CLAIMS

What is claimed is:

1. A method for repairing a microvia assembly 10 comprising a microvia and a pad disposed on and in electrical conductive contact with the microvia along a microvia-pad interface, at least a portion of the pad being missing from the assembly 10, exposing an upper region of the microvia along the microvia-pad interface; wherein at least the upper region of the microvia comprises nanocopper; the method including providing conductive material comprising nanocopper on the exposed upper region of the microvia in at least a portion of a region where the missing portion of the pad was located, such that a direct nanocopper to nanocopper interface is formed between the provided conductive material and the upper region of the microvia along the microvia-pad interface.

2. The method of claim 1 in which the step of providing conductive material includes sintering the conductive material onto the microvia.

3. The method of claim 2 in which:

   the missing portion of the pad is the entire pad; and

   the step of providing conductive material includes replacing the pad by forming a new pad on the microvia by sintering the conductive material onto the microvia.

4. The method of claim 1 in which:

   the providing step includes providing the conductive material on a microvia of a microvia assembly 10 that is installed in a PCB; and

   the method includes, before the providing step, the additional step of removing a PCB component that is carried by the PCB and is blocking access to the damaged microvia assembly 10.

5. The method of claim 4 in which the step of removing a PCB component includes heating the PCB before removing the PCB component.

6. The method of claim 4 in which the step of step of removing a PCB component includes heating the PCB component.

7. The method of claim 1, including the additional step of tinning the pad.

8. The method of claim 1, including the additional step of reinforcing the conductive material with an adhesive such that the adhesive provides structural support for the conductive material.

9. The method of claim 1 in which the providing step includes providing the conductive material in a cavity left in a masking layer of a PCB carrying the microvia assembly 10, the cavity having been left in the masking layer by the loss of the missing portion of the pad.

10. The method of claim 1, wherein the nanocopper includes particles having a diameter of 20 nanometers or less.