CLAIMS

Therefore, the following is claimed:

1. A transaction card comprising:

an aluminum layer;

a stainless-steel layer adjacent to the aluminum layer;

a first polyvinyl chloride layer (PVC) adjacent to the aluminum layer on an opposing side relative to the stainless-steel layer, the first PVC layer having a first cavity;

a chip disposed within the first cavity of the first PVC layer with an insulating adhesive, the chip implementing a version of the Europay-Mastercard-Visa (EMV) standard; and

a wireless integrated circuit disposed within a second cavity in an antenna layer, the antenna layer separated from the stainless-steel layer by a ferrite layer and wherein the wireless integrated circuit is configured to wirelessly communicate with a payment terminal on behalf of the chip disposed within the first PVC layer.

2. The transaction card of claim 1, wherein the first PVC layer comprises a transaction card face printed thereon.

3. The transaction card of claim 1 or 2, further comprising:

a second PVC layer adjacent to the ferrite layer on an opposing side relative to the stainless-steel layer, wherein the second PVC layer comprises a transaction card backing printed thereon.

4. The transaction card of claim 3, further comprising a magnetic stripe layer adjacent to the second PVC layer on an opposing side relative to the ferrite layer, wherein the magnetic stripe layer comprises a magnetic stripe in which transaction card data is encoded.

5. A transaction card, comprising:

an aluminum layer with a first cavity;

a stainless-steel layer adjacent to the aluminum layer;

a chip disposed within the first cavity of the aluminum layer with an insulating adhesive, the chip implementing a version of the Europay-Mastercard-Visa (EMV) standard; and

a wireless integrated circuit disposed within a second cavity of an antenna layer, the antenna layer separated from the stainless-steel layer by a ferrite layer and wherein the wireless integrated circuit is configured to wirelessly communicate with a payment terminal on behalf of the chip disposed within the aluminum layer.

6. The transaction card of claims 5, wherein the aluminum layer is approximately 100 microns in thickness and the stainless-steel layer is approximately 300 microns in thickness.

7. The transaction card of claim 5 or 6, wherein the aluminum layer comprises a transaction card face printed thereon.

8. The transaction card of any of claims 5-7, wherein the aluminum layer comprises 2024-T3 aluminum alloy.

9. The transaction card of claim 8, wherein the aluminum alloy is stripped of exterior paint, rolled to a thickness of approximately 100 microns, and tempered.

10. The transaction card of any of claims 5-9, further comprising:

a second PVC layer adjacent to the ferrite layer on an opposing side relative to the stainless-steel layer, wherein the second PVC layer comprises a transaction card backing printed thereon.

11. The transaction card of claim 10, further comprising a rear laminate layer adjacent to the second PVC layer on an opposing side relative to the ferrite layer, wherein the rear laminate layer comprises a magnetic stripe in which transaction card data is encoded.

12. A method of fabricating a card body for a transaction card, comprising:

obtaining a portion of aluminum recycled from an airframe;

stripping the portion of aluminum of dirt and paint;

rolling the portion of aluminum to a thickness of less than 760 microns;

annealing the portion of aluminum;

fabricating an aluminum layer from the portion of aluminum;

attaching the aluminum layer to a stainless-steel layer;

attaching the aluminum layer to a first polyvinyl chloride layer (PVC) adjacent to on an opposing side relative to the stainless-steel layer;

resting a chip within a first cavity of the first PVC layer with an insulating adhesive, the chip implementing a version of the Europay-Mastercard-Visa (EMV) standard; and

inserting a wireless integrated circuit within a second cavity of an antenna layer, the antenna layer separated from the stainless-steel layer by a ferrite layer, and wherein the wireless integrated circuit is configured to wirelessly communicate with a payment terminal.

13. The method of claim 12**,** further comprising rolling the portion of aluminum to a thickness of approximately 100 microns.

14. The method of claim 12 or 13, further comprising fabricating the stainless-steel layer to a thickness of approximately 300 microns.

15. The method of any of claims 12-14, further comprising:

attaching a second PVC layer adjacent to the ferrite layer on an opposing side relative to the stainless-steel layer, wherein the second PVC layer comprises a transaction card backing printed thereon.

16. The method of claim 15, further comprising:

attaching a rear laminate layer adjacent to the second PVC layer on an opposing side relative to the ferrite layer, wherein the rear laminate layer comprises a magnetic stripe in which transaction card data is encoded.

17. The method of any of claims 12-16, wherein fabricating the aluminum layer from the portion of aluminum further comprises cutting an ID-1 compliant sized piece of aluminum from the portion of aluminum.