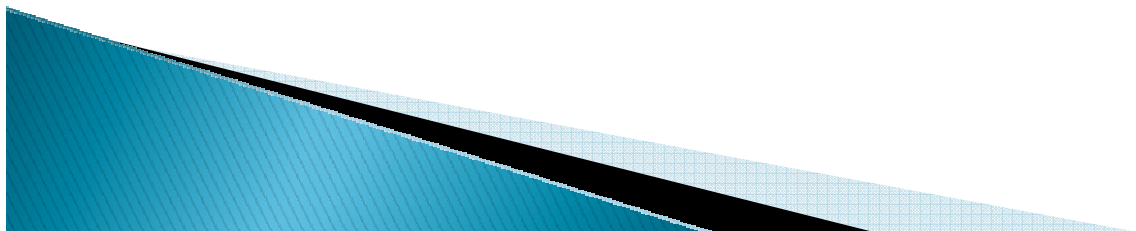
OpenCV (Open Source Computer Vision Library)

- *Computer Vision Library*
- C/C++
- Module
- *BSD*



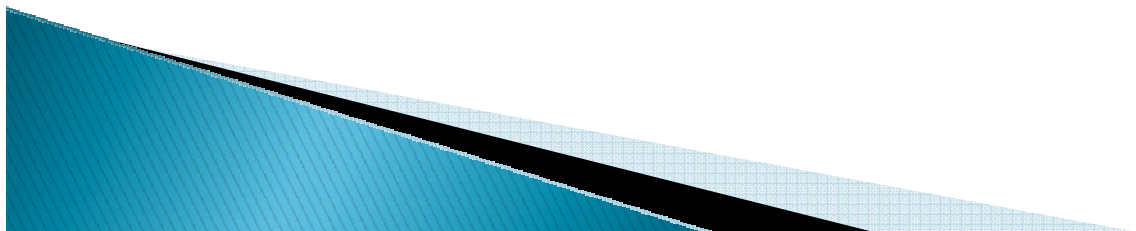
Cxcore

- ▶ Operations on Arrays
- ▶ Dynamic Structures
- ▶ Drawing Functions
- ▶ XML/YAML Persistence
- ▶ Clustering and Search in Multi-Dimensional Spaces
- ▶ Utility and System Functions and Macros



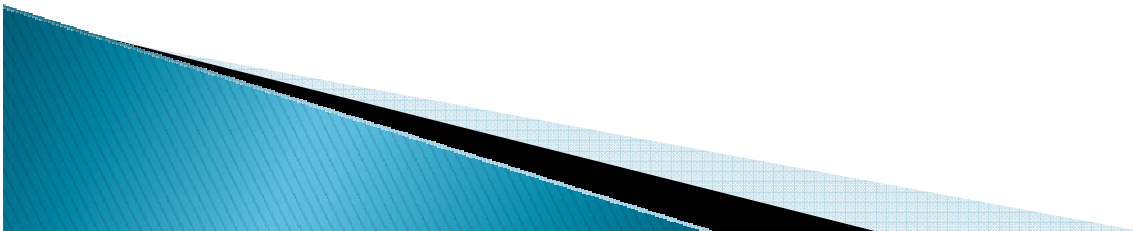
CV

- ▶ Image Filtering
- ▶ Miscellaneous Image Transformations
- ▶ Histograms
- ▶ Feature Detection
- ▶ Motion Analysis and Object Tracking
- ▶ Structural Analysis
- ▶ Object Detection
- ▶ Camera Calibration and 3D Reconstruction



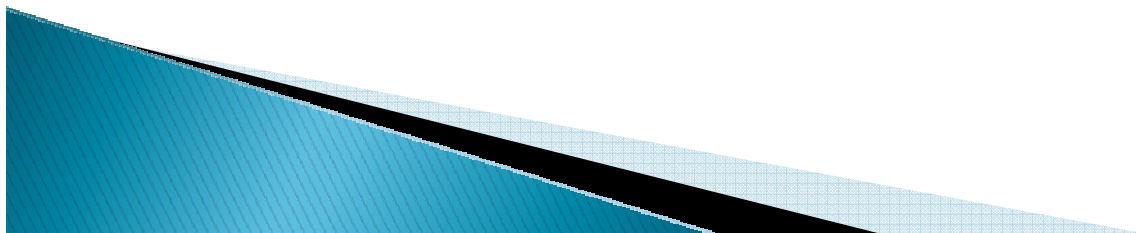
Highgui

- ▶ User Interface
- ▶ Reading and Writing Images and Video

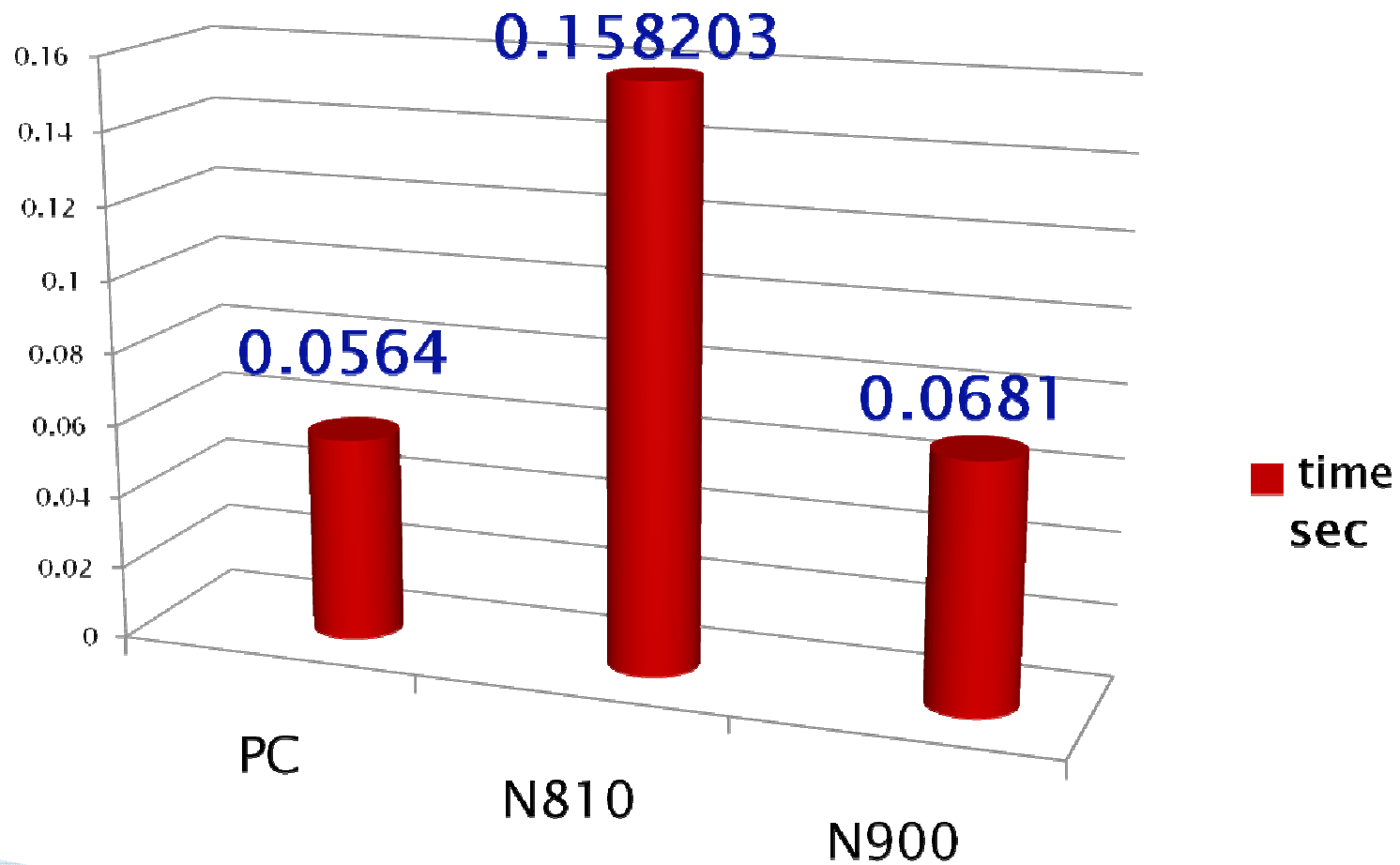


Project milestones

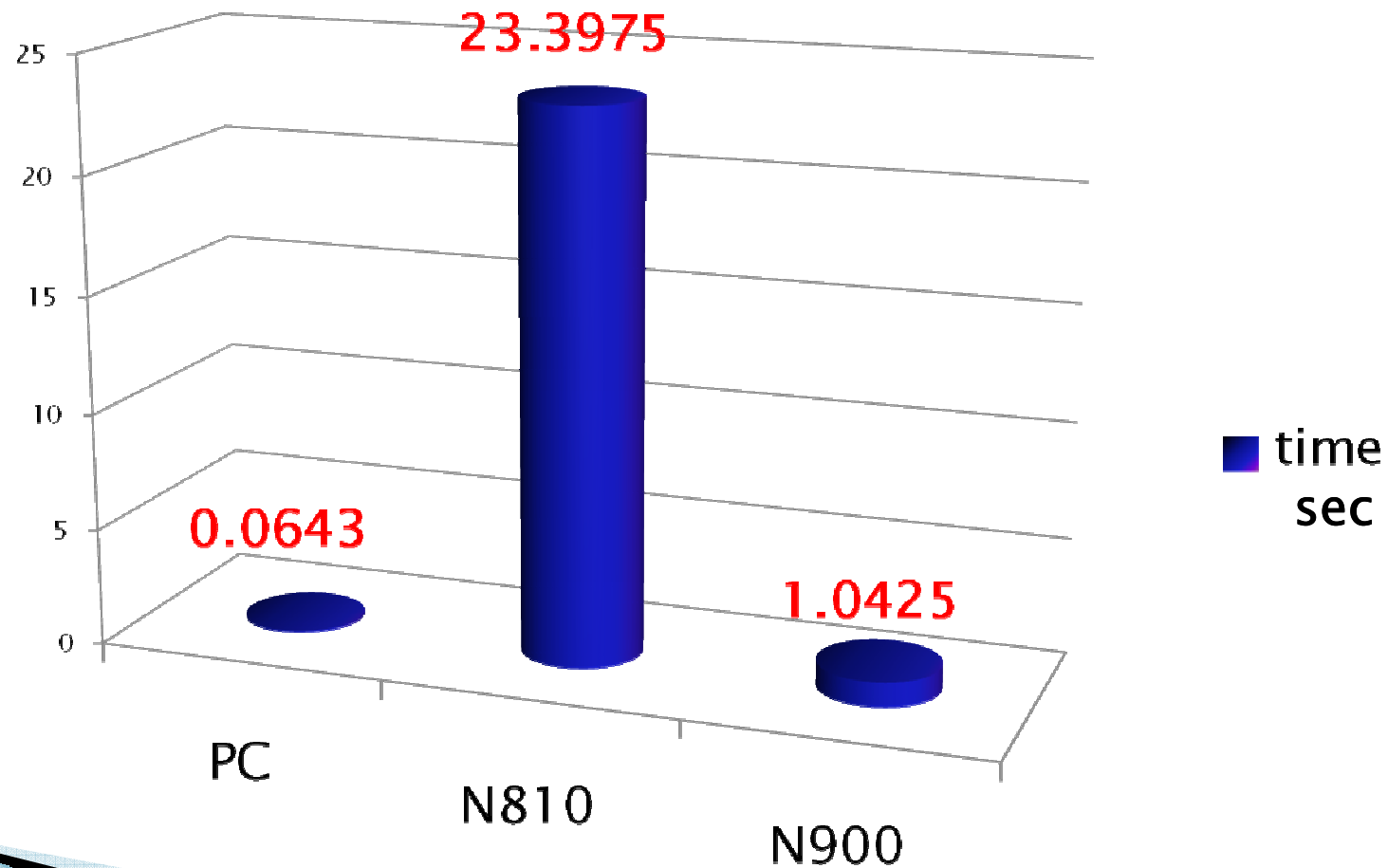
- ▶ Cross-Compilation to ARM
- ▶ Porting to MAEMO4, MAEMO5
- ▶ Test cases
- ▶ Performance testing
- ▶ Performance tuning
- ▶ DEB packaging
- ▶ Project release



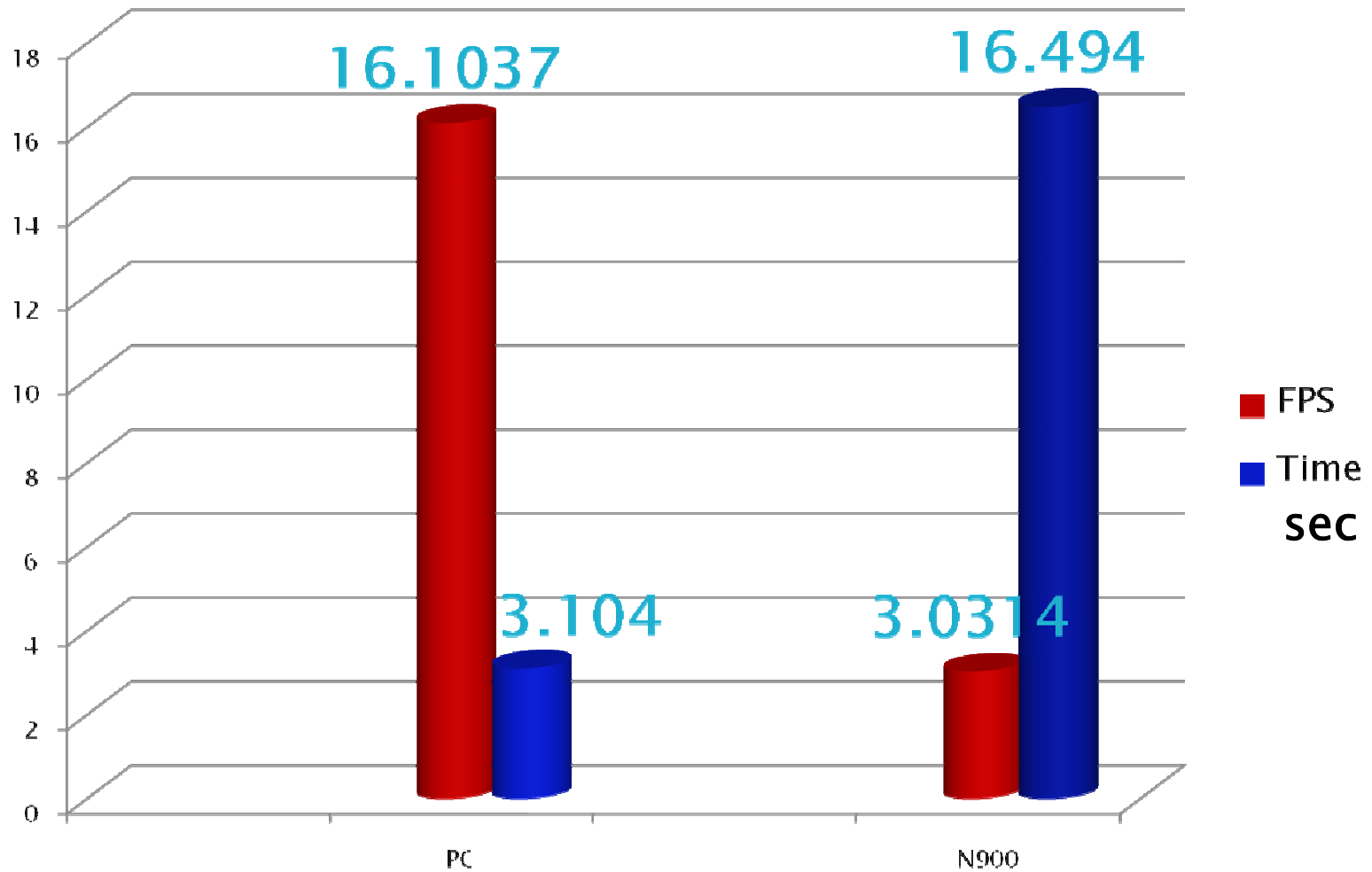
Test case 1 - linear filtering



Test case 2 – face recognition

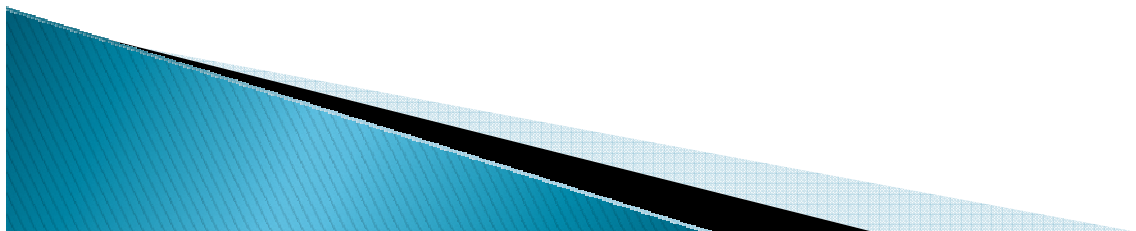


Test case 3 - motion tracking



Project Future Plans

- ▶ Debian maemo package
- ▶ Intensive testing
- ▶ Performance tuning
- ▶ Initiate the project devoted to touchless graphical input system for maemo on the basis of video stream recognition





Questions

