Abstract:

A therapy planning system (18) and method generate an optimal treatment plan. A plurality of objectives are automatically formulated (154) based on a plurality of clinical goals including dose profiles and priorities. The dose profiles and the priorities correspond to a plurality of structures including a plurality of target and/or critical structures identified within a planning image. Further, a plurality of treatment plan parameters are optimized (156) based on the plurality of objectives to generate a treatment plan. The plurality of objectives are reformulated (162) and the plurality of treatment plan parameters are reoptimized (156) based on the reformulated plurality of objectives to generate a reoptimized treatment plan. The optimizing (156) is repeated based on the reformulated plurality of objectives to generate a reformulated treatment plan.
**INTERNATIONAL SEARCH REPORT**

*International application No*

| PCT/IB2013/05944O |

**A. CLASSIFICATION OF SUBJECT MATTER**

INV. GO6F19/00

ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electrical data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
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[X] Further documents are listed in the continuation of Box C.  
[X] See patent family annex.

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**Date of the actual completion of the international search**

4 July 2014

**Date of mailing of the international search report**

21/07/2014

**Name and mailing address of the ISA/**

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**Authorized officer**

Sisk, Aisling
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