

CLAIMS

1. A card (10) having an outer, at least substantially straight side (16) and being configured to provide an electromagnetic field along a straight line (121, 122) on or at a surface
5 thereof, the straight line being at least substantially parallel to the side and positioned between 6.9mm and 7.2mm from the side or between 10.2 and 10.5mm from the side, the card comprising an oblong field generator (20,30) comprising at least two end portions (20', 20'') configured to output at least part of the electromagnetic field,
characterized in that the end portions have a width, perpendicular to a longitudinal direction
10 of the field generator, of at least 1.8mm and are positioned so that, when projected on to a plane of the surface:
 - an edge of each end portion is positioned no more than 0.5mm from the straight line and/or
 - the straight line does not overlap the end portions in the projection.
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2. A card according to any of the preceding claims, wherein the straight line extends between a first end point and a second end point on or at the surface and wherein the end portions are positioned so that the first and second end points, when projected on to a straight line through the end portions, are positioned between the end portions.
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3. A card according to any of the preceding claims, wherein the field generator comprises a core material (22) extending within a coil (24).
4. A card according to any of the preceding claims, the card being configured to provide an
25 additional electromagnetic field along a predetermined curve on or at the surface, the card comprising a second oblong field generator (30) with two second end portions having a width, in a direction perpendicular to a longitudinal direction of the generator, of at least 1.8mm and being configured to output at least part of the additional electromagnetic field,
wherein the second end portions are positioned so that, when projected on to the plane of
30 the surface:
 - an edge of each second end portion is positioned no more than 0.5mm from the predetermined curve and/or
 - the predetermined curve does not overlap the second end portions in the projection.
- 35 5. A card according to claim 4, wherein the curve is a straight line being at least substantially parallel to the side and positioned between 10.2mm and 10.5mm from the side.

6. A card according to claim 4 or 5, further comprising a compensating field generator (29, 39) having a first and a second compensating field outputs, wherein the end portions and the compensating field outputs are positioned, when projected on to the plane, so that the end portions are provided on one side of the curve and the compensating field outputs on
5 an opposite side of the curve.

7. An assembly of a card (10) and a card reader (50), the card having an outer, at least substantially straight side, the card reader comprising a reading head configured to be positioned over a straight line, being at least substantially parallel to the side and positioned
10 between 6.9mm and 7.2mm from the side or between 10.2 and 10.5mm from the side, of the card while sensing the electromagnetic field and to output a signal relating to the field sensed,

characterized in that the card comprises an oblong field generator comprising at least two end portions having a width, perpendicular to a longitudinal axis of the generator, of at least
15 1.8mm and being configured to output at least part of the electromagnetic field, and in that the end portions are positioned so that, when projected on to a plane of the surface:

- an edge of each end portion is positioned no more than 0.5mm from the straight line and/or
- 20 - the straight line does not overlap the end portions in the projection.

8. An assembly according to claim 7, wherein the reading head comprises at least a first and a second field sensor (52, 54), where the first field sensor is configured to travel along the straight line and the second field sensor is configured to travel along a curve, the card
25 being configured to provide an additional electromagnetic field along the curve on or at the surface, the card comprising a second oblong field generator (30) with two second end portions configured to output at least part of the additional electromagnetic field, wherein the second end portions are positioned so that, when projected on to a plane of the surface:

- 30 - an edge of each second end portion is positioned no more than 0.5mm from the curve and/or
- the curve does not overlap the second end portions in the projection.

9. A method of outputting a signal from a card according to any of claims 1-6, the method
35 comprising the step of operating the field generator to output a magnetic field.

10. A method according to claim 9, wherein the operating step comprises operating the field generator to output a magnetic field which varies over time.

11. A method of transferring information from a card to a card reader head comprising a reading head, the card having an outer, at least substantially straight side, the method comprising:

- positioning the reading head directly above a straight line, being at least substantially parallel to the side and positioned between 6.9mm and 7.2mm from the side or between 10.2 and 10.5mm from the side,
- 10 - operating the field generator of the card to output a magnetic field so that at least a part of the magnetic field enters the reading head, and where the card reader outputs a signal corresponding to the at least part of the magnetic field entering the reading head, wherein the operating step comprises operating a field generator comprising at least two end portions configured to output at least part of the electromagnetic field,
- 15 characterized in that the end portions have a width, perpendicular to a longitudinal direction of the generator, of at least 1.8mm and are positioned so that, when projected on to a plane of the surface:
 - an edge of each end portion is positioned no more than 0.5mm from the straight line and/or
- 20 - the straight line does not overlap the end portions in the projection.

12. A method according to claim 11, wherein the positioning step comprises translating the reading head in relation to the card.

25 13. A card according to claim 1, wherein the edge is a portion of or at the end portion which extends in a longitudinal direction of the oblong field generator.

14. An assembly according to claim 7, wherein the edge is a portion of or at the end portion which extends in a longitudinal direction of the oblong field generator.

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15. A method according to claim 11, wherein the edge is a portion of or at the end portion which extends in a longitudinal direction of the oblong field generator.