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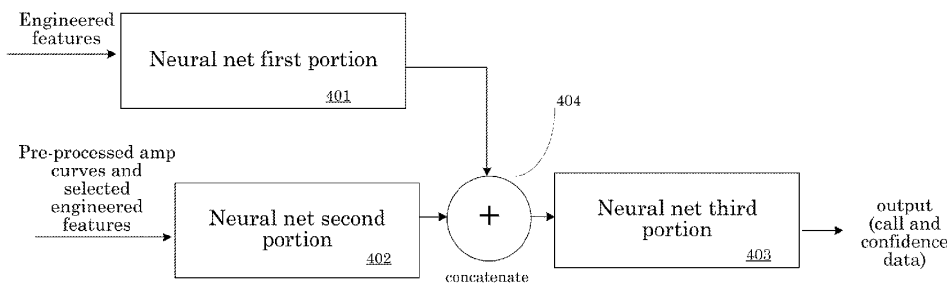


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(54) Title: QPCR CURVE DETECTION



4000
(Structure for each neural net of
neural nets 202 of FIG. 2)

FIG. 4

(57) **Abstract:** Embodiments of the invention are disclosed that provide improved computer systems, computerized methods, and computer program products for generating and evaluating automated predictions regarding whether a particular amplification curve from a qPCR assay indicates presence of a target molecule in a sample. In some embodiments, predictions are generated using deep learning networks. In some embodiments, curve-quality predictions are generated and used to assess whether an amplification prediction can be reliably made from a particular amplification curve or whether the curve reflects an anomaly in the qPCR assay. In various embodiments, prediction confidence data is also generated and used, along with prediction data, in an electronic user interface to improve qPCR measurement.

[Continued on next page]

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