CLAIMS

1. A method for point-of-sale (POS) transaction data management, the method comprising:

for each POS machine of a plurality of POS machines:

capturing, by a first transaction data management module (TDCMM), first POS transaction summary data output by a first POS machine (702, 704, 706) before such POS transaction summary data is communicated to a receipt generation device coupled to the first POS machine with which the first TDCMM is associated, wherein the first TDCMM is augmented to appear to be a network capable printer to the first POS machine, wherein the first TDCMM is installed on the first POS machine and executed by one or more processors of the first POS machine;

transmitting the first POS transaction summary data to a POS transaction data management server (710);

receiving, by the first TDCMM, first adjunctive POS transaction data from the POS transaction data management server, wherein data content of the first adjunctive POS transaction data is corresponding to one or more POS transactions identified within the first POS transaction summary data, and wherein the first adjunctive POS transaction data is distinguishable from the first POS transaction summary data;

generating final POS transaction receipt data, wherein the final POS transaction receipt data comprises the captured first POS transaction summary data augmented with the first adjunctive POS transaction data distinguishable from the first POS transaction summary data (730);

transmitting the final POS transaction receipt data to at least one receipt generation device within a set of receipt generation devices coupled to the first POS machine (734);

generating, by the first TDCMM, second POS transaction summary data for the first POS machine, wherein the second POS transaction summary data comprises reporting data corresponding to multiple distinct sequences of POS transactions handled by the first POS machine across separate purchase transactions within a particular time period under a particular operator; and

transmitting, by the first TDCMM, the second POS transaction summary data to the POS transaction data management server, wherein the each second POS transaction summary data is specific to the POS machine on which the first TDCMM generated the second POS transaction summary data.

2. The method of claim 1, wherein the first POS transaction summary data comprises statistical information generated from one or more POS transaction sequences.

3. The method of claim 1 or 2, wherein the first POS transaction summary data is further associated with an item code comprising a Quick Response code.

4. The method of any one of claims 1 to 3, further comprising producing at least one of a paper receipt and an e-receipt corresponding to the final POS transaction receipt data by way of the at least one receipt generation device to which the final POS transaction receipt data was communicated.

5. The method of claim 1, further comprising identifying second adjunctive POS transaction summary data relevant to the first POS transaction summary data, wherein the second adjunctive POS transaction summary data locally resides in the memory of the first POS machine and/or a data storage unit thereof prior to communication or attempted communication of the first POS transaction summary data to the POS transaction data management server.

6. The method of claim 5, wherein the second adjunctive data comprises at least one of a business name, a business logo, a business operating schedule corresponding to a business at which the first POS machine is located, a promotional or an advertising message, and a set of images.

7. The method of any one of claims 1 to 6, further comprising:

receiving first redeemable certificate data corresponding to a first redeemable certificate presented by a buyer in association with a current set of POS purchase transactions, wherein the first redeemable certificate data was captured or input by a first input device coupled to the first POS machine;

transmitting the first redeemable certificate data to the POS transaction data management server;

validating the first redeemable certificate data by the POS transaction data management server; and

returning the first authorization code corresponding to the first redeemable certificate data.

8. The method of claim 7, wherein validating the first redeemable certificate data by the POS transaction data management server comprises determining whether the first redeemable certificate data is valid or expired.

9. The method of any one of claims 1 to 8, further comprising:

providing a POS transaction database accessible to the POS transaction data management server, wherein the POS transaction database stores historical POS transaction data corresponding to POS transaction summary data received from one or more TDCMMs;

analyzing the historical POS transaction data in accordance with particular criteria; and

transmitting results corresponding to an analysis of historical POS transaction data to one or more external computing systems or devices.

10. The method of claim 9, wherein the external computing systems or devices comprise one or more of a seller electronic / computing device, a loyalty / rewards system, a customer relationship management system, a third-party POS transaction information consumer system, subsystem, or device, a payment system, a big data analytics system, and a credit scoring system.

11. The method of any one of claims 1 to 10, further comprising:

determining whether the final POS transaction receipt data is locally-stored and flagged; and

in response to determining that the final POS transaction receipt data is locally-stored and flagged, transmitting the final POS transaction receipt data from the first TDCMM to the POS transaction data management server.

12. A system for point-of-sale (POS) transaction data management, the system comprising a plurality of modules configured to perform the method of any one of claims 1 to 11.