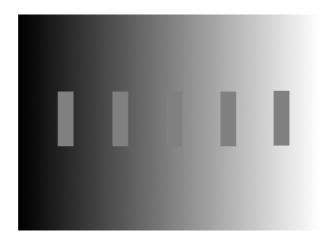# T-61.5010 Information visualization

Exercise 2. Tue/Wed Feb. 12/13, 2006, 12-13 T3

You should *solve the exercises prior to the session*, where the solutions will be presented and discussed. There will be a list to which you can mark which problems you have solved. You should *be prepared to present your solution for the class*. Handing in your answers is NOT necessary.

1. Discuss the *simultaneous brightness and contrast* effect shown in the figure below and explain it using the Difference of Gaussians model. Your answer does not have to contain any mathematical calculations. Instead, try to give a clear explanation why the rectangles appear to be of a different gray tone while they in fact are all of the same "color".

2. Digital cameras have a *white-balance* setting. Why is this needed? Why do pictures taken outside using an indoor setting appear blue, and why do pictures taken indoors using an outdoor setting appear red?

3. Present an example and discuss the properties of a good color scale for representing:

   a) Land use (residential, industrial, recreational, agricultural, etc.) on a map.

   b) The level of elevation on a map.