

Title (en)

METHOD AND APPARATUS FOR AUTOMATICALLY PROGRAMMING CRT DEVICES

Title (de)

VERFAHREN UND VORRICHTUNG ZUR AUTOMATISCHEN PROGRAMMIERUNG VON CRT-EINRICHTUNGEN

Title (fr)

METHODES ET APPAREIL POUR PROGRAMMER AUTOMATIQUEMENT DES DISPOSITIFS DE THERAPIE DE RESYNCHRONISATION CARDIAQUE (CRT)

Publication

**EP 1665110 A2 20060607 (EN)**

Application

**EP 04781788 A 20040820**

Priority

- US 2004027174 W 20040820
- US 49659503 P 20030820
- US 77916204 A 20040214

Abstract (en)

[origin: WO2005020025A2] External or internal monitoring equipment is used to automatically determine optimal programming parameters for a CRT based on externally or internally derived measurements of cardiac performance, anisotropic myocardial deformation (AMD) or both. The ideal programming parameter, operational parameter, represents optimal interval timing between multiple electrodes within the CRT, and is generated by such a closed loop control system. The closed loop system may be semi-automatic and implement connectivity to external ultrasound equipment or externally derived measurements of transthoracic impedance. Preferably, the operational parameter is determined by a closed loop system using internally derived intercardiac and intrathoracic electrograms and impedance measurements that describe cardiac performance and electromechanical dysynchrony in real time. Such a CRT has a control system that automatically optimizes performance by a system of checks and balance.

IPC 1-7

**G06F 19/00**

IPC 8 full level

**G06F 19/00** (2011.01); **A61B 5/02** (2006.01); **A61N 1/362** (2006.01); **G06K 9/00** (2006.01)

CPC (source: EP)

**A61B 8/0883** (2013.01); **A61B 8/488** (2013.01); **A61N 1/3627** (2013.01); **A61N 1/36521** (2013.01); **A61N 1/37235** (2013.01); **G06F 2218/00** (2023.01)

Designated contracting state (EPC)

CH DE FR IE IT LI

DOCDB simple family (publication)

**WO 2005020025 A2 20050303**; **WO 2005020025 A3 20051222**; EP 1665110 A2 20060607; EP 1665110 A4 20130828

DOCDB simple family (application)

**US 2004027174 W 20040820**; EP 04781788 A 20040820