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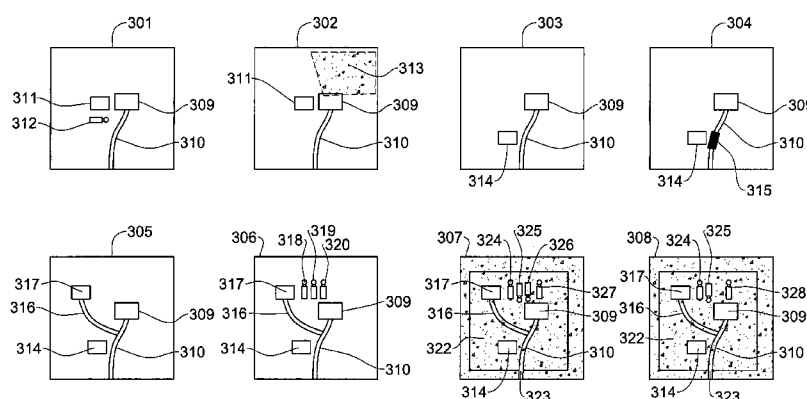


Figure 3

(57) Abstract: There are provided a method for computerized generation of an enhanced image based on a plurality of acquired images (e.g. SAR images) and system thereof. The method comprises: (a) receiving a plurality of acquired images, each comprising a common area of interest; (b) receiving processing parameters; (c) grouping said plurality of acquired images into one or more groups; (d) processing the images within said one or more groups, wherein said processing comprises: i) for each given pixel within the common area of interest, calculating a likelihood of discrepancy between respective pixels of the images of said one or more groups, thus giving rise to likelihood of discrepancy values characterizing said given pixel; ii) generating a "likelihood of discrepancy matrix" comprising the likelihood of discrepancy values and characterizing the likelihood of discrepancy for each pixel within the common area of interest; iii) for each of said one or more groups, generating an enhanced image while utilizing said likelihood of discrepancy matrix