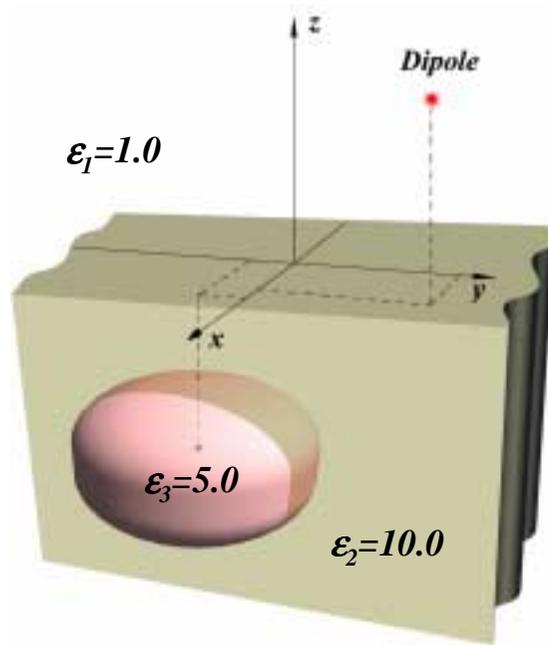


Immersed Body Problem



For many practical purposes it is of great importance to consider the visualization problem for metallic and dielectric bodies embedded within a dielectric media illuminated from an another dielectric one. For example, in practice it is important to consider the visualization problem for buried metallic and dielectric bodies. The direct diffraction problem for such a case is considered in [86]. In fact if it is possible to get sufficient scattered field information coming from the inserted body one can use the proposed algorithm straightforwardly. Fig.5 presents the results for the buried metallic sphere. In fig.5a we can see reconstructed picture and in fig.5b this result merged with ground plane and metallic sphere burned underground. As can be seen, the reconstructed surface is shifted and distorted. The power of its distortion depends on the material properties of the outer dielectric body

