Big data has now become a strong focus of global interest that is increasingly attracting the attention of academia, industry, government and other organizations. Big data can be situated in the disciplinary area of traditional geospatial data handling theory and methods. The increasing volume and varying format of collected geospatial big data presents challenges in storing, managing, processing, analyzing, visualizing and verifying the quality of data. This has implications for the quality of decisions made with big data. Consequently, this position paper of the International Society for Photogrammetry and Remote Sensing (ISPRS) Technical Commission II (TC II) revisits the existing geospatial data handling methods and theories to determine if they are still capable of handling emerging geospatial big data. Further, the paper synthesises problems, major issues and challenges with current developments as well as recommending what needs to be developed further in the near future.