

Title (en)  
APPARATUS FOR ANGIOGRAPHIC X-RAY PHOTOGRAPHY

Title (de)  
GERÄT FÜR DIE ANGIOGRAPHISCHE RÖNTGEN-BILDGEBUNG

Title (fr)  
APPAREIL D'IMAGERIE ANGIOGRAPHIQUE RADIOGRAPHIQUE

Publication  
**EP 1617763 A1 20060125 (DE)**

Application  
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Abstract (en)  
[origin: WO2004093684A1] The invention relates to an X-ray photographic apparatus for imaging the blood flow in the coronary vessel tree of a patient. According to the invention, a first series (1) of X-ray projection images of the coronary tree in various phases of the heart cycle is recorded, at the same time as the ECG (2) of the patient is taken. The three-dimensional structure of the vessel tree in the various phases of the heart cycle is then reconstructed by means of suitable programming means of the computerised portion (17) of the claimed apparatus. A second series (6) of X-ray projection images is recorded while a contrast agent is administered, again at the same time as the ECG (7) is taken. In order to determine the time-dependent contrast agent concentration within the reconstructed three-dimensional structure of the vessel tree, the invention proposes locating local image regions which correspond to individual vessel segments (5, 8) within the X-ray projection images in the second series (6), according to the positions in space of the vessel segments (5, 8) in the relevant phase of the heart cycle. The contrast agent concentration in the area of the vessel segments (5, 8) is then determined by evaluation of X-ray absorption in the thus located local image regions.

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