University of
British Columbia

Sampling

CPSC 414

Michiel van de Panne

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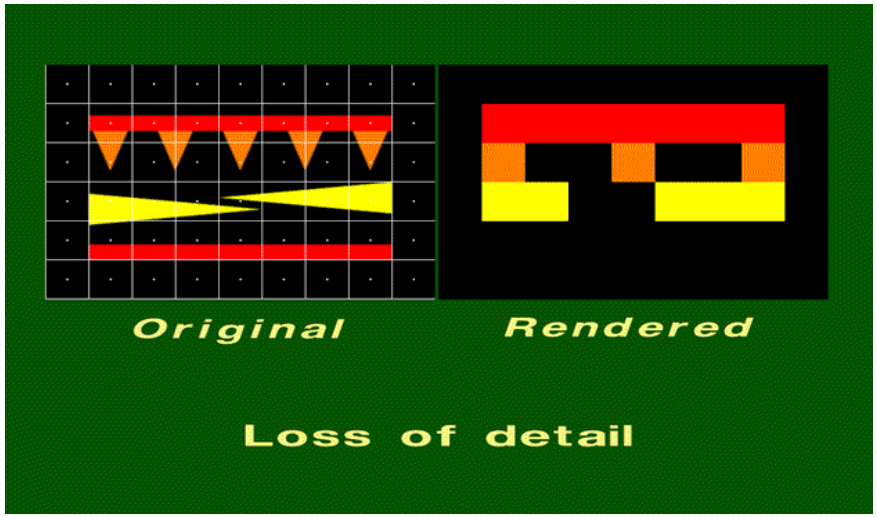

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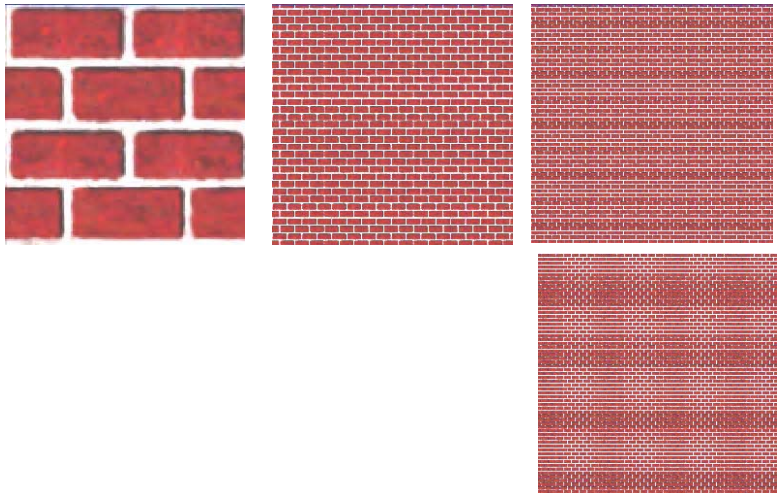

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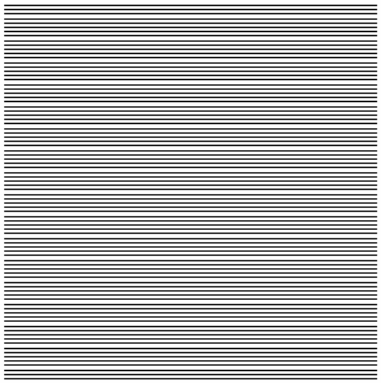

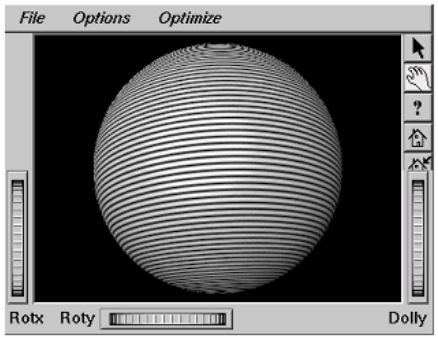

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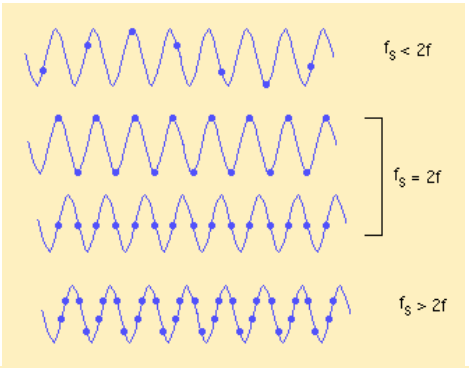

A continuous-time signal can be completely recovered from its samples iff the sampling rate is greater than twice the maximum frequency present in the signal.

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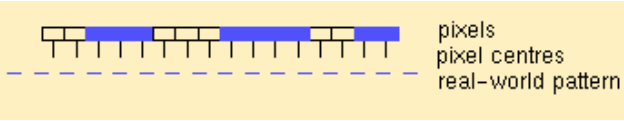
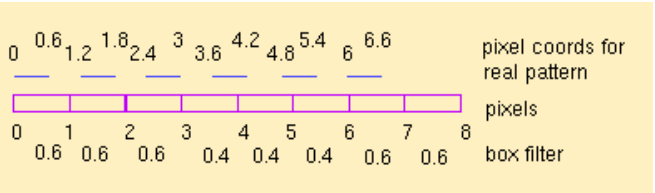
point sampling



unweighted area sampling



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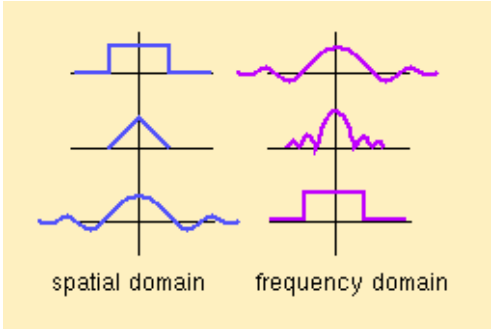
the view in the frequency domain



textures can be pre-filtered (i.e., filtered before sampling)

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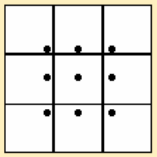
post-filtering
(regularly-sampled grid)

- multiple samples per pixel



```
3x3 Bartlett        5x5 Bartlett

1 2 1               1 2 3 2 1
2 4 2               2 4 6 4 2
1 2 1               3 6 9 6 3
                    2 4 6 4 2
                    1 2 3 2 1
```

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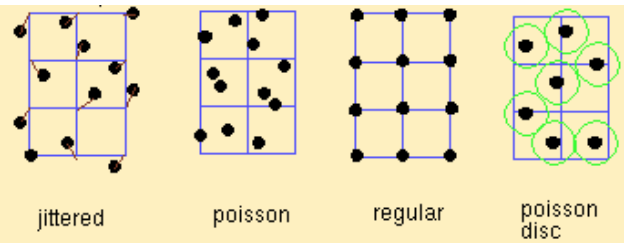
post-filtering
(stochastic sampling)



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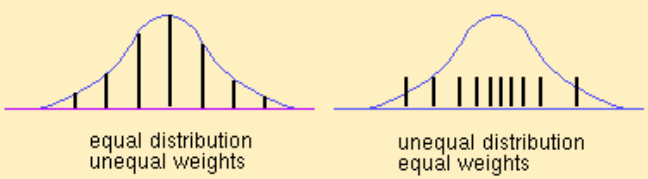
importance sampling



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