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(54) Title: SIGNAL-TO-NOISE-RATIO METRIC FOR DETERMINING NUCLEOTIDE-BASE CALLS AND BASE-CALL QUALITY

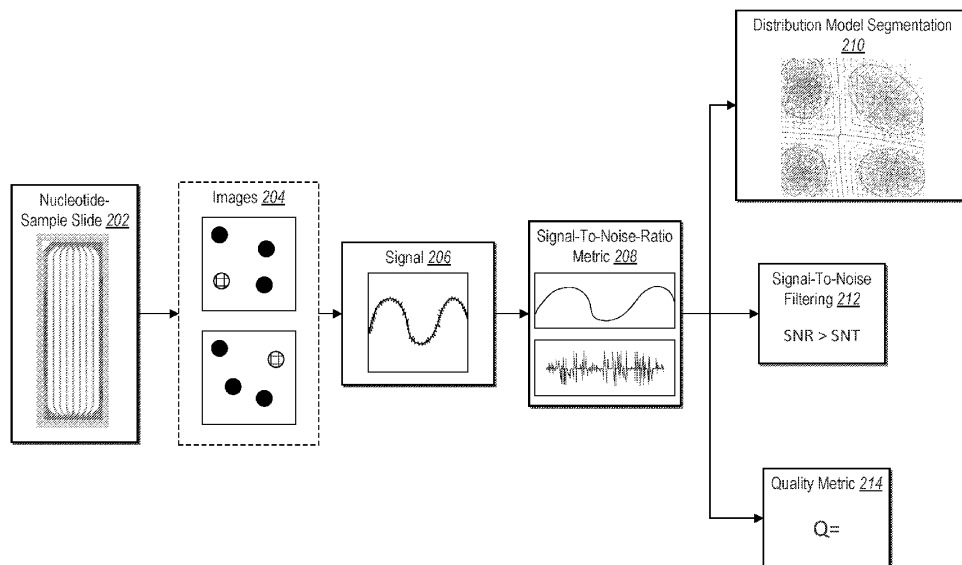


Fig. 2

(57) Abstract: This disclosure describes methods, non-transitory computer readable media, and systems that can generate signal-to-noise-ratio metrics for clusters of oligonucleotides to which tagged nucleotide bases are added and utilize the signal-to-noise-ratio metrics to generate nucleotide-base calls and determine base-call quality. For example, the disclosed systems can generate the signal-to-noise-ratio metrics using scaling factors and noise levels associated with light signals detected from the clusters of oligonucleotides. The disclosed systems can utilize the signal-to-noise-ratio metrics to generate intensity-value boundaries for generating nucleotide-base-calls for the signals in accordance with one or more base-call-distribution models. Additionally, the disclosed systems can utilize a threshold to filter out signals detected from the clusters of oligonucleotides that have low signal-to-noise-ratio metrics. The disclosed systems can further utilize the signal-to-noise-ratio metrics to generate quality metrics for generated nucleotide-base calls

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