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(54) **SYSTEM AND METHOD FOR CORTICAL MAPPING WITHOUTH DIRECT CORTICAL STIMULATION AND WITH LITTLE REQUIRED COMMUNICATION**

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A61B 5/00	(2006.01)
A61B 5/0478	(2006.01)
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CPC ***A61B 5/6868*** (2013.01); ***A61B 5/0478*** (2013.01); ***A61B 5/0484*** (2013.01); ***A61B 5/4005*** (2013.01)

(58) **Field of Classification Search**

CPC A61B 5/00; A61B 5/04; A61B 5/0478; A61B 5/6868; A61B 5/0484; A61B 5/4005

See application file for complete search history.

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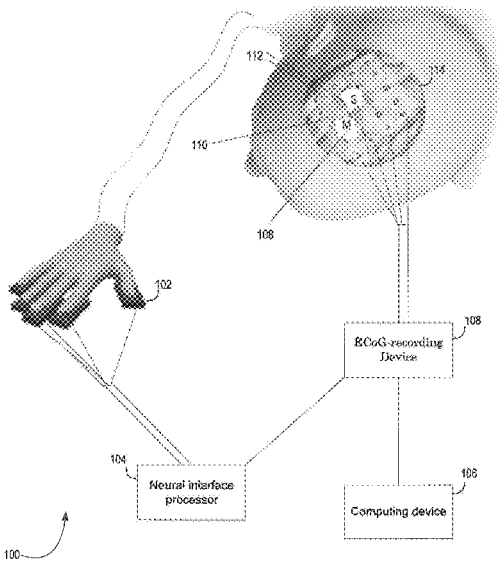
(57) **ABSTRACT**

An apparatus for cortical mapping and method for using same are disclosed. The apparatus comprises a ECoG electrodes array, a stimulation pad, a neural interface processor, and a computing device for mapping eloquent cortical regions of a subject's brain without using exogenous stimulation and with high resolution.

20 Claims, 7 Drawing Sheets