CLAIMS:

1. A display apparatus for direct viewing of information on the display apparatus, comprising

a thermal conductive liquid (46),

a liquid tight encasing (11) being filled with the thermal conductive liquid (46) and comprising a transparent window (13),

a direct view display panel (12) having a front area for displaying information and being arranged inside the liquid tight encasing (11) in a position with respect to the transparent window (13) for allowing a spectator to directly view the information through the transparent window (13),

a backlight being arranged inside the liquid tight encasing (11), the direct view display panel (12) and the backlight being submerged in the thermal conductive liquid (46).

2. A display apparatus as claimed in claim 1, wherein the direct view display panel (12) is a reflective direct view display panel.

3. A display apparatus as claimed in claims 1 or 2, further comprising electronic circuits (14, 15, 16) for operating the direct view display panel (12).

4. A display apparatus as claimed in claim 3 wherein the electronic circuits (14, 15, 16) are arranged inside the liquid tight encasing (11) and are submerged in the thermal conductive liquid (46).

5. A display apparatus as claimed in claim 3 or 4 wherein the electronic circuits (14, 15, 16) comprise a processing circuit (14) for driving the direct view display panel (12) and an AC to DC power converter (15) for converting a mains voltage into power supply voltages for the processing circuit (14).

6. A display apparatus as claimed in claim 3 or 4, wherein electronic circuits (14, 15, 16) comprise a battery (16), a processing circuit (14) for driving the direct view display panel (12) and an DC to DC power converter (15) for converting a voltage of the battery (16) or an external DC voltage into power supply voltages for the processing circuit (14).

7. A display apparatus as claimed in claim 6, wherein the battery (16) is arranged inside the liquid tight casing (11) and is submerged in the thermal conductive liquid (46).

8. A display apparatus as claimed in any one of the preceding claims, wherein the front area of the direct view display panel (12) is spaced apart from the transparent window (13) for allowing the thermal conductive liquid (46) to flow between the front area and the transparent window (13).

9. A display apparatus as claimed in any one of the preceding claims, wherein a refractive index of the thermal conductive liquid (46), a refractive index of a material of the transparent window (13) and a refractive index of a transparent material covering the front area of the direct view display panel (12) are matched.

10. A display apparatus as claimed in claim 1, wherein the liquid tight encasing (11) comprises a heat sink area (42) for dissipating heat into the ambient of the liquid tight encasing (11).

11. A display apparatus as claimed in any one of the preceding claims, further comprising a liquid pump (39) being arranged inside the liquid tight encasing (11) for obtaining a liquid flow of the thermal conductive liquid (46) inside the liquid tight encasing (11).

12. A display apparatus as claimed in any one of the preceding claims, wherein the thermal conductive liquid (46) is electrically non-conductive.

13. A digital outdoor advertising system comprising the display apparatus as claimed in any one of the preceding claims.

14. A passenger information system comprising the display apparatus as claimed in any one of the claims 1 to 12.

CLAIMS:

1. A display apparatus for direct viewing of information on the display apparatus, comprising

a thermal conductive liquid (46),

a liquid tight encasing (11) being filled with the thermal conductive liquid (46) and comprising a transparent window (13),

a direct view display panel (12) having a front area for displaying information and being arranged inside the liquid tight encasing (11) in a position with respect to the transparent window (13) for allowing a spectator to directly view the information through the transparent window (13),

a backlight being arranged inside the liquid tight encasing (11),

the direct view display panel (12) and the backlight being submerged in the thermal conductive liquid (46).

2. A display apparatus as claimed in claim 1, wherein the direct view display panel (12) is a reflective direct view display panel.

3. A display apparatus as claimed in claims 1 or 2, further comprising electronic circuits (14, 15, 16) for operating the direct view display panel (12).

4. A display apparatus as claimed in claim 3 wherein the electronic circuits (14, 15, 16) are arranged inside the liquid tight encasing (11) and are submerged in the thermal conductive liquid (46).

5. A display apparatus as claimed in claim 3 or 4 wherein the electronic circuits (14, 15, 16) comprise a processing circuit (14) for driving the direct view display panel (12) and an AC to DC power converter (15) for converting a mains voltage into power supply voltages for the processing circuit (14).

6. A display apparatus as claimed in claim 3 or 4, wherein the electronic circuits (14, 15, 16) comprise a battery (16), a processing circuit (14) for driving the direct view display panel (12) and a DC to DC power converter (15) for converting a voltage of the battery (16) or an external DC voltage into power supply voltages for the processing circuit (14).

7. A display apparatus as claimed in claim 6, wherein the battery (16) is arranged inside the liquid tight encasing (11) and is submerged in the thermal conductive liquid (46).

8. A display apparatus as claimed in any one of the preceding claims, wherein the front area of the direct view display panel (12) is spaced apart from the transparent window (13) for allowing the thermal conductive liquid (46) to flow between the front area and the transparent window (13).

9. A display apparatus as claimed in any one of the preceding claims, wherein a refractive index of the thermal conductive liquid (46), a refractive index of a material of the transparent window (13) and a refractive index of a transparent material covering the front area of the direct view display panel (12) are matched.

10. A display apparatus as claimed in claim 1, wherein the liquid tight encasing (11) comprises a heat sink area (42) for dissipating heat into the ambient of the liquid tight encasing (11).

11. A display apparatus as claimed in any one of the preceding claims, further comprising a liquid pump (39) being arranged inside the liquid tight encasing (11) for obtaining a liquid flow of the thermal conductive liquid (46) inside the liquid tight encasing (11).

12. A display apparatus as claimed in any one of the preceding claims, wherein the thermal conductive liquid (46) is electrically non-conductive.

13. A display apparatus as claimed in any one of the preceding claims, wherein the backlight comprises one or more white or colored light emitting diodes (LED), or one or more cold cathode fluorescent lamps (CCFL), or one or more tube luminescent lamps (TL) and the backlight is arranged at a side, a corner, or a back of the direct view display panel.

14. A digital outdoor advertising system comprising the display apparatus as claimed in any one of the preceding claims.

15. A passenger information system comprising the display apparatus as claimed in any one of the claims 1 to 13.