parent back plate for a flexible, conductive, transparent touch member assembly as is also described in U.S. patent application Ser. No. ______ (DON03 P-910), filed Sep. 5, 2001, incorporated by reference above,

**[0013]** The transparent thin film conductors **20** and **50** are typically metal oxides such as indium tin oxide, tin antimony oxide, fluorine doped tin oxide, or tin oxide. The spacer dots **30** preferably consist of organic-inorganic nanocomposites (Nanomeres®) utilizing methyl tetraethylorthosilicate, tetraethylorthosilicate, or glycidoxypropyltrimethoxysilane as network formers hydrolyzed using hydrochloric acid prepared initially in a paste form. Silica sols, silica powders, ethyl cellulose, and hydroxypropyl cellulose may be utilized as additives to adjust viscosity. Cyracure, (Union Carbide, UV 6974) serves as the photoinitiator allowing for the use of ultraviolet light for curing. The resulting improved spacer dots **30** can be enhanced optically by nano-particle metal oxides and pigments such as titanium dioxide ($TiO_2$), barium titanium oxide (BaTiO), silver (Ag), nickle (Ni), molybdenum (Mo), and platinum (Pt). The resulting index of refraction of the dots **30** for substantial optical matching to the transparent conductor is preferably about 1.49 to about 2.0, most preferably about 1.75 to about 1.95 (as measured at the sodium D line).

**[0014]** The preferred spacer dots, such as those shown in **FIG. 3**, are produced by silk screen printing using fine mesh sieves with appropriate hole patterns. The nanoparticles can be used to adjust the refractive index of the dots easily; for example, the nanoparticles can include silicon dioxide for decreasing the index; or zirconium dioxide, titanium dioxide, and tantalum pentoxide for increasing the refractive index. The nanoparticles can be used to adjust the viscosity of the paste. The incorporation of nanoparticles leads to reduced shrinkage during the curing of the spacer dots. The ultraviolet (UV) curable silk screen printing paste is preferably synthesized using a nanocomposite material as described in U.S. Pat. No. 5,910,522 "Composite Adhesive for Optical and Opto-Electronic Applications" by Institut fur Neue Materialien gemeinnutzige GmbH, Saarbrucken Germany, invented by Helmut Schmidt, Saarbrucken-Gudingen et al, dated Jun. 8, 1999, the entire disclosure of which is hereby incorporated by reference herein. The preferred screening paste contains the following:

**[0015]** a) transparent polymers and/or polymerizable oligomers and/or monomers,

**[0016]** b) nanoscale inorganic particles,

**[0017]** c) optionally, compounds for the surface modification of said inorganic particles,

**[0018]** d) optionally, a crosslinking initiator.

**[0019]** In some forms of the invention, it may be useful to incorporate a reduced glare, conductive coated panel having increased visible light transmission and suitable for use as a touch screen, digitizer panel or substrate in an information display and incorporating one or more thin film interference layers forming a thin film stack on opposite surfaces of a substrate such as that described herein and a transparent electrically conductive coating on the outer most layer of one or both of the thin film stacks, such as described in U.S. patent application Ser. No. 09/883,654, filed Jun. 18, 2001 entitled ENHANCED LIGHT TRANSMISSION CONDUCTIVE COATED TRANSPARENT SUBSTRATE AND METHOD FOR MAKING SAME, the disclosure of which is hereby incorporated by reference herein.

**[0020]** The present invention may also include the use of a reduced contrast, increased transmission, conductively coated panel wherein optical in-homogeneity is reduced between the transparent conductively coated regions and the non-coated regions rendering these delineation regions essentially visually indistinguishable when viewed so that there is no substantial contrast apparent when viewed in reflected light as described in U.S. provisional patent application Serial No. 60/239,788, filed Oct. 12, 2000, entitled REDUCED CONTRAST IMPROVED TRANSMISSION CONDUCTIVELY COATED TRANSPARENT SUBSTRATE, the disclosure of which is hereby incorporated by reference in its entirety.

**[0021]** The preferred process, and as shown in **FIG. 2**, for the application of the spacer dots **30** starts with the use of conventional glass cleaning techniques for preparation of the transparent conductively coated rigid substrate or lite **10**. The substrate is in the form known as stocksheet allowing for the subsequent cutting from and manufacture of multiple touch devices from one lite. Lites can be processed in the flat or bent product configuration. Prior to the deposition of the transparent conductor thin film **20**, a pattern of a mask material may be applied to the raw glass using a silk screen coating method, 325-mesh stainless steel screen. This allows removal of the thin film conductor, indium tin oxide for example, in the areas coated with the mask material following the deposition of the conductive film. The conductive thin film **20**, indium tin oxide, is then deposited on surface **24** of the lite, over any mask material, preferably by the sputtering physical vapor deposition technique or evaporation physical vapor deposition technique. A thick film conductive electrode pattern, typically a silver frit such as Dupont 7713, is then applied using a silk screen coating method, 325 stainless steel mesh silk screen with glass frit as required based on the touch screen design. The thin film conductor **20** and the thick film conductor are then cured using a conventional baking process, such as 480 degrees C. for 60 minutes. The thin film may be chemically reduced in an inert forming gas curing environment. Following curing of the thick film and thin film conductors, the coated lite is washed using conventional glass washing techniques. This prepares the lite for the application of the spacer dots and removes residual mask material for the deletion of specific areas of the thin film conductor as required by the touch screen design. The transparent conductor may also be deleted in selected areas following curing using photolithography or laser deletion methods.

**[0022]** The spacer dots **30** are then applied to the transparent conductor **20** on substrate or lite **10** using conventional silk screening techniques using a 400-mesh stainless steel. Alternately, the dots **30***a*, may be applied to surface **51** of transparent conductor **50** or to both conductors **20** and **50** as described below. The dots are arranged in an orientation based on the design of the touch screen. Optimum design calls for dots **30** to be non-visible minimizing diameter with maximum height for electrical functionality. Spacer dot dimensions for width are about 125 microns to about 15 microns, preferably about 100 microns to about 25 microns, most preferably about 80 microns to about 40 microns in diameter. Spacer dot dimensions for height are about 25 microns to about 3 microns, preferably about 15 microns to