

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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PANASONIC CORPORATION  
Petitioner

v.

NEODRON LTD.  
Patent Owner

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Case IPR2021-01115  
Patent No. 8,946,574

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**DECLARATION OF VIVEK SUBRAMANIAN, PH.D.  
IN SUPPORT OF PETITION FOR  
INTER PARTES REVIEW OF U.S. PATENT NO. 8,946,574**

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- a.** 1.pre: “An apparatus comprising”
- 8.pre: “A device comprising”
- 15.pre: “An apparatus comprising” .....30
- b.** 8.a: “a first cover sheet” .....30
- c.** 1.a: “a first optically clear adhesive (OCA) layer between a first cover sheet and a substrate”
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- 15.a “a first optically clear adhesive (OCA) layer between a first cover sheet and a substrate” .....31
- d.** 1.b: “the substrate, with drive or sense electrodes of a touch sensor disposed on a first surface and a second surface of the substrate, the first surface being opposite the second surface, the drive or sense electrodes being made of a conductive mesh conductive material comprising metal”
- 8.c: “the substrate, with drive or sense electrodes of a touch sensor disposed on a first surface and a second surface of the substrate, the first surface being opposite the second surface, the drive or sense electrodes being made of a conductive mesh conductive material comprising metal”
- 15.b: “the substrate, with sense electrodes of a touch sensor disposed on a first surface and drive electrodes of the touch sensor disposed on a second surface of the substrate, the first surface being opposite the second surface, the drive and sense electrodes being made of a conductive mesh of conductive material comprising metal” .....33
- e.** 1.c: “a display separated from the second surface of the substrate by a second OCA and a second cover sheet such that at least a portion of the second cover sheet is

positioned between the second surface of the substrate and the display”

8.d: “a display separated from the second surface of the substrate by a second OCA and a second cover sheet such that at least a portion of the second cover sheet is positioned between the second surface of the substrate and the display”

15.c: “a display separated from the second surface of the substrate by a second OCA and a second cover sheet such that at least a portion of the second cover sheet is positioned between the second surface of the substrate and the display” .....43

**f.** 8.e: “one or more computer-readable non-transitory storage media embodying logic that is configured when executed to control the touch sensor” .....45

**g.** 2.: “The apparatus of claim 1, wherein the conductive material is copper, silver, gold, aluminum, or tin.”

9.: “The device of claim 8, wherein the conductive material is copper, silver, gold, aluminum, or tin.” .....46

**h.** 3.: “The apparatus of claim 1, wherein the conductive mesh comprises a plurality of mesh segments, each of the mesh segments having a width of approximately 10  $\mu\text{m}$ .”

10.: “The device of claim 8, wherein the conductive mesh comprises a plurality of mesh segments, each of the mesh segments having a width of approximately 10  $\mu\text{m}$ .” .....47

**i.** 4.: “The apparatus of claim 3, wherein approximately 5% of an active area of the touch sensor is covered by the one or more mesh segments.”

11.: “The device of claim 10, wherein approximately 5% of an active area of the touch sensor is covered by the mesh segments.” .....48

**j.** 6.: “The apparatus of claim 1, wherein the conductive meshes have an optical transmissivity of approximately

90%.”

13.: “The device of claim 8, wherein the conductive meshes have an optical transmissivity of approximately 90%.” .....50

**k.** 7.: “The apparatus of claim 1, wherein the sense electrodes being disposed on the first surface of the substrate and the drive electrodes being disposed on the second surface of the substrate.”

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**B.** Ground 2: Claims 1-4, 6-11, and 13-15  
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**1.** Summary of Philipp .....54

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**a.** 1.pre: “An apparatus comprising”

8.pre: “A device comprising”

15.pre: “An apparatus comprising” .....56

**b.** 8.a: “a first cover sheet” .....57

**c.** 1.a: “a first optically clear adhesive (OCA) layer between a first cover sheet and a substrate”

8.b: “a first optically clear adhesive layer (OCA) between the first cover sheet and a substrate”

15.a “a first optically clear adhesive (OCA) layer between a first cover sheet and a substrate” .....57

**d.** 1.b: “the substrate, with drive or sense electrodes of a touch sensor disposed on a first surface and a second surface of the substrate, the first surface being opposite

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