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The invention relates to medicine, in particular to neurosurgery and maxillofacial surgery, and can be used for restoring defects of the bone tissue of the skull and/or facial bony skeleton.

Summary of the invention consists in that on the basis of computed tomography of the defect area and the contralateral part if the defect is unilateral, in the case of a medial defect on the basis of computed tomography of a virtual donor is performed the virtual three-dimensional reconstruction of the bone and soft tissue surface. It is built a virtual geometric model corresponding to the affected area, determining the volume, topography and geometry of the defect, the zones of muscular insertion and all the anatomical formations of the defect area, then virtually is simulated the design of the prosthesis, as well as its fixation holes taking into account the topography of the bone substrate, is simulated a surgical guide for screw hole drilling and for cutter movement control during drilling in all planes, which is printed on a 3D printer of biocompatible resins, then is manufactured the titanium or polyetheretherketone prosthesis and is applied in the defect area and fixed with screws, and the soft tissues are sutured in layers.

Claims: 1