Blue Light AB

A leading Company With a Bright Future!
The Company

- A small company with limited resources
- Focused on Bio optics
- Primarily knowledge based business
The Company

- Few employees, but with a high competence
- Need for strengthening and widening of the company’s core business
- Previous experiences with consults and cooperation with external companies have been satisfying
Laser Speckle Imaging
Background

- Need for measurements of changes in tissue microcirculatory blood flow
- Interest in laser Speckle Imaging (LSI)
- Non-invasive diagnosis

Ref: http://woundblog.com/2008/12/05/wagner-classification-of-diabetic-foot-ulcers/
Background
Static speckle pattern
Dynamic speckle pattern

Skin tissue
Doppler shift = frequency shift
Application area

• The final prototype is intended for:
  – testing the post occlusive hyperaemic reaction
  – testing of local erythematous responses from skin provocation
  – testing the heat provocation response
  – further development of a novel system for measurements in clinical practice
**Requirements**

- The system should:
  - analyze the signals digitally
  - function in different light settings
  - be stable
  - measure fast changes in blood flow
  - be user-friendly
Requirements

• The system should:
  – be portable
  – be safe for the patient and the user
  – function in a clinical setting
  – be able to create images of the blood flow
  – measure in real time