



















5

















CIE Chromacity Diagram (cont...)

 Any straight line joining two points in the diagram defines all the different colors that can be obtained by combining these two colors additively.

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 A line drawn from the PEE to any point on the boundary defines all the shades of that particular color.



C. Nikou – Digital Image Processing (E12)























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Pseudocolor Image Processing

- Pseudocolor (also called false color) image processing consists of assigning colors to grey values based on a specific criterion.
- The principle use of pseudocolor image processing is for human visualisation.

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 Humans can discern between thousands of color shades and intensities, compared to only about two dozen or so shades of grey.









































































121 **Color Perception Model (cont...)** • The perception of a color with spectral energy distribution $C(\lambda)$ is described by the responses of the three primaries to that color: $a_i(C) = \int_{\lambda_{\min}}^{\lambda_{\max}} S_i(\lambda)C(\lambda)d\lambda, i = 1, 2, 3$ • Two colors $C_1(\lambda)$ and $C_2(\lambda)$ are perceived to be identical (they look the same) if: $a_i(C_1) = a_i(C_2), i = 1, 2, 3$ C. Nikou – Digital Image Processing (E12)















