

01.

2차원 신호의 디지털화 과정

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학습목표

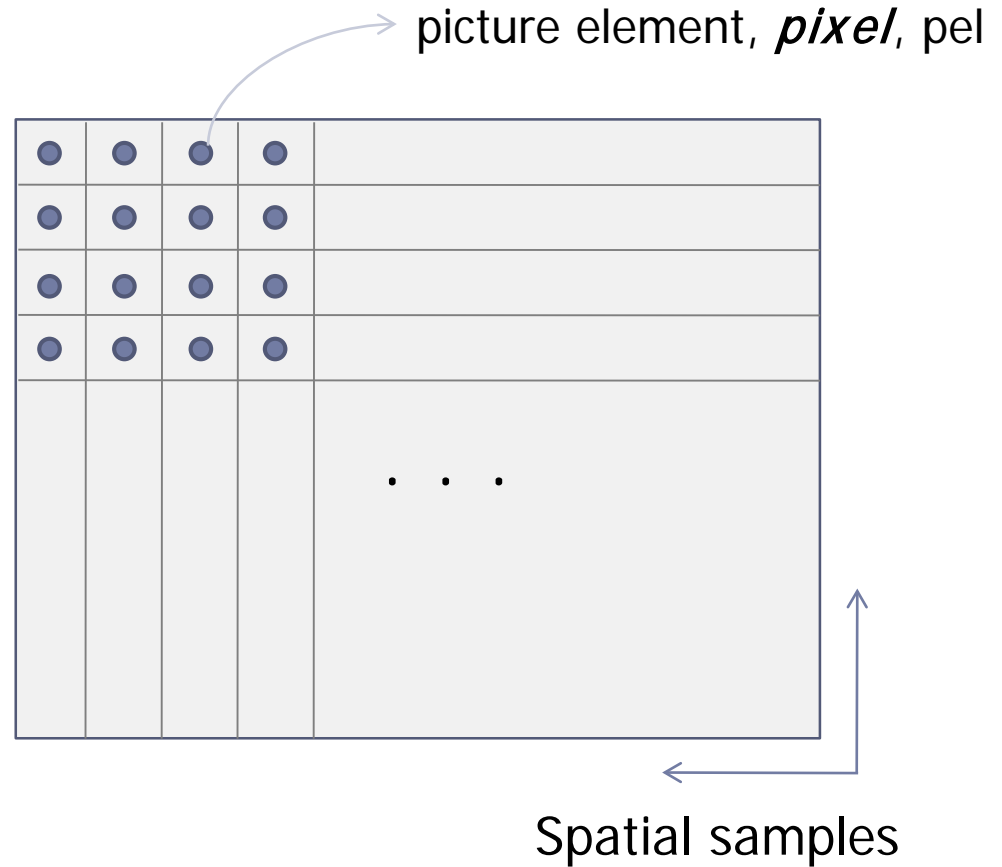
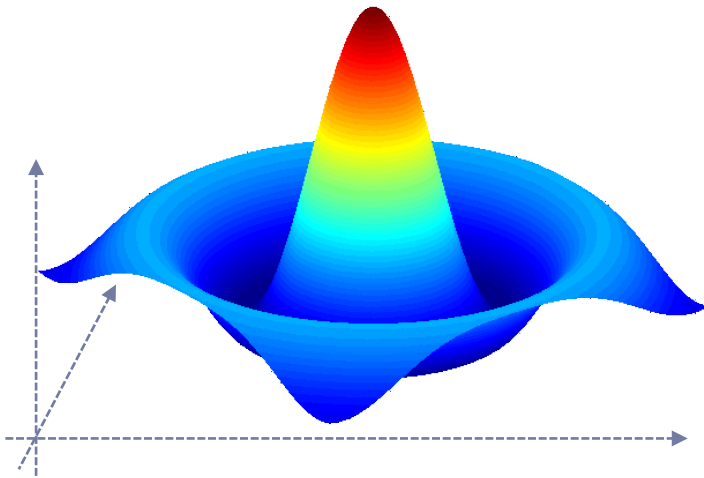
- 영상 신호의 디지털화 과정을 설명할 수 있다.

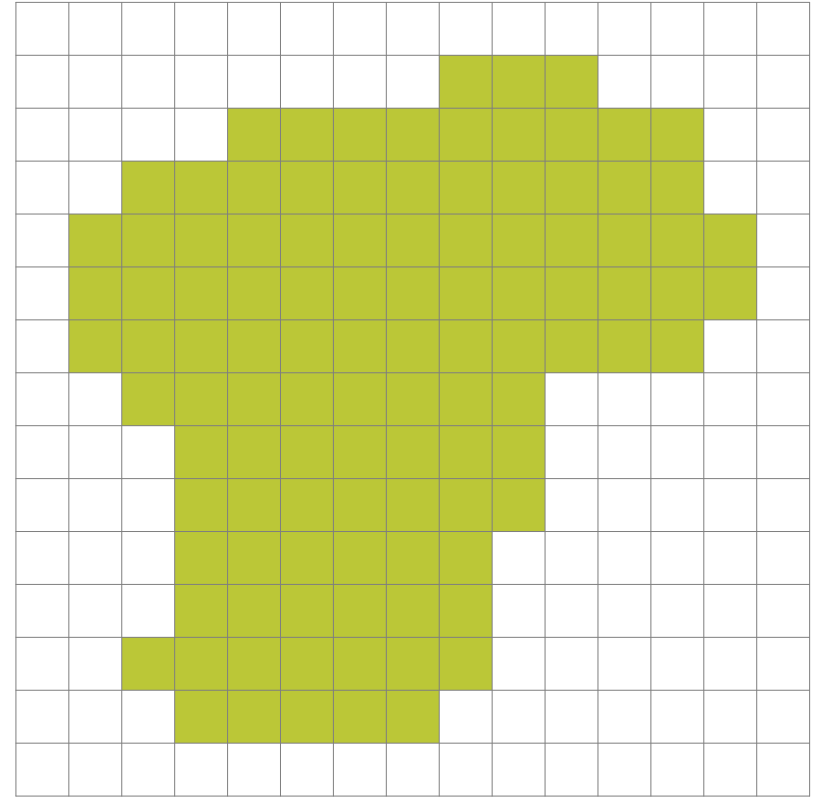
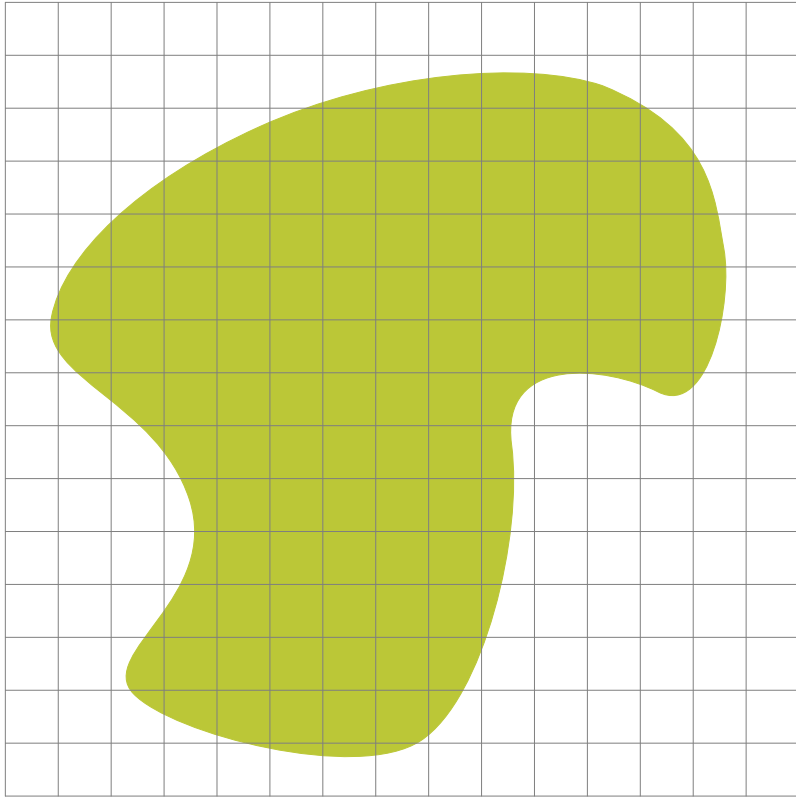
영상 신호의 디지털화 과정

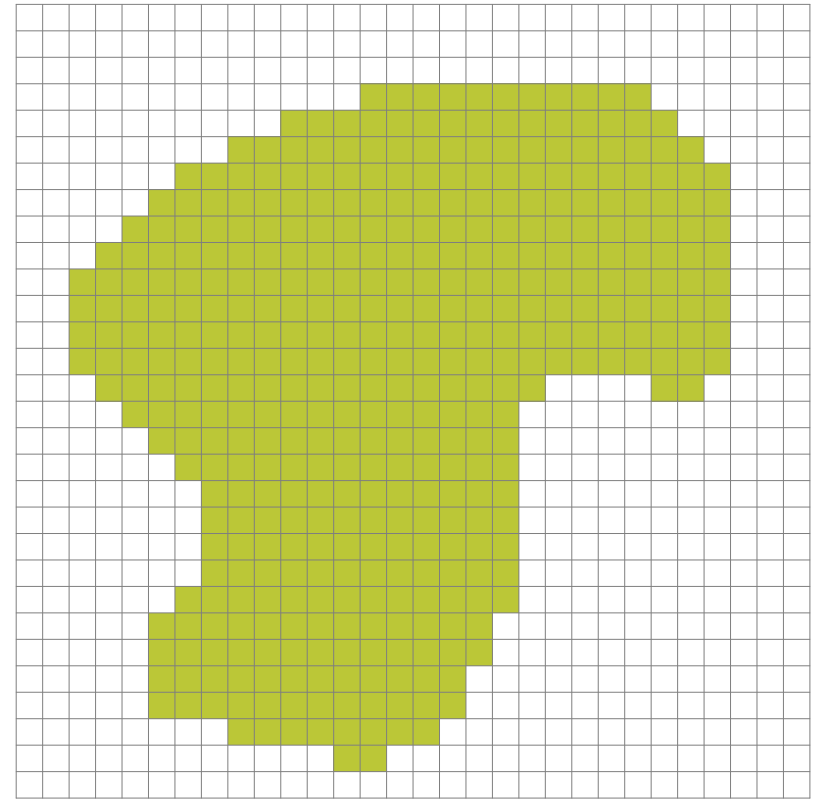
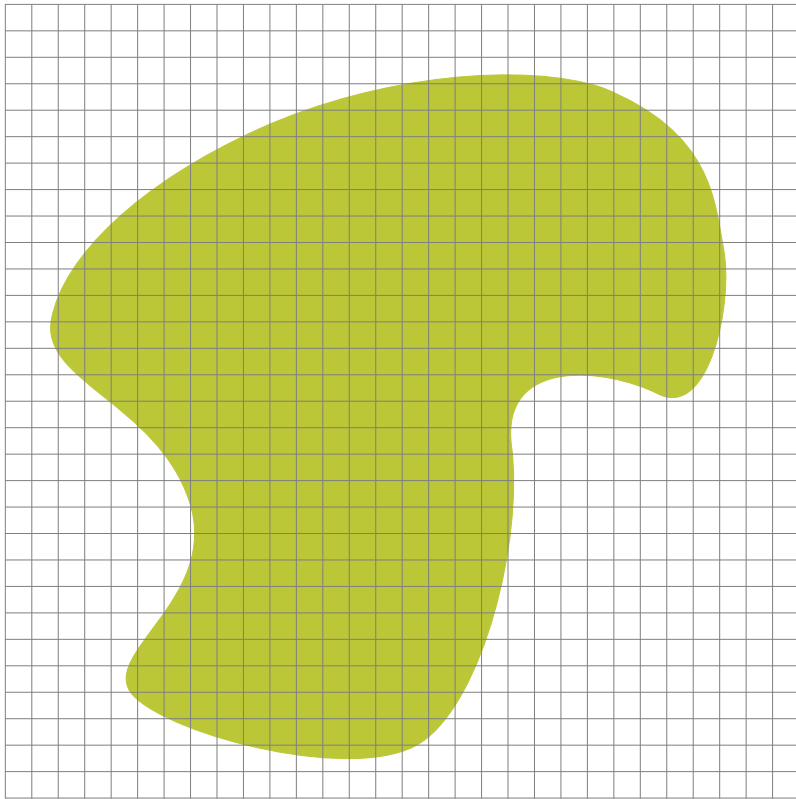


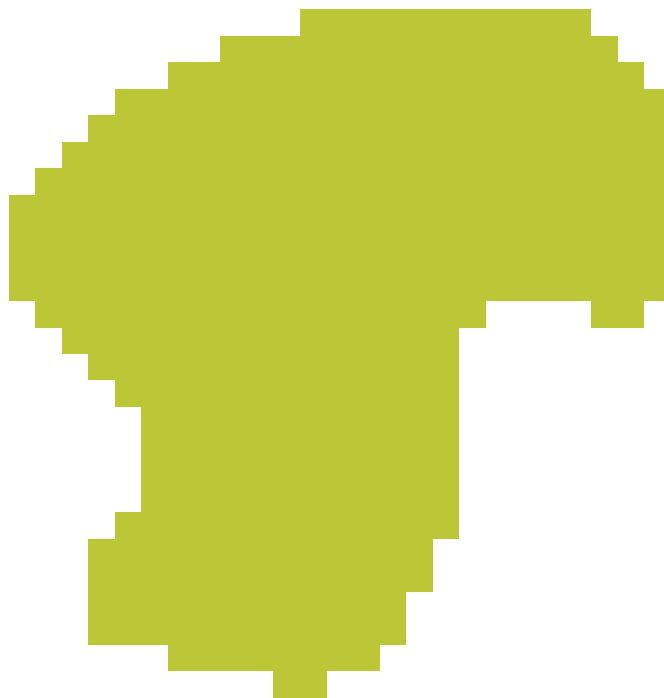
Sampling \Rightarrow **Quantizing** \Rightarrow **Coding**

Sampling











64x64



128x128



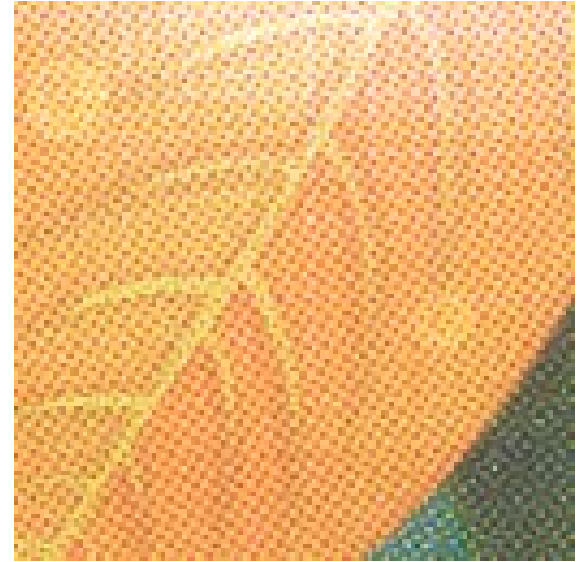
256x256



(a) 100dpi 영상



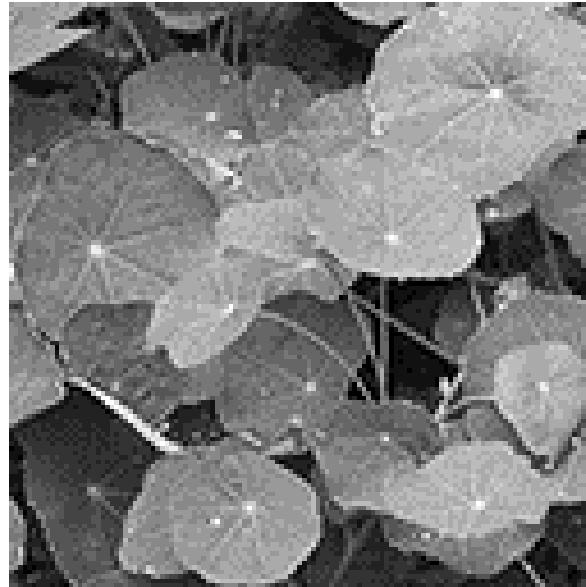
(b) 300dpi 영상



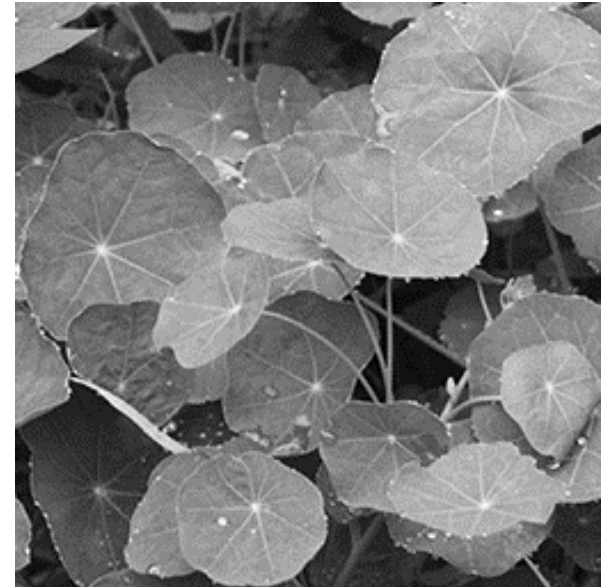
(c) 600dpi 영상



64x64

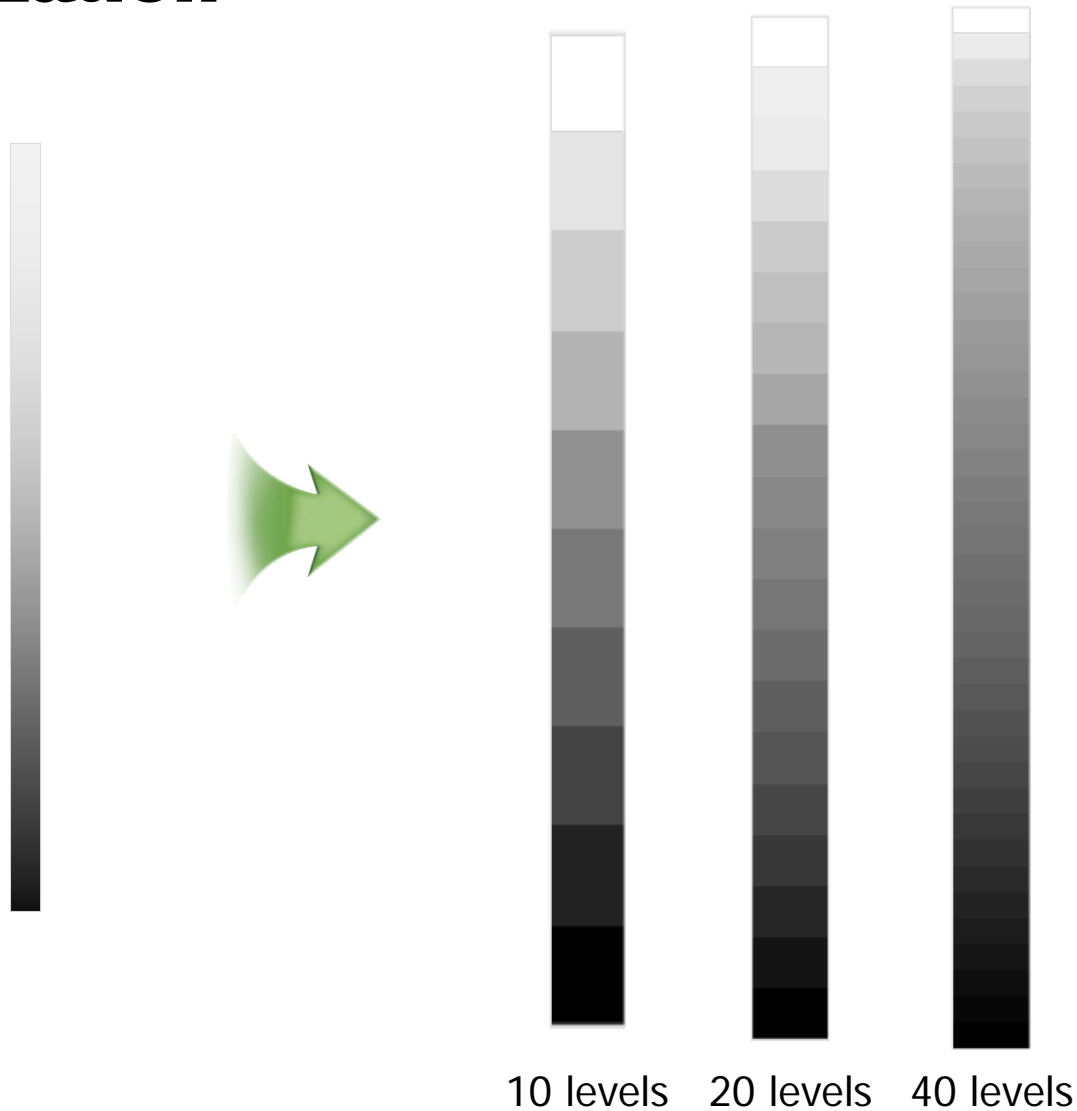


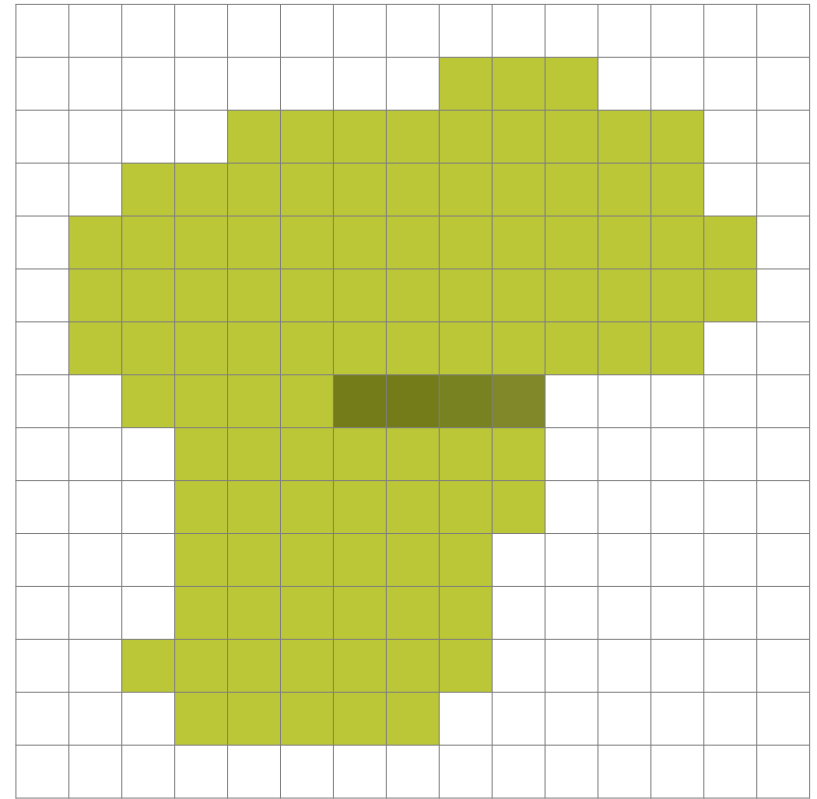
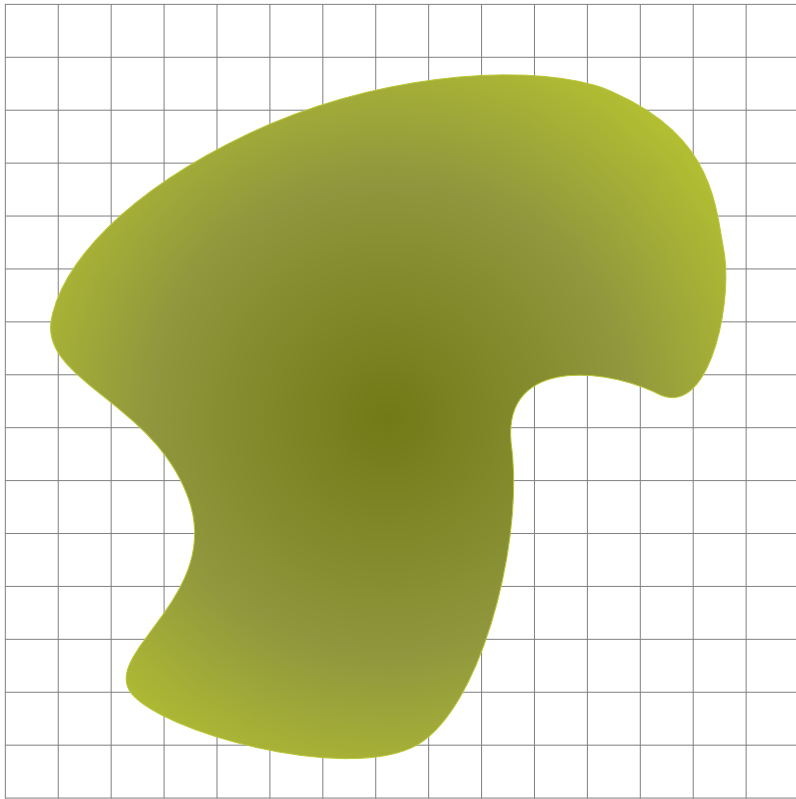
128x128



256x256

Quantization







(a) 2 levels



(b) 4 levels

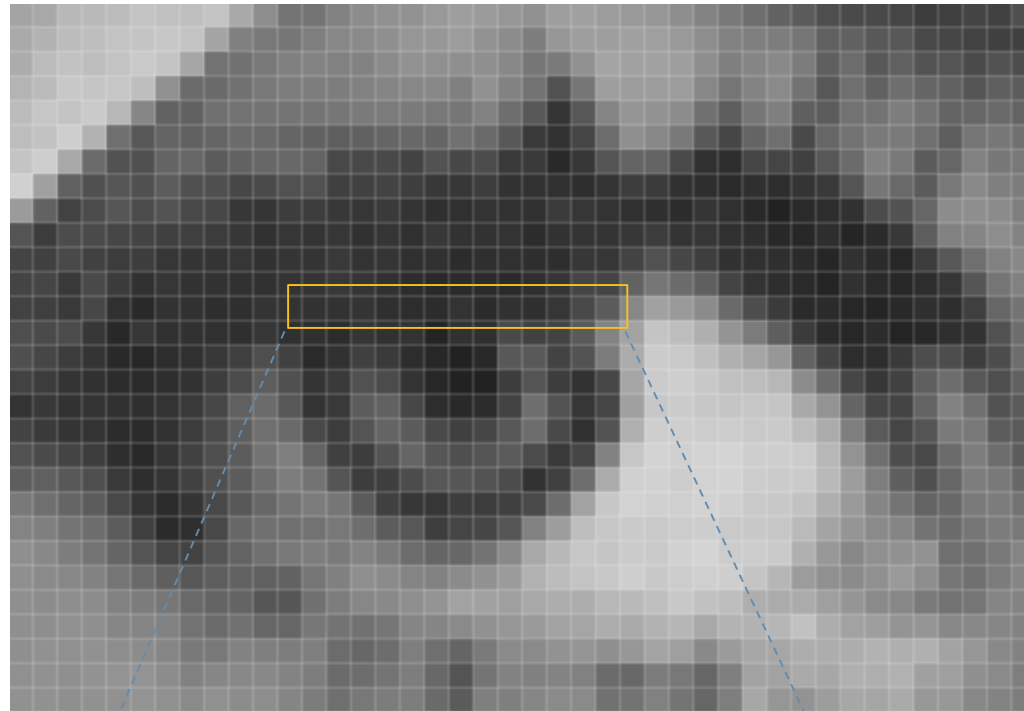


(c) 16 levels



(d) 256 levels

Coding



0011 0001 0010 . . . 0101



압축

요약

- 영상 신호의 디지털화 과정
 - Sampling \Rightarrow Quantization \Rightarrow Coding

Reference

- R. Gonzalez, R. Woods, **Digital Image Processing (2nd Edition)**, Prentice Hall, 2002
- Scott E Umbaugh, **Computer Imaging**, CRC Press, 2005