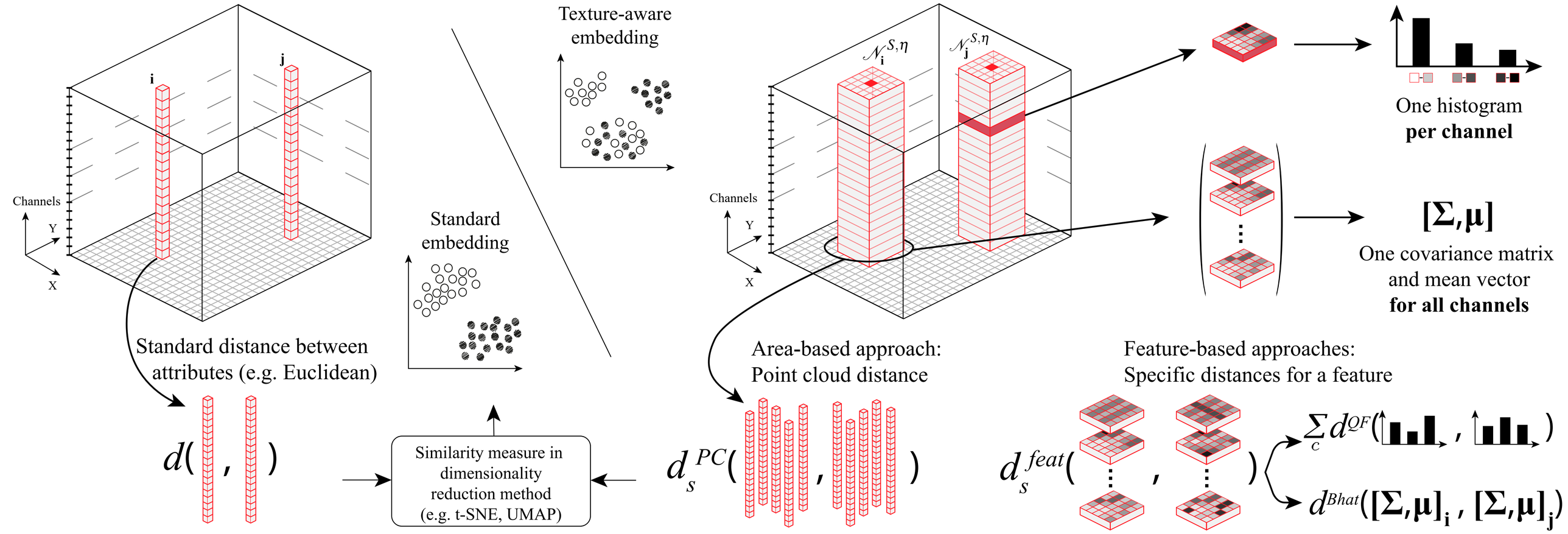
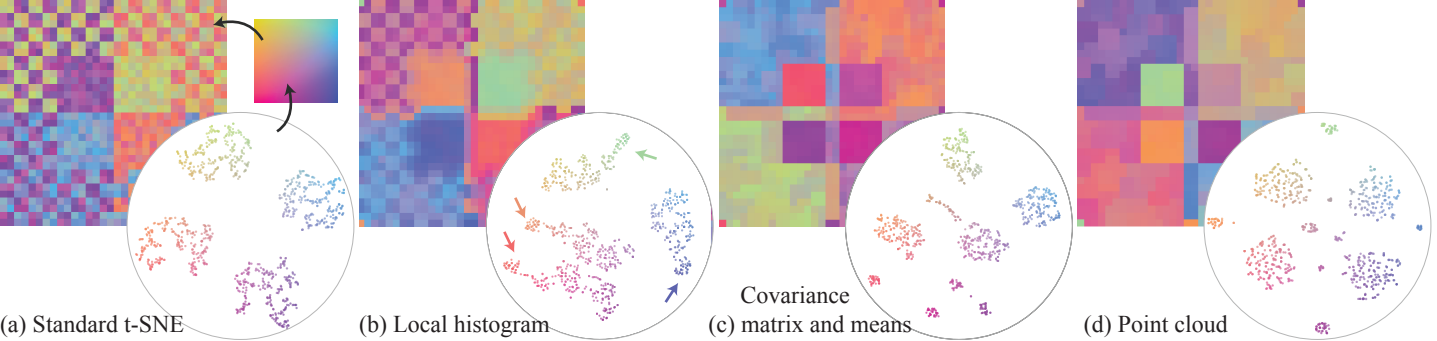
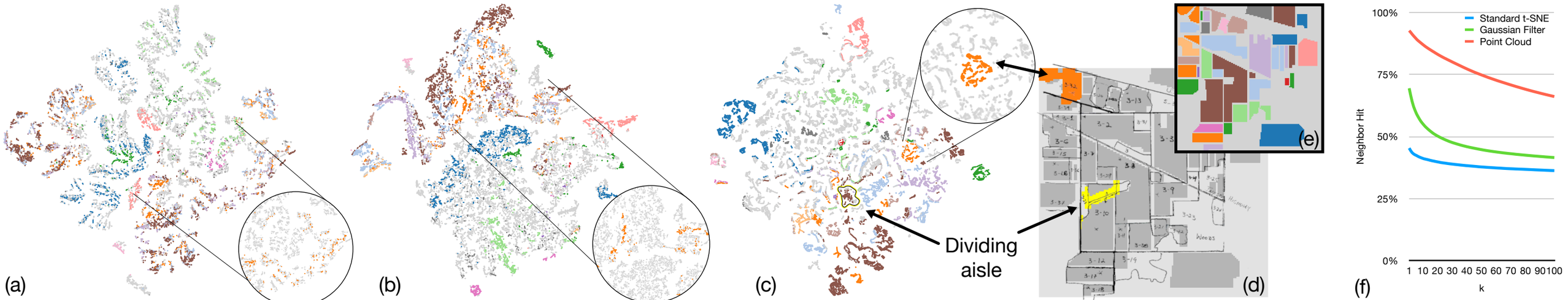

Texture-aware embedding
Standard embedding
Channels
Y
X
i
j
$\mathcal{N}_i^{S,\eta}$
$\mathcal{N}_j^{S,\eta}$
One histogram
per channel
[Σ,μ]
One covariance matrix
and mean vector
for all channels
Standard distance between
attributes (e.g. Euclidean)
Area-based approach:
Point cloud distance
Feature-based approaches:
Specific distances for a feature
$d(\ ,\ )$
Similarity measure in
dimensionality
reduction method
(e.g. t-SNE, UMAP)
$d_s^{PC}(\ ,\ )$
$d_s^{feat}(\ ,\ )$
$\sum_c d^{QF}(\ ,\ )$
$d^{Bhat}([\Sigma,\mu]_i, [\Sigma,\mu]_j)$



(a) Standard t-SNE (b) Local histogram (c) Covariance matrix and means (d) Point cloud


(a)
(b)
(c)
Dividing aisle
(d)
(e)
(f)
100%
75%
50%
25%
0%
Neighbor Hit
1 10 20 30 40 50 60 70 80 90100
k
Standard t-SNE
Gaussian Filter
Point Cloud